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**Effects of Compliance Ratings With Corporate Governance Principles  
on Financial Performance in Turkey**

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**Abstract**

“Good Procedures and Practices such as the creation of well-functioning supervision and audit mechanisms, performance of efficient risk management, sufficient transparency level and the clarification and documentation of duties and responsibilities are very important to both companies and stakeholders. These practices, contained in various codes, form the basis of ratings of compliance with corporate governance.

In Turkey this code is the Corporate Governance Principles, as established by the Capital Market Board (CMB). Taking into account publicly quoted companies in particular, the principles contain procedures and practices deemed beneficial to the companies. The rating of compliance with corporate governance principles is an attempt to assess the extent of the implementation of these principles in a certain company and rate the same accordingly.

This study is intended to analyze whether rates granted to companies with higher compliance ratings have influence on their financial performance and whether there is any connection between the rates granted to the companies which undergo a compliance rating in a certain time frame and their financial performance within that said time frame.

To this end, financial ratios obtained from the financial statements of the rated companies and ratings compiled from the four rating agencies authorized to carry out rating activities in Turkey have been analyzed using statistical methods.”

**Keywords:** Corporate Governance, Rating of Compliance with Corporate Governance Principles, Financial Performance

**JEL Classification:** G3, G34

**Özet**

Kurumsal yönetim uyum derecelendirmesine temel teşkil eden kodlarda yer alan; iyi işleyen gözetim ve denetim mekanizmalarının oluşturulması, etkili risk yönetiminin yapılması, şeffaflık seviyesinin yüksekliği, görev ve sorumluluk tanımlarının belirginleştirilmesi ve yazılı hale getirilmesi gibi “iyi kural ve uygulamalar” şirketler ve menfaat sahipleri açısından büyük önem taşımaktadır.

Türkiye’de iyi kural ve uygulamaları içeren kod Sermaye Piyasası Kurulu (SPK) Kurumsal Yönetim İlkeleri’dir. Özellikle halka açık şirketler göz önüne alınarak oluşturulan bu ilkelerde, şirketlere fayda sağlayacağı düşünülen kural ve uygulamalar bulunmaktadır. Kurumsal yönetim uyum derecelendirmesi ise bir şirkette bu ilkelerin ne ölçüde hayata geçirildiğini ortaya koyan bir değerlendirme ve not verme çalışmasıdır.

Makalenin amacı, yüksek uyum notuna sahip şirketlerin almış oldukları notun finansal başarıları üzerine etkili olup olmadığının ve belirli bir zaman diliminde her yıl uyum derecelendirmesi yaptıran şirketlerinin aldıkları notlar ile aynı dönem

indeki finansal başarıları arasında bir ilişkinin var olup olmadığının araştırılmasıdır.

Bu amaçla, Türkiye’de derecelendirme faaliyetini yürütme ile yetkili dört derecelendirme kuruluşundan derlenen derecelendirme notları ile derecelendirilen şirketlerin finansal tablolarından elde edilen finansal oranları temel istatistik yöntemlerle analiz edilmiştir.

**Anahtar Kelimeler:** Kurumsal Yönetim, Kurumsal Yönetim İlkelerine Uyum Derecelendirmesi, Finansal Başarı

**JEL Sınıflaması:** G3, G34

## **Introduction**

The concept of corporate governance has arisen as a result of the process through which the shareholders of a company have become different from the professional executives in charge of its management. The professional executives of the company become more important as a company grows. In other words, the shareholders have become removed from the actual management of the company and vital decisions have begun to be taken by professional executives. This has resulted in the principal-proxy issue (the agency problem), which lies behind the conflict of interest between the shareholders and professional executives. For example, an executive, not a shareholder, may abstain from investing in profitable businesses and make use of company resources for their own benefits. M. Jensen and W. Meckling have suggested that certain rules should apply to relations between shareholders and executives, rights should be secured and an efficient monitoring and audit should be carried out in order to solve this issue (Jensen and Meckling, 1976: 305).

Considering the shareholders and professional executives as the only interest groups in a company, corporate governance may be defined as the set of rules and practices that arrange the relations between the two groups, ensuring that their respective rights are secured and the company is managed in a profitable manner. However, the interest groups in a company are not limited to just these two groups. A wider point of view shows that the employees, suppliers, customers and the community all have their own relationships with the company and one another. Due to these relations, it can be said that these additional groups also hold some rights. These interest groups are called stakeholders as a whole. It is obvious that positive and reconciliatory relations with the stakeholders would enhance the competitive power of a company positively affect its productivity and profitability and support sustainability. Therefore, stakeholders should be considered in the concept of corporate governance. From this point of view, corporate governance is a system that aims to ensure that the interests of the different interest groups representing its capital, expertise and labor force are consistent with one another and that common goals are achieved in the most profitable manner (Monks and Minoy, 2005: 98).

In the 1992 report issued by Adrian Cadbury known as the Cadbury Report, corporate governance was defined as “a system that provides the management and audit of companies” and “codes of good corporate governance” were developed to perform such functions. The codes of good corporate governance are classified into four main sections: the responsibilities of the management board, the appointment of executives by the shareholders, the creation of internal and external audit and the development of a sufficient organization structure (Cadbury, 1992: 14). Davies defined corporate governance as “a management and audit system that balances between the benefits of the interest groups in relation with a company and the benefits of the company (Davies, 2006:14).

Apart from these, other definitions have been introduced by international organizations carrying out research on corporate governance. For example, corporate governance is defined in the official web site of the Organization for Economic Cooperation and Development (OECD) as “a set of rules and management systems that make a company fair, transparent, responsible and accountable” (OECD, 2004: 12). The World Bank is another organization that focuses on this issue. Its definition is as follows: “Corporate governance

is a set of principles and rules that will ensure that a company is constantly managed in productive manner, the rights of those in relation with the company are secured and, they faithfully serve the company” (IFC, 2013).

Considering the common points of the above-mentioned definitions, it is possible to make an ultimate definition as follows: corporate governance is a set of rules and practices that ensure that a company lives longer by achieving the goals of the company or the organization structures thereof in an efficient and profitable manner and that create a conciliation platform by minimizing the conflict of interest between the shareholders, stakeholders and managers who have a voice in the company.

A quick look at the development of corporate governance in Turkey reveals that this concept was brought to the agenda later than in developed countries. The understanding that the vulnerability of larger companies in Turkey to the crises of the 1990’s and the beginning of the 2000’s were due to mismanagement, low levels of transparency, inefficient overseeing and auditing and other similar factors has contributed to the development of the concept of corporate governance. In other words, these crises were a milestone for corporate governance and contributed to its improvement (TUSIAD, 2002).

In Turkey, the first attempt was made by the Turkish Industry and Business Association (TUSIAD) to develop codes for the better management of a company for its members. The latest revision of these codes of the best practices was issued in 2002. The Capital Market Board’s (CMB) Corporate Governance Principles were published as a set of advice in the 2003 CMB Laws. These principles were composed of a set of non-compulsory guidelines and were amended and republished in 2005 (Ararat and Uğur, 2006: 2). In 2006, the Banking Regulation and Supervision Agency (BRSA) took a step and issued Regulations on Corporate Governance Principles for Banks. Additionally, the Banking Law was amended, introducing regulations on the management of board members and senior executives within the scope of corporate governance. The said law also contains provisions concerning internal control, risk management and internal audit, which are also considered under the scope of the concept of corporate governance (Battal, 2006: 147).

Significant changes were made to the CMB’s Corporate Governance Principles in 2012 and consequently some practices were made mandatory for publicly held companies (CMB, 2013). Mandatory good practices include but are not limited to: the requirement for a certain number of independent members in a management board, transparent relations with related parties, approval of independent members for significant decisions and the establishment of committees such as audit and corporate governance committees.

The good rules and practices in the codes, which serve as a basis for the rating scores of compliance with corporate governance, are of vital importance to companies, shareholders and stakeholders and this benefit has been scientifically explained by academic studies. For example, a study of S&P500 companies in the United States revealed that the companies with good corporate governance practices achieved 19% greater financial success than those with poor practices in the last two years (Grandmont and Others, 2004: 4).

Rating notes for the Compliance with Corporate Governance Principles developed in parallel with that of corporate governance principles, is a process that determines to what extent a company complies with a certain corporate governance code. This rating activity carried out by independent and impartial institutions specializing in terms of evaluation and measurement aims to determine the extent to which rules and practices within a certain code are implemented in a company. The rating agency performs a scoring evaluation based on a predetermined method and issues a report to disclose the scores to the public. A higher score means a higher degree of compliance with the rules and practices within that certain code.

In Turkey, the CMB issued the Communiqué Serial: VIII, No: 51 on the Rating Activities and Rating Agencies in the Capital Market based on the Capital Market Law No. 2499 (SPK, 2013). According to this communiqué, corporate governance ratings in Turkey are the evaluation and classification by rating agencies of the compliance of companies to the CMB's corporate governance principles in an independent, impartial and fair manner. The following institutions are authorized to perform such rating activities in Turkey:

- ▲ SAHA Kurumsal Yönetim ve Kredi Derecelendirme Hizmetleri A. Ş.
- ▲ Kobirate Uluslararası Kredi Derecelendirme ve Kurumsal Yönetim Hizmetleri A.Ş.
- ▲ JCR Avrasya Derecelendirme Hizmetleri A.Ş.

These rating agencies evaluate a company's compliance with the 4 sections of CMB's Principles:

- ▲ Shareholders
- ▲ Public Disclosure and Transparency
- ▲ Stakeholders
- ▲ Board of Directors

Scores are based on a scale between 1 and 10 for each section and then multiplied by the coefficients specified by the CMB, resulting in compliance scores with the CMB's corporate governance principles.

De facto rating activities began in 2005 and 5 publicly held companies received rating scores until 2007. The Istanbul Stock Exchange Corporate Governance Index (XKURY) was established in August, 2007. To enter this list, a company with shares traded on the Borsa İstanbul must be subject to a rating evaluation and awarded a score above 7. As of December 2014, 48 publicly traded companies and 5 non-publicly companies have received Compliance with Corporate Governance Principle ratings.

The aim of this study is to determine whether companies in Turkey with higher ratings for Compliance with Corporate Governance Principles have greater financial successes. To that end, this study will focus on the question of the statistically meaningful relations between a company's compliance rating scores starting from 2005 and its financial success.

## 2. Literature

The influence of corporate governance on the value and performance of a company have also come to the attention of academicians. Through research

conducted in many countries, a large volume of literature has begun to be formed on this subject.

In 1999 Black conducted research on the 21 largest companies in Russia. These 21 companies, the shares of which were traded on the Moscow Stock Exchange, were ranked and scored in terms of compliance with corporate governance principles by a Russian investment bank. Their market values, were calculated over the stock exchange prices. According to the statistical method used by the researcher, despite the small number of samples, the corporate governance rating score was one of many other factors that significantly affect a company's market value (Black, 2001: 89).

A Japanese study based on 2004 data focused on the relationship between a company's corporate performance and their corporate governance rating scores given by the rating agency *Governance Metrics International* (GMI). GMI evaluated 330 Japanese companies in terms of 500 criteria under 6 main groups and assigned a general score and individual scores for the 6 main sections. Corporate performances of the companies were measured by their yields between 1999 and 2004. The study reported that companies with higher scores had yields 15% higher than those with lower scores. However, it was also noted that not all of the 6 main section scores positively affected corporate performance. The scores for the sections covering financial transparency, stakeholders' rights and executive remunerations positively affected the performance while the influence of the sections on the management board, market control and corporate behavior were limited (Bauer and Others, 2008:236).

A study on 54 companies from developing countries with American Depositary Receipts (ADR) traded on United States stock exchanges reported a statistically meaningful relationship between the corporate governance score of a company and its value and performance. The research took return on equity, return on assets and Tobin's Q ratio (the market value of a company divided by its book value) as the dependent variables. The independent variables affecting these three variables were the corporate governance rating score, the legal infrastructure of the country of the company and the corruption coefficient of that country. *Standard & Poor's* rating scores were used in the study. The results of the analysis indicated a positive correlation between the rating scores and the Tobin's Q Ratio (Ficici and Aybar, 2012:38).

The relation between corporate governance practices and financial performance was the subject of another study conducted between 2005 and 2010 on 57 family-owned companies in India. First, some of the good practices in the corporate governance code issued by the respective public authority were chosen and divided into two groups: voluntary compliance and involuntary compliance. Data concerning these practices were compiled from the annual reports of the 57 companies in two periods: 2005 and 2006, and 2009 and 2010. Financial parameters such as market value, total assets, profit before tax, Tobin's Q Ratio and interest coverage ratio etc. were used as dependent variables and the relationship between these variables and the chosen corporate governance practices was inspected. Consequently, the researchers reported that the voluntary compliance practices in particular positively affected the financial performance, especially Tobin's Q Ratio (Mukhopadhyay and Others, 2012:128).

Another study on insurance companies with shares traded on the stock exchange in Kenya focused on the influence of certain corporate governance practices on two performance indicators: the return on equity and the return on assets. The study reported that the two performance indicators were strongly affected by the following: the number and composition of the management board members, having a different individual in the positions of chairman and general manager and the share of foreign sources in total assets (Wanyama and Olweyn, 2013: 96).

In Turkey, a study was conducted on companies traded on the Istanbul Stock Exchange that were assigned a rating for compliance with corporate governance principles by an independent rating agency between 2006 and 2010. The results of this research indicated a positive relation between the price of company shares and its rating scores. This shows that a rating score is a factor that affects investor preference (Ergin, 2012: 61).

### 3. Methodology

The Wilcoxon signed-rank test, Friedman test and Regression Analysis are used to determine whether there are meaningful relations between the compliance rating scores of the companies and their financial success indicators.

#### 3.1. Wilcoxon Signed-Rank Test

The Wilcoxon signed-rank test is a non-parametric alternative to the dependent two sample t test. It is used to compare the sample group at two different times ( $t_1$  and  $t_2$ ) or conditions. Unlike the dependent two-sample t test, which compares different averages, the Wilcoxon signed-rank test ranks the values, converts them to different times ( $t_1$  and  $t_2$ ) and tests them to determine if there is any change between the time frames (Kalaycı, 2010: 104).

#### 3.2. Friedman Test

The Friedman Test is also a non-parametric test. It is used as an alternative to the one-way repeated analysis of variance. The Friedman Test is used when the samples are measured at two or more different times ( $t_1, t_2, \dots, t_n$ ) or conditions (Kalaycı, 2010: 108).

#### 3.3. Regression Analysis

The Regression Analysis is a technique used to study the causality relation between one or more dependent variables and one or more independent variables. The simple regression method studies the relation between one dependent variable (Y) and one independent variable ( $X_1$ ) and the multiple regression method the relation between one dependent variable (Y) and two or more independent variables ( $X_1, X_2, \dots, X_p$ ). Models used to study the dependent variables and the independent variables in the form of linear relation are referred to as simple linear or multiple linear regression methods, while non-linear relationship models are referred to as simple non-linear or multiple non-linear regression methods. The analysis method to analyze the validity of the established models is called the regression analysis (Özdamar, 2004: 187).

The simple, multiple and multi-variable linear regression models are respectively defined as follows:

$$Y = \beta_0 + \beta_1 X_1 + e_{ij}$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p + e_{ij}$$

$$Y_1, Y_2 = f(X_1, X_2, \dots, X_p)$$

#### **4. Research Method**

The research includes 34 companies for which a rating agency certified by the CMB has given rating scores in at least three successive years starting in 2006. Out of these companies, 2 were ranked for 7 years from 2006, 5 companies for 6 years from 2007, 7 companies for 5 years from 2008, 12 companies for 4 years from 2009 and, the remaining 8 companies for 3 years from 2010. Companies were given a compliance score between 0 and 100.

The data of the said 34 companies with their respective rating scores for the variables used in the research was compiled from their independent auditing and rating reports disclosed to the public in 2012.

Apart from the scores of the said 34 companies for compliance with CMB corporate governance principles given by a certified rating agency, the profitability and growth ratios from their independently audited financial statements are also used as the variables of the research. The definitions of these variables are as follows:

*Score for the Compliance with the Corporate Governance Principles:* the compliance score between 0 and 100 given by a rating agency certified by the CMB pursuant to the Communiqué Serial: VIII, No: 51 on the Principles for the Rating Activities in the Capital Market and the Rating Agencies

*Return on Total Assets:* the ratio of the net income to total assets of a company according to its independently audited financial statements ended on December 31 of each year (Net Profit/ Total Assets)

*Return on Equity:* the ratio of net income to equity of a company according to its independently audited financial statements ended on December 31 of each year (Net Profit/ Equity)

*Profit Margin (Return on Sales):* the ratio of net profit for the period to net sales of a company according to its independently audited financial statements ended on December 31 of each year (Net Profit/ Net Sales)

*Leverage Ratio:* the ratio of foreign assets to total assets of a company according to its independently audited financial statements ended on December 31 of each year (Total Assets-Equity/ Total Assets)

*Total Assets Growth Ratio:* the ratio of the difference between total assets in the previous period to total assets in the current period to the total assets in the previous period of a company according to its independently audited financial statements ended on December 31 of each year (e.g. the growth rate in 2012: Total Assets in 2012-Total Assets in 2011/ Total Assets in 2011).

*Equity Growth Ratio:* the ratio of the difference between equity in the previous period to equity in the current period to equity in the previous period of a company according to its independently audited financial statements ended on December 31 of each year (e.g. the growth rate in 2012: Equity in 2012-Equity in 2011/ Equity in 2011).



*Net Sales Growth Ratio*: the ratio of the difference between net sales in the previous period to net sales in the current period to net sales in the previous period of a company according to its independently audited financial statements ended on December 31 of each year (e.g. the growth rate in 2012: Net sales in 2012-Net sales in 2011/ Net sales in 2011).

*Net Profit Growth Ratio*: the ratio of the difference between net profit in the previous period to net profit in the current period to net profit in the previous period of a company according to its independently audited financial statements ended on December 31 of each year (e.g. the growth rate in 2012: Net profit in 2012-Net profit in 2011/ Net profit in 2011).

This research aims to find out whether having a rating score affects the above-mentioned financial ratios. First, the financial ratios of each company in the last year before the rating score is received are to be compared to the financial scores of each company in 2012 and, if this comparison results in significant differences between mentioned financial ratios, then the causality relation between the rating score and each financial ratio is to be looked for, which is to reveal whether the rating score has a significant effect on the financial ratios.

The hypothesis of the research is that “the rating score of a company for 2012, which has received rating scores for at least three years successively, has a significant effect on the financial ratios in the same year”. Researchers expect the verification of this hypothesis.

In the regression model applied to test this hypothesis, each financial ratio is a dependent variable and, the rating score for 2012 and the number of years, in which a rating score is received, is an independent variable. Considering the similar research in the literature, no other control variable is included in this model.

It was not technically possible to perform the same analysis with the data from the year before 2012. This is because the application of rating scores is relatively new in Turkey and, the number of such companies which have received rating scores is limited. Considering the criterion “having rating scores for at least three years successively”, it is not possible to find sufficient number of companies to perform an analysis with the data before 2012. Therefore, the regression analysis is based on the data for 2012. However, it is possible to repeat this analysis in the coming years.

## 5. Analysis and Findings

In the Wilcoxon signed-rank test, the financial ratios of the 34 companies are divided into two groups. The first group is composed of the ratios derived from the financial statements of the year before the year in which the respective evaluation score was given. For example, the financial ratios of a company for which a score was given in 2010 are the values of the financial indicators derived from the 2009 financial statements. The financial ratios in the second group were derived from the financial statements for 2012. The test aims to determine whether there is a meaningful relation between the financial indicators of the ranked companies before and after the evaluation (between  $t_1$  ve  $t_2$ ). Thus, the test results indicate whether there is a difference between these two groups for each ratio. Table 1 shows the results from the Wilcoxon signed-rank test.

**Table 1: Wilcoxon Signed-Rank Test Results**

<b>Financial Indicators</b>	<b>Z Value</b>	<b>Level of meaningfulness (p)</b>
Net Profit Growth Ratio	-0,521	0,602
Equity Growth Ratio	-0,368	0,713
Net Sales Growth Ratio	-0,898	0,369
Assets Growth Ratio	-2,009	0,045*
Return on Equity	-1,693	0,091
Return on Sales	-1,590	0,112
Leverage Ratio	-3,513	0,000*
Return on Assets	-1,171	0,242

\* a difference of  $p \leq 0,05$  is considered meaningful.

Table 1 shows that there is a meaningful difference between the year in which the compliance note was given and 2012 (the last year in which the compliance note was given) in terms of the variables for the assets growth ratio and the leverage ratio. There is no meaningful difference for other financial indicators. Table 2 shows the Descriptive Statistics in order to define whether this difference is for an increase or decrease.

**Table 2: Descriptive Statistics**

<b>Financial Indicators</b>	<b>Minimum Value</b>	<b>Maximum Value</b>	<b>Average</b>	<b>Standard Deviation</b>
Assets Growth Ratio (Year before the evaluation for each company)	-,1810	,9944	,236015	,2846132
Assets Growth Ratio (2012)	-,3049	,8136	,105821	,1758688
Leverage Ratio (Year before the evaluation for each company)	,0069	,9022	,525574	,2882141
Leverage Ratio (2012)	,0159	,9012	,630621	,2292632

Table 2 shows that the average of the variables for the leverage ratios of the 34 companies increased from 0.53 before the evaluation to 0.63 in the last evaluation year, while the average assets growth ratios decreased from 24% before the evaluation to 11% in 2012.

Similar results are obtained when the same analysis is applied by means of the dependent two sample t test, a parametric test. The Wilcoxon signed-rant test is preferred because it does not require any assumption.

The Freidman Test is used to study whether the said 8 financial ratios are different from each other by years. The ratios in the years 2009, 2010, 2011 and 2012 are compared to each other in terms of all financial ratios. The test aims to determine whether the compliance scores of the companies are in parallel with their respective financial indicators. Table 3 shows the test results.

**Table 3: Friedman Test Results**

Financial Indicators	Chi-Square Value	Level of meaningfulness (p)
Net Profit Growth Ratio	4,941	0,085
Equity Growth Ratio	1,235	0,539
Net Sales Growth Ratio	8,176	0,017*
Assets Growth Ratio	10,504	0,005*
Return on Equity	3,671	0,299
Return on Sales	6,709	0,082
Leverage Ratio	18,247	0,000*
Return on Assets	5,118	0,163

\* a difference of  $p \leq 0,05$  is considered meaningful.

Table 3 shows that there are differences between the years in which the rating scores were given in terms of the variables for the net sales growth ratio, assets growth ratio and leverage ratio. In other words, the ratios in the years in which the scores were successively given become statistically different from each other. The results from the Friedman test applied to determine whether there is a meaningful increase or decrease in the financial indicators by years in the period after the companies were given the scores bear a resemblance to the results from the Wilcoxon test; however when comparing the financial ratios of the year before the evaluation and of the year after the evaluation, the Wilcoxon test indicates a meaningful relation in terms of the variables for the assets growth ratio and leverage ratio and the Friedman test indicates a meaningful relation also in terms of the variables for the net sales growth ratio.

Table 4 shows the descriptive statistical data for the variables for the net sales growth ratio, assets growth ratio and leverage ratio, for which a meaningful difference is determined upon the results from the Friedman test for the years 2009, 2010, 2011 and 2012.

Table 4 shows that there is a significant increase in the net sales growth ratio variable, particularly in 2011. The same applies to the variable for assets growth rate. The leverage ratio shows an increasing tendency over the years.

**Table 4: Descriptive Statistics**

Financial Indicators	Minimum Value	Maximum Value	Average	Standard Deviation
Net Sales Growth Ratio (2009)	-,36380	3,80840	,1163735	,68268010
Net Sales Growth Ratio (2010)	-,9518	,7873	,076485	,2965150
Net Sales Growth Ratio (2011)	-,4058	98,0795	4,401194	18,2087235
Net Sales Growth Ratio (2012)	-,4894	,5354	,143676	,1910367
Assets Growth Ratio (2009)	-,25950	,84460	,1076412	,22527446
Assets Growth Ratio (2010)	-,1545	37,4842	1,285347	6,4009357
Assets Growth Ratio (2011)	-,1526	,5915	,210935	,1613315
Assets Growth Ratio (2012)	-,3049	,8136	,105821	,1758688
Leverage Ratio (2009)	,0171	,8792	,570444	,2611156
Leverage Ratio (2010)	,0242	,9146	,595700	,2602637
Leverage Ratio (2011)	,0097	,9040	,639835	,2349692
Leverage Ratio (2012)	,016	,901	,63062	,229263

In the analysis performed up to now, the ratios for the year before the year the respective scores were given and the ratios for the last year the scores were given are compared to each other. It is attempted to determine whether there is any difference between the two groups. The tests conducted do not provide any information on the reasons and significance of the differences, if any. The Simple Linear Regression Analysis is applied to perform an analysis on the relation of causality between the dependent and independent variables. In this regression analysis, each financial ratio is taken as a dependent variable and it is attempted to understand to what extent the evaluation score describes this ratio. Thus, the companies are inspected not only in terms of whether or not they are ranked but also of whether or not the scores given to them affect their financial indicators. The regression model is established as follows:

$$Y = \beta_0 + \beta_1 X_1 + e_{ij} \quad (1)$$

Y= Financial ratios

$X_1$  =Rating score

$e_{ij}$  = Error term

The regression analysis is performed for each financial ratio. For all financial ratios, the 2012 ratios and rating scores are used. Table 5 shows the analysis results.

**Table 5: Simple Linear Regression Analysis Results**

Financial Indicators	Model Summary			ANOVA	
	R-squar e	Correcte d R- square	Durbin- Watson	F Value	Level of meaningf ulness
Net Profit Growth Ratio	0,105	0,011	0,652	0,359	0,553
Equity Growth Ratio	0,163	0,027	0,642	0,871	0,358
Net Sales Growth Ratio	0,024	0,001	0,619	0,019	0,892
Assets Growth Ratio	0,040	0,002	0,629	0,050	0,824
Return on Equity	0,126	0,016	0,653	0,518	0,477
Return on Sales	0,154	0,024	0,618	0,774	0,386
Leverage Ratio	0,007	0,000	0,710	0,002	0,968
Return on Assets	0,153	0,024	0,645	0,772	0,386

Table 5 shows that the level of meaningfulness is not below 0.05 for any financial ratio. None of the regression models are statistically meaningful. In other words, there is no relation of causality between the 8 financial ratios and the rating score when considering single financial period.

In this study, the Multiple Linear Regression Analysis is also applied by means of adding the number of years in which the rating scores were given to the regression model. This analysis is intended to study the influence on the financial indicators of the rating scores given to the companies and the number of years in which the rating scores were given. This model is formulized in equation 2 below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e_{ij} \quad (2)$$

Y= Financial ratios

$X_1$  =Rating score

$X_2$  = Number of the years, the rating scores was given.

$e_{ij}$  = Error term

Like the simple regression analysis, the ratios in 2012 and the rating scores in 2012 are used for all financial ratios. Table 6 shows the analysis results.

**Table 6: Multiple Linear Regression Analysis Results**

Financial Indicators	Model Summary			ANOVA	
	R-square	Corrected R-square	Durbin - Watson	F Value	Level of meaningfulness
Net Profit Growth Ratio	0,223	0,050	2,136	0,811	0,453
Equity Growth Ratio	0,252	0,064	1,753	1,055	0,360
Net Sales Growth Ratio	0,333	0,111	1,966	1,932	0,162
Assets Growth Ratio	0,216	0,046	2,133	0755	0,478
Return on Equity	0,306	0,094	2,103	1,600	0,208
Return on Sales	0,552	0,305	1,958	6,799	0,004*
Leverage Ratio	0,203	0,041	1,893	0,699	0,520
Return on Assets	0,328	0,107	1,898	1,865	0,172

Table 6 shows that the rating score and period have an influence on the variable for the return on sales. The level of meaningfulness is below 0.05. This model indicates that since the Certainty Coefficient (R-Square) is below 0.55, the variables for the score and period determine the profitability of the companies at the level of 55%.

The adjusted R-square should be also considered in order to see that each variable added to the model in the Multiple Regression Analysis increases the coefficient of certainty of the model and how much of the part of the change in the dependent variable is explained by the dependent variable, from a view without this affect. In the model where the profit margin is a dependent variable, the adjusted R-square is attained as 30%. This value represents that the change to the profit margin could be explained by the number of years for which a rating score is given and, the rating score.

In such case, according to the multiple regression analysis, the research hypothesis is verified only for the sales profitability. In other words, the rating score and the number of years for which a rating score is received is determinant on the sales profitability of a company. The hypothesis is refused for all other financial ratios under the scope of the research.

Since the Durbin-Watson value is between 1,5 and 2,5 in all the models, it is observed that there is no problem with the models for autocorrelation.

Table 7 represents the coefficients of the model where the profit margin is a dependent variable and, whether the addition of each independent variable to the model is meaningful.

**Table 7: Model Coefficients**

Model	B	Beta	t	Meaningful Level
Fixed Term	-1,007		-1,457	0,155
Number of Years for which a rating score is received	-0,104	-0570	-3,542	0,001
Rating Score for 2012	0,019	0,364	2,257	0,031

The table above shows that the additions of both independent variables of the number of years, for which a rating score is received, and of the rating score for 2012 to the model are meaningful. On the other hand, considering the Beta values, the addition of the independent variable of the number of years, for which a rating score is received, to the model is more than the addition of the independent variable of the rating score for 2012 to the model.

### **Conclusion and Discussion**

Out of the results from various statistical analyses on the rating scores and certain financial ratios of 34 companies for which a certified rating agency in Turkey has given rating scores for at least 3 consecutive years, it is very remarkable that the leverage ratio varies compared to that before the rating. The average of the leverage ratio in 2012 increased from 53% to 63% compared to the year before the rating score was given. It is thus possible to say that companies with rating scores are more successful at foreign sourcing. A higher compliance with corporate governance principles and the disclosure thereof to the public by means of an official report are considered to be a factor that enhances the trust of the creditors in a company. The common opinion that companies with a higher level of institutionalization, which are managed well and which secure the rights of the creditors are able to find foreign sources easier than others is scientifically proven as a result of this study.

Similarly, as the net sales growth ratio increased from 11% to 14%, it is possible to say that the trust in the companies is also established on the side of the customers. There are of course many factors that affect the sales of a company. However, this study proves that there is a difference between the average of the ratios in the year before and the final year in which the scores were given. In addition, there is an increase of about 30% between these two averages, which indicates that the rating scores have a significant effect on customers.

It does not seem that there is a significant change in the assets growth ratio. The average of the assets growth ratios before the rating scores was 10%, while the average in the last year was about 10%. We should consider the financial crisis that started in the USA in 2008 affecting the entire world when commenting on the growth rate. The ranked companies maintained their assets growth ratios at the same level as the growth ratios in the previous period, although this financial crisis significantly eroded the assets of many other companies. This shows that the ranked companies attained a relative success despite the deterioration in the business cycle.

The Simple Regression Analysis used to determine to what extent the financial ratios is influenced by the rating score revealed that none of the models established between the financial ratios and the scores is meaningful. This result indicates that a score given for only one year by itself has not any influence on the financial ratios.

The Multiple Regression Analysis that is used to determine the influence of the scores and the number of the years in which the scores were given by adding the number of the years to the models established between the scores and the financial ratios indicates a meaningful relation only for the return on sales. The scores given to a company and the number of the years in which

the scores were given have an effect on the return on sales. During the years in which the scores were given, the rating scores and the number of the years in which the scores were given seem to have an influence on 55% of the changes to the return on sales. As a matter of course, it is possible to claim that this higher influence of the scores and the number of the years in which the scores were given on the return on sales is considered to be significant evidence of the fact that the rating scores provide a great benefit to the companies. However, a rating score given for only one year is not sufficient to have such benefit, and a company must have rating scores for at least 3 consecutive years.

According to the information from the analysis results, higher scores for a certain period of time result in more positive developments in some financial ratios of that company. Additionally, it is determined that the scores have a significant influence on the result on sales. Another study may be carried out on the scores of the companies in terms of the 4 main sections of the CMB's Corporate Governance Principles using similar analyses. As is known, in addition to the general compliance score given to the ranked companies in Turkey, scores are assigned to the four main sections: shareholders, public disclosure and transparency, stakeholders and management board. Further studies may be carried out to define the influences of the scores given for these four main sections in addition to the general compliance score on the financial ratios considered to be the success criteria. In addition, research comparing the financial ratios of the ranked and unranked companies would provide significant information on whether the carrying out of the corporate governance ranking makes a difference for a company.

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