

THE ADOPTION OF IFRS IN PUBLICLY LISTED ENTERPRISES OF HIGH AND MEDIUM CAPITALIZATION AND THE IMPACT OF THE SIZE OF THE AUDIT FIRM IN GREECE

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Abstract

In 2002, developments in the global markets during the past decades have highlighted the need for common accounting standards among companies all around the world so as the financial statements to be comparable. From 2005 onwards the Greek Companies listed on the Athens Exchange was an accounting “revolution” of the 21st century, given the difference in philosophy between the Greek GAAP and the International Accounting Standards-IAS (next, IFRS). This study evaluates the implementation of IFRS on the financial statements of Greek publicly listed companies of high and medium capitalization, which are companies that are included in the FTSE 20 and FTSE 40 indexes of the Athens Stock Exchange-ASE, respectively. Also, for those firms we examined the effect of the size of the audit firm. The research was conducted based on the analysis of thirteen ratios. According to our analysis only few of the ratios have changed significantly. Finally, regarding the impact of the size of the audit firm the results reveal controversy with the present bibliography concerning “Big 4” in comparison with “non-Big 4” firms in Greece.

JEL classifications: G18, G30, M41

Keywords: IFRS, IAS, Greek GAAP, financial statements.

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Introduction

Globalization has fostered the need for world-wide comparable accounting standards and regulations in all financial markets (Meek and Saudagaran, 1990; Zarzeski, 1996; d’Arcy, 2001; Baker & Barbu, 2007; Iatridis & Rouvolis, 2010). Within this process, starting from 2005 all publicly listed firms in the European Union (EU) member states were required to prepare their financial statements according to the International Financial Reporting Standards – IFRS¹ (see, EU Regulation 1606/2002 for the mandatory adoption of IFRS from 2005 onwards).

Compliance with IFRS is compulsory for the publicly listed firms in Greece since January 2005, while other firms that are not obliged to apply IFRS still use Greek GAAP (Karagiorgos & Petridis, 2010). This transition from Greek GAAP to IFRS may have an effect on firms’ financial results (Iatridis & Rouvolis, 2010). Several studies worldwide

document anticipated as well as actual economic consequences of IFRS adoption (Armstrong et al., 2007; Daske et al., 2008; Prather-Kinsey et al., 2008).

In Greece there are many past studies that examined the impact of adoption of IFRS at the Greek firms from many aspects (Schleicher et al., 2010; Prather-Kinsey, 2010; Floropoulos & Moschidis, 2004; Ballas et al., 2010; and others); also, some of them have examined several business sectors of Athens Exchange (Georgakopoulou et al., 2008; 2010; Dimitras et al., 2010). However, none of them have evaluated the implementation of IFRS on the financial statements of Greek listed companies of high and medium capitalization (enterprises which are included in the FTSE 20 and FTSE 40 indexes of the Athens Stock Exchange-ASE, respectively) in accordance to the size of the Audit firm. Therefore, the objective of the present study could be interesting and useful on actual literature on IFRS and the impact of the size of the auditor.

The structure of this paper is as follows: the next section presents the literature review of IFRS studies for Greece. The following section presents the research design of this study (sample and data;

¹ In this study, there no distinction between International Financial Reporting Standards-IFRS and International Accounting Standards-IAS, which were published until 2002 and after this date all future (new) standards are called IFRS.

selected accounting ratios; methodology and hypothesis). The next one analysed the results. The next section provides further evidence from the results regarding the size of the audit firm. Finally, the last section concludes our work.

Literature review

Several past studies examined the impact of adoption of IFRS at the Greek firms from many aspects, such as: shareholder value and performance (Floros, 2007), cash flow analysis (Schleicher et al., 2010; Prather-Kinsey, 2010), impact on tangible assets (Ginoglou et al., 2008), managers' opinions and considerations (Floropoulos, 2006), SME firms and their possible IFRS adoption (Floropoulos & Moschidis, 2004), etc. The most important studies that examined the impact of IFRS at Greek publicly listed firms on the financial statements and performance (in comparison with the Greek GAAP period) are the following:

Iatridis & Dalla (2011) studied the impact of the transition of the IFRS in Greek publicly listed firms concluded a positive correlation to the profitability of the companies adopted IFRS in the majority of the industries/Sectors, especially lower capitalization companies.

Tsalavoutas & Evans (2010) state that the implementation and the adoption of IFRS had significant impact on the Financial Statements and the relevant liquidity ratios. On average, the impact in the shareholders equity and the P&L was positive in contrast with the liquidity which was negative. Only companies that use non big 4 External Auditors present significant impact in the profitability and liquidity. Moreover, they faced significant problems in preparation if the IFRS Transition compared with those companies that use Big 4 External Audit firms. To conclude the quality of Financial Reporting was improved especially for the companies that use non-Big 4 Audit firms.

Daske et al. (2008) examined the economic consequences of mandatory IFRS reporting around the world, and more specifically they analyzed the effects on market liquidity, cost of capital and Tobin's q in 26 countries and 3100 companies that were obliged to adopt the IFRS. They concluded that, on average, market liquidity increases around the time of the introduction of IFRS².

Athianos et al. (2005), based on the methodology of Hung & Subramanyam (2004), which have conducted research for German companies adoption of IFRS performed similar research in Greece. They selected a sample of 40 companies which have adopted IFRS initially in 2003 and after relevant analysis came up to similar results with Hung & Subramanyam (2004), so that the

adoption of IFRS may result to indirect economic impact such as high liquidity or low cost of capital. More specifically, their research resulted that the adoption of IFRS converts the main company financial ratios and the value of the Financial Statements data, therefore the Balance Sheet value and the Net Income which are significantly higher under the IFRS.

Grant Thornton (June 2006 & July 2007) published a research related to the impact of IFRS initial implementation in the publicly listed firms with significant findings related to the impact of IFRS in the Balance Sheet & P&L of the Greek publicly listed firms.

Diakomichalis and Toudas (2007) examined a sample of Greek firms from the media, technology and financial services sector. They concluded that the value of shareholders' equity decreased, after the implementation of IFRS, due to various causes such as: the valuation of holdings at fair value, bad debt write off, inventories' policy, redefinition of value investments, the impact from the valuation of tangible assets and the recognition of deferred tax.

Iatridis and Rouvolis (2010) investigated the effects of the transition from Greek GAAP to IFRS on the financial results of all non-financial Greek firms, listed on the Athens Exchange. Also, they examined the factors associated with the provision of voluntary IFRS disclosures before the official period of adoption and the degree of earnings management under IFRS. They concluded that the implementation of IFRS has introduced volatility in key income statement and balance sheet measures of Greek firms. Although the effects of IFRS adoption in the first year of adoption appear to be unfavourable, perhaps due to the IFRS transition costs, firms' financial measures improved significantly in the subsequent period. Furthermore, this result explains why in the official adoption period there is some evidence of earnings management, which is reduced in the subsequent period.

Ballas et al. (2010) examined the relevance of IFRS in Greece. Their study adopted a mixed methodology relying on secondary sources (such as the relevant legislation, published annual reports and reports on the effects of the application of IFRS by Greek firms) and primary data (a postal survey answered by the finance managers of twenty four Greek firms). They claimed that, participants in the survey believed that the IFRS adoption improved the quality of financial reporting, even though the Greek environment was not appropriate for IFRS application. Ballas et al. (2010) concluded that the introduction of IFRS increased the reliability, transparency and comparability of the financial statements.

Vazakidis and Athianos (2010) explored the main differences between IFRS and Greek GAAP, in order to reveal the differences in financial figures which have been appeared due to the adoption of

² Even this study is concentrated on Greek companies, this research is stated for its large sample and worldwide spread in 26 countries.

IFRS. They examined a sample of ninety randomly selected Greek firms, listed on the Athens Exchange, with the use of capital asset pricing model (CAPM). Vazakidis and Athianos (2010) concluded that when investors take into consideration the risk profile of each company, the differences in the valuation, current assets, current liabilities and sales can predict the share prices within a period of six months. Furthermore, in comparison with another past study of these authors (Athianos et al., 2005), which examined a sample of forty Greek companies that adopted voluntarily the IFRS, they have found same results for earnings and sales, as in both studies the arithmetic mean of the above was statistically the same.

Doukakis (2010) examined the persistence of earnings and earnings components after the adoption of IFRS in Greece. In his study analysed accounting data for two years before and two years after the adoption of IFRS for all non-financial firms listed on the Athens Exchange, in order to examine whether the adoption of IFRS materially affects the persistence, as well as the explanatory power of earnings and earnings components. Doukakis (2010) argued that its research results suggested that IFRS measurement and reporting guidelines do not seem to improve the persistence of earnings and earnings components.

Pazarskis et al. (2011) examined the possible impact of adoption of IFRS at Greek firms of the Information Technology (IT) sector, listed on the Athens Exchange. They analyze the financial statements of the sample firms for three years before and after the IFRS adoption in Greece with some ratios. The received results revealed that two (EBIT margin; gearing) out of twenty accounting ratios had a statistically significant change and a positive impact due to the IFRS adoption.

Moreover, in a similar research (Pazarski et al., 2011), including chemical corporations, research included the impact of IFRS in their Financial Statements for the periods of 2002-2004 and 2005-2007, as well as in 2002 compare to 2005. They came up to almost similar conclusions as above. None of the examined financial ratios changed significantly.

There are many other research efforts (published and non-published) with respect to IFRS adoption both in Greece and abroad. We only referred to a representative sample of them based on the Athens Stock Exchange listed companies which from 2005 onwards compulsorily adopted them.

Research design

Sample and data

The study proceeds to an analysis of Greek listed companies of high and medium capitalization, which are companies that are included in the FTSE 20 and FTSE 40 indexes of the Athens Stock Exchange-ASE, respectively, in order to examine their financial statements and performance in relation to the IFRS adoption in Greece. These companies are with the highest stock market capitalization on the continuous market and, therefore, they are representative of the behaviour and evolution of the Greek stock market over a specific period (Callao et al., 2007).

Furthermore, from those sixty companies, financial institutions and companies from insurance sector are excluded as they represent special peculiarities in their accounting evaluation, and some firms have been de-listed from the ASE for various reasons (bankruptcy, not meeting the standards of the market, etc.) (Callao et al., 2007). Thus, the final sample consists from 47 firms that are selected and examined, which are 13 firms that are included in the FTSE 20 index of the ASE and 34 firms included in the FTSE 40 index of the ASE.

For those forty seven Greek listed firms their financial statements are evaluated and compared based on several ratios for three years before and after the IFRS adoption in Greece: the pre-IFRS period (2002-2004) and the post-IFRS period (2005-2007).

The study proceeds to an analysis only of listed firms as their financial statements are published and it is easy to find them and evaluate them. Financial statements of the listed Greek firms were downloaded by the web site of the Athens Exchange. The data of this study (accounting ratios) is computed from the financial statements of the sample firms and the databank of the University of Macedonia library (Thessaloniki, Greece).

Selected accounting ratios

The IFRS effects on financial statements at the sample firms are evaluated based on specific accounting ratios performance. For the purpose of this study, twelve ratios are utilized, classified at four categories (a) profitability ratios, (b) operational ratios, (c) structure ratios, (d) cash flow ratios, which are tabulated at the following table (see, Table 1):

Table 1. Analysis of financial ratios

<i>Code</i>	<i>Variable Name</i>	<i>Description</i>
Profitability ratios		
M01	EBITDA Margin	(earnings before interest, taxes, depreciation and amortization-EBITDA / sales)*100
M02	EBIT Margin	(earnings before interest and taxes-EBIT / sales)*100
M03	ROE	(net income / shareholders funds)*100
M04	ROA	(net income / total assets)*100
Operational ratios		
M05	Net assets turnover	sales / (shareholders funds + long term debt)
M06	Interest cover	(earnings before interest and taxes-EBIT / interest expense)
M07	Collection period	(debtors / sales)*360
M08	Credit period	(creditors / sales)*360
Structure ratios		
M09	Current ratio	current assets / current liabilities
M10	Liquidity ratio	(current assets - stocks) / current liabilities
M11	Solvency ratio	(shareholders funds / total assets)*100
M12	Gearing	(non current liabilities + loans) / shareholders funds
Cash flow ratios		
M13	Cash flow	Cash flow

Methodology and main hypothesis

In order to evaluate the IFRS effects on financial statements and performance of the sample firms, the study proceeds to an analysis of several ratios from their financial statements.

The study analyses the IFRS effects on financial statements for three years before and after the IFRS adoption in Greece (Schleicher et al., 2010): the pre-IFRS period (2002-2004), which were applied the Greek GAAP, and the post-IFRS period (2004-2006). Also, these selected years provide a regular weighting of data observations for the pre-IFRS and post-IFRS years (Prather-Kinsey, 2010).

The crucial research question that is investigated by examining the above mentioned ratios is the following: "Is IFRS adoption provide a different and better accounting-based information and performance from financial statements than the earliest one with the Greek GAAP?"

In order to evaluate the relative change with ratio analysis of the sample of the Greek firms after the IFRS adoption, the following form of the hypothesis is examined:

H_1 : It is expected no relative change at the accounting information (ratios) from the IFRS adoption.

The selected accounting ratios for each company of the sample over a three-year-period before (year T -

3, T -2, T -1) or after (year T +1, T +2, T +3) the adoption of IFRS in Greece are calculated, and the mean from the sum of each accounting ratio for the years T -3, T -2 and T -1 is compared with the equivalent mean from the years T +1, T +2 and T +3 respectively¹.

To test these hypothesis two independent sample mean t-tests for unequal variances are applied, which are calculated as follows:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

where,

n = number of examined ratios

\bar{X}_1 = mean of Pre-IFRS ratios

\bar{X}_2 = mean of Post-IFRS ratios

s = standard deviation

1 = group of Pre-IFRS ratios

2 = group of Post-IFRS ratios

¹ In this study, the mean from the sum of each accounting ratio is computed than the median, as this could lead to more accurate research results. This argument is consistent with other researchers (Iatridis & Rouvolis, 2010; and others).

Finally, the research results are presented in the next section.

Research Results

The results revealed that over a three-year-period before and after the IFRS adoption only two (M07: collection period and M08: credit period) out of the thirteen accounting ratios had a statistically significant change due to the IFRS adoption event; the first increased and the second decreased. The rest eleven accounting ratios (EBITDA margin; EBIT margin; ROE; ROA; net assets turnover; interest

cover; current ratio; liquidity ratio; solvency ratio; gearing; cash flow) did not change significantly and they did not have any particular impact (positive or negative) on accounting-based information and performance from financial statements due to IFRS (see, Table 2). Thus, the above stated proposition of the hypothesis H_1 is rejected, as the research signalizes that the IFRS adoption effects on accounting-based information and performance from financial statements have lead the sample firms, in general, to a partial better accounting performance.

Table 2. Mean pre-IFRS and post-IFRS ratios three years before/after the IFRS adoption in Greece for firms at FTSE 20 and FTSE 40

Table values are the mean computed for each ratio (as shown above) for the research sample of twenty listed firms from the IT sector at the Athens Exchange between 2002 and 2007. The ratio mean computed in the pre-IFRS period of three years (3 years avg.) represents the mean ratio of the third (T-3), second (T-2) and first year (T-1) before the IFRS adoption event in Greece. The ratio mean computed in the post-IFRS period of three years (3 years avg.) represents the mean ratio of the third (T+3), second (T+2) and first year (T+1) after the IFRS adoption.

Variable	Mean Pre-IFRS (3 years avg.)	Mean Post-IFRS (3 years avg.)	T-statistic (Two-tail)	P-Value	Confidence Interval 95%
M01	20,5	18,9	-0,70	0,486	(-6,23; 2,97)
M02	11,5	13,5	0,88	0,381	(-2,48; 6,47)
M03	10,3	11,1	0,31	0,760	(-4,66; 6,37)
M04	5,59	6,00	0,39	0,698	(-1,65; 2,46)
M05	1,29	1,33	0,17	0,867	(-0,491; 0,583)
M06	24,4	13,0	-1,63	0,105	(-25,14; 2,39)
M07	168	127	-2,53	0,012**	(-72,5; -9,1)
M08	71,8	57,6	-1,66	0,098*	(-31,01; 2,63)
M09	2,30	2,66	0,73	0,464	(-0,607; 1,329)
M10	1,82	2,15	0,71	0,479	(-0,581; 1,235)
M11	58,0	57,4	-0,25	0,803	(-5,10; 3,95)
M12	62,7	61,1	-0,19	0,849	(-18,81; 15,49)

Note:

***, **, * indicate that the mean change is significantly different from zero at the 0.01, 0.05, and 0.10 probability level, respectively, as measured by two independent sample mean t-tests.

More analytically, the P-value interpretation levels for the above referred three cases are described below:

p<0.01 strong evidence against Ho (see, ***)

0.01 p<0.05 moderate evidence against Ho (see, **)

0.05 p<0.10 little evidence against Ho (see, *)

0.10 p no real evidence against Ho

Interpretation of results and further evidence

According to several past studies, companies belonging to FTSE 20 and 40 could exhibit higher equity or reveal several financial differences in terms of IFRS adoption effects between firms that belong to different stock market indices (Iatridis & Dalla, 2011; Grant Thornton, 2007).

To test the above referred proposition, the study compares the pre-official and official IFRS adoption periods among the ASE indices that are used in this study: FTSE 20 and FTSE 40.

Thus, the hypothesis H_2 of this research is that: "IFRS adoption effects are not likely to be different for large firms compared to medium firms".

In order to examine the impact of the categorization in the FTSE 20 and FTSE 40 indexes of the ASE for the companies of high and medium capitalization, regarding to the above referred argument, the study analyses this data of the sample firms and categorize them in two groups from this respect:

72% (34 firms) are companies of medium capitalization and are included in the FTSE 40 index of the ASE and

28% (13 firms) are companies of high capitalization and are included in the FTSE 20 index of the ASE.

Next, the differences between the means of post-IFRS and pre-IFRS ratios (ratios M01 to M13) are computed as below:

$$\Delta MX_i = \bar{X}_{2i} - \bar{X}_{1i}$$

where,

ΔMX = difference between the means of post- and pre-merger ratios

i = examined ratios {M1, M2, ..., M13}

\bar{X}_1 = mean of pre-IFRS examined ratios

\bar{X}_2 = mean of post-IFRS examined ratios

Then, for these data (see, ΔMX_i), after the rejection of the null hypothesis that the data sample has the normal distribution, a non-parametric test is applied, as non-parametric tests imply that there is no assumption of a specific distribution for the data population: the Kruskal-Wallis test.

The Kruskal-Wallis test is a nonparametric test alternative to a one-way ANOVA. The test does not require the data to be normal, but instead uses the rank of the data values rather than the actual data values for the analysis. The general calculation form of the Kruskal-Wallis test statistic is for H:

$$H = \frac{12 \sum n_j [\bar{R}_j - \bar{R}]^2}{N(N+1)}$$

where,

n_j = the number of observations in group j

N = the total sample size

\bar{R}_j = the average of the ranks in group j,

\bar{R} = the average of all the ranks.

The received results are presented in the Table 3 (see, below).

The results reveal that three variables ($\Delta M04$ /ROA, $\Delta M11$ /solvency ratio, $\Delta M13$ /cash flow) present a significant change due to the IFRS adoption event. And thus, it signalizes a higher impact on their financial statements, with a similar reduction at the size of examined data of the ratios, of firms that are in the FTSE 40 than these of FTSE 20. So, the above stated proposition of the hypothesis H_2 is rejected.

Thus, this result of the study is not consistent with these of past studies concerning firms that are included in FTSE 20 and 40 in Greek stock market (as already have been referred above).

Table 3. Kruskal-Wallis test for FTSE 20 and FTSE 40 firms

Table values are the median computed for each ratio (as shown above) for the research sample of 47 Greek listed firms. The median of each ratio that computed for firms of FTSE 20 represents the median of each ratio from the mean differences of the average of 3 years before the IFRS adoption event (the third, $T-3$; the second, $T-2$; and the first year, $T-1$) and after the completion of the IFRS adoption event (the third, $T+3$; the second, $T+2$; and the first year, $T+1$). The other (FTSE 40) is computed in similar way for the sample firms that are included in this index.

Code	Variable name of examined ratio	Median		P-Value
		FTSE 20	FTSE 40	
$\Delta M01$	EBITDA Margin	-2,625	-2,151	0,935
$\Delta M02$	EBIT Margin	-0,7159	-0,3944	0,862
$\Delta M03$	ROE	-0,2827	-1,2198	0,410
$\Delta M04$	ROA	1,3472	-0,9277	0,047**
$\Delta M05$	Net assets turnover	-0,004329	-0,041753	0,129
$\Delta M06$	Interest cover	-1,6271	-0,7288	0,383
$\Delta M07$	Collection period	-14,17	-28,63	0,174
$\Delta M08$	Credit period	-9,473	-6,839	0,928
$\Delta M09$	Current ratio	0,06437	0,08174	0,982
$\Delta M10$	Liquidity ratio	-0,04971	0,01248	0,964
$\Delta M11$	Solvency ratio	2,601	-3,505	0,060*
$\Delta M12$	Gearing	-2,315	6,464	0,167
$\Delta M13$	Cash flow	26435,8	640,2	0,002***

Note:

***, **, * indicate that the median change is significantly different from zero at the 0.01, 0.05, and 0.10 probability level, respectively.

Several past studies referred to the audit firm size as a proxy for accounting quality (DeAngelo, 1981; Watts & Zimmerman, 1986) and thus, the sample firms could be divided according to their preference to choose for their auditor a Big 4 (which are: KPMG, PriceWaterHouseCoopers, Deloitte, Ernst & Young) or a non-Big 4 company and further examine any differences of the impact of the IFRS adoption event, in accordance to the above arguments (Tsalavoutas & Evans, 2010).

The hypothesis H_3 of this research is that: “*IFRS adoption effects are not likely to be different for companies with non-Big 4 audit firms than for companies with Big 4 auditors*”.

With similar process than the above a non-parametric test is applied in order to examine if the group of the sample firms that preferred a non-Big 4

firm as their auditor company than a Big 4 firm present difference impact from the IFRS adoption event at their financial statements.

The data of the sample firms within this respect are in two groups:

30% (14 firms) of the sample firms that preferred a Big 4 firm as their auditor company and

70% (33 firms) of the sample firms that preferred a non-Big 4 firm as their auditor company.

From the above received results, it is clear that there is no statistical significant change from the choice of the auditor firm (Big 4 or non-Big 4) for the examined firms of the research sample at any accounting ratio, which is not consistent with those of past studies (Tsalavoutas & Evans, 2010). Finally, the hypothesis H_3 is accepted.

Table 4. Kruskal-Wallis test for Big 4 and non-Big 4 auditor companies

Table values are the median computed for each ratio (as shown above) for the research sample of 47 Greek listed firms. The median of each ratio that computed for the firms that preferred a Big 4 firm as their auditor company represents the median of each ratio from the mean differences of the average of 3 years before the IFRS adoption event (the third, $T-3$; the second, $T-2$; and the first year, $T-1$) and after the IFRS adoption event (the third, $T+3$; the second, $T+2$; and the first year, $T+1$). The other (firms that preferred a non-Big 4 firm as their auditor company) is computed in similar way for the sample firms.

Code	Variable name of examined ratio	Median		P-Value
		Big 4	non-Big 4	
$\Delta M01$	EBITDA Margin	-3,121	-1,919	0,646
$\Delta M02$	EBIT Margin	-0,3725	-0,6727	0,759
$\Delta M03$	ROE	0,1487	-0,6946	0,406
$\Delta M04$	ROA	0,3766	-0,4050	0,470
$\Delta M05$	Net assets turnover	-0,01788	-0,02506	0,594
$\Delta M06$	Interest cover	-2,0046	-0,8714	0,709
$\Delta M07$	Collection period	-20,36	-26,76	0,536
$\Delta M08$	Credit period	-10,211	-7,306	0,765
$\Delta M09$	Current ratio	0,21948	0,05956	0,733
$\Delta M10$	Liquidity ratio	-0,008290	-0,08621	0,765
$\Delta M11$	Solvency ratio	-0,6762	-1,6604	0,443
$\Delta M12$	Gearing	2,533	6,591	0,456
$\Delta M13$	Cash flow	4984,3	793,0	0,670

Note:

***, **, * indicate that the median change is significantly different from zero at the 0.01, 0.05, and 0.10 probability level, respectively.

Related to the above referred to the audit firm is the statement that several past studies claimed that the choice of the SOL SA as an auditor firm could lead to lower tax evasion and thus, higher accounting transparency (Kourdoumpalou & Karagiorgos, 2012) and thus, the sample firms could be further divided according to their preference to choose for their auditor a Big 4 or the SOL SA or a non-Big 4 company and further examine any differences of the impact of the IFRS adoption event, in accordance to the above arguments.

The hypothesis H_4 of this research is that: “*IFRS adoption effects are not likely to be different for*

companies with Big 4 auditors, SOL SA and non-Big 4 audit firms”.

With similar process than the above a non-parametric test is applied in order to examine if the group of the sample firms that chose a Big 4 firm, the SOL SA and a non-Big 4 firm as their auditor company present difference impact from the IFRS adoption event at their financial statements.

The data of the sample firms within this respect are in three groups:

30% (14 firms) of the sample firms that preferred a Big 4 firm as their auditor company,

28% (13 firms) of the sample firms that preferred the SOL SA as their auditor company and 42% (20 firms) of the sample firms that preferred a non-Big 4 firm as their auditor company (except the SOL SA).

From the above received results, it is clear that there is no statistical significant change from the choice of the auditor firm (Big 4 or SOL SA or non-

Big 4) for the examined firms of the research sample at any accounting ratio (apart from a more conservative evaluation of the tangible and intangible assets, etc. at firms that have chosen the SOL SA), which is not consistent with these of past studies (Tsalavoutas & Evans, 2010; Kourdoumpalou & Karagiorgos, 2012). Finally, the hypothesis H_4 is accepted.

Table 5. Kruskal-Wallis test for Big 4, SOL SA and non-Big 4 auditor companies

Table values are the median computed for each ratio (as shown above) for the research sample of 47 Greek listed firms. The median of each ratio that computed for firms that preferred a Big 4 firm as their auditor company represents the median of each ratio from the mean differences of the average of 3 years before the IFRS adoption event (the third, $T-3$; the second, $T-2$; and the first year, $T-1$) and after the completion of IFRS adoption event (the third, $T+3$; the second, $T+2$; and the first year, $T+1$). The other (firms that preferred SOL SA or another non-Big 4 firm as their auditor company) is computed in similar way for the sample firms.

Code	Variable name of examined ratio	Median			P-Value
		Big 4	SOL SA	non-Big 4	
$\Delta M01$	EBITDA Margin	-3,1211	-2,7271	-0,6785	0,433
$\Delta M02$	EBIT Margin	-0,3725	-0,7089	-0,6365	0,752
$\Delta M03$	ROE	0,1487	-2,0802	-0,3662	0,669
$\Delta M04$	ROA	0,37663	-1,14557	0,05077	0,441
$\Delta M05$	Net assets turnover	-0,01787	-0,0832	-0,00951	0,447
$\Delta M06$	Interest cover	-2,0046	-1,4157	-0,4288	0,597
$\Delta M07$	Collection period	-20,36	-37,39	-16,26	0,183
$\Delta M08$	Credit period	-10,211	-9,745	-7,261	0,850
$\Delta M09$	Current ratio	0,21948	-0,09509	0,08174	0,696
$\Delta M10$	Liquidity ratio	-0,00829	-0,08621	0,00589	0,850
$\Delta M11$	Solvency ratio	-0,6762	-4,4395	-1,2738	0,210
$\Delta M12$	Gearing	2,533	18,879	2,125	0,219
$\Delta M13$	Cash flow	4984,3	623,2	1202,4	0,471

Note:

***, **, * indicate that the median change is significantly different from zero at the 0.01, 0.05, and 0.10 probability level, respectively.

Summary and conclusions

The process of globalization has increased the need for world-wide comparable accounting standards and regulations in all the financial markets. Within this globalization process, starting from January 2005 onwards all publicly listed firms in the European Union (EU) member states were required to prepare their financial statements according to the International Financial Reporting Standards – IFRS. This transition from Greek GAAP to IFRS may have an effect on firms' financial results.

Several studies worldwide document anticipated, as well as actual economic consequences of IFRS adoption. In Greece there are many past studies that examined the impact of adoption of IFRS at the Greek firms from many aspects and in several sectors of Athens Exchange.

This study analyzes the IFRS effects on financial statements for three years before and after the IFRS adoption in Greece: the ratios for the pre-IFRS period (2002-2004), when were applied the

Greek GAAP, are compared with these ones of the post-IFRS period (2005-2007). Also, a further analysis is applied in order to estimate the exact influence of IFRS adoption effects regarding the event if the companies are of high and medium capitalization (which are companies that are included in the FTSE 20 and FTSE 40 indexes of the ASE), and the impact of the auditor size at the relative change after the IFRS official adoption on firms' financial statements).

Concerning the IFRS adoption impact in examining the data for the sample firms over a three-year-period before and after the IFRS adoption, the results revealed that only two (collection period and M08: credit period) out of the thirteen accounting ratios had a statistically significant effect due to the IFRS adoption event; the first increased and the second decreased. Thus, it signalize that the IFRS adoption effects on accounting-based information and performance from financial statements have led the sample firms, in general, to a partial better accounting performance.

Furthermore, the research results revealed a higher impact on their financial statements, with a similar reduction at the size of examined data of the ratios, of firms that are in the FTSE 40 than those of FTSE 20.

Also, from the above results, it is clear that there is no statistical significant change from the choice of the audit firm (Big 4 or SOL SA or non-Big 4) for the examined firms of the research sample at any accounting ratio, which is not consistent with those past studies.

Last, future research of this study could examine a larger sample that could include not only Greek firms listed in the FTSE 20 and 40 of the Athens Stock Exchange, but also other listed firms possibly within other time frame periods.

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