Who Is The Financial Performance Leader of Sports Clubs? An Empirical Application With the Aras Method

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ABSTRACT

The competitive environment and income created by the sports sector are on the rise due to its rapid development and its global performance concerning other industries. Thus, researchers and market participants must assess how well sports clubs are performing in the sector. For the aforementioned reason, the goal of the research is to evaluate the sports clubs that are part of the BIST Sports Index according to their financial performance and ascertain if these rankings vary by club year. For this purpose, the financial performance success of the sports clubs in question between 2018 and 2022 was analyzed using the ARAS (Additive Ratio Assessmen) method, weighted by the CRITIC (Criteria Importance Through Intercriteria Correlation) method within the framework of 13 criteria (ROA, gross profit margin, operating profit margin, net profit margin, current ratio, cash conversion cycle, PD/DD, EBITDA/total financial expenses, fixed asset turnover days, working capital/growth rate in sales, ROIC, receivables turnover days, doubtful trade receivables ratio). Although the findings obtained as a result of the study vary according to the years, it was determined that Beşiktaş sports club showed the most successful financial performance in 2018 and 2020, Fenerbahçe sports club in 2021 and Galatasaray sports club in 2019.

Keywords: BIST Sports Index, ARAS, CIRITIC.

Spor Kulüplerinin Finansal Performans Lideri Kim? Aras Yöntemiyle Ampirik Bir Uygulama

ÖZ

Spor endüstrisinin hızlı bir şekilde gelişmesi ve diğer endüstri kollarıyla bağlantılı olarak sergilediği uluslararası performans elde edilen gelirlerin yanı sıra rekabet ortamının da artmasına neden olmaktadır. Dolayısıyla endüstride yer alan spor kulüplerinin performanslarının değerlendirilmesi piyasa katılımcıları ve araştırmacılar açısından önem arz etmektedir. Bu motivasyonla çalışmanın amacı BİST Spor Endeksi'nde faaliyet gösteren spor kulüplerinin finansal performanslarının sıralanması ve kulüplerin göstermiş olduğu finansal performansın yıllara göre farklılaşıp farklılaşmadığının tespit edilmesidir. Bu amaçla söz konusu spor kulüplerinin 2018-2022 yılları arasındaki finansal performans başarıları 13 kriter (ROA, brüt kâr marjı, faaliyet kâr marjı, net kâr marjı, cari oran, nakit dönüşüm süresi, PD/DD, FAVÖK/toplam finansman giderleri, sabit varlık devir gün sayısı, çalışma sermayesi/satışlardaki büyüme oranı, ROIC, alacakların devir günü sayısı, şüpheli ticari alacak oranı) çerçevesinde CRITIC (Criteria Importance Through Intercriteria Correlation) yöntemiyle ağırlıklandırılarak, ARAS (Additive Ratio Assessmen) yöntemiyle analiz edilmiştir. Çalışma neticesinde elde edilen bulgular yıllara göre değişkenlik göstermekle birlikte Beşiktaş spor kulübünün 2018 ve 2020 yıllarında, Fenerbahçe spor kulübünün 2021 yılında Galatasaray spor kulübünün ise 2019 yılında en başarılı finansal performansı gösterdiği tespit edilmiştir.

Anahtar Kelimeler: BİST Spor Endeksi, ARAS, CIRITIC.

Introduction

The significance of developing and applying sophisticated and effective quantitative analysis approaches to support and aid in economic decision-making has been emphasized due to the recent and fast rise in the complexity of economic decisions (Zavadskas and Turskis, 2011). While assessing financial performance, financial ratios derived from the data and income statements that make up the

financial structures are usually the most desired option. Because the information this condition provides regarding the firm's financial structure is crucial for decision-makers. Numerous statistical methods have been developed over time to assess financial success. Performance analysis techniques are implemented inside the ratios themselves, among the firms and for the sector, notably in performance tests, as these approaches are regarded as a criteria in the evaluation of financial ratios (Baş, Hantal and Balcı, 2020, p. 267).

The sports sector, which has grown quickly in the last several years, may now be assessed internationally in terms of its earnings and relationships with other industries. The football industry has grown in importance as a result of its comparatively higher economic volume and rising income from sponsorship, public offers, broadcasting, royalties, and advertising (Karadeniz, Koşan and Günay, 2016, p. 251). Football is first and foremost regarded by society as one of the most popular sports, with robust national teams, clubs, and fan bases. The football club organization consists of more than just the athletic component, though. Football is a business, which is another significant aspect that the general public frequently ignores (Karpavicius and Jucevicius, 2009, p.87). It is believed that building a strong brand around the club name is an essential precondition to good financial management. According to Oppenhuisen and Zoonen (2006), a powerful brand generates free exposure, links supporters, and draws sponsors. The most significant factor influencing a football club or league's ability to continue operating is its supply of talent, which in the football business is its players. The success and financial gain of the football team or league are influenced by players' desire to play the game and their professional abilities. Football schools are suppliers to different football leagues, providing professional football players. Customers in the football sector are oriented around the fans as users of the product produced in football, as is typical in this microenvironment. Football players may also be consumers. This is especially true in the amateur football league, where a football player serves as a football club's primary source of funding. Professional football players continue to be users of the product developed inside the football economic system, even if their function as customers is decreasing (Karpavicius and Jucevicius, 2009, p.87). Accountability, or more accurately, transparency, becomes more important in today's strong financial system as the amount of money controlled by football clubs and public offering efforts get attention (Güngör, 2014, p. 17). Throughout the past 25 years, football has seen tremendous monetary growth. Football income reached 3.6 billion TL in the previous 25 years, according to studies, up from about 275 million TL in 1996. Comparing 1996 to 2021, this number demonstrates a rate of rise of 1209 % (Akşar, 2022).

The sports industry is considered to have a high financial volume, so it is believed that researchers and market participants will find guidance from the financial performance success evaluations of sports clubs listed in the BIST (Borsa İstanbul) Sports Index, such as Beşiktaş (BJKAS), Fenerbahçe (FENER), Galatarasay (GSRAY), and Trabzonspor (TSPOR). In line with this motivation, the main objective of the research is to perform the financial performance ranking of 4 football clubs operating in the BIST Sports Index in the period between 2018-2022 with the ARAS method, as well as to draw attention to the differentiation of the financial performance of the clubs over the years. For this purpose, in the study, firstly, information about the football industry is given, the literature on the related index and technique is given, and then information about the data set and methodology is provided. Then, the findings of the empirical analyses are interpreted and evaluations are made in the conclusion section.

Literature Review

Following are some instances of empirical applications from the literature employing comparable and distinct methodologies, in keeping with the goal of the research.

Ergül (2017) applied the TOPSIS (Technique for Order Preference by Similarity to Ideal Solutions) approach, a multi-criteria decision-making tool, to examine the association between the football teams' financial performance as measured by the BIST and their performance in competition. It was concluded from the investigation performed by looking through the clubs' financial accounts that the financial statements were positively impacted by the tournament's success. Similarly, using the

Promethee approach, a multi-criteria decision-making tool, Bağcı (2018) examined the financial standing of four sports teams included in the BIST Sports Index in the context of financial fair play. Although it changed over time, BJK was determined to have the best performance out of all the clubs in the research. Süslü and Hızlıer (2023) investigated the financial performance of firms listed in the BIST Sports Index by utilizing CRITIC-based Multimoora TOPSIS techniques. Based on the empirical evaluations, it has been determined that TSPOR club had the highest financial success and that both strategies produced similar outcomes. Hatem and Ikram (2023) offer a novel framework for the criteria integrating the FIFA (Federation Internationale de Football Association) World Cup 2022 starting lineup from a different angle. To ascertain the ideal degree of football player selection, they employ the MOORA (Multi-Objective Optimization Ratio Analysis) approach in their investigation. By choosing players, they evaluate the model's efficacy using the French national football team and discover that the process makes decision-making easier. In their research, Ünlü et al. (2017) employed the CRITIC weighing approach and the TOPSIS performance ranking method to assess the performance of companies listed in the BIST 30 Index as well as those included and excluded from the Corporate Governance Index. The studies conducted revealed no discernible variation in the financial performance of the companies included in the BIST 30 Index and those that are listed or not listed in the BIST Corporate Governance Index.

Şenol and Ulutaş (2018) employed CRITIC and ARAS techniques to analyze the market-based and accounting-based performance metrics of firms in the Chemical, Petroleum, Rubber, and Plastic goods sector using data from 2016. The findings revealed that market-based performance metrics and accounting-based performance measures yielded different outcomes. Görmüş (2021) used the CRITIC technique, weighted TOPSIS method, and ARAS method to analyze the performance rating of insurance businesses trading on the stock exchange. Türkiye Sigorta A.Ş. was deemed to have the best performance in the 2020 assessments. In a similar vein, Aytekin and Erol (2018) sought to evaluate the performance of businesses listed in the Sustainability Index and listed in the BIST 30 Index for November 2014-October 2015, as well as the BIST 50 Index for the months of November 2016-October 2017. The ARAS approach, a multi-criteria decision-making tool based on activity, profitability, liquidity, and financial structure ratios, was used to conduct an empirical analysis for the study. Prediction percentages of 45%, 64%, and 74% have been identified by comparing the Sustainability Index rating that was produced as a result of the research. Gümüş et al (2019) assessed the financial performance of the businesses in the BIST Construction sector from 2014 to 2017 using the ARAS and SWARA approaches. Based on the empirical evaluations, EDIP was found to have the best financial performance, followed by ORGE and SANEL, in that order. Maruf and Özdemir (2021) sought to assess the effectiveness of the websites belonging to fifteen Turkish commercial banks, all functioning in the same direction. Performance ranking was done in the research using the ARAS and SWARA (tep-Wise Weight Assessment Ratio Analysis) techniques. They discovered that the HSBC, FIBA Bank, and Şeker Bank websites performed successfully based on benefit value estimations.

Şahin and Karacan (2020) sought to use multi-criteria decision-making techniques to compare the financial performance of the companies listed in the Borsa Istanbul Construction Index. Edip Gayrimenkul Yatırım Sanayi ve Ticaret A.Ş. was the firm with the highest financial performance for 2018 according to the Entropy, Copras, and Aras methodologies' results, which showed that the financial performance ranking of the two approaches was identical. Additionally et al (2022) used the financial ratios of companies in the BIST energy industry to assess the outcomes of ratio analysis in conjunction with multi-criteria decision-making methodologies. The firms were rated according to their financial results for 2019 and 2020 in the research, which employed the TOPSIS and EDAS (Evaluation based on Distance from Average Solution) techniques along with 10 ratios to measure the financial outcomes of the relevant industry from the ratios used for financial analysis. Because of this, there were minor variations between the two approaches in the overall rankings that were established annually throughout the same period in the study's results, which examined the financial ratios of sixteen various companies. Last but not least, during the COVID-19 Pandemic, Gheibdoust et al. (2023) seek to determine and rank the characteristics influencing SERVQUAL of five-star hotels. To determine the best hotel out of five in Iran in 2022, they give priority to the SERVQUAL impact variables utilizing the Progressive

Weighted Assessment Ratio Analysis (SWARA) and Additive Ratio Assessment (ARAS) methods. According to the findings, differentiation between companies is observed.

Data Set and Methodology

The purpose of this research is to ascertain the position in the BIST Sports Index performance ranking of the following clubs: Trabzonspor (TSPOR), Galatarasay (GSRAY), Fenerbahçe (FENER), and Beşiktaş (BJKAS), as well as the distinction in their financial performances. The financial ranking was done using the ARAS approach, one of the Multi-Criteria Decision Making Techniques. These clubs' yearly data for the years 2018-2022 were acquired via Datastream creativity. Table 1 provides details on the sports teams that are quoted on BIST Spor index.

Table 1
BIST Companies included in the analysis

BIST Code	Company Title	Registration Date
BJKAS	Beşiktaş Futbol Yatırımları Sanayi ve Ticaret A.Ş.	1995
FENER	Fenerbahçe Futbol A.Ş.	1998
GSRAY	Galatasaray Sportif Sınai ve Ticari Yatırımlar A.Ş.	1997
TSPOR	Trabzonspor Sportif Yatırım ve Futbol İşletmeciliği Ticaret A.Ş.	1994

Table 2 illustrates the assessment of performance factors that were employed in the research, and which are considered to be likely to have an influence on companies' financial performance based on reviews made in the literature.

Table 2
Performance evaluation criteria included in the analysis

Criterion	Formulation	Ideal
ROA	Net Profit/Total Assets	Max.
Gross profit margin	Gross profit on sales /net sales	Max.
Operating profit margin	Net income/total sales revenue	Max.
Net profit margin	(Net profit/total income) x 100	Max.
Current ratio	Current Assets/Short-Term Liabilities	Max.
Cash conversion period (days)	(Conversion period of inventories + conversion period of receivables- conversion period of payables)	Min.
Market to Book Value	Market Value/Book Value	Max.
EBITDA/total financial xpenses	Earnings before interest and tax/total financial expenses	Max.
Number of days of fixed asset turnover	Net sales/non-current assets)/360	Min.
Working capital/sales growth rate	Working capital/sales growth rate	Max.
Return on investment Capital (ROIC)	Net operating profit/ capital invested in operations	Max.
Number of days of transfer of receivables	(Credit sales / average trade receivables)/360	Min.
Doubtful trade receivable ratio	Receivables estimated to be uncollectible due to various reasons / Total receivables	Min.

Financial performance indicators are useful to club management and interest groups when gathering data and making decisions (Güngör, 2014, p.17). As a consequence, it is crucial that the parties look over the performance evaluation standards that are acknowledged as measures of financial performance.

Multi-criteria Decision Making Techniques

Numerous Multi-Criteria Decision Making Techniques have been developed since the 1950s. These techniques vary from one another concerning the quantity and quality of information used, the methodology employed, the ease of use, the sensitivity tools utilized, and the mathematical properties they verify (Zavadskas and Turskis, 2011, p.02). Furthermore, it is acknowledged that multi-criteria decision-making approaches help handle challenging issues. (Brutovsky et al., 2022, p.204). The capability to make decisions by analyzing complex problems and the potential for gathering criteria in the evaluation process, as well as the ability to make appropriate decisions and allow the decision maker to actively participate in the process, are the main benefits of multi-criteria decision-making. The approach compares the examined variables with the optimal value to determine the degree of alternative selection (Bakshi and Sarkar, 2011, p.20). The decision maker's problem, according to Zavadskas and Turskis (2010), is to rank a finite set of alternatives from best to worst, organize them into predetermined homogeneous classes, or explain simultaneously how well each alternative satisfies all criteria.

CIRITIC Method

Weights are of great importance in multi-criteria decision-making techniques problems. Weights take into account the intensity of contrast and conflict in the structure of the decision problem. CRITIC (Criteria Importance through Inter Criteria Correlation - Objective Weighting) method, which is based on the correlation relationship between criteria, was proposed by Diakoulaki, Mavrotas and Papayannakis in 1995. The method is an approach based on the determination of objective weights without the involvement and intervention of any decision-maker. The purpose of this method is goal setting. The developed method is based on an analytical examination of the evaluation matrix to extract all the information contained in the evaluation criteria. The procedure of the CRITIC method and the calculation of weights are shown in the following steps (Diakoulaki et al, 1995; Goswami, Behera, Afzal, Kaladgi, Khan, Rajendran, Subbiah and Asif, 2021):

$$C_j = \sigma_j . \sum_{k=q}^{m} (1 - r_{jk}) \tag{1}$$

$$w_j = \frac{C_j}{\sum_{k=1}^{m} C_k} \tag{2}$$

Objective SD weights are calculated as follows, using a method based on the contrast intensity of the criteria and measured by the standard deviation a t of the scores in criterion j (SD weights):

$$w_j = \frac{\sigma_j}{\sum_{k=1}^{m} \sigma_k} \tag{3}$$

Giving the decision criteria equal weight in the computation of average weights, which is predicated on the idea that all criteria are equally important, reflects a fully impartial attitude on the part of the decision maker and is typically thought to ensure the objectivity of the evaluation process. Here's how average weights are computed:

$$w_j = \frac{1}{m} \tag{4}$$

Using these three distinct weight sets, the analyzed companies are ranked using many criteria using the following aggregation formula:

$$D_i = \sum_{j=1}^{m} w_j . x_{ij} \tag{5}$$

D_i = i firm's multi-criteria score,
x_i = i company's score under crite,

w_j = refers to the weight of criterion j previously calculated according to three different approaches.

ARAS Method

The ARAS approach is predicated on the idea that straightforward relative comparisons may be used to comprehend complicated world events. It is contended that the degree of optimality attained by the alternative under comparison is determined by the ratio of the total of the normalized and weighted criteria values characterizing the ignoring of the alternative to the sum of the normalized and weighted criteria values defining the optimal alternative. When determining the complex relative wage efficiency, a reasonable alternative project must take into account the values and weights of the main criteria, and the auxiliary function value is directly proportional to their relative influence, following the ARAS method (Turskis and Zavadskas, 2010, p. 600). According to the degree of utility K_i, which can be computed using the formula below (Stanujkic, Dordevic and Dordevic, 2013), the most acceptable option is chosen using this technique.

$$K_i = \frac{S_i}{S_0}; i = 1,2, ..., m$$

(6)

Where S_i is the overall performance index of the alternative i, S_0 is the overall performance index of the optimal alternative and S_0 usually has a value of 1.

Ki is the ascending rank of i'n and the alternative with the highest K_i value is ranked best. The best-ranked alternatives according to the ARAS method can be determined using the following formula:

$$A^*_{ARS} = \left\{ A_i = \max_i K_i \right\}, i = 1,2, ..., m$$

(7)

The originality of the ARAS method compared to other methods is that the optimal alternative A_0 is presented. The performances of the optimal alternative are determined according to the preferences of the decision-makers. If the decision maker has no preference about some criteria, the optimal performance is determined as follows:

$$x_{0j} = \begin{cases} \max_i x_0 & : j \in \Omega_{max} \\ \min_i x_0 & j \in \Omega_{min} \end{cases}$$

(8)

In the ARAS method, the overall performance index of any alternative can be determined as follows:

$$S_i = \sum_{j=1}^n w_j r_{ij}$$

(9)

Normalised performance ratings in the ARAS' method are calculated using the following formula:

$$r_{ij} = \begin{cases} \dfrac{x_{ij}}{\sum_{j=0}^m x_{ij}} & : j \in \Omega_{max} \\ \dfrac{1/x_{ij}}{\sum_{j=0}^m 1/x_{ij}} & : j \in \Omega_{min} \end{cases}$$

(10)

Findings And Analysis

To estimate the weights with the CRITIC method based on the correlation relationship between the criteria, 13 financial ratios shown in Table 1 were determined and included in the analysis of the study, which took into consideration the data of Beşiktaş, Fenerbahçe, Galatasaray, and Trabzonspor sports clubs listed in the BIST Sports Index between 2018 and 2022. Table 3 displays the weights that were determined in the aforementioned manner.

Table 3
Criteria weights by year

Criterion	2018 (w_j)	2019 (w_j)	2020 (w_j)	2021 (w_j)	2022 (w_j)
ROA	0.034	0.011	0.009	0.115	0.027
Gross profit margin	0.012	0.013	0.017	0.334	0.056
Operating profit margin	0.026	0.015	0.033	0.113	0.081
Net profit margin	0.804	0.231	0.814	0.038	0.037
Current ratio	0.006	0.015	0.006	0.013	0.016
Cash conversion period (days)	0.022	0.526	0.006	0.033	0.222
Market to Book Value	0.037	0.076	0.040	0.101	0.142
EBITDA/total financial expenses	0.022	0.011	0.010	0.108	0.024
Number of days of fixed asset turnover	0.009	0.020	0.009	0.026	0.020
Working capital/sales growth rate	0.006	0.029	0.008	0.044	0.023
ROIC	0.014	0.028	0.034	0.014	0.322
Number of days of transfer of receivables	0.006	0.009	0.006	0.032	0.017
Doubtful trade receivable ratio	0.005	0.015	0.010	0.027	0.014

The research uses the computed values of 13 financial performance criteria and the weight values of these criteria as displayed in Table 3 to analyze the financial performance of 4 sports clubs in the BIST Sports Index after the criterion's weights have been determined. Table 3 illustrates the optimal (S_i) and utility (K_i) function values that were determined during the first round of ARAS method assessments.

Table 4
Optimum and Utility Function Values

Years		Optimum Value (S_0)	Beşiktaş	Fenerbahçe	Galatasaray	Trabzonspor
2018	S_i	-0.110	0.096	0.199	0.221	0.595
	K_i		-0.873	-1,809	-2,009	-5,409
	Rank		*1*	*2*	*3*	*4*
2019	S_i	0.037	0.165	0.148	0.522	0.130
	K_i		4,459	4.000	14.108	3.514
	Rank		*2*	*3*	*1*	*4*
2020	S_i	0.030	0.656	0.204	0.037	0.056
	K_i		21.867	6.800	1.233	1.867
	Rank		*1*	*2*	*4*	*3*
2021	S_i	-1.126	0.112	-1.056	2.324	0.748
	K_i		-0.099	0.938	-2.064	-0.664
	Rank		*2*	*1*	*4*	*3*
2022	S_i	0.082	0.061	0.172	0.390	0.295
	K_i		0.744	2.098	4.756	3.598
	Rank		*4*	*3*	*1*	*2*

After calculating the optimum function (S_i) value, the utility function value (K_i) was calculated. The ranking was carried out according to the performance values obtained by ARAS method. Considering the information presented in Table 4, Beşiktaş Sports Club ranked first in 2018, while Trabzonspor Club ranked last. When 2019 is evaluated specifically for 2019, it is noteworthy that the first-ranked club is Galatasaray, while the last-ranked club is Trabzonspor. When the table is analyzed for 2020, Beşiktaş was the first-ranked club, while Galatasaray ranked last in terms of financial performance. Then, when the year 2021 is analyzed, it is seen that Fenerbahçe Sports Club ranks 1st. In the year in question, the last ranked club was determined as Galatasaray. Finally, in the data obtained in

2022, it was determined that Galatasaray club ranked first, followed by Trabzonspor, Fenerbahçe and Beşiktaş, respectively.

Conclusion

While evaluating a company's financial performance, financial ratios derived from the data and income statements that make up its financial structure are usually favored. When supplying details regarding the company's financial structure, Multi-Criteria Decision Making Techniques successfully resolve issues that come up. To this end, the study compares the financial performance rankings of Beşiktaş, Fenerbahçe, Galatasaray, and Trabzonspor teams featured in the BIST Sports Index between 2018 and 2022 to identify any year-by-year variations in their financial performance. Thirteen financial ratios were identified and taken into consideration throughout the process of creating these rankings. These measures include working capital/sales growth ratio, ROIC, receivables turnover days, gross profit margin, operational profit margin, net profit margin, cash conversion period, PD/DD, EBITDA/total financial costs, fixed asset turnover days, and dubious trade receivables ratio. The ARAS approach was used to evaluate the financial performance of the firms while taking into account the weights acquired. The CRITIC method was used to create the weightings of the criterion.

The outcomes demonstrated that Fenerbahçe Sports Club came in top in 2021, Galatasaray Sports Club came in first in 2019, and Beşiktaş Sports Club came in first in 2018. The findings reveal that there are variations in financial success based on the year. In terms of the output that the performance ranking over the years can be differentiated, these findings' conclusions contrast with those of Ünlü et al. (2017)'s research and are comparable to those of Bağcı (2018), Maruf and Özdemir (2021), and Süslü and Hızlıer (2023). Also, it is brought to the attention of the market participants that the financial performance of sports clubs can move in different directions other than sporting achievements and can be taken into consideration in their evaluations in this context. It is believed that comparing many techniques and utilizing various weighting and decision-making strategies can enhance the body of literature in future research.

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Genişletilmiş Özet

Giriş

Son yıllarda ekonomik kararların karmaşıklığının hızla artmasıyla birlikte, ekonomik karar vermeyi desteklemek ve yardımcı olmak için gelişmiş ve verimli kantitatif analiz tekniklerinin geliştirilmesi ve uygulanmasının önemi vurgulanmıştır (Zavadskas ve Turskis, 2011). Gelir tablolarında elde edilen oranlar, finansal performansın test edilmesi amacıyla sıklıkla kullanılmaktadır. Bu oranlar, firmanın finansal yapısı hakkında karar vericilere önemli bilgiler sağlamaktadır. Zaman içerisinde finansal performansı değerlendirmek amacıyla birçok farklı istatistiksel teknik geliştirilmiştir. Finansal oranların performans testlerinde bir kriter olarak kabul edilmesiyle, oranlar hem şirket içi hem de şirketler arası analizlerde kullanılmaktadır (Baş, Hantal ve Balcı, 2020, s.267). Özellikle sektörel açıdan son zamanlarda hızla gelişim gösteren spor endüstrisi elde ettiği gelirler ve diğer endüstrilerle ilişkileri noktasında uluslararası düzeyde değerlendirilebilecek bir endüstri haline gelmiştir. Reklâm, sponsorluk, yayın ve telif hakkı, halka arz gibi ekonomik hacmi göreli olarak artış gösteren futbol endüstrisi de buna bağlı olarak gelirlerin büyük tutarlara ulaşmasıyla birlikte önemini artırmıştır (Karadeniz vd, 2016, s. 251). Öyle ki futboldaki parasal büyüme son 25 yılda önemli düzeyde artış göstermiştir. Araştırmalar 1996 yılında yaklaşık 275 milyon TL olan futbol gelirlerinin geçen 25 yıllık süreçte 3.6 Milyar TL'ye ulaştığını göstermektedir. Bu rakam artış oranının 1996-2021 yılları arasında %1209 olduğu gözler önüne sermektedir (Akşar, 2022). Spor sektörünün finansal hacmi büyük bir sektör olması motivasyonuyla BİST Spor Endeksi'nde faaliyet gösteren spor kulüpleri olan Beşiktaş Futbol Yatırımları Sanayi ve Ticaret A.Ş. (BJKAS), Fenerbahçe Futbol A.Ş. (FENER), Galatarasay Sportif Sınai ve Ticari Yatırımlar A.Ş. (GSRAY) ve Trabzonspor Sportif Yatırım ve Futbol İşletmeciliği Ticaret A.Ş. (TSPOR) finansal performans başarı değerlendirmelerinin yapılması piyasa katılımcıları ve araştırmacılar açısından yön gösterici olacağı düşünülmektedir.

Bu motivasyon doğrultusunda çalışmanın temel amacı BİST Spor Endeksi'nde faaliyet gösteren 4 futbol kulübünün 2018-2022 yılları arasındaki süreçte ARAS (Additive Ratio Assessmen) yöntemiyle finansal performans sıralaması gerçekleştirmenin yanı sıra yıllar içerisinde kulüplerin finansal performanslarının farklılaşmasına da dikkat çekmektir. Bu amaçla çalışmada öncelikle ilgili endeks ve teknikle ilgili literatüre yer verildikten sonra veri seti ve metodoloji konusunda bilgilendirmeler yapılmıştır. Ardından ampirik analizlerin bulguları yorumlanarak sonuç bölümünde değerlendirmeler yapılmıştır.

Yöntem

Bu çalışmanın amacı, BİST Spor Endeksi'nde yer alan Beşiktaş, Fenerbahçe, Galatasaray ve Trabzonspor kulüplerinin finansal performanslarını sıralamak ve bu performanslarındaki farklılaşmaları tespit etmektir. Finansal sıralama yapılırken Çok Kriterli Karar Verme Tekniklerinden ARAS yöntemi kullanılmıştır. 1950'lerden bu yana çok sayıda Çok Kriterli Karar Verme Tekniği geliştirilmiştir ve bu teknikler bilgi kalitesi ve miktarı, kullanılan metodoloji, kullanım kolaylığı, kullanılan duyarlılık araçları ve doğruladıkları matematiksel özellikler açısından birbirlerinden farklılık göstermektedir (Zavadskas ve Turskis, 2011, s. 402). Bunun yanı sıra çok kriterli karar verme teknikleri, karmaşık problemlerle başa çıkmak için yararlı yöntem olarak kabul edilmektedir. (Buganova, Brutovsky ve Slepecky, 2022, s.204).

Çok kriterli karar vermenin temel avantajı, karmaşık sorunları analiz ederek uygun kararlar alınmasını sağlamak ve karar vericinin sürece aktif olarak katılmasına olanak tanımasıdır. Yönteme göre, alternatif seçim derecesi, analiz edilen değişkenlerin ideal olarak en iyisi ile karşılaştırılmasıyla yapılmaktadır (Bakshi ve Sarkar, 2011, s. 20). Zavadskas ve Turskis'e (2010) göre ise çok kriterli karar verme teknikleri karar vericinin problemi en iyisini bulmak, en iyiden en kötüye doğru sıralamak, önceden tanımlanmış homojen sınıfları gruplandırmak veya her bir alternatifin tüm kriterleri ne kadar iyi karşıladığını aynı anda açıklamak için sonlu bir alternatif kümesini değerlendirmekten oluşmaktadır.

Bulgular

Çalışmada BİST Spor Endeksi'nde faaliyet gösteren Beşiktaş, Fenerbahçe, Galatasaray ve Trabzonspor spor kulüplerinin 2018-2022 yılları arası verileri dikkate alınarak, kriterler arasındaki korelasyon ilişkisini esas alan CRITIC (Criteria Importance Through Intercriteria Correlation) yöntemi ile ağırlıkların hesaplanabilmesi için 13 tane finansal oran belirlenmiş ve analize dahil edilmiştir. Ardından kriterlere ait ağırlıkların tespitini takiben ARAS yöntemi ile BİST Spor Endeksi'nde bulunun 4 spor kulübünün 13 finansal performans kriterinin ROA (aktif karlılık), Brüt kâr marjı, Faaliyet kâr marjı, Net kâr marjı, Cari oran, Nakit dönüşüm süresi (gün), PD/DD, FAVÖK/toplam finansman giderleri, Duran varlık devir gün sayısı, Çalışma sermayesi/satışlardaki büyüme oranı, Return on investment Capital (ROIC) (yatırım sermayesi getirisi), Alacakların devir günü sayısı, Şüpheli ticari alacak oranı) hesaplanan değerleri ile bu kriterlerin ağırlık değerleri kullanılarak finansal performans değerlendirmesi yapılmaktadır. ARAS yöntemiyle yapılan değerlendirmelerin ilk aşamasında optimum (S_i) ve fayda (K_i) fonksiyon değerleri elde edilmiştir. Optimum fonksiyon (S_i) değerinin hesaplanmasının ardından fayda fonksiyon değeri (K_i) hesaplanmıştır. ARAS yöntemiyle elde edilen performans değerlerine göre sıralama gerçekleştirilmiştir. Analiz sonuçları bilgiler dikkate alındığında, 2018 yılında Beşiktaş spor kulübü yer almakta iken; Trabzonspor kulübü son sırada yer almaktadır. 2019 yılı özelinde değerlendirildiğinde ilk sırada yer alan kulüp Galatasaray iken son sıradaki kulübün yine Trabzonspor olduğu dikkat çekmektedir. 2020 yılı için incelendiğinde Beşiktaş ilk sırada olan kulüp olmuş, Galatasaray ise finansal performans açısından son sırada yer almaktadır. Ardından 2021 yılı incelendiğinde Fenerbahçe spor kulübünün 1. sırada yer aldığı görülmektedir. Söz konusu yılda ise son sıradaki kulüp ise Galatasaray olarak tespit edilmiştir. Son olarak 2022 yılında elde edilen verilerde ilk sırada Galatasaray kulübü olduğu tespit edilmişken, Galatasaray kulübünü sırasıyla Trabzonspor, Fenerbahçe ve Beşiktaş takip etmektedir.

Sonuç

Bir firmanın finansal yapısını meydana getiren rakamlar ve gelir tablolarında elde edilen finansal oranlar finansal performansın test edilmesi amacıyla sıklıkla tercih edilmektedir. Firmanın finansal yapısı hakkında bilgi verme noktasında ise Çok Kriterli Karar Verme Teknikleri ortaya çıkan sorunları çözüme kavuşturma noktasında başarılı sonuçlar vermektedir. Bu doğrultuda çalışmada, BİST Spor Endeksi'ne kote olmuş Beşiktaş, Fenerbahçe, Galatasaray ve Trabzonspor kulüplerinin 2018-2022 yılları arasındaki finansal performans sıralaması açısından karşılaştırılması ve yıllara göre finansal performanslarındaki farklılıklarının tespiti amaçlanmıştır. Bu sıralamalar yapılırken 13 finansal oran belirlenerek analize dâhil edilmiştir. Bu oranlar ROA, brüt kâr marjı, faaliyet kar marjı, net kar marjı, cari oran, nakit dönüşüm süresi, PD/DD, FAVÖK/toplam finansman giderleri, sabit varlık devir gün sayısı, çalışma sermayesi/satışlardaki büyüme oranı, ROIC, alacakların devir günü sayısı, şüpheli ticari alacak oranıdır. Kriterlere ait ağırlıklandırmalar ise CRITIC yöntemiyle yapılmış olup elde edilen ağırlıklar dikkate alınarak ARAS metoduyla finansal performans değerlendirmesi yapılarak firmaların başarıları sıralanmıştır.

Elde edilen bulgulara göre 2018 yılında Beşiktaş spor kulübü, 2019 yılında Galatasaray spor kulübü, 2020 yılında Beşiktaş spor kulübü, 2021 yılında ise Fenerbahçe spor kulübünün 1. sırada yer aldığı gözlemlenmiştir. Yapılan analizler finansal performansın yıllara göre farklılaştığını göstermektedir. Dolayısıyla bu bulgulardan elde edilen sonuçlar Bağcı (2018); Maruf ve Özdemir (2021) ve Süslü ve Hızlıer (2023) çalışmaları ile benzerlik göstermekte olup Ünlü vd (2018) çalışmalarıyla çelişmektedir. Gelecek çalışmalarda farklı ağırlıklandırma ve karar verme yönteminin kullanılabileceğinin yanı sıra birden fazla tekniğin de karşılaştırılmasının literatüre katkı sağlayabileceği düşünülmektedir.