THE EFFECTS OF SPORTIVE AND FISCAL ACHIEVEMENTS OF FOUR BIGGEST TURKISH FOOTBALL CLUBS ON THEIR STOCK RETURNS

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THE EFFECTS OF SPORTIVE AND FISCAL ACHIEVEMENTS OF FOUR BIGGEST TURKISH FOOTBALL CLUBS ON THEIR STOCK RETURNS

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Approval of the Graduate School of Social Sciences

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I certify that this thesis satisfies all the requirements as a thesis

for the degree of Master of Science.

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This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science..

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ABSTRACT

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The purpose of this study is to analyze the effects of both sportive and fiscal achievements of the four major clubs in Turkish Super League such as Beşiktaş, Fenerbahçe, Galatasaray and Trabzonspor to the stock returns of those clubs that became institutional and professional corporations. In the analysis of sportive achievements such variables wins at home/away games in the Turkish Super League, Turkish Domestic Cup Games, European competitions are included. On the other hand, net profits, total assets, total equities, total liabilities, debt-ratios, capital structure ratios, return on equity ratios and total asset turnover ratios of the football clubs are observed under the fiscal achievements. On this study, the effects of sportive and fiscal achievements of the football clubs to the both their stock returns and abnormal stock returns is analyzed with time series models. In addition, all club's variables included in a separate data and are analyzed with panel models as well. In order to make a general comment for results, it can be said that the investors of BJKAS, FENER, GSRAY and TSPOR are more sensitive in the manner of sportive achievements and wins more valuable more than financial performances. Therefore, they generally behave irrationally and make their decisions emotionally when they invest on club's stocks. On the other hand, few of the investors still consider the financial performance of the stocks.

Keywords: Football, Stock Returns, Sportive Achievements, Fiscal Achievements, Sports Clubs

ÖZET

DÖRT BÜYÜK TÜRK FUTBOL TAKIMININ SPORTİF VE MALİ BAŞARILARININ HİSSE GETİRİLERİNE OLAN ETKİSİ

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Bu çalışmanın amacı kurumsal ve şirketleşmiş hale gelen Türkiye Süper Lig'deki Beşiktaş, Fenerbahçe, Galatasaray ve Trabzonspor gibi dört büyük takımın sportif ve mali başarılarının kendi hisse getirilerine olan etkisini analiz etmektir. Sportif başarıların analizinde Türkiye Süper Ligi, Türkiye Kupası ve Avrupa müsabakaları yer almaktadır. Diğer taraftan, futbol kulüplerinin net karları, toplam varlıkları, toplam öz kaynakları, toplam yükümlülükleri, borç oranları, sermaye yapısı, öz kaynak getirileri ve toplam varlık döngüsü gibi değişkenler mali başarılar altında gözlenmiştir. Bu çalışmada, futbol kulüplerinin sportif ve mali başarılarının takımların normal ve arındırılmış hisse getirilerine olan etkisinin analizi zaman serisi modelleri ile yapılmıştır. Ek olarak, bütün kulüplerin değişkenleri ayrı bir verisetinde toplanmış ve panel modelleri ile analiz edilmiştir. Elde edilen sonuçlara genel olarak yorum yapmak gerekirse, BJKAS, FENER, GSRAY ve TSPOR hisse yatırımcıları sportif başarılar karşısında daha hassas davranmakta ve galibiyetleri finansal performanslardan daha değerli bulmaktadırlar. Bu yüzden, yatırımcılar kulüplerin hisselerine yatırım yaptıklarında genellikle irrasyonel davranmakta ve aldıkları kararlar duygusal olmaktadır. Diğer taraftan, yatırımcıların çok azı hisselerin finansal performanslarına önem vermektedir.

Anahtar Kelimeler: Futbol, Hisse Getirisi, Sportif Başarılar, Mali Başarılar, Spor Kulüpleri

DEDICATION

I would like to dedicate this research to Strategist and the Owner of Thales E&D Mr. Erda GERÇEK, a person like a real leader, guider and father to me, for his unending supports, inspires and faith on me during my master degree career...

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Mehmet Erdem DELİCE was born in İzmir on February 19, 1989. He received his B.S. degree in Economics from İzmir University of Economics in January 2013. He continued his education career on Financial Economics Master Degree Program at the same year in İzmir University of Economics.

1. INTRODUCTION

In global economy, many sports activities stand in the system very well as an actor that can change the balances of the sector that they belong. It is fair to say that the most influential one in the sports industry is simply *football.* Football is well established as the most popular game in the world and can be mentioned as a different sector. At the present day, football has 4 billion members of audience and growth in the economics has reached more than $100 billion in the world. 80% of this growth rate occurred from European Football. In the world economies, the growth rate of football has been increasing over the years. The main reason of this increase is the football tend to combine sportive issues with commercialize sports and finance by including many sectors and industries (Sultanoğlu, 2008).

In the world, football embodies a giant market. Football has developed an increasing economic importance over the past years, demonstrated by an increasing capital markets presence and the rapid growth in the sports industry and its market (Bell et al., 2012). Clubs, employees, referees, coaches and footballers in football industry also affect many sectors that exist in economics. Because, returns or gains of any football aspects – both fiscal and sportive – have many impacts on economy and financial activities. The reason why football became one of the major economic sectors is that it is the thing which the common demand occurred from the society. In economics, consumers or householders have their consumption on any different goods and services at different time and amount. From those consumptions, they have some utilities that are also not the same. However, demands of many consumer for football (buying ticket and going to stadium to watch a game, purchasing the jersey of favorite team, buying private TV streams for watching favorite team's matches, etc.) are almost the same. Only difference on consumption types and levels is that people have different favorite teams, but eventually that consumption attitude exists

no matter the supporting team is same or not. Besides, the utility that people get from those consumptions are also same (Considering two different persons supporting the same team and the team is winning against its rival, etc.).

Besides, football is dragging the society after itself and affects the people's psychologies in the society. In football, there is an interesting relationship between supporters and teams. Generally, supporters do not have a tendency such as switching to support other clubs or giving up to support their teams. This implies that there is stability between teams and their supporters (Uludağ and Varan, 2013). As these supportive activities include some economical activities (such as buying tickets, shirts or any product that belong and represent their teams), the football industry creates and establishes a competitive market.

Football have so many demand from any kind of people have different income or purchasing power and anywhere in the world. As the demands become the same (or at least similar) there is no concern for scarcity in football economy. Therefore, it can be said that football became so important economical sector in the world (Bell et al., 2012).

The purpose of this study is to analyze the effects of both sportive and fiscal achievements of the four major clubs in Turkish Super League such as Beşiktaş, Fenerbahçe, Galatasaray and Trabzonspor to the stock returns of those clubs that became institutional and professional corporations. In the analysis of sportive achievements such variables wins at home/away games in the Turkish Super League, Turkish Domestic Cup Games, European competitions are included. On the other hand, net profits, total assets, total equities, total liabilities, debt-ratios, capital structure ratios, return on equity ratios and total asset turnover ratios of the football clubs are observed under the fiscal achievements.

On this study, the effects of sportive and fiscal achievements of the football clubs to the both their stock returns and abnormal stock returns is analyzed with time series models. In addition, all club's variables included in a separate data and are analyzed with panel models as well.

According to the results, it can be said that many of the sportive variables have positive and significant effects to the BJKAS returns and abnormal BJKAS returns. For example, wins at home and away games in the league games have positive effects on stock returns and abnormal stock returns of Beşiktaş Sportive Inc. when other variables held constant. Moreover, taking three points at home games in European competitions also effects positively to both BJKAS returns and abnormal BJKAS returns while they are controlled variables. Besides, when Beşiktaş win at home and away games in the domestic cup, both stock returns and abnormal returns are appreciated as well when other variables do not change. On the other hand, some of the fiscal variables have significant impacts on BJKAS returns and abnormal BJKAS returns. For instance, total assets and debt-ratio of the Beşiktaş Sportive Inc. has negative and significant effect to the stock returns and abnormal stock returns of the club. An increase in total assets and debt-ratio cause depreciation of the stock returns and abnormal stock returns when the other variables held constant. However, returns on equity ratios have significant and positive effect to stock returns and abnormal stock returns of Beşiktaş Sportive Inc. Any rise in the return on equity ratios cause increase in both stock returns and abnormal stock returns when the other variables do not change.

For Fenerbahçe Sportive Inc. it can be said that only one of the sportive variables has positive and significant effects to the FENER returns and abnormal FENER returns. For example, wins at home games in the league games have positive effects on stock returns and abnormal stock returns of Fenerbahçe Sportive Inc. when other variables held constant. On the other hand, only one of the fiscal variables has significant impacts on FENER returns and abnormal FENER

returns. For instance, increase in the net profits of the club causes increase in both stock returns and abnormal stock returns when the other variables do not change.

For Galatasaray Sportive Inc. it can be concluded that only one of the sportive variables has positive and significant effects to the GSRAY returns and abnormal GSRAY returns. For example, wins at away games in the league games have positive effects on stock returns and abnormal stock returns of Galatasaray Sportive Inc. when other variables held constant. On the other hand, some of the fiscal variables have significant impacts on GSRAY returns and abnormal GSRAY returns. For instance, return on equity ratios ratio of the Galatasaray Sportive Inc. has negative and significant effect to the stock returns and abnormal stock returns of the club. Increase in return on equity ratios cause depreciation of the stock returns and abnormal stock returns when the other variables held constant. However, total equities and capital structure ratios have significant and positive effect to stock returns and abnormal stock returns of Galatasaray Sportive Inc. Any rise in the total equities and capital structure ratios cause increase in both stock returns and abnormal stock returns when the other variables do not change. Moreover, 2010-2011 football season have bad impact on both GSRAY returns and abnormal GSRAY returns comparing to the chicanery year.

For Trabzonspor Sportive Inc. it can be interpreted that only one of the sportive variables has positive and significant effects to the TSPOR returns and abnormal TSPOR returns. For example, wins at home games in the league games have positive effects on stock returns and abnormal stock returns of Trabzonspor Sportive Inc. when other variables held constant. On the other hand, only one of the fiscal variables has significant impacts on TSPOR returns and abnormal TSPOR returns. For instance, increase in the debt-ratio of the club causes increase in both stock returns and abnormal stock returns when the other variables do not change.

When all teams are analyzed together, both sportive and fiscal achievements have significant effects of the stock returns and abnormal stock returns. For example, wins at home and away games in the league games have positive effects on stock returns and abnormal stock returns when other variables held constant. Moreover, taking three points at home games in European competitions also effects positively to both stock returns and abnormal stock returns while they are controlled variables. On the other hand, some of the fiscal variables have significant impacts on stock returns and abnormal stock returns. For instance, total assets and total liabilities of all clubs have negative and significant effect to the stock returns and abnormal stock returns of them. An increase in total assets and total liabilities cause depreciation of the stock returns and abnormal stock returns when the other variables held constant. However, net profits have significant and positive effect to stock returns and abnormal stock returns of all teams. Any rise in the net profits cause increase in both stock returns and abnormal stock returns when the other variables do not change. Moreover, 2010-2011 and 2012-2013 football seasons have bad impacts on both stock returns and abnormal stock returns of all clubs comparing to the chicanery year.

In order to make a general comment, it can be said that the investors of BJKAS, FENER, GSRAY and TSPOR are more sensitive in the manner of sportive achievements and wins more valuable more than financial performances. Therefore, they behave irrationally and make their decisions emotionally when they invest on club's stocks. On the other hand, few of the investors still consider the financial performance of the stocks.

On the next parts of the study, main aims of the football clubs and their main revenue sources will be represented with explaining their financial positions. Moreover, how these clubs became industrialized and what is the benefit of investments on football clubs' stock will be interpreted. Besides, it will be discussed that what are the expectations from sportive and fiscal achievements

by the investors and which of them become real in the stock market. Next, other studies findings will be represented in the literature and the methods for the variables in the regression models and formations of the data will be discussed in methodology part. Finally, the empirical results of the regression analyses and conclusion of the study will be presented.

1.1 Main Aims of the Football Clubs

In football, all clubs have and supporters expect two main aims such as;

1. Sportive Achievements
2. Fiscal Achievements

1.1.1. Sportive Achievements

Sportive achievements can be gained from winning matches or getting points against all teams in each competition. In order to have sportive achievements, football clubs have to beat teams in their own league, domestic and international tournaments. As the team gets more points, they would have a good ranking in the competition. Also, it benefits to earn a level of reputation to the club that announces the club is successful whether they show bad form graphic rather than the previous years. On the other hand, fiscal achievements might be earned by merchandising sales, prize money (money that is given per win), sponsorships, TV revenues, stadium revenues and transfer revenues (revenue that comes from player sold).

1.1.2 Fiscal Achievements

For the firm side (i.e, football clubs), they are likely to interest on more fiscal achievements rather than sportive achievements (Palomino et al., 2009). At the previous years, sportive achievements were more important as there were not much financial investments on football (excluding national football federations' investments). Nowadays, the clubs that became corporations are focusing on fiscal achievements. Because, there is a 'brand equity' fact in football and clubs aim to increase the value of it or at least keep it at a certain level. Financing these transactions is critically important for the chairmen. When they cannot finance the balance, they try to create some internal and external financial opportunities. Therefore, clubs may make profits from these financial activities. For instance, the transfer budget of Beşiktaş football club was supplied from club's financial funds in 2008. Similarly, in 2011, Galatasaray applied the same strategy in order to create transfer budget by using club's financial funds. In addition, these two major clubs used these funds for building their stadiums in recent years.

1.2 Main Revenues, Expenditures and Financial Positions of the Clubs

When we discuss the clubs' profit margins for the point of incomes and expenditures, we can say that they are mostly in bankrupt condition. If we want to describe the income part, the clubs can gain some revenue such as merchandising, stadium revenues (like gate receipts, selling seasonal tickets, match day income, parking, etc.), TV revenues, transfer revenues (revenue that comes from players sold), prize moneys (after winning the game), investment, interests and sponsorships. On the other hand, there are many items on expenditure side such as player wages, staff wages, match and loyalty bonuses, non-football costs, transfer expenditures (players

bought), agent fees, match day expenses (cost of flying or renting a inter-city buses), ground maintenance, league fines, youth setup, scouting costs, dividends, taxes and loan repayments. When we analyze the total income statement, these expenditures influence strongly over main revenues and thus, clubs have giant liabilities in the football market.

On the other hand, sportive achievements of the clubs are expected to affect the fiscal performance of teams. As the clubs have more success on games in different competitions or tournaments, fans tend to support their teams more such as preferring to watch the game in the stadium rather than watching on TV (buying the tickets), purchasing merchandised product, etc. (Uludağ ve Varan, 2013).

1.3 Industrialization of the Football

After football enter industrial process, we can realize that football clubs started to becoming corporation. This is the reason of structural changes in football. Because, all quantity and characteristic functions in football has changed and developed in time, and this evolution forced the clubs to corporate. Clearly, in order to get benefit from 'The Big Cake' in football, they need to become corporation.

Becoming a corporation gives the clubs many advantages. We can gather these advantages under two main titles such as institutionalization and professionalize; and increase the income (Akşar, 2005). In order for football clubs to be active actors in developing industrial football, they have to get more shares from this market. The reason of contention to get maximum share from 'Cake' forced the clubs to create new income sources. Therefore, they opened to capital market in order to financing and supplying long-term and lower cost funds. After the clubs head to capital

market, they also become an institutional structure as appropriate for development of industrial football. Thus, the clubs can both provide valuable funds from capital market and become institutional and professional.

Another reason for the clubs to enter the capital market by public offerings is that they can increase their capital or funds. Thus, they can finance all income under ‘corporation’. The main goal is to enter or inject cash to capital. Besides, investors see these clubs as ‘secure firms’ as they have stocks in the capital market and also some financial institutions (such as Capital Markets Board of Turkey) are the controlling these clubs interactions. It means that the club that has stock in the capital market promote to upper levels. The clubs that have stocks in bourse are known as ‘very secure firms’ in the capital market. It became obligatory for the clubs to enter the capital market because of creating extra funds for big sponsorships and transfers (especially funds for a valuable transfer budget). Moreover, the banks also consider these clubs as secure, because the brand equity of the club is given at their annual financial statements.

1.4 Stock Investments and Behavioral Finance

Football is one of the well-known sectors in global economy and there occurs relationship between fiscal policies of the clubs and their goals on entering the capital market in order to follow the innovations of this sector. It should be considered how these transactions or investments reflect by the investors in the capital market. The term of ‘reaction of the investor’ has great importance in finance, because it is the main concept of behavioral finance.

Behavioral finance is the study of effects of psychological, social, cognitive and emotional factors on the economic decisions of individuals and institutions, and the consequences for

market prices, returns and the resource allocation. The fields are primarily concerned with the bounds of rationality of economic agents. Behavioral models typically integrate insights from psychology, neuroscience and microeconomic theory. Therefore, these behavioral models cover a range of concepts, methods and fields. (The New Palgrave Dictionary of Economics, 2008). However, there are significant differences between behavioral approach and mainstream approach. The first difference is that behavioral finance is not based on optimizing the objective function, while the mainstream approach is (Kramer & Levi, 2000). Secondly, the agents in behavioral finance are considered irrational and their emotional cases play an important role in their decision making process (Loewenstein, 2000). On the other hand, the agents are considered to be rational and their decisions are not affected by their emotions, according to the mainstream approach. Thirdly, past experiences are considered as important for investors' preferences and decisions in the behavioral finance concept. On the contrary, the mainstream approach has a forward-looking manner with an optimizing objective function, where the assets with higher future dividends will have a higher price (Loewenstein and Weber, 2001).

One of the most critical assumptions in finance is that the investors are rational "wealth maximizers" who aims to raise their own welfare. In the manner of conventional economics, emotions or other endogenous and exogenous factors do not influence the investors' decision making process (Kahneman and Tversky, 1979).

On the other hand, the efficient market hypothesis is a study that irrationality occurs in the market as it allows that the market price of a stocks shows the impact of all relevant information as it is released. In other words, there are some abnormal issues that cannot be explained by modern financial theory. Fundamentally, these abnormal issues are found in conventional theories and they are considered short-term events that are eventually corrected over time. Moreover, the

market efficiency can only explain that behavioral finance itself is the collection of abnormality (Fama, 1970).

The main problem for investment in stock market is that investors use their emotions, especially in the conditions of supporting their teams. As they behaving irrational and their decisions are affected directly by the performance of their supported teams, there exist some unexpected results in the stock market. To give an example, when Galatasaray win against Beşiktaş in 2008-2009 season period (Score: 4-2) the stock returns went down on upcoming week (from 34,15 TL to 31.95 TL per stock). Similarly, at the same year although Beşiktaş became champion in the Turkish Super League, their stocks depreciated and had a downward slope for the next two weeks. Thus, as the investors making their decisions in emotional conditions and irrational thinking, the stock values can surprise or mislead the investors regardless to the teams' performance in the premier league. In order to find the expected valuation of the stocks, the internal effects should be analyzed carefully and individually (see Methodolgy part).

1.5 Financial Performances of Four Biggest Football Club in Turkey

As every firm has the financial performances, football clubs that were industrialized and entered the capital market have also financial performances over years. The figures below represent the financial performances of Beşiktaş Sportive Inc., Fenerbahçe Sportive Inc., Galatasaray Sportive Inc. and Trabzonspor Sportive Inc. from the 1st quarter of 2004 to 1st quarter in 2014.

Figure 1: The quarterly distribution of net profits, total assets, total equities and total liabilities of Beşiktaş Sportive Inc.

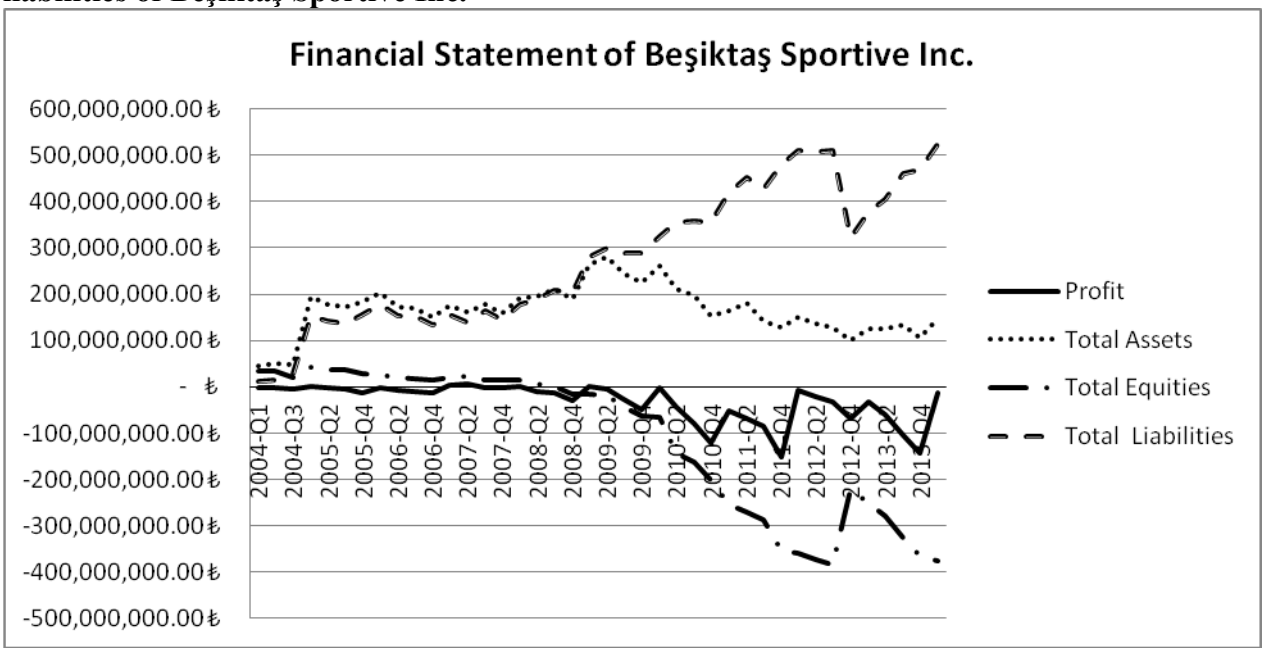

Figure 1 shows the quarterly distribution of of net profits, total assets, total equities and total liabilities of Beşiktaş Sportive Inc. According to the figure 1, it can be said that net profits of the club were stabile for very long time (2004-2008) and they were at zero point during these years. After 2008, net profits performed some breakings towards negative side. The most depreciation in loss occurred in fourth quarter of 2011. On the other hand, total equities of the club were the most volatile variable in the financial statement of the club. Beşiktaş Sportive Inc. had positive total equities from the beginning of 2004 to the 3rd quarter of 2010. After 2011, total equities went on deficit movement as the club had spent a lot capital for the investments such as new stadium and new sports institutions. Besides, total equities of the club had reached the bottom point at the end of 2013. In addition, total assets and total liabilities of the club performed parallel to each other between the beginning of 2004 and 2014, as the total assets are the difference

between total equities and total liabilities. Besides, the difference between these two variables would give the net debt of the club. The most debt appreciation occurred in 2nd quarter of 2012. Having huge liabilities (or debts) and losses for some period implies that Beşiktaş had spending on transfers of many players and for their wages regarding to their contracts.

Figure 2: The quarterly distribution of net profits, total assets, total equities and total liabilities of Fenerbahçe Sportive Inc.

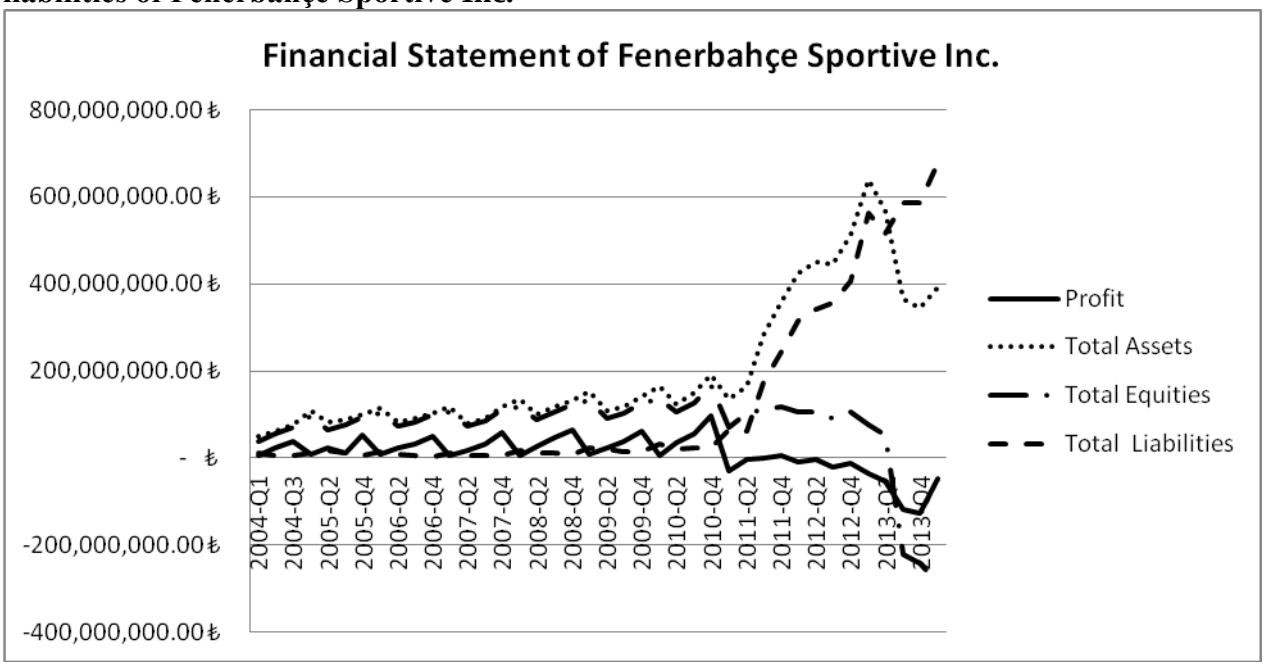

Figure 2 shows the quarterly distribution of of net profits, total assets, total equities and total liabilities of Fenerbahçe Sportive Inc. According to the figure 2, it can be said that net profits of the club were very volatile and positive from the beginning of 2004 till 1st quarter of 2011. After 2011, net profits became stable and had a negative movement. Moreover, total liabilities performed sharply increase from the beginning of 2011 and reached the peak point in the end of 2013. The reason might be that Fenerbahçe had a lot of transfers after 2011 and spent very money on players and their contracts. As the club had losses and could not finance the debt, total equities were also in negative trend and reached the bottom point at the end of 2013. From the figure 2, it can be said that the debt of the club tended to increase and reached the peak at the end of 2013.

One of the main reasons for that might be the bad impacts of the chicanery claims over Fenerbahçe Sportive Inc.

Figure 3: The quarterly distribution of net profits, total assets, total equities and total liabilities of Galatasaray Sportive Inc.

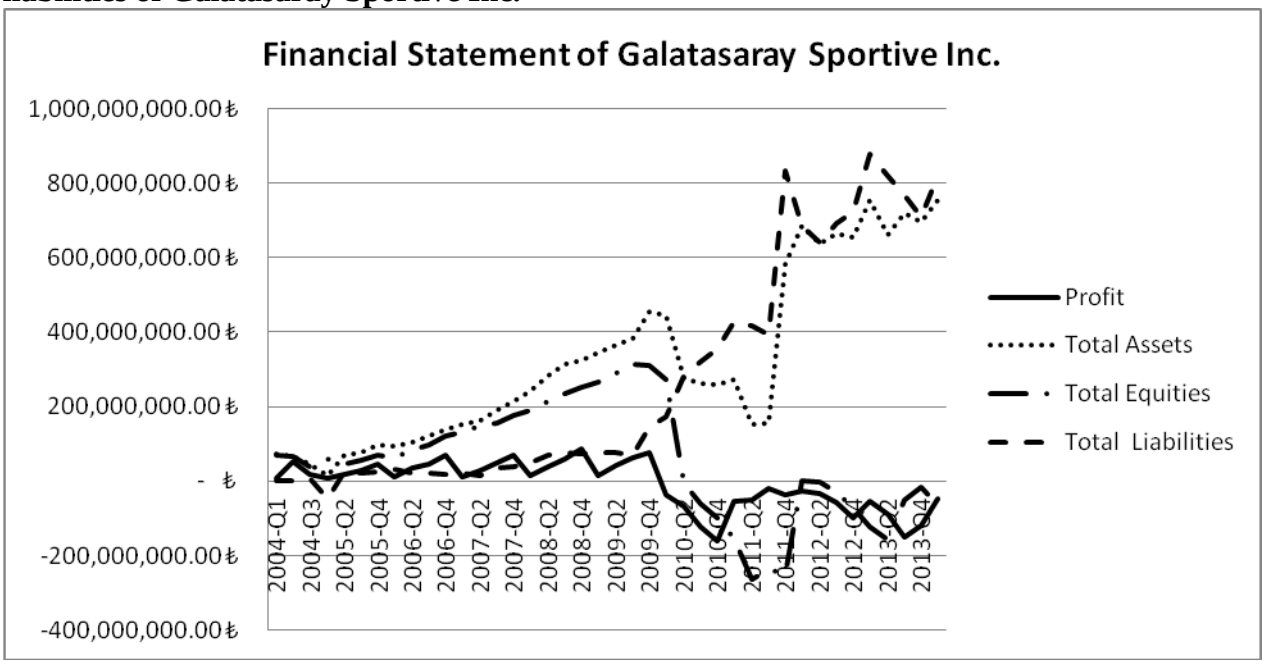

Figure 3 shows the quarterly distribution of of net profits, total assets, total equities and total liabilities of Galatasaray Sportive Inc. According to the figure 3, it can be said that net profits of the club were very volatile and positive from the beginning of 2004 till 1st quarter of 2010. After 2010, net profits became stabile and had a negative movement. Moreover, total liabilities performed sharply increase from the 2nd quarter of 2009 and reached the peak point in the 2nd of 2013. The reason might be that Galatasaray had a lot of transfers after 2009 till now and spent very money on players and their contracts. Moreover, they have built a new stadium that also caused to loan creditability of the club. Also, it reached the bottom point at the end of 2011. From the figure 3, it can be said that the debt of the club seem like not much comparing to the other

football clubs. One of the main reasons for that coverage of the debt might be the sponsorship revenues after new the new stadium and well-known player transfers to the club.

Figure 4: The quarterly distribution of net profits, total assets, total equities and total liabilities of Trabzonspor Sportive Inc.

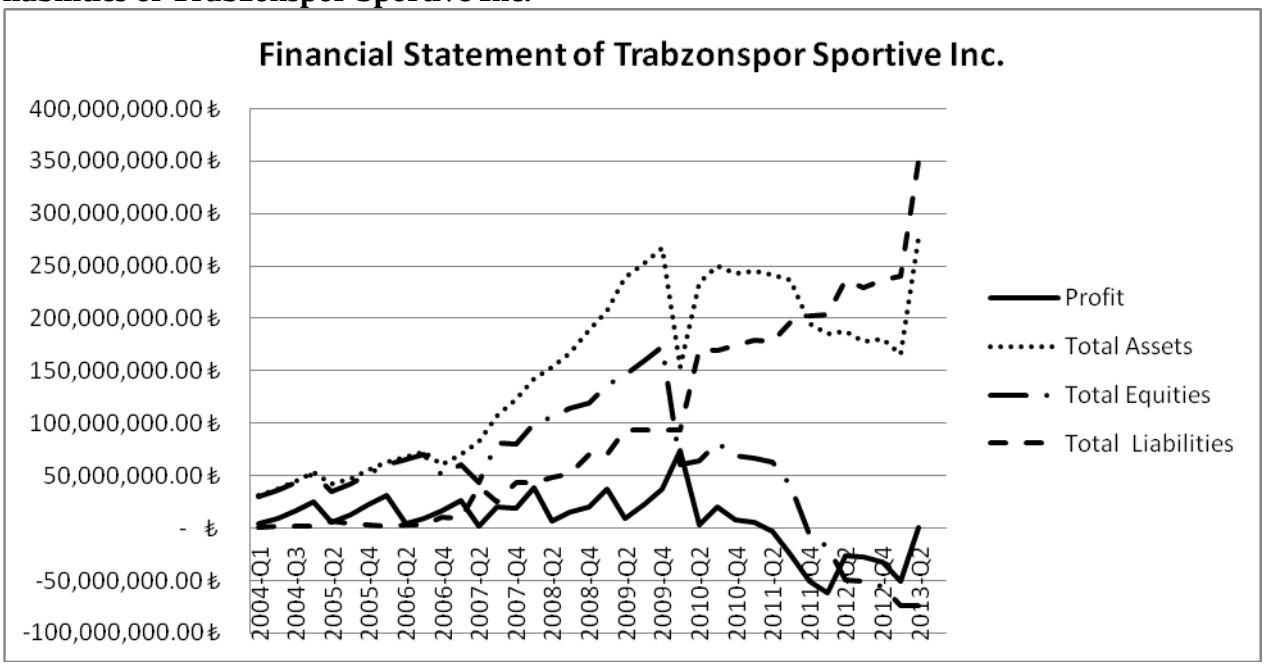

Figure 4 shows the quarterly distribution of net profits, total assets, total equities and total liabilities of Trabzonspor Sportive Inc. According to the figure 3, it can be said that net profits of the club were very volatile and positive from the beginning of 2004 till 2nd quarter of 2010. After 2010, net profits became stabile and had a negative movement. However, the club started to make profit comparing to the previous years. Moreover, the gap between total liabilities and total equities have started to open at the same quarter in 2010 and as it happened in other clubs, this gap is caused by unconscious player transfers and payments for their contracts. In addition, the biggest debt amount of the club occurred on 3rd quarter of 2009. However, the club seemed like able to finance the debt and decreased their liabilities that were included total assets.

1.6 Sportive Performance vs. Fiscal Performance

There are two reasons of analyzing the effect of both sportive and fiscal achievements as the effect of stock prices/returns of the clubs. The first reason is that if we just analyze the sportive achievements in the sense of scores or total amount of points gathered in the league, then we would have ignored the fiscal revenues, meaning the main income and profit analysis, and it will not be a realistic study. Secondly, when we look for the effect of fiscal variables of the club in each year to the stock prices, there should be subtraction of income and expenditure budget of club that is booked for just football department of the club. Because, there are other income and expenditure items on other amateur branches (such as basketball, volleyball, swimming team, etc.) and in order to understand their effects on the stock prices, we should also analyze the net profit and total sportive achievement levels of each branch.

1.7 Expectations of the Sportive and Fiscal Achievements Effect

One of the main aims in this study is to express the mistake and irrational decision making while the investors are doing their investments on the stocks of the clubs. Generally, the investors expect to appreciate the stock returns of the football clubs when they win against their opponents at home/away games in each competition. Turkish Super League, Turkish Domestic Cup and European competition games (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup) are three different and very important tournaments for major clubs. Their main goal is to get many successes from these competitions as possible as they can.

Professional football teams target all of these achievements even it is very hard to success championship in all competitions. In addition, the supporters or fans follow the expectations after

their team's target is declared as well. On the other hand, the investors of the club's stocks realize that getting all achievements from all competitions is hard to be real. Therefore, they have different expectations from each tournament. Most of them become more in European competitions game as the clubs have winnings in world-wide tournaments would bring more fame and prestige (such as sponsorships, etc). Thus, each win would appreciate the brand value of the club and this valuation will bring appreciations on the stocks of the football clubs.

Turkish Super League comes second for the good reason to do investments on football clubs as it is a very long marathon and investment opportunities process in the long run. The stability in success of major teams in the league would bring the prestige around the national football communities. Each win against the opponents (especially against the rivals) would supply good opportunity for the investments on them. Therefore, the investors of these club's stocks expect the teams to have stabile success in the league in the manner of long run investment on the club's stocks. In addition, Turkish Football Federation gives some amount of prize for each point that taken after games in the league to the football clubs. Thus, sportive achievements also bring the fiscal achievements to the clubs and the investors consider each wins in the league as a valuable issue for both fiscal and financial performances of the football clubs.

Turkish Domestic Cup games are also another prestige opportunity for the major football clubs in the eyes of the investors. The reason is that any of these major teams may have very bad season according to their performances. For the point of view of both the fans and the investors, their team will be had a peak-up period after the worst performances that they have already reached. Wins in the domestic cup after having very bad performance in other competitions would be a good morale for the team and vitality begins to occur on the stock market. Therefore, the investors also become sensitive from winnings in the domestic cup games in order to have a short

term surplus. Similar to the league games, the football clubs earn some amount of prize for each point and level-ups in the tournament.

Transfers are also effective investment opportunity in the point of view of the investors. Because, as the clubs make transfers into the team, both sportive and fiscal successes are expected case in the manner of sponsorships, merchandising revenues (such as shirts sales, etc), more attendance in stadiums, etc. For example, after the transfer of Wesley Sneijder and Didier Drogba in Galatasaray, their shirt sales increased by 116% in a year comparing to the previous years. Besides, the brand value of the sponsorship on team's shirts after the team has signed agreement with Turkish Airlines and Huawei. To give another example on transfers, Beşiktaş Sportive Inc. have made sponsorship deal with Vodafone Co. for their new stadium building and construction after important transfer had been made such as Demba Ba. Therefore, the investors take these transactions inside the club as a valuable development and expect them to reflect to the stock market of the club. Moreover, each transfer appreciates the club's brand and naturally their values, so it holds as a good investment opportunity for the investors of the club's stocks.

The investors also prefer to analyze the balance sheets and the financial statements of these corporate football clubs in order to do profitable and risk-free investments on the club's stocks. In the manner of financial performance analysis, fiscal variables are the benchmark to make a decision about the investment. For instance, the net profits, total equities, return on equity ratio and total asset turnover ratio are the positive observation tools in order to do good investments on the stocks of the football clubs. As the club have surplus from their financial activities (means that when net profit increase), the total equity will be appreciate. Consequently, these ratios (see the formulas in methodology part) will increase and there occur valuable investment opportunity for the investors of these stocks.

On the other hand, total liabilities, debt-ratios and capital structure are also benchmarks for the investors in order to realize the financial performances of the football clubs and make a decision about doing their investments on club's stocks. For example, if the club has huge debts or deficit liabilities on their financial statements, the investors should consider that the valuation of the club is on depreciation and it would reflect to the brand corporation. Having debt or deficit liability performance means that clubs do not have much cash flow and liquidity on their own budgets and it causes for the clubs to increase their creditability by loans. This case lead the investments would finance the debts or deficits in the liability, which its source is established by the investors as the club managers may decide to evaluate the investments on the stocks as re-payable financial instrument or cash flow into the liabilities. However, the value of being benchmark for the investors for total assets of the football clubs depends on the total liabilities that lie on the total assets. If the debts or deficit liabilities are greater than surplus side, then any increase total assets in the manner of rise in debts or liabilities would affect the investor's decisions about the investment on club's stock.

2. LITERATURE

On the previous studies there are important analyses about measuring the effects of sportive performances on financial status. On these studies, generally it was found that there are significant relationships between match results and return of football clubs' stocks. For instance, Morrow (1999) has the first study about the effects of football results on the club's stock price and returns. He analyzed the English Premier League games in 1998-1999. According to the results, wins have positive impact on stock price and returns. On the contrary, losing league games reduce the returns of stocks.

Correspondingly, Renneboog and Vanbrabant (2000) researched 17 British football clubs in order to monitor the effects of games on stock returns. Their findings represent that wins have positive impact on the stock returns, while losses have negative effect on them.

Amir and Livne (2005) studied on the effects of 1,348 UK football games of 24 football teams to stock prices and returns of clubs. According to the results, after they win their games against the opponent teams, investors buy more stock of club and this financial behavior affects the increase in stock prices and returns. When the contrary occurs, investors do not prefer to add club's stock on their portfolio.

Scholtens and Peenstra (2009) analyzed the results of 8 European football clubs' 1247 game played on financial performances between the years 2000-2004. According to the results of the study, while winning games against opponent teams affects positively to the returns of the teams' stocks, losing games against opponent teams have negative impact on returns.

In other study, Palomino, Renneboog and Zhang (2009) analyzed 16 English and Irish football clubs that their stocks are traded in London Stock Exchange between the years 1999-2002 and have found significant relationships between game results and returns of stocks. They have found that when teams win games in their leagues, returns of stocks increasing. On the other hand, when they lose games against opponents, returns of stocks have decreasing tendency.

Similarly, Benkraiem, Le Roy and Louchichi (2009) analyzed 18 European football clubs' 745 games in their own leagues in 2006-2007. They have found that there are significant outcomes between results and abnormal returns of stocks. According to their findings, when these teams win against opponent teams in the league, abnormal returns are impacted positively. On the contrary, when they draw or lose on their games, results have negative reaction to the abnormal returns of stocks.

Fotaki, Arkellos and Mania (2009) studied on 15 UK clubs for the years between 2001-2008. According to their findings, wins led to a price rise and defeats to a price fall after monitoring the stock market.

In other study, Bell (2012) researched on the impact of league games of English football teams on stock prices and returns. Results of the study imply that investors respond to stocks according to the importance of the game. In other words, the results of games that is played towards the end of season and that are critical ones about promotion or relegation have significant effects on stock prices and returns of football clubs.

There are also some studies implied that there are no significant impact of sportive achievements on financial performances of football clubs. For example, Zuber et al. (2005) analyzed the effects of league and domestic cup games of 10 English football teams to stock prices and returns.

According to the results, it is found that there is no significant impact of winning league and domestic cup games on stock returns of these clubs. It is claimed that investors of the football clubs are more passive rather than other traditional investors. Besides, the trade volume of stocks of football clubs is found to be lower than trade volume of other stocks. Zuber et al. (2005) has concluded his study that these investors are irrational and they are 'fans' more than 'investors'.

In the literature, there are some studies that analyze the effect of sportive achievement of national teams to their domestic exchange market. For instance, Boyle and Walter (2003) analyzed the impact of sportive achievements of New Zealand National Team on New Zealand Exchange Market. According to the results of the study, they could not find any significant effect of wins, draws or losses of national team to the stock prices and returns in exchange market.

On the contrary, Ashton et al. (2003) found different results rather than previous study. Their findings imply that when England National Football Team has good performance and winnings against other opponent national teams, performances of stocks in London Stock Exchange are affected positively. On the other hand, after they lose against other national opponents the stock prices and returns have decrease movement in the exchange market.

There are also some studies that analyze and research the relationship between sportive performances of specific teams and financial performance of club's stocks. For example, Stadtmann (2006) analyzed the sportive performance of Borussia Dortmund Football Team and studied on the impact of game results on stock returns of the club. The findings of the study imply that there is a significant and positive relationship between game results and stock returns. Besides, Stadtmann (2006) has also found that the effect of league games to stock returns of club are more than the impact of European games on stock returns.

Similarly, Duque and Ferreira (2008) examined the effects of Sporting Lisbon Football Team's sportive achievements to the club's stock returns between the years 2001-2006. After controlling for movements in the Portuguese stock market they found that after they draw or loss against their opponents, the stock returns tend to decrease, while they win their games there exist opposite movement in returns.

In the literature, there are important studies about the effects of sportive achievements of Turkish football clubs on their financial performances. For instance, on the study of "Performance of soccer on the stock market: Evidence from Turkey" by Hakan Berument et al, 2004, analyzed the effects of scores that finalized on Winner's Cup where three major teams such as Beşiktaş, Fenerbahçe and Galatasaray had joined. The empirical evidence provided that Beşiktaş's win against foreign rivals in the *Winners' Cup* increased the stock market returns. They also found that the same effect is not present for the other two major Turkish teams (Fenerbahçe and Galatasaray). The day of the week effect on the stock market and the relationship between risk and return are also presented.

In another example, Berument, Başak Ceylan and Gözpınar (2006) analyzed the effects of European results of Beşiktaş, Fenerbahçe and Galatasaray to stock performances of these clubs between the years 1987 and 2003. According to the results, while winnings of Beşiktaş on European tournaments have a positive and significant effect on stock returns, game results of Fenerbahçe and Galatasaray on European tournaments do not have any significant impact on stock returns.

In other study, Aygören, Uyar and Sarıtaş (2008) examined the influences of 177 Champions League and UEFA League games of Beşiktaş, Fenerbahçe, Galatasaray and Trabzonspor between

the years 2001 and 2007 to the performances of club's stock returns. Their findings imply that investors are more sensitive after these teams play on UEFA League games rather than the response on Champions League games.

Devecioğlu et al. (2010) have tried to analyze the effects of becoming corporation and having brand equity to the stock market in different view of point for 2008-2009 season. In their study, "Evaluation of sports club in Turkey orientation incorporation", they have claimed that sports clubs have emerging economies as well as having professional management and to improve their performance in order to be successful have adopted a business model approach. They have mentioned that sports clubs in Turkey headed towards such efforts and on the one hand taking advantage of tax benefits, while continuing their activities association with the status, on the other hand the company becoming institutionalized, professionalization, commercial activities, trying to be brand, creating sources of income. They have found significant effects of those internal aspects to the stock prices of the clubs.

Kaya and Gülhan researched "The effect of sport clubs' performance on stock prices: An application at BIST" by in 2013. The aim of this study is to analyze the effect of match results of the football clubs which have stocks in BIST to the stock prices of clubs. They have found positive effects for results of the winnings in home and drawings in away to the stock prices. However, they have concluded that drawing or losing the game in home have negative effect on stock prices.

Uludağ and Varan (2013) analyzed the impact of sportive performances of Beşiktaş, Fenerbahçe, Galatasaray and Trabzonspor football clubs on club's stock returns for the seasons from 2009-2010 to 2012-2013. Their findings show that there is a significant relationship between game

results and returns of club's stocks. When these teams win against other opponent in their league, the stock returns increase. While the contrary event happens, returns of club's stocks are affected negatively. Moreover, they concluded that investors of Beşiktaş and Fenerbahçe lose more when teams draw or loss the game rather than investors of Galatasaray and Trabzonspor.

3. METHODOLOGY

3.1 Data Collection Methods

On this study, all econometrical and statistical tests and analysis are done by using IBM SPSS Statistics 20.0 (Statistical Packages for Social Sciences), E-views 7 Statistics Software, Gretl 1.9.90 Statistics Software and Microsoft Office Excel 2007 Software.

Microsoft Office Excel 2007 Software is used for collecting and organizing the dataset. Moreover, the regression models on this study are tested by using IBM SPSS Statistics 20.0 for both time series and panel analysis. Besides, it is used for the analysis of Pearson-Correlation Tests and Multicollinearity Tests. E-views 7 Statistics Software is used for Heteroscedasticity corrections for all tests in the regression models. It also helped about analyzing the data, formulizing them and converting into percentage and ratio data. In addition, Gretl 1.9.90 Statistics Software is used for analysis of Unit Root Tests of the variables.

3.2 Sportive and Fiscal Variables in Time Series Regression Models

In econometrics, time series is a series of data that occurs measurable calculations made over a time interval. In addition, Time series analysis establishes methods for analyzing time series data for working on meaningful statistics results and other characteristics of the data (Gujarati, 2008). On this study, time series analysis is used in order to estimate the effects of sportive and fiscal variables to stock returns and abnormal returns of the football clubs.

In the regression models, there are 2 different dependent variables and 12 different independent variables. Dependent variables are simply stock returns and abnormal stock returns of the football

clubs. In order to analyze the stock returns of the clubs without the market effect, abnormal stock returns are used. Consequently, it will be beneficial to analyze the impacts of sportive and fiscal variables to the both stock returns with market effect and without market effect. Some parts of these variables in the regression models represent the sportive achievements of the football clubs such as home results of the football clubs in Turkish Super League games, away results of the football clubs in Turkish Super League games, home results of the football clubs in European competition games, away results of the football clubs in European competition games, home results of the football clubs in Turkish Domestic Cup games, away results of the football clubs in Turkish Domestic Cup games and year variables for each season in Turkey and Europe. These variables that define the sportive achievements of the football clubs are formed as dummy variable.

The other part of these variables in the regression models refer to fiscal achievements of the football clubs such as total assets of the football clubs, total equities of the football clubs, total liabilities of the football clubs, net profits of the football clubs, debt-ratios of the football clubs, capital structure ratios of the football clubs, return on equity ratios of the football clubs and total asset turnover ratios of the football clubs. These variables that define the fiscal achievements of the football clubs are generated as percentage and ratio.

Moreover, transfer dummy variable that represents player transfers of the football clubs can be included both sportive and fiscal achievements. Because, transfers are expected to affect the trend of the game in the manner of wins against the opponent teams. Besides, they are made in hassles, but it confirms that the financial statements of these football clubs are still well and strong regarding to the difficulties in the fiscal positions.

3.3 Abnormal and Normal Stock Returns in Time Series Analysis

Return of a stock is the profit or loss of a stock or a security that is invested or observed in a specific period of time. The return is occurred from the income and the capital earnings regarding to the investment made. It is generally represented by percentage (%) term (Peleg, 2014).

$f(R_{i,t}) = (P_{initial}, P_{ending})$ where $P_{initial}$ is the initial price of a stock and P_{ending} is the ending or next period price of a stock.

On the other hand, abnormal return is the return that is calculated by decomposing from average market return (Peleg, 2014). In other words, it is the pure return of a invested stock or a security which is sorted from market average trend.

$f(AR_{i,t}) = (P_{initial}, P_{ending}, R_{m,t})$ where $P_{initial}$ is the initial price of a stock, P_{ending} is the ending or next period price of a stock and $R_{m,t}$ is the market return.

3.4 Establishing and Re-Arranging the Variables

In order to make better regressions, the variables can also be used in different ways in the manner of analyzing and observing the outcomes in various angles. After the variables were set in the dataset, most of them have been changed in different versions such as ratios (debt-ratio, capital structure ratio, return on equity ratio and total asset turnover ratio) and percentages changes (rate of net profits, rate of total assets, rate of total equities, rate of total liabilities) in order to find the effects of variables in usual, but different point of views. Ratio and percentage change analysis in

finance is more preferred observation method in order to monitor the financial performances (Kothari, 2001).

In addition, the dummy variables for Turkish Super League games, European competition games (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup) and Turkish Domestic Cup games are generated as wins or not winnings. The reason is that these 4 football clubs are the-first-four-big-teams in Turkey and they are expected to win against all other opponents in Turkish Super League games and Turkish Domestic Cup games, except the bigger ones in European competition games. In other words, Beşiktaş, Fenerbahçe, Galatasaray and Trabzonspor are not underdog teams in Turkish Super League games and Turkish Domestic Cup games and also they are well-known teams in European competition games. For the underdog or lower quality teams, it can be said that draws in away games or against bigger and strong opponents in all competitions are valuable issue. Most of them consider taking 1 point in an away game as a successful result. Even many of them view taking 1 point in their own stadium as a desirable result. However, in order for big teams to reach their goals, they need to win as possible as they can no matter the game is at home or away. Therefore, they are expected to finish at top in these competitions.

The details of these formulas and dummy variables are mentioned in the next part of methodology.

3.5 Regression Analysis and Dummy Variables

In statistics, regression analysis is done to estimate the link between variables. If the focus is to find out the link between a dependent variable and one or more independent variables, then it

includes many techniques in order to analyze variables. In other words, regression analysis defines how the dependent variable alters while any of the independent variables differs among each other when the other independent variables are constant (A.T.Studenmund, 2008).

Regression analysis estimates the effect to the dependent variable by the independent variables. In the definition of regression function it can be mentioned that the estimation target is a function of the independent variables. In the regression analysis, it is important to characterize the changes of the dependent variable around the regression function. (Gujarati, 2008).

Regression analysis is widely used in order to forecast or predict the effects of some certain independent variables to the dependent variable that is to find the expected probability impact. Regression analysis is also used to observe that how the independent variables are related to the dependent variable and is it for exploring the forms of these relationships (Gujarati, 2008).

In the regression models, there are some variables that can be involved either ratio scale variables or nominal scale variables. These kind of variables are called as 'dummy variables'. Their function is establishing an indicator or an identifier in order to observe the effects of the estimated variable (A.T.Studenmund, 2008).

3.6 Dummy Variables in the Regression Models

In the regression models, there are several dummy variables that refer the sportive achievements such as winnings or not winnings in Turkish Super League games, European competition games (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup) and Turkish Domestic Cup games as dividing in home and away categories.

In addition to these dummy variables, there is also one dummy variable for transfers of these football clubs that is represented as both sportive and fiscal achievements. Although transfers are expected to be useful or beneficial for the team to get sportive achievements, able to make transfer in the football clubs is also referred as financial success even most of them become with huge losses. Taking the risk of transfer in deficit financial position for the clubs represents that they have good creditability for loans from banking sector (Dumontier and Raffournier, 2002). Moreover, making the transfers for teams that have bad financial statements causes to fill the liabilities of football clubs with huge debts. This situation shows that these football clubs do not have officially bankruptcy in their financial statements (Martani et al., 2009).

For the dummy variables that refer the sportive achievements, the result variables are formed and defined as winning the game or not winning the game. In order to explain in details, winnings in the Turkish Super League games represent "1" and not winnings (draws and defeats) represent "0". In other words, taking 3 points from Turkish Super League games is defined as "1". On the other hand, taking 1 or less points from Turkish Super League games is defined as "0". The results are divided in two different categories such as wins at home and wins at away in order to see that winnings in front of the fans in their own stadium have more impact on the stock performances of the football club or winnings at away stadium and in front of opponent team's supporters, taking 3 points in away have bigger effect on football club's financial performances.

Similarly for European competition games, winnings represent "1" and not winnings (draws and defeats) represent "0". In order to mention with different way, taking 3 points from European competition games is defined as "1". On the other hand, taking 1 or less points from European competition games is defined as "0". As in Turkish Super League games, the results of the European competition games are divided in two different categories such as wins at home and

wins at away to observe whether the winnings at home have more impact on the stock performances of the football clubs than winnings at away, or not.

For Turkish Domestic Cup games, winnings represent “1” and not winnings (draws and defeats) represent “0”. In other words, taking 3 points from Turkish Domestic Cup tournament games is defined as “1”. On the other hand, taking 1 or less points from Turkish Domestic Cup tournament games is defined as “0”. Similar to other competitions, the results of the Turkish Domestic Cup games are divided in two different categories such as wins at home and wins at away to analyze the winnings at home affect the stock performances of the football clubs rather than winnings at away or winning the opponent team at their own stadium has greater impact on returns of the football club’s stocks.

On this study, the year dummy variables are formed that refer the effects of the years to the stock performances of the football clubs with respect to “chicanery year in Turkish Football”. The time range of the year dummy variables is begun from 2009-2010 football season to 2013-2014 football season in Turkey and Europe. Each year dummy variable represents all sportive results and fiscal changes occur in that year. In order to explain in detail, “2009-2010” dummy variable refers to “1” if that year has an impact on stock performances of football clubs and refers to “0” if there is no effect of 2009-2010 year. Similarly, “2010-2011” dummy variable refers to “1” if that year has an impact on returns of football clubs and refers to “0” if there is no effect of 2010-2011 year.

“2011-2012” dummy variable, also declared as “chicanery year”, refers to “1” if that year has an impact on stock performances of football clubs and refers to “0” if there is no effect of 2011-2012 year. Correspondingly, “2012-2013” dummy variable refers to “1” if that year has effect on

returns of the stocks of football clubs and refers to "0" if there is no effect of 2012-2013 year. Finally, "2013-2014" dummy variable represents "1" if that year has impact on financial performances of football clubs and refers to "0" if there is no effect of 2013-2014 year.

In the regression model, in order to analyze or observe the year effect, one of the dummy variable categories should be left out of the equation. As it is declared as "chicanery year" in football competitions in Turkey, the year "2011-2012" is dropped due to analyzing the effect of chicanery to the stock and return performances of the football clubs in Turkey. In other words, the effects of other years to the stock and financial performances of the football clubs will be analyzed comparing to the "chicanery year".

These year dummy variables will give benefits to this study in order to analyze the effect of chicanery year in the football to the stock market, and at the same time, to the financial performances of Beşiktaş, Fenerbahçe, Galatasaray and Trabzonspor. It is important to observe how chicanery year affects the domestic and sports market in the finance. It is also an opportunity how the investors are reacted after the chicanery year in football. The regression analysis will present whether chicanery year have a bad impact on both financial markets and the financial performances of the football clubs or it does not have any negative effect to the football club's stock performances and their profits.

The rest of variables in the regression models are formed as dummy variables. "HwinL" refers to wins against the opponents at home games in Turkish Super League. If the team wins then it takes the value "1", otherwise it takes the value "0". "AwinL" represents winnings against the opponents at away games in Turkish Super League. Similarly, if the team wins then it takes the value "1", otherwise it takes the value "0".

“HwinE” refers to wins against the opponents at home games in European competitions. If the team wins then it takes the value “1”, otherwise it takes the value “0”. On the other hand, “AwinE” represents winnings against the opponents at away games in European competitions. Similarly, if the team wins then it takes the value “1”, otherwise it takes the value “0”.

“HwinD” refers to wins against the opponents at home games in Turkish Domestic Cup. If the team wins then it takes the value “1”, otherwise it takes the value “0”. On the other hand, “AwinD” represents winnings against the opponents at away games in Turkish Domestic Cup. Similarly, if the team wins then it takes the value “1”, otherwise it takes the value “0”.

“Transfers” variable is player transfers that are made by football clubs at some period of time or season. The transfer data is formed as dummy variable and “1” represents football clubs made one or more player transfer at any specific time period or season and “0” represents any player transfer is made by football clubs.

“Year 1” dummy variable refers season in 2009-2010. Having an impact of this year on stock performances of football clubs and refers to “1” and Having no effect of 2009-2010 year to the stock performances of the football clubs refers to “0”. “Year 2” dummy variable defines season in 2010-2011. If there is any impact of this year on stock performances of football clubs and refers to “1” and otherwise it takes “0”. “Year 3” dummy variable refers to chicanery season in 2011-2012. This dummy variable is dropped due to analyze the effects of other years to the stock performances of the football clubs regarding to chicanery.

Besides, “Year 4” dummy variable refers season in 2009-2010 and “Year 5” represents the next season. If there are any seasonal effects on the stock performances of the football clubs, it takes the value of “1”, otherwise “0”.

As the most of fiscal variables are correlated to each other (see the Pearson-Correlation results), they are divided and analyzed in 8 different regression models in order to estimate the effect to the returns of the football club's stocks. Besides, another eight different regression estimations are analyzed to observe the impact on abnormal returns the football club's stocks. Consequently, there will be strict empirical analysis by observing all correlated variables with keeping the rest of them same in the regression model.

3.7 Regression Models and Formulas of Generated Variables

The regression models and the variables that are included in the estimation equations are mentioned with their equation numbers and formulas below:

$Equation\ (1)$:

$$R_{i,t} = \beta_0 + \beta_1\, HwinsL + \beta_2\, AwinsL + \beta_3\, HwinsE + \beta_4\, AwinsE + \beta_5\, HwinsD + \beta_6\, AwinsD + \beta_7\, Transfer + \beta_8\, Profits + \beta_9\, Year\ 1 + \beta_{10}\, Year\ 2 + \beta_{11}\, Year\ 4 + \beta_{12}\, Year\ 5 + e_i$$

$Equation\ (2)$:

$$R_{i,t} = \beta_0 + \beta_1\, HwinsL + \beta_2\, AwinsL + \beta_3\, HwinsE + \beta_4\, AwinsE + \beta_5\, HwinsD + \beta_6\, AwinsD + \beta_7\, Transfer + \beta_8\, Assets + \beta_9\, Year\ 1 + \beta_{10}\, Year\ 2 + \beta_{11}\, Year\ 4 + \beta_{12}\, Year\ 5 + e_i$$

$Equation\ (3)$:

$$R_{i,t} = \beta_0 + \beta_1\, HwinsL + \beta_2\, AwinsL + \beta_3\, HwinsE + \beta_4\, AwinsE + \beta_5\, HwinsD + \beta_6\, AwinsD + \beta_7\, Transfer + \beta_8\, Equities + \beta_9\, Year\ 1 + \beta_{10}\, Year\ 2 + \beta_{11}\, Year\ 4 + \beta_{12}\, Year\ 5 + e_i$$

Equation (4):

$$R_{i,t} = \beta_0 + \beta_1 HwinsL + \beta_2 AwinsL + \beta_3 HwinsE + \beta_4 AwinsE + \beta_5 HwinsD + \beta_6 AwinsD + \beta_7 Transfer + \beta_8 Liabilities + \beta_9 Year\ 1 + \beta_{10} Year\ 2 + \beta_{11} Year\ 4 + \beta_{12} Year\ 5 + e_i$$

Equation (5):

$$R_{i,t} = \beta_0 + \beta_1 HwinsL + \beta_2 AwinsL + \beta_3 HwinsE + \beta_4 AwinsE + \beta_5 HwinsD + \beta_6 AwinsD + \beta_7 Transfer + \beta_8 Debts + \beta_9 CAS + \beta_9 Turnover + \beta_{10} Year\ 1 + \beta_{11} Year\ 2 + \beta_{12} Year\ 4 + \beta_{13} Year\ 5 + e_i$$

Equation (6):

$$R_{i,t} = \beta_0 + \beta_1 HwinsL + \beta_2 AwinsL + \beta_3 HwinsE + \beta_4 AwinsE + \beta_5 HwinsD + \beta_6 AwinsD + \beta_7 Transfer + \beta_8 ROE + \beta_9 Year\ 1 + \beta_{10} Year\ 2 + \beta_{11} Year\ 4 + \beta_{12} Year\ 5 + e_i$$

Equation (7):

$$AR_{i,t} = \beta_0 + \beta_1 HwinsL + \beta_2 AwinsL + \beta_3 HwinsE + \beta_4 AwinsE + \beta_5 HwinsD + \beta_6 AwinsD + \beta_7 Transfer + \beta_8 Profits + \beta_9 Year\ 1 + \beta_{10} Year\ 2 + \beta_{11} Year\ 4 + \beta_{12} Year\ 5 + e_i$$

Equation (8):

$$AR_{i,t} = \beta_0 + \beta_1 HwinsL + \beta_2 AwinsL + \beta_3 HwinsE + \beta_4 AwinsE + \beta_5 HwinsD + \beta_6 AwinsD + \beta_7 Transfer + \beta_8 Assets + \beta_9 Year\ 1 + \beta_{10} Year\ 2 + \beta_{11} Year\ 4 + \beta_{12} Year\ 5 + e_i$$

Equation (9):

$$AR_{i,t} = \beta_0 + \beta_1\, HwinsL + \beta_2\, AwinsL + \beta_3\, HwinsE + \beta_4\, AwinsE + \beta_5\, HwinsD + \beta_6\, AwinsD + \beta_7\, Transfer + \beta_8\, Equities + \beta_9\, Year\ 1 + \beta_{10}\, Year\ 2 + \beta_{11}\, Year\ 4 + \beta_{12}\, Year\ 5 + e_i$$

Equation (10):

$$AR_{i,t} = \beta_0 + \beta_1\, HwinsL + \beta_2\, AwinsL + \beta_3\, HwinsE + \beta_4\, AwinsE + \beta_5\, HwinsD + \beta_6\, AwinsD + \beta_7\, Transfer + \beta_8\, Liabilities + \beta_9\, Year\ 1 + \beta_{10}\, Year\ 2 + \beta_{11}\, Year\ 4 + \beta_{12}\, Year\ 5 + e_i$$

Equation (11):

$$AR_{i,t} = \beta_0 + \beta_0 + \beta_1\, HwinsL + \beta_2\, AwinsL + \beta_3\, HwinsE + \beta_4\, AwinsE + \beta_5\, HwinsD + \beta_6\, AwinsD + \beta_7\, Transfer + \beta_8\, Debts + \beta_9\, CAS + \beta_9\, Turnover + \beta_{10}\, Year\ 1 + \beta_{11}\, Year\ 2 + \beta_{12}\, Year\ 4 + \beta_{13}\, Year\ 5 + e_i$$

Equation (12):

$$AR_{i,t} = \beta_0 + \beta_1\, HwinsL + \beta_2\, AwinsL + \beta_3\, HwinsE + \beta_4\, AwinsE + \beta_5\, HwinsD + \beta_6\, AwinsD + \beta_7\, Transfer + \beta_8\, ROE + \beta_9\, Year\ 1 + \beta_{10}\, Year\ 2 + \beta_{11}\, Year\ 4 + \beta_{12}\, Year\ 5 + e_i$$

where, $R_{i,t} = \frac{\ln(P_{i,t})}{\ln(P_{i,t-1})}$ is the return of the stocks of the football clubs, $AR_{i,t} = R_{i,t} - R_{m,t}$ is the abnormal return that is formed by subtraction of returns of the stocks from market return.

For the formulas of percentages fiscal changes in calculations, it can be said that $Profits = \frac{Profits_{i,t} - Profits_{i,t-1}}{Profits_{i,t-1}}$ is the rate of net profits in the financial statements of the football

clubs, $Assets = \frac{Assets_{i,t} - Assets_{i,t-1}}{Assets_{i,t-1}}$ means the rate of total assets in the financial statements of the football clubs, $Equities = \frac{Equities_{i,t} - Equities_{i,t-1}}{Equities_{i,t-1}}$ defines the rate of total equities in the financial statements of the football clubs, $Liabilities = \frac{Liabilities_{i,t} - Liabilities_{i,t-1}}{Liabilities_{i,t-1}}$ represents the rate of total liabilities in the financial statements of the football clubs.

For the formulas of ratios in fiscal performances in calculations, it can be said that $Debt\ Ratio = \frac{Total\ Assets\ of\ the\ Footbal\ Clubs}{Total\ Liabilities\ of\ the\ Football\ Clubs}$ is the ratio that represents the percentage of debts in the financial statements of the football clubs, $CAS = \frac{Total\ Liabilities\ of\ the\ Footbal\ Clubs}{Total\ Equities\ of\ the\ Football\ Clubs}$ is named as capital structure ratio that defines how much percentage of total liabilities rely in the total equities of the football clubs.

$ROE = \frac{Net\ Profits\ of\ the\ Footbal\ Clubs}{Total\ Equities\ of\ the\ Football\ Clubs}$ is named as return on equities that means how much percentage of net profits are included in total equities of the football clubs. Finally, $Turnover = \frac{Net\ Profits\ of\ the\ Footbal\ Clubs}{Total\ Assets\ of\ the\ Football\ Clubs}$ is named as total asset turnover that refers how much percentage of net profits are contained in total assets of the football clubs.

3.8 Quantile Regression Analyses

One of the important regression analysis or methods used in statistics and econometrics is 'Quantile regression'. In the OLS (Ordinary Least Square) analysis, approximate the conditional mean of the response variable is estimated with the certain values of the independent variables.

However in the quantile regression models, the conditional median and different quantiles of the dependent variable is estimated according to the effects of the independent variables (A.T. Studenmund, 2008).

3.9 Pearson-Correlation Tests

In statistics, correlation is a term that measures how variables are related to each other (Gujarati, 2008). There are some tests in order to find the correlations between variables. One of them is called Pearson-Correlation Test. It is the most common method in order to measure the correlation in statistics. Pearson-Correlation Test examines linear relationship between two sets of data (Gujarati, 2008). The correlation value exist between "-1" and "1". Finding a value towards "-1" means that the correlation between two variables is negative. On the contrary, finding a value that heads to "1" examines that these variables have positive correlation. When the value is found as equal to "-1" represents that two variables are perfectly negative correlated to each other. On the other hand, after using Pearson-Correlation Test, if the value is equal to "1", then these variables are perfectly positive correlated to each other.

Pearson's correlation coefficient between two variables can be calculated by the covariance of the two variables divided by the product of their standard deviations (Gujarati, 2008). Moreover, in order to represent the Pearson correlation coefficient by the Greek letter ρ (rho) is used and it represents the population correlation coefficient or the population Pearson correlation coefficient. The formula for ρ is:

$$\rho_{X,Y} = \frac{\operatorname{cov}(X,Y)}{\sigma_X \sigma_Y} = \frac{E[(X-\mu_X)(Y-\mu_Y)]}{\sigma_X \sigma_Y}$$

In Pearson-Correlation Test, p-value represents the significance rate that shows two variables are correlated to each other. If the p-value is significant, then the null-hypothesis (H_0: There is no correlation) will be rejected. In other words, if the p-value is lower than 0.05 (for 95% confidence level) then it means that there is a high correlation between two variables that are measured (A.H. Studenmund, 2008). If the p-value is not significant, then the null-hypothesis (H_0: There is no correlation) will not be rejected and it means that there are no highly correlated variables.

In addition for measuring the correlations between two variables, "60% ratio rule" is also common analysis criterion. Correlation matrix table indicates the percentage rates of variables in order to detect the highly related variables. In statistics, two variables can be examined as related to each other when the correlation coefficients of these variables have at least "60%" or more ratio. If the correlation coefficients of two variables have at least "-60%" or more ratio, then it can be said that these variables are negatively correlated to each other. On the other hand, when the correlation coefficient ratio of two variables is at least "60%" or more, then these variables are defined as positively correlated variables. Moreover, if two variables have "-100%" correlation coefficient ratio, then it means that these variables are perfectly negative correlated to each other. On the contrary, if they have "100%" rate of correlation coefficient, then it means that these variables have perfectly positive correlation (A.H. Studenmund, 2008).

When econometrical analysis are made for measuring the effects of independent variables to dependent one, variables that found or detected as correlated and hold in the same regression would give wrong estimation output results. In order to make better regressions or get more correct results, the variables that are detected as having high correlation coefficients should omit

or dropped from regression model (Gujarati, 2008). On the following pages, the football club's correlation tables and coefficient rates of correlations is stand.

3.9.1 Pearson Correlation Coefficients and Results

Table 1: Correlation Coefficient Rates of Beşiktaş Sportive Inc.

	Stock Price	Stock Return	Ab. Return	Av. Subs. Return	Profit	Asset	Equity	Lia	Debt	ROE	CAS	Turnover
Stock Price	1	.946**	.883**	-.825**	.011	-.104	.038	-.049	-.129	.082	-.015	-.040
Stock Return	.946**	1	.937**	-.845**	.011	-.127	.053	-.061	-.137	.095	-.023	-.073
Ab. Return	.883**	.937**	1	-.791**	-.003	-.129	.034	-.082	-.137	.079	-.034	-.075
Av. Subs. Return	-.825**	-.845**	-.791**	1	.009	.067	-.015	.067	.143	-.027	.016	.097
Profit	.011	.011	-.003	.009	1	-.372**	.853**	.144	.007	-.360**	-.816**	-.113
Asset	-.104	-.127	-.129	.067	-.372**	1	-.172*	.273**	-.036	-.201**	.214**	.311**
Equity	.038	.053	.034	-.015	.853**	-.172*	1	.145	.130	-.269**	-.688**	-.066
Lia	-.049	-.061	-.082	.067	.144	.273**	.145	1	.158*	.283**	.017	-.086
Debt	-.129	-.137	-.137	.143	.007	-.036	.130	.158*	1	-.059	.099	-.074
ROE	.082	.095	.079	-.027	-.360**	-.201**	-.269**	.283**	-.059	1	.550**	.210**
CAS	-.015	-.023	-.034	.016	-.816**	.214**	-.688**	.017	.099	.550**	1	.148*
Turnover	-.040	-.073	-.075	.097	-.113	.311**	-.066	-.086	-.074	.210**	.148*	1

HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season.*,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis.

Table 1 shows the correlation coefficient rates of variables for Beşiktaş Sportive Inc. Each variable in the table will be analyzed separately and in details. According to the results in the table above, stock prices are highly correlated with stock returns, abnormal stock returns and average return that are subtracted from Beşiktaş Football Club's returns. On the other hand, stock prices have low correlation with net profit (ρ=0,011), capital structure ratios (ρ= -0,015) and total equities (ρ=0,038). It can be said that the highest correlated variable with stock prices (except the

variable itself) is stock returns (ρ=0,94). On the contrary, the lowest correlated variable with stock prices is profit (ρ=0,011).

There is significant and positive correlation between stock prices and stock returns (ρ=0,94) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between stock prices and stock returns are reasonably normal as stock prices are calculated by difference of changes in stock prices. In the regression models, these two variables are not used in same equation to not face with correlation problem.

The second highest variable that is highly correlated with stock prices is abnormal return. There is significant and positive correlation between stock prices and abnormal returns (ρ=0,88) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between the stock prices and the abnormal returns are expected issue. Because, abnormal returns are formed by subtraction of market returns from stock returns and as it is mentioned, stock returns are generated form stock prices. Therefore, stock prices and abnormal returns cannot be used in the same equation in any regression model.

The next highest variable that is highly correlated with stock prices is average subtracted return that is simply the returns of the football club's stocks that subtracted from all teams average returns. There is negative and significant correlation between these two variables (ρ=-0,820). Similarly, having high correlation coefficient rate with stock prices and average subtracted return is very normal. As it is explained on previous sentences, average subtracted return is generated from changes in stock prices and then converted to different type of return. Thus, stock prices and average subtracted returns should not be in the same regression model.

Stock prices have very low correlation with other variables such as net profit, total assets, total equities, total liabilities, debt-ratios, return on equities, capital structure ratios and total asset turnover ratios. In other words, there is no significant correlation between stock prices and these variables. Moreover, even there are low correlations between stock prices and these variables, it ought to be mentioned that stock prices have positive correlation with net profit (ρ=0,011), total equities (ρ=0,038) and return on equities (ρ=0,082). On the other hand, total assets (ρ=-0,104), total liabilities (ρ=-0,049), debt-ratios (ρ=0,129), capital structure ratios (ρ=-0,015), and total asset turnover ratios (ρ=-0,04) are negatively correlated with stock prices.

According to the results in table 1, stock returns are are highly correlated with stock prices, abnormal return and average subtracted return that are subtracted from Beşiktaş Football Club's returns. On the other hand, stock returns have low correlation with net profit, capital structure ratios and total equities. As it is mentioned on previous part, the highest correlated variable with stock returns (except the variable itself) is stock prices (ρ=0,946). On the contrary, as it is same as in stock prices, the lowest correlated variable with stock returns is profit (ρ=0,011).

There is significant and positive correlation between stock returns and abnormal return (ρ=0,937). Therefore, the null hypothesis (H_0: There is no correlation) is rejected. This high correlation is substantially normal as abnormal return is generated from stock returns. Moreover, positive correlation between these variables examines that stock returns are mostly greater than the market return.

The correlation between stock return and average subtracted return is also significant, but negatively (ρ=-0,845). Thus, the null hypothesis (H_0: There is no correlation) is again rejected. Similarly, high correlation coefficient rate between these two variables are expected as average

subtracted return is developed from stock returns. Besides, negative correlation between these variables shows that stock returns are mostly smaller than sports club's average returns.

Stock returns have very low correlation with other variables such as net profit, total assets, total equities, total liabilities, debt-ratios, return on equities, capital structure ratios and total asset turnover ratios. In other words, there is no significant correlation between stock returns and these variables. In addition, stock returns have positive correlation with, total equities (ρ=0,053), return on equities (ρ=0,095) and net profit (ρ=0,011) which is the lowest correlated variable with them. On the other hand, total assets (ρ=-0,127), total liabilities (ρ=-0,061), debt-ratios (ρ=-0,137), capital structure ratios (ρ=-0,023), and total asset turnover ratios (ρ=-0,073) are negatively correlated with stock returns.

According to the results in table 1, abnormal return and average subtracted return are highly correlated to each other. The correlations between these variables are significant and negative (ρ=0,791). Therefore, the null hypothesis (H_0: There is no correlation) is again rejected. Except they are highly correlated with stock prices and stock returns, they have low correlations with other variables such as net profit, total assets, total equities, total liabilities, debt-ratios, return on equities, capital structure ratios and total asset turnover ratios.

Among these lower correlated variables, abnormal returns are positively correlated with total equities (ρ=0,034) and return on equities (ρ=0,079) and they are negatively correlated with total assets (ρ=-0,129), total liabilities (ρ=-0,082), debt-ratios (ρ=-0,137), capital structure ratios (ρ=-0,034), total assets turnover (ρ=-0,075) and net profits (ρ=-0,003), which is the lowest correlated with them. On the other hand, average subtracted returns are positively correlated with debt-ratios (ρ=0,143), total asset turnover ratios (ρ=0,097), total assets (ρ=0,067), total liabilities

(ρ=0,067), capital structure ratios (ρ=0,016) and net profits (ρ=0,009), that is again the lowest correlated with them and they are negatively correlated with total equities (ρ=-0,015) and return on equities (ρ=-0,027).

The table of Pearson-Correlation Test shows that there are significant correlations between net profits of Beşiktaş Sportive Inc. and total equities, capital structure ratios, total assets and return on equities ratios that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no correlation) is rejected. Moreover, net profits have positive correlation with total equities (ρ=0,853) and also the correlation coefficient is the highest one among the other variables. On the other hand, net profits are negatively correlated with return on equities ratios (ρ=-0,360), total assets (ρ=-0,372) and capital structure ratios (ρ=-0,816) and the last one has the highest negative correlation with net profits.

The reason why there are correlations among net profits with total equities and total assets is that in the financial statements, some part of the net profits is supplied from total equities (liquidity injection by the chairman and board of directors) and also some part of the net profits is paid in total assets in order to cover or reduce the liability part of them. For both payments, as the net profits increase, total equities would be reduced. Besides, when the net profits are paid out for liabilities in total assets, then total assets have increase value in the balance sheet. However, if losses are greater than surpluses, then total assets and total equities tend to decrease. Therefore, total equities and total assets have negative relationship with net profits. In addition, return on equities ratios are formed by dividing net profits to total equities and this causes correlation between them. As the net profits increase, the ratio will also increase. However, there is negative relationship among them and the reason might be that Beşiktaş Sportive Inc. has losses more than

surpluses in most of the time period. As losses occur more than surpluses, decrease in net profits would cause increase in capital structure ratios.

According to the results in the table 1, there are significant correlations between total assets of the club and total equities, total liabilities, capital structure ratios, return on equities ratios and total assets turnover that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no correlation) is rejected. In addition, total assets have positive correlations with capital structure ratios (ρ=0,214) and total asset turnovers (ρ=0,311) which is the highest and positively correlated with them. On the contrary, total assets are negatively correlated with total equities (ρ=-0,172) return on equities ratios (ρ=-0,201), total liabilities (ρ=-0,273) and net profits (ρ=-0,372) that is the highest negatively correlated variable with them.

The positive relationship between total assets and capital structure ratios are expected. Because, when the debts increase, the liabilities in total assets will also increase. Besides, having positive correlation between total assets and total asset turnover ratios is relatively normal as total asset turnover ratio is formed by net profits divided by total assets. Moreover, when the liabilities of the club increase the total assets will also raise as total liabilities is represented in total assets.

Table 1 show that there are significant correlations between total equities and net profits, total assets, return on equities ratio and capital structure ratio. It can be said that the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total equities have significant and positive correlation with net profits (ρ=0,853) that is the highest correlated variable. On the other hand, there are significant and negative correlations between total equities and total assets (ρ=-0,172), return on equities ratio (ρ=-0,269) and capital structure ratio (ρ=-0,688) which is the highest negatively correlated with the variable.

The negative relationship between total equities and return on equities ratio is unexpected. However, as the net losses are greater than surpluses, it affects the total equities towards decreasing movement. On the other hand, negative correlation between total equities and capital structure is substantially normal as it is formed by debts over total equities.

According to the results in the table 1, there are significant correlations between total liabilities and total assets, debt-ratios and return on equities that shows that these variables are highly correlated to each other. It can be said that the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total liabilities have significant and positive correlation with total assets (ρ=0,273), debt-ratio (ρ=0,158) and return on equities (ρ=0,283) that is the highest positively correlated variable with total liabilities. On the other hand, there are no negatively correlated variables with total liabilities.

The positive relationship between total liabilities and total debt-ratios are relatively expected as debt-ratios are formed by division of total assets to total liabilities. Moreover, positive correlation between total liabilities and return on equities is substantially normal as the club announces losses most of the time, it reflects to the liabilities as the short and long term debts.

Table 1 shows that return on equities have significant correlations with capital structure ratio and total asset turnover ratio. Thus, the null-hypothesis (H_0: There is no correlation) is rejected. Return on equities has positive correlations with total asset turnover (ρ=0,210) and capital structure ratio (ρ=0,550) which is the highest positively correlated variable. These positive relationships occurred from their forms such that total equities represent in the formula same in both return on equities ratio and capital structure ratio. Similarly, net profits are standing in both return on equities ratio and total asset turnover formulas.

Other variables that have significant and positive or negative correlation coefficients are mentioned on previous pages. In the regression models, these correlated variables are not used in same equation to not face with correlation problem. Generally, total liabilities have the most correlation with other variables. However, total equities have the least correlated variable with other variables.

Table 2: Correlation Coefficient Rates of Fenerbahçe Sportive Inc.

	Stock Price	Stock Return	Ab. Return	Av. Subs. Return	Profit	Asset	Equity	Lia	Debt	ROE	CAS	Turnover
Stock Price	1	.958**	.909**	.830**	.129	-.017	.043	-.090	.070	.005	-.008	-.027
Stock Return	.958**	1	.941**	.860**	.121	-.006	.051	-.075	.046	.010	-.003	-.024
Ab. Return	.909**	.941**	1	.810**	.148	.017	.063	-.097	.026	-.045	-.038	-.071
Av. Subs. Return	.830**	.860**	.810**	1	.133	-.002	.025	-.149	.096	-.057	-.041	-.031
Profit	.129	.121	.148	.133	1	-.261**	-.103	-.152*	.003	-.183*	-.397**	.053
Asset	-.017	-.006	.017	-.002	-.261**	1	.504**	.212**	-.442**	.112	.108	.078
Equity	.043	.051	.063	.025	-.103	.504**	1	-.022	-.025	-.059	-.019	.075
Lia	-.090	-.075	-.097	-.149	-.152*	.212**	-.022	1	-.724**	.239**	.046	.198*
Debt	.070	.046	.026	.096	.003	-.442**	-.025	-.724**	1	-.125	.018	-.129
ROE	.005	.010	-.045	-.057	-.183*	.112	-.059	.239**	-.125	1	.872**	.240**
CAS	-.008	-.003	-.038	-.041	-.397**	.108	-.019	.046	.018	.872**	1	-.074
Turnover	-.027	-.024	-.071	-.031	.053	.078	.075	.198*	-.129	.240**	-.074	1

HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season.*,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis.

Table 2 shows the correlation coefficient rates of variables for Fenerbahçe Sportive Inc. Each variable in the table will be analyzed separately and in details. According to the results in the table above, stock prices are highly correlated with stock returns, abnormal stock returns and average return that are subtracted from Fenerbahçe Football Club's returns. On the other hand, stock prices have low correlation with total asset turnover ratio (ρ=-0,002), capital structure ratios (ρ=-0,008) and return on equities ratio (ρ=0,005). It can be said that the highest correlated variable with stock prices (except the variable itself) is stock returns (ρ=0,958). On the contrary, the lowest correlated variable with stock prices is return on equities ratio (ρ=0,005).

There is significant and positive correlation between stock prices and stock returns (ρ=0,958) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between stock prices and stock returns are reasonably normal as stock prices are calculated by difference of changes in stock prices. In the regression models, these two variables are not used in same equation to not face with correlation problem.

The second highest variable that is highly correlated with stock prices is abnormal return. There is significant and positive correlation between stock prices and abnormal returns (ρ=0,909) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between the stock prices and the abnormal returns are expected issue. Because, abnormal returns are formed by subtraction of market returns from stock returns and as it is mentioned, stock returns are generated form stock prices. Therefore, stock prices and abnormal returns cannot be used in the same equation in any regression model.

The next highest variable that is highly correlated with stock prices is average subtracted return that is simply the returns of the football club's stocks that subtracted from all teams average returns. There is positive and significant correlation between these two variables (ρ=0,830). Similarly, having high correlation coefficient rate with stock prices and average subtracted return is very normal. As it is explained on previous sentences, average subtracted return is generated from changes in stock prices and then converted to different type of return. Thus, stock prices and average subtracted returns should not be in the same regression model.

Stock prices have very low correlation with other variables such as return on equities ratio, capital structure ratio and total asset turnover ratio. In other words, there is no significant correlation between stock prices and these variables. Moreover, even there are low correlations

between stock prices and these variables, it ought to be mentioned that stock prices have positive correlation with net profit (ρ=0,129), total equities (ρ=0,043) and return on equities (ρ=0,005). On the other hand, total assets (ρ=-0,017), total liabilities (ρ=-0,090), capital structure ratios (ρ=-0,008), and total asset turnover ratios (ρ=-0,027) are negatively correlated with stock prices.

According to the results in table 2, stock returns are highly correlated with stock prices, abnormal return and average subtracted return that are subtracted from Fenerbahçe Football Club's returns. On the other hand, stock returns have low correlation with total assets, capital structure ratios and total asset turnover ratio. As it is mentioned on previous part, the highest correlated variable with stock returns (except the variable itself) is stock prices (0,958). On the contrary, as it is same as in stock prices, the lowest correlated variable with stock returns is capital structure ratios (ρ=-0,003).

There is significant and positive correlation between stock returns and abnormal return (ρ=0,941). Therefore, the null hypothesis (H_0: There is no correlation) is rejected. This high correlation is substantially normal as abnormal return is generated from stock returns. Moreover, positive correlation between these variables examines that stock returns are mostly greater than the market return.

The correlation between stock return and average subtracted return is also significant and positive (ρ=0,860). Thus, the null hypothesis (H_0: There is no correlation) is again rejected. Similarly, high correlation coefficient rate between these two variables are expected as average subtracted return is developed from stock returns. Besides, positive correlation between these variables shows that stock returns are mostly greater than sports club's average returns.

Stock returns have very low correlation with other variables such as total assets, total equities, total liabilities, debt-ratios, return on equities, capital structure ratios and total asset turnover ratios. In other words, there is no significant correlation between stock returns and these variables. In addition, stock returns have positive correlation with, total equities (ρ=0,051), return on equities (ρ=0,010) which is the lowest correlated variable with them. On the other hand, total assets (ρ=-0,006), total liabilities (ρ=-0,075), capital structure ratios (ρ=-0,003), and total asset turnover ratios (ρ=-0,024) are negatively correlated with stock returns.

According to the results in table (2), abnormal return and average subtracted return are highly correlated to each other. The correlations between these variables are significant and negative (ρ=0,810). Therefore, the null hypothesis (H_0: There is no correlation) is again rejected. Except they are highly correlated with stock prices and stock returns, they have low correlations with other variables such as total assets, total equities, total liabilities, debt-ratios, return on equities, capital structure ratios and total asset turnover ratios.

Among these lower correlated variables, abnormal returns are positively correlated with total equities (ρ=0,063), debt-ratios (ρ=0,026), and total assets (ρ=0,17) and they are negatively correlated with return on equities (ρ=-0,045), total liabilities (ρ=-0,097), total assets turnover (ρ=-0,071) and capital structure ratios (ρ=-0,038),which is the lowest correlated with them. On the other hand, average subtracted returns are positively correlated with debt-ratios (ρ=0,096), total equities (ρ=0,025), total liabilities (ρ=0,067), capital structure ratios (ρ=0,016) and net profits (ρ=0,009), that is again the lowest correlated with them and they are negatively correlated with total assets (ρ=-0,002), total asset turnover ratios (ρ=-0,031) and return on equities (ρ=-0,057).

The table of Pearson-Correlation Test shows that there are significant correlations between net profits of Fenerbahçe Sportive Inc. and capital structure ratios, total assets, total liabilities and return on equities ratios that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no correlation) is rejected. Moreover, net profits do not have positive and significant correlation with any variable. On the other hand, net profits are negatively correlated with total liabilities (ρ=-0,152), return on equities ratios (ρ=-0,183), total assets (ρ=-0,261) and capital structure ratios (ρ=-0,397) and the last one has the highest negative correlation with net profits.

The reason why there are correlations among net profits with total assets is that in the financial statements, some part of the net profits is paid in total assets in order to finance the liability part in the financial statement. As the net profits increase, total equities would be reduced. Besides, when the net profits are paid out for liabilities in total assets, then total assets have increase value in the balance sheet. However, if losses are greater than surpluses, then total assets tend to decrease. Therefore, total assets have negative relationship with net profits. In addition, return on equities ratios are formed by dividing net profits to total equities and this causes correlation between them. As the net profits increase, the ratio will also increase. However, there is negative relationship among them and the reason might be that Fenerbahçe Sportive Inc. has losses more than surpluses in most of the time period. As losses occur more than surpluses, decrease in net profits would cause increase in capital structure ratios.

According to the results in the table 2, there are significant correlations between total assets of the club and total equities, total liabilities and debt-ratio that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no correlation) is rejected.

In addition, total assets have positive correlations with total liabilities (ρ=0,212) and total equities (ρ=0,504) which is the highest and positively correlated with them. On the contrary, total assets are significantly and negatively correlated with net profits (ρ=-0,261) and debt-ratio (ρ=-0,442) that is the highest negatively correlated variable with them.

The positive correlation between total assets and total liabilities is relatively normal. When the liabilities of the club increase the total assets will also raise as total liabilities is represented in total assets. It represents that 21,2 % of the assets include liabilities of the club

Table 2 shows that there are only significant correlations between total equities and total assets. For the correlations of these variables, it can be said that the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total equities have significant and positive correlation with total assets (ρ=0,504) that is the only and highest correlated variable. However, there are no other significant and negative correlated variables with total equities.

According to the results in the table 2, there are significant correlations between total liabilities and total assets, debt-ratios, net profits, total asset turnover ratio and return on equities that shows that these variables are highly correlated to each other. Consequently, the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total liabilities have significant and positive correlations with total assets (ρ=0,212), total asset turnover ratio (ρ=0,198) and return on equities (ρ=0,239) that is the highest positively correlated variable with total liabilities. On the other hand, there are negatively correlated variables with total liabilities such as net profits (ρ=-0,152) and debt-ratio (ρ=-0,724) that is the highest negative correlated variable.

The negative relationship between total liabilities and debt-ratios is unexpected case. Debt-ratios are formed by division of total assets to total liabilities. However, it can be explained that the change in total assets might be greater than the change in total liabilities. Therefore, even the liabilities increase at some period of time, bigger decreases seem as having impact on the ratio towards negative movement. Moreover, positive correlation between total liabilities and return on equities is substantially normal as the club announces losses most of the time, it reflects to the liabilities as the short and long term debts.

Table 2 shows that return on equities have significant correlations with total liabilities, net profits, capital structure ratio and total asset turnover ratio. Thus, the null-hypothesis (H_0: There is no correlation) is rejected. Return on equities has positive correlations with total asset turnover (ρ=0,240), total liabilities (ρ=0,239) and capital structure ratio (ρ=0,872) which is the highest positively correlated variable. These positive relationships occurred from their forms such that total equities represent in the formula same in both return on equities ratio and capital structure ratio. On the other hand, return on equities has significant and negative correlation with net profits. Net profits are existed in both return on equities ratio and total asset turnover formulas. Therefore, it can be said that as losses increase at some period of time, return on equities also decreases due to the reduction in profit side.

Other variables that have significant and positive or negative correlation coefficients are mentioned on previous pages. In the regression models, these correlated variables are not used in same equation to not face with correlation problem. Generally, total liabilities have the most correlation with other variables. However, total equities have the least correlated variable with other variables. Besides, the highly correlated variables are not used in same regression model in order to estimate the effect of variables to dependent variable which is desired to be observed.

Table 3: Correlation Coefficient Rates of Galatasaray Sportive Inc.

	Stock Price	Stock Return	Ab. Return	Av. Subs. Return	Profit	Asset	Equity	Lia	Debt	ROE	CAS	Turnover
Stock Price	1	.930**	.849**	.792**	-.040	-.014	-.090	-.114	.025	-.099	.099	.057
Stock Return	.930**	1	.919**	.838**	-.007	-.062	-.122	-.053	.022	-.124	.122	.085
Ab. Return	.849**	.919**	1	.776**	.016	-.059	-.110	-.067	.037	-.147	.153*	.050
Av. Subs. Return	.792**	.838**	.776**	1	.038	-.145	-.077	-.099	.006	-.125	.124	-.046
Profit	-.040	-.007	.016	.038	1	.138	.140	.268**	-.123	.015	.071	-.219**
Asset	-.014	-.062	-.059	-.145	.138	1	-.006	.656**	-.115	.112	-.077	.348**
Equity	-.090	-.122	-.110	-.077	.140	-.006	1	.057	-.190*	.515**	-.480**	-.018
Lia	-.114	-.053	-.067	-.099	.268**	.656**	.057	1	-.093	.191*	-.173*	.370**
Debt	.025	.022	.037	.006	-.123	-.115	-.190*	-.093	1	-.026	.006	-.200**
ROE	-.099	-.124	-.147	-.125	.015	.112	.515**	.191*	-.026	1	-.979**	.173*
CAS	.099	.122	.153*	.124	.071	-.077	-.480**	-.173*	.006	-.979**	1	-.117
Turnover	.057	.085	.050	-.046	-.219**	.348**	-.018	.370**	-.200**	.173*	-.117	1

HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season.*,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis.

Table 3 shows the correlation coefficient rates of variables for Galatasaray Sportive Inc. Each variable in the table will be analyzed separately and in details. According to the results in the table above, stock prices are highly correlated with stock returns, abnormal stock returns and average return that are subtracted from Galatasaray Football Club's returns. On the other hand, stock prices have low correlation with total assets (ρ=-0,014), debt-ratio (ρ=0,025), net profits (ρ=-0,004) and total asset turnover ratio (ρ=0,057). It can be said that the highest correlated variable with stock prices (except the variable itself) is stock returns (ρ=0,930). On the contrary, the lowest correlated variable with stock prices is total assets (ρ=-0,014).

There is significant and positive correlation between stock prices and stock returns (ρ=0,930) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between stock prices and stock returns are reasonably normal as stock prices are calculated by difference of changes in stock prices. In the regression models, these two variables are not used in same equation to not face with correlation problem.

The second highest variable that is highly correlated with stock prices is abnormal return. There is significant and positive correlation between stock prices and abnormal returns (ρ=0,849) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between the stock prices and the abnormal returns are expected issue. Because, abnormal returns are formed by subtraction of market returns from stock returns and as it is mentioned, stock returns are generated form stock prices. Therefore, stock prices and abnormal returns cannot be used in the same equation in any regression model.

The next highest variable that is highly correlated with stock prices is average subtracted return that is simply the returns of the football club's stocks that subtracted from all teams average returns. There is positive and significant correlation between these two variables (ρ=0,079). Similarly, having high correlation coefficient rate with stock prices and average subtracted return is very normal. As it is explained on previous sentences, average subtracted return is generated from changes in stock prices and then converted to different type of return. Thus, stock prices and average subtracted returns should not be in the same regression model.

Stock prices have very low correlation with other variables such as return on equities ratio, capital structure ratio, net profits, total assets and debt-ratio. In other words, there is no significant correlation between stock prices and these variables. Moreover, even there are low

correlations between stock prices and these variables, it should be mentioned that stock prices have positive correlation with debt-ratio (ρ=0,025), total asset turnover ratio (ρ=0,057) and capital structure ratio (ρ=0,099). On the other hand, total assets (ρ=-0,14), total liabilities (ρ=-0,114), net profits (ρ=-0,040) and total equities (ρ=-0,090) are negatively correlated with stock prices.

According to the results in table 3, stock returns are highly correlated with stock prices, abnormal return and average subtracted return that are subtracted from Galatasaray Football Club's returns. On the other hand, stock returns have low correlation with total assets, total liabilities ratios and net profits. As it is mentioned on previous part, the highest correlated variable with stock returns (except the variable itself) is stock prices (ρ=0,930). On the contrary, as it is same as in stock prices, the lowest correlated variable with stock returns is net profits (ρ=-0,007).

There is significant and positive correlation between stock returns and abnormal return (ρ=0,919). Therefore, the null hypothesis (H_0: There is no correlation) is rejected. This high correlation is substantially normal as abnormal return is generated from stock returns. Moreover, positive correlation between these variables examines that stock returns are mostly greater than the market return.

The correlation between stock return and average subtracted return is also significant and positive (ρ=0,838). Thus, the null hypothesis (H_0: There is no correlation) is again rejected. Similarly, high correlation coefficient rate between these two variables are expected as average subtracted return is developed from stock returns. Besides, positive correlation between these variables shows that stock returns are mostly greater than sports club's average returns.

Stock returns have very low correlation with other variables such as net profits, total assets, debt-ratio and total liabilities. In other words, there is no significant correlation between stock returns and these variables. Moreover, stock returns have positive correlation with, capital structure ratio (ρ=0,122), total asset turnover (ρ=0,085) and debt-ratio (ρ=0,022) which is the lowest correlated variable with them. On the other hand, total assets (ρ=-0,062), total liabilities (ρ=-0,053), return on equities ratio (ρ=-0,124), and net profits (ρ=-0,007%) are negatively correlated with stock returns.

According to the results in table 3, abnormal return and average subtracted return are highly correlated to each other. The correlations between these variables are significant and negative (ρ=0,776). Therefore, the null hypothesis (H_0: There is no correlation) is again rejected. Except they are highly correlated with stock prices and stock returns, they have low correlations with other variables such as total assets, total equities, total liabilities, debt-ratios, return on equities, capital structure ratios and total asset turnover ratios.

Among these lower correlated variables, abnormal returns are positively correlated with capital structure ratio (ρ=0,122), net profit (ρ=0,016) and debt-ratios (ρ=0,026) and they are negatively correlated with return on equities (ρ=-0,147), total assets (ρ=-0,159), return on equities ratio (ρ=-0,147) and total liabilities (ρ=-0,067) which is the lowest correlated with them. On the other hand, average subtracted returns are positively correlated with capital structure ratios (ρ=0,124), net profits (ρ=0,038) and debt-ratios (ρ=0,006) that is again the lowest correlated with them and they are negatively correlated with total assets (ρ=-0,145), total asset turnover ratios (ρ=-0,046), return on equities (ρ=-0,125), total liabilities (ρ=-0,099) and total equities (ρ=-0,077).

The table of Pearson-Correlation Test shows that there are significant correlations between net profits of Galatasaray Sportive Inc. and total asset turnover ratios and total liabilities that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no correlation) is rejected. Net profits are significantly and positively correlated with total liabilities (ρ=0,268). On the other hand, net profits are negatively correlated with total asset turnover ratio (ρ=-0,219).

The reason why there are correlations among net profits with total assets is that in the financial statements, when the net profits are paid out for liabilities in total assets, then total assets have increase value in the balance sheet. However, if losses are greater than surpluses, then total assets tend to decrease. Therefore, total asset turnover ratio has negative relationship with net profits.

According to the results in the table 3, there are significant correlations between total assets of the club and total liabilities and total asset turnover ratio that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no correlation) is rejected. In addition, total assets have positive correlations with total liabilities (ρ=0,656) and total asset turnover ratio (ρ=0,348) which is the highest and positively correlated with them. On the contrary, there are no significant and negative correlations between total assets and any variable.

The positive correlation between total assets and total liabilities is relatively normal. When the liabilities of the club increase the total assets will also raise as total liabilities is represented in total assets. It represents that 65,6 % of the assets include liabilities of the club

Table 3 shows that there are significant correlations between total equities and debt-ratio, return on equities ratio and capital structure ratio. It can be said that the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total equities have significant and positive correlation with return on equities ratio (ρ=0,515) that is the only positive and highest correlated variable. However, there are significant and negative correlated variables with total equities such as debt-ratio (ρ=-0,190) and capital structure ratio (ρ=-0,480).

According to the results in the table 3, there are significant correlations between total liabilities and net profits, total assets, return on equity ratio, capital structure ratio and total asset turnover ratio and return on equities that shows that these variables are highly correlated to each other. Consequently, the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total liabilities have significant and positive correlations with net profits (ρ=0,268), total asset turnover (ρ=0,370) total assets (ρ=0,656) that is the highest positively correlated variable with total liabilities. On the other hand, there are negatively correlated variables with total liabilities such as capital structure ratio (ρ=-0,173) and debt-ratio (ρ=-0,093) that is the highest negative correlated variable.

The negative relationship between total liabilities and capital structure ratio is unexpected case. Capital structure ratio is formed by division of total liabilities to total equities. However, it can be explained that the change in total liabilities might be greater than the change in total equities. Therefore, even the liabilities increase at some period of time, bigger decreases seem as having impact on the ratio towards negative movement. Moreover, positive correlation between total liabilities and return on equities is substantially normal as the club announces losses most of the time, it reflects to the liabilities as the short and long term debts.

The positive correlation between total liabilities and net profits are also unusual case. However, for this relationship, it can be said that losses are greater than surpluses at the most of the time period. When the losses rise, the debt of the club is also increase. Besides, this chain explains how total liabilities and total asset turnover ratio have positive correlation.

Table 3 shows that return on equities have significant correlations with total liabilities, total equities, capital structure ratio and total asset turnover ratio. Thus, the null-hypothesis (H_0: There is no correlation) is rejected. Return on equities has positive correlations with total asset turnover (ρ=0,173), total liabilities (ρ=0,191) and total equities (ρ=0,515) which is the highest positively correlated variable. On the other hand, there is significant and negative correlation between return on equities and capital structure ratio (ρ=-0,979).

These negative relationships occurred from their forms such that total equities and capital structure ratio represent in the formula. On the other hand, return on equities has significant and negative correlation with net profits. Net profits are existed in both return on equities ratio and total asset turnover formulas. Therefore, it can be said that as losses increase at some period of time, return on equities also decreases due to the reduction in profit side.

Total asset turnover ratios have significant and negative correlation with debt-ratio (ρ=-0,200). The reason why there exists a negative relation among these variables is that an increase in total assets would cause also increase in total asset turnover, but it also would reduce the debt-ratio.

Other variables that have significant and positive or negative correlation coefficients are mentioned on previous pages. In the regression models, these correlated variables are not used in same equation to not face with correlation problem. Generally, total liabilities have the most correlation with other variables. However, total equities have the least correlated variable with

other variables. Besides, the highly correlated variables are not used in same regression model in order to estimate the effect of variables to dependent variable which is desired to be observed.

Table 4: Correlation Coefficient Rates of Trabzonspor Sportive Inc.

	Stock Price	Stock Return	Ab. Return	Av. Subs. Return	Profit	Asset	Equity	Lia	Debt	ROE	CAS	Turnover
Stock Price	1	.943**	.881**	.805**	.073	.046	.016	.126	.165	-.137	.100	-.032
Stock Return	.943**	1	.942**	.859**	.088	.004	.011	.115	.174	-.137	.137	-.039
Ab. Return	.881**	.942**	1	.812**	.113	-.022	-.011	.092	.053	-.123	.051	.000
Av. Subs. Return	.805**	.859**	.812**	1	.063	-.016	.009	.039	.043	-.008	.140	.027
Profit	.073	.088	.113	.063	1	-.216**	-.217**	-.235**	-.134	-.557**	.523**	-.103
Asset	.046	.004	-.022	-.016	-.216**	1	.101	.802**	.399**	-.273**	.074	-.083
Equity	.016	.011	-.011	.009	-.217**	.101	1	.000	-.142	-.001	-.019	-.249**
Lia	.126	.115	.092	.039	-.235**	.802**	.000	1	.778**	-.340**	.061	-.024
Debt	.165	.174	.053	.043	-.134	.399**	-.142	.778**	1	-.551**	.006	-.196**
ROE	-.137	-.137	-.123	-.008	-.557**	-.273**	-.001	-.340**	-.551**	1	-.280**	.343**
CAS	.100	.137	.051	.140	.523**	.074	-.019	.061	.006	-.280**	1	.049
Turnover	-.032	-.039	.000	.027	-.103	-.083	-.249**	-.024	-.196**	.343**	.049	1

HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season.*,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis.

Table 4 examines the correlation coefficient rates of variables for Trabzonspor Sportive Inc. Each variable in the table will be analyzed separately and in details. According to the results in the table above, stock prices are highly correlated with stock returns, abnormal stock returns and average return that are subtracted from Trabzonspor Football Club's returns. On the other hand, stock prices have low correlation with total assets (ρ=0,046), total equities (ρ=0,016), net profits (ρ=0,073) and total asset turnover ratio (ρ=-0,032). It can be said that the highest correlated

variable with stock prices (except the variable itself) is stock returns (ρ=0,943). On the contrary, the lowest correlated variable with stock prices is total equities (ρ=0,016).

There is significant and positive correlation between stock prices and stock returns (ρ=0,943) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between stock prices and stock returns are reasonably normal as stock prices are calculated by difference of changes in stock prices. In the regression models, these two variables are not used in same equation to not face with correlation problem.

The second highest variable that is highly correlated with stock prices is abnormal return. There is significant and positive correlation between stock prices and abnormal returns (ρ=0,881) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between the stock prices and the abnormal returns are expected issue. Because, abnormal returns are formed by subtraction of market returns from stock returns and as it is mentioned, stock returns are generated form stock prices. Therefore, stock prices and abnormal returns cannot be used in the same equation in any regression model.

The next highest variable that is highly correlated with stock prices is average subtracted return that is simply the returns of the football club's stocks that subtracted from all teams average returns. There is positive and significant correlation between these two variables (ρ=0,805). Similarly, having high correlation coefficient rate with stock prices and average subtracted return is very normal. As it is explained on previous sentences, average subtracted return is generated from changes in stock prices and then converted to different type of return. Thus, stock prices and average subtracted returns should not be in the same regression model.

Stock prices have very low correlation with other variables such as return on equities ratio, capital structure ratio, net profits, total assets, total equities and total asset turnover ratio. In other words, there is no significant correlation between stock prices and these variables. Moreover, even there are low correlations between stock prices and these variables, it should be mentioned that stock prices have positive correlation with total assets (4,6%), total equities (ρ=0,016) net profits (ρ=0,073) and capital structure ratio (ρ=0,100). On the other hand, return on equities ratio (ρ=-0,137) and total asset turnover ratio (ρ=-0,032) are negatively correlated with stock prices

According to the results in table 4, stock returns are highly correlated with stock prices, abnormal return and average subtracted return that are subtracted from Trabzonspor Football Club's returns. On the other hand, stock returns have low correlation with total assets, total equities, total asset turnover ratio and net profits. As it is mentioned on previous part, the highest correlated variable with stock returns (except the variable itself) is stock prices (ρ=0,943). On the contrary, as it is same as in stock prices, the lowest correlated variable with stock returns is total assets (ρ=0,004).

There is significant and positive correlation between stock returns and abnormal return (ρ=0,942). Therefore, the null hypothesis (H_0: There is no correlation) is rejected. This high correlation is substantially normal as abnormal return is generated from stock returns. Moreover, positive correlation between these variables examines that stock returns are mostly greater than the market return.

The correlation between stock return and average subtracted return is also significant and positive (ρ=0,859). Thus, the null hypothesis (H_0: There is no correlation) is again rejected. Similarly, high correlation coefficient rate between these two variables are expected as average subtracted

return is developed from stock returns. Besides, positive correlation between these variables shows that stock returns are mostly greater than sports club's average returns.

Stock returns have very low correlation with other variables such as total assets, total equities, total asset turnover ratio and net profits. In other words, there is no significant correlation between stock returns and these variables. Moreover, stock returns have positive correlation with, net profits (ρ=0,088), total equities (ρ=0,011) and total assets (ρ=0,004) which is the lowest correlated variable with them. On the other hand, total assets turnover (ρ=-0,039) and return on equities ratio (ρ=-0,137) are negatively correlated with stock returns.

According to the results in table 4, abnormal return and average subtracted return are highly correlated to each other. The correlations between these variables are significant and negative (ρ=0,812). Therefore, the null hypothesis (H_0: There is no correlation) is again rejected. Except they are highly correlated with stock prices and stock returns, they have low correlations with other variables such as total assets, total equities, total liabilities, debt-ratios, capital structure ratios and total asset turnover ratios.

Among these lower correlated variables, abnormal returns are positively correlated with capital structure ratio (ρ=0,051), net profit (ρ=0,113) and debt-ratios (ρ=0,053) and they are negatively correlated with total assets (ρ=-0,022) and return on equities ratio (ρ=-0,123) return on equities (ρ=-0,011). Besides, there is no correlation between abnormal returns and total asset turnover ratio (ρ=0,000).

On the other hand, average subtracted returns are positively correlated with capital structure ratios (ρ=0,140), net profits (ρ=0,063) and debt-ratios (ρ=0,043), total asset turnover (ρ=0,027)

and total equities (ρ=0,009) that is again the lowest correlated with them. Moreover, they are negatively correlated with total assets (ρ=-0,016) and return on equities (ρ=-0,008).

The table of Pearson-Correlation Test shows that there are significant correlations between net profits of Trabzonspor Sportive Inc. and total assets, total equities, total liabilities, return on equity ratios and capital structure ratios that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no correlation) is rejected. Net profits are significantly and positively correlated with only capital structure ratios. On the other hand, net profits are negatively correlated with total assets (ρ=-0,216), total equities (ρ=-0,217), total liabilities (ρ=-0,235) and return on equities ratio (ρ=-0,557).

The reason why there are correlations among net profits with total assets is that in the financial statements, when the net profits are paid out for liabilities in total assets, then total assets have increase value in the balance sheet. However, if losses are greater than surpluses, then total assets tend to decrease. Therefore, total assets have negative relationship with net profits.

According to the results in the table 4, there are significant correlations between total assets of the club and net profits, total liabilities, debt-ratio and return on equities ratio that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no correlation) is rejected. In addition, total assets have positive correlations with debt-ratio (ρ=0,399) and total liabilities (ρ=0,802) which is the highest and positively correlated with them. On the contrary, total assets have negative correlations with net profits (ρ=-0,216) and return on equities ratio (ρ=-0,273) that is the highest and negatively correlated variable. The positive correlation between total assets and total liabilities is relatively normal. When the liabilities of the

club increase the total assets will also raise as total liabilities is represented in total assets. It represents that 80,2% of the assets include liabilities of the club.

Table 4 shows that there are significant correlations between total equities and total asset turnover and net profits. It can be said that the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total equities have significant and negative correlation with net profits (ρ=-0,217) and total asset turnover ratio (ρ=-0,249) that is negative and highest correlated variable. However, there are no significant and positive correlated variables with total equities.

According to the results in the table 4, there are significant correlations between total liabilities and net profits, total assets, return on equity ratio and total asset turnover ratio that shows that these variables are highly correlated to each other. Consequently, the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total liabilities have significant and positive correlations with total asset turnover ratio (ρ=0,078), debt-ratio (ρ=0,107) and total assets (ρ=0,364) that is the highest positively correlated variable with total liabilities. On the other hand, total liabilities and net profits (ρ=-0,156) are negatively correlated with each other.

The positive correlation between total liabilities and net profits are unusual case. It can be said that losses are greater than surpluses on club's financial statement at the most of the time period. When the losses rise, the debt of the club is also increase.

Table 4 shows that return on equities have significant correlations with total equities, total liabilities, capital structure ratio and total asset turnover ratio. Thus, the null-hypothesis (H_0: There is no correlation) is rejected. Return on equities has positive correlations with total asset turnover (ρ=0,117), total liabilities (ρ=0,107) and total equities (ρ=0,371). On the other hand,

there is significant and negative correlation between return on equities and capital structure ratio (ρ=-0,898).

Other variables that have significant and positive or negative correlation coefficients are mentioned on previous pages. In the regression models, these correlated variables are not used in same equation to not face with correlation problem. In addition, the highly correlated variables are not used in same regression model in order to estimate the effect of variables to dependent variable which is desired to be observed.

Table 5: Correlation Coefficient Rates of All Football Clubs

	Stock Price	Stock Return	Ab. Return	Profit	Asset	Equity	Lia	Debt	ROE	CAS	Turnover
Stock Price	1	.730**	.593**	.069	-.032	-.046	-.077	.045	-.063	.067	.017
Stock Return	.730**	1	.827**	.067	-.079	-.033	-.031	.087	-.045	.049	-.013
Ab. Return	.593**	.827**	1	.052	-.064	-.025	-.054	.004	-.048	.052	-.021
Profit	.069	.067	.052	1	-.155**	.040	-.156**	-.007	-.042	-.031	-.036
Asset	-.032	-.079	-.064	-.155**	1	.061	.364**	.053	.062	-.043	.221**
Equity	-.046	-.033	-.025	.040	.061	1	-.018	-.026	.371**	-.372**	-.006
Lia	-.077	-.031	-.054	-.156**	.364**	-.018	1	-.049	.107**	-.068	.078*
Debt	.045	.087	.004	-.007	.053	-.026	-.049	1	-.041	-.002	-.067
ROE	-.063	-.045	-.048	-.042	.062	.371**	.107**	-.041	1	-.898**	.117**
CAS	.067	.049	.052	-.031	-.043	-.372**	-.068	-.002	-.898**	1	-.050
Turnover	.017	-.013	-.021	-.036	.221**	-.006	.078*	-.067	.117**	-.050	1

HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season.*,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis.

Table 5 examines the correlation coefficient rates of variables for all football clubs. Each variable in the table will be analyzed separately and in details. According to the results in the table above, stock prices are highly correlated with stock returns, abnormal stock returns and average return that are subtracted from all football club's returns. On the other hand, stock prices have low correlation with total assets (ρ=-0,032), total equities (ρ=-0,046%), net profits (ρ=0,069) and total asset turnover ratio (ρ=0,017). It can be said that the highest correlated variable with stock prices (except the variable itself) is stock returns (ρ=0,730). On the contrary, the lowest correlated variable with stock prices is total asset turnover rations (ρ=0,017).

There is significant and positive correlation between stock prices and stock returns (ρ=0,730) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between stock prices and stock returns are reasonably normal as stock prices are calculated by difference of changes in stock prices. In the regression models, these two variables are not used in same equation to not face with correlation problem.

The second highest variable that is highly correlated with stock prices is abnormal return. There is significant and positive correlation between stock prices and abnormal returns (ρ=0,593) and the null hypothesis (H_0: There is no correlation) is rejected. The high correlation between the stock prices and the abnormal returns are expected issue. Because, abnormal returns are formed by subtraction of market returns from stock returns and as it is mentioned, stock returns are generated form stock prices. Therefore, stock prices and abnormal returns cannot be used in the same equation in any regression model.

Stock prices have very low correlation with other variables such as return on equities ratio, capital structure ratio, debt-ratio, net profits, total assets, total equities and total asset turnover ratio. In other words, there is no significant correlation between stock prices and these variables. Moreover, even there are low correlations between stock prices and these variables, it should be mentioned that stock prices have positive correlation with debt-ratio (ρ=0,045), net profits (ρ=0,073) and total asset turnover (ρ=0,017). On the other hand, return on equities ratio (ρ=-0,063), total assets (ρ=-0,032), total equities (ρ=-0,046) and total liabilities (ρ=-0,077) are negatively correlated with stock prices

According to the results in table 5, stock returns are highly correlated with stock prices and abnormal return. On the other hand, stock returns have low correlation with total assets, total

equities, return on equities ration, debt-ratio, capital structure ratio, total liabilities and total asset turnover ratio and net profits. As it is mentioned on previous part, the highest correlated variable with stock returns (except the variable itself) is stock prices (ρ=0,730). On the contrary, as it is same as in stock prices, the lowest correlated variable with stock returns is total assets (ρ=-0,013).

There is significant and positive correlation between stock returns and abnormal return (ρ=0,827). Therefore, the null hypothesis (H_0: There is no correlation) is rejected. This high correlation is substantially normal as abnormal return is generated from stock returns. Moreover, positive correlation between these variables examines that stock returns are mostly greater than the market return.

Stock returns have very low correlation with other variables such with total assets, total equities, return on equities ration, debt-ratio, capital structure ratio, total liabilities and total asset turnover ratio and net profits. In other words, there is no significant correlation between stock returns and these variables. Moreover, stock returns have positive correlation with, net profits (ρ=0,067), debt-ratio (ρ=0,087) and capital structure ratio (ρ=0,049) which is the lowest correlated variable with them. On the other hand, total assets turnover (ρ=-0,013), total assets (ρ=-0,079), total equities (ρ=-0,033), total liabilities (ρ=-0,031) and return on equities ratio (ρ=-0,045) are negatively correlated with stock returns.

According to the results in table 5, abnormal return is highly correlated with stock prices and stock returns. Therefore, the null hypothesis (H_0: There is no correlation) is again rejected. However, they have low correlations with other variables such as total assets, total equities,

return on equities ration, debt-ratio, capital structure ratio, total liabilities and total asset turnover ratio and net profits.

Among these lower correlated variables, abnormal returns are positively correlated with net profits (ρ=0,052), capital structure ratio (ρ=0,052) and debt-ratio (ρ=0,004) that is the least correlated variable. On the other hand, total asset turnover (ρ=-0,021), return on equities ratio (ρ=-0,048), total liabilities (ρ=-0,054), total assets (ρ=-0,064) and total equities (ρ=-0,025) are negatively correlated.

The table of Pearson-Correlation Test shows that there are significant correlations between net profits of all football clubs and total assets, and total liabilities that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no correlation) is rejected. There is no variable that is significantly and positively correlated with net profits. On the other hand, net profits are negatively correlated with total assets (ρ=-0,155) and total liabilities (ρ=-0,156).

The reason why there are correlations among net profits with total assets is that in the financial statements, when the net profits are paid out for liabilities in total assets, then total assets have increase value in the balance sheet. However, if losses are greater than surpluses, then total assets tend to decrease. Therefore, total assets have negative relationship with net profits. It also shows that all clubs have losses and they present them in total liabilities at the financial statements.

According to the results in the table 5, there are significant correlations between total assets of the club and net profits, total liabilities and total asset turnover ratio that represents that these variables are highly correlated to each other. Therefore, the null-hypothesis (H_0: There is no

correlation) is rejected. In addition, total assets have positive correlations with total asset turnover ratio (ρ=0,221) and total liabilities (ρ=0,364) which is the highest and positively correlated with them. On the contrary, total assets have negative correlations with net profits (ρ=-0,155).

The positive correlation between total assets and total liabilities is relatively normal. When the liabilities of the club increase the total assets will also raise as total liabilities is represented in total assets.

Table 5 shows that there are significant correlations between total equities and capital structure ratio and return on equities ratio. It can be said that the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total equities have significant and negative correlation with capital structure ratio (ρ=-0,372). On the other hand there is significant and positive correlations between total equities and return on equities ratio (ρ=0,371).

According to the results in the table 5, there are significant correlations between total liabilities and net profits, total assets, return on equity ratio and total asset turnover ratio that shows that these variables are highly correlated to each other. Consequently, the null-hypothesis (H_0: There is no correlation) is rejected. In other words, total liabilities have significant and positive correlations with total asset turnover ratio (ρ=0,078), debt-ratio (ρ=0,107) and total assets (ρ=0,364) that is the highest positively correlated variable with total liabilities. On the other hand, total liabilities and net profits (ρ=-0,156) are negatively correlated with each other.

The positive correlation between total liabilities and net profits are unusual case. It can be said that losses are greater than surpluses on club's financial statement at the most of the time period. When the losses rise, the debt of the club is also increase.

Table 5 shows that return on equities have significant correlations with total equities, total liabilities, capital structure ratio and total asset turnover ratio. Thus, the null-hypothesis (H_0: There is no correlation) is rejected. Return on equities has positive correlations with total asset turnover (ρ=0,117), total liabilities (ρ=0,107) and total equities (ρ=0,371). On the other hand, there is significant and negative correlation between return on equities and capital structure ratio (ρ=-0,898).

Other variables that have significant and positive or negative correlation coefficients are mentioned on previous pages. In the regression models, these correlated variables are not used in same equation to not face with correlation problem. In addition, the highly correlated variables are not used in same regression model in order to estimate the effect of variables to dependent variable which is desired to be observed.

3.10 Stationarity and Unit Root Tests

As the observation variables are analyzed with time series data, it is needed to be confirmed that variables in the regression models are stationary or not. Stationarity is the quality of a process where mean and standard deviation of the process do not change with time. The most important characteristics of a stationarity is the auto-correlation function (acf). It is related with lag alone and does not alter with the time. For the weakly stationarity, it can be said that it has a constant mean and variance. On the other hand, the strong stationarity can be defined that it has greater constant values with the mean and the variance (Challis and Kitney, 1991).

In statistics or math language, it can be defined as:

$$Y_t = \rho Y_{t-1} + u_{t-1} \quad \leq \rho \leq 1$$

If ρ = 1, then there would be unit root problem which is a situation of nonstationarity; we already know that in this case the variance of Y_t is not stationary. The name unit root is due to the fact that ρ = 1. Thus the terms nonstationarity, random walk, unit root, and stochastic trend can be treated synonymously. On the other hand, | ρ | < 1, that is if the absolute value of ρ is less than 1, then it can be said that the time series Y_t is stationary (Gujarati, 2008).

There are some tests to detect the stationarity or non-stationarity of the variables. These unit root tests give the result in the manner of using the variables in the time series analysis. The most common unit root tests are Augmented-Dickey Fuller Test, Phillips-Perron Test and Kwiatkowski–Phillips–Schmidt–Shin (KPSS) Test.

3.10.1 Unit Root Tests of the Variables

Table 6: Unit Root Tests for the Variables of Beşiktaş Sportive Inc.

	ADF			PP			KPSS	
	Intercept	**Trend&Int.**	**None**	**Intercept**	**Trend&Int.**	**None**	**Intercept**	**Trend &Int**
STOCK PRICE	-13.00095*** I (1)	-12.98517*** I (1)	-13.03742*** I (1)	-13.00975*** I (1)	-12.99455*** I (1)	-13.04928*** I (1)	0.108126	0.067514
STOCK RETURN	-13.25328*** I (0)	-13.23931*** I (0)	-13.29046*** I (0)	-13.25347*** I (0)	-13.23931*** I (0)	-13.29061*** I (0)	0.124264	0.073915
ABNORMAL RETURN	-14.01915*** I (0)	-14.02882*** I (0)	-14.03915*** I (0)	-14.01913*** I (0)	-14.02897*** I (0)	-14.03917*** I (0)	0.098235	0.039224
AV. SUBS. RETURN	-12.55520*** I (0)	-12.54852*** I (0)	-12.58826*** I (0)	-12.55838*** I (0)	-12.55166*** I (0)	-12.59132*** I (0)	0.065415	0.032581
PROFITS	-2.752328* I (0)	-3.215588* I (0)	-2.598376*** I (0)	-2.927242** I (0)	-3.412492* I (0)	-2.715617*** I (0)	0.465367	0.149097
ASSETS	-6.534209*** I (0)	-3.248962** I (0)	-2.803555*** I (0)	-3.066803** I (0)	-3.502637** I (0)	-3.081607*** I (0)	0.310216	0.044049
EQUITIES	-2.672707* I (0)	-3.218049* I (0)	-2.399925** I (0)	-2.836131* I (0)	-3.423700* I (0)	-2.495445** I (0)	0.653084	0.200937
LIABILITIES	-3.015927** I (0)	-3.014788* I (0)	-2.959592*** I (0)	-3.221092** I (0)	-3.228438* I (0)	-3.145109*** I (0)	0.165258	0.094652
DEBT-RATIOS	-3.773230*** I (0)	-3.798345*** I (0)	-3.711847*** I (0)	-4.005056*** I (0)	-3.969099*** I (0)	-3.946730*** I (0)	0.118951	0.110921
ROE	-2.771961* I (0)	-2.744607* I (0)	-1.742223* I (0)	-2.950036** I (0)	-2.924448** I (0)	-1.769014* I (0)	0.113954	0.079997
CAS	-3.096490*** I (0)	-3.257515*** I (0)	-2.469889** I (0)	-3.323831** I (0)	-3.483863** I (0)	-2.573123** I (0)	0.199792	0.115311
TURNOVER	-3.921092*** I (0)	-3.923586*** I (0)	-3.700520*** I (0)	-4.296004*** I (0)	-4.301761*** I (0)	-4.034975*** I (0)	0.058944	0.029885

HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season.*,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis. T-stats and the probability amounts are defined according to Akaike Info Criterion with maximum lag 10.

Table 6 shows the unit roots for the variables of Beşiktaş Sportive Inc. According to the results, stock prices has a stationarity at I(1). On the other hand, the other variables such as stock returns, abnormal returns, average subtracted return, net profits, total assets, total equities, total liabilities, debt-ratios, return on equity ratio, capital structure ratio and total asset turnover ratio have stationarity at I(0).

Table 7: Unit Root Tests for the Variables of Fenerbahçe Sportive Inc.

	ADF			PP			KPSS	
	Intercept	**Trend&Int.**	**None**	**Intercept**	**Trend&Int.**	**None**	**Intercept**	**Trend &Int**
STOCK PRICE	-7.921552*** I (1)	-7.930615*** I (1)	-7.942646*** I (1)	-11.86510*** I (1)	-11.85438*** I (1)	-11.90097*** I (1)	0.080129	0.039843
STOCK RETURN	-7.857599*** I (0)	-7.887944*** I (0)	-7.872177*** I (0)	-13.24518*** I (0)	-13.26335*** I (0)	-13.27350*** I (0)	0.101144	0.037540
ABNORMAL RETURN	-7.820923*** I (0)	-7.855415*** I (0)	-7.799679*** I (0)	-12.81359*** I (0)	-12.82811*** I (0)	-12.81191*** I (0)	0.080251	0.030756
AV. SUBS. RETURN	-8.343005*** I (0)	-8.319798*** I (0)	-8.358235*** I (0)	-14.27746*** I (0)	-14.23849*** I (0)	-14.30499*** I (0)	0.048644	0.040681
PROFITS	-2.970842** I (0)	-2.966527** I (0)	-2.928262*** I (0)	-3.193189** I (0)	-3.189711** I (0)	-3.140946** I (0)	0.151637	0.142153
ASSETS	-2.815701** I (0)	-2.800761** I (0)	-2.690681*** I (0)	-3.008825** I (0)	-2.997733** I (0)	-2.822240** I (0)	0.155240	0.125848
EQUITIES	-3.548626*** I (0)	-3.624055*** I (0)	-3.475903*** I (0)	-3.873362*** I (0)	-3.980061*** I (0)	-3.783989*** I (0)	0.285251	0.065124
LIABILITIES	-3.612024*** I (0)	-3.612460*** I (0)	-3.329709*** I (0)	-3.845924*** I (0)	-3.877649** I (0)	-3.457989*** I (0)	0.311216	0.091954
DEBT-RATIOS	-3.344570** I (0)	-3.439318** I (0)	-3.306963*** I (0)	-3.646387*** I (0)	-3.748444** I (0)	-3.589983*** I (0)	0.157852	0.054539
ROE	-5.546797*** I (0)	-5.545155*** I (0)	-5.549839*** I (0)	-6.048374*** I (0)	-6.049368*** I (0)	-6.050834*** I (0)	0.145900	0.119035
CAS	-5.229487*** I (0)	-5.234875*** I (0)	-5.188671*** I (0)	-5.826895*** I (0)	-3.631696** I (0)	-3.641043*** I (0)	0.065774	0.079242
TURNOVER	-3.066386** I (0)	-3.083901** I (0)	-2.792825** I (0)	-3.294780** I (0)	-3.311346** I (0)	-2.926341** I (0)	0.088326	0.064414

HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season.*,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis. T-stats and the probability amounts are defined according to Akaike Info Criterion with maximum lag 10.

Table 7shows the unit roots for the variables of Fenerbahçe Sportive Inc. According to the results, stock prices has stationarity at I(1). On the other hand, the other variables such as stock returns, abnormal returns, average subtracted return, net profits, total assets, total equities, total liabilities, debt-ratios, return on equity ratio, capital structure ratio and total asset turnover ratio have stationarity at I(0).

Table 8: Unit Root Tests for the Variables of Galatasaray Sportive Inc.

	ADF			PP			KPSS	
	Intercept	**Trend&Int.**	**None**	**Intercept**	**Trend&Int.**	**None**	**Intercept**	**Trend &Int**
STOCK PRICE	-12.05838*** I (1)	-12.17582*** I (1)	-12.08877*** I (1)	-12.10206*** I (1)	-12.18328*** I (1)	-12.13147*** I (1)	0.275309	0.094205
STOCK RETURN	-11.85541*** I (0)	-12.14023*** I (0)	-11.85971*** I (0)	-11.85388*** I (0)	-12.14382*** I (0)	-11.85805*** I (0)	0.482532	0.037540
ABNORMAL RETURN	-7.820923*** I (0)	-7.855415*** I (0)	-7.799679*** I (0)	-12.81359*** I (0)	-12.82811*** I (0)	-12.81191*** I (0)	0.080251	0.030756
AV. SUBS. RETURN	-8.343005*** I (0)	-8.319798*** I (0)	-8.358235*** I (0)	-14.27746*** I (0)	-14.23849*** I (0)	-14.30499*** I (0)	0.048644	0.040681
PROFITS	-2.970842** I (0)	-2.966527** I (0)	-2.928262** I (0)	-3.193189** I (0)	-3.189711* I (0)	-3.140946** I (0)	0.151637	0.142153
ASSETS	-2.815701** I (0)	-3.204612*** I (0)	-3.182908** I (0)	-3.474811** I (0)	-3.467364** I (0)	-3.437777** I (0)	0.109656	0.109110
EQUITIES	-3.545439*** I (0)	-3.530646*** I (0)	-3.428837*** I (0)	-3.887743*** I (0)	-3.874292*** I (0)	-3.760993*** I (0)	0.084133	0.081175
LIABILITIES	-3.398991** I (0)	-3.628171** I (0)	-3.123346** I (0)	-3.693161*** I (0)	-3.972839*** I (0)	-3.364682** I (0)	0.414772	0.407388
DEBT-RATIOS	-3.460793** I (0)	-3.510100** I (0)	-3.243533** I (0)	-3.767611*** I (0)	-3.824722** I (0)	-3.505576*** I (0)	0.166322	0.082319
ROE	-2.697964* I (0)	-2.689324* I (0)	-2.683007* I (0)	-2.830655** I (0)	-2.822386** I (0)	-2.805435** I (0)	0.111549	0.112070
CAS	-2.651987* I (0)	-2.635538* I (0)	-2.554038** I (0)	-2.781131* I (0)	-2.764870* I (0)	-2.671987* I (0)	0.134856	0.129569
TURNOVER	-2.595547* I (0)	-2.933198* I (0)	-2.445264** I (0)	-2.772498** I (0)	-3.118817* I (0)	-2.555247** I (0)	0.369065	0.071899

HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season.*,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis. T-stats and the probability amounts are defined according to Akaike Info Criterion with maximum lag 10.

Table 8 shows the unit roots for the variables of Galatasaray Sportive Inc. According to the results, stock prices has stationarity at I(1). On the other hand, the other variables such as stock returns, abnormal returns, average subtracted return, net profits, total assets, total equities, total liabilities, debt-ratios, return on equity ratio, capital structure ratio and total asset turnover ratio have stationarity at I(0).

Table 9: Unit Root Tests for the Variables of Trabzonspor Sportive Inc.

	ADF			PP			KPSS	
	Intercept	**Trend&Int.**	**None**	**Intercept**	**Trend&Int.**	**None**	**Intercept**	**Trend &Int**
STOCK PRICE	-10.60149*** I (0)	-10.73936*** I (0)	-10.63063*** I (0)	-13.96637*** I (0)	-14.01947*** I (0)	-14.00771*** I (0)	0.265993	0.049003
STOCK RETURN	-13.46583*** I (0)	-13.76600*** I (0)	-13.49602*** I (0)	-13.48270*** I (0)	-13.76828*** I (0)	-13.51348*** I (0)	0.510264	0.548893
ABNORMAL RETURN	-13.84587*** I (0)	-10.65723*** I (0)	-13.84034*** I (0)	-13.87876*** I (0)	-14.41548*** I (0)	-13.84041*** I (0)	0.496429	0.431256
AV. SUBS. RETURN	-11.72427*** I (0)	-11.74409*** I (0)	-11.74866*** I (0)	-14.69437*** I (0)	-14.94044*** I (0)	-14.72432*** I (0)	0.150168	0.146427
PROFITS	-2.999503** I (0)	-3.071004* I (0)	-2.820827** I (0)	-3.224197* I (0)	-3.288047* I (0)	-3.013393* I (0)	0.121314	0.083792
ASSETS	-2.401438* I (0)	-2.539463* I (0)	-2.313542* I (0)	-2.668184* I (0)	-2.775163* I (0)	-2.578007* I (0)	0.146198	0.122950
EQUITIES	-2.653894* I (0)	-2.723460* I (0)	-2.591590* I (0)	-2.821872* I (0)	-2.913154* I (0)	-2.712714* I (0)	0.285037	0.079490
LIABILITIES	-2.915552* I (0)	-2.877184* I (0)	-2.552696* I (0)	-3.158148** I (0)	-3.107712** I (0)	-2.738371** I (0)	0.095445	0.089638
DEBT-RATIOS	-2.828650** I (0)	-2.905921** I (0)	-2.803365** I (0)	-3.023837** I (0)	-3.113859** I (0)	-2.989479** I (0)	0.208850	0.063353
ROE	-3.026237** I (0)	-3.348692* I (0)	-1.753046* I (0)	-3.253156** I (0)	-3.573299** I (0)	-1.782149* I (0)	0.291484	0.050141
CAS	-3.803419*** I (0)	-3.870314*** I (0)	-3.814580*** I (0)	-4.166243*** I (0)	-4.245374*** I (0)	-4.176239*** I (0)	0.171359	0.036360
TURNOVER	-3.434059** I (0)	-3.414190** I (0)	-3.159861** I (0)	-3.738571*** I (0)	-3.720627** I (0)	-3.416488** I (0)	0.074851	0.070191

HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season.*,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis. T-stats and the probability amounts are defined according to Akaike Info Criterion with maximum lag 10.

Table 9 shows the unit roots for the variables of Trabzonspor Sportive Inc. According to the results, stock prices has stationarity at I(1). On the other hand, the other variables such as stock returns, abnormal returns, average subtracted return, net profits, total assets, total equities, total liabilities, debt-ratios, return on equity ratio, capital structure ratio and total asset turnover ratio have stationarity at I(0).

4. DATA

The dataset of this study includes several variables such as;

i. Return of the football club's stocks,
ii. Abnormal Return of the football club's stocks,
iii. Returns of the football club's stocks that subtracted from all teams average returns,
iv. Total results of the football in clubs Turkish Super League games,
v. Total results of the football clubs in European competition games (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup),
vi. Total results of the football clubs in Turkish Domestic Cup games,
vii. Home results of the football clubs in Turkish Super League games,
viii. Away results of the football clubs in Turkish Super League games,
ix. Home results of the football clubs in European competition games,
x. Away results of the football clubs in European competition games,
xi. Home results of the football clubs in Turkish Domestic Cup games,
xii. Away results of the football clubs in Turkish Domestic Cup games,
xiii. Player transfers of the football clubs,
xiv. Total assets of the football clubs,
xv. Total equities of the football clubs,
xvi. Total liabilities of the football clubs,
xvii. Net profits of the football clubs,
xviii. Debt-ratios of the football clubs,
xix. Capital structure ratios of the football clubs,
xx. Return on equity ratios of the football clubs,

xxi. Total asset turnover ratios of the football clubs,

xxii. Yearly dummy variables for each season in Turkey and Europe.

The stock prices data of the football clubs are searched and provided form Bourse Istanbul (Istanbul Stock Exchange). Then, returns of the football club's stocks are calculated by changes in stock prices of the football clubs (see methodology part, Equation 1). Next, abnormal returns of the football club's stocks are generated by subtracting returns of market index from returns of the stocks (see methodology part, Equation 2). After that, decomposed or actual returns of the football club's stocks are formed by subtracting from all teams average returns of stocks from returns of the football club's stocks (see methodology part, Equation3). These data that represent financial performance are used for the years from 2009 to 2013 as weekly data.

League results of the football club's games include only Turkish Super League games and they are collected from official website of The Football Federation of Turkey (www.tff.org). Results of the games are used in two different versions such as total results of league games and home/away results of league games as divided format. Winnings in the Turkish Super League games represent "1" and not winnings (draws and defeats) represent "0". In other words, taking 3 points from Turkish Super League games is defined as "1". On the other hand, taking 1 or less points from Turkish Super League games is defined as "0".

Total results of the football clubs in European competition games includes UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup games and teams' results from these competitions. The data of results in European competition games are gathered from official website of FIFA (Federation International of Football Association – www.fifa.com). Results of

the games are used in two different versions such as total results of European games and home/away results of European games as divided format. Winnings in the European competition games represent “1” and not winnings (draws and defeats) represent “0”. In order to mention with different way, taking 3 points from European competition games is defined as “1”. On the other hand, taking 1 or less points from European competition games is defined as “0”.

Domestic Cup results of the football club’s games include only Turkish Domestic Cup tournament games and they are collected from official website of The Football Federation of Turkey (www.tff.org). Results of the domestic cup games are used in two different versions such as total results of domestic cup games and home/away results of domestic cup games as divided format. Winnings in the Turkish Domestic Cup tournament games represent “1” and not winnings (draws and defeats) represent “0”. In other words, taking 3 points from Turkish Domestic Cup tournament games is defined as “1”. On the other hand, taking 1 or less points from Turkish Domestic Cup tournament games is defined as “0”.

The data about player transfers of football clubs include information about player transfers that are made by football clubs at some period of time or season. The transfer data is formed as ‘dummy variable’ (see the definition in methodology part) –“1” represents football clubs made one or more player transfer at any specific time period or season and “0” represents any player transfer is made by football clubs. The player transfer data information are found from official website of Transfermarkt GmbH & Co. KG (www.transfermarkt.com) and are checked from income statements and balance sheets of the clubs from Public Disclosure Platform (www.pdp.com.tr).

One part of the financial data of the football clubs include total assets of the football clubs, total equities of the football clubs, total liabilities of the football clubs and net profit of the football clubs (see the methodology part). They are quarterly (3 monthly, 6 monthly, 9 monthly and annually) data for the years from 2009 to 2013. Each quarter is calculated by subtracting actual time from next 3 month amounts in order to find the change in total assets, total equities, total liabilities and net profit amounts in 3 months. These financial data are collected from income statements, net cash flow statements and balance sheets of the clubs from Public Disclosure Platform (www.pdp.com.tr). Financial, or fiscal, data are used in two different forms as monetary amount of data per 3 months and changes in the manner of rates per 3 months such as rate of total assets, rate of total equities, rate of total liabilities and rate of net profit (see the formulas in methodology part).

Another part of the financial data of the football clubs includes debt-ratios of the football clubs, capital structure ratios of the football clubs, return on equity ratios of the football clubs and total asset turnover ratios of the football clubs. These ratios are calculated and generated from financial data of the football clubs. Debt-ratios of the football clubs are calculated as dividing total assets to total liabilities (see the formula and the definition in methodology part). Capital structure ratios of the football clubs are formed as total liabilities divided by total equities (see the formula and the definition in methodology part). The calculation for return on equity ratios is made by net profits over total equities (see the formula and the definition in methodology part). Last financial ratio, total asset turnover, is generated by net profits divided by total assets (see the formula and the definition in methodology part).

In order to understand the changes (increases and decreases) in performances of football club's returns, year dummy variables are formed to represent the impact of each year. There are 5 year

dummy variables that represent each year such as “2009-2010”, “2010-2011”, “2011-2012”, “2012-2013” and “2013-2014”. In the regression model, in order to analyze or observe the year effect, one of the dummy variable categories should be left out of the equation. As public opinion, sports groups and communities know that the year “2011-2012” is declared as the year of “chicanery in football”. In this study, the year “2011-2012” is dropped due to analyzing the effect of chicanery to the stock and return performances of the football clubs in Turkey. In other words, the effects of other years to the stock and financial performances of the football clubs will be analyzed comparing to the “2011-2012” year.

5. EMPIRICAL RESULTS

In the regression models, there are 2 different dependent variables and 12 different independent variables. Some parts of these variables in the regression models represent the sportive achievements of the football clubs such as home results of the football clubs in Turkish Super League games, away results of the football clubs in Turkish Super League games, home results of the football clubs in European competition games, away results of the football clubs in European competition games, home results of the football clubs in Turkish Domestic Cup games, away results of the football clubs in Turkish Domestic Cup games and year variables for each season in Turkey and Europe. These variables that define the sportive achievements of the football clubs are formed as dummy variable.

The other part of these variables in the regression models refer to fiscal achievements of the football clubs such as total assets of the football clubs, total equities of the football clubs, total liabilities of the football clubs, net profits of the football clubs, debt-ratios of the football clubs, capital structure ratios of the football clubs, return on equity ratios of the football clubs and total asset turnover ratios of the football clubs. These variables that define the fiscal achievements of the football clubs are generated as percentage and ratio.

Moreover, transfer dummy variable that represents player transfers of the football clubs can be included both sportive and fiscal achievements. Because, transfers are expected to affect the trend of the game in the manner of wins against the opponent teams. Besides, they are made in hassles, but it confirms that the financial statements of these football clubs are still well and strong regarding to the difficulties in the fiscal positions.

5.1 The Effects of Sportive and Fiscal Variables to the Stock Returns

On this part of the study, the regression models and results of the estimation equations will be represented and interpreted in tables below. Each team's results are divided in 6 different

regression models in order to able to analyze and compare the changes when new variables are included to the equations in the regression models.

Table 10: The Effects of Sportive and Fiscal Variables to the Returns of Beşiktaş Sportive Inc.

	Bjkas-1	Bjkas-2	Bjkas-3	Bjkas-4	Bjkas-5	Bjkas-6
Constant	**-0.021*** (0.015)**	**-0.028* (0.015)**	-0.023 (0.015)	-0.019 (0.016)	-0.012 (0.016)	**-0.142*** (0.039)**
HwinL	**0.042*** (0.015)**	**0.041*** (0.014)**	**0.041*** (0.015)**	**0.042*** (0.015)**	**0.042*** (0.015)**	**0.039*** (0.014)**
AwinL	**0.036** (0.016)**	**0.033* (0.016)**	**0.036** (0.016)**	**0.036** (0.016)**	**0.032** (0.016)**	**0.034** (0.015)**
HwinE	**0.091*** (0.032)**	**0.091*** (0.032)**	**0.090*** (0.032)**	**0.092*** (0.032)**	**0.088*** (0.032)**	**0.079** (0.031)**
AwinE	0.002 (0.042)	0.005 (0.041)	0.001 (0.042)	0.002 (0.042)	0.003 (0.042)	0.004 (0.041)
HwinD	**0.086*** (0.033)**	**0.092*** (0.032)**	**0.086*** (0.033)**	**0.082** (0.033)**	**0.087*** (0.032)**	**0.104*** (0.032)**
AwinD	**0.106** (0.050)**	**0.118** (0.049)**	**0.106** (0.050)**	**0.107** (0.050)**	**0.114** (0.050)**	**0.126** (0.048)**
Transfer	0.006 (0.016)	0.011 (0.014)	0.005 (0.016)	0.007 (0.014)	-0.002 (0.022)	**0.095*** (0.029)**
Profits	-0.014 (0.028)					
Assets		**-0.076** (0.022)**				
Equities			0.012 (0.025)			
Liabilities				-0.038 (0.022)		
Debt					**-0.003** (0.001)**	
CAS					-0.002 (0.007)	
Turnover					-0.002 (0.002)	
ROE						**0.090*** (0.027)**
Year 1	-0.020 (0.018)	-0.015 (0.018)	-0.018 (0.018)	-0.007 (0.018)	-0.019 (0.025)	0.035 (0.025)
Year 2	-0.010 (0.019)	-0.003 (0.019)	-0.007 (0.021)	-0.020 (0.019)	-0.015 (0.019)	0.013 (0.020)
Year 4	0.010 (0.022)	0.024 (0.023)	0.011 (0.022)	-0.013 (0.022)	-0.010 (0.021)	0.025 (0.021)
Year5	0.001 (0.002)	-0.010 (0.034)	-0.013 (0.029)	0.011 (0.050)	-0.007 (0.024)	0.043 (0.023)
R^2	**0.106**	**0.131**	**0.106**	**0.109**	**0.187**	**0.161**
DW Test	2.087	2.144	2.089	2.104	2.150	2.253

There are 6 different regression models for Beşiktaş Sportive Inc. and each number in columns represents different equation from 1 to 6 (see the equations in methodology). The dependent variable is return of BJKAS, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% significance levels and standard errors are shown in the parenthesis. DW Test indicates the t-statistics of Durbin-Watson Autocorrelation Test.

Table 10 shows the 5 different regression models that represent the effects of sportive and fiscal achievements to the stock returns of Beşiktaş Sportive Inc. In each regression models, variables that represent sportive achievements such as wins at home games in Turkish Super League, wins at away games in Turkish Super League, wins at home games in European competitions (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), wins at away games in European competitions, wins at home games in Turkish Domestic Cup, wins at away games in Turkish Domestic Cup and transfers that are made by the football club are same, but the variables that include fiscal achievements such as net profits, total assets, total equities, total liabilities, debt-ratio, capital structure ratio, return on equity ratio and total asset turnover ratio are divided in different 5 equations as they are correlated to each other (see the Pearson-Correlation Test results in the methodology part). Besides, there are variables that represent the year effects to the stock returns of the football club regarding to the chicanery year in the football. Comparing 5 different regression models will be beneficial for the investor in order to observe and realize which fiscal variable have better impact on the stock returns of the football club. Moreover, despite the fact that there are correlations among the variables which represent fiscal achievements of the football club, analyzing all regression models will also give benefit to understand which model is the best one among themselves.

In the first regression model, there are significant and positive effects of wins at home and away games in Turkish Super League to the stock returns of Beşiktaş Sportive Inc. For instance, winning against the opponents at home in the league cause to increase the stock returns of the football club by 4,2% when the other variables held constant. Similarly, wins at away games in the league also raise the stock returns by 3,6% when the other variables do not change. Thus, the investors are sensitive wins at away games more than the wins at home in the league. In addition,

there are significant and positive relationships between wins at home games in European competitions and the abnormal stock returns of the club. For example, when Beşiktaş win against their opponents in European competitions their stock returns appreciate by 9,1%. However, there is no effect of wins at away games in European competitions to the stock returns of the football club. For Turkish Domestic Cup games, it can be said that there is also significant and positive impacts from wins at both home and away games in this tournament on the stock returns of the football club. For example, when Beşiktaş win at home against the opponents in the domestic tournament, their stock returns increase by 8,6%. Correspondingly, when the team beat their opponents at away there is also an increase in the stock returns by 10,6%. On the other hand, there are no significant and positive or negative effects of transfers, net profits and the year effects to the stock returns.

In the second regression model, the effect of total assets of Beşiktaş Sportive Inc. to the stock returns is observed instead the net profits of the football club, different from the previous regression model. There are still significant and positive effects of wins at home games to the stock returns (by 4,1%) , but slightly less effective than the previous observation. For the wins at away games, there are also significant and positive impacts on stock returns (by 3,3%), but again less than the previous analysis. Wins at home games in European competitions have still significant and positive effect on the stock return (by 9,1%) which is the same as the previous one and similar to the previous regression model, there is no significant and positive or negative effect of wins at away games in European competitions to the stock returns. Moreover, there are still significant and effects of wins at home (by 9,2%) and away games (by 11,8%) in domestic cup to the stock returns. Besides, there is significant and negative relationship between total assets of the Beşiktaş Sportive Inc. and stock returns. In other words, when the total assets

increase, the stock returns depreciate by 7,6%. On the other hand, there are no significant and positive or negative effects of transfers and the year effects to the stock returns.

According to the results of the next regression model in the table 10, the effect of total equities of Beşiktaş Sportive Inc. to the stock returns is observed. It can be said that there are still significant and positive effects of wins at home (by 4,1%) and at away (by 3,6%) games in the league to the stock returns of the football club. Besides, wins at home games in European competitions still have significant and positive effects to the stock returns (9,0%). Moreover, significant and positive impacts of wins at home (by 8,6%) and at away (10,6%) games in the domestic cup maintain on the stock returns of the football club. However, there are no significant and positive or negative relationships among the transfers, total equities and the year effect with the stock returns of Beşiktaş Sportive Inc.

In the forth regression model, there are significant and positive effects of wins at home and away games in Turkish Super League to the stock returns of Beşiktaş Sportive Inc. For instance, winning against the opponents at home in the league cause to increase the stock returns of the football club by 4,2%. Similarly, wins at away games in the league also raise the stock returns by 3,6%. Thus, the investors are sensitive wins at away games more than the wins at home in the league. In addition, there are significant and positive relationships between wins at home games in European competitions. For example, when Beşiktaş win against their opponents in European competitions their stock returns appreciate by 9,2%. However, there is no effect of wins at away games in European competitions to the stock returns of the football club. For Turkish Domestic Cup games, it can be said that there is also significant and positive impacts from wins at both home and away games in this tournament on the stock returns of the football club. For example, when Beşiktaş win at home against the opponents in the domestic tournament, their stock returns

increase by 8,2%. Correspondingly, when the team beat their opponents at away there is also an increase in the stock returns by 10,7%. On the other hand, there are no significant and positive or negative effects of transfers, net profits and the year effects to the stock returns.

On the next regression model, there are still significant and positive effects of wins at home (by 4,2%) and at away (by 3,2%) games in the league to the stock returns of the football club. Besides, wins at home games in European competitions still have significant and positive effects to the stock returns (8,8%). Moreover, significant and positive impacts of wins at home (by 8,7%) and at away (11,4%) games in the domestic cup maintain on the stock returns of the football club. Also, there is a significant and negative link between the debt-ratio of the football club and their stock return. According to the results, an increase in debts cause the reduction in stock returns by 0,3%. However, there are no significant and positive or negative relationships among the transfers, capital structure ratio, total asset turnover ratio and the year effect with the stock returns of Beşiktaş Sportive Inc.

On the last regression model, it can be said that there are significant and positive effects of wins at home and away games in Turkish Super League to the stock returns of Beşiktaş Sportive Inc. For instance, winning against the opponents at home in the league cause to increase the stock returns of the football club by 3,9%. Similarly, wins at away games in the league also raise the stock returns by 3,4%. Thus, the investors are sensitive wins at away games more than the wins at home in the league. In addition, there are significant and positive relationships between wins at home games in European competitions. For example, when Beşiktaş win against their opponents in European competitions their stock returns appreciate by 7,9%. However, there is no effect of wins at away games in European competitions to the stock returns of the football club. For Turkish Domestic Cup games, it can be said that there is also significant and positive impacts

from wins at both home and away games in this tournament on the stock returns of the football club. For example, when Beşiktaş win at home against the opponents in the domestic tournament, their stock returns increase by 10,4%. Correspondingly, when the team beat their opponents at away there is also an increase in the stock returns by 12,6%. Besides, the relationship between transfers and the stock returns of the football club is both significant and positive. According to the results, making one more player transfer to the club increase the stock returns by 9,5%. Moreover, there is significant and positive effect of return on equities to the stock returns of the football club. In other words, when the return on equity ratio increase, the stock returns appreciate by 9,0%. On the other hand, there are no significant and positive or negative effects of year effects to the stock returns.

In summary, the investors of BJKAS become more sensitive when Beşiktaş win at home games in Turkish Super League, European competitions and Turkish Domestic Cup. Also, they prefer to invest on BJKAS when the team wins at away games in both Turkish Super League and Turkish Domestic Cup. In addition, the investors can be affected by increases in both total assets and debt-ratios of the club as the club's stock would depreciate. However, when return on equities of Beşiktaş Sportive Inc. increase, they prefer to move on their investments for BJKAS.

Table 11: The Effects of Sportive and Fiscal Variables to the Returns of Fenerbahçe Sportive Inc.

	Fener-1	Fener-2	Fener-3	Fener-4	Fener-5	Fener-6
Constant	-0.022 (0.019)	-0.020 (0.020)	-0.021 (0.018)	-0.002 (0.024)	-0.017 (0.023)	-0.022 (0.019)
HwinL	0.029 (0.018)	**0.031*** **(0.018)**	**0.031*** **(0.018)**	**0.033*** **(0.018)**	**0.033*** **(0.019)**	**0.031*** **(0.018)**
AwinL	**0.034*** **(0.019)**	0.027 (0.019)	0.026 (0.019)	0.030 (0.019)	0.031 (0.019)	0.027 (0.019)
HwinE	0.016 (0.044)	0.014 (0.045)	0.013 (0.045)	0.007 (0.045)	0.014 (0.045)	0.014 (0.045)
AwinE	0.014 (0.045)	0.014 (0.046)	0.011 (0.046)	0.021 (0.046)	0.012 (0.046)	0.012 (0.046)
HwinD	0.011 (0.032)	0.018 (0.032)	0.018 (0.032)	0.022 (0.032)	0.019 (0.032)	0.018 (0.032)
AwinD	0.041 (0.049)	0.028 (0.050)	0.024 (0.050)	0.030 (0.049)	0.032 (0.053)	0 .025 (0.053)
Transfer	0.018 (0.017)	0.008 (0.016)	0.008 (0.016)	-0.003 (0.018)	0.010 (0.019)	0.009 (0.016)
Profits	**0.003**** **(0.001)**					
Assets		-0.007 (0.034)				
Equities			0.003 (0.008)			
Liabilities				-0.022 (0.017)		
Debt					0.000 (0.000)	
CAS					0.000 (0.001)	
Turnover					0.004 (0.008)	
ROE						0.000 (0.004)
Year 1	-0.007 (0.025)	0.002 (0.026)	0.003 (0.025)	-0.012 (0.027)	-0.006 (0.027)	0.003 (0.025)
Year 2	0.007 (0.021)	-0.003 (0.021)	-0.003 (0.021)	-0.016 (0.023)	-0.014 (0.023)	-0.003 (0.021)
Year 4	-0.009 (0.021)	-0.007 (0.023)	-0.003 (0.023)	-0.023 (0.025)	-0.013 (0.024)	-0.005 (0.022)
Year5	-0.019 (0.035)	-0.020 (0.035)	-0.020 (0.035)	-0.038 (0.038)	-0.034 (0.039)	-0.019 (0.035)
R^2	**0.061**	**0.034**	**0.035**	**0.045**	**0.042**	**0.034**
DW Test	2.129	2.085	2.092	2.109	2.112	2.081

There are 6 different regression model Fenerbahçe Sportive Inc. and each number in columns represents different equation from 1 to 6 (see the equations in methodology). The dependent variable is return of FENER, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis and standard errors are shown in the parenthesis. DW Test indicates the t-statistics of Durbin-Watson Autocorrelation Test.

Table 11 shows the 5 different regression models that represent the effects of sportive and fiscal achievements to the stock returns of Fenerbahçe Sportive Inc. In each regression models, variables that represent sportive achievements such as wins at home games in Turkish Super League, wins at away games in Turkish Super League, wins at home games in European competitions, wins at away games in European competitions (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), wins at home games in Turkish Domestic Cup, wins at away games in Turkish Domestic Cup and transfers that are made by the football club are same, but the variables that include fiscal achievements such as net profits, total assets, total equities, total liabilities, debt-ratio, capital structure ratio, return on equity ratio and total asset turnover ratio are divided in different 5 equations as they are correlated to each other (see the Pearson-Correlation Test results in the methodology part).

There are variables that represent the year effects to the stock returns of the football club regarding to the chicanery year in the football. Comparing 5 different regression models will be beneficial for the investor in order to observe and realize which fiscal variable have better impact on the stock returns of the football club. Moreover, despite the fact that there are correlations among the variables which represent fiscal achievements of the football club, analyzing all regression models will also give benefit to understand which model is the best one among themselves.

In the first regression model, there are significant and positive effects of wins at away games in Turkish Super League to the stock returns of Fenerbahçe Sportive Inc. For instance, wins at away games in the league raise the stock returns by 3,4%. In addition, there are no significant and positive or negative relationships between wins at home and away games in both European competitions and Turkish Domestic Cup. Besides, net profits of the football club have a

significant and positive impact on the stock returns. To give an example, increase in the net profits of the club cause an appreciation by 0,3% in the stock returns of the club. On the other hand, there are no significant and positive or negative effects of transfers and the year effects to the stock returns.

In the second regression model, the effect of total assets of Fenerbahçe Sportive Inc. to the stock returns is observed instead the net profits of the football club, different from the previous regression model. There is only significance and positive effect of wins at home games to the stock returns (by 3,1%), different than the previous equation result. On the contrary, there are no significant and positive or negative effects of other variables to the stock returns of Fenerbahçe Sportive Inc.

According to the results of the rest of the regression models in the table 11, there is only significant and positive effect of wins at home games in the Turkish Super League to the stock return of the clubdifferent from the other competitions. In the regression model 3 and 6, it can be said that the effects of the wins at home in the league increase the stock returns of the club 3,1%. For the 4^{th} and 5^{th} regression models, the impact of wins at home games in the league appreciate the stock returns by 3,3%. On the other hand for other regression models, other variables have no significant and positive or negative effect to the stock returns of Fenerbahçe Sportive Inc.

In order to make a general comment for the investors of FENER stocks, it can be said that they are more sensitive on wins at home games rather than wins at away games in Turkish Super League. Moreover, they prefer to do their investments on FENER stocks when the net profits of the football club increase during the season.

Table 12: The Effects of Sportive and Fiscal Variables to the Returns of Galatasaray Sportive Inc.

	Gsray-1	Gsray-2	Gsray-3	Gsray-4	Gsray-5	Gsray-6
Constant	-0.003 (0.014)	0.000 (0.014)	0.002 (0.014)	0.001 (0.014)	-0.007 (0.021)	0.003 (0.022)
HwinL	0.001 (0.015)	0.000 (0.014)	0.004 (0.014)	0.000 (0.014)	0.003 (0.014)	0.003 (0.015)
AwinL	**0.038***** **(0.014)**	**0.036**** **(0.014)**	**0.038***** **(0.014)**	**0.036**** **(0.014)**	**0.039***** **(0.014)**	**0.038***** **(0.015)**
HwinE	0.042 (0.037)	0.040 (0.036)	0.038 (0.036)	0.039 (0.035)	0.039 (0.036)	0.037 (0.037)
AwinE	0.007 (0.055)	0.005 (0.055)	0.005 (0.054)	0.004 (0.055)	0.009 (0.054)	0.005 (0.057)
HwinD	0.013 (0.032)	0.012 (0.032)	0.006 (0.032)	0.013 (0.032)	0.005 (0.032)	0.004 (0.033)
AwinD	0.037 (0.077)	0.036 (0.077)	0.037 (0.076)	0.040 (0.077)	0.027 (0.075)	0.034 (0.080)
Transfer	0.008 (0.014)	0.001 (0.014)	0.002 (0.014)	0.003 (0.014)	0.000 (0.015)	-0.003 (0.016)
Profits	0.000 (0.012)					
Assets		-0.014 (0.011)				
Equities			**0.005**** **(0.003)**			
Liabilities				-0.023 (0.023)		
Debt					0.000 (0.003)	
CAS					**0.003***** **(0.000)**	
Turnover					0.002 (0.003)	
ROE						**-0.003**** **(0.001)**
Year 1	0.005 (0.022)	0.006 (0.020)	0.016 (0.021)	0.014 (0.022)	0.016 (0.022)	0.007 (0.020)
Year 2	**-0.033*** **(0.018)**	-0.026 (0.018)	-0.034 (0.017)	**-0.031*** **(0.017)**	**-0.044**** **(0.021)**	**-0.047***** **(0.018)**
Year 4	-0.022 (0.017)	-0.022 (0.017)	-0.024 (0.016)	-0.024 (0.017)	-0.015 (0.021)	-0.022 (0.016)
Year5	-0.041 (0.027)	-0.042 (0.027)	-0.027 (0.028)	-0.041 (0.027)	-0.032 (0.033)	-0.040 (0.026)
R^2	**0.094**	**0.103**	**0.117**	**0.100**	**0.137**	**0.128**
DW Test	1.886	1.895	1.890	1.890	1.984	1.967

There are 6 different regression model for Galatasaray Sportive Inc. and each number in columns represents different equation from 1 to 6 (see the equations in methodology). The dependent variable is return of GSRAY, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis and standard errors are shown in the parenthesis. DW Test indicates the t-statistics of Durbin-Watson Autocorrelation Test.

Table 12 shows the 5 different regression models that represent the effects of sportive and fiscal achievements to the stock returns of Galatasaray Sportive Inc. In each regression models, variables that represent sportive achievements such as wins at home games in Turkish Super League, wins at away games in Turkish Super League, wins at home games in European competitions, wins at away games in European competitions (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), wins at home games in Turkish Domestic Cup, wins at away games in Turkish Domestic Cup and transfers that are made by the football club are same, but the variables that include fiscal achievements such as net profits, total assets, total equities, total liabilities, debt-ratio, capital structure ratio, return on equity ratio and total asset turnover ratio are divided in different 5 equations as they are correlated to each other (see the Pearson-Correlation Test results in the methodology part). Besides, there are variables that represent the year effects to the stock returns of the football club regarding to the chicanery year in the football. Comparing 5 different regression models will be beneficial for the investor in order to observe and realize which fiscal variable have better impact on the stock returns of the football club. Moreover, despite the fact that there are correlations among the variables which represent fiscal achievements of the football club, analyzing all regression models will also give benefit to understand which model is the best one among themselves.

In the first regression model, it can be said that there is significant and positive effect of wins at away games in Turkish Super League, but not at home games in the league and at home/away games in both European competitions and Turkish Domestic Cup to the stock return of the club. At the away games in the league, when Galatasaray win against their opponents, the stock return of the club increase by 3,8%. In addition, the stock returns of the club depreciated by 3,3% in 2010-2011 season comparing to the chicanery year in the football. On the other hand, there are no

significant and positive or negative effects of other variables to the stock returns of Galatasaray Sportive Inc.

In the second regression model, there is significant and positive effect of wins at away games in Turkish Super League, but not at home games in the league and at home/away games in other competitions to the stock return of the club. For instance, when Galatasaray win at away games in the league, their stock returns appreciate by 3,6%. However, there are no significant and positive or negative effects of other variables to the stock returns of Galatasaray Sportive Inc.

On the next regression model, there is significant and positive effect of wins at away games in the league that is each wins increase the stock returns by 3,8%. Besides, there is also significant and positive relationship between the total equities of the club and their stock return. According to the results, every increase the total equities cause 0,5% appreciation on the stock return of the club.

The results of the last three regression models are similar to the results of first regression model. That is, there is significant and positive effect of wins at away games in Turkish Super League, but not at home games in the league and at home/away games in other competitions. when Galatasaray win at away games in the league, their stock returns appreciate, respectively 3,6%, 3,9% and 3,8%. Besides, the stock returns of the club depreciated in 2010-2011 season comparing to the chicanery year in the football (3,1% in the regression model 4; 4,4% in the regression model 5 and 4,7% in the regression model 6). On the other hand, there are no significant and positive or negative effects of other variables to the stock returns of Galatasaray Sportive Inc in other regression models. Meanwhile, there are significant impacts of both capital structure ratio and return on equity ratio on the stock returns of the club. Each increase in capital

structure ratio cause an increase by 0,3% (regression model 5) and every rise in return on equity ratio depreciate the stock returns of the club by (0,3%).

As a result, the investors of GSRAY stocks prefer to do their investments more when Galatasaray win at away games rather than winnings at away games in Turkish Super League. Moreover, when capital structure ratio and total equities of Galatasaray Sportive Inc. increase, the investors of GSRAY become more sensitive and takes it as a valuable issue. Unexpectedly, increases in return on equity ratio of the football club have bad impact on the investors of GSRAY. In addition to the bad impact, it can be said that the investors have losses from the stock returns of the club in 2010-2011 football season comparing to the chicanery year.

Table 13: The Effects of Sportive and Fiscal Variables to the Returns of Trabzonspor Sportive Inc.

	Tspor-1	Tspor-2	Tspor-3	Tspor-4	Tspor-5	Tspor-6
Constant	-0.004 (0.018)	-0.004 (0.018)	-0.004 (0.018)	-0.013 (0.020)	-0.021 (0.021)	0.015 (0.023)
HwinL	**0.030*** **(0.017)**	**0.032*** **(0.017)**	**0.032*** **(0.017)**	**0.030*** **(0.017)**	**0.027*** **(0.017)**	**0.028*** **(0.017)**
AwinL	0.030 (0.019)	**0.031*** **(0.019)**	0.030 (0.019)	0.030 (0.019)	0.027 (0.019)	0.028 (0.019)
HwinE	0.040 (0.056)	0.042 (0.056)	0.044 (0.056)	0.041 (0.056)	0.044 (0.056)	0.043 (0.056)
AwinE	0.023 (0.048)	0.024 (0.048)	0.026 (0.048)	0.028 (0.048)	0.029 (0.048)	0.026 (0.048)
HwinD	0.016 (0.033)	0.021 (0.033)	0.021 (0.033)	0.022 (0.033)	0.024 (0.033)	0.021 (0.033)
AwinD	0.020 (0.048)	0.024 (0.048)	0.025 (0.048)	0.022 (0.048)	0.015 (0.048)	0.021 (0.048)
Transfer	-0.021 (0.024)	0.003 (0.016)	0.005 (0.017)	0.007 (0.017)	0.005 (0.017)	-0.017 (0.022)
Profits	0.006 (0.004)					
Assets		-0.009 (0.036)				
Equities			0.012 (0.012)			
Liabilities				0.036 (0.037)		
Debt					**0.001*** **(0.000)**	
CAS					0.005 (0.003)	
Turnover					0.001 (0.006)	
ROE						-0.031 (0.022)
Year 1	0.006 (0.024)	0.000 (0.024)	-0.001 (0.024)	0.006 (0.025)	0.020 (0.026)	0.010 (0.025)
Year 2	-0.023 (0.020)	-0.019 (0.021)	-0.018 (0.020)	-0.012 (0.021)	-0.002 (0.022)	-0.011 (0.021)
Year 4	-0.020 (0.021)	-0.026 (0.021)	-0.035 (0.023)	-0.019 (0.022)	-0.003 (0.023)	-0.014 (0.022)
Year5	-0.025 (0.031)	-0.026 (0.035)	-0.031 (0.031)	-0.034 (0.031)	-0.009 (0.032)	-0.017 (0.032)
R^2	**0.071**	**0.061**	**0.065**	**0.066**	**0.086**	**0.071**
DW Test	2.186	2.154	2.157	2.178	2.218	2.181

There are 6 different regression model for Trabzonspor Sportive Inc. and each number in columns represents different equation from 1 to 6 (see the equations in methodology). The dependent variable is return of TSPOR, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis and standard errors are shown in the parenthesis. DW Test indicates the t-statistics of Durbin-Watson Autocorrelation Test.

Table 13 shows the 5 different regression models that represent the effects of sportive and fiscal achievements to the stock returns of Trabzonspor Sportive Inc. In each regression models, variables that represent sportive achievements such as wins at home games in Turkish Super League, wins at away games in Turkish Super League, wins at home games in European competitions, wins at away games in European competitions (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), wins at home games in Turkish Domestic Cup, wins at away games in Turkish Domestic Cup and transfers that are made by the football club are same, but the variables that include fiscal achievements such as net profits, total assets, total equities, total liabilities, debt-ratio, capital structure ratio, return on equity ratio and total asset turnover ratio are divided in different 5 equations as they are correlated to each other (see the Pearson-Correlation Test results in the methodology part). Besides, there are variables that represent the year effects to the stock returns of the football club regarding to the chicanery year in the football. Comparing 5 different regression models will be beneficial for the investor in order to observe and realize which fiscal variable have better impact on the stock returns of the football club. Moreover, despite the fact that there are correlations among the variables which represent fiscal achievements of the football club, analyzing all regression models will also give benefit to understand which model is the best one among themselves.

In the first regression model, there are significant and positive effects of wins at home games in Turkish Super League to the stock returns of Trabzonspor Sportive Inc. For instance, wins at home games in the league raise the stock returns by 3,0%. However, there are no significant and positive or negative relationships between wins at home and away games in both European competitions and Turkish Domestic Cup and the stock returns of the club. On the other hand,

there are no significant and positive or negative effects of transfers and the year effects to the stock returns.

In the second regression model, the effect of total assets of Trabzonspor Sportive Inc. to the stock returns is observed instead the net profits of the football club, different from the previous regression model. There are significant and positive effect of wins at home (by 3,2%) and away games (by 3,1%) to the stock returns, different than the previous equation result. On the contrary, there are no significant and positive or negative effects of other variables to the stock returns of Trabzonspor Sportive Inc.

In the third regression model, there is only significant and positive effect of wins at home games in Turkish Super League to the stock returns of Trabzonspor Sportive Inc. For example, wins at home games in the league raise the stock returns by 3,2%. However, there are no significant and positive or negative relationships between wins at home and away games in both European competitions and Turkish Domestic Cup and the stock returns of the club. On the other hand, there are no significant and positive or negative effects of transfers and the year effects to the stock returns.

The results of 4^{th} and 6^{th} regression model are very similar to the results of the 3^{rd} regression model. To give an example, wins at home games in the league raise the stock returns by 3,0% (on the 4^{th} regression model), and by 2,8% (on the 6^{th} regression model). However, on the 5^{th} regression model, there is only significant and positive effect of the debt-ratio of the club to the stock returns. For instance, an increase on the debts of the club cause also increase the stock returns of the club by 0,1%).

In order to make a general comment for the investors of TSPOR stocks, it can be said that they are more sensitive on wins at home games rather than wins at away games in Turkish Super League. Unexpectedly, they prefer to do their investments on TSPOR stocks when the debt-ratio of the football club increases during the season.

Table 14: The Effects of Changes in Sportive and Fiscal Variables to the Returns of All Football Clubs

	R(1)	R(2)	R(3)	R(4)	R(5)	R(6)
Constant	-0.008 (0.008)	-0.006 (0.008)	-0.007 (0.008)	-0.002 (0.009)	-0.009 (0.008)	-0.007 (0.008)
HwinL	**0.025***** **(0.008)**	**0.025***** **(0.008)**	**0.024***** **(0.008)**	**0.026***** **(0.008)**	**0.024***** **(0.008)**	**0.024***** **(0.008)**
AwinL	**0.032***** **(0.008)**	**0.031***** **(0.008)**	**0.031***** **(0.008)**	**0.032***** **(0.008)**	**0.030***** **(0.008)**	**0.031***** **(0.008)**
HwinE	**0.040**** **(0.019)**	**0.039**** **(0.019)**	**0.039**** **(0.020)**	**0.040**** **(0.019)**	**0.040**** **(0.0018)**	**0.039**** **(0.0019)**
AwinE	0.011 (0.022)	0.011 (0.022)	0.011 (0.022)	0.012 (0.022)	0.011 (0.022)	0.011 (0.0022)
HwinD	0.023 (0.016)	0.023 (0.016)	0.022 (0.016)	0.023 (0.016)	0.023 (0.016)	0.022 (0.0016)
AwinD	0.011 (0.025)	0.012 (0.025)	0.011 (0.025)	0.011 (0.025)	0.014 (0.026)	0.013 (0.026)
Transfer	0.006 (0.007)	0.005 (0.007)	0.006 (0.007)	0.003 (0.007)	0.006 (0.007)	0.005 (0.007)
Profits	**0.001*** **(0.001)**					
Assets		**-0.017*** **(0.009)**				
Equities			-0.002 (0.002)			
Liabilities				**-0.017*** **(0.010)**		
Debt					0.001 (0.002)	
CAS					0.001 (0.002)	
Turnover					0.000 (0.001)	
ROE						-0.001 (0.002)
Year 1	-0.010 (0.011)	-0.008 (0.011)	-0.005 (0.011)	-0.008 (0.011)	-0.004 (0.010)	-0.006 (0.010)
Year 2	**-0.021**** **(0.009)**	**-0.021**** **(0.009)**	**-0.022**** **(0.009)**	**-0.025***** **(0.009)**	**-0.020**** **(0.009)**	**-0.024**** **(0.009)**
Year 4	**-0.022**** **(0.009)**	**-0.023**** **(0.009)**	**-0.022**** **(0.009)**	**-0.026***** **(0.010)**	**-0.020**** **(0.009)**	**-0.022**** **(0.009)**
Year5	-0.017 (0.013)	-0.016 (0.013)	-0.017 (0.013)	-0.021 (0.013)	-0.016 (0.013)	-0.018 (0.013)
R^2	**0.054**	**0.055**	**0.051**	**0.054**	**0.055**	**0.052**
DW Test	2.058	2.059	2.048	2.058	2.064	2.057

There are 6 different regression model for all club's return and each number in columns represents different equation from 1 to 6 (see the equations in methodology). The dependent variable is return of all clubs, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis and standard errors are shown in the parenthesis.

Table 14 shows the effects of home and away wins in Turkish Super League games, in Turkish Domestic Cup games and in European competition games (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), transfers of the football clubs, net profits of the football clubs, total assets of the football clubs, total equities of the football clubs, total liabilities of the football clubs, debt-ratios of the football clubs, capital structure ratio of the football clubs, return on equity ratios of the football clubs and total asset turnover ratio of the football clubs and reactions for the stocks in years (2009-2014) to the stock returns of all football clubs. There are 8 different regression models (see the regression models in methodology part) and each column represents different equations.

According to regression model (1), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on stock returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,5%. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 3,2%. Similarly, when the teams win games at home in the European competitions their stock returns rise by 4,0%. However, there is no significant and positive or negative relationship between winning games at away in the European competitions, winning games at home and away in the in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home (for Turkish Domestic Cup) and at away games (for both), the stock returns are not reacted.

Table 14 shows that there is no significant and positive or negative relationship between making transfers and the stock returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. On the other hand, there are significant and positive effects of net profits of all football clubs to the stock returns. For

example, when the net profits of the all clubs increase, their stock returns are also appreciated by 0,1%.

According to the results in regression model (1), it can be said that there is significant and negative relationship between the years' effect and stock returns of all football clubs. In other words, the stock returns of all football clubs are depreciated by 2,1% in 2010-2011 season and by 2,2% in 2012-2013 season regarding to the chicanery year in Turkey. On the other hand, there is no significant and positive or negative effect of other years to the stock returns of all football clubs regarding to the chicanery year in Turkey.

According to regression model (2), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on stock returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,5%. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 3,1%. Similarly, when the teams win games at home in the European competitions their stock returns rise by 3,9%. However, there is no significant and positive or negative relationship between winning games at away in the European competitions, winning games at home and away in the in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home (for Turkish Domestic Cup) and at away games (for both), the stock returns are not reacted.

Table 14 shows that there is no significant and positive or negative relationship between making transfers and the stock returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. On the other hand, there are significant and negative effects of total assets of all football clubs to the stock returns. For

example, when the total assets of the all clubs increase, their stock returns are also depreciated by 1,7%.

According to the results in regression model (2), it can be said that there is significant and negative relationship between the years' effect and stock returns of all football clubs. In other words, the stock returns of all football clubs are depreciated by 2,1% in 2010-2011 season and by 2,3% in 2012-2013 season regarding to the chicanery year in Turkey. On the other hand, there is no significant and positive or negative effect of other years to the stock returns of all football clubs regarding to the chicanery year in Turkey.

According to regression model (3), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on stock returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,4%. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 3,1%. Similarly, when the teams win games at home in the European competitions their stock returns rise by 3,9%. However, there is no significant and positive or negative relationship between winning games at away in the European competitions, winning games at home and away in the in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home (for Turkish Domestic Cup) and at away games (for both), the stock returns are not reacted.

Table 14 shows that there is no significant and positive or negative relationship between making transfers and the stock returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. Similarly, there is no significant and positive or negative effect of total equities of all football clubs on the stock returns. In other

words, any changes in total assets of all football clubs have an impact on the stock returns. According to the results in regression model (3), it can be said that there is significant and negative relationship between the years' effect and stock returns of all football clubs. In other words, the stock returns of all football clubs are depreciated by 2,2% in 2010-2011 season and by 2,2% in 2012-2013 season regarding to the chicanery year in Turkey. On the other hand, there is no significant and positive or negative effect of other years to the stock returns of all football clubs regarding to the chicanery year in Turkey.

According to regression model (4), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on stock returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,6%. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 3,2%. Similarly, when the teams win games at home in the European competitions their stock returns rise by 4,0 %. However, there is no significant and positive or negative relationship between winning games at away in the European competitions, winning games at home and away in the in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home (for Turkish Domestic Cup) and at away games (for both), the stock returns are not reacted.

Table 14 shows that there is no significant and positive or negative relationship between making transfers and the stock returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. On the other hand, there are significant and negative effects of total liabilities of all football clubs to the stock returns. For example, when the total liabilities of the all clubs increase, their stock returns are also depreciated by 1,7%.

According to the results in regression model (4), it can be said that there is significant and negative relationship between the years' effect and stock returns of all football clubs. In other words, the stock returns of all football clubs are depreciated by 2,5% in 2010-2011 season and by 2,6% in 2012-2013 season regarding to the chicanery year in Turkey. On the other hand, there is no significant and positive or negative effect of other years to the stock returns of all football clubs regarding to the chicanery year in Turkey.

According to regression model (5), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on stock returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,4%. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 3,0%. Similarly, when the teams win games at home in the European competitions their stock returns rise by 4,0 %. However, there is no significant and positive or negative relationship between winning games at away in the European competitions, winning games at home and away in the in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home (for Turkish Domestic Cup) and at away games (for both), the stock returns are not reacted.

Table 14 shows that there is no significant and positive or negative relationship between making transfers and the stock returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. Similarly, there is no significant and positive or negative effect of debt-ratios, capital structure ratio and total asset turnover ratio of all football clubs on the stock returns.

According to the results in regression model (5), it can be said that there is significant and negative relationship between the years' effect and stock returns of all football clubs. In other words, the stock returns of all football clubs are depreciated by 2,0% in 2010-2011 season and by 2,0% in 2012-2013 season regarding to the chicanery year in Turkey. On the other hand, there is no significant and positive or negative effect of other years to the stock returns of all football clubs regarding to the chicanery year in Turkey.

According to regression model (6), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on stock returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,4%. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 3,1%. Similarly, when the teams win games at home in the European competitions their stock returns rise by 3,9 %. However, there is no significant and positive or negative relationship between winning games at away in the European competitions, winning games at home and away in the in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home (for Turkish Domestic Cup) and at away games (for both), the stock returns are not reacted.

Table 14 shows that there is no significant and positive or negative relationship between making transfers and the stock returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors.

According to the results in regression model (6), it can be said that there is significant and negative relationship between the years' effect and stock returns of all football clubs. In other words, the stock returns of all football clubs are depreciated by 2,4% in 2010-2011 season and by

2,2% in 2012-2013 season regarding to the chicanery year in Turkey. On the other hand, there is no significant and positive or negative effect of other years to the stock returns of all football clubs regarding to the chicanery year in Turkey.

5.2 The Effects of Sportive and Fiscal Variables to the Abnormal Returns

Table 15: The Effects of Sportive and Fiscal Variables to the Abnormal Returns of Beşiktaş Sportive Inc.

	Bjkas-7	Bjkas-8	Bjkas-9	Bjkas-10	Bjkas-11	Bjkas-12
Constant	**-0.028* (0.016)**	**-0.035** (0.016)**	**-0.028* (0.016)**	-0.024 (0.017)	-0.018 (0.017)	-0.133 (0.042)
HwinL	**0.051*** (0.016)**	**0.050*** (0.015)**	**0.051*** (0.016)**	**0.050*** (0.015)**	0.050 (0.015)	0.049 (0.015)
AwinL	**0.040** (0.017)**	**0.038** (0.017)**	**0.041** (0.017)**	**0.040** (0.017)**	0.035 (0.017)	0.038 (0.016)
HwinE	**0.086** (0.034)**	**0.085** (0.033)**	**0.086** (0.034)**	**0.087** (0.034)**	0.082 (0.034)	0.076 (0.033)
AwinE	0.013 (0.045)	0.009 (0.044)	0.013 (0.045)	0.012 (0.044)	0.010 (0.044)	0.017 (0.044)
HwinD	**0.088** (0.035)**	**0.096*** (0.034)**	**0.088** (0.035)**	**0.083** (0.035)**	0.091 (0.034)	0.105 (0.034)
AwinD	**0.117** (0.053)**	**0.130** (0.052)**	**0.117** (0.017)**	**0.121** (0.052)**	0.132 (0.052)	0.135 (0.052)
Transfer	0.008 (0.017)	0.012 (0.015)	0.008 (0.027)	0.006 (0.015)	-0.013 (0.023)	0.084 (0.031)
Protits	0.001 (0.002)					
Assets		**-0.080** (0.036)**				
Equities			0.004 (0.030)			
Liabilities				-0.059 (0.053)		
Debt					-0.004 (0.002)	
CAS					-0.007 (0.008)	
Turnover					-0.003 (0.002)	
ROE						0.079 (0.029)
Year 1	-0.015 (0.030)	-0.014 (0.023)	-0.014 (0.027)	-0.010 (0.023)	-0.032 (0.026)	0.026 (0.027)
Year 2	-0.014 (0.019)	-0.008 (0.019)	-0.013 (0.020)	-0.014 (0.019)	-0.004 (0.020)	0.015 (0.021)
Year 4	-0.014 (0.020)	-0.007 (0.020)	-0.014 (0.022)	-0.019 (0.021)	-0.011 (0.023)	0.016 (0.023)
Year5	0.005 (0.023)	0.020 (0.024)	0.006 (0.023)	0.006 (0.023)	-0.018 (0.025)	0.033 (0.025)
R^2	**0.166**	**0.189**	**0.165**	**0.171**	**0.197**	**0.200**
DW Test	2.205	2.262	2.206	2.236	2.288	2.327

There are 6 different regression model for Beşiktaş Sportive Inc. and each number in columns represents different equation from 7 to 12 (see the equations in methodology). The dependent variable is abnormal return of BJKAS, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis and standard errors are shown in the parenthesis.

Table 15 shows the 5 different regression models that represent the effects of sportive and fiscal achievements to the abnormal stock returns of Beşiktaş Sportive Inc. The abnormal return analysis will present the effects of other variables to the stock returns of the club without the market effect. The reason is that the stock return analysis can mislead the investor as the market effect may appreciate or depreciate the real value of the stock return of the club. In each regression models, variables that represent sportive achievements such as wins at home games in Turkish Super League, wins at away games in Turkish Super League, wins at home games in European competitions (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), wins at away games in European competitions, wins at home games in Turkish Domestic Cup, wins at away games in Turkish Domestic Cup and transfers that are made by the football club are same, but the variables that include fiscal achievements such as net profits, total assets, total equities, total liabilities, debt-ratio, capital structure ratio, return on equity ratio and total asset turnover ratio are divided in different 5 equations as they are correlated to each other (see the Pearson-Correlation Test results in the methodology part). Besides, there are variables that represent the year effects to the abnormal stock returns of the football club regarding to the chicanery year in the football. Comparing 5 different regression models will be beneficial for the investor in order to observe and realize which fiscal variable have better impact on the abnormal stock returns of the football club. Moreover, despite the fact that there are correlations among the variables which represent fiscal achievements of the football club, analyzing all regression models will also give benefit to understand which model is the best one among themselves.

In the first regression model, there are significant and positive effects of wins at home and away games in Turkish Super League to the abnormal stock returns of Beşiktaş Sportive Inc. For instance, winning against the opponents at home in the league cause to increase the abnormal

stock returns of the football club by 5,1%. Similarly, wins at away games in the league also raise the abnormal stock returns by 4,0%. Thus, the investors are sensitive wins at away games more than the wins at home in the league. In addition, there are significant and positive relationships between wins at home games in European competitions and the abnormal stock returns of the club. For example, when Beşiktaş win against their opponents in European competitions their stock returns appreciate by 8,6%. However, there is no effect of wins at away games in European competitions to the stock returns of the football club. For Turkish Domestic Cup games, it can be said that there is also significant and positive impacts from wins at both home and away games in this tournament on the stock returns of the football club. For example, when Beşiktaş win at home against the opponents in the domestic tournament, their stock returns increase by 8,8%. Correspondingly, when the team beat their opponents at away there is also an increase in the stock returns by 11,7%. On the other hand, there are no significant and positive or negative effects of transfers, net profits and the year effects to the stock returns.

In the second regression model, the effect of total assets of Beşiktaş Sportive Inc. to the abnormal stock returns is observed instead the net profits of the football club, different from the previous regression model. There are still significant and positive effects of wins at home games to the abnormal stock returns (by 5,0 %), but slightly less effective than the previous observation. For the wins at away games, there are also significant and positive impacts on abnormal stock returns (by 3,8%), but again less than the previous analysis. Wins at home games in European competitions have still significant and positive effect on the abnormal stock return (by 8,5%) which is the same as the previous one and similar to the previous regression model, there is no significant and positive or negative effect of wins at away games in European competitions to the abnormal stock returns. Moreover, there are still significant and effects of wins at home (9,6 %)

and away games (by 13,0 %) in domestic cup to the abnormal stock returns. Besides, there is significant and negative relationship between total assets of the Beşiktaş Sportive Inc. and abnormal stock returns. In other words, when the total assets increase, the abnormal stock returns depreciate by 8,0%. On the other hand, there are no significant and positive or negative effects of transfers and the year effects to the abnormal stock returns.

According to the results of the next regression model in the table 15, the effect of total equities of Beşiktaş Sportive Inc. to the abnormal stock returns is observed. It can be said that there are still significant and positive effects of wins at home (by 5,1%) and at away (by 4,1 %) games in the league to the abnormal stock returns of the football club. Besides, wins at home games in European competitions still have significant and positive effects to the abnormal stock returns (8,6%). Moreover, significant and positive impacts of wins at home (by 8,8%) and at away (11,7%) games in the domestic cup maintain on the abnormal stock returns of the football club. However, there are no significant and positive or negative relationships among the transfers, total equities and the year effect with the abnormal stock returns of Beşiktaş Sportive Inc.

In the forth regression model, there are significant and positive effects of wins at home and away games in Turkish Super League to the abnormal stock returns of Beşiktaş Sportive Inc. For instance, winning against the opponents at home in the league cause to increase the stock returns of the football club by 5,0%. Similarly, wins at away games in the league also raise the abnormal stock returns by 4,0%. Thus, the investors are sensitive wins at away games more than the wins at home in the league. In addition, there are significant and positive relationships between wins at home games in European competitions and the abnormal stock returns of the club. For example, when Beşiktaş win against their opponents in European competitions their abnormal stock returns appreciate by 8,7%. However, there is no effect of wins at away games in European competitions

to the abnormal stock returns of the football club. For Turkish Domestic Cup games, it can be said that there is also significant and positive impacts from wins at both home and away games in this tournament on the abnormal stock returns of the football club. For example, when Beşiktaş win at home against the opponents in the domestic tournament, their abnormal stock returns increase by 8,3%. Correspondingly, when the team beat their opponents at away there is also an increase in the abnormal stock returns by 12,1%. On the other hand, there are no significant and positive or negative effects of transfers, net profits and the year effects to the abnormal stock returns.

In the rest of the regression models, there are no significant and positive or negative impacts of the both sportive and fiscal variables on the abnormal stock returns of Beşiktaş Sportive Inc.

In summary, the investors of BJKAS become more sensitive when Beşiktaş win at home games in Turkish Super League, European competitions and Turkish Domestic Cup. Also, they prefer to invest on BJKAS when the team wins at away games in both Turkish Super League and Turkish Domestic Cup. In addition, the investors can be affected by increases in both total assets and debt-ratios of the club as the club's stock would depreciate. However, when return on equities of Beşiktaş Sportive Inc. increase, they prefer to move on their investments for BJKAS.

Table 16: The Effects of Sportive and Fiscal Variables to the Abnormal Returns of Fenerbahçe Sportive Inc.

	Fener-7	Fener-8	Fener-9	Fener-10	Fener-11	Fener-12
Constant	-0.028 (0.018)	-0.028 (0.020)	-0.027 (0.019)	-0.003 (0.024)	-0.020 (0.023)	-0.026 (0.019)
HwinL	**0.032* (0.018)**	**0.034* (0.018)**	**0.034* (0.018)**	**0.036** (0.018)**	**0.033* (0.019)**	**0.033* (0.018)**
AwinL	**0.037** (0.019)**	0.028 (0.019)	0.028 (0.019)	**0.032* (0.019)**	0.030 (0.019)	0.028 (0.019)
HwinE	0.022 (0.044)	0.020 (0.045)	0.018 (0.045)	0.011 (0.045)	0.019 (0.045)	0.020 (0.045)
AwinE	0.007 (0.045)	0.004 (0.046)	0.003 (0.046)	0.016 (0.046)	0.006 (0.046)	0.005 (0.046)
HwinD	0.010 (0.032)	0.020 (0.032)	0.020 (0.032)	0.025 (0.032)	0.020 (0.032)	0.020 (0.032)
AwinD	0.022 (0.048)	0.003 (0.050)	0.000 (0.050)	-0.007 (0.049)	-0.016 (0.053)	-0.010 (0.053)
Transfer	0.024 (0.016)	0.012 (0.017)	0.011 (0.016)	-0.002 (0.018)	0.012 (0.019)	0.012 (0.016)
Protits	**0.003*** (0.001)**					
Assets		0.004 (0.034)				
Equities			0.003 (0.008)			
Liabilities				-0.027 (0.017)		
Debt					0.000 (0.000)	
CAS					-0.001 (0.001)	
Turnover					-0.001 (0.008)	
ROE						-0.002 (0.004)
Year 1	-0.014 (0.025)	-0.001 (0.026)	-0.001 (0.025)	-0.020 (0.027)	-0.009 (0.027)	-0.002 (0.025)
Year 2	0.013 (0.021)	0.000 (0.021)	0.001 (0.021)	-0.015 (0.023)	-0.006 (0.023)	-0.002 (0.021)
Year 4	-0.014 (0.021)	-0.009 (0.023)	-0.006 (0.023)	-0.031 (0.025)	-0.014 (0.024)	-0.010 (0.022)
Year5	-0.018 (0.035)	-0.019 (0.035)	-0.020 (0.034)	-0.042 (0.038)	-0.029 (0.039)	-0.019 (0.035)
R^2	**0.087**	**0.041**	**0.042**	**0.057**	**0.047**	**0.042**
DW Test	2.084	2.018	2.028	2.051	2.050	2.027

There are 6 different regression model and each number in columns represents different equation from 7 to 12 (see the equations in methodology). The dependent variable is abnormal return of FENER, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis and standard errors are shown in the parenthesis.

Table 16 shows the 5 different regression models that represent the effects of sportive and fiscal achievements to the abnormal stock returns of Fenerbahçe Sportive Inc. The abnormal return analysis will present the effects of other variables to the stock returns of the club without the market effect. The reason is that the stock return analysis can mislead the investor as the market effect may appreciate or depreciate the real value of the stock return of the club. In each regression models, variables that represent sportive achievements such as wins at home games in Turkish Super League, wins at away games in Turkish Super League, wins at home games in European competitions (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), wins at away games in European competitions, wins at home games in Turkish Domestic Cup, wins at away games in Turkish Domestic Cup and transfers that are made by the football club are same, but the variables that include fiscal achievements such as net profits, total assets, total equities, total liabilities, debt-ratio, capital structure ratio, return on equity ratio and total asset turnover ratio are divided in different 5 equations as they are correlated to each other (see the Pearson-Correlation Test results in the methodology part). Besides, there are variables that represent the year effects to the abnormal stock returns of the football club regarding to the chicanery year in the football. Comparing 5 different regression models will be beneficial for the investor in order to observe and realize which fiscal variable have better impact on the abnormal stock returns of the football club. Moreover, despite the fact that there are correlations among the variables which represent fiscal achievements of the football club, analyzing all regression models will also give benefit to understand which model is the best one among themselves.

In the first regression model, there are significant and positive effects of wins at home and away games in Turkish Super League to the abnormal stock returns of Fenerbahçe Sportive Inc. For instance, wins at home games in the league raise the stock returns by 3,2% and at away games the

abnormal stock returns of the club appreciate by 3,7%. In addition, there are no significant and positive or negative relationships between wins at home and away games in both European competitions and Turkish Domestic Cup. Besides, net profits of the football club have a significant and positive impact on the abnormal stock returns. To give an example, increase in the net profits of the club cause an appreciation by 0,3% in the abnormal stock returns of the club. On the other hand, there are no significant and positive or negative effects of transfers and the year effects to the abnormal stock returns.

In the second regression model, the effect of total assets of Fenerbahçe Sportive Inc. to the abnormal stock returns is observed instead the net profits of the football club, different from the previous regression model. There is only significance and positive effect of wins at home games to the abnormal stock returns (by 3,4%), different than the previous equation result. On the contrary, there are no significant and positive or negative effects of other variables to the stock returns of Fenerbahçe Sportive Inc. According to the results of the rest of the regression models in the table (16), there is only significant and positive effect of wins at home games in the Turkish Super League to the abnormal return of the club, different from the other competitions. In the regression model 5 and 6, it can be said that the effects of the wins at home in the league increase the stock returns of the club 3,3%. For the 3rd and 4th regression models, the impact of wins at home games in the league appreciate the stock returns by 3,4% and 3,6%, respectively. In addition for the 4th regression model, there is also significant and positive effect of wins at away games in the league to the abnormal stock returns of the club by 3,2%. On the other hand for other regression models, other variables have no significant and positive or negative effect to the stock returns of Fenerbahçe Sportive Inc.

In order to make a general comment for the investors of FENER stocks, it can be said that they are more sensitive on wins at home games rather than wins at away games in Turkish Super League. Moreover, they prefer to do their investments on FENER stocks when the net profits of the football club increase during the season.

Table 17: The Effects of Sportive and Fiscal Variables to the Abnormal Returns of Galatasaray Sportive Inc.

	Gsray-7	Gsray-8	Gsray-9	Gsray-10	Gsray-11	Gsray-12
Constant	-0.009 (0.015)	-0.007 (0.014)	-0.005 (0.014)	-0.005 (0.015)	-0.012 (0.022)	-0.004 (0.014)
HwinL	0.003 (0.015)	0.003 (0.015)	0.006 (0.015)	0.002 (0.015)	0.006 (0.015)	0.006 (0.015)
AwinL	**0.044***** **(0.015)**	**0.042***** **(0.015)**	**0.044***** **(0.015)**	0.042 (0.015)	**0.045***** **(0.015)**	**0.044***** **(0.015)**
HwinE	0.042 (0.038)	0.039 (0.038)	0.037 (0.038)	0.038 (0.038)	0.038 (0.037)	0.036 (0.037)
AwinE	0.009 (0.058)	0.010 (0.057)	0.011 (0.057)	0.011 (0.058)	0.007 (0.057)	0.011 (0.057)
HwinD	0.004 (0.034)	0.001 (0.033)	0.004 (0.033)	0.003 (0.033)	0.005 (0.033)	0.007 (0.033)
AwinD	0.075 (0.081)	0.072 (0.080)	0.074 (0.080)	0.076 (0.080)	0.065 (0.080)	0.070 (0.079)
Transfer	0.018 (0.014)	0.012 (0.015)	0.013 (0.014)	0.014 (0.015)	0.009 (0.016)	0.008 (0.015)
Profits	0.003 (0.012)					
Assets		-0.014 (0.012)				
Equities			**0.005*** **(0.003)**			
Liabilities				-0.022 (0.024)		
Debt					0.001 (0.003)	
CAS					**0.003***** **(0.000)**	
Turnover					0.001 (0.003)	
ROE						**-0.003**** **(0.001)**
Year 1	**-0.005*** **(0.023)**	-0.003 (0.021)	0.006 (0.022)	0.005 (0.023)	0.008 (0.023)	-0.001 (0.021)
Year 2	-0.032 (0.019)	-0.024 (0.018)	**-0.032*** **(0.017)**	-0.030 (0.018)	**-0.043**** **(0.022)**	**-0.046**** **(0.018)**
Year 4	-0.029 (0.018)	-0.028 (0.017)	-0.029* (0.017)	-0.030 (0.018)	-0.021 (0.022)	-0.028 (0.017)
Year5	-0.032 (0.028)	-0.034 (0.028)	-0.020 (0.029)	-0.033 (0.028)	-0.025 (0.035)	-0.032 (0.028)
R^2	**0.100**	**0.108**	**0.117**	**0.105**	**0.142**	**0.132**
DW Test	1.909	1.926	1.905	1.917	1.985	1.970

There are 6 different regression model and each number in columns represents different equation from 7 to 12 (see the equations in methodology). The dependent variable is the abnormal return of GSRAY, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis and standard errors are shown in the parenthesis.

Table 17 shows the 5 different regression models that represent the effects of sportive and fiscal achievements to the abnormal stock returns of Galatasaray Sportive Inc. The abnormal return analysis will present the effects of other variables to the stock returns of the club without the market effect. The reason is that the stock return analysis can mislead the investor as the market effect may appreciate or depreciate the real value of the stock return of the club. In each regression models, variables that represent sportive achievements such as wins at home games in Turkish Super League, wins at away games in Turkish Super League, wins at home games in European competitions (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), wins at away games in European competitions, wins at home games in Turkish Domestic Cup, wins at away games in Turkish Domestic Cup and transfers that are made by the football club are same, but the variables that include fiscal achievements such as net profits, total assets, total equities, total liabilities, debt-ratio, capital structure ratio, return on equity ratio and total asset turnover ratio are divided in different 5 equations as they are correlated to each other (see the Pearson-Correlation Test results in the methodology part). Besides, there are variables that represent the year effects to the abnormal stock returns of the football club regarding to the chicanery year in the football. Comparing 5 different regression models will be beneficial for the investor in order to observe and realize which fiscal variable have better impact on the abnormal stock returns of the football club. Moreover, despite the fact that there are correlations among the variables which represent fiscal achievements of the football club, analyzing all regression models will also give benefit to understand which model is the best one among themselves.

In the first regression model, it can be said that there is significant and positive effect of wins at away games in Turkish Super League, but not at home games in the league and at home/away

games in both European competitions and Turkish Domestic Cup to the abnormal stock returns of the club. At the away games in the league, when Galatasaray win against their opponents, the abnormal stock return of the club increase by 4,4%. In addition, the abnormal stock returns of the club depreciated by 0,5% in 2009-2010 season comparing to the chicanery year in the football. On the other hand, there are no significant and positive or negative effects of other variables to the abnormal stock returns of Galatasaray Sportive Inc.

In the second regression model, there is significant and positive effect of wins at away games in Turkish Super League, but not at home games in the league and at home/away games in other competitions to the abnormal stock returns of the club. For instance, when Galatasaray win at away games in the league, their stock returns appreciate by 4,2%. However, there are no significant and positive or negative effects of other variables to the stock returns of Galatasaray Sportive Inc.

On the next regression model, there is significant and positive effect of wins at away games in the league that is each wins increase the abnormal stock returns by 4,4%. Besides, there is also significant and positive relationship between the total equities of the club and their abnormal stock return. According to the results, every increase the total equities cause 0,5% appreciation on the stock return of the club. Moreover, the abnormal stock returns of the club depreciated by 3,2% in 2009-2010 and by 2,9% in 2012-2013 season comparing to the chicanery year in the football. However, there are no significant and positive or negative effects of other variables to the abnormal stock returns of Galatasaray Sportive Inc.

The results of the last two regression models are similar to the results of first regression model. That is, there is significant and positive effect of wins at away games in Turkish Super League,

but not at home games in the league and at home/away games in other competitions. when Galatasaray win at away games in the league, their abnormal stock returns appreciate, respectively 4,5% and 4,4%. Besides, the abnormal stock returns of the club depreciated in 2010-2011 season comparing to the chicanery year in the football (4,3% in the regression model 5 and 4,6% in the regression model 6). On the other hand, there are no significant and positive or negative effects of other variables to the abnormal stock returns of Galatasaray Sportive Inc in other regression models. Meanwhile, there are significant impacts of both capital structure ratio and return on equity ratio on the abnormal stock returns of the club. Each increase in capital structure ratio cause an increase by 0,3% (regression model 5) and every rise in return on equity ratio depreciate the abnormal stock returns of the club by (0,3%).

As a result, the investors of GSRAY stocks prefer to do their investments more when Galatasaray win at away games rather than winnings at away games in Turkish Super League. Moreover, when capital structure ratio and total equities of Galatasaray Sportive Inc. increase, the investors of GSRAY become more sensitive and takes it as a valuable issue. Unexpectedly, increases in return on equity ratio of the football club have bad impact on the investors of GSRAY. In addition to the bad impact, it can be said that the investors have losses from the stock returns of the club in 2010-2011 football season comparing to the chicanery year.

Table 18: The Effects of Sportive and Fiscal Variables to the Abnormal Returns of Trabzonspor Sportive Inc.

	Tspor-7	Tspor-8	Tspor-9	Tspor-10	Tspor-11	Tspor-12
Constant	-0.008 (0.019)	-0.007 (0.019)	-0.008 (0.019)	-0.015 (0.021)	-0.027 (0.022)	0.006 (0.024)
HwinL	**0.031*** **(0.018)**	**0.033*** **(0.018)**	**0.032*** **(0.018)**	**0.031*** **(0.018)**	0.029 (0.018)	**0.030*** **(0.018)**
AwinL	0.031 (0.020)	**0.033*** **(0.020)**	0.032 (0.020)	0.032 (0.020)	0.031 (0.020)	0.030 (0.020)
HwinE	0.047 (0.059)	0.051 (0.059)	0.052 (0.059)	0.049 (0.059)	0.052 (0.059)	0.050 (0.059)
AwinE	0.031 (0.050)	0.030 (0.051)	0.034 (0.050)	0.035 (0.051)	0.040 (0.051)	0.034 (0.050)
HwinD	0.011 (0.035)	0.015 (0.035)	0.017 (0.035)	0.017 (0.035)	-0.020 (0.034)	0.016 (0.034)
AwinD	0.032 (0.050)	0.037 (0.050)	0.037 (0.050)	0.035 (0.050)	-0.029 (0.050)	0.034 (0.050)
Transfer	-0.023 (0.025)	0.005 (0.017)	0.007 (0.017)	0.008 (0.018)	0.009 (0.018)	-0.010 (0.023)
Profits	0.007 (0.004)					
Assets		-0.021 (0.038)				
Equities			0.011 (0.013)			
Liabilities				0.027 (0.039)		
Debt					0.000 (0.000)	
CAS					0.005 (0.004)	
Turnover					0.004 (0.007)	
ROE						-0.023 (0.023)
Year 1	0.003 (0.026)	-0.004 (0.026)	-0.004 (0.025)	0.001 (0.026)	0.015 (0.028)	0.004 (0.026)
Year 2	-0.019 (0.022)	-0.015 (0.022)	-0.013 (0.021)	-0.008 (0.022)	0.001 (0.023)	-0.007 (0.022)
Year 4	-0.024 (0.022)	-0.032 (0.022)	-0.039 (0.024)	-0.025 (0.023)	-0.007 (0.025)	-0.022 (0.023)
Year5	-0.029 (0.033)	-0.025 (0.037)	-0.036 (0.033)	-0.038 (0.033)	-0.015 (0.034)	-0.025 (0.034)
R^2	**0.073**	**0.062**	**0.064**	**0.063**	**0.084**	**0.066**
DW Test	2.226	2.192	2.198	2.204	2.246	2.206

There are 6 different regression model and each number in columns represents different equation from 7 to 12 (see the equations in methodology). The dependent variable is abnormal return of TSPOR, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis and standard errors are shown in the parenthesis.

Table 18 shows the 5 different regression models that represent the effects of sportive and fiscal achievements to the abnormal stock returns of Trabzonspor Sportive Inc. The abnormal return analysis will present the effects of other variables to the stock returns of the club without the market effect. The reason is that the stock return analysis can mislead the investor as the market effect may appreciate or depreciate the real value of the stock return of the club. In each regression models, variables that represent sportive achievements such as wins at home games in Turkish Super League, wins at away games in Turkish Super League, wins at home games in European competitions (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), wins at away games in European competitions, wins at home games in Turkish Domestic Cup, wins at away games in Turkish Domestic Cup and transfers that are made by the football club are same, but the variables that include fiscal achievements such as net profits, total assets, total equities, total liabilities, debt-ratio, capital structure ratio, return on equity ratio and total asset turnover ratio are divided in different 5 equations as they are correlated to each other (see the Pearson-Correlation Test results in the methodology part). Besides, there are variables that represent the year effects to the abnormal stock returns of the football club regarding to the chicanery year in the football. Comparing 5 different regression models will be beneficial for the investor in order to observe and realize which fiscal variable have better impact on the abnormal stock returns of the football club. Moreover, despite the fact that there are correlations among the variables which represent fiscal achievements of the football club, analyzing all regression models will also give benefit to understand which model is the best one among themselves.

In the first regression model, there are significant and positive effects of wins at home games in Turkish Super League to the abnormal stock returns of Trabzonspor Sportive Inc. For instance, wins at home games in the league raise the stock returns by 3,1%. However, there are no

significant and positive or negative relationships between wins at home and away games in both European competitions and Turkish Domestic Cup and the abnormal stock returns of the club. On the other hand, there are no significant and positive or negative effects of transfers and the year effects to the abnormal stock returns of the club. In the second regression model, the effect of total assets of Trabzonspor Sportive Inc. to the stock returns is observed instead the net profits of the football club, different from the previous regression model. There are significant, positive and the same effect of wins at home and away games by 3,3% to the abnormal stock returns of the club, different than the previous equation result. On the contrary, there are no significant and positive or negative effects of other variables to the abnormal stock returns of Trabzonspor Sportive Inc.

In the third regression model, there is only significant and positive effect of wins at home games in Turkish Super League to the abnormal stock returns of Trabzonspor Sportive Inc. For example, wins at home games in the league raise the stock returns by 3,2%. However, there are no significant and positive or negative relationships between wins at home and away games in both European competitions and Turkish Domestic Cup and the abnormal stock returns of the club. On the other hand, there are no significant and positive or negative effects of transfers and the year effects to the abnormal stock returns. The results of 4^{th} and 6^{th} regression model are very similar to the results of the 3^{rd} regression model. To give an example, wins at home games in the league raise the stock returns by 3,1% (on the 4^{th} regression model), and by 3,0% (on the 6^{th} regression model). However, on the 5^{th} regression model, there is no significant and positive or negative relationship between both sportive and fiscal variables and the abnormal stock returns of the club.

In order to make a general comment for the investors of TSPOR stocks, it can be said that they are more sensitive on wins at home games rather than wins at away games in Turkish Super League. Unexpectedly, they prefer to do their investments on TSPOR stocks when the debt-ratio of the football club increases during the season.

Table 19: The Effects of Changes in Sportive and Fiscal Variables to the Abnormal Returns of All Football Clubs

	AR(7)	AR(8)	AR(9)	AR(10)	AR(11)	AR(12)
Constant	-0.014 (0.010)	-0.012 (0.010)	-0.013 (0.010)	-0.006 (0.010)	-0.013 (0.010)	-0.013 (0.010)
HwinL	**0.023** **(0.009)**	**0.024** **(0.009)**	**0.023** **(0.009)**	**0.025*** **(0.009)**	**0.023** **(0.009)**	**0.023** **(0.009)**
AwinL	**0.028*** **(0.010)**	**0.026*** **(0.010)**	**0.026*** **(0.010)**	**0.027*** **(0.010)**	**0.027*** **(0.010)**	**0.026*** **(0.010)**
HwinE	0.034 (0.024)	0.033 (0.024)	0.033 (0.024)	0.034 (0.024)	0.034 (0.024)	0.034 (0.024)
AwinE	0.014 (0.027)	0.014 (0.027)	0.014 (0.027)	0.016 (0.027)	0.014 (0.027)	0.014 (0.027)
HwinD	0.016 (0.019)	0.016 (0.019)	0.015 (0.019)	0.016 (0.019)	0.016 (0.019)	0.015 (0.019)
AwinD	-0.005 (0.030)	-0.004 (0.030)	-0.005 (0.030)	-0.006 (0.030)	-0.004 (0.030)	-0.003 (0.030)
Transfer	0.008 (0.009)	0.007 (0.009)	0.008 (0.009)	0.005 (0.009)	0.009 (0.009)	0.007 (0.009)
Profits	0.001 (0.001)					
Assets		-0.018 (0.011)				
Equities			-0.002 (0.003)			
Liabilities				**-0.022**** **(0.012)**		
Debt					-0.001 (0.003)	
CAS					0.000 (0.001)	.
Turnover					0.000 (0.001)	
ROE						-0.001 (0.003)
Year 1	-0.010 (0.014)	-0.008 (0.013)	-0.005 (0.013)	-0.008 (0.013)	-0.006 (0.013)	-0.005 (0.013)
Year 2	-0.009 (0.011)	-0.009 (0.011)	-0.010 (0.011)	-0.014 (0.011)	-0.010 (0.011)	-0.012 (0.011)
Year 4	-0.016 (0.011)	-0.016 (0.011)	-0.016 (0.011)	**-0.021*** **(0.012)**	-0.016 (0.011)	-0.015 (0.012)
Year5	-0.010 (0.016)	-0.008 (0.016)	-0.009 (0.016)	-0.014 (0.016)	-0.010 (0.016)	-0.010 (0.016)
R^2	**0.026**	**0.027**	**0.024**	**0.029**	**0.024**	**0.025**
DW Test	2.445	2.448	2.438	2.452	2.440	2.445

There are 6 different regression model and each number in columns represents different equation from 7 to 12 (see the equations in methodology). The dependent variable is the abnormal return of all clubs, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, AwinE= Wins at away in European competitions, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Transfer=Making player transfer, Profits= Changes in net profits, Assets= Changes in total assets, Equities= Changes in total equities, Liabilities= Changes in total liabilities, Debt= Debt-ratio of the club, CAS= Capital structure ratio of the club, Turnover= Total asset turnover ratio of the club, ROE= Return on equity ratio of the club, Year 1= "2009-2010" season, Year 2= "2010-2011" season, Year 4= "2012-2013" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% the levels of confidence for rejection of the null hypothesis and standard errors are shown in the parenthesis.

Table 19 shows the effects of home and away wins in Turkish Super League games, in Turkish Domestic Cup games and in European competition games (UEFA Champions League, UEFA European League and UEFA Inter-Toto Cup), transfers of the football clubs, net profits of the football clubs, total assets of the football clubs, total equities of the football clubs, total liabilities of the football clubs, debt-ratios of the football clubs, capital structure ratio of the football clubs, return on equity ratios of the football clubs and total asset turnover ratio of the football clubs and reactions for the stocks in years (2009-2014) to the abnormal returns of the stocks of all football clubs. There are 8 different regression models (see the regression models in methodology part) and each column represents different equations.

According to regression model (7), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on abnormal returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,3%. It can be said that the abnormal returns of all football clubs are effected by 0,2% from the market return. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 2,8%. It can be said that the abnormal returns of all football clubs are effected by 0,4% from the market return. However, there is no significant and positive or negative relationship between winning games at home and away in the European competitions and in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home and away (for both), the abnormal returns are not reacted.

Table 19 shows that there is no significant and positive or negative relationship between making transfers and the abnormal returns. In other words, even the teams make transfer for the benefit of

their clubs, the stock returns are not demanded by the investors. Similarly, there is no significant and positive or negative effect of net profits of all football clubs on the abnormal returns. In other words, any changes in net profits of all football clubs have an impact on the abnormal returns.

According to the results in regression model (7), it can be said that there is no significant and negative relationship between the years' effect and abnormal returns of all football clubs. In other words, the abnormal returns of all football clubs are not affected by the changes in years.

According to regression model (8), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on abnormal returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,4%. It can be said that the abnormal returns of all football clubs are effected by 0,1% from the market return. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 2,6%. It can be said that the abnormal returns of all football clubs are effected by 0,5% from the market return. However, there is no significant and positive or negative relationship between winning games at home and away in the European competitions and in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home and away (for both), the abnormal returns are not reacted.

Table 19 shows that there is no significant and positive or negative relationship between making transfers and the abnormal returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. Similarly, there is no significant and positive or negative effect of total assets of all football clubs on the abnormal returns. In

other words, any changes in total assets of all football clubs have an impact on the abnormal returns.

According to the results in regression model (8), it can be said that there is no significant and negative relationship between the years' effect and abnormal returns of all football clubs. In other words, the abnormal returns of all football clubs are not affected by the changes in years.

According to regression model (9), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on abnormal returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,3%. It can be said that the abnormal returns of all football clubs are effected by 0,1% from the market return. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 2,6%. It can be said that the abnormal returns of all football clubs are effected by 0,5% from the market return. However, there is no significant and positive or negative relationship between winning games at home and away in the European competitions and in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home and away (for both), the abnormal returns are not reacted.

Table 19 shows that there is no significant and positive or negative relationship between making transfers and the abnormal returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. Similarly, there is no significant and positive or negative effect of total equities of all football clubs on the abnormal returns. In other words, any changes in total equities of all football clubs have an impact on the abnormal returns.

According to the results in regression model (9), it can be said that there is no significant and negative relationship between the years' effect and abnormal returns of all football clubs. In other words, the abnormal returns of all football clubs are not affected by the changes in years.

According to regression model (10), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on abnormal returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,5%. It can be said that the abnormal returns of all football clubs are effected by 0,1% from the market return. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 2,7%. It can be said that the abnormal returns of all football clubs are effected by 0,5% from the market return. However, there is no significant and positive or negative relationship between winning games at home and away in the European competitions and in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home and away (for both), the abnormal returns are not reacted.

Table 19 shows that there is no significant and positive or negative relationship between making transfers and the stock returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. On the other hand, there are significant and negative effects of total liabilities of all football clubs to the abnormal returns. For example, when the total liabilities of the all clubs increase, their abnormal returns are also depreciated by 2,2%.

According to the results in regression model (10), it can be said that there is no significant and negative relationship between the years' effect and abnormal returns of all football clubs. In other words, the abnormal returns of all football clubs are not affected by the changes in years.

According to regression model (11), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on abnormal returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,3%. It can be said that the abnormal returns of all football clubs are effected by 0,1% from the market return. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 2,7%. It can be said that the abnormal returns of all football clubs are effected by 0,3% from the market return. However, there is no significant and positive or negative relationship between winning games at home and away in the European competitions and in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home and away (for both), the abnormal returns are not reacted.

Table 19 shows that there is no significant and positive or negative relationship between making transfers and the abnormal returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. Similarly, there is no significant and positive or negative effect of debt-ratio of all football clubs on the abnormal returns. In other words, any changes in debt-ratio of all football clubs have an impact on the abnormal returns.

According to the results in regression model (11), it can be said that there is no significant and negative relationship between the years' effect and abnormal returns of all football clubs. In other words, the abnormal returns of all football clubs are not affected by the changes in years. Besides,

there is no significant and positive or negative effect of debt-ratio, capital structure ratio and total asset turnover equity ratio of all football clubs on the abnormal returns.

According to regression model (12), there are significant and positive relationships between wins at home games in Turkish Super League have significant and positive effects on abnormal returns of all football clubs. For example, when teams win games at home in the league their stock returns appreciate by 2,3%. It can be said that the abnormal returns of all football clubs are effected by 0,1% from the market return. In addition, if they have matches at away and win against the opponents, then the stock returns increase by 2,6%. It can be said that the abnormal returns of all football clubs are effected by 0,5 % from the market return. However, there is no significant and positive or negative relationship between winning games at home and away in the European competitions and in Turkish Domestic Cup. In other words, when the teams have winnings in these tournaments at their home and away (for both), the abnormal returns are not reacted.

Table 19 shows that there is no significant and positive or negative relationship between making transfers and the abnormal returns. In other words, even the teams make transfer for the benefit of their clubs, the stock returns are not demanded by the investors. Similarly, there is no significant and positive or negative effect of return on equity ratio of all football clubs on the abnormal returns. In other words, any changes in return on equity ratio of all football clubs do not have an impact on the abnormal returns.

5.3 Quantile Regression Results

One of the important regression analysis or methods used in statistics and econometrics is 'Quantile regression'. In the OLS (Ordinary Least Square) analysis, approximate the conditional mean of the response variable is estimated with the certain values of the independent variables. However in the quantile regression models, the conditional median and different quantiles of the dependent variable is estimated according to the effects of the independent variables (A.T. Studenmund, 2008).

On this study, the OLS estimation results explain the effects of both sportive and fiscal achievements of four biggest football clubs in Turkey to their average or mean stock returns. Using quantile regression method shows the impacts of these sportive and fiscal variables on both stock returns and abnormal stock returns will be analyzed per each chosen quartile. That is, in which quartile the significant and positive or negative effects of the sportive and fiscal variables occur when we analyze the changes in both stock returns of the football clubs.

In the quantile regression analysis, the significant and positive or negative related sportive and fiscal variables with the stock returns that were occurred in the OLS estimations are included in order to understand and observe the specific effects points. On the tables below, the regression models that there exist significant and positive or negative impacts on the stock returns of 4 big football clubs are analyzed. Besides, the regression model numbers are clarified in the explanation part of the tables.

Table 20: Quantile Regression Analysis of BJKAS Returns

	Quantiles	Bjkas-2	Bjkas-5	Bjkas-6
HwinL	0.05	0.0040	0.0036	0.0048
	0.25	0.0168*	0.0178*	0.0184*
	0.50	0.0154**	0.0166**	0.0172**
	0.75	0.0432***	0.0458***	0.0471***
	0.95	0.0452**	0.0387*	0.0401*
AwinL	0.05	0.0213	0.0197	0.0226
	0.25	0.0263**	0.0242**	0.0278**
	0.50	0.0148**	0.0120*	0.0146*
	0.75	0.0187***	0.0211***	0.0309***
	0.95	0.0434***	0.0514***	0.0597***
HwinE	0.05	0.0408	0.0397	0.0452
	0.25	0.0231	0.0212	0.0276
	0.50	0.0250*	0.0238*	0.0302*
	0.75	0.1070***	0.0985***	0.1102***
	0.95	0.2221***	0.2179***	0.2364***
HwinD	0.05	0.0530	0.0499	0.0542
	0.25	0.0068	0.0064	0.0102
	0.50	0.0240*	0.0215*	0.0254*
	0.75	0.1693***	0.1576***	0.1702***
	0.95	0.2069***	0.1985***	0.2174***
AwinD	0.05	0.2022	0.1967	0.2036
	0.25	0.0633*	0.0597*	0.0645*
	0.50	0.1448***	0.1384***	0.1521***
	0.75	0.1036***	0.0932***	0.1184***
	0.95	0.0302	0.0264	0.0314
Transfer	0.05			0.0040
	0.25			0.0776**
	0.50			0.0848***
	0.75			0.0931***
	0.95			0.1843
Assets	0.05	-0.0070		
	0.25	-0.0321		
	0.50	-0.0394*		
	0.75	-0.0562**		
	0.95	-0.1068		
Debt	0.05		-0.0022	
	0.25		-0.0145**	
	0.50		-0.0120**	
	0.75		-0.0720	
	0.95		-0.0005	
ROE	0.05			0.0161
	0.25			0.0607**
	0.50			0.0717***
	0.75			0.0860***
	0.95			0.0103

There are 3 different regression models for Beşiktaş Sportive Inc. and each number in columns represents regression model 2, 5 and 6. The dependent variable is return of BJKAS, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, HwinD= Wins at home in Domestic Cup games, AwinD= Wins at away in Domestic Cup games, Assets= Changes in total assets, Debt= Debt-ratio of the club, ROE= Return on equity ratio of the club. *,** and *** indicates 1%,5% and 10% significance levels

Table 20 represents the effects of the sportive and fiscal achievements of Beşiktaş Sportive Inc. to the stock returns. According to the OLS estimations of BJKAS returns, there are significant and positive or negative effects of the sportive and fiscal variables occurred in regression model 2, regression model 5 and regression model 6. In the table (20), the significant impacts of these variables are analyzed in quantiles (5^{th}, 25^{th}, 50^{th}, 75^{th} and 95^{th}).

According to the results of regression model 2, 5 and 6 in table 20, the biggest effects of wins at home and away games in Turkish Super League, Turkish Domestic Cup and wins at home in European competitions to the stock returns occur in 75^{th} percentile. In other words, after Beşiktaş win games in those competitions, they have positive effects to the stock returns when they above 2,6%. It means that when the stock returns will be more than 2,6%, then estimated variables have impact on stock returns of the club.

In the finance, when the effects occur in the percentiles move towards the tails (means when they move far away from median), the volatility of the stocks increase. Therefore, it can be said that the investors of BJKAS mostly do their investments when there are frequent buy/sell transactions occur in the market after Beşiktaş win their opponents in these tournaments. Besides, there are significant and positive effects of winnings in these tournaments to 95^{th} percentile of the BJKAS return ($Return_{BJKAS} = 14{,}0\%$). Consequently, it shows that investors prefer to process the advantages of wins in more volatile and risky positions.

In addition, the biggest and negative effects of the increases in total assets and debt-ratio of Beşiktaş Sportive Inc. to the stock returns occur in 75^{th} percentile as well. That is, the investors prefer to take the risk of the return until it reach instability or very volatile position and when they are in decision making process, they observe the changes in total assets and debt-ratio of the

club. In other words, they drop BJKAS stocks when it goes on depreciation movement after total assets and debt-ratio of the club increase. On the other hand, the positive effects of the increase in return on equity ratio of Beşiktaş Sportive Inc. to the stock returns occur in 50^{th} and 75^{th} percentile of the stock return. Any stock return percentage above them represent that all the sportive and fiscal variables have high impact on BJKAS returns.

Table 21: Quantile Regression Analysis of GSRAY Returns

	Quantiles	Gsray-3	Gsray-5	Gsray-6
AwinL	0.05	0.0451*	0.0318*	0.0412*
	0.25	0.0477**	0.0402**	0.0498**
	0.50	0.0503***	0.0568***	0.0526***
	0.75	0.0452**	0.0499**	0.0474**
	0.95	0.0394*	0.0451*	0.0436*
Equities	0.05	0.0059		
	0.25	0.0007		
	0.50	0.0117**		
	0.75	0.0196***		
	0.95	0.0030		
CAS	0.05		0.0009	
	0.25		0.0017	
	0.50		0.0125***	
	0.75		0.0023**	
	0.95		0.0001	
ROE	0.05			-0.0030
	0.25			-0.0010
	0.50			-0.0128**
	0.75			-0.0243***
	0.95			-0.0048
Year 2	0.05	0.0098	0.0086	0.0097
	0.25	-0.0149**	-0.0986**	-0.0162**
	0.50	-0.0369***	-0.0327***	-0.0327***
	0.75	-0.0089	-0.0091	-0.0079
	0.95	-0.0094	-0.0093	-0.0086

There are 3 different regression models for Beşiktaş Sportive Inc. and each number in columns represents regression models 3, 5 and 6. The dependent variable is return of GSRAY, AwinL= Wins at away games in the league, Equities= Changes in total equities, CAS= Capital structure ratio of the club, ROE= Return on equity ratio of the club, Year 2= "2010-2011" season. *,** and *** indicates 1%,5% and 10% significance levels

Table 21 represents the effects of the sportive and fiscal achievements of Galatasaray Sportive Inc. to the stock returns. According to the OLS estimations of GSRAY returns, there are significant and positive or negative effects of the sportive and fiscal variables occurred in

regression model 2, regression model 5 and regression model 6. In the table (21), the significant impacts of these variables are analyzed in quantiles (5^{th}, 25^{th}, 50^{th}, 75^{th} and 90^{th}).

According to the results of regression model 3, 5 and 6 in table 21, the biggest effects of wins at away games in Turkish Super League to the stock returns occur in 50^{th} percentile. In other words, after Galatasaray win games in those competitions, they have positive effects to the stock returns when they above 0,4%. It means that when the stock returns will be more than 0,4%, then estimated variables have impact on stock returns of the club.

There are significant and positive effects of increases in total equities to 75^{th} percentile of the GSRAY return ($Return_{GSRAY} = 2{,}8\%$). Moreover, when stock returns are above 0,4% (50^{th} percentile), the effects of increase in capital structure ratio is very high to the stock return. Consequently, it shows that investors do not prefer to process the advantages of wins in more volatile and risky positions. In addition, the biggest and negative effects of the increases in return on equity ratio of Galatasaray Sportive Inc. to the stock returns occur in 75^{th} percentile as well. That is, the investors prefer to take the risk of the return until it reach instability or very volatile position and when they are in decision making process, they observe the changes in return on equity ratio of the club. In other words, they drop GSRAY stocks when it goes on depreciation movement after total assets and debt-ratio of the club increase.

On the other hand, the positive effects of the increase in return on equity ratio of Galatasaray Sportive Inc. to the stock returns occur in 50^{th} and 75^{th} percentile of the stock return. Any stock return percentage above them represent that all the sportive and fiscal variables have high impact on GSRAY returns. However, year's negative effect to the stock returns occur only when GSRAY returns are above 0,4%.

Table 22: Quantile Regression Analysis of FENER and TSPOR Returns

	Quantiles	Fener-1	Tspor-5
HwinL	0.05	0.0097	0.0150
	0.25	0.0121**	0.0220***
	0.50	0.0266***	0.0184**
	0.75	0.0146**	0.0187**
	0.95	0.0016	0.0045
AwinL	0.05		
	0.25		
	0.50		
	0.75		
	0.95		
Profit	0.05	0.0008	
	0.25	0.0150**	
	0.50	0.0214***	
	0.75	0.0025	
	0.95	0.0004	
Debt	0.05		0.0002
	0.25		0.0101**
	0.50		0.0226***
	0.75		0.0013
	0.95		0.0001

There are 2 different regression models for Fenerbahçe Sportive Inc. (Regression model 1) and Trabzonspor Sportive Inc. (Regression model 5). The dependent variables are return of FENER and TSPOR, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, Profits= Changes in net profits, Debt= Debt-ratio of the club. *,** and *** indicates 1%,5% and 10% significance levels

Table 22 represents the effects of the sportive and fiscal achievements of both Fenerbahçe Sportive Inc. and Trabzonspor Sportive Inc. to the stock returns. According to the OLS estimations of FENER and TSPOR returns, there are significant and positive or negative effects of the sportive and fiscal variables occurred in regression model 1, for Fenerbahçe and regression model 5 for Trabzonspor. In the table (22), the significant impacts of these variables are analyzed in quantiles (5^{th}, 25^{th}, 50^{th}, 75^{th} and 90^{th}). The reason why Fenerbahçe and Trabzonspor are analyzed in one table is that they have only one regression model that shows significant and positive or negative effects of both sportive and fiscal achievements of two clubs to their stock returns.

According to the results of regression models in table 22, the biggest effects of wins at home games in Turkish Super League to the stock returns occur in 50th percentile for Fenerbahçe. In other words, after Fenerbahçe win games in those competitions, they have positive effects to the stock returns when they above 0,7%. It means that when the stock returns will be more than 0,7%, then estimated variables have impact on stock returns of the club. On the other hand, the biggest effects of wins at home games in Turkish Super League to the stock returns occur in 25th percentile for Trabzonspor. After the team win games in those competitions, they have positive effects to the stock returns when they above -4,9%. It means that -4,9% is the benchmark for TSPOR returns to be affected by win at home games in the league.

Moreover, there are significant and positive effects of increases in net profits to 50th percentile of the FENER return ($Return_{FENER} = 0{,}7\%$). It means that increase in net profits of Fenerbahçe Sportive Inc. only affect the stock returns when they are more than 0,7%. Similarly, -0,5% is the critical value of TSPOR returns in order to be affected by increases in debt-ratio of the club.

Table 23: Quantile Regression Analysis of All Club's Returns

	Quantiles	All-1	All-2	All-4
HwinL	0.05	0.0009	0.0011	0.0008
	0.25	0.0156*	0.0178*	0.0132*
	0.50	0.0264**	0.0268**	0.0251**
	0.75	0.0561***	0.0593***	0.0498***
	0.95	0.0232**	0.0267**	0.0201*
AwinL	0.05	0.0013	0.0016	0.0009
	0.25	0.0163*	0.0179*	0.0151*
	0.50	0.0248**	0.0262**	0.0233*
	0.75	0.0467***	0.0476***	0.0455***
	0.95	0.0228**	0.0252**	0.0212*
HwinE	0.05	0.0018	0.0023	0.0013
	0.25	0.0131	0.0136	0.0119
	0.50	0.0250**	0.0261**	0.0237*
	0.75	0.0970***	0.1070***	0.0898***
	0.95	0.0221*	0.0252*	0.0213*
Profits	0.05	0.0026		
	0.25	0.0106		
	0.50	0.0193*		
	0.75	0.0478**		
	0.95	0.0067		
Assets	0.05		-0.0012	
	0.25		-0.0153*	
	0.50		-0.0297**	
	0.75		-0.0765***	
	0.95		-0.0005	
Liabilities	0.05			-0.0061
	0.25			-0.0107*
	0.50			-0.0798***
	0.75			-0.1067***
	0.95			-0.0003
Year 2	0.05	0.0018	0.0020	0.0021
	0.25	-0.0169**	-0.0186**	-0.0162**
	0.50	-0.0359***	-0.0344***	-0.0319***
	0.75	-0.0461***	-0.0426***	-0.0439***
	0.95	-0.0024	-0.0023	-0.0026
Year 4	0.05	0.0090	0.0086	0.0095
	0.25	-0.0149**	-0.0138**	-0.0146**
	0.50	-0.0367***	-0.0327***	-0.0375***
	0.75	-0.0089	-0.0091	-0.0079
	0.95	-0.0094	-0.0093	-0.0086

There are 3 different regression models for all clubs and each number in columns represents regression model 1, 2 and 4. The dependent variable is return of ALL STOCKS, HwinL= Wins at home games in the league, AwinL= Wins at away games in the league, HwinE= Wins at home in European competition, Profits= Changes in net profits, Assets= Changes in total assets, Liabilities= Changes in total liabilities, Year 2= "2010-2011" season, Year 5= "2013-2014" season. *,** and *** indicates 1%,5% and 10% significance levels

Table 23 represents the effects of the sportive and fiscal achievements of all clubs to their stock returns. According to the OLS estimations of all club's returns, there are significant and positive or negative effects of the sportive and fiscal variables occurred in regression model 1, regression model 2 and regression model 4. In the table 23, the significant impacts of these variables are analyzed in quantiles (5^{th}, 25^{th}, 50^{th}, 75^{th} and 90^{th}).

According to the results of regression model 1, 2 and 4 in table 23, the biggest effects of wins at home and away games in Turkish Super League and at home games in European competitions to the stock returns occur in 75^{th} percentile. In other words, after all teams win games in those competitions, they have positive effects to the stock returns when they above 2,4%. It means that when the stock returns will be more than 2,4%, then estimated variables have impact more on stock returns of the club. Also there are significant effects of these variables in both 50^{th} and 95^{th} percentile of the stock returns (-12,7 % and 15,4%).

In addition, the biggest and negative effects of the increases in total assets and total liabilities of all football clubs to their stock returns occur in 75^{th} percentile as well. That is, the investors prefer to take the risk of the return until it reach instability or very volatile position and when they are in decision making process, they observe the changes in total assets and total assets of football clubs. In other words, they drop club's stocks when it goes on depreciation movement after total assets and total liabilities of football clubs increase. Similar effect of total liabilities of the football clubs are observed in 50^{th} percentile of the stock returns as well. On the other hand, the most positive effects of the increase in return on net profit of football clubs to their stock returns occur in 75^{th} percentile of the stock return. Any stock return percentage above 2,4% represent that all the sportive and fiscal variables have high impact on all football club's stock returns.

6. CONCLUSION

In the world, football embodies a giant market. Football is well established as the most popular game in the world and can be mentioned as a different sector. In the world economics, the growth rate of football is increasing over the years. The main reason of this increase is the football tend to combine sportive issues with commercialize sports and finance by including many sector and industry (Sultanoğlu, 2008).

Football has developed an increasing economic importance over the past years, demonstrated by an increasing capital markets presence and the rapid growth in the sports industry and its market (Bell et al., 2012). Clubs, employees, referees, coaches and footballers in football industry also affect many sectors that exist in economics. Because, returns or gains of any football aspects – both fiscal and sportive – have many impacts on economy and financial activities. Besides, football is dragging the society after itself and affects the people's psychologies in the society. In football, there is an interesting relationship between supporters and teams. Generally, supporters do not have a tendency such as switching to support other clubs or giving up to support their teams. This implies that there is stability between teams and their supporters (Uludağ and Varan, 2013). As these supportive activities include some economical activities (such as buying tickets, shirts or any product that belong and represent their teams), the football industry creates and establishes a competitive market.

Football have so many demand from any kind of people have different income or purchasing power and anywhere in the world. As the demands become same (or at least similar) there is no concern for scarcity in football economy. Therefore, it can be said that football became so important economical sector in the world (Bell et al., 2012)

The purpose of this study is to analyze the effects of both sportive and fiscal achievements of the four major clubs in Turkish Super League such as Beşiktaş, Fenerbahçe, Galatasaray and Trabzonspor to the stock returns of those clubs that became institutional and professional corporations. Besides, the analyses in the study give opportunities in order to measure the effects sportive achievements to both stock returns and abnormal returns when fiscal achievements are controlled variable. These multiple analyses are formed in different variables by including them to the regression models at the same time.

Professional football teams target all of these achievements even it is very hard to success championship in all competitions. In addition, the supporters or fans follow the expectations after their team's target is declared as well. On the other hand, the investors of the club's stocks realize that getting all achievements from all competitions is hard to be real. Therefore, they have different expectations from each tournament. Most of them become more in European competitions game as the clubs have winnings in world-wide tournaments would bring more fame and prestige (such as sponsorships, etc). Thus, each win would appreciate the brand value of the club and this valuation will bring appreciations on the stocks of the football clubs.

It can be said that regression models 2, 5 and 6 are available for the analysis of the significant effects of sportive and fiscal variables to BJKAS returns. In the second regression model, the effect of total assets of Beşiktaş Sportive Inc. to the stock returns is 4,1%. For the wins at away games, there are also significant and positive impacts on stock returns by 3,3%. Wins at home games in European competitions have still significant and positive effect on the stock return 9,1%. Moreover, there are still significant and effects of wins at home (by 9,2%) and away games (by 11,8%) in domestic cup to the stock returns. Besides, there is significant and negative relationship between total assets of the Beşiktaş Sportive Inc. and stock returns. In other words,

when the total assets increase, the stock returns depreciate by 7,6%. On the other hand, there are no significant and positive or negative effects of transfers and the year effects to the stock returns.

In the 5th regression model, there are still significant and positive effects of wins at home (by 4,2%) and at away (by 3,2%) games in the league to the stock returns of the football club. Besides, wins at home games in European competitions still have significant and positive effects to the stock returns (8,8%). Moreover, significant and positive impacts of wins at home (by 8,7%) and at away (11,4%) games in the domestic cup maintain on the stock returns of the football club. Also, there is a significant and negative link between the debt-ratio of the football club and their stock return. According to the results, an increase in debts cause the reduction in stock returns by 0,3%. However, there are no significant and positive or negative relationships among the transfers, capital structure ratio, total asset turnover ratio and the year effect with the stock returns of Beşiktaş Sportive Inc.

In the 6th regression model, it can be said that there are significant and positive effects of wins at home and away games in Turkish Super League to the stock returns of Beşiktaş Sportive Inc. For instance, winning against the opponents at home in the league cause to increase the stock returns of the football club by 3,9%. Similarly, wins at away games in the league also raise the stock returns by 3,4%. Thus, the investors are sensitive wins at away games more than the wins at home in the league. In addition, there are significant and positive relationships between wins at home games in European competitions. For example, when Beşiktaş win against their opponents in European competitions their stock returns appreciate by 7,9%. However, there is no effect of wins at away games in European competitions to the stock returns of the football club. For Turkish Domestic Cup games, it can be said that there is also significant and positive impacts from wins at both home and away games in this tournament on the stock returns of the football

club. For example, when Beşiktaş win at home against the opponents in the domestic tournament, their stock returns increase by 10,4%. Correspondingly, when the team beat their opponents at away there is also an increase in the stock returns by 12,6%. Besides, the relationship between transfers and the stock returns of the football club is both significant and positive. According to the results, making one more player transfer to the club increase the stock returns by 9,5%. Moreover, there is significant and positive effect of return on equities to the stock returns of the football club. In other words, when the return on equity ratio increase, the stock returns appreciate by 9,0%. These events happen mostly in 75^{th} and 95^{th} percentile of BJKAS returns.

According to the results, the investors of BJKAS become more sensitive when Beşiktaş win at home games in Turkish Super League, European competitions and Turkish Domestic Cup. Also, they prefer to invest on BJKAS when the team wins at away games in both Turkish Super League and Turkish Domestic Cup. In addition, the investors can be affected by increases in both total assets and debt-ratios of the club as the club's stock would depreciate. However, when return on equities of Beşiktaş Sportive Inc. increase, they prefer to move on their investments for BJKAS.

The first regression model is available for the analysis of the significant effects of sportive and fiscal variables to FENER returns. In the first regression model, there are significant and positive effects of wins at away games in Turkish Super League to the stock returns of Fenerbahçe Sportive Inc. For instance, wins at away games in the league raise the stock returns by 3,4%. In addition, there are no significant and positive or negative relationships between wins at home and away games in both European competitions and Turkish Domestic Cup. Besides, net profits of the football club have a significant and positive impact on the stock returns. To give an example, increase in the net profits of the club cause an appreciation by 0,3% in the stock returns of the club. On the other hand, there are no significant and positive or negative effects of transfers and

the year effects to the stock returns. These effects mostly occur in 50th percentile for Fenerbahçe. In other words, after Fenerbahçe win games in those competitions, they have positive effects to the stock returns when they above 0,7%. It means that when the stock returns will be more than 0,7%, then estimated variables have impact on stock returns of the club.

In addition, the investors of FENER stocks, it can be said that they are more sensitive on wins at home games rather than wins at away games in Turkish Super League. Moreover, they prefer to do their investments on FENER stocks when the net profits of the football club increase during the season.

For Galatasaray Sportive Inc., it can be said that regression models 3, 5 and 6 are available for the analysis of the significant effects of sportive and fiscal variables to GSRAY returns. In the 3rd regression model, there is significant and positive effect of wins at away games in the league that is each wins increase the stock returns by 3,8%. Besides, there is also significant and positive relationship between the total equities of the club and their stock return. According to the results, every increase the total equities cause 0,5% appreciation on the stock return of the club. Moreover, the investors of GSRAY stocks prefer to do their investments more when Galatasaray win at away games rather than winnings at away games in Turkish Super League. In the 5th regression model, there is significant and positive effect of wins at away games in Turkish Super League, but not at home games in the league and at home/away games in other competitions. When Galatasaray win at away games in the league, their stock returns appreciate and 3,8%. Besides, the stock returns of the club depreciated by 4,7% in 2010-2011 season comparing to the chicanery year in the football. On the other hand, there are no significant and positive or negative effects of other variables to the stock returns of Galatasaray Sportive Inc in other regression models. Meanwhile, there are significant impacts of both capital structure ratio and return on

equity ratio on the stock returns of the club. Each increase in capital structure ratio cause an increase by 0,3% (regression model 5) and every rise in return on equity ratio depreciate the stock returns of the club by (0,3%). These significant effects mostly occur in 50^{th} and 75^{th} percentile of GSRAY returns.

Moreover, when capital structure ratio and total equities of Galatasaray Sportive Inc. increase, the investors of GSRAY become more sensitive and takes it as a valuable issue. Unexpectedly, increases in return on equity ratio of the football club have bad impact on the investors of GSRAY. In addition to the bad impact, it can be said that the investors have losses from the stock returns of the club in 2010-2011 football season comparing to the chicanery year.

For the results of Trabzonspor Sportive Inc., it can be said that the 5^{th} regression model is available for the analysis of the significant effects of sportive and fiscal variables to TSPOR returns. There is only significant and positive effect of wins at home games in Turkish Super League to the stock returns of Trabzonspor Sportive Inc. For example, wins at home games in the league raise the stock returns by 2,7%. However, there are no significant and positive or negative relationships between debt-ratios and the stock returns of the club. As the debt of the club increase, their stock returns are also increase by 0,1% which is unexpected. Moreover, these effects to the stock returns mostly occur in 25^{th} percentile for Trabzonspor. After the team win games in those competitions, they have positive effects to the stock returns when they above -4,9%. It means that -4,9% is the benchmark for TSPOR returns to be affected by win at home games in the league.

For the investors of TSPOR stocks, it can be said that they are more sensitive on wins at home games rather than wins at away games in Turkish Super League. Unexpectedly, they prefer to do

their investments on TSPOR stocks when the debt-ratio of the football club increases during the season.

For the analysis of the impacts of these variables on all football clubs' stock returns, it can be said that regression models 1, 2 and 4 are available for the analysis of the significant effects of sportive and fiscal variables to all football club's returns. In the first regression model, there are still significant and positive effects of wins at home games to the stock returns by 2,5 %. For the wins at away games, there are also significant and positive impacts on stock returns by 3,2%. Wins at home games in European competitions have still significant and positive effect on the stock return by 4,0%. Besides, there is significant and negative relationship between total assets of the stock returns. In other words, when the total assets increase, the stock returns depreciate by 1,7% (In 2^{nd} regression model) and increase in total liabilities have same impact (In 4^{th} regression model). According to the results of regression model 1, 2 and 4, the biggest effects of wins at home and away games in Turkish Super League and at home games in European competitions to the stock returns occur in 75^{th} percentile. In other words, after all teams win games in those competitions, they have positive effects to the stock returns when they above 2,4%. It means that when the stock returns will be more than 2,4%, then estimated variables have impact more on stock returns of the club. Also there are significant effects of these variables in both 50^{th} and 95^{th} percentile of the stock returns (-12,7 % and 15,4%).

In order to make a general comment, it can be said that the investors of BJKAS, FENER, GSRAY and TSPOR are more sensitive in the manner of sportive achievements and wins more valuable more than financial performances.

Wins at home and away games in the league is the most effective reason to appreciate the BJKAS returns and abnormal BJKAS returns of the clubs when the other variables held constant. In addition, BJKAS returns are mostly appreciated 75^{th} and 95^{th} percentile. It represents that when BJKAS returns are high and Beşiktaş win against the opponents, BJKAS appreciates more and the investors desire to keep it in high stock price level. Moreover, total assets and return on equity ratios are the most influential variables on BJKAS returns and abnormal BJKAS returns especially at 75^{th} percentile level.

Similar effects of wins at home games in the league are observed in FENER (mostly at 50^{th} percentile) and TSPOR returns (mostly at 25^{th} percentile), when the other variables do not change. Moreover, increases in net profits of Fenerbahçe Sportive Inc. have positive impact on FENER returns and abnormal FENER returns when other variables held constant. These effects mostly occur at 50^{th} percentile and it represents that the investors notice the activities more in net profits rather than other fiscal variables for investment. On the other hand, the investors pay attention the activities on debt-ratio of Trabzonspor Sportive Inc.

Wins at away games in the league is the most effective reason to appreciate the GSRAY returns and abnormal GSRAY returns of the clubs when the other variables held constant. In addition, GSRAY returns are mostly appreciated 50^{th} percentile. It represents that when GSRAY returns are high and Galatasaray win against the opponents, GSRAY appreciates more and the investors desire to keep it in high stock price level. Moreover, total equities and capital structure ratios are the most influential variables on GSRAY returns and abnormal GSRAY returns especially at 57^{th} and 75^{th} percentile level. The investors of GSRAY observe increase activities on total equities and capital structure ratios. On the other hand, any increase in return on equity ratios influence them negatively and cause the investors to not decide investing on GSRAY.

Therefore, they generally behave irrationally and make their decisions emotionally when they invest on club's stocks. On the other hand, few of the investors still consider the financial performance of the stocks.

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