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FINANCIAL FOULS? EARNINGS MANAGEMENT IN THE GREEK SPORTS INDUSTRY

Abstract

This study investigates the phenomenon of earnings management within Greek sports clubs, a sector with substantial popularity and a strong fan base in Greece, as in many other countries. National sports competitions represent a major industry, involving significant financial investments in marketing, athlete salaries, and organizational expenditures. In recent years, UEFA has imposed financial oversight on these clubs to ensure compliance with Financial Fair Play (FFP) regulations. This research examines a sample of 35 Greek sports clubs competing in the two highest professional leagues from 2006 to 2019, resulting in an un-

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balanced panel dataset with 225 annual observations. To identify earnings management practices, we apply the accrual-based approach, utilizing the performance-matched model as modified by Kothari (2005). Our findings indicate strong evidence that, during the financial crisis period, Greek sports clubs employed earnings management techniques, likely as a response to UEFA's FFP regulations and to navigate financial challenges.

Key words:

earnings management, Greek sport clubs, accrual method, performance matched model.

JEL: M40, M41.

3 tables, 6 formulas, 21 references.

Problem Statement

By *earnings management*, we mean the practice of manipulating the financial statements of a company, usually by its top executives, which results in the alteration of the reliability of these statements (Bellas et al., 2010). The most common and widespread way of managing earnings involves the process of adjusting the accounting numbers of the accrued data of the enterprise. More specifically, top executives of the company, based on their will, use their judgment and estimates in the accounting for accruals to modify and present accounting data based on their initial intentions that prompted them to this process. The most common reasons that the management of the enterprise resorts to the practice of managing earnings are:

- To increase remuneration and corporate bonuses based on the performance of the company.
- To avoid conflict with creditors and further commitments they can impose due to non-satisfaction of their commercial claims.

- To maintain the financial image of the company within the framework set by the forecasts of financial analysts.
- To influence their company's share prices.

It is also worth noting that the majority of top executives try to avoid negative effects on accruals statements so as not to negatively affect earnings (Koutoupis et al., 2024). The majority of users of accounting standards, within the framework of which the practice of earnings management is carried out, consider it to be an integral part of accrual accounting and a very likely outcome during the accruals process.

Despite the above-mentioned, the academic community has not come up with a single definition yet, because of the different views that exist to this day about methods, incentives and how legitimate it is to manage earnings even when its users operate within accounting standards.

The ***purpose of this paper*** is to investigate the phenomenon of earnings management in the Greek sport industry.

Copeland (1968) defines earnings management as handling the financial results in an attempt by the management to increase or decrease results as it pleases. According to Schipper (1989), earnings management is defined as *«a purposeful intervention by the management in the external financial reporting process, with the intention of obtaining some private gain».* Jones (1991) considered that earnings management is related to the use of manageable accruals to influence reported earnings. Fischer and Rosenzweig (1995) consider that earnings management operations are intended to increase (decrease) the reported earnings of the economic unit without a corresponding increase (decrease) in its long-term economic profitability.

Xie et al. (2003) consider that earnings management is implemented when the managers of a company use their own judgment when it comes to the preparation of financial reports and transaction structure either to mislead certain interests of the underlying financial performance of the company, or to influence the contractual results that depend on the reported accounting numbers.

The incentives for managing earnings vary according to the needs and problems that a business may face, as well as on the goals and desires that senior management may have. There are cases when the personal interests of executives, that are a derivative of their ambitions, clash with the goals that they have set for the course of the business. There are other cases when the future of the company is uncertain, pushing the management to alternate the accounting result in financial statements. What the above two cases have in common is the alteration of the real financial picture of the company.

The motives associated with the personal desires of the top executives are to maximize their remuneration or to claim promotion. More specifically, the con-

tracts that senior executives have signed with the company include additional remuneration known as «bonuses». A prerequisite for these «bonuses» to be given is that the performance of the company is within the frameworks set by the contracts. These performances are translated into accounting numbers and ratios within the financial statements and usually focus on the profit result. Therefore, on the basis of the upper and lower limits, the directors alternate the level of earnings in the financial statements. When earnings are within the agreed frameworks of contracts, top executives tend to manage earnings upwards while when the earnings are outside the frameworks, i.e. beyond the upper or lower limit, they manage the earnings downwards in order to create reserves that they will report in the following financial periods in order for them to reap of the «bonuses».

An additional criterion for the management of earnings by senior executives is the processing of the accounting results so that they come along with the conditions for receiving the maximum compensation.

Carter and Lynch (2012) state «*Accounting knowledge in the compensation committee affects level of earnings. The levels of remuneration that are vulnerable to discretion may also be due to the structure of the management board and in particular due to the lack of separation of functions between the committees of the management board*».

The financial statements of the company display the commercial receivables, liabilities, loan obligations, and creditworthiness through ratios that use accounting process data. The management of the company, in order to present a positive picture in terms of the turnover speed of receivables, liabilities, so as to maintain a climate of good faith with the current counterparties but also to attract new counterparties, will manage accounting amounts in the current assets, in the real liabilities and in the earnings.

Jackson and Liu (2010) state: «*Companies manage bad debt expenses downwards (and even record income-increasing bad debt expenses) to meet or beat analysts' profit forecasts, and that conservatism highlights the extent to which companies manage bad debt expenses. Furthermore, we find that companies manage bad debt costs downwards by reducing previously recorded excess costs of bad debts that have been accumulated on the balance sheet. Stricter limits are set on the amount by the companies that are allowed to devalue net assets which may reduce their ability to manage earnings.*»

Based on Jaggi and Lee (2002), managers of financially troubled companies use earnings management to increase income, if they are at risk of dismissal for violations of debt contracts, or they use earnings management to reduce income if debt restructuring takes place or debts are renegotiated because exemptions are rejected.

In cases where the company is in need of new investors, management may proceed to the normalization of its earnings to show a picture of stability or pre-

sent generous dividends with the risk of attracting investors who expect profits in the short term, thus increasing the risk of resorting to further earnings management practices.

The estimates and forecasts of financial analysts are among the main motivations for management to «beautify» its earnings in order to disprove the negative forecasts and respectively to verify as much as possible the positive forecasts.

Literature Review

European football over the years has evolved into one of the most profitable markets due to the impact it has on the public for the spectacle it offers. In the last two decades, many investors have shown increased interest in participating in the share capital of a FC (Football Societe Anonyme) with the expectation of making profits in the short term, not only from sports activity but also from other activities such as the sale and purchase of players, product advertisements, sponsorships, etc.

Brooks (2012) mentions: *«Due to the increased global popularity of the sport of football in recent years, along with increased revenue generating opportunities, managers of football clubs are greatly incentivized to acquire big name talents (i.e. players) for both on-field success and commercial branding purposes. Stemming from the motivation to acquire the most talented footballers, studies have shown some clubs are not very effective in balancing the interests of shareholders and stakeholders with those of the club.»*

It has been observed that the majority of FCs even the most financially strong, spent exorbitant amounts mainly on player purchases without taking into account the fact that their expenses had ended up exceeding their income. As a result, many FCs found themselves in a state of financial suffocation and this was also evident in their financial statements. UEFA, observing that the football clubs were not able to control the cost of their expenses, in 2004/2005 intervenes by implementing a licensing system for participation in European championships, known as Club Licensing System, thus setting specific quality criteria categorized into:

- Sports,
- Infrastructure,
- Administrative,
- Legal,
- Finance.

In 2009, UEFA, wanted to have a continuous picture of the financial performance of FCs and in order to achieve a rationalization of the financial statements, established the Financial Fair Play (FFP) wanting by this way to reduce the mistreatment of expenses.

UEFA with the implementation of the FFP argues that the quality of the financial statements of PAE will ameliorate in terms of the accuracy of the accounting results and at the same time the quality of the audit on them will be improved. UEFA also firmly believes that FFP is preventing the owners and the management from spending exorbitantly, leading by this way the clubs towards a financial suffocation.

House of Commons UK (2010) *states: «Club owners are generally overly optimistic about their management skills and with their visions for a club. With abundant academic evidence there is a clear correlation between the salaries of the team and the points they win—which is obvious to the owners. There is a natural tendency to borrow in pursuit of success, although not all teams can be successful by doing so. There are many examples of clubs where the managers «chased the dream». So they invested in the short term, by borrowing, in the hope of long-term success. The pressure on the management of a club to invest or to sign a star player ... it's often huge and comes from the ordinary supporters».*

With the implementation of Break Even, UEFA argues that the financial gap between large and smaller clubs is narrowing. However, by setting limits on clubs that have the ability to raise more their capital, so that they cannot channel them freely, it does not bring to a particularly advantageous position clubs with a smaller share capital since it is subject to the same restriction.

Budzinski (2014) mentions about the impact of Financial Fair Play on the part of competition of the teams: «The restrictive effects of the 'Break Even' rule (i.e. expenses should not exceed the revenues) cannot be justified by a proper objective claim (according to European competition policy), as significant financial problems due to excessive investment are not inherent to European football.»

Football is directly related to the element of spectacle and a key factor of success is the victory or the defeat of a team. Therefore, the fact that the reputation of the team depends on its successes on the pitch refers to the need in using the financial resources to acquire players and for achieving the rise in the league.

However, before the implementation of FFP as a result of asymmetrical competition, the phenomenon of 'financial doping' arose where the privately-owned large FCs had the ability to allocate part of their personal wealth for the acquisition of athletes with the most demand. Smaller clubs, in an attempt to keep up with the competition, were forced to increase their loan obligations and their expenses in general, or even to alter the results of the financial statements, jeopardizing their viability in the long term.

An important factor, even within the FFP regulations, remains the structure of a FC's management and the incentives of its corporate governance, which affects whether there will be an option to manage earnings against UEFA regulations.

Methodology

In our research, in order to examine whether the Greek clubs manage their earnings, we set as a basis the correspondence between accruals and financial profitability, as well as parameters such as participation in European competitions under the regulations of the FFP, during the period of the credit crisis (2010-2016) to see how the clubs reacted to the specific economic environment in terms of managing their earnings. Therefore, initially on the basis of the sample, the total accruals were calculated based on the equation:

$$TA_{i,t} = \Delta CA_{i,t} - \Delta CASH_{i,t} - (\Delta AP_{i,t} - \Delta CL_{i,t}) - DEP_{i,t}. \quad (1)$$

Where:

$TA_{i,t}$ = Total accruals of club *i* in period *t.*

$\Delta CA_{i,t}$ = Change in current assets of club *i* in period *t.*

$\Delta CASH_{i,t}$ = Change in cash holdings of club *i* in period *t.*

$\Delta AP_{i,t}$ = Change in accounts payable of club *i* in period *t.*

$\Delta CL_{i,t}$ = Change in short-term loans of club *i* in period *t.*

$DEP_{i,t}$ = Total depreciation of club *i* in period *t.*

More precisely, the term «accrual» in accounting is a financial event that represents all income and expenses that have been incurred but have not been respectively received or paid off. The calculation of accruals also results from the difference between net income and operating cash flows. The practice of managing earnings at its basis has the falsification of accruals by senior management for personal gain. In addition, accruals are divided into two categories: non-manageable and manageable, based on their discretion and end use. To segregate total accruals, we use the following formula:

$$TA_{i,t} = NDA_{i,t} + DA_{i,t}. \quad (2)$$

Where:

$TA_{i,t}$ = Total accruals of club *i* in period *t.*

$NDA_{i,t}$ = Total non-manageable accruals of club *i* in period *t.*

$DA_{i,t}$ = Total manageable accruals of club *i* in period *t.*

Manageable accruals result from the difference between total accruals and non-manageable accruals:

$$DA_{i,t} = TA_{i,t} - NDA_{i,t}. \quad (3)$$

Non-manageable accruals come from adjustments made to cash flows within the framework set by the accounting standards, while manageable accruals come from processes decided by the management in order to obtain a desired result of its choice.

The most widespread way to calculate manageable accruals is the model proposed by Jones in 1991, also known as Jones model (1991), in an attempt to discern the factors that influence the size of non-manageable accruals. In this research, we used the model of Jones (1991) modified by Kothari et. al (2005) in order to calculate manageable accruals based on the financial performance of the company. This model treats the level of manageable accruals as a factor that affects the actual level of sales, real estate facilities, equipment and return of the total funds by calculating the following equation:

$$\frac{TA_{i,t}}{Assets_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{Assets_{i,t-1}} + \beta_2 \frac{(\Delta Sales_{i,t} - \Delta REC_{i,t})}{Assets_{i,t-1}} + \\ + \beta_3 \frac{PPE_{i,t}}{Assets_{i,t-1}} + \beta_4 ROA_{i,t-1} + \varepsilon_{i,t}. \quad (4)$$

Where:

$TA_{i,t}$ = Total accruals of club *i* in period *t*.

$Assets_{i,t-1}$ = Lagged assets of club *i*.

$\Delta Sales_{i,t}$ = Change in sales of club *i* in period *t*.

$\Delta REC_{i,t}$ = Change in accounts receivable of club *i* in period *t*.

$PPE_{i,t}$ = Property, plant and equipment of club *i* in period *t*.

$ROA_{i,t-1}$ = Lagged return on total assets of club *i*.

$\varepsilon_{i,t}$ = Error of club *i* in period *t*.

The addition of a ratio that measures profitability (ROA) is done to increase the effectiveness of the Jones model in order to have more reliable results in terms of matching accruals with the profitability of the company. Kothari et. al. (2005) also report that the matching of accruals and efficiency based on ROA using Jones' model shows clearer results for the level of manageable accruals since the values of means and medians in samples applied are usually closer to zero.

The regression below was performed separately for each year and branch of activity, as Jones (1991) defines for the study of the effect of time and industry sector on accruals. Similarly, none of the individual smaller samples obtained had fewer than 15 annual observations.

Based on this, in order to find the absolute value of manageable accruals (|Dacc|) based on the modified Jones model, the following regression was applied:

$$Dacc_{i,t} = \frac{TA_{i,t}}{Assets_{i,t-1}} - b_1\left(\frac{1}{Assets_{i,t-1}}\right) + b_2\left(\frac{(\Delta Sales_{i,t} - \Delta REC_{i,t})}{Assets_{i,t-1}}\right) + b_3\left(\frac{PPE_{i,t}}{Assets_{i,t-1}}\right) + b_4 ROA_{i,t-1}. \quad (5)$$

The absolute value is used for the reason that the practice of managing earnings may include accruals that increase the level of earnings or accruals that reduce the level of earnings so that the financial statements reflect earnings that work in the interest of management. The higher the absolute value of manageable accruals, the greater the level of earnings management, and correspondingly, the lower the quality of earnings.

Research Results

Research Hypotheses

Based on surveys that have been conducted, it was observed that the majority of clubs in Europe had shown the first signs of financial predicament in 2006. For example, data emerged from a survey in the Spanish league, showed that the expenses of the clubs were increasing rapidly and large parts of them were due to transfers of players (i.e. the purchase and sale of intangible items). In conjunction with revenues that were not sufficient even to cover short-term expenses, their financial statements had an increased element of precariousness. Based on this, we propose the following hypothesis:

H1: During the economic crisis, FCs manipulated their results more intensely.

Based on their size, clubs, like any other business, make important decisions about the financial course in the short and long term. One of the basics that the club seeks regardless of the size of the assets is to find sources of funding. In the last decade, it has been observed that more and more clubs are facing difficulties in raising capital in order to continue to operate smoothly and in combination with the debts that have been inflated from the previous years, an effort is being made to prevent the crisis from fully reflecting in the financial statements.

Lago, Simmons & Szymanski (2006) mention: «If small clubs have ambitions to compete against the big clubs, they will also predict that the gap from the ultimate bridging cost will increase over time and that «now» may be the last chance to try to bridge that gap».

This is how we come to the hypothesis that:

H2: The size of the club is inversely proportional to the levels of earnings management.

Thanasas and Smaraidos (2017) concluded that «Teams that were called upon to represent Greece in Europe seem to be manipulating their earnings strongly upwards».

This is how we come up to the hypothesis:

H3: The more often there is a change in the auditors, the greater are the chances of managing earnings.

Franck (2014) stated that «Who, for example, is the one who will look at the banking regulations without considering their impact on the incentives of bank managers to engage in moral hazard and rent-seeking? That is the banking regulation. The same standard should be applied when analyzing the possible impact of the football regulation».

So we came up to the hypothesis:

H4: The Football Clubs participating in UEFA European competitions have greater incentives to manage their earnings properly.

Given that football is arguably the most popular sport in the world with the largest number of fans and comparatively higher financial transactions and interested investors, we consider that the level of earnings management is also comparatively higher.

This is how we come to our concluding hypothesis:

H5: Earnings management is more pronounced in football clubs than in other sports clubs.

Therefore, in order to check our research hypothesis, we will use the absolute value of manageable accruals |Dacc| as a dependent variable in the following research model:

$$Dacc_{i,t} = \beta_0 + \beta_1 crisis_{i,t} + \beta_2 sport_{i,t} + \beta_3 size_{i,t} + \beta_4 europe_{i,t} + \\ + \beta 5 ChAusitor_{i,t} + \beta_6 ROA_{i,r} + \beta_7 LEV_{i,t}. \quad (6)$$

Where:

Dacc: manageable accruals at absolute value, an indicator that is internationally recognized in the academic community as an indication of the level of earnings management.

crisis: dummy variable that receives the value 1 if the accounting period is included in the years when the financial crisis has plagued the Greek economy and the value of zero in any other *case*.

sport: dummy variable that receives the value 1 if the club is football team and the value zero in any other case.

size: the natural logarithm of the total assets of the club, used as a control variable.

europe: dummy variable which receives the value 1 if the club participates in European competitions in the current season and the value zero in any other case.

ChAuditor: dummy variable, which receives the value 1 if the club made a change of the auditing firm in relation to the previous year and the value of zero in any other case.

ROA: profitability ratio, which is used as a control variable (Operating result/Total Assets)

LEV: The leverage ratio of the club's debts, which is used as a control variable (Borrowed funds/Total Assets)

Process and data selection

Our sample consists of 35 Greek sports clubs which operate as legal entities of private law (N.P.I.D.) and under the legal scheme of the Sports Societe Anonyme. More specifically, the sample consists of financial statements of 35 clubs of which, 26 are FCs and 9 are BCs, for the period 2006-2019. The financial data of the survey were drawn from the ICAP database. The data are in the form of a panel and are not balanced as some of the clubs included in the sample were founded after 2006 or in the process were put into dissolution and liquidation.

Thus, the data for our study consist of a total of 264 annual observations, of which 195 correspond to FCs and 69 correspond to BCs. In addition, the clubs that represent the sample mainly competed during the 2006-2019 seasons in the Super League (for FCs) and in the Basket League (for BCs), taking into account relegations and promotions between the 1st and 2nd divisions for several clubs during this period.

The participation in UEFA European competitions, such as Champions League and Europa League, was an important factor in the selection of the sample, especially for FCs, considering whether the implementation of FFP was one of the factors that led them to manage their earnings or prevented it.

STATA (v.14) was used to analyze and interpret the sample and the econometric data.

Descriptive statistics

In the table below we list the descriptive statistics of the variables used in our research model.

Table 1

Descriptive statistics of the variables

	Mean	St.Dev	min	Median	max
dacc	0.018	0.379	-2.812	0.001	1.775
|dacc|	0.229	0.301	0	0.146	2.812
crisis	0.614	0.488	0	1	1
sport	0.739	0.440	0	1	1
Europe	0.318	0.467	0	0	1
LEV	1.263	1.156	0.048	0.956	7.601
ROA	-0.465	1.269	-9.873	-0.145	0.693
size	14.932	1.702	10.91	14.943	18.557
chAuditor	0.121	0.327	0	0	1

The *dacc* variable shows the level of earnings management for the sample, and in the table acts as an information variable. It is observed that earnings have been managed upwards by 1.8% on average or more specifically more earnings management has been made upwards based on our sample. The standard deviation is well above the average (0.379), while the minimum earnings management rate is -281%, finding that it is managed downwards and the maximum management rate corresponds to 178%, which is the maximum management upwards. The median appears to be 0, which means that there is no earnings management in the middle observation of the sample.

The variable |dacc| presents the absolute value of the level of earnings management and acts as a dependent variable of the model. The average level of manageable accruals of the sampled clubs reaches 23% of the assets of the previous year. If we consider that the existence of manageable accruals is an indication of manipulation of the results, then the percentage is very high. But despite this being lower than other studies done in the past, Dimitropoulos (2011) had found for |dacc| 48%. The standard deviation is 0.30. The minimum level of earnings management in the sample is 0. The maximum level is 2.81, i.e. 281% of the actual accruals of the periods that have been managed. The median is about 15%.

The mean for the variable *crisis* of the sample is 0.61, which shows that most of the observations were during the crisis period. The standard deviation is 0.49, as for dummy variable the minimum is 0 and the maximum is 1.

The variable *sports* is a dummy variable and as we observe from the above results that for the variable sport we have as a minimum of 0 and as the maximum 1. The mean is 0.738 since most of the teams in the sample are football clubs. The standard deviation is 0.440 and the median is 1.

For the variable *europe*, the average of the sample is 0.32 which shows that most teams had not competed in European competitions. The standard deviation is 0.47, the minimum is 0 and the maximum is 1.

The *LEV* variable represents the financial leverage of a club. The average in our sample is 1.26, which means that most clubs have debt that exceeds their net worth for many years in a row. The standard deviation is 1.16, the minimum is 0.048, i.e. the liabilities are much lower than assets, and the maximum is 7.6, i.e. the liabilities exceed the assets of the club by 7.6 times. The median is 0.96.

The variable *ROA* has a minimum value of -9.87, which means that the club had losses that reached 10 times the total assets, and the maximum was 0.69, which indicates that the most efficient club in the sample has a return of 69% on its assets. The mean is -0.46, i.e. our sample on average has a return of -46% on assets. The standard deviation is 1.27 and the median is -0.14. We observe that the efficiency and profitability of sports clubs is very low to non-existent.

The size of the clubs in the sample on average is 14.93 i.e. the logarithm of the «players» assets is approximately on average. The standard deviation is 1.70. The minimum is 10.91 and the maximum is 18.56, which, in logarithmic terms, shows large variation. The median is 14.94, which approaches the middle.

The variable ChAuditor has a minimum of 0 and a maximum of 1. The median is 0 and the standard deviation is 0.33. The average is 0.12 which shows us that 12% of the observations made a change to the auditors compared to the previous year.

Correlation table

In Table 2 below we list the correlation data of the variables participating in our research model.

Table 2

Correlation table

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) dacc	**1.000**							
(2) crisis	0.132*	**1.000**						
(3) sport	0.247*	-0.029	**1.000**					
(4) Europe	-0.159*	-0.093	-0.334*	**1.000**				
(5) LEV	0.250*	0.051	-0.055	0.015	**1.000**			
(6) ROA	-0.199*	-0.155*	-0.117	0.143*	-0.376*	**1.000**		
(7) size	-0.192*	-0.181*	0.066	0.624*	-0.237*	0.432*	**1.000**	
(8) chAuditor	0.114	0.080	0.036	0.020	0.132*	-0.028	0.077	**1.000**

We note that the sample variables are statistically significant at the significance level of 95%, except for the variable for changing the auditing firm. We also observe that there is no pronounced linear correlation between the dependent variable of our model (|dacc|) and the rest of the independent variables. In the same way, there is no equally strong linear correlation between independent variables, except for the variables of size and participation in European competitions (p=62.4%) which we hope that, will not affect the continuity of our research. This strong correlation is logical when we consider that the biggest clubs in the league compete in European competitions.

Regression analysis

In the table below (Table 3), we list the elements of the linear regression of the variables that were included in our research model.

Table 3

Linear regression results

|dacc|	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
crisis	0.077	0.039	**1.98**	0.049	0.000	0.154	**
sport	0.215	0.050	**4.32**	0.000	0.117	0.313	***
Europe	0.032	0.060	0.53	0.599	-0.087	0.150	
LEV	0.058	0.018	**3.25**	0.001	0.023	0.094	***
ROA	-0.033	0.033	-1.00	0.321	-0.098	0.032	
size	-0.032	0.018	-1.78	0.076	-0.068	0.003	*
chAuditor	0.075	0.055	1.37	0.173	-0.033	0.184	
Constant	0.406	0.262	1.55	0.123	-0.111	0.923	

Mean dependent var	0.229	SD dependent var	0.301
R-squared	**0.194**	Number of obs	225.000
F-test	**7.475**	Prob > F	**0.000**
Akaike crit. (AIC)	65.304	Bayesian crit. (BIC)	92.633

*** p<0.01, ** p<0.05, * p<0.1

The explanatory power of our model is at 19.4% (R^2), which means that the independent variables describe 19.4% of the variation in earnings management (dependent variable). So there are other factors that influence the levels of earnings management in a sports club, which are not included in this study. The price is very satisfactory and is quite high compared to other similar studies. F-statistic is quite high (7.475) and the p-value is zero, which ensures us from the risk of zero hypothesis in which there can be an observation for which all independent

variables are simultaneously equal to zero. This kind of case does not exist for our sample and model.

The *crisis* variable has a positive sign and is statistically significant (*t*-stat= 1.98 and *p*-value= 0.049) at the 95% level. Based on Habib et al. (2013), companies in times of crisis manage earnings downwards. Persakis and Iatridis (2015) also report that many companies use more conservative methods for profit forecasting and accruals management. This fact confirms our first research hypothesis and therefore we can safely say that during the crisis sports clubs in Greece, more intensely manipulated their accrued data.

The *size* variable shows a negative coefficient and a significance level (*t*-stat= -1.78 and *p*-value= 0.076). Our second hypothesis is verified, but only at the significance level of 90%. More specifically, this means that larger sports clubs manage their earnings less compared to smaller clubs. As Burgstahler and Dichev (1997) mention in their research, the larger the size of the company, the smaller the level of its earnings management. This theory is based on the fact that the size of an enterprise is related to the internal control system. This means that larger companies have better internal control systems compared to smaller companies and expect stricter external control over their financial statements.

The variable for the change of the auditing firm in relation to the previous accounting period (*chAuditor*), although positive, is not statistically significant (*t*-stat = 1.37 and *p*-value =0.173). This means that clubs that decide to change external auditor are more likely to engage in earnings management practices by verifying the H3 hypothesis, but we cannot generalize the case to the entire population. Furthermore, according to our sample, in terms of the selection and change of the auditing firm, it is observed for the Greek clubs participating in European competitions, with a lower ranking position, that they have hired Big 4 auditors wanting to show reliability in their financial statements, as Dimitropoulos reports (2016).

The variable for participation in European competitions (*europe*) has a positive factor that shows how clubs competing in European competitions make greater earnings management, probably due to the European regulations set by UEFA. The H4 hypothesis is confirmed, but is not a statistically significant at a 95% confidence interval (t-stat = 0.53 and p-value = 0.599). More specifically in football, FFP regulations seem to have caused an increase in earnings management practice, echoing with Thanasas and Smaraidos (2017), who reported that teams competing in European competitions make an intense earnings management upwards thus confirming the H4 case, without being able to generalize the case similarly to the previous variable.

The variable *sport* affects the dependent variable of manageable accruals (dacc) with a significance level of 100% (t-stat = 4.32 and p-value = 0.00). The coefficient is positive, which confirms our last research hypothesis that football clubs manage to a greater extent their accruals than other Sports Sociétés Anonymes.

Conclusions

The purpose of our research is to investigate and ascertain whether the earnings of sports clubs are managed and what their levels are. Initially we studied the phenomenon of earnings management based on a more generalized approach by comparing the different opinions that have been expressed about practice, motivation, methods and compatibility with the accounting standards. We then focused on the management of earnings in sports clubs in order to spot the differences and similarities with other business sectors. Through the statistical studies we implemented for earnings management in sports clubs we came to the conclusion that they coincide with the theoretical part.

In addition to the financial figures from balance sheets, income statements and cash flow, we investigated the choices of the sports clubs regarding the auditing firm in order to record a change of the auditor compared to the previous year. We also observed the competitive course (relegation, promotion, championship winning, participation in European competitions) focusing on the Super League since most clubs compete in it, giving a greater base to FCs, since they make up the majority of our sample.

As the dependent variable for the regression model we used the absolute value of manageable accruals. Considering that the FFP's regulations for obtaining permission to participate in European competitions of UEFA, the period of the economic crisis, and the change of the auditing firm greatly affect the incentives for managing earnings, we included in the regression model the corresponding dummy variables. In addition, the dummy variable for the type of sport was added because the sample is divided into FCs and clubs of other sports. Finally, the regression model contained common variables that have been used in other models such as club size, financial leverage and asset efficiency. Specifically, the size was derived from the logarithm of the assets of the clubs, the financial leverage corresponds to the quotient of dividing the total liabilities by the assets, and the asset efficiency equals the result of the exploitation by the assets.

This research was carried out to investigate whether sports clubs manage their earnings and what factors drive them into this type of practice. We believe that in the future it will help sports team managers, regulators and potential investors operating from the external environment of the clubs for the reason that the results showed that most clubs falsify their financial statements.

We take into consideration that due to the limited sample there is scope for improving research. We could compare European clubs with Greek ones in terms of earnings management if we had an additional representative sample of European clubs. Also, if the sample contained more financial years it could be distinguished in pre- and post-crisis periods, before and after FFP to compare the lev-

els of earnings management. Lastly, if they were more populous and there were no incomplete financial periods, the results would be more reliable and that is why we list them with caution.

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