International Journal of Business & Economic Studies
Year: 2024, Vol: 6, No: 2, pp.129-142
https://doi.org/10.54821/uiecd.1447823

Assessing the Financial Performance of the Greek Football Clubs

Yunan Futbol Kulüplerinin Finansal Performansının Değerlendirilmesi

Gerasimos ROMPOTIS
Dr., National and Kapodistrian University of Athens MBA
geras3238@yahoo.gr
https://orcid.org/0000-0002-1148-8115

Received : 06.03.2024
Revised : 21.06.2024
Accepted : 23.06.2024
Type of Article : Research

Keywords:
Financial Performance, Football Clubs, Liquidity, Leverage, Efficiency
Jel Codes:
M42

ABSTRACT

This study evaluates the financial performance of seven major football clubs from the top division of Greece over a period which spans from season 2015-16 to season 2021-22 with correlation and regression analysis. Financial performance is expressed in three alternative ways, i.e., the return on assets (ROA), return on equity (ROE), and profit margin, which is computed as ratio of the profit before tax to total operating revenue. Purely financial factors are considered as determinative variables of performance including the size of the clubs, their liquidity, leverage, efficiency and cash flow efficiency. The results reveal indicate that the clubs under investigation are highly leveraged and have poor liquidity, while they present extensive annual and accumulated losses. On the factors that can affect the financial performance of the Greek football clubs, our analysis accentuates that the size of the football entreprises, along with the degree of liquidity, leverage, efficiency and their ability to use their assets to generate cash can affect financial performance, either in a positive or a negative way.

Anahtar Kelimeler:
Finansal Performans, Futbol Kulüpleri, Likidite, Kaldıraç, Etkinlik
Jel Kodları:
M42

ÖZET

Bu çalışma, Yunanistan'ın en üst düzey futbol liginden yedi önemli kulübün finansal performansını, 2015-16 ile 2021-22 sezonları arasındaki dönem boyunca korelasyon ve regresyon analizleri kullanarak değerlendirmektedir. Finansal performans, aktif getiri oranı (ROA), özsermaye getiri oranı (ROE) ve vergi öncesi karın işletme gelirine oranı olan kar marjı gibi üç farklı alternatif göstergeyle ölçülmektedir. Çalışma, finansal performansı belirleyen faktörler olarak sadece finansal değişkenleri ele almaktadır, bunlar arasında kulüplerin büyüklüğü, likidite durumu, kaldıraç oranı, etkinlik ve nakit akışı etkinliği yer almaktadır. Bulgular, incelenen kulüplerin yüksek kaldıraçlı olduğunu, likidite sorunları yaşadıklarını ve önemli ölçüde yıllık ve birikmiş zararları rapor ettiklerini ortaya koymaktadır. Yunan futbol kulüplerinin finansal performansını etkileyebilecek faktörler üzerine yapılan analiz, kulüplerin büyüklüğünün, likidite durumunun, kaldıraç oranının, etkinliğinin ve aktiflerini nakit üretmek için kullanma becerilerinin finansal performans üzerindeki olumlu veya olumsuz etkilerini vurgulamaktadır.

Suggested Citation: Rompotis, G. (2024). Assessing the financial performance of the Greek football clubs . *International Journal of Business and Economic Studies*, 6(2), 129-142, Doi: https://doi.org/10.54821/uiecd.1447823

1. INTRODUCTION

Professional football has become internationally a multi-billion dollar industry in recent decades. According to Deloitte (2023), in the period 2021-22, and after the lifting of the restrictive measures of the Covid-19 pandemic that had a particularly negative impact on the activity and the financial figures of the football industry, the revenue figures of the European football market increased by 7% reaching 29.5 billion euros.

The main sources of revenue for the clubs participating in the major football categories concern ticket sales, sponsorships, advertising, TV rights, sale of products and services under the club's brand, income from participating in European competitions, including UEFA's Champions League, Europa League and Conference League, grants, rental income, and revenue from the academies.

At the same time, the main costs of the football clubs concern the payroll of the footballers, training teams and other staff, travelling, subscriptions, sponsorships, various operating costs, advertsising, and the depreciation of the tangible and intangible assets, along with the amortization of the various costs regarding the acquisitions of footballers.

Among the tens of football leagues throughout Europe, there are the so-called (Big Five), which include the Premier League of England, the La Liga of Spain, the Bundesliga of Germany, Serie A in Italy and the League 1 in France. Several clubs from these leagues are held by wealthy investors, who have been investing billions in infrastructure and the acquisition of top players aiming at boosting the sporting performance of the clubs.

In this environment of high operating costs and investments, often the revenue of clubs is not sufficient to meet their needs. Consequently, investments in footballers and infrastructure, as well as the rest of operating costs, are largely covered by bank lending or liquidity injections by the owners of the clubs in the form of share capital increases. As a result of their financial policy, European clubs often present significant annual and cumulative losses on their income statement and balance sheet, respectively.

Compared to the big European markets, the Greek football industry is considered small, both from a competitive and a financial point of view. Nevertheless, to the best of their abilities, and under the strong pressure of fans, the Greek clubs follow the tactics of the European ones in footballers' transfers and the financing of their wages and other operational costs. As a corollary, the Greek football enterprises show significant losses, both at an annual and a cumulative level.

This paper assesses the financial performance of seven Greek football clubs, which compete in the country's first division, the so-called "Super League". The study period spans from season 2015-16 to season 2021-22 and all the selected clubs have had stable presence in Greece's first division over the study period.

We examine the profitability of the clubs and assess their financial performance trying to highlight factors that may affect financial performance. Given the financial hardships that are frequently faced by several of the Greek football clubs (even the big ones), a study that will provide empirical insights on the factors that can contribute to the financial health of the Greek football enterprises is highly desirable. In other words, a study that may provide an answer to the key question of "where should the Greek football clubs focus on" in order to boost their financial health and long-run viability should be beneficial to the clubs themselves, as well as all the stakeholders involved (i.e., club owners, footballers, training and other staff, suppliers, and communities around the clubs).

Our study is not the first to examine the financial performance of the Greek football clubs. Similar studies in the past such as those by Dimitropoulos (2009 & 2010), Dimitropoulos and Alexopoulos (2014), and Dimitropoulos and Limperopoulos (2014) have shown that the Greek football enterprises are highly leveraged and face significant liquidity and profitability issues. Moreover, when it comes to the factors that affect the financial efficiency of the Greek football clubs, previous research has shown that the magnitude of the clubs' assets, the turnover rate of assets, the return on assets and the number of wins achieved by the clubs affect their profitability. However, profitability does not seem to be affected by other sporting factors.

Our study has been motivated by the fact that the most recent study on the financial health and performance of the Greek football clubs dates back to 2014. Ten years since the last study on the financials of the Greek football clubs is a quite long period of time. Thus, the main objective of the current study is to examine whether the various

financial issues accentuated by the previous studies have been dealt with or not, especially if we consider that Greece encountered a ten-year period of severe economic crisis during 2010-2019, which affected all aspects of economic activity in Greece, including the football industry of the country too.

In comparison to the findings of the early studies on the financial performance of the Greek football corporations, one would expect that efforts should have been made towards the improvement of the administration and, consequently, the financials of the Greek football clubs, especially if we take into consideration the necessity of the Greek football clubs to overcome the economic hardships posted by the Greek economic crisis. However, our results do not confirm such an improvement. On the contrary, our findings are in line with earlier findings in the literature concerning the high leverage of the Greek football enterprises, and their low liquidity, anemic profitability, high accumulated losses and poor financial performance.

The similarity of our findings with those in previous studies indicates that the Greek football clubs are not willing or able to change their way of conducting business. The clubs have been making losses over the study period on a constant basis. Their revenues are not sufficient to cover their liquidity needs. As a result, the clubs resort to frequent capital injections by their owners or to financing by the banking sector. The weak financial outlook of the Greek football clubs can be reflected to their poor on-field performance over the last decade when competing with clubs from the developed or less developed European championships under UEFA's competitions, with the exception of the recent win of the Conference League by Olympiakos.

Even though not being the first study to focus on the Greel football industry, we deem that our study makes significant contributions to the relevant literature. First, our study provides new empirical insights on the relationship between key accounting factors and the financial performance of the Greek football clubs which cover the last phase of the economic crisis in Greece, i.e., years 2015/16 to 2018/19. Previous studies on the Greek football clubs have not captured this period. Moreover, given the significance of Greece as a peripheral football power (at least in the Balkan territory), the results of our study may be used as a basis for similar studies on other football leagues in the neighborhood.

Maybe the most significant contribution of our study concerns the significant policy implications of our results for those involved in the administration of the Greek football clubs. First of all, professional managers should be hired to run the business of the Greek football clubs. In Greece, but in other countries too, it is not rare that ex-footballers of high popularity with the fans of the clubs but with poor academic records and entrepreneurship experience undertake crucial seats in the management of clubs. To some extent, this fact can explain the poor financial performance of the Greek football clubs.

Moreover, the clubs need to acknowledge that a business model which is characterized by constant loss-making cannot be viable in the long run. The answer to this problem cannot be bank lending or capital injections by the owners simply because these options cannot be available forever. In the past, major Greek clubs, such as Olympiakos, Panathinaikos and AEK, faced significant issues which threatened their presence in the top league of the country at best or over their very existence.

The Greek football clubs need to work towards their financial self-sufficiency. In this respect, our results can be quite helpful. In particular, with respect to the financial factors that may affect financial performance, our analysis shows that among the variables that may affect performance, either positively or negatively, are the size of assets, liquidity, leverage, efficiency and the ability of clubs to use their assets to generate money. Therefore, along with the necessary improvements in their sporting performance, the Greek football clubs need to focus on improving their financial and business operations, avoiding unnecessary expenditure, and enhancing their financial independence and long-run viability.

The rest of this article includes the literature review in Section 2, the description of research methodology and the sample of the study in Section 3, the discussion of empirical results in Section 4 and the conclusion in Section 5.

2. LITERATURE REVIEW

With respect to the financial performance of the Greek football firms, Dimitropoulos (2009) examines the profitability of the Greek football clubs and the factors that affect financial performance over the period 1994-

2004. The results indicate that the profitability of the Greek clubs is positively related to their short-run success from a sporting perspective, but not to their long-run success and seasonal uncertainty. In addition, the size of the clubs, measured in terms of their assets, affects financial performance in a positive way. Finally, asset turnover and ROA have a significantly positive impact on profitability.

Dimitropoulos (2010) analyzes the financial performance of the football clubs participating in the first division of the Greek Football League over the period 1993-2006. Financial analysis is applied with the use of key accounting ratios calculated with data from the annual financial statements of the clubs. Based on the results, the Greek football clubs are highly leveraged, while they have intense liquidity and profitability issues and face an increased financial distress risk. The author claims that these poor financial outlook can be attributed to mismanagement and political inefficiencies during the last fifteen years in the Greek football industry.

The financial performance of the Greek football clubs and the determinative factors of performance during the period 2007-2013 is the subject of the study by Dimitropoulos & Alexopoulos (2014). Match attendance and the profitability of the clubs are found to be positively associated with their short and long-run success, but not with the seasonal uncertainty of the league. Moreover, similar to Dimitropoulos (2009), the size of the clubs is a factor that exerts a positive and significant impact on financial performance. Finally, the level of cash flow per assets have a significantly positive impact on the profitability of the Greek football enterprises.

Dimitropoulos & Limperopoulos (2014) investigate the relationship between the sporting and financial performance of the Greek football clubs. The impact of investing in player contracts on the relationship between sporting and financial performance is examined too. They sample of this study includes 20 clubs which participated in the three professional divisions of Greece during the period 2004-05 to 2008-09. The results of the applied panel data analysis show that the higher the investment in player contracts, the more successful a club is on the field. However, as the investment in player contracts increases, the club gets more unprofitable and insolvent. This evidence implies that the decisions about players' contracts are not based on economic standards and verifies arguments that European football clubs seek to maximize sporting performance rather than financial performance.

On football clubs in other countries, Szymanski & Smith (1997) assess the financial performance of the English League clubs using a dataset of 48 clubs over the period 1974-89. The dependent variable of the model used is pre-tax profit, while the independent variables are ticket prices, attendance rates, income from other sources, such as TV rights and sponsorships, the net amounts for/from transfers, the non-salary expenses, the position of clubs in the league ranking table, promotion or relegation, and the participation of clubs in cup competitions. The results show that the promotion from one league to the next creates temporary excitement that is reflected in an increase in the demand for tickets. However, this excitement starts to decline sometime soon. Attendance rates are also boosted by a high performance in the cup competitions. The empirical analysis also shows that only the top clubs are profitable.

Barajas et al. (2005) examine the impact of sporting results on the financial performance of 42 Spanish football clubs over a period which spans from 1998 to 2002. The dependent variable is the net profit of clubs, while the independent variables are the ranking of clubs in the league and their total points, along and the weighted average of points in each competition. Based on their analysis, the authors conclude that the sporting variables hardly explain financial performance.

The opposite results on the relationship between sporting and financial performance are provided by Ferri et al. (2017), who employ data of 29 Italian football clubs that competed in Serie A during the period 2007/08-2013/14. A positive correlation between the footballers' payroll cost and sporting performance is revealed. However, the transfer fees of players and sporting performance are not significantly related to each other.

In the same context, Miragaia et al. (2019) examine the interactions between financial efficiency and sports performance with a sample of 15 professional football clubs that won league titles in the leading football leagues in England, Germany, Spain, Italy and France over the period 2009 and 2014. Based on the empirical results, only 10 of the examined clubs were efficient. The authors conclude that despite the attractiveness of professional football, the recent financial crisis burst in 2008 increasingly demands better management of the clubs' resources. Clubs need to improve their control over their financial resources given the positive relationship between their sporting performance and their financial efficiency. A positive correlation between sporting and financial performance is reported by Di Simone & Zanardi (2021) too.

The impact of corporate governance quality, i.e., board size, board independence, managerial ownership, institutional ownership and CEO duality, on the profitability and viability of the European Union's football clubs

during the period 2005-2009 is evaluated by Dimitropoulos & Tsagkanos (2012). Based on the empirical findings, qualitative corporate governance practices, such as a higher managerial and institutional ownership, increases in the size of the board, the separation of the CEO and chairman roles, can help the football clubs achieve higher profitability and boost their viability.

Ruta et al. (2020) examine the relationship between governance structure and football club performance in Italy and England trying to verify the assumption about a weaker role of internal governance structure (i.e., board and CEO) in determining sporting and financial performances in a highly concentrated club ownership environment. The study covers the period 2006-2015. The findings show a poor impact of board structure and CEO features on financial performances compared to the influence of the ownership structure. The results also show that the size of the board is negatively related to profitability and that the independence of the board along with the CEO tenure are positively related to sporting performance. CEO tenure increases profitability too.

The impact of the ownership structure on financial performance is examined by Fraile et al. (2017) with data from the five major European football leagues. The study period spans from season 2007/08 to season 2012/13. The impact of the financial fair play regulation is considered too. The sample of the study includes 94 first division clubs from Germany, France, Spain, England and Italy. An inverted U-shaped curve relation between ownership and financial performance is revealed as a result of both monitoring and expropriation effects. After passising demanding financial fair play regulation, the monitoring effect vanishes but not the expropriation effect.

Wilson et al. (2013) assess the correlation of the financial performance with the sporting performance of the Premiere League's clubs in England also focusing on the effect of different models of club ownership on financial and sporting performance. The analysis uses financial data for 20 clubs for the period 2001-2010. The results of the applied correlation analysis indicate that the stock market model of ownership results in better financial health relative to the privately owned clubs. On a similar topic, Carlsson-Wall et al. (2016) assess the role of performance measurement systems in managing the co-existence of different institutional logics in a football club. The authors show that sports and business logics at times compete with each other, but in other situations, these logics are in harmony. In other words, the decisions made by a football club under a financial perspective cannot necessarily ensure sporting success and vice versa.

The impact of investing in human capital on the financial performance of the football clubs is the subject of a study by Scafarto & Dimitropoulos (2018). The authors use a sample of 16 clubs from Italy and apply a fixed-effect econometric model that controls for the governance mechanisms of the clubs, which are characterized by a highly concentrated ownership and the control by specific families. By acknowledging this ownership and governance status, the applied model assumes that the representation of the owning families in the clubs' board and the the dual leadership are crucial for the decisions concerning the investments in the acquisition of talented footballers. Based on the empirical findings, clubs with CEO and chairman duality and a high degree of family representation on the board profit from investments in player contracts. Clubs whith no such governance mechanisms are in an inferior position.

Ika et al. (2020) analyze the financial statements of Arsenal and Manchester City over the three-year period 2015-2017. Altman's Z-score is computed and a bankruptcy prediction model is applied. The two clubs are found to have a healthy financial shape during the period under study. It is also found that Manchester City is financially healthier than Arsenal. In the same context, Kevser & Dogan (2022) compare the financial performance of Manchester City, Manchester United, Barcelona, Real Madrid and Juventus over the period 2015-2019. Liquidity, leverage and profitability ratios of the clubs are considered. This comparison reveals that Manchester City is the most sound club from a financial perspective, while Juventus is the least sound. They also find that liquidity and short-term debt-to-equity ratios are the most important performance indicators for the football clubs.

Evans et al. (2019) examine the effectiveness of the Salary Cost Management Protocol introduced by the English Football League in 2004 to improve the financial sustainability of the country's professional football clubs. The authors focus on the impact on the profitability, liquidity and solvency of the League Two clubs from 1994 to 2014. The empirical results accentuated the failure of the specific financial regulation to significantly improve the profitability or the solvency of football clubs in League Two. On the other hand, the liquidity of the clubs improved in response to the introduction of the Salary Cost Management Protocol, this improvement lasted only in the year in which the financial regulation was introduced.

Similarly, Martín-Magdalena et al. (2023) assess the impact of "financial fair play" regulations on the financial performance of the Spanish professional football league by examining the moderating role of club size. The authors use a 12-year dataset covering 22 football clubs and argue that introducing financial fair play positively impacted the financial performance of small clubs but increased the economic gap between large and small clubs.

The results show that the regulation on financial fair play significantly affected the profitability of small clubs in a positive way, as well as the solvency of medium-sized clubs, but has not affected the financial performance of the big clubs. Overall, after new regulations, economic inequality in Spanish La Liga increased. Similar inferences are drawn by Fernández-Villarino & Domínguez-Gómez (2022).

Holzmayer & Schmidt (2020) evaluate the effectiveness of the main diversification strategies adopted by the English football clubs. The strategies examined are business diversification and international diversification. The authors employ a 15-year panel data set of English Premier League clubs, many of which have employed corporate diversification strategies. In addition, measures for related business diversification and unrelated business diversification, as well as international diversification are used. The findings reveal non-linear financial performance effects from the adopted corporate diversification strategies.

Finally, Dogan et al. (2021) focus on Turkish football clubs to examine the effect of the Public Disclosure Platform (PDP) notifications of Beşiktaş, Galatasaray, Fenerbahçe and Trabzonspor clubs on their stock returns during the period 2009/10-2019/20. According to the empirical findings, notifications related to football clubs provide extremely high returns from stocks, as the market is not efficient. As a result, people can buy the stocks of their existing teams by not acting rationally but only acting as fans of the clubs.

3. RESEARCH METHODOLOGY

3.1. Financial Ratios

Using key accounting data, we compute some basic financial ratios of efficiency and financial structure for the examined clubs. These ratios are: a) the return on assets (ROA), which is calculated as the ratio of profit before tax to assets, b) the return on equity (ROE), which is computed as the fraction of profit before tax to equity, c) the profit margin ratio, which is calculated by dividing profit before tax by total operating revenue, d) the general liquidity ratio, which is measured as the fraction of current assets to current liabilities, e) the leverage ratio, which is the fraction of total liabilities to total equity, f) the efficiency (asset turnover) ratio, which is calculated through dividing total operating revenue by assets, and g) the ratio of net cash flow to assets.

3.2. Correlation Analysis

We apply simple correlation analysis trying to identify some of the factors that may affect the financial performance of the Greek football clubs. The factors considered in our analysis as "dependent" variables are return on assets, return on equity, and the profit margin, while the "determinant" variables are the size of the examined clubs, i.e., the logarithm of their assets, the general liquidity ratio, the leverage ratio, the efficiency ratio, and the ratio of net cash flow to assets.

3.3. Regression Analysis

We seek to answer whether the factors discussed in the previous section can indeed affect the financial performance of the Greek football enterprises. We do so with the following multivariate model (1), which is applied with panel data:

$$Pnce = \beta_0 + \beta_1 Size + \beta_2 Liquidity + \beta_3 Leverage + \beta_4 Effciency + \beta_5 C.F.Efficiency + u \quad (1)$$

where, Pnce stands for financial performance measured as ROA, ROE and profit margin. The independent variables of the model are the size, liquidity, leverage, efficiency and cash flow efficiency (C.F.Efficiency), which are defined in the previous section.[1]

Size is frequently considered to be positively related to firm performance. If this is true in our case, the coefficient of size will be positive and significant. Moreover, as noted by Zygmunt (2013), the liquidity of a firm might determine its profitability and, thus, the coefficient of the liquidity ratio in model (1) should be positive. Going further, there are studies that report a negative impact of leverage on firm performance (e.g., Yameen *et al*., 2019). If this is the case for the Greek football enterprises too, the coefficient of leverage must be negative. Furthermore, efficiency has been found to be positively related to the financial performance of a firm (Khan *et al*., 2021). Consequently, the estimate of the efficiency ratio in model (1) is expected to be positive. A similar positive estimate is expected for cash flow efficiency.

[1] The regression model (1) has been run via the econometric software Eviews 9.

3.4. Sample

The sample of our study includes the four major Greek football clubs (Big 4), namely, Olympiakos, Panathinaikos, AEK, and PAOK, as well as the clubs of Atromitos Peristeri, Asteras Tripolis and Panaitolikos, which are the only three of the smaller Greek football clubs with an uninterrupted presence in the Super League during the period under review.

Table 1 presents key accounting figures from the balance sheet, income statement and cash flow statement of the examined football clubs over the seven-year-period spanning from season 2015-16 to season 2021-22. Accounting figures include assets, current assets, equity, total liabilities, short-term liabilities, total operating income, profit before taxes (PBT), and the net cash flow, i.e., the change in cash reserves at the end of each year compared to the previous year. The figures in the table concern the averages of the accounting data for the entire period under review and have been collected from the published financial statements of the clubs.

The average assets of the clubs in the sample amount to €23.5 million. The largest club is Olympiacos with average assets of €69 million. The smallest club is Atromitos with average assets of €1.8 million. The average current assets equals €9.7 million, that is, 41% of the average total assets. In regard to equity, the average term of the sample amounts to €2.4 million, i.e., only 10% of total assets. Average total liabilities amount to €21.1 million, of which short-term liabilities equal €16.5 million (or approximately 78% of total liabilities).

From the simple presentation of the balance sheet figures, we conclude that the Greek football clubs rely mainly on external funds to finance their operation, as evidenced by the fact that 90% of the sum of equity and total liabilities concerns liabilities to third parties. In addition, the fact that most of the liabilities are of a short-term nature may pose risks regarding the liquidity of the Greek football firms. This risk is further enhanced by the fact that the average net cash flow, although positive at €406 thousand, is very small if we compare it to total liabilities. In other words, the money generated by the clubs is not enough to meet their needs.

Table 1. Accounting Data

Club	Assets	Current Assets	Equity	Total Liabilities	Current Liabilities	Cash Flow +/-	Operating Revenue	PBT
Olympiakos	68,909,857	29,508,714	12,620,857	56,289,000	53,437,000	1,930,857	51,822,857	-2,705,000
Panathinaikos	23,605,825	7,679,130	-14,845,426	38,451,251	28,036,110	265,515	15,091,678	-12,909,892
AEK	28,643,117	10,285,017	6,011,318	22,631,799	13,704,857	880,590	21,003,556	-1,763,676
PAOK	33,309,174	15,783,304	11,295,553	22,013,621	13,420,279	-72,314	28,934,594	-12,209,036
Atromitos	1,846,163	1,149,590	-3,151,707	4,997,869	3,424,916	-11,566	4,006,945	-1,825,510
Asteras Trip	2,764,101	2,081,849	1,800,625	963,476	926,025	-178,864	4,587,652	-926,949
Panaitolikos	5,254,229	1,084,716	2,856,688	2,397,542	2,303,956	26,279	3,340,351	-1,355,092
Average	**23,476,067**	**9,653,189**	**2,369,701**	**21,106,365**	**16,464,735**	**405,785**	**18,398,233**	**-4,813,594**
Min	**1,846,163**	**1,084,716**	**-14,845,426**	**963,476**	**926,025**	**-178,864**	**3,340,351**	**-12,909,892**
Max	**68,909,857**	**29,508,714**	**12,620,857**	**56,289,000**	**53,437,000**	**1,930,857**	**51,822,857**	**-926,949**

In relation to the income statement figures, the average total operating revenue of the clubs under consideration equals €18.4m. Olympiacos shows the highest average revenue of €51.8m. The club with the second highest average revenue is PAOK (€28.9). The average revenue of PAOK falls short of that of Olympiakos by 126%. The club with the smallest amount of revenue is Panaitolikos, which shows operating revenue of €3.3 million.

In total, four of the clubs in the sample show revenues that exceed €10m. These clubs are Olympiacos, Panathinaikos, AEK and PAOK. If we compare the Greek clubs to the clubs from the major European leagues, a wide gap is found between the Greek and European clubs in terms of revenue, which can largely explain the competitive difference between the Greek football clubs and the foreign competitors.[2]

Finally, when it comes to the profitability of the Greek football clubs, we see in Table 1 that all the examined clubs are loss-makers, with Panathinaikos appearing as the most loss-making club with an average pre-tax loss of €12.9 million. PAOK is the team with the second worst average profit of minus €12.2m.

The relatively low amount of revenue combined with the significant losses, as well as the high leverage and the weak ability of clubs to generate money, certify a negative financial structure and performance of the Greek football enterprises.

[2] Rompotis (2024) reports that the average revenue of the English Premier League clubs in the decade 2013-22 exceeded 193 million British pounds. This figure attests to the large financial gap between Greek and English (or other European) teams.

3.5. Profitability and Equity Figures

In the previous section, we revealed a low financial performance of the Greek football clubs in terms of the before taxes profitability. In this section, we analyze in more detail the after-tax profitability of the clubs, as well also two key elements of their equity, i.e., retained earnings and share capital. The relevant annual figures are provided in Table 2.

Table 2. Profitability and Equity Figures

Net Profit After Tax								
Club	**Seas. 2021-22**	**Seas. 2020-21**	**Seas. 2019-20**	**Seas. 2018-19**	**Seas. 2017-18**	**Seas. 2016-17**	**Seas. 2015-16**	**Average**
Olympiakos	-11,100,302	4,335,425	2,625,108	-2,165,620	-7,988,573	-891,201	-8,524,202	-3,387,052
Panathinaikos	-16,082,778	-8,172,507	-8,416,664	-3,227,571	-16,964,047	-27,972,339	-11,761,053	-13,228,137
AEK	-8,195,726	-645,485	-2,961,135	6,243,552	1,595,700	-4,057,837	-4,197,125	-1,745,437
PAOK	-13,439,141	-3,744,666	-26,904,651	-5,277,826	-20,781,369	-5,346,075	-9,969,967	-12,209,099
Atromitos	-2,986,765	-2,277,513	-1,471,737	-1,948,985	-866,893	-2,724,965	-501,714	-1,825,510
Asteras Trip	-2,801,035	191,701	-1,052,360	-1,305,075	-2,179,422	-2,135,224	1,934,166	-1,049,607
Panaitolikos	-3,077,233	-344,261	-1,400,811	-1,546,384	-1,767,691	-973,625	-375,637	-1,355,092
Average	**-8,240,426**	**-1,522,472**	**-5,654,607**	**-1,318,273**	**-6,993,185**	**-6,300,181**	**-4,770,790**	**-4,971,419**
Min	**-16,082,778**	**-8,172,507**	**-26,904,651**	**-5,277,826**	**-20,781,369**	**-27,972,339**	**-11,761,053**	**-13,228,137**
Max	**-2,801,035**	**4,335,425**	**2,625,108**	**6,243,552**	**1,595,700**	**-891,201**	**1,934,166**	**-1,049,607**
Retained Earnings								
Club	**Seas. 2021-22**	**Seas. 2020-21**	**Seas. 2019-20**	**Seas. 2018-19**	**Seas. 2017-18**	**Seas. 2016-17**	**Seas. 2015-16**	**Average**
Olympiakos	-16,799,111	-5,827,092	-10,485,246	-13,170,123	-68,897,110	-60,884,338	-60,025,162	-33,726,883
Panathinaikos	-114,611,461	-98,528,683	-90,532,307	-82,115,644	-78,888,073	-61,991,615	-57,832,683	-83,500,067
AEK	-12,173,911	-3,978,185	-3,332,699	-371,565	-6,615,116	-8,210,816	-4,152,979	-5,547,896
PAOK	-146,326,482	-132,830,341	-129,195,396	-102,286,455	-97,008,629	-76,227,260	-70,881,185	-107,822,250
Atromitos	-15,758,965	-12,672,200	-10,394,687	-8,922,950	-6,973,965	-6,107,072	-3,382,107	-9,173,135
Asteras Trip	-2,694,165	110,343	-4,301,217	-3,248,857	-1,943,782	235,640	2,467,572	-1,339,209
Panaitolikos	-3,078,313	-1,936,080	-1,591,818	-1,586,720	-3,872,260	-2,104,568	-1,130,943	-2,185,814
Average	**-44,491,772**	**-36,523,177**	**-35,690,481**	**-30,243,188**	**-37,742,705**	**-30,755,718**	**-27,848,212**	**-34,756,465**
Min	**-146,326,482**	**-132,830,341**	**-129,195,396**	**-102,286,455**	**-97,008,629**	**-76,227,260**	**-70,881,185**	**-107,822,250**
Max	**-2,694,165**	**110,343**	**-1,591,818**	**-371,565**	**-1,943,782**	**235,640**	**2,467,572**	**-1,339,209**
Share Capital								
Club	**Seas. 2021-22**	**Seas. 2020-21**	**Seas. 2019-20**	**Seas. 2018-19**	**Seas. 2017-18**	**Seas. 2016-17**	**Seas. 2015-16**	**Average**
Olympiakos	15,397,975	5,397,975	5,397,975	5,397,975	65,430,000	65,430,000	58,430,000	31,554,557
Panathinaikos	62,457,267	54,779,935	46,908,935	36,432,935	8,206,844	5,953,352	20,885,596	33,660,695
AEK	11,130,700	6,130,700	5,180,000	5,180,000	4,800,000	2,261,000	1,881,000	5,223,343
PAOK	119,857,454	116,257,457	116,167,457	115,840,631	100,029,632	7,724,538	63,514,538	91,341,673
Atromitos	6,670,000	6,670,000	6,670,000	3,170,000	3,170,000	2,650,000	2,650,000	4,521,429
Asteras Trip	3,343,800	2,004,000	5,421,000	3,633,000	2,745,000	1,638,000	1,638,000	2,917,543
Panaitolikos	3,870,000	4,553,303	3,472,853	3,078,076	4,789,904	3,144,904	2,668,400	3,653,920
Average	**31,818,171**	**27,970,482**	**27,031,174**	**24,676,088**	**27,024,483**	**12,685,971**	**21,666,791**	**24,696,166**
Min	**3,343,800**	**2,004,000**	**3,472,853**	**3,078,076**	**2,745,000**	**1,638,000**	**1,638,000**	**2,917,543**
Max	**119,857,454**	**116,257,457**	**116,167,457**	**115,840,631**	**100,029,632**	**65,430,000**	**63,514,538**	**91,341,673**

In terms of net annual profits, we see in Table 2 that, on average, all clubs achieved net losses in all years under review, with the average loss of all years amounting to €5m. This average term is slightly worse than the average term of the profit before tax of €4.8m that we saw in Table 1. The difference of €200k between pre-tax and after-tax profit indicates that the Greek football clubs pay little or nil income taxes due to the ongoing operating losses they present in their annual profit and loss statements. At the individual level, just the clubs of Olympiakos, AEK and Asteras Tripoliss show two profitable years each. All other years for the entire sample are loss-making.

As a result of the persistent annual losses, all the clubs show consistently significant accumulated retained losses, the average of which at the sample level amounts to €34.8 million. PAOK shows the highest average accumulated retained losses of €107.8 m. Furthermore, with the exception of the club of Asteras Tripoliss, which shows three years of positive cumulative retained earnings, all other clubs show negative profits carried forward on a consistent basis throughout all the examined years.

As a consequence of the above negative results, the Greek football clubs tend to proceed with share capital increases quite often. As shown in Table 2, the share capital of the examined clubs was increasing quite frequently during the period under study. In fact, any reductions in share capital observed, for instance in the case of Olympiakos between the years 2017-18 and 2018-19 or Panathinaikos between the periods 2015-16 and 2016-17,

do not concern capital returns to the shareholders of the clubs, but the usage of the accounting instrument of netting accumulated losses against share capital.[3]

In conclusion, in accordance with the inferences drawn in the previous section, the poor profitability of the Greek football enterprises reflects a weak financial picture, which triggers the need for frequent share capital increases. These share capital increases aim both at covering the financial needs of the clubs and embellishing their equity structure.

4. EMPIRICAL RESULTS

4.1. Financial Ratios

The average terms of the examined financial ratios for the examined period appear in Table 3. In relation to the efficiency ratios, the average ROA of the sample is negative and equal to -40.37%. The club of Atromitos shows the worst average ROA, which amounts to -102.82%. On the other hand, Olympiacos shows the best ROA in the sample, which is close to 5%. The average ROE of the sample is negative at -8.85% indicating a rather poor financial performance of the examined Greek football clubs. In terms of the profit margin, the relative performance of the Greek football clubs is rather disappointing as the average profit margin ratio of all clubs is negative at -41.82%. On the other hand, Olympiacos presents the relatively best profit margin ratio, which is equal to -6.86%.

Overall, the analysis of the financial performance ratios confirms the poor financial performance of the Greek football clubs highlighted in the previous two sections of this study.

Moving forward with the ratios of financial structure, the average general liquidity ratio in Table 3 is equal to 87.89%. This ratio, which is lower than 100% indicates that the current assets of the clubs are not sufficient to cover their short-term liabilities. This finding verifies the liquidity problems related to the poor ability of the clubs to show positive net cash flows. At the club level, Asteras Tripolis shows the highest liquidity while Panathinaikos shows the lowest.

Table 3. Financial Ratios

Club	ROA	ROE	Profit Margin	Liquidity	Leverage	Efficiency	Cash Flow Efficiency
Olympiakos	4.98	-22.86	-6.86	54.90	454.40	147.01	11.21
Panathinaikos	-54.48	110.65	-82.95	27.90	-347.55	70.76	1.30
AEK	-8.97	-132.43	-15.31	82.75	647.12	79.43	2.57
PAOK	-40.37	107.44	-57.15	115.45	-100.36	83.19	0.22
Atromitos	-102.82	63.07	-48.72	36.42	-190.82	227.18	-1.02
Asteras Tripolis	-55.08	-117.52	-36.85	248.52	73.61	165.17	-8.09
Panaitolikos	-25.87	-70.26	-44.89	49.29	114.23	63.75	0.50
Average	**-40.37**	**-8.85**	**-41.82**	**87.89**	**92.95**	**119.50**	**0.96**
Min	**-102.82**	**-132.43**	**-82.95**	**27.90**	**-347.55**	**63.75**	**-8.09**
Max	**4.98**	**110.65**	**-6.86**	**248.52**	**647.12**	**227.18**	**11.21**

When it comes to leverage, the average term of this ratio is very high at 93%. The most leveraged club is AEK, with an average leverage ratio of 647%, followed by OLYMPIAKOS, which has an average leverage ratio of 454%. Panathinaikos appears as the team with the most negative leverage ratio of -348%. This negative ratio is due to the negative equity that Panathinaikos consistently displays throughout the period under study.

The average efficiency ratio is the only financial indicator which is relatively satisfactory because it exceeds 100% and amounts to 120%. This percentage shows that the Greek football clubs, on average, can generate revenue that exceeds their total assets. At the group level, Atromitos presents the best average efficiency ratio, which amounts to 227%. On the other hand, PANAITOLIKOS shows the worst efficiency ratio at 64%.

Finally, the average ratio of net cash flow to assets of the sample equals 0.96%. The highest ratio of the sample amounts to 11.21% and has been achieved by Olympiakos. On the other hand, the club of Asteras Tripolis shows the worst average ratio of net cash flow to assets, which is equal to -8.09%. Overall, the average ratios of net cash flow to assets for all clubs in the sample are rather low and confirm the limited ability of the Greek football enterprises to efficiently use their assets to generate money.

[3] The club of PAOK, which shows the largest accumulated losses, does not seem to have used this tool, which is why it also shows the largest share capital, which exceeds €90m on average.

4.2. Correlation Analysis

Correlation estimates among the key financial ratios and figures used in our analysis are presented in Table 4. According to the data in Table 4, ROA shows a positive correlation estimate with the size factor of 0.50. Based on this estimate, we can infer that the size of the clubs is a factor that can affect the financial performance of the Greek football companies in a positive way. This positive relationship between size and ROA indicates that a football club can benefit financially from getting bigger through time. In fact, at the corporate level, several studies do confirm a positive relationship between the size of a company and its financial performance. Chell and Baines (2000) argue that firms are able to grow and make profits on their size by focusing on the reduction in their operating costs, the use of debt to benefit from tax deductions, the purchase of raw materials in large quantities to receive significant discounts and the maintenance of good relations with suppliers and other stakeholders. According to Brewer and Jagtiani (2013), large firms can exploit economies of scale and scope and thus be more efficient compared to small firms. In addition, small firms might have less power compared to large firms and thus they might find it difficult to effectively compete with large firms especially in competitive markets.

Positive correlations are found for ROA with liquidity, leverage and net cash flow to asset ratios. These positive correlation estimates are equal to 0.24, 0.17 and 0.41, respectively. There is also a positive correlation between ROA and the efficiency ratio, which, however, is quite close to zero (0.03). Therefore, the effect of efficiency on ROA cannot be expected to be significant from an economic perspective.

The positive sign of liquidity's and correlation with financial performance is not surprising as several studies have acknowledged the importance of liquidity and for the financial performance and health of companies. Kimondo et al. (2016) establish a significant positive relationship between liquidity and profitability for the nonfinancial companies quoted on the Nairobi Securities Exchange. Similar results are reported by Obida & Owolabi (2012), and Musah & Kong (2019). Furthermore, the positive sign of efficiency's correlation with ROA indicates that the greater the operational efficiency, the more profitable a firm can be because the firm can generate greater income or return for the same or lower cost than a less efficient competitor. On the other hand, the positive sign of leverage's coefficient is a little surprising as financial leverage is frequently considered to be associated with financial performance in a negative way (e.g., Javed et al., 2015, and Yameen et al., 2019).

In regard to ROE, the only material correlations are that with leverage, which is negative and equal to -0.91, and that with the net cash flow to assets ratio, which is positive and equal to 0.17. Based on these correlation coefficients, one might expect that the more leveraged a Greek football company is, the lower its return on equity. On the contrary, as a club's ability to use its assets to generate cash flows increases, so does its return on equity.

Finally, regarding the relationship between the profit margin and the determinative factors, we observe in Table 4 positive correlations of 0.12 between the profit margin and the size factor, as well as positive correlations with liquidity (0.29), leverage (0.16), efficiency (0.24), and net cash flow to assets (0.26). These positive correlations resemble those between the Return on Assets ratio and size, liquidity, leverage, efficiency and cash flow efficiency. Based on this resemblance, it could be argued that ROA and profit margin move quite close to each other. In any case, the positive correlations of profit margin the determinative factors show that as the magnitude of the specific factors increases, the operational profitability of the Greek football companies may increase too.

Overall, the correlation analysis applied in this section, though quite unsophisticated, can indicate the factors the Greek football clubs need to focus on in order to improve their financial performance, self-sustenance, and long-term health and viability, reducing at the same time the dependence on capital injections by the owners of the clubs. The latter is even more significant given the ownership structure of the Greek football clubs, which are usually owned by a unique owner. Such a restricted ownership may entail that the basic shareholder of a club might not be able to continuously support their club financially in the long run with possible negative repercussions for the club.

Table 4. Correlation Analysis

	ROA	ROE	Profit Margin	Size	Liquidity	Leverage	Efficiency	Cash Flow Efficiency
ROA	1.00	0.02	0.71	0.50	0.24	0.17	-0.03	0.41
ROE	0.02	1.00	0.07	0.03	-0.06	-0.91	0.07	0.07
Profit Margin	0.71	0.07	1.00	0.12	0.29	0.16	0.24	0.26
Size	0.50	0.03	0.12	1.00	-0.17	0.17	-0.50	0.11
Liquidity	0.24	-0.06	0.29	-0.17	1.00	0.03	0.10	0.02
Leverage	0.17	-0.91	0.16	0.17	0.03	1.00	-0.11	0.01
Efficiency	0.03	0.07	0.24	-0.50	0.10	-0.11	1.00	0.43
Cash Flow Eff.	0.41	0.17	0.26	0.11	0.02	0.01	0.43	1.00

4.3. Regression Analysis

The regression results of model (1) are provided in Table 5. In the case of ROA, the estimate of size is positive and statistically insignificant confirming a positive relationship between the size of the clubs and their financial performance similar to that detected via the correlation analysis in the previous section. This result verifies the previous findings in the literature (e.g., Chell & Baines, 2000, and Brewer & Jagtiani, 2013), about the positive impact of size on the financial performance of a corporation.

The coefficient of liquidity is positive and statistically significant at 1%. This positive sign indicates that the more liquid a football club is, the more profitable it can be from a financial perspective. This positive relationship between financial performance and liquidity is in line with the relevant findings in the literature of non-football enterprises (e.g., Zygmunt, 2013, Kimondo et al., 2016, Obida & Owolabi, 2012, and Musah & Kong, 2019).

Table 5. Regression Analysis

	Dependent Variable: ROA		**Dependent Variable: ROE**		**Dependent Variable: Profit Margin**	
Variable	**Coefficient**	**t-Statistic**	**Coefficient**	**t-Statistic**	**Coefficient**	**t-Statistic**
Constant	*-406.12	-4.20	*-972.69	-2.78	**-233.92	-2.55
Size	*7.55	3.97	*3.21	3.01	***8.85	1.89
Liquidity	*0.18	3.29	0.01	0.02	**0.14	2.27
Leverage	*0.01	2.77	*-0.44	-16.85	0.01	1.05
Efficiency	0.05	0.57	0.23	0.81	0.15	1.46
Cash Flow Effic.	***0.81	1.88	***0.46	1.69	***0.14	1.77
R-squared	0.49		0.87		0.25	

*Significant at 1% level; ** Significant at 5% level; *** Significant at 10% level

The coefficient of leverage is positive and significant in statistical terms but rather insignificant in economic terms as the relevant estimate is only equal to 0.01. Based on this result, we may infer that the impact of financial leverage on the Return of Assets of the examined Greek football clubs is not that material. On the other hand, the coefficients of efficiency and cash flow efficiency are positive but only that of cash flow efficiency is statistically insignificant at 10%. In particular, the coefficient of cash flow efficiency is equal to 0.81 indicating that an improvement in the ability of the Greek football clubs to use their assets to generate cash by 1% can result in an increased ROA by 0.81%.

In the case of ROE, the coefficient of size is significantly positive, while the estimate of leverage is negative and significant. The sign of leverage's estimate is in accordance with our expectations. The estimate of the cash flow efficiency is significantly positive. The liquidity and efficiency factors are statistically insignificant.

Finally, as far as the results on profit margin are concerned, the estimates of size, liquidity and cash flow efficiency are positive and statically significant indicating that these factors can affect the financial performance of the Greek football clubs in a positive way. The rest of the factors present no statistically significant estimates. With the exception of the leverage factor, whose coefficient is statistically insignificant, the results of the regression model having the profit margin as the dependent variable, resemble the results obtained via having ROA as the model's dependent variable.

Overall, similar to the conclusions drawn via the correlation analysis in the previous section, the multifactor regression analysis applied in this section verifies the significant role of key factors mainly including size, liquidity and cash flow efficiency for the financial performance and, consequently, long-run viability of the football enterprises in Greece.

5. CONCLUSION

In this study, we examined the financial performance of seven Greek football clubs competing in the first domestic division, the Super League, over the seven-season period spanning from 2015-16 to 2021-22. From a methodological point of view, our study applies simple correlation analysis and multifactor regression analysis on the factors that may affect the financial performance of the selected football clubs in Greece.

Our results confirm the findings of earlier relevant studies on the Greek football industry. In particular, the examined clubs show a high degree of leverage, along with low liquidity, extensive annual and accumulated losses, and poor financial performance in general. In relation to the factors that can affect the financial performance of the Greek football companies, our analysis has shown that the factors that can possibly affect

financial performance, either in a positive or negative way, are the assets of the football enterprises, liquidity, leverage, efficiency, as well as the ability of the clubs to use their assets to generate cash.

The diachronically weak financial outlook of the Greek football clubs should motivate their management to start seeking for alternative ways of conducting business. In this respect, professional managers should be hired to run the Greek football clubs contrary to the common practice in Greece, and in other countries too, of ex-footballers, of high popularity but of weak academic records and entrepreneurship experience, undertaking crucial seats in the management of clubs. The clubs and their fans also need to understand that the accumulation of losses could threaten the very existence of the clubs in the long run.

Overall, our results indicate that the Greek football clubs need to make radical changes to their business model. Constant loss-making cannot be viable for much long. In addition, bank lending and financing by the owners of the clubs may not be an option in the future. The clubs need to work towards improving their financials and enhancing their self-sufficiency. Should such an improvement happen, the Greek football clubs may see an improvement in their competitive ability at the international level.

AUTHORS' DECLARATION:

This paper complies with Research and Publication Ethics, has no conflict of interest to declare, and has received no financial support.

AUTHORS' CONTRIBUTIONS:

The entire research is written by the author.

REFERENCES

Barajas, A., Jardon, C., & Crolley, L. (2005). Does sports performance influence revenues and economic results in Spanish football? working paper, available on https://papers.ssrn.com.

Brewer, E. III., & Jagtiani, J. (2013). How much did banks pay to become too-big-to-fail and to become systemically important. *Journal of Financial Services Research*, 43(1), 1-35.

Carlsson-Wall, M., Kraus, K., & Messner, M. (2016). Performance measurement systems and the enactment of different institutional logics: Insights from a football organization. *Management Accounting Research*, 32, 45-61.

Chell, E., & Baines, S. (2000). Networking, entrepreneurship and microbusiness between small and large firms' behavior. *Entrepreneurship and Regional Development*, 12, 95-206.

Deloitte. (2023). Annual review of football finance 2023. available on: https://www2.deloitte.com/uk/en/pages/sports-business-group/articles/annual-review-of-football-finance-europe.

Dimitropoulos, P.E. (2009). Profitability of the Greek football clubs: implications for financial decisions making. *Business Intelligence Journal* 2(1), 159-169.

Dimitropoulos, P.E. (2010). The financial performance of the Greek football clubs. *Choregia Sport Management International Journal*, 6(1), 5-27.

Dimitropoulos, P.E., & Alexopoulos, P. (2014). Attendance, revenues, profits and the on-field performance of the Greek football clubs. *International Journal of Scientific Engineering and Research*, 2(9), 33-39.

Dimitropoulos, P.E., & Limperopoulos, V. (2014). Player contracts, athletic and financial performance of the Greek football clubs. *Global Business and Economics Review*, 16 (2), 123-141.

Dimitropoulos, P.E., & Tsagkanos, A. (2012). Financial performance and corporate governance in the European football industry. *International Journal of Sport Finance*, 7(4), 280-308.

Di Simone, L., & Zanardi, D. (2021). On the relationship between sport and financial performances: An empirical investigation. *Managerial Finance*, 47(6), 812-824.

Dogan, M., Kevser, M., & Sarigul, S.S. (2021). Analysis of the relationship between notifications of football clubs and stock returns using event study method. *Journal of Social Economic Research*, 21(1), 66-75.

Evans, R., Walters, G., & Tacon, R. (2019). Assessing the effectiveness of financial regulation in the English football league: "The dog that didn't bark". *Accounting, Auditing & Accountability Journal*, 32(7), 1876-1897.

Fernández-Villarino, R., & Domínguez-Gómez, J.A. (2022). The financial impact of the financial fair play policy on Spanish football. *Sport, Business & Management*, 12(2), 171-188.

Ferri, L., Macchioni, R., Maffei, M., & Zampella, A. (2017). Financial versus sports performance: The missing link. *International Journal of Business & Management*, 12(3), 36-48.

Fraile, I.A., Serrano, R., & Dimitropoulos, P.E. (2017). Ownership structure and financial performance in European football. *Corporate Governance*, 17(3), 511-523.

Javed, Z.H., Rao, H., Akram, B., & Nazir, M.F. (2015). Effect of financial leverage on performance of the firms: Empirical evidence from Pakistan. *SPOUDAI Journal of Economics & Business*, 65(1-2), 87-95.

Holzmayer, F., & Schmidt, S.L. (2020). Financial performance and corporate diversification strategies in professional football - Evidence from the English Premier League. *Sport, Business & Management*, 10(3), 291-315.

Ika, S.R., Nugroho, J.P., Udin, K., & Koenti, I.J. (2020). Assessing the financial performance of English football clubs: Arsenal and Manchester City. *Proceedings of the 3rd International Conference of Banking,* Accounting, Management & Economics.

Kevser, M., & Dogan, M. (2022). Comparative analysis of the financial performance of 5 major football clubs in UEFA ranking. *Accounting Science World Journal*, 24(2), 436-460.

Khan, M.N., Parksh, R., Shamim, M., & Ali, S. (2021). Does audit quality matter for firm performance? Empirical evidence from Pakistani public listed companies. *Elementary Education Online*, 20(5), 3953-3960.

Kimondo, C. N., Irungu, M., & Obanda, M. (2016). The impact of liquidity on the financial performance of the nonfinancial firms quoted on the Nairobi Securities Exchange. *Researchjournali's Journal of Accounting*, *4*(2), 1-12.

Martín-Magdalena, J., Martínez-de-Ibarreta, C., Gonzalo-Angulo, J.A., & García Domonte, A. (2023). The impact of financial fair play on the financial performance of Spanish professional football: Do the biggest clubs behave better?. *Sport, Business & Management*, 13(5), 601-621.

Miragaia, D., Ferreira, J., Carvalho, A., & Ratten, V. (2019). Interactions between financial efficiency and sports performance: Data for a sustainable entrepreneurial approach of European professional football clubs. *Journal of Entrepreneurship & Public Policy*, 8(1), 84-102.

Musah, M., & Kong, Y. (2019). The relationship between liquidity and the financial performance of non-financial firms listed on the Ghana Stock Exchange (GSE). *International Journal of Advanced Research in Management & Social Sciences*, 8(4), 1-34.

Obida S.S., & Owolabi S.A. (2012). Liquidity management and corporate profitability: Case study of selected manufacturing companies listed on the Nigerian Stock Exchange. *Business Management Dynamics*, 2(2), 10-25.

Rompotis, G.G. (2024). The financial performance of the English football clubs. *International Journal of Finance Research*, 5(2), 181-203.

Ruta, D., Lorenzon, L., & Sironi, E. (2020). The relationship between governance structure and football club performance in Italy and England. *Sport, Business & Management*, 10(1), 17-37.

Scafarto, V., & Dimitropoulos, P.E. (2018). Human capital and financial performance in professional football: The role of governance mechanisms. *Corporate Governance*, 18(2), 289-316.

Szymanski, S., & Smith, R. (1997). The English football industry: Profit, performance and industrial structure. *International Review of Applied Economics*, 11(1), 135-153.

Wilson, R., Plumley, D., & Ramch&ani, G. (2013). The relationship between ownership structure and club performance in the English Premier League. *Sport, Business & Management: An International Journal*, 3(1), 19-36.

Yameen, M., Farhan, N.H.S., & Tabash, M. (2019). The impact of liquidity on firms' performance: Empirical investigation from Indian pharmaceutical companies. *Academic Journal of Interdisciplinary Studies*, 8(3), 212-220.

Zygmunt, J. (2013). Does liquidity impact on profitability? A Case of Polish listed IT companies. *Conference of Informatics and Management Sciences,* Poland, March 25-29.