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Sustainability Reporting and Performances of the Companies in the Istanbul Stock Exchange Sustainability Index

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Abstract**—**In today's business world, in which it is difficult to survive, the economic life of products, services or knowledge is considerably reduced. Competitors produce similar products or extra-featured ones instantly. In this environment, the contribution of companies to the social and economic environment is a preferred criterion by consumers alongside products or services. Therefore, consumers need to obtain more detailed information about companies. Besides, this drastic change in the market encourages companies to become sustainable. Sustainable business means the company puts consumed products back. Corporate sustainability, corresponds to sustainability at the level of the company, and gives equal importance to company growth and profitability together with environmental and social issues. The BIST Sustainability Index started to be calculated by the Istanbul Stock Exchange (BIST) in 2014 to evaluate the sustainability performance of companies in Turkey. The main objective of this study is to present the importance of sustainability reports in Turkey. To this aim, the performances of 15 companies in the BIST Sustainability Index were compared the periods before and after entering the index. On the other hand, sustainability reporting practices should be encouraged to increase studies on this issue. In this context, to remain on the agenda of the issue is a further objective of this study. To achieve these objectives, the financial data of the companies in the period before and after entering to the BIST Sustainability Index were analyzed using t-test in Statistical Package for the Social Sciences (SPSS) package. The results of the study showed that no significant difference between the performances of the companies in terms of the net profit margin, the return on assets and equity capital in these periods could be found. Therefore, it can be said that insufficient importance is given to sustainability issues in Turkey. The reasons for this situation might be considered as a lack of awareness due to the recent introduction and calculation of the index. It is expected that the awareness of firms and investors about sustainability will increase, and that they will demonstrate the necessary importance to this issue over time.

Keywords**—**BIST sustainability index, firm performance, sustainability, sustainability reporting.

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I. Introduction

RAPID capitalist growth after the Second World War caused negative effects on the environmental balance. In addition, the link between development and the environment emerged after this time, increasing the importance of sustainability [1]. The concept of sustainability emerged in the 1960s. Sustainability for businesses is an evaluation of the balance between economic expectations and environmental/ social sensitivity. The concept of sustainable development emerged at the United Nations Conference on the Human Environment held in Stockholm. The most widely used definition of sustainable development was made in the 1987 "Common Future" report prepared by the World Commission on Environment and Development, known as the Brundtland Commission. According to this definition, sustainable development is "the fulfilment of the needs of the present generation without depleting the ability of future generations to meet their own needs" [2].

Sustainability reports are being prepared to monitor the sustainability of companies. Sustainability reports may vary from country to country. Different guidelines have been developed to ensure that sustainability reports are clear, understandable, transparent and comparable. The forerunner to these guidelines is the Global Reporting Initiative (GRI) Guide published in 2000. The United Nations Global Compact Guide and many other guides have been published after the GRI Guidelines. However, the most widely used of these is the GRI Guidelines.

Sustainability of businesses is measured by the benefits they provide for sustainable development. The increase of activities that take into account the environment friendly and social financing sources of the firms will also increase the sustainable development [3]. The benefit to sustainable development is called sustainability performance. The most effective method used to evaluate sustainability performance is to measure performance via indexes. Indexes are provided to compare the sustainability activities of businesses. The first sustainability index was developed in the United Kingdom in 1990 under the name of the Dow Jones Sustainability Index. In Turkey, studies on the development of a sustainability index were initiated by Borsa Istanbul (BIST) and the first index started to be calculated from November 2014. In the first step, 15 companies in the BIST 30 Index fulfilled the sustainability criteria affiliated with this index. In the second step, 14 companies in the BIST50 Index were included to the Index starting from November 2015 [4].

The objective of the BIST Sustainability Index is to create an index of companies that are traded in the Istanbul Stock Exchange (Borsa Istanbul) and whose institutional sustainability performance is at an upper level, and to provide understanding, information and applications about sustainability among companies in Turkey. This index will allow firms to compare their sustainability performance locally and globally. In addition, investors will be able to distinguish between companies that adopt sustainability and corporate social responsibility principles; therefore, companies that enter the index will gain competitive advantage [4].

In the literature, it is found that there is a positive correlation between sustainability and firm performance in some studies. On the other hand, there is also a lack of correlation between sustainability and firm performance in some other studies. For instance, in the study of D'Angela [5], the performance of the companies that were on the best sustainable global reporting list between 2002 and 2006 was compared to the other firms, and no significant difference was found. In contrast to this study, in another study conducted by Chang and Kuo [6], the economic, environmental and social data of 311 firms were examined, and it was found that there was a positive correlation between sustainability and firm performance.

In [7], the impact of economic and social disclosures on sustainability in Hong Kong was investigated. According to the results of this study, there is no correlation between profitability or growth opportunities and sustainability related disclosures. In the study conducted by Vijfvinkel et al. [8], it was found that environmental sustainability activities positively affected the economic performance of SMEs.

Ameer and Othman [9] compared the economic performance of sustainable global firms to other global firms and found that sustainable firms performed better. In the same year, Lee and Pati [10] found in their work that environmental and social performance positively affected economic performance. Similarly, Vitezic et al. [11] found that companies with high economic performance have more sustainability and social responsibility disclosures in their reports. Reference [12] found a positive correlation between sustainability reporting quality and firm performance.

The objective of this study is to identify the probable deviations between the performance of the firms before and after entry in the BIST Sustainability Index. In Turkey, there were no direct related studies about this issue. It is expected that the study will make a significant contribution to the literature due to the fact that it is the first study to be conducted in Turkey. The study consists of six sections. Following the introduction section of the study, sustainability reports are introduced in the second section, the sustainability index in the third section, the method of the study in the fourth section, the findings in the fifth section, and finally the conclusion is the sixth section.

II. Sustainability Reporting

Sustainability monitoring is possible through sustainability reports. Sustainability reports are the reports on which firms express economic, environmental and social impacts. Sustainability reports are not just a tool for communication and accountability; it also reveals the links between the financial and non-financial performances of firms. These reports provide measurement, explanation, and accountability for internal and external stakeholders to achieve sustainable development goals [13].

A lot of guidance on sustainability reporting has been developed. The most widely used is GRI, which was founded in Boston in 1997 as a non-profit organization. The first GRI Guidelines were published in 2000, the second in 2002, the third in 2006, the fourth in 2011, and the last one in 2013 [14]. Following that, a lot of sustainability-related guidelines have been published such as the United Nations Global Compact, the United Nations Principles for Responsible Investment (UNPRI), OECD Guidelines for Multinational Enterprises, ISO 26000:2010 Guidance on Social Responsibility, Accountability‘s AA1000 Series of Standards, and AA1000 Assurance Standard.

Reports on sustainability are often presented in the name of corporate social responsibility, corporate governance, sustainability reports, or as a supplementary of annual reports. Sustainability reports are prepared for many reasons such as raising awareness about environmental issues, meeting stakeholder expectations, increasing transparency, creating low-cost financing, raising reputation, creating brand value, and reducing costs.

In Turkey, sustainability reports were initially presented as a supplementary of the firms’ annual reports. However, it has now become common to publish it separately in the form of a sustainability report. The most preferred sustainability reporting guide in Turkey is the GRI Guidelines. The GRI Guidelines are highly preferred because it is aimed at all businesses, translated in different languages, and easy to use [15]. As of October 2016, 9,787 firms have produced 35,651 sustainability reports in the world between 1999 and 2016, and 27,982 of these reports were prepared using the GRI Guidelines. In Turkey, 114 organizations have prepared 301 sustainability reports between 2005 and 2016, and 247 of these reports are GRI Reports [16].

III. Sustainability Index

In recent years, stock exchanges have been introducing regulations to inform investors about the sustainability related practices of companies traded on the stock market. At the same time, these regulations help raise awareness of transparency and sustainability. Arranging training programmes on sustainability, encouraging research about it, and establishing sustainability indexes are some of the regulations of the stock market.

The first index on sustainability is the Dow Jones Sustainability Index developed in the US in 1999. In the UK, the first index was developed by The Financial Times Stock Exchange (FTSE) in 2001. South Africa (2004) and Brazil (2005) began to calculate the index before many developed stock markets and set an example for other markets. The sustainability index started to be calculated by China, Indonesia, India, Hong Kong, Korea, Mexico and Egypt after 2008 [13]-[17]. In Turkey, the first sustainability index development studies started with an agreement signed between the Istanbul Stock Exchange and Ethical Investment Research Services (EIRIS) Ltd. in October 2013. With this agreement, EIRIS will evaluate companies according to the international sustainability criteria and the companies will be included the index calculated by the Istanbul Stock Exchange in consideration of the "Index Selection Criteria" determined according to the studies conducted with EIRIS. In this process, EIRIS considers the issues of environment, biodiversity, climate change, human rights, supply chain, corporate governance structure, bribery, and health and safety [18].

The first period sustainability index in Turkey was calculated for 14 firms in the BIST 30 Index between November 2014 and October 2015. The second period index was calculated by adding 14 firms in the BIST 50 Index between November 2015 and October 2016. The next step is to evaluate the companies in the BIST 100 Index [18]. It has been seen that firms that could not take a place in the first period index have made great efforts in the second period and developed methods related to sustainability governance. These efforts in the first period of the index are thought to cause permanent and effective change in the business models of the firms in the long run. It is expected that firms can attract more domestic and foreign investors' interest and have better financing opportunities whereby the BIST Sustainability Index is thought of as a tool to increase understanding, knowledge and applications on sustainability in Turkey. In this way, firms will be able to demonstrate their financial performances as well as their performance about environment, social issues and corporate governance.

IV. Method

The objective of the study is to compare before and after entry performance of 15 firms in the BIST Sustainability Index, calculated between November 2014 and October 2015. The firms involved in the study are firms that included in the BIST 30 Index by ensuring sustainability criteria for entering the BIST Sustainability Index. These companies are Akbank, Arçelik, Aselsan, Garanti Bank, Koç Holding, Migros, PETKİM, Sabancı Holding, TAV Airports, Tofaş Automotive Factories, Turkcell, TÜPRAŞ, Türk Telekom, Vakıflar Bank, Yapı Kredi Bank.

In the study, the financial statements of the firms were taken from the official website of Istanbul Stock Exchange. The January-September 2014 period is taken into consideration before the index and the January-September 2015 period is taken into consideration after the index. Net profit margin, return on assets and return on equity are taken into account as profitability indicator ratios in evaluating financial performance. The data were analyzed by t-test using the SPSS 20 statistical package program. The variables used in the study are explained below:

– Net profit margin: Shows the profitability of the firm. In this ratio, the financing and other expenses of the company are also taken into consideration.

$$Net\ profit\ margin = \frac{Net\ profit}{Net\ sales} \tag{1}$$

– Return on Assets (ROA): All investments made by the firm show the net income of taxable income.

$$Return\ on\ assets = \frac{Net\ income}{Total\ assets} \tag{2}$$

– Return on Equity (ROE); Shows the ratio of the firm's shareholders to a unit of capital invested. It shows how much remains to the firm owners after interest and taxes are paid.

$$Return\ on\ equity = \frac{Net\ profit}{Average\ Shareholders\ equity} \tag{3}$$

The following hypotheses have been established to determine the differences between the profitability performances of firms before and after entering in the BIST Sustainability Index:

– H_1: There is a difference between the net profit margins of firms before and after entering in the BIST Sustainability Index.
– H_2: There is a difference between the return on assets (ROA) of firms before and after entering in the BIST Sustainability Index.
– H_3: There is a difference between the equity returns of firms before and after entering in the BIST Sustainability Index.

V. Findings

The differences between the profitability performances of 15 firms before and after entering in the BIST Sustainability Index were calculated for January-September 2014 and January-September 2015 periods. Firstly, the One Sample Kolmogorov-Simirnov Test was performed to test the assumption of a normal distribution of data. The test results are given in Table I.

TABLE I
THE RESULTS OF ONE SAMPLE KOLMOGOROV-SIMIRNOV TEST

	Net Profit Margin	Return on Assets (ROA)	Return on Equity (ROE)
Kolmogorov-Smirnov Z	0.642	1.265	1.233
p	0.804	0.085	0.096

*p<0.05

As a result of the analysis, it is seen that the p value is greater than 0.05 for all variables. It means the data have normal distribution. Since the data shows normal distribution, t-test was used to compare the data before and after entering the BIST Sustainability Index. The results of the analysis are given in Table II.

The results of the t test show that p is greater than 0.05 for all variables. Therefore, it can be said that there is no significant difference between the profitability performances of firms before and after entering in the BIST Sustainability Index. As a result, H_1, H_2 and H_3 hypotheses were rejected in this study.

TABLE II
THE RESULTS OF T TEST

	Net Profit Margin	Mean	t Value
Net Profit Margin	Before Entry	0.1180	0.148
	After Entry	0.1141	
Return on Assets (ROA)	Before Entry	0.3800	0.114
	After Entry	0.3680	
Return on Equity (ROE)	Before Entry	0.1224	0.804
	After Entry	0.1750	

VI. CONCLUSION

The BIST Sustainability Index, which is traded on the Istanbul Stock Exchange, enables firms to compare their sustainability performance both locally and globally. In addition, this index is a tool that enables investors to invest in this firm. It is thought that the BIST Sustainability Index, which is started to be newly calculated in Turkey in 2014, will contribute to the firms increasing their profitability performance. Accordingly, whether there is a difference between the performances of firms before and after entering in the BIST Sustainability Index, were investigated in this study using profitability indicator ratios.

The index evaluates firms considering the issues of environment, biodiversity, climate change, human rights, supply chain, structure of company management board, bribery, and health and safety. In order to compare the performance of the firms before and after the calculation period of the index, the profitability ratios of firms were used as a data set. As a result of the study, similar to the findings of [5] and [7], no significant correlation was found between sustainability and firm performance.

Since the BIST Sustainability Index has begun to be newly calculated in Turkey, it is thought that the firms do not yet enough information about this issue. However, it is thought that sustainability awareness will be achieved over time with this index.

Due to the fact that it is the first study conducted in Turkey about the effects of entering sustainability index on firm performance, it is expected to fill the existing gap in the literature and serve as a guide for other studies. In future studies, issues such as the evaluation of the contribution of sustainable businesses to the social and economic environment can be implemented on a larger number of firms.

On the other hand, data before and after calculation of the first BIST Sustainability Index were analysed in the study. In future studies, it may be taken into account the wider time interval to collect data and to be aware of the importance of the BIST Sustainability Index on firm performance. In addition, net profit margins, return on assets and return on equity are taken into account in this study to evaluate the firm performance. Other ratios may be used in future studies.

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