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Capital structure and corporate governance of soccer clubs

European evidence

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Abstract

Purpose – The present study aims to examine the impact of corporate governance quality on the capital structure of European soccer clubs and specifically on the level of debt that soccer clubs decide to issue.

Design/methodology/approach – A sample from 67 European soccer clubs over the period of 2005-2009 was analyzed, and panel data techniques were performed to assess the impact of specific corporate governance provisions on the capital structure of football clubs (FCs).

Findings – Evidence indicate that efficient corporate governance mechanisms such as the increased board size and independence and the existence of more dispersed ownership (managerial and institutional) result in a reduction in the level of leverage and debt, thus reducing the risk of financial instability.

Practical implications – This evidence suggests that corporate governance could be used as a monitoring mechanism for reducing the fictitious level of debt that characterizes the majority of European soccer clubs. This study could prove useful to Union of European Football Associations (UEFA) regulators because it provides an additional insight for the importance of establishing sound governance principles in European soccer so as to enhance the effectiveness of the recent “financial fair play” regulation which was launched in 2010, as well as to improve the financial status of the clubs and sustain their future viability.

Originality/value – This is the first study internationally that examines capital structure within FCs, thus extending the existent empirical evidence in the literature and adding to a growing body of research on the issues of corporate governance and financing decisions.

Keywords Corporate governance, Capital structure, Leverage, European soccer clubs

Paper type Research paper

1. Introduction

Since the seminal work of [Modigliani and Miller \(1958; 1963\)](#) (hereafter referred as MM), the issue of capital structure has gained increased interest from financial and business economists ([Parsons and Titman, 2008](#)). The MM theory is based on some basic assumptions which, according to [Brusov et al. \(2011\)](#), can be removed without affecting the main results, while others can significantly alter the conclusions of the MM model. However, the football industry is a business sector where some of the assumptions of the MM theory actually hold. [Andreff \(2006a\)](#) documents that football is a sector with low information asymmetry, clubs are commercialized and some are even public corporations belonging to

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the same class of risky companies. However, the most significant characteristic of football clubs (FCs) which simultaneously fits the main assumption of the MM theory is the absence of bankruptcy costs (no possibility of bankruptcy).

Gerrard (2006) argues that FCs have a remarkable survival rate despite the fact that the majority of them operate within the edge of financial distress. This argument has been verified by Kennedy (2012) who documents that FCs in Europe mainly exist in a situation of debt. The reason for the low possibility of bankruptcy is the fact that several stakeholders (mainly fans and the local community) are dedicated to bailing out the club whenever there is need. However, this behavior may create a significant conflicts of interest between managers and stakeholders, as the constant increase of debt brings the risk of embezzlement and fund diversion, unless the corporate governance structures are re-enforced and strengthened (Andreff, 2006a).

Strong corporate governance mechanisms (board size and independence, chief executive officer [CEO] dual roles, managerial or institutional ownership) have been proved useful in alleviating agency problems within a firm (Brown *et al.*, 2011) by reducing the information asymmetry between managers and stakeholders and by ensuring the release of credible financial information (Mande *et al.*, 2012). This argument has been verified in the football industry by Dimitropoulos (2011) who documents that FCs with good corporate governance mechanisms are associated with higher quality of financial reporting, measured via lower earnings manipulation.

The football industry in Europe provides a unique business setting for examining the issue of capital structure and corporate governance, as the penetration of corporations and investment funds into the sport business leads to the separation of ownership and control within the clubs. On the contrary, this fact did not have a positive impact on the financial stability and growth of the sector (Andreff, 2006b), as the majority of clubs have accumulated increased amounts of debt and reported consecutive losses, mainly because managers are aware of the fact that false financial decisions have low cost, as someone will be there, when needed, to bail them out. This fact is the source of the severe agency problems that characterize FCs today (Storm, 2012).

Additionally, McMaster (1997) and Jennett and Sloane (1985) argue that football directors are willing to retain influence on the club's day-to-day operation because they have an objective function which contains the element of power. According to Lindblom *et al.* (2011), managers seem to avoid underpricing their future prospects by avoiding stock market financing and preferring debt issuance so as to sustain corporate control. However, this fact constrains the ability of the clubs to achieve a sounder financial footing and to explore fruitful commercial opportunities (McMaster, 1997). These core agency problems evidenced in the majority of FCs in Europe point toward the arguments of managerial entrenchment (empire building) made by Zwiebel (1996) and are mainly responsible for the dire financial straits of the European FCs over the past decade.

This situation urged the Union of European Football Association's (UEFA) Executive Committee (2010) to introduce the "Financial Fair Play" regulation as a license mechanism for FCs to participate in the UEFA championships (Champions League and Europa League). The scope of this regulation is to introduce more discipline and rationality on clubs' financing decisions. However, there is no provision regarding the quality of corporate governance of the clubs and what impact it can have on the financing decisions of the managers. A recent study by Kennedy (2012) argues that a

comprehensive and robust governance framework is needed to draw managerial attention back to economic imperatives of efficiency, profitability and the view of football as an exchange value.

Therefore, this fact creates a motive for the present study, as it is believed that efficient governance mechanisms could be a useful tool for enhancing the effectiveness of the recent “financial fair play”. Also the present study is motivated by a recent paper by Benkraiem *et al.* (2011), who argue that FCs in Europe invest heavily in intangible assets (player contracts, etc.) without having the necessary equity to support this kind of investment, therefore turning to debt issuance to economize the required funds. However, the perpetual accumulation of debt and the uncertainty of future revenues can easily create severe deficits which can no longer be served.

This study contributes to the existing literature on capital structure in several ways. First of all, it is the first study internationally that examines the aforementioned issue within FCs which is a business sector with immense interest and corporate value but with scarce empirical evidence. In addition, this study provides further evidence regarding the impact of governance on capital structure within an industry with different characteristics from other business (industrial or services) sectors. The capital structure of FCs is closer to the theoretical model of MM, as they present low information asymmetry, increased capitalization and, more importantly, they face low or even no possibility of bankruptcy, thus, making this business setting unique and different from the rest of the sectors of the economy.

By analyzing a sample from 67 European soccer clubs over the period of 2005-2009, evidence suggests that strong corporate governance mechanisms, such as increased board size, independence, non-existence of CEO dual role and more dispersed ownership (managerial and institutional), result in a reduction in the level of leverage, thus, reducing the risk of financial instability. In addition, this study provides a motive for UEFA officials to consider the issue of governance on their agendas in a more intense manner to efficiently scrutinize clubs’ finances and sustain the viability of the sport. The rest of the paper is organized as follows: The literature review section provides a discussion on the relevant literature on the issue of governance quality and its impact on capital structure and states the main research hypotheses. The third section describes the data used in the study and analyzes the research design. The fourth section is dedicated to the empirical results and the sensitivity analysis, while the last section presents the main conclusions and offers policy implications and fruitful avenues for future research.

2. Literature review and hypotheses development

The role of corporate governance is to ensure the absence of opportunistic behavior, limit information asymmetries and create special skills in strategic decision-making (La Rocca, 2007). The agency theory has gained strong empirical support within this specific research area (Fama and Miller, 1972; Jensen and Meckling, 1976). Zwiebel (1996) and Hart (1993) argue that debt restricts the availability of free cash flows at the manager’s discretionary choices, but most of the times, managers are free to make capital structure decisions in a manner which maximizes their own interests without any constraints by the owners of the firm. This agency conflict has a limit and that is the possibility of bankruptcy. However, as we mentioned above, FCs are corporations that do not fit in the classic framework of firm distress, thus debt cannot play its disciplinary

role by restricting managerial entrenchment (Gerrard, 2006). Consequently, agency conflicts are expected to be more severe within this business sector, and corporate governance could be used as the monitoring mechanism for mitigating any conflict of interest between managers and stakeholders.

Agency problems are evidenced by several recent studies on sport governance (Mason, 1997; De Barros *et al.*, 2007). Additionally, a study by the Football Governance Research Center (FGRC, 2005) documents that sport organizations and specifically FCs are not so effective in balancing the shareholder's (and stakeholder's) interests with that of the organization. In addition, Michie (2000) documents that the issue of corporate governance for FCs should be considered very seriously because directors' behavior frequently suggests that they are more interested in personal financial benefits or social status rather than the interests of their stakeholders. The abovementioned arguments find support in many recent cases of FCs financial mismanagement where FCs in Europe appear to be in difficult financial straits, having accumulated great losses and huge levels of debt (Bosca *et al.*, 2008; Lago *et al.*, 2006; Ascari and Gagnepain, 2006; Frick and Prinz, 2006; Barros, 2006; Dimitropoulos, 2009; 2010).

Despite the source of the aforementioned agency costs, Drobetz *et al.* (2004) and Haque *et al.* (2011) argue that strong corporate governance mechanisms are able to reduce the agency costs. Consequently, we can infer that FCs with strong corporate governance mechanisms will sustain less leverage compared to their weak governed counterparts. Thus, we predict an inverse relationship between the quality of governance and the level of debt obligations. The following subsections discuss the main governance mechanisms under study and the research hypotheses.

2.1 Ownership structure and capital structure

According to Jensen and Meckling (1976), increased managerial share ownership may result in less agency conflicts between managers and shareholders due to the alignment of interests between these two related parties. The abovementioned argument is empirically supported by Bajaj *et al.* (1998) and Bokpin and Arko (2009) who document a positive association between managerial share ownership and various measures of leverage. On the contrary, there are some studies which point toward the opposite direction under different methodological settings and business sectors (Friend and Lang, 1988; Brailsford *et al.*, 2002).

Specifically, in the sport industry, Sloane (1971) and Szymanski and Smith (1997) argue that wider share ownership consists of a viable solution to the agency problems evidenced in sport organizations in the USA and the European Union (EU). Additionally, McMaster (1997) argues that ownership dispersion may partially resolve underlying agency problems and provide smaller clubs with the necessary funds to attract skilled athletes. What is more, it can enhance the competitiveness of the leagues and improve their financial position through less leverage exposure. However, a recent study by Peterson (2009) regarding the European football industry (2009) documents that the majority of FCs in elite football leagues in Europe are characterized by increased ownership concentration and are either completely controlled by few shareholders (the majority of them are managers and institutional investors) or have a majority shareholder with > 75 per cent of voting rights (Dimitropoulos, 2011). Therefore, as the concentration of ownership (among managers) increases, an increase in the level of leverage will probably occur. Consequently, it is expected that higher managerial

ownership will have a significant positive effect on the level of leverage of European FCs. Thus, the first research hypothesis is stated in the following form:

H1. Managerial ownership is positively associated with the level of leverage.

As mentioned above, institutional investors are the second and probably the most significant group of share holders within the European FCs. According to [Bhojraj and Sengupta \(2003\)](#) and [Mande et al. \(2012\)](#), institutional investors improve the efficiency of corporate governance by providing external monitoring which lowers agency costs. Additionally, [Senaux \(2008\)](#) argues that if investors have a high stake in the firm (share ownership), they will demand stronger governance structures that will safeguard their investments ([Hill and Jones, 1922](#)).

The empirical literature on the relation between institutional ownership and leverage is quite limited but again with contradictory results. [Brailsford et al. \(2002\)](#) found that firms with external institutional investors have lower leverage, contrary to [Friend and Lang's \(1988\)](#) earlier argument that firms with more non-managerial external investors have significantly higher leverage. In addition, [Driffield et al. \(2005\)](#) and [Pindado and de la Torre \(2005\)](#) document that higher ownership concentration is associated with higher leverage which is relevant to [Jiraporn and Gleason's \(2007\)](#) argument of better alignment between manager's and shareholder's interests. Therefore, we can argue that if the participation of institutional investors on FC's equity increases, this will create agency problems and will increase managerial entrenchment which, in turn, may have a positive impact on the capital structure of clubs, as debt issuance provides institutional investors' with the ability to sustain corporate control on the clubs operational activities. Consequently, it is expected that institutional ownership will have a positive effect on the level of leverage. Thus, the second research hypothesis is stated as follows:

H2. Institutional ownership is positively associated with the level of leverage.

2.2 Board structure and capital structure

Previous studies on the field of corporate governance have considered the size of the board of directors as a significant monitoring mechanism that impacts the capital structure of the firm. [Jensen \(1986\)](#) documents that firms with larger boards are more leveraged. This finding has been verified by [Wen et al. \(2002\)](#), who argue that larger boards are associated with larger amounts of leverage. Additionally, [Anderson et al. \(2004\)](#) and [Abor \(2007\)](#) document that larger boards are more efficient and more trustworthy, a fact which lowers the firm's cost of debt and serves as a motivation to use more debt instead of equity. However, [Bokpin and Arko \(2009\)](#) have found some contradictory findings on this issue, documenting a positive association between leverage and board size which reverts when they use other forms of debt–equity ratio.

On the contrary, [Berger et al. \(1997\)](#) reached an opposite conclusion compared to the previous studies by documenting an inverse relation between board size and leverage. Their findings are in line with the arguments by [Goodstein et al. \(1994\)](#), [Psaros \(2009\)](#) and [Reddy et al. \(2010\)](#) that larger boards provide an increased pool of expertise, greater management monitoring and access to a wider range of contracts and resources, thus, are able to achieve better access to equity markets, leading to lower levels of leverage. In the case of sport organizations, the issue of board structure has been considered extensively during the past decade ([Esteve et al., 2011](#)). [Ferkins \(2009\)](#) points out that the board structure remains a significant determinant of a sport organization's strategy,

and Heinemann and Puig (1996) provide evidence that larger boards include a wider range of professionals with different knowledge experience and connections with the local community, which can benefit the sport clubs by raising financial resources from various stakeholders. This opinion has been documented by Chelladurai (1987), who argues that clubs which have boards with more pool of expertise and size can improve their relations with its stakeholder's, thus increasing their resources without relying on the leverage. Therefore, it is expected that FCs with a higher board size will be associated with lower levels of leverage. So, the third hypothesis is stated in the following form:

H3. Board size is negatively associated with the level of leverage.

Furthermore board independence (the fraction of independent and non-executive directors serving on the board) has also received great attention by researchers and regulators. According to the agency theory, more independent boards are associated with less agency problems, thus, contributing to the enhancement of firm value (Brown *et al.*, 2011). Referring to the issue of capital structure, Wen *et al.* (2002) argue that the presence of independent directors on the board leads to lower leverage due to the superior monitoring control and the reduction of agency conflicts between managers and stakeholders. However, earlier studies by Jensen (1986) and Berger *et al.* (1997) document that firms with more independent directors utilize more debt instead of equity. Additionally, Bhojraj and Sengupta (2003) argue that more independent boards have lower bond yields and higher credit ratings on new debt issuances, a fact which reduces the cost of debt-making and the issuance of equity less desirable.

In addition, De Barros *et al.* (2007) argue that the monitoring of the board of directors within sport clubs is a crucial issue which can be achieved through higher board independence. Their evidence indicate that board independence contributes toward reducing agency conflicts within the club and restrains the role of interest groups which try to modify the rules of the game to achieve their own interests at the expense of the stakeholders. Additionally, Rezende *et al.* (2010) argue that the adoption of practices of corporate governance (as board independence) could be an important mechanism for managing clubs based on the principles of transparency, accountability and equity, thus restricting the club's exposure on leverage. Therefore, based on the abovementioned discussion, we can state the fourth hypothesis in the following form:

H4. Board independence is negatively associated with the level of leverage.

Finally, there is a long debate among researchers on whether the CEO should serve as the chairman of the board of directors. On the one hand, a dual role of the CEO may enhance the firm's value, as the CEO has thorough knowledge of the strategies and the operations of the firm (Donaldson and Davis, 1991; Davis *et al.*, 1997). On the other hand, when a CEO is also the chairman on the board this could denote CEO entrenchment (Shleifer and Vishny, 1989; Mande *et al.*, 2012) and a deterioration on board effectiveness in monitoring managerial actions, as the CEO can influence the board's agenda and decisions, leading to higher agency problems between managers and shareholders (Abbott *et al.*, 2004; Imhoff, 2003). The evidence regarding CEO duality and leverage is limited, but it points in the same direction. Fosberg (2004) argues that firms with CEO duality have higher leverage, and this result is corroborated by Abor (2007). De Barros *et al.* (2007) documents empirical evidence that the separation of CEO and board

chairmen's roles in sport clubs can prevent the domination by a single personality and mitigate conflict of interests among managers and the members of the clubs (fans and various stakeholders). Consequently, it is expected that FCs with dual leadership will be more leveraged. Thus, the final hypothesis is stated as follows:

H5. CEO duality is positively associated with the level of leverage.

3. Data and research design

3.1 Data selection procedure

The research sample includes data from 67 FCs (7 listed and 60 unlisted) from 10 EU countries, namely, Belgium, Denmark, France, Germany, Italy, The Netherlands, Sweden, Spain, Greece and the UK over the period of 2005-2009, summing up to 335 firm-year observations. The initial sample included 79 FCs; however, those which did not provide complete accounting and governance data for every year between 2005 and 2009 were removed, thus, limiting the final number to 67 clubs. All FCs in the sample have the legal form of the limited liabilities or public company where their capital and assets are divided in shares held by the owners which can be freely traded in the market. Clubs having the legal form of mutually structured corporations were excluded from the sample. All FCs with the abovementioned legal structure are obliged to publish financial statements and annual reports (audited by certified chartered accountants) which include information on the governance structure of the club. The main criteria that each club must fulfill in order to be included in the sample is to have full financial data published in their annual financial statements, provide details on corporate governance (mainly board and ownership structure) and to have closed their fiscal year in June. The research sample is restricted only to clubs participating in the elite division of each country's official championship for all years under investigation. The reason for this choice is that this filter can mitigate any biases arising from the relegation of FCs to lower divisions and because clubs in the first division attract greater publicity, have increased chances for external financing and their financial statements provide greater reliability, as they are permanently audited by certified chartered accountants. All data were hand-collected from each club's annual reports, and furthermore, the top and bottom 1 per cent of the data distribution was trimmed to reduce any biases arising from the existence of significant outliers in our sample variables. Additionally, the data of non-Eurozone clubs have been converted to Euro-based on the rate (extracted from ECB's database) between Euro and their national currency on the last day of each fiscal year. The following [Tables I and II](#) presents that sample selection procedure and the distribution by country.

3.2 Research design

A basic methodological issue that researchers have to consider when trying to explain the causes and effects of corporate governance and capital structure is endogeneity ([Brown et al., 2011](#); [Bokpin and Arko, 2009](#)). According to [Demsetz \(1983\)](#), ownership endogeneity implies that the conditions under which the firm is operating determine the best ownership structure for the shareholders. Thus, no systematic relationship between ownership structure and capital structure should be expected. Despite the fact that this view has been challenged by [Agrawal and Knoeber \(1996\)](#), we examined for the possible impact of endogeneity by applying a Generalized Method of Moments (GMM) methodology. To find valid instruments, we followed the works by [Kose and Litov \(2008\)](#) and [Dimitropoulos and Tsagkanos \(2012\)](#) and instrumented the governance

measures (except CEO duality) with their values at the year prior to the beginning of the sample period. For CEO duality, the tenure of the CEO in each club was used as an instrument, as the tenure of the CEO is likely to influence its presence on the board and his/her dominance in the future. These instruments are expected to be economically significant, as these are predetermined by a managerial point of view (Kose and Litov, 2008). The test of over-identifying restrictions (Hansen J-test) examines the joint null hypothesis that the excluded instruments are uncorrelated with the error term and are correctly excluded from the second-stage equation. The results of this tests suggested that the used instruments were economically meaningful, as the Hansen statistic was insignificant in conventional levels.

To test the main research hypotheses, the ratio of total debt over common equity (Bokpin and Arko, 2009; Mande *et al.*, 2012; Haque *et al.*, 2011; Jiraporn *et al.*, 2012) has been used as the dependent variable in the following GMM panel regression model:

$$TDit = \alpha_0 + \alpha_1 BIND_{it} + \alpha_2 BDSIZE_{it} + \alpha_3 MOWN_{it} + \alpha_4 IOWN_{it} + \alpha_5 CEODUAL_{it} + \beta Controls_{it} + \gamma Year\ dummies + \delta Country\ dummies + e_{it} \quad (1)$$

BIND denotes board independence and is estimated as the ratio of independent directors to the total number of directors serving on the board. Independent directors are defined as:

- those who are not an active or retired employee of the club;
- those who do not have any close business ties with the club; and

Available soccer clubs	327
Less: clubs not participating in the elite division	(223)
Remaining clubs	104
Less: clubs with incomplete financial and governance data	(34)
Clubs with full financial and governance data	70
Less: non-June fiscal year-end clubs	(3)
Soccer clubs included in the final sample	67

Table I.
Sample selection: selection procedure

Country	Number of clubs
Belgium	6
Denmark	6
France	8
Germany	6
Greece	8
Italy	6
The Netherlands	5
Norway	9
Sweden	7
United Kingdom	6
Total	67

Table II.
Sample selection: sample distribution by country

- those who are not representatives of a major shareholder of the club (Ahmed *et al.*, 2006).

BDSIZE is the total number of directors serving on the board at the end of the fiscal year (Peasnell *et al.*, 2005) and captures the board size. To not reject *H3* and *H4*, the coefficients of BIND and BDSIZE are expected to be negative and statistically significant.

MOWN is the level of managerial ownership estimated as the percentage of share capital owned by the directors of each FC at the end of the fiscal year (Beiner *et al.*, 2006). IOWN is the level of institutional ownership estimated as the percentage of share capital owned by institutional investors of each FC at the end of the fiscal year (Rose, 2007). In order for *H1* and *H2* not to be rejected, the relative coefficients on the MOWN and IOWN variables are expected to be positive and statistically significant. Our last corporate governance variable is CEODUAL which captures the dual role of the CEO as the chairman of the board. It is a dichotomous variable receiving (1) if the CEO is also the board's chairman and (0) otherwise. In order for *H5* not to be rejected, we must find a positive and significant coefficient on this variable, suggesting that soccer clubs with a dual management system rely are associated with higher leverage compared to clubs where these two positions are occupied by two different people. Finally, the main model includes year and country dummies to capture annual- and country-specific characteristics which may affect the capital structure and which are not included in the model.

In model (1), additional control variables, which have proved to be significant determinants of capital structure in previous research, have been included. First of all, we examine the size of FCs (SIZE), estimated as the natural logarithm of the club's total assets at the end of the fiscal year following Haque *et al.* (2011), Mande *et al.* (2012) and Dimitropoulos (2011). Evidence by James (1987) and Ojah and Manrique (2005) indicates that larger firms have more quality projects on their portfolio which they may wish to fund through bank debt to avoid information dispersion to rivals. Additionally, Chang *et al.* (2006) suggest that larger firms are generally more risky than their smaller counterparts and are more likely to issue debt instead of equity. However, according to Bevan and Danbolt (2000), the empirical evidence on the impact of firm size on debt is controversial, and the reason for this inconsistency is attributed to several factors including the type of debt, methodological settings and other firm characteristics. On the contrary, Rajan and Zingales (1995) and Bevan and Danbolt (2000) provide evidence of a positive association between size and gearing in the UK. Their findings and arguments can theoretically be supported for the European football industry, as Dimitropoulos (2011) indicates that larger FCs publish high-quality financial statements (characterized by less earnings management), thus, making the issuance of bank debt easier for them, as banking institutions are more confident that such FC's can repay back interest and principal. Therefore, a positive and significant coefficient is expected on this variable.

Additionally, a variable capturing growth opportunities (GROWTH) is included in the model and estimated as the annual percentage change in a club's revenues as in the study by Dimitropoulos (2011). According to Mande *et al.* (2012), firms with greater growth opportunities tend to finance their future projects less through debt because they are closely monitored by debt holders and, as a result, managers have fewer opportunities to implement strategic decisions without close control. An alternative

explanation for the impact of growth opportunities on clubs' capital structure can be derived from the arguments made by [Dimitropoulos \(2011\)](#) who supports that FCs with more growth opportunities are associated with more manipulated financial statements via earnings management. This can negatively influence their creditworthiness, resulting in lower possibilities for finance by banking institutions. Consequently, based on the above discussion a negative coefficient is expected on this variable.

Moreover, we examine the impact of profitability on clubs' capital structure ([Jiraporn *et al.*, 2012](#)). The measure of return on assets (ROA) has been used and is estimated as the net income divided by end-of-year total assets. According to [Jiraporn *et al.* \(2012\)](#), managers have a pecking order in which retained earnings remain their first choice of cash followed by debt and equity financing. In addition, [Singh and Faircloth \(2005\)](#) document that high leverage adversely affects a firm's future investment opportunities which, in turn, can lead to a negative impact on the long-term operating performance. According to [Garcia-del-Barrio and Szymanski \(2009\)](#), European FCs seem to be more win maximizers than profit maximizers and are willing to resort to debt financing and sustain severe losses to enhance their on-field performance. Therefore, a negative relationship between ROA and leverage is expected.

An additional control variable captures the impact of audit quality (AUD) and is a dichotomous variable receiving (1) if a club is audited by a big-4 audit corporation (PriceWaterhouse Coopers, KPMG, Deloitte, Ernst & Young) in a given year and (0) otherwise. According to [Chang *et al.* \(2009\)](#), firms with higher external audit quality (audited by big-4) report financial statements of enhanced quality and, therefore, rely more on equity financing rather than debt, as they are characterized by less information asymmetries which, in turn, lowers their cost of equity. Moreover, [Dimitropoulos \(2011\)](#) points out that FCs with high quality of external audit publish less manipulated financial statements, a fact which increases investor's trust, thus, making it easier for them to get financed by public debt. Therefore, a negative coefficient is expected on this variable. Additionally, a previous study by [Bokpin and Arko \(2009\)](#) examined asset tangibility (estimated as the ratio of property, plant and equipment to total assets) as a significant determinant of the capital structure and found a negative association between these two variables. On the contrary, [Benkraiem *et al.* \(2011\)](#) argue that soccer clubs base their operations heavily on intangible assets (player contracts, brand names, etc.). According to [Andreff \(2006b\)](#), FCs have invested heavily in playing talent over the years which was basically financed through debt, resulting in severe financial problems and even reaching the realms of insolvency. Consequently, we examine asset intangibility (IA), estimated as the ratio of intangible assets to total assets, and it is expected to have a positive coefficient, suggesting that clubs with more intangible assets will present higher levels of debt. Finally, the last control variable captures the capital structure between publicly listed and unlisted FCs. DLIST is a dichotomous variable receiving (1) if an FC is listed on the stock market and (0) otherwise. According to [Bianco and Casavola \(1999\)](#), listed firms are characterized by a more dispersed ownership structure compared to unlisted corporations, and these firms present higher levels of return on investment and lower cost of capital which make the issuance of equity more preferable than debt. Additionally, a recent study by [Baur and McKeating \(2011\)](#) documents that FCs' initial public offerings impose tacit restrictions toward the club's excessive leverage and investments, which is consistent with the argument that public markets impose greater financial discipline on firms. Thus, listed FCs are

expected to be less leveraged compared to their unlisted counterparts. This means that a negative coefficient is expected on the DLIST variable.

4. Empirical findings

4.1 Descriptive statistics and correlations

Table III, presents the descriptive statistics of the sample variables for the period of investigation (2005-2009). Because we can see that the mean leverage of European soccer clubs is equal to 5.6, suggesting that the total debt covers almost six times their common equity. However, clubs in our sample present a positive annual change in revenues (mean value of GROWTH, 10.27), but they are not profitable because the mean ROA is negative (-0.12). Additionally, European soccer clubs are characterized by low audit quality, as only 16 per cent of these clubs are audited by a big-4 audit firm (mean value of AUD equals 0.16), and their intangible assets comprise 57.5 per cent of their total assets, justifying the asset intangibility variable used in the regression model. Referring to the governance variables, 47.4 per cent of the European FCs is owned by insiders (managers and officers), while 48.9 per cent by institutional investors. Additionally, the mean board of FC's includes nine members, of whom 46.6 per cent are independent. On the contrary, in the majority of European FC's, the board chairman also holds the position of the CEO, as the CEODUAL dummy has a mean value of 92.5 per cent. Moreover, Table IV presents the evolution of debt and financial performance over the period under investigation. As we can see, the ratio of total debt to total assets presents a significant increase up to 2007 and then decreases until 2009. Of course, this result

Variables	Mean	Standard deviation	Minimum	Maximum
TD	5.60	9.54	0.04	81.56
BIND	0.42	16.96	0.1	1
BDSIZE	9.49	7.15	1	33
MOWN	0.47	0.39	0	1
IOWN	0.48	0.40	0	1
CEODUAL	0.92	0.26	0	1
SIZE	8.17	1.77	3.88	12.98
GROWTH	0.10	0.36	0.02	0.27
ROA	-0.12	0.24	-0.91	0.52
AUD	0.16	0.37	0	1
IA	0.57	0.20	0.15	0.98
DLIST	0.11	0.23	0	1

Notes: The sample includes data from 67 FCs from 10 EU countries over the period 2005-2009. Seven clubs are publicly listed and 60 unlisted. TD is the ratio of total debt over common equity, BIND is the ratio of independent directors to the total number of directors serving on the board, BDSIZE is the total number of directors serving on the board, MOWN is the percentage of shares owned by the directors and managers, IOWN is the percentage of shares owned by institutional investors, CEODUAL receives (1) if the CEO is also the chairman of the board and (0) otherwise, SIZE is the natural logarithm of total assets at the end of the fiscal year, GROWTH is the annual percentage change in a club's revenues, ROA is the ratio of net income over total assets at the end of the fiscal year, AUD is a dichotomous variable receiving (1) if a club is audited by a big-4 audit corporation (PriceWaterhouse Coopers, KPMG, Deloitte or Ernst & Young) in a given year and (0) otherwise, IA is estimated as the ratio of intangible assets to total assets, DLIST is a dummy receiving (1) if a club is publicly listed and (0) otherwise

Table III.
Sample description:
descriptive statistics
(2005-2009)

cannot be directly attributed to the decision of club managers to reduce their debt exposure, but to the 2007-2008 financial crises which reduced the amount of lending by banking institutions, making it even more difficult for clubs to get financed. This fact is evidenced by the financial performance measures (ROA and asset turnover) which both deteriorated over the sample period where net losses reach up to almost 20 per cent of clubs assets, verifying previous findings on clubs' dire financial straits and the need to implement effective governance mechanisms to reduce financial misconduct and enhance corporate transparency (Dimitropoulos and Tsagkanos, 2012).

Table V presents Pearson's correlation coefficients between the sample variables during the period of investigation (2005-2009). Leverage is positively correlated with SIZE (0.285) and IA (0.305) as expected indicated an association between larger soccer clubs and those with more intangible assets regarding the levels of leverage. On the contrary, leverage is negatively correlated with GROWTH (-0.159) and ROA (-0.255), verifying previous evidence on the negative association between growth opportunities and profitability with the firm's capital structure. In addition, listed FCs seem to have a negative association with leverage, as the correlation between TD and DLIST is negative and significant (-0.118). Finally, the only significant correlation between TD and the governance variables was with the size of the board of directors (BDSIZE) which has a negative coefficient (-0.228).

4.2 Regression results on capital structure and corporate governance

The results from the estimation of the GMM panel regression model (1) are presented in Table VI. As for the ownership structure variables, both MOWN and IOWN have positive and significant coefficients, leading us to support *H1* and *H2*. Specifically, this result corroborates previous studies by Sloane (1971), McMaster (1997) and Szymanski and Smith (1997), who argue that wider share ownership is a viable solution to agency problems evidenced in sport organizations in the EU. This result also corroborates evidence by Driffield *et al.* (2005) and Pindado and de la Torre (2005) that higher ownership concentration is associated with higher leverage which, in turn, is relevant to Jiraporn and Gleason's (2007) argument. Therefore, the evidence from the ownership structure of European soccer clubs suggests that as the concentration of ownership (among managers and institutional investors) increases, the level of debt will probably also increase due to the fact that managers prefer to finance new investments more through debt (instead of equity), as the issuance of new equity may lead to a loss of corporate control and distort their "empire-building" and entrenchment behavior. Consequently, more dispersed ownership can be used as an effective mechanism to reduce the clubs' leverage.

Moving on to the governance variables, BIND and BDSIZE were both found negative and statistically significant, supporting *H3* and *H4*. This finding suggests that soccer

Variables	2005	2006	2007	2008	2009
TD	1.119	1.210	1.435	0.906	0.877
ROA	-0.097	-0.117	-0.108	-0.121	-0.191
SAL/TA	14.134	12.810	9.277	6.898	8.239

Notes: SAL/TA is the ratio of asset turnover measured as annual sales to total assets

Table IV.
Sample description:
evolution of debt and
financial performance
(annual mean values)

Table V.
Pearson's correlation
coefficients of sample
variables (2005-2009)

Variables	TD	SIZE	GROWTH	ROA	AUD	DLIST	IA	BIND	CEODUAL	BDSIZE	MOWN
SIZE	0.285										
GROWTH	-0.159	-0.482									
ROA	-0.255	0.160	-0.024								
AUD	0.105	0.123	0.010	0.017							
DLIST	-0.118	0.309	-0.066	0.033	0.228						
IA	0.305	0.285	-0.181	-0.168	0.016	-0.082					
BIND	-0.022	-0.151	-0.024	-0.064	-0.076	-0.041	-0.019				
CEODUAL	0.011	0.037	-0.286	-0.095	-0.027	0.072	0.023	-0.284			
BDSIZE	-0.228	0.197	-0.129	0.102	-0.036	0.141	-0.155	-0.147	0.083		
MOWN	0.010	-0.281	0.024	0.039	-0.204	-0.046	0.054	0.010	0.121	-0.138	
IOWN	0.029	0.186	-0.001	-0.066	0.199	0.005	-0.083	0.004	-0.142	0.153	-0.451

Notes: Coefficients in bold indicate statistical significance at the 5 per cent level or more (two-tailed test). The sample includes data from 67 FCs from 10 EU countries over the period 2005-2009. Seven clubs are publicly listed and 60 unlisted. TD is the ratio of total debt over common equity, BIND is the ratio of independent directors to the total number of directors serving on the board, BDSIZE is the total number of directors serving on the board, MOWN is the percentage of shares owned by the directors and managers, IOWN is the percentage of shares owned by institutional investors, CEODUAL receives (1) if the CEO is also the chairman of the board and (0) otherwise, SIZE is the natural logarithm of total assets at the end of the fiscal year, GROWTH is the annual percentage change in club's revenues, ROA is the ratio of net income over total assets at the end of the fiscal year, AUD is a dichotomous variable receiving (1) if a club is audited by a big-4 audit corporation (PriceWaterhouse Coopers, KPMG, Deloitte or Ernst & Young) in a given year and (0) otherwise, IA is estimated as the ratio of intangible assets to total assets, DLIST is a dummy receiving (1) if a club is publicly listed and (0) otherwise

Variables	Coefficients	TD	Z-stat
Constant (a_0)	1.140**		1.77
BIND (a_1)	-0.020**		-2.33
BDSIZE (a_2)	-0.030**		-1.79
MOWN (a_3)	2.658*		4.21
IOWN (a_4)	2.256*		3.27
CEODUAL (a_5)	0.144**		1.75
SIZE (β_1)	1.094**		2.41
GROWTH (β_2)	-0.017		-0.88
ROA (β_3)	-1.574*		-3.28
AUD (β_4)	-0.620		-0.41
DLIST (β_5)	-0.174		-0.95
IA (β_6)	1.771**		2.54
BIND _{t-1}	-0.018**		-1.91
BDSIZE _{t-1}	-0.021**		-1.80
MOWN _{t-1}	2.101**		2.03
IOWN _{t-1}	1.843**		2.44
CEOTENURE	0.098**		1.71
Hansen's J statistic		Chi2 = 2.654 ($p = 0.988$)	

Notes: *, ** indicate statistical significance at the 1 and 5 per cent level, respectively (Z-statistics with two tailed test in the parentheses). The instruments of the governance measures (except CEO duality) were their values at the year prior to the sample initiation. For CEO duality, the tenure of the CEO in each club was used as a valid instrument. TD is the ratio of total debt over common equity, BIND is the ratio of independent directors to the total number of directors serving on the board, BDSIZE is the total number of directors serving on the board, MOWN is the percentage of shares owned by the directors and managers, IOWN is the percentage of shares owned by institutional investors, CEODUAL receives (1) if the CEO is also the chairman of the board and (0) otherwise, CEOTENURE is the number of years the CEO has served in that position, SIZE is the natural logarithm of total assets at the end of the fiscal year, GROWTH is the annual percentage change in club's revenues, ROA is the ratio of net income over total assets at the end of the fiscal year, AUD is a dichotomous variable receiving (1) if a club is audited by a big-4 audit corporation (PriceWaterhouse Coopers, KPMG, Delloitte or Ernst & Young) in a given year and (0) otherwise, IA is estimated as the ratio of intangible assets to total assets, DLIST is a dummy receiving (1) if a club is publicly listed and (0) otherwise

Table VI.
GMM regression results of
governance on capital
structure

clubs, with an increased number of independent and non-executive directors on the board combined with more members serving on the board, are associated with lower levels of leverage. This empirical finding verifies arguments by [Heinemann and Puig \(1996\)](#) and [Chelladurai \(1987\)](#) that sport clubs that have boards with more pool of expertise and size can improve their relations with their stakeholders, thus increasing their financial resources without relying on leverage. In addition, this evidence is in accordance with arguments provided by [De Barros et al. \(2007\)](#) who point out that BIND can restrict managerial entrenchment and control over FCs via lower leverage. The CEODUAL variable has the expected sign and is statistically significant within conventional levels; therefore, the duality of the CEO serving as the board chairman does seem to influence the level of leverage of European soccer clubs, suggesting that the separation of these two roles can contribute toward reducing clubs' leverage exposure.

Finally, the control variables have all the expected signs, but only SIZE, ROA and IA are statistically significant. Specifically, the coefficient on SIZE indicates that soccer clubs with more assets are associated with higher levels of leverage, verifying previous evidence that larger FCs are less risky and more likely to issue more debt than equity (Chang *et al.*, 2006). The coefficient on profitability (ROA) was found negative and significant, suggesting that more profitable FCs depend more on equity issuance. In addition, as FCs in Europe are more win maximizers than profit maximizers (Garcia-del-Barrio and Szymanski, 2009), they are also willing to resort to debt financing and sustain severe losses so as to enhance their on-field performance. This argument is further supported by the coefficient on the variable of IA which is significantly positive as expected, suggesting that soccer clubs finance their intangible investments (player contracts etc.) more through leverage than equity, thus, verifying arguments made by Andreff (2006b).

4.3 Sensitivity analysis

To control the robustness of the main results, several sensitivity tests were performed referring to the form of the regression model, the method of estimation and the definition of variables. At first, following the work of Bevan and Danbolt (2000), Bokpin and Arko (2009) and Lemma and Negash (2011), model (1) was re-estimated by replacing the dependent variable with alternative forms of corporate leverage, such as total debt over total assets, long-term debt over assets, long-term debt over equity and short-term debt over equity, to fully understand the impact of corporate governance on the capital structure of European FCs. The results remained unchanged relative to those in Table VI.

In addition, following Jiraporn *et al.* (2012), model (1) was re-estimated using changes in both dependent and independent variables, as the regressions with changes are less likely to show spurious relations between the variables and those using only levels. The results remain unchanged after this modification. In addition, model (1) was re-estimated by including specific variables from countries that may affect the capital structure like macroeconomic variables from Eurostat's database (GDP growth, inflation rates and annual tax rates) and institutional variables extracted from the studies of La Porta *et al.* (1998, 2000) and Kaufmann *et al.* (2009), such as law enforcement, capital market size, stock market liquidity and banking sector development. Again the results remained qualitatively unchanged compared to those in Table VI. Moreover, the basic model was re-estimated by substituting the SIZE variable using the logarithm of annual sales instead of the total assets, ROA was substituted by the ratio of net profit margin and GROWTH was substituted by the ratio of net revenues to total assets, but the results remain qualitatively unaffected.

Additionally, to avoid any bias arising from the existence of outliers in the estimation of the basic model, we trimmed the approximately 5 per cent (beyond the 1 per cent that has already been performed) of all variables used in the estimation of model (1). Results were qualitatively similar compared to those in Table VI. Finally, we controlled for possible estimation bias arising from the curtailing of the sample. For this reason, the basic model was re-estimated after including FCs participating in lower divisions (with complete financial and governance data) including a dummy separating these two groups and clubs which close their fiscal year in December. The adjustment of the differences in the fiscal years was made according to the work of Lemma and Negash (2012). The results remained qualitatively unchanged for the elite FCs, as for the non-elite FCs, all coefficients were insignificant and only BIND seemed to impact

significantly on the level of leverage. Thus, our initial results stand even after including smaller clubs in the estimation sample.

5. Conclusions

The aim of this study was to examine the issue of corporate governance and its impact on the capital structure of publicly listed and unlisted European FCs. By analyzing a sample from 67 European soccer clubs over the period of 2005-2009, it is evidenced that strong corporate governance mechanisms such as increased board size and independence and the separation between the board chairman's and CEO's roles can result in a reduction in the level of leverage, thus, reducing the risk of soccer clubs' financial instability. Additionally, the levels of managerial and institutional ownership were found to contribute positively to the level of leverage, suggesting that reducing ownership concentration among managers and institutional investors and contrarily increasing ownership dispersion can significantly contribute to the improvement of FCs' capital structure. These findings corroborate empirical results of many studies on the field like [Jiraporn *et al.* \(2012\)](#), [Jiraporn and Gleason \(2007\)](#) and [Mande *et al.* \(2012\)](#).

These findings are important because, for the first time in literature, empirical evidence is provided regarding the validity of the agency theory within a business sector which has experienced a fascinating growth over the years, yet remains quite unexplored by financial economists. This study proves that the football industry (despite its peculiar characteristics) could be benefited by the incorporation of strong corporate governance principles in a club's structure, as they can contribute toward improving their current financial status and future viability. In addition, the evidence from this study could prove useful to football managers and regulators, as they have policy implications for these related parties. Managers must bear in mind that governance mechanisms could be a useful tool for improving the capital structure (through the reduction on the level of leverage) of their clubs, a fact which may positively impact the financial market (because most clubs are unlisted, and the only source of financing is the banking sector which require signs of solvency to secure their principal and interest). Finally, the issues of board independence and ownership dispersion must be included in the official agenda of regulators on clubs' governance reform and allow the participation of various stakeholders (fans, supporters, local representatives, etc.) in the decision and monitoring process of FCs' corporate boards. In particular the UEFA regulators must consider the issue of governance seriously, as the efficiency of the new licensing system depends heavily on the structure and quality of clubs' corporate governance; therefore, a reform in that direction may help clubs balance the needs of the business and success on the pitch, while simultaneously bringing significant benefits to stakeholder groups ([Michie and Oughton, 2005](#)).

However, there are two limitations that have to be mentioned. First, the data set is restricted within a specific region (EU), covering a single sport activity (football) and specifically FCs with a distinctive corporate identity and structure (limited liability companies or publicly listed companies), thus, the generalization of these findings within other sport sectors (with different legal structure) remains an open empirical question. Second, the data span is from a relatively short period. Therefore, future research can extend the present findings by examining the connection between governance and capital structure in other professional sport sectors (basketball, baseball, etc.) with increased interest from the public and within different world

segments (USA or Australia) or corporate structures. Finally, another fruitful avenue for future research is to consider what effect governance quality and a club's intellectual capital is likely to have on their financial performance and capital structure.

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