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Relationship Between Sustainability Report, Financial Performance, and Ownership Structure: Research on The Turkish Banking Sector

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RESEARCH ARTICLE

# Relationship Between Sustainability Report, Financial Performance, and Ownership Structure: Research on The Turkish Banking Sector

Mesut Doğan<sup>1</sup> , Mustafa Kevser<sup>2</sup>

#### **Abstract**

The financial statements of companies have been evaluated in financial performance analysis for many years. However, today, investors and business stakeholders, who want to invest in businesses, demand not only the information presented in financial statements, but also non-financial information to see future status and test whether it have a sustainable structure. In this context, the reporting of information on the economic, social, and environmental dimensions of businesses is possible through sustainability reporting. The purpose of this study is to reveal the sustainability scores of banks operating in the Turkish Banking sector. Another aim of the study is to determine the relationship between the sustainability score of banks, financial performance indicators, and ownership structure. In the study, the compliance scores of banks along with a sustainability report determined the framework of criteria for sustainability reports standardized by the GRI. From 2013-2018, the data of 10 banks that published sustainability reports in the Turkish Banking Sector were analysed. According to the results obtained from the research, the sustainability score of banks was not effective based on their financial performance. On the other hand, an increase in the shares of the largest shareholder capital caused a decrease in the sustainability scores of banks.

#### Keywords

GRI, Sustainability reporting, Financial performance, Ownership structure, Banking

#### Introduction

With the onset of the industrial revolution, radical changes occurred in production processes, and labour-based production was replaced by mechanization and technology. With this change, there was a huge increase in the amount of goods and services produced. The increase in production also caused an increase in the need for raw materials and natural resources. The fact that businesses, governments, and other segments of society needed more resources brought the concept of sustainability to the agenda. In the Bruntdland report of 1987, the concept of sustainability emphasized "meeting the needs of today's generations without compromising the ability of future generations to meet their own needs" and defined

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sustainable development. Investors wanted the companies in which they planned to invest to have a sustainable structure when making an investment decision, and thus, they wanted to evaluate not only the financial data but also non-financial data. It is not possible to report in the financial statements of businesses developments in a global economy effective all over the world, disease, or an environmental problem occurring in a country that causes production to stop in various parts of the world, threatens natural resources, and raw materials. Sustainability reports are a tool that provide an evaluation of economic, social, and environmental aspects in addition to the continuity of corporate performance about internal and external stakeholder groups (Düzer and Önce, 2017: 638). In 1997, John Elkington coined the concept of "Triple Bottom Line", which stated that corporate sustainability had three pillars: economic, environmental, and social. Thus, traditional accounting expanded to include social and environmental performance as well as financial performance (Gençoğlu and Aytaç, 2016: 52). As a result, greater emphasis was placed on problems caused by businesses that grew by consuming world resources since the industrial revolution, and in addition, how much money businesses earned, and how this money earned became an important criterion (Altınay, 2016: 50).

It is the Global Reporting Initiative (GRI) headquartered in the Netherlands, which standardizes sustainability reports that include financial and non-financial statements and that has gained importance due to an increase in the economic, social, and environmental crises. The GRI is an international organization that develops sustainable reporting principles, sustainability reporting guidelines, works for a sustainable economic structure and is one of the leading institutions in the field. The GRI principles were first published in 2000, and in May 2013, the fourth generation reporting principle G4 was published by the GRI and was implemented in 2015. Seventy-eight percent of the top 100 companies (N100) in every country who reports sustainability refers to GRI principles (Aras and Sarioğlu, 2015). It is among the most important advantages of the GRI reporting framework to include the participation of multiple stakeholders and be accepted all over the world (Lozano and Huisingh, 2011: 101).

Sustainability reports developed within the scope of the GRI covers the results of businesses undertakings, strategies, and management practices.

Kolk (2008) listed the reasons for sustainability reporting as follows:

- An important tool to achieve specific goals.
- Facilitates the implementation of an environmental compliance strategy.
- Raises awareness of environmental problems in businesses.
- Provides opportunity for businesses to clearly convey their messages both inside and outside.
  - Provides transparency which leads to an increase in the trust for a business.
  - Fosters communication efforts and allows standardization in communication.
  - Allows business to run a campaign.

- Increases business reputation, reduces costs, increases efficiency, increases employee motivation, and business development opportunities.

Lozano (2013) stated that there were two main reasons for the preparation of organizational sustainability reports. The first one was to evaluate the economic, environmental, and social dimensions of the organization, and the second one was to share the efforts and sustainability of the organization with its stakeholders.

The categories and elements included in the GRI G4 sustainability reporting guideline are presented in the table below.

Table 1
Categories and Elements Included in the Sustainability Reporting Guideline

Category	Economic	Environmental
Elements	1.Economic	1.Materials
	performance	2.Energy
	<ol><li>Market assets</li></ol>	3.Water
	3.Indirect economic	4.Biodiversity
	effects	5.Emitions
	<ol><li>Purchasing practices</li></ol>	<ol><li>Wastewater and</li></ol>
		waste
		7.Goods and services
		8.Adaptation
		9. Transportation
		10.General
		11.Environmental
		evaluation of the
		supplier
		12.Environmental
		complaint
		mechanisms

Category	Social			
Sub-categories	Labour Practices and Decent Work	Human Rights	Community	Product Responsibility
Elements	1.Employment	1.Investmnet	1.Local Communities	1.Client Health and
	2.Labour	2.Prevention of	2. Fighting Corruption	Safety
	Management	Discrimination	<ol><li>Public Policy</li></ol>	<ol><li>Labelling of</li></ol>
	Relationships	3. Right to	4. Anti-Competitive	Products and Services
	3.Occupational Health	Organization and	Behaviour	<ol><li>Marketing</li></ol>
	and Security	Collective Bargaining	<ol><li>Adaptation</li></ol>	Communication
	4.Education and	4.Child Workers	<b>6.</b> Evaluation of the	4.Client Privacy
	Instruction	<ol><li>Forced and</li></ol>	Suppliers in terms of	5.Adaptation
	5.Diversity	Compulsory Labour	their Effects on the	•
	and Equality of	6. Security Practices	Community	
	Opportunity	7. Rights of Local	7.Complaint	
	<b>6.</b> Equal Wage for	People	Mechanisms for	
	Women and Men	8.Evaluation	the Effects on the	
	7. Evaluation of the	9.Evaluation of the	Community	
	Supplier in terms of	Supplier in terms of	•	
	Labour Practices	Human Rights		
	8.Complaint	10.Human Rights		
	Mechanisms for	Complaint		
	Labour Practices	Mechanisms		

Sustainability reporting was started on a voluntary basis, but countries began to introduce voluntary or mandatory regulations over the past 15 years. Especially the 2008 global financial crisis caused tightening of financial regulations in developing countries. During this crisis, some countries made incentive regulations for sustainability reporting and some went even further and determined the minimum information that must be explained. Thus, in many countries, it has become mandatory to publish sustainability data on issues related to public procurement, being listed on the stock exchange, environment, occupational health, and safety. An example is the obligation to disclose non-financial information of publicly owned businesses in countries such as Sweden, India, and Russia. In addition, countries such as Finland, France, Spain, the Netherlands, Brazil, and China have made it compulsory for public enterprises to disclose their non-financial information as they operate on behalf of the community (KPMG, GRI and UNEP, 2013: 17). Within this framework, ownership structures are also becoming an important issue in sustainability reporting as well as stakeholders.

The purpose of the current study is to analyse the relationship between sustainability reporting, financial performance, and ownership structure in the banking sector in Turkey. Banks thatled economic development with their fund raising and funding activities. In this way, banks directly affect society, the environment and the economy with the quality and quantity of services they provide. Therefore, whether banks have a sustainable structure is important for all stakeholders. Many banks established internal units to carry out environmental activities, publish sustainability reports, and develop environmentally friendly products and services. Some banks go beyond this and continue their activities for the purpose of sustainable development (Kaya, 2010: 76).

No study was found investigating the sustainability reporting, financial performance, and ownership structure of banks in Turkey. In the current study, the compliance score of banks along with a sustainability report determined the framework of the sustainability reports standardized by the GRI. When the existing national literature was analysed, there were some studies that compared the performance of companies that publish and do not publish sustainability reports or determined their sustainability level through content analysis. The current study is quite different from other studies both in terms of sector, variables, and method. The current study is expected to shed light on similar research to be conducted in other sectors. In this regard, the current study is believed to be incredibly important and will contribute to the literature.

In the following first section of the study, the concept of stakeholder, which is an important element in the Brundtland report, and the sustainability reporting activities carried out in the following phase, are discussed within the framework of stakeholder theory. In addition, explanations are made regarding the concept of the ownership structure within the framework of corporate governance. In the second section, the literature on the relationship between financial performance and sustainability reporting in the banking sector in Turkey is presented. Next, the relationship between sustainability reporting and financial performance and ownership structure is analysed and finally results are presented and evaluations are made.

# Stakeholder Theory

Stakeholders are generally defined as individuals or groups having certain interests in business. Neo-classical economics promotes the understanding that stakeholders are entitled to the profits of a business and that the business tries to maximize shareholders' revenues. In this framework, stakeholders have a privileged and prioritized position and legal rights to receive shares from the profit of the business. The shareholder theory advocated by neo-classical economics was criticized by Freeman in the Strategic Management: Stakeholder Theory (1984) and it has become one of the important management theories in recent years. Although stakeholder theory entered management literature in the 1970s, its fundamentals are based on Adam Smith's Economic theory. As Adam Smith put it in "The Theory of Moral Sentiments" in 1759 and in "The Wealth of Nations" in 1776, ethical and economic benefits are in a relationship of mutual utilitarianism and if businesses can provide these two benefits together, they should be considered to have worked effectively. These views of Smith in the field of ethics are expressed under the assumption that businesses are considered closed systems and are not affected by the environment. However, in the 1950s, with the Quality Movement, raising awareness of consumers and increasing lobbying activities as well as the demands for the protection of the environment have revealed the fact that businesses and society interact with each other. Thus, it has become accepted that businesses are open systems, and influenced by external environmental dynamics. With the acceptance of the fact that businesses are open systems, Corporate Social Responsibility discussions have become part of the literature. This approach found support in a short time, forming the foundations of many theories such as Shareholder Theory and Stakeholder Theory (Ertuğrul, 2008: 200).

The first study in which stakeholder theory was discussed in detail is the book of Strategic Management: A Stakeholder Approach by R. Edward Freeman in 1984. Freeman defined the concept of stakeholder as groups that are vital for the continuation of the organization, have a dominant importance for the survival and success of the organization, and are effective in business activities. According to Freeman, the stronger the bonds that are established between groups that have interests in the business, the easier it will be to achieve common goals; otherwise, the weakening of relations between groups will make it difficult to achieve those goals. This approach is the basic premise of stakeholder theory (Aktan and Börü, 2007: 14). According to Freeman's (1984) stakeholder theory, stakeholders are divided into two groups: as internal and external stakeholders. Internal stakeholders include founders, shareholders, managers, and employees. External stakeholders include community, government,

customers, suppliers etc. Stakeholder theory aimed to strike a balance between internal and external stakeholders. According to Freeman's (1984) stakeholder theory, it was not enough for businesses to have corporate governance mechanisms that only considered the relations between managers and shareholders. In addition, in order for the business to maintain a sustainable structure, other groups related to the business should also be taken into consideration (Koçel, 2003). Emshoff and Freeman argued that the theory has two basic principles. The first principle was "determining what the purpose of the business is" and the determination of the purpose ensured the development of the business and improvement in performance. The other principle of the theory was "determining what the responsibilities are towards stakeholders". According to this principle, the management should regulate its relations with its stakeholders in order to achieve its managerial goals (Ertuğrul, 2008: 201).

The stakeholder theory that Freeman put forward in 1984 included a traditional approach. As of 2000, it has been generally accepted that the concept of stakeholders has a more general nature and not only consists of lenders, employees, customers, and suppliers, but also includes the state, local communities, environmentalists, media, and future generations as part of society (Wenzhong ve Limin, 2012: 59-61). In this framework, stakeholders are closely related to the development and sustainability of business, and operational risks, costs, decision-making processes, and the quality of business activities are related to stakeholders. This cycle requires the concepts of sustainability and corporate social responsibility be handled within the framework of the stakeholder approach.

#### Literature

There were many studies examining the relationship between sustainability reporting and financial performance. While these studies investigated the relationship between the two variables, they used very different methods and found different results even in similar sectors. Some of these studies performed content analysis with annual reports, some with sustainability index data. In addition, accounting-based indicators such as rate of return on assets or rate of return on equity as well as market-based indicators such as profit per share or price/earnings ratio were also used. Studies

carried out for different industries in different countries and from different time periods. Therefore, different results were obtained from these studies examining the relationship between sustainability reporting and financial performance. Some of these studies found a positive relationship between sustainability reporting and financial performance, others found a negative relationship, while still others found no relationship at all (Vance, 1975; Preston and Q'Bannon, 1997; Ameer and Othman, 2012; Iqbal et al., 2012, D'arcimoles and Trebucq, 2002; Becchetti et al., 2008). In studies where a negative relationship was found between sustainability practices and financial performance, the main idea was that sustainability studies

were costly and had a decreasing effect on operating profit. However, the new classification developed within the study conducted by Roman et al. (1999) led to a decrease in the number of studies showing negative correlation and thus determined that a significant part of the studies examined in this framework found a positive relationship.

Within sustainability reporting, studies investigating the relationship between ownership structure and financial performance have become important in recent years. Although volunteering is essential in sustainability reporting, the binding of sustainability reporting to global standards with GRI principles and their implementation among businesses led businesses to start reporting non-financial information besides their financial statements in accordance with the legislation (King and Bartels, 2016). Sweden was the first country to ask public organizations to submit corporate social responsibility reports according to GRI standards in 2007 (Angelstig and Gustavsson, 2016: 6). While some studies examined the relationship between ownership structure and sustainability reporting, more places were allocated to social and environmental information in the reporting of public organizations (Cormier & Gordon, 2001; Tagesson, Blank, Borger & Collin, 2009), while in some other studies, the exact opposite was observed (Balal, 2000; Secci, 2005). In line with these developments, the relationship of ownership structure with sustainability reports based on stakeholder demand has attracted the attention of academics (Kane and Velury 2004, Glac 2010, Del Guercio and Tran 2012).

Pava and Krausz (1996) investigated the relationship between corporate social responsibility and financial performance. In their study, data was obtained for the periods of 1985-1987 and 1989-1991 from a total of 106 businesses. These 106 businesses were divided into two equal groups depending on the importance they attached to social responsibility statements. Thus, one group consisted of 53 businesses attaching greater importance while the other group consisted of 53 businesses attaching less importance to social responsibility statements. According to the results obtained from the study, the market based performance indicators of the group attaching greater importance to social responsibility were slightly higher than the other group. No significant difference was found between the price/earnings ratios of the two groups. The market value/book value ratio return on assets, equity, and profits per share of the group of businesses attaching greater importance to social responsibility were higher than the other group.

Ghazali (2007) investigated the effect of ownership structure on corporate social responsibility disclosures. In the study, social responsibility statements were obtained from the annual reports of large businesses operating in the Malaysian stock exchange and the data was analysed by a multiple regression method. According to the results of the study, the businesses owned by managers made a lower level of social responsibility disclosure than public enterprises.

Fauzi and İdris (2009) investigated the relationship between corporate social responsibility and financial performance within the framework of public and private enterprises. Ac-

cording to the results of the study, there was a positive relationship between corporate social responsibility and financial performance under the assumption of resource theory and good management theory.

Burhan and Rahmanti (2012) analysed the relationship between sustainability reporting and financial performance for all dimensions. In the study, the data of 32 businesses operating in Indonesia Stock Exchange for the period of 2006-2009 was analysed. Sustainability reporting within the framework of the GRI G4 sustainability guideline and the three-dimensional independent variable rate of return on assets dependent variables were used as an indicator of financial performance. According to the research results, only the social dimension of sustainability reporting affected financial performance.

Ameer and Othman (2012) investigated the relationship between sustainability reporting and financial performance. In the study, the data of 100 big sustainable companies from developed and developing countries for the period of 2006-2010 was examined. In addition, 100 companies of the same size were included in the analysis as the control group. In the study, sales/income growth, return on assets, profit before tax and cash flow indicators were used as financial performance indicators. According to the results of the study, the businesses that attach greater importance to sustainability practices performed better in terms of return on assets, profit before tax, and cash flow indicators.

Darus et al. (2013) stated that family ownership and foreign ownership were important factors in informing the shareholders through the use of the corporate website in their research on the Malaysian Stock Exchange.

Başar (2014) investigated the reporting levels of companies in the BIST Chemistry, Petroleum, and Plastic Indexes between 2010 and 2012 according to the social responsibility criteria set by GRI and the relationship of the results with the financial performance criteria. The financial performance criterion of the study was profit per share, and correlation analysis was used as a method. According to the results of the study, there was an inverse relationship between social responsibility disclosures and profit per share.

Fettahoğlu (2014) investigated whether there was a relationship between the social responsibilities of businesses and their financial performance. In the study, 16 companies whose stocks were traded in İMKB and which published sustainability reports between 2009 and 2011 were identified. Social responsibility components were analysed under four headings: relations with employees, relations with the environment, relations with the community, and product responsibility. The financial indicators that made up the dependent variables of the study were return on equity, return on assets, leverage ratio, asset turnover rate, profit per share, and return on stock. Multiple regression analysis was used as the method. According to the results of the study, there was a negative relationship between leverage ratio and culture

and art expenditures. A positive relationship was determined between the ratio of collective bargaining staff, the increase in the number of women, the increase in environmental expenditures, the increase in label information and leverage ratio. A reverse relationship was determined between the asset turnover rate and the ratio of young employees, and a positive relationship was found between other social responsibility components. In the study, a negative relationship was determined between profit per share and culture and art expenditures. Accordingly, the per-share profit of businesses that support culture and arts was lower than that of those that did not support culture and arts.

Özçelik et al. (2014) investigated the relationship between corporate social responsibility and financial performance by analysing the 2010-2012 data of companies in the BIST 100 index. In the study, the hypothesis that companies publishing corporate social responsibility reports had higher performance in terms of financial accounting was tested with logistic regression analysis. In the study, corporate social responsibility was used as the dependent variable while financial performance rates, firm size, risk, and partnership structure were used as the independent variables. According to the results of the study, a significant relationship was found between company size and corporate social responsibility. No relationship was found between financial performance, risk and partnership structure and corporate social responsibility.

Shamil et al. (2014) investigated the effect of the board structure on sustainability reporting. In the study, data was collected from the 2012 annual reports of 148 businesses selected randomly from the Colombo Stock Exchange (Sri Lanka) and sequential logistic regression analysis was performed. According to the results of the study, while there was a positive relationship between executive duality and sustainability, there was a negative relationship between women management and sustainability reporting.

De Beelde and Tuybens (2015) examined the relationship between the largest shareholder and sustainability reporting within the scope of ownership density. According to the results of the study, the density of ownership was higher in companies that did sustainability reporting compared to companies that did not perform sustainability reporting.

Arayssi et al. (2016) investigated the impact of gender differences in company boards on sustainability reports and shareholder well-being. According to the results of the study, the presence of women in company boards decreased the risk of the company and increased financial performance.

Şişman, Doğan and Ağca (2016) analysed the corporate social responsibility or sustainability reports of 50 businesses listed on the BIST (İstanbul Stock Exchange) and included in the sustainability index to determine the impact of their 2013 supply chain activities on their financial performance of 2014. According to the results of the study, there was a significant

and positive relationship between economical supply chain management activities and return on assets and return on equity, but there was no significant relationship between environmental and social supply chain management activities and return on assets and return on equity.

Angelstig and Gustavsson (2016) used the logistic regression method for companies operating in NASDAQ Stockholm at the end of 2013 to determine the factors affecting their preference for publishing sustainability reporting. In the study, it was analysed whether the ownership structure had an impact on sustainability reporting based on the corporate investor and large shareholder ownership. In the study, a positive relationship was determined between sustainability reporting and corporate investor ownership. Accordingly, the increase in corporate investor ownership increased the likelihood of sustainability reporting. No statistically significant relationship was found between the intense ownership structure and the decision on sustainability reporting practices. The effect of investor identity on sustainability reporting decisions was also investigated in this study. A positive relationship was determined between private corporate investor ownership and decision making, and a negative relationship between public corporate investor ownership and decision making.

Haladu and Salim (2016) examined the relationship between environmental information disclosures and ownership structure within the framework of GRI G4 principles. In the study, the data of 67 companies for the period of 2009-2014 was analysed. According to the results of the study, there was a statistically significant and strong relationship between the company's environmental disclosures and ownership structure. Firms with foreign ownership structure in countries called third world countries such as Nigeria were more sensitive to environmental issues than firms with local ownership structure.

Kasbun, Teh and Ong (2016) investigated the relationship between sustainability reporting and financial performance. In their study, they analysed the data of 200 companies that traded on the Malaysian Stock Exchange. Return on assets and return on equity were the financial performance indicators used in the study. According to the results of the study, sustainability reporting positively affected the financial performance of businesses.

Nobanee and Ellili (2016) investigated the level of corporate sustainability disclosures of banks operating in the United Arab Emirates stock exchange for the period of 2003-2013. In the study, it was determined that corporate sustainability disclosures were low in the framework of sustainability reporting of the banks operating in the UAE stock exchange. It was concluded that the conventional sustainability statements of conventional banks were higher than those of Islamic banks. In addition, while sustainability disclosures were found to affect the financial performance of conventional banks significantly and positively, no statistically significant effect of sustainability disclosures on the financial performance of Islamic banks was determined.

Smit and Zyl (2016) analysed the annual integrated reports of eight commercial banks operating in the Johannesburg Stock Exchange with content analysis and found that the compliance of social reporting with GRI G4 standards was very weak.

Aman and İsmail (2017) examined the factors affecting the sustainability report statements of the firms listed on the Malaysian Stock Exchange in 2016. According to the results of the study, sustainability reports were affected by the ownership structure (family ownership, holding ownership and board of directors). According to the results, there was a statistically significant relationship between the type of industry and the level of sustainability reporting.

Akyüz and Yeşil (2017) analysed the 2011-2015 data of 19 businesses operating in the production sector registered in the BIST Sustainability Index and examined their financial performance. According to the results of the study, the financial performance of the companies that meet the sustainability criteria were also positively affected while meeting these criteria.

Düzer and Ago (2017) examined whether the financial performance of companies that published and did not publish a sustainability report differs. To this end, 30 companies that published sustainability reports according to GRI reporting standards were selected among the companies operating in BIST for the period of 2008-2014. In addition, a control group consisting of 26 companies, which were in the same sector with these companies and which did not publish a sustainability report, was created. Two independent samples t-test and Mann Whitney U test were used to determine whether there were any financial performance differences between the companies. According to the results of the study, the return on assets and return on equity were higher among the companies that published sustainability reports. In addition, it was concluded that the companies that published sustainability reports had lower price/earnings ratio indicators. No significant difference was found between the market value/book value ratios of companies that published and those that did not publish sustainability reports.

Rudyanto (2017) investigated the impact of public ownership, family ownership, and managerial effectiveness on the quality of sustainability reports. In the study, the 2010-2014 data of 123 companies operating in the Indonesian Stock Exchange were analysed. According to the results of the study, public ownership, independence, and authority of the board of directors positively affect the quality of sustainability reports. Family ownership and the size of the board of directors had no influence on the quality of sustainability reports.

Şendurur and Karacaer (2017) determined triple responsibility reporting scores based on the sustainability reports of the companies traded in the BIST 100 index within the framework of the triple responsibility reporting proposed by Elkington (1997) and investigated the relationship between the 10 variables determined by multiple regression analysis. The 10 independent variables used in the study are sector, size, country of origin, ownership structure, auditor type, business type, leverage ratio, liquidity, profitability, and age. In the ownership structure analysis, the enterprises were divided into two as public and private enterprises. The profitability variable in the study was the period net profit. According to the results of the study, no relation was found between the triple responsibility reporting scores and the ownership structure. In addition, a medium positive correlation was found between triple responsibility reporting scores and leverage ratio and profitability.

Taşdemir (2017) investigated whether corporate social responsibility disclosures of businesses had an impact on their financial performance within the scope of sustainability reports. In the study, information given by 35 companies in the BIST Sustainability Index regarding their corporate social responsibility in their sustainability reports and annual reports between 2011 and 2016 was determined. Financial performance indicators of the study were activity rates, profitability ratios, liquidity ratios, and financial structure ratios. According to the results of the study, there was a significant and positive relationship between the corporate social responsibility statements of the enterprises and the profitability ratios and liquidity ratios.

Şendurur and Temelli (2018) determined the sustainability scores of traditional banks and participation banks and analysed the relationship between these scores in relation to size, country of origin, auditor type, leverage ratio, liquidity, profitability, and age, which were the independent variables of the study. The sustainability score was the dependent variable of the study. In the study, the country of origin and ownership structure were used as dummy variables. The sustainability scores were divided into two as social and environmental scores. According to the results of the research, there was no significant difference between the participation banks and traditional banks in terms of social activities, and the traditional banks scored well above the participation banks in terms of environmental activities. In addition, due to the small size of the sample, a significant relationship could not be detected as a result of the t-test conducted between the sustainability scores and dummy variables.

Mita et al. (2018) investigated the level of corporate social responsibility disclosures in the banking sector in five Asian countries - Indonesia, Philippines, Malaysia, Singapore, Thailand. In the study, it was determined that the banks' compliance levels to GRI G4 principles are exceptionally low. In addition, it was stated that corporate social responsibility disclosures were positively associated with financial performance.

Laskar (2018) investigated the impact of corporate sustainability reporting on firm performance in four Asian countries - Japan, South Korea, Indonesia, and India. In the study, the data of 36 non-financial firms from Japan, 28 from India, 26 from South Korea and 21 from Indonesia for the period of 2009-2014 were analysed. According to the results of the study, the sustainability statements of Japanese enterprises were higher at the rate of 90%, followed by India with 88%, South Korea with 85% and Indonesia with 72%. According to the results

of the regression analysis, there was a statistically significant and positive relationship between sustainability reporting and financial performance. According to another result obtained, the impact of sustainability reports on firm performance was higher in developed countries than in developing countries.

Topaloğlu (2019) examined the relationship between sustainability studies and financial performance. In the study, the financial performances of 11 companies included in the BIST Sustainability Index and 27 companies not included in the index were analysed. The companies included in the index were included in the analysis as "1" and those not included in the index as "0". The data of 2014-2018 period were used in the study and panel data analysis was used as the method. According to the results of the study, there was a significant and positive relationship between sustainability studies and the rate of active profitability.

Buallay (2019) investigated the relationship between sustainability reporting and the rate of return on assets, rate of return on equity and Tobin's Q rate. In the study, the data of 235 banks for the period of 2007-2016 were analysed. It was found that environmental, social, and corporate governance statements had a positive effect on performance. However, when the research results were examined individually, different results emerged. Accordingly, environmental disclosures affected active profitability and return on equity positively, whereas corporate governance disclosures affected active profitability and return on equity negatively, and Tobin's Q rate positively.

Buallay (2019) conducted a comparative study between the banking and manufacturing sectors, investigating the impact of sustainability reporting on financial performance and market performance. In the study, the data of 932 manufacturing companies and 530 banks from 80 countries for the period of 2008-2017 were analysed. According to the results of the study, sustainability reports within the framework of environmental, social, and corporate governance statements had a positive effect on the financial performance and market performance of the manufacturing sector, while it had a negative effect on the banking sector.

# Methodology

# Purpose of the Study

The purpose of the current study is to reveal the sustainability scores of the banks operating in the Turkish Banking sector. Another purpose of the study is to determine the relationship between the sustainability score of the banks and financial performance indicators. In the study, interactions between sustainability scores will also be determined according to the ownership structure of banks (foreign, corporate, biggest ownership, biggest three ownership,

free float ratio). In this study, the compliance score of the banks with the sustainability report was determined within the framework of the criteria of sustainability reports standardized by the GRI.

# **Data Set and Sample**

In the study, data of 10 public, private, and foreign banks operating in the Turkish Banking sector for the period of 2013-2018 were used (Türkiye Halk Bank A.Ş., Akbank, Türkiye İş Bank A.Ş., Şekerbank T.A.Ş, Türkiye Sınai Kalkınma Bank A.Ş., Türk Ekonomi Bank, Garanti Bank, Türkiye Vakıflar Bank A.O., Yapı ve Kredi Bank A.Ş., T.C. Ziraat Bank A.Ş.). Financial data used in the empirical analysis were obtained from the web page of the Banks Association of Turkey (www.tbb.org.t). Sustainability scores were created on the basis of the Sustainability Reports published on the banks' websites.

#### Variables

In the current study, accounting based indicators were used as financial performance indicators. Two financial performance indicators were used in the study. These were return on equity (ROE) and return on assets (ROA).

Return on Assets (ROA): Calculated by proportioning the net profit of the period to total assets.

Return on Equity (ROE): Calculated by proportioning the net profit of the period to the total equity.

In the study, 5 variables were used as ownership structure indicators. These are given below;

LARGEST1: Obtained by dividing the capital share of the partner with the largest share by total capital.

LARGEST3: Calculated by proportioning the capital share of the third largest shareholder to total capital.

FOREIGN: Obtained by dividing the amount of capital held by foreign investors by total capital.

INSTITUTIONAL: Obtained by dividing the amount of capital held by institutional investors by total capital.

FREE FLOAT RATIO: Flee Float Rate of Companies.

Three variables related to sustainability score were used in the study. Sustainability levels of the banks were divided into three categories: Economic Sustainability, Environmental Sustainability, and Social Sustainability. The sustainability levels of the banks were determined by 40 criteria so that the sustainability scores of the banks were calculated. These 40 criteria are given in the appendices. A total of 2400 data were produced in the study.<sup>1</sup>

In the study, economic, environmental, and social sustainability data were searched with 0-1 values by analysing the sustainability reports of the banks. In this way, economic, environmental, and social sustainability scores were created. If a bank has economic, environmental, and social sustainability activities, that activity is given a value of 1, in other cases a value of 0 is given. G4 Sustainability Reporting Guidelines were taken as the basis for defining sustainability areas in the process of reviewing reports.

ECONOMIC: (Total Score /13)\*100

ENVIRONMENTAL: (Total Score /12)\*100

SOCIAL: (Total Score /15)\*100

Table 2
Banks' Economic Sustainability Scores

BANKS	2013	2014	2015	2016	2017	2018
Akbank	7692	84.62	69.23	76.92	76.92	100.00
Garanti Bank	100.00	76.92	76.92	100.00	76.92	84,.62
İş Bank	69.23	76.92	84.62	76.92	100.00	76.92
Şekerbank	76.92	100.00	76.92	84.62	69,23	76.92
Halk Bank	84.62	76.92	100.00	76.92	76.92	84.62
TSKB	76.92	84.62	69.23	76.92	61.54	0.00
Vakıfbank	100.00	76.92	76.92	84.62	76.92	84.62
Yapı Kredi Bank	69.23	76.92	61.54	0.00	100.00	76.92
TEB	76.92	38.46	76.92	84.62	69.23	76.92
Ziraat Bank	84.62	0,00	100.00	76.92	69.23	38.46

Economic sustainability scores of the banks are given in Table 2. When the results were analysed, the banks with the highest economic sustainability scores between 2016 and 2018 are Akbank, İşbank, Yapı Kredi and Garanti. Between 2013 and 2015, public banks had the highest economic sustainability scores.

<sup>1 10</sup> Bans\*6 Years\*40 Criteria = 2400

Table 3
Banks' Environmental Sustainability Scores

BANKS	2013	2014	2015	2016	2017	2018
Akbank	66.67	66.67	83.33	66.67	83.33	91.67
Garanti Bank	100.00	66.67	75.00	75.00	75.00	66.67
İş Bank	83.33	66.67	83.33	83.33	100.00	66.67
Şekerbank	75.00	75.00	75.00	66.67	83.33	66.67
Halk Bank	83.33	83.33	100.00	66.67	75.00	58.33
TSKB	75.00	66.67	83.33	66.67	66.67	16.67
Vakıfbank	100.00	66.67	75.00	58.33	66.67	66.67
Yapı Kredi Bank	83.33	66.67	66.67	16.67	100.00	66.67
TEB	75.00	58.33	66.67	75.00	83.33	66.67
Ziraat Bank	66.67	16.67	100.00	66.67	66.67	58.33

Environmental sustainability scores of the banks are given in Table 3. When the results were analysed, the banks with the highest environmental sustainability scores between 2016 and 2018 were Akbank, İşbank and Yapı Kredi. Between 2013 and 2015, public banks had the highest environmental sustainability scores.

Table 4
Banks' Social Sustainability Scores

BANKS	2013	2014	2015	2016	2017	2018
Akbank	100.00	100.00	100.00	100.00	100.00	100.00
Garanti Bank	100.00	73.33	86.67	93.33	100.00	100.00
İş Bank	100.00	100.00	100.00	100.00	100.00	73.33
Şekerbank	86.67	93.33	100.00	100.00	100.00	100.00
Halk Bank	100.00	100.00	100.00	73.33	93.33	66.67
TSKB	100.00	100.00	100.00	100.00	93.33	0.00
Vakıfbank	100.00	73.33	93.33	66.67	86.67	100.00
Yapı Kredi Bank	100.00	100.00	100.00	0.00	100.00	73.33
TEB	93.33	53.33	86.67	100.00	100.00	100.00
Ziraat Bank	93.33	0.00	100.00	73.33	93.33	53.33

Social sustainability scores of the banks are given in Table 4. When the results were analysed, the banks with the highest social sustainability scores were Akbank, TEB and İşbank. Public banks, on the other hand, had a relatively lower social sustainability score than other banks.

Table 5
Banks' Total Sustainability Scores

BANKS	2013	2014	2015	2016	2017	2018
Akbank	82.50	85.00	85.00	82.50	87.50	97.50
Akbank	(4)	(3)	(3)	(4)	(2)	(1)
Garanti Bank	100.00	72.50	80.00	90.00	85.00	85.00
Gагапи Вапк	(1)	(5)	(4)	(1)	(3)	(2)
İs Bank	85.00	82.50	90.00	87.50	100.00	72.50
15 Вапк	(3)	(4)	(2)	(2)	(1)	(4)
Şekerbank	80.00	90.00	85.00	85.00	85.00	82.50
Şekerbank	(5)	(1)	(3)	(3)	(3)	(3)
Halk Bank	90.00	87.50	100.00	72.50	82.50	70.00
Haik Bank	(2)	(2)	(1)	(5)	(4)	(5)
TSKB	85.00	85.00	85.00	82.50	75.00	5.00
ISKB	(3)	(3)	(3)	(4)	(6)	(7)
Vakıfbank	100.00	72.50	82.50	70.00	77.50	85.00
vakiibalik	(1)	(5)	(4)	(6)	(5)	(2)
Yapı Kredi Bank	85.00	82.50	77.50	5.00	100.00	72.50
rapi Kiedi balik	(3)	(4)	(5)	(7)	(1)	(4)
TEB	82.50	50.00	77.50	87.50	85.00	82.50
IEB	(4)	(6)	(5)	(2)	(3)	(3)
Ziraat Bank	82.50	5.00	100.00	72.50	77.50	50.00
Ziraat Bank	(4)	(7)	(1)	(5)	(5)	(6)

Total sustainability scores of the banks are given in Table 5. When the results were analysed, the banks with the highest total sustainability scores in 2018-2017-2016 were Akbank, İşbank and Yapı Kredi, and Garanti, respectively. The banks with the highest sustainability scores in 2015-2014-2013 were Garanti Bank, İşbank, Şekerbank and Ziraat bank, respectively.

Table 6 Banks' Sustainability Means Scores Between 2013 And 2018.

BANKS	Economic Sustainability	Environmental Sustainability	Social Sustainability	Total Sustainability	Total Rank
Akbank	80.7683	76.3900 (3)	100.0000 (1)	86.6667	1
İş Bank	80.7683	80.5550 (1)	95.5550 (3)	86.2500	2
Garanti Bank	85.8967 (1)	76.3900 (3)	92.2217 (4)	85.4167	3
Şekerbank	80.7683	73.6117 (4)	96.6667 (2)	84.5833	4
Halk Bank	83.3333 (2)	77.7767 (2)	88.8883 (5)	83.7500	5
Vakıfbank	83.3333 (2)	72.2233 (5)	86.6667 (6)	81.2500	6
TEB	70.5117 (4)	70.8333 (6)	88.8883 (5)	77.5000	7
YKB	64.1017 (5)	66.6683 (7)	78.8883 (8)	70.4167	8
TSKB	61.5383 (6)	62.5017 (8)	82.2217 (7)	69.5833	9
Ziraat Bank	61.5383 (6)	62.5017 (8)	68.8867 (9)	64.5833	10

Table 6 shows the mean sustainability scores of the banks between 2013 and 2018. The bank with the highest mean economic sustainability score was Garanti Bank while the banks with the lowest mean economic sustainability scores were TSKB and Ziraat Bank. The bank having the highest mean environmental sustainability score was İş Bank while the bank having the lowest mean environmental sustainability scores were TSKB and Ziraat Bank. On the other hand, the bank having the highest mean social sustainability score was Akbank while the bank having the lowest mean social sustainability score was Ziraat Bank. When the banks were ranked in terms of total sustainability score, the bank with the highest score was Akbank while the bank with the lowest score was Ziraat Bank.

Table 7
Comparison of the Sustainability Scores of the Banking Sector by Years

Type of Transparency	2013	2014	2015	2016	2017	2018	TOTAL
Economic	81.5380	69.2300	79.2300	73.8460	77.6910	70.0000	75.2558
Sustainability Level	(2)	(2)	(3)	(2)	(3)	(2)	(2)
Environmental	80.8330	63.3350	80.8330	64.1680	80.0000	62.5020	71.9452
Sustainability Level	(3)	(3)	(2)	(3)	(2)	(3)	(3)
Social Sustainability	97.3330	79.3320	96.6670	80.6660	96.6660	76.6660	87.8883
Level	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total Sustainability Level	87.2500	71.2500	86.2500	73.5000	85.5000	70.2500	79.0000

In Table 7, the sustainability scores of the banking sector were compared by years. When the results were examined, the *Social Sustainability* was the highest among the sustainability dimensions of the banking sector while the lowest one was the *Environmental Sustainability*.

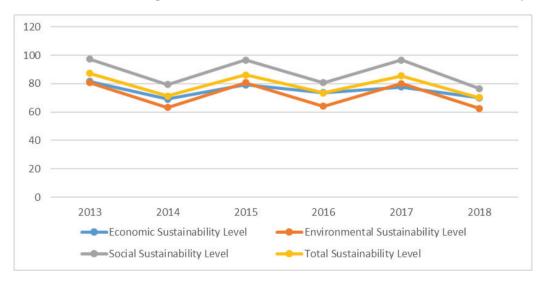


Figure 1. Sustainability scores of the banking sector by years

Figure 1 shows the sustainability scores of the banking sector by years. Every year, the social sustainability score of the banking sector is higher than the environmental and economic sustainability score. While the environmental sustainability and economic sustainability scores were remarkably close to each other in 2013, 2015 and 2017, in other years, the economic sustainability scores were partially higher than the environmental sustainability scores. The social, environmental, and economic sustainability scores of the banking sector are in a fluctuating trend.

Table 8
The Relationship Between the Banks' Sustainability Scores and Financial Performance and Ownership Structure

	ECONOMIC	ENVIRONMENTAL	SOCIAL
	SUSTAINABILITY	SUSTAINABILITY	SUSTAINABILITY
ROA	102	074	040
ROE	053	041	081
LARGEST1	332**	265*	333**
LARGEST3	235	218	278*
FOREIGN	.099	.036	.130
INSTITUTIONAL	220	161	096
FREEFLOATRATIO	.265*	.203	.232

In Table 8, the relationship between the banks' economic, environmental, and social sustainability scores and financial performances and ownership structures was tested with correlation analysis. When the analysis results are analysed, it is understood that there is no significant relationship between banks' economic, environmental, and social sustainability scores and ROA and ROE, which are financial performance indicators (p>0.05). However, there is a positive and significant relationship between the banks' economic sustainability score and free float ratio (FFR) (p<0.05). Similarly, although there is a positive relationship between the banks' environmental and social sustainability scores and free float ratio, the relationship is weak (r=0.203 and 0.232). There is no significant relationship between foreign investor ownership and institutional investor ownership and the economic, environmental, and social sustainability scores of the banks (p>0.05). However, there is a negative and significant relationship between the largest investor ownership and the three largest investors ownership and the economic, environmental, and social sustainability scores of the banks (p<0.05). In other words, as the largest investor ownership of the banks and the three largest investors ownership increase, the sustainability scores also increase.

Table 9
The Effect of the Banks' Sustainability Score on Financial Performance

	Dependent Variable: ROA			Dependent Variable: ROE		
Independent Variables	Beta	Std. Error	Significance	Beta	Std. Error	Significance
Constant	1.606	.360	.000	14.481	2.128	.000
Economic	006	.008	.446	.002	.046	.957
Environmental	001	.010	.884	.016	.056	.775
Social	.004	.007	.549	024	.041	.561
Significance of the Model	0.915				0.91	9
The Number of Observations	60				60	

In Table 9, the effect of the banks' sustainability score on financial performance was tested with multiple regression analysis. When the analysis results are examined, it is seen that the economic, environmental, and social sustainability scores of the banks do not have any effect on financial performance (p>0.05). In other words, whether the banks' sustainability score is high or low does not cause any change in their financial performance.

Table 10
The Effect of the Banks' Sustainability Score on Financial Performance

	Dependent Variable Economic		Dependent Variable Environmental		Dependent Variable Social	
Independent Variables	Beta	Significance	Beta	Significance	Beta	Significance
Constant	93.453	.000	.000	14.481	108.151	.000
The Largest Ownership	343	.009	.446	.002	382	.009
Significance of the Model		0.009	0.041		0.009	
$\mathbb{R}^2$	%9.5		%5.4		%9.6	
The Number of Observations	60		60		60	

In Table 10, the effect of the ownership structure of the banks on their sustainability score was tested with stepwise regression analysis. When the results of the analysis are examined, it is seen that the largest ownership structure of the banks is effective on their economic, environmental, and social sustainability scores (p<0.05). In other words, as the largest investor ownership of banks increases, the economic, environmental, and social sustainability scores also decrease. The rate of the change explained by the largest ownership structure in the economic, environmental, and social sustainability scores of the banks is 9.5%, 5.4% and 9.6%, respectively. However, as the other variables of ownership structure (the three largest investors ownership, institutional investor ownership, foreign investor ownership and free float ratio) were not significant, they were excluded from the stepwise regression model (p>0.05).

#### Results

Sustainability reporting has become an important element in the interaction of businesses with their stakeholders. Through their sustainability reporting, businesses account for the management structure of the business, business strategy and the vision they put forward for the future to their stakeholders. The number of businesses publishing sustainability reports in the world has been increasing day by day, and the issue of sustainability has become more and more subject to research in academic circles. Sustainability reporting is an important tool for investors' future investment plans in terms of not only showing the financial performance of the business but also the impact it creates for the society and the environment.

In the current study, the sustainability scores of the banks operating in the Turkish Banking sector were determined. In the study, the relationship between the sustainability scores of banks and financial performance indicators was also determined. In addition, the interactions between sustainability scores according to the ownership structure of the banks have been another subject examined. The data of 10 public, private and foreign banks operating in the Turkish Banking sector for the period of 2013-2018 were used in the study.

According to the results of the content analysis related to sustainability scores, the highest economic sustainability score belongs to Garanti Bank, the highest environmental sustainability score belongs to İşbank and the highest social sustainability score and total sustainability score belong to Akbank. The lowest total sustainability score and the sustainability scores taken from the sub-dimensions belong to Ziraat Bank. Moreover, from among the sustainability dimensions addressed in the banking sector, "Social Sustainability" was found to be the highest while "Environmental Sustainability" was found to be the lowest.

In the study, it was also determined that the economic, environmental, and social sustainability scores of the banks are not effective on their financial performance. In other words, whether the banks' sustainability score is high or low does not cause any change in their financial performance. These findings concur with the findings reported by D'arcimoles and Trebucq (2002), Murray et al. (2006); Arsoy et al. (2012), Aggarwal (2013), Kusuma and Koesrindartoto (2014).

Another finding obtained in the current study is that the largest shareholder ownership in the total capital of the banks has an impact on the economic, environmental, and social sustainability scores. In other words, as the share of the largest shareholder of the bank's increases, the economic, environmental, and social sustainability scores also decrease. These findings are parallel to the findings of De Beelde and Tuybens (2015).

As a result, different and complex results were obtained from the studies investigating the relationship between sustainability reporting and financial performance. The results we obta-

ined in our study cover the 2013-2018 period of the banks operating in Turkey and publishing sustainability reports. In addition, analysis of the relationship between sustainability reports and ownership structure are important in terms of providing information regarding the quality and level of reports in different types of ownership structures.

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# APP-1

CATEGORIES AND ELEMEN	CATEGORIES AND ELEMENTS USED IN THE STUDY ACCORDING TO GRI 4 PRINCIPLES							
Economic Sustainability	Environmental Sustainability	Social Sustainability						
Incomes	Materials	Employment						
Operating expenses	Energy	Occupational health and safety						
Wages and profits	Water	Education and instruction						
Social investments	Bio-diversity	Diversity and equality of opportunity						
Assets at hand	Waste water and wastes	Labour practices complain mechanisms						
Risks and opportunities arising from climate change	Goods and services	Investment						
Compensation plan liabilities	Adaptation	Prevention of discrimination						
Financial support received from the	Transportation	Human rights complain mechanisms						
state								
Starting wage by gender	General	Local peoples						
Senior management information	Evaluation of the supplier in terms of the environment	Public policy						
Growth and effects on infrastructure investments	Environmental complaint mechanisms	Anti-competitive behavior						
Economic effects of the business		Complaint mechanisms about the effects on community						
Percentage of purchasing budget from local suppliers		Client health and security						
		Marketing communication						
		Client privacy						