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INVESTOR RESPONSES TO CORPORATE SUSTAINABILITY IN A DEVELOPING COUNTRY: THE CASE OF TURKEY

GELİŞMEKTE OLAN BİR ÜLKEDE YATIRIMCILARIN KURUMSAL SÜRDÜRÜLEBİLİRLİĞE OLAN TEPKİLERİ: TÜRKİYE ÖRNEĞİ

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ABSTRACT

This study investigates if "corporate sustainability" which appears as an important concept as of the beginning of 2000s has valued or not by investors in Turkish context. In that respect, the aim of the study is to analyze the effect of the entrance in BIST Sustainability Index (XUSRD) via corporations that traded at BIST on stock returns using "event study" method. Findings of the study indicate that the companies within the sustainability index or would be included in the sustainability index could obtain abnormal returns from the stocks of the corporation upon their disclosure to public. In other words, related information of corporations disclosed to public is priced by investors.

Keywords: *Corporate Sustainability, Stock Returns, Event Study, BIST Sustainability Index, Turkey*

Jel Codes: *Q55, M1, M10, G1, G14*

ÖZET

Bu çalışma 2000'li yılların başı itibariyle önem *arz eden bir kavram olarak karşımıza çıkan "kurumsal sürdürülebilirlik" kavramının Türkiye bağlamında yatırımcılar tarafından değer görüp görmediğini incelemektedir. Bu bağlamda çalışmanın amacı, hisse senetleri BIST'te işlem gören ve BIST Sürdürülebilirlik Endeksi'nde (XUSRD) yer alan firmaların, söz konusu endekse girişlerinin, hisse senedi getirilerini ne yönde etkilediğinin "olay çalışması" yöntemiyle analiz edilmesidir. Çalışmanın bulguları sürdürülebilirlik endeksinde yer alınmasının kamuoyuna duyurulmasıyla firmalara ait hisse senetlerinden anormal getirilerin elde edilebileceğini göstermektedir. Başka bir deyişle, kamuoyuna açıklanan söz konusu* bilgiler *yatırımcılar tarafından fiyatlanmaktadır.*

Anahtar Kelimeler: *Kurumsal Sürdürülebilirlik, Hisse Senedi Getirileri, Olay Çalışması BIST Sürdürülebilirlik Endeksi, Türkiye*

Jel Kodları: *Q55, M1, M10, G1, G14*

1. INTRODUCTION

Today the world is faced with important issues such as hunger, poverty, discrimination, human rights violations, global warming, and biodiversity loss, rapid depletion of resources, pollution and corruption. These issues are pushing humanity to a new social order. In these circumstances, sustainability has become a critical issue in global context. For example, United Nations attaches great importance to sustainable development issues and supports related policies. Such that; a number of indicators (*namely; poverty, governance, health, demographics, education, natural hazards, atmosphere, land, oceans,*

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seas and coasts, freshwater, biodiversity, economic development, global economic partnership, consumption and production patterns) has been developed to show the importance of this to countries and national administrators (United Nations, 2007: 9).

Correspondingly, concepts like corporate social responsibility, responsible investment, and corporate governance have begun to enter the agenda of governments, policy makers, civil society organizations, business networks, and investors since the beginning of the 21st century. Withal, companies are witnessing a global transformation process which short-term and only profit-oriented production and sales activities are not enough to achieve long-term success. During this process, being a good corporate citizen and complying with the principles of good corporate governance has gained great importance. In this new business environment, companies are faced with the expectation to act responsibly and be accountable not only to their own generation but also towards future generations by all segments of society which requires a human and environment sensitive business approach, in order to be a part of sustainable development in the long run. In recent years, rankings as the "most sustainable corporations" (ex. Global 100-Corporate Knights) which are announced to the public, shows the importance of this concept. So that, based on one of the most extensive studies performed on CEOs, 93% of them believe the sustainability issues will be important for future success of companies which proves the increasing interest in sustainability (Accenture, 2010).

This business link makes "corporate sustainability" concept one of the most important management paradigms in today's business environment. Accordingly, companies as one of the major actors of sustainable development are expected to consider economic, environmental and social factors and the risks & opportunities associated with these factors as a whole. In other words, besides the financial and economic issues, companies are required to act in a responsible manner for environmental and social issues (DeSimone and Popoff, 1997). Regarding to this, company valuation has started to be determined by various selection criteria which also reflect public interest. With the increasing importance of the sustainability, as well as its economic performance, a company's social and environmental performances are also evaluated as selection criteria by investors as a sign of credibility.

Considering the developments about corporate sustainability in Turkey for recent years, we can see that Istanbul Stock Exchange (BIST) and Business Council for Sustainable Development Turkey(BSCD) together has launched Sustainability Project in 2010 in order to create awareness about corporate sustainability in Turkey. With the cooperation of Ethical Investment Research Services Limited (EIRIS), BIST Sustainability Index(XUSRD) was created in 2014. While there were in 15 companies on the index in 2014, by 2015 this number increased to 29. Starting from 2016, volunteer companies from BIST 100 are added to the list of companies to be assessed in "the assessment list" and announced by BIST in December.

Based on these, this study tries to understand if operating with sustainability approach is valuable for investors or not and how capital markets respond to a company's existence on a sustainability index in a developing country context, Turkey. Regarding to this, this paper is organized as follows. In the next section, the sustainability concept is defined and a brief literature review is given. In the third part the aim and methodology of the study are explained. In the fourth part findings of the study are discussed. Lastly, concluding remarks are shared.

2. LITERATURE REVIEW

2.1. Corporate Sustainability

There are various facts within the background of sustainability concept to get in companies' agenda as a new business paradigm. Concepts like sustainable development, corporate governance, corporate social responsibility, accountability and stakeholder theory forms a basis for sustainability based business approach (Wilson, 2003: 1). Sustainable development, a concept that is trying to balance the need for economic growth with the protection of environment and social equity, is first defined in Brundtland Report published by World Commission on Environment and Development in 1987 as the "development that meets the needs of current generations without compromising the ability of future generations to meet their own needs" (Brundtland Report, 1987: 27). In this report it is emphasized that all development activities has to take into account its impact on the opportunities for future generations including economic and social development for people with a low standard of living and also it underlined the importance of protecting the nature resources and environment. This perspective shaped the international organizations' attitude towards economic, social and environmental development which created an expectation from companies to behave social responsible manner towards their stakeholders. Customers, suppliers, employees, governments, community groups, international and national unions expect companies to undertake additional investments in social areas and are asking companies to be accountable for corporate social responsibility issues (Davis and Blomstrom, 1966; Davis, 1973). In other words, companies are expected the fulfill obligations; accountability and socially responsiveness towards their stakeholders. Thereby, companies have started to organize corporate social responsibility projects in areas such as environment, education, health etc. Accordingly an increasing demand occurred for transparency and growing expectations for companies to measure, report, and continuously improve their social performance to be a part of sustainable development (Tsoutsoura, 2004).

In this context, corporate sustainability has gained a huge importance in today's business world. Dyllick and Hockerts (2002) defines corporate sustainability as "the ways of meeting the needs of an organization's internal and external stakeholders like shareholders, employees, suppliers and vendors, social communities and customers without negotiating in its capability to meet the future demands of the stakeholders" (Dyllick and Hockerts, 2002: 131). Moving from this definition three key dimensions of corporate sustainability can be identified namely; economic, social and ecological (environmental) which are inter-related in multiple ways (Morelli, 2011). This definition which carries the sustainability concept at business level emphasizes that focusing only economic performance with a narrow approach can only bring short-term success. However, long-term success requires all three dimensions to be handled at the same time. It is underlined that a good financial situation does not guarantee the long-term success but only neglecting the environment and social issues may ensure a long-term survival at both the micro and macro level. Thus, companies integrating sustainability principles into their corporate strategy need to consider both environmental and social aspects to maximize future earnings (Adams and Zutshi 2004: 34). In other words to maximize create sustainable firm's value in long term, companies should take all the three dimensions of sustainability into account which are also called "triple-bottom-line" (Elkington, 1997).

At this point, it can be stated that corporate sustainability is a multi-faceted concept which recognizes the importance of corporate growth and profitability on one hand and societal goals on the other hand that are related sustainable development. Contrary to traditional

business models aiming to make a profit without taking into consideration social and environmental consequences, sustainable companies include as an explicit objective to reduce their negative economic, social and environmental externalities in a manner that increases the wealth of the corporation and the world (Cheung, 2011: 146).

Economic sustainability gained importance with the financial crisis which affects the global economic world. Due to the enduring global economic recessions, companies, investors, governments and consumers became alarmed for financial risks, employees faced with the fear of losing their jobs, society felt insecure about the continuity of the established order. In this context, economic sustainability is identified with two dimensions. The first one is about the conventional financial performance such as cost reductions or ensuring liquidity, and the other one is about the economic interests of external stakeholders, such as a economic well-being and standard of society's living (Sheth et al. , 2011: 24.) At this point economic sustainability can be defined with wider financial performance of a company; how the company manages its intangible assets, its influence on the wider economy, and how it influences and manages social and environmental impacts (Deborah and MacGillivray, 2001: 19).

Social sustainability dimension started to generate broader interest in business environment by increased public distrust towards company's activities (such as Enron Scandal). In today's business world society expect much more than performing the requirements of the law for public well being. Due to the "social contract" that characterizes the relationship between companies and society, it is expected from companies to behave in an appropriate way to fulfill the obligations beyond economic and legal ones (Carroll, 1993: 18). Accordingly, corporate social responsibility concept has become a widespread issue. It is stated that to be socially sustainable, a company has to be seen fair and trustworthy by all stakeholder groups (Zadek et al., 1997: 13). Similarly Dyllick and Hockerts (2002) define socially sustainable companies as organizations that add value to the communities which they operate by increasing the human capital and furthering their societal capital (Dyllick and Hockerts, 2002: 134).

The ecological (environmental) dimension of sustainability expresses the exhaustible 'natural capital' and focuses on environmental protection, its improvement and prevention of exhausting the limited environmental resources (Lovins et al., 1999: 146). Today, customers, local communities, environmental interest groups, and governments consider ecological impacts and expect corporate ecological responsiveness through integration of environmental issues to companies' decision making processes (Bansal and Roth, 2000: 718). Ecological sustainability is crucial due to the link between industrial system and eco-system. There is a general consensus in this era that world's environmental resources are proceeding to the depletion as a result of human activities (Turner, 2008: 397). It is emphasized that if the natural resources are used ineffectively and the damage cannot be reduced in minimum level, industrial system will become ecologically unsustainable (Ayres, 1995: 4).

In this respect, transposing sustainability idea into business level requires maintaining economic, social and environmental capital interrelated in order to create long-term value (Bansal, 2005: 198). Thus, to be regarded as sustainable, companies should take into account the environmental and social factors as well as economic ones and the risks associated with these factors within the corporate governance principles and integrate these to their decision-making processes and operations.

2.2. Literature on Investor Responses to Corporate Sustainability

Although the importance of corporate sustainability is expressed in global platforms and in academia, many companies have concerns about the awareness of investors regarding their sustainability focused decisions (Cheung, 2011: 147). Besides, recent studies show that (e.g.HBR, 2012; PcW, 2014) with the integration of sustainability concept into business strategies of companies, investors have started to recognize that social and environmental issues can have a direct impact on a company's long-term survival and begun value non-financial performance as well as financial one. So, they started considering the corporate sustainability performance which can give a better understanding of a company's future performance potential and ensure more reliable investment decisions that may generate long-term shareholder value. One of the findings of PwC (2014)'s study draws attention to the dissatisfaction of investors due to the lack information which they received in companies' corporate sustainability reporting systems (PwC, 2014: 5-6). In fact, to overcome this situation, a number of organizations have developed frameworks to provide companies guidance on disclosing information and preparing such reports. The World Business Council for Sustainable Development guidelines (WBCSB, 2002), the Institute of Social and Ethical Accountability guidelines (AA1000, 2008) and the Global Reporting Initiative (GRI, 2000) guidelines are few examples of the frameworks that are globally accepted and commonly used as a standard for sustainability reporting. There are also other several sources which can provide information about a company's sustainability for investors such as announcements of sustainability goals on corporate websites, internet, television or print media. In addition, corporate sustainability indices that emerged in recent years also allow investors to achieve independent and reliable information about companies' sustainability performances which are regarded as appropriate indicators for their demands and reactions. A number of sustainability indices were introduced in developed markets since early 2000s for with varying focus areas (e.g. environmental indices, clean technology indices, social indices). For example Dow Jones Sustainability World Index (DJSWI) series were launched in 1999 as the first global sustainability benchmark. This was followed by the launch of the FTSE4Good Index in 2001.

Today, in developing countries, the sustainability indices are often created by those countries' stock markets. Corporate Sustainability Index in Brazil by BM & FBOVESPA exchange, SSI SRI Index in China by Shanghai stock market, SRI Kekhat Index in Indonesia by Indonesian stock market, Korean SRI Index in Korea by Korean stock market, S&P EGX ESG Index in Egypt by Egyptian stock exchange is some of the examples. Also in Turkey an index, named "BIST Sustainability Index (XUSRD)", has been created in 2014 by Borsa Istanbul with the cooperation of Ethical Investment Research Services Limited (EIRIS) which is an independent London based research organization. EIRIS is specialized on environmental, social and governance issues for more than 30 years and serving asset owners, asset managers and index providers globally (e.g. Johannesburg and Mexico Stock Exchanges). EIRIS, as a leading global provider of independent research into the environmental, social and governance (ESG) performance of companies, assess Borsa Istanbul listed companies in terms of international sustainability criteria by using only publicly available information and assessment costs of companies that are covered by Borsa Istanbul. The purpose of BIST Sustainability Index is described as "to increase awareness, know-how and hand-on practice of the companies about sustainability in Turkey, especially the ones listed in Borsa Istanbul". With this Index, Borsa Istanbul provide companies "an instrument for evaluating their performance and creating new targets or furthering their performance while allowing them to develop their risk management abilities for corporate transparency, accountability and sustainability". In this context, BIST Sustainability Index

aims to provide a basis in order to benchmark for Borsa Istanbul companies with high performance on corporate sustainability and create a platform for institutional investors to demonstrate their commitment to companies managing environmental, social and governance (ESG) issues with high performance. Also index ensure companies an opportunity to compare their corporate sustainability performance in local and global basis (BIST Sustainability Index, www.borsaistanbul.com).

In parallel with the developments mentioned above, studies both by academicians (e.g. Cheung, 2011) and by practitioners (e.g. PwC, 2012) began to analyze how investor behavior is influenced by a company's sustainability performance. For example, according to a research in 2014 conducted by Price Waterhouse Coopers (PwC) on a diverse mix of institutional investors such as asset managers, mutual funds, hedge funds etc. it is reported that investors' primary driver for considering sustainability issues is to mitigate risk. Enhancing investment returns and avoiding firms with unethical conduct are the other two significant drivers (PwC, 2014: 6).

The literature on the relationship between corporate sustainability and firm value is relatively new and considers the link mainly from an investment perspective which focuses either on whether corporate sustainability is priced in capital markets (Cheung, 2011: 150). Empirical studies that examine investor reactions to companies on sustainability indexes show mixed results.

For example focusing on the period 2002-2006 of DJSWI on U.S. stocks, Tsai (2007) found a significant negative impact for index exclusion stocks but no significant change for index inclusion stocks. Similarly, analyzing nine countries including the US, Karlsson and Chakarova (2008), state that both index inclusions and exclusions do not create significant abnormal returns. On the other hand, Dilling (2008)'s study show contradictory results on market reactions. He documents significantly positive market reactions to inclusions in DJWSI for years 2002 and 2003, whereas significantly negative market reactions to inclusions are documented for years 2004 and 2005.

In their studies, Lo and Sheu (2007) examined whether corporate sustainability has an impact on market value using large US non-financial firms from 1999 to 2002 by DJSGI USA Index. Their findings showed a significant positive relation between corporate sustainability and its market value. Also they reported a strong interaction effect between corporate sustainability and sales growth on firm value. These findings show that companies with substantial sustainable development activities are more likely to be rewarded by investors with a higher valuation in the financial markets (Lo and Sheu, 2007).

Consolandi et al. (2009) examine whether inclusion in, or deletion from, the Dow Jones Sustainability Stoxx Index (DJSSI STOXX), an index for European corporations, results in a stock market reaction. Their study showed limited evidence for the performance of companies listed in the DJWSI STOXX relative to those STOXX 600 companies not included in the DJWSI STOXX. In their event study covering the years 2001-2006, a low but significantly positive (negative) excess returns are reported.

Cheung (2011) examining impacts of inclusions and exclusions to the DJSWI over the period of 2002-2008 could not find strong evidence that announcement per se has any significant impact on stock return and risk. However, he reports a significant but temporary increase (decrease) in stock return by the inclusion (exclusion) to the index on the day of change.

However, in a Harvard Business School research paper, using a matched sample of 180 US companies, corporations that voluntarily adopted sustainability policies were compared to a

matched sample of companies that adopted almost none of these policies. In the study it is found that companies that have sustainability policies, significantly outperform their counterparts over the long-term and tend to have better stock performance, lower volatility, and greater return on assets and return on equity (Eccles, Ioannis and Serafeim, 2011).

In their study Lourenço et.al. (2012), classifying the largest 600 firms from Canada and United States of America in the Dow Jones Global Total Stock Market Index (DJGTSM) into two groups, depending on whether they belong or not to the Dow Jones Sustainability North America Index (DJSI North America) by 2009, investigated the market views about sustainability performance based on membership of the Dow Jones Sustainability Index. Their findings suggested that investors undervalue large profitable firms in case of low level of sustainability performance. Especially, they reported that companies which receive incentives to develop a high sustainability performance but not having a related strategy are penalized by the market (Lourenço et. al., 2012).

Congruently, analyzing a sample of European stocks that were added to (deleted from) the Dow Jones Sustainability Europe Index (DJSI Europe) over the period 2009-2013 Stekelenbur et. al., (2015) could not found any strong impact on stock return of the announcement related with the inclusion and exclusion events. Yet, as in Cheung (2011)'s study, on the day of change, index inclusion (exclusion) stocks experience a significant but temporary increase (decrease) in stock return.

3. AIM AND METHODOLOGY

3.1. Aim of the Study

The aim of the present study is to analyze the effect of the entrance in BIST Sustainability Index (XUSRD) via corporations that traded at BIST on stock returns using "event study" method. Thus, different from previous studies, whether the securities of these corporations had abnormal returns during the process of inclusion in the index was investigated. BIST Sustainability Index started to be calculated and published in price and return with XUSRD code since November 4, 2014. There is one index period, November-October for the BIST Sustainability Index. Corporations in BIST 30 and corporations in BIST 50 were subject to evaluation respectively in 2014 and 2015. In order to be included in the index, the shares have to exceed the threshold values in the "Index Selection Criteria" (www.borsaistanbul.com, 10.04.2016). There are 29 corporations that exceed the threshold values and included in the index since November 2015.

The basis of regulations on the capital markets cover the principles such as protection of shareholders, public disclosure, provision of trust, openness, and stability in functioning of capital market. In this regard, in Turkey, all corporations that are publicly-traded in the stock market, Borsa Istanbul, are obliged to announce the information about the corporation completely, objectively, comprehensibly and accurately in a method that saving owners, partners and other interested parties could access it as simultaneously as possible (kap.gov.tr, 22.04.2016). "Efficient Market Hypothesis," which was put forward by Fama (1991), suggests that in a market that is efficient in semi-strong form, as long as any information is publicly disclosed it would be reflected on prices, and investors would not be able to get super-profits using publicly available information. However, if the market is not efficient, investors could provide abnormal returns based on such information to be disclosed to the public (Shleifer, 2004: 6). Therefore, an explanation made on being listed in corporate sustainability index by providing the necessary criteria for a corporation could create positive or negative effects, depending on the degree of market efficiency.

The scope of the study included 29 firms that were introduced to the XUSRD Index during either 2014 or 2015. Initially, in the application part of the study, daily return rates encompassing 10 days prior and 10 days after the day of inclusion within the XUSRD Index, determined as the case event for each corporation, were obtained. Based on the obtained daily returns, necessary calculations have been made for the event study and it was investigated whether being included in the relevant index provided any abnormal returns of stocks to the related corporations.

Pertaining data for trade days within the period of investigation for the corporations analyzed in this study were requested and obtained from the Borsa Istanbul Stock Exchange Marketing and Sales Department. The 29 corporations subject to this study are presented in Appendix 1.

3.2. Methodology of the Study

Event study technique makes it possible to estimate or deduct the effects of an event that occur in a specific period or several periods, was utilized in the study (Serra, 2002: 3). Thus, it could be stated that the aim of the event study was the measurement of the speed of actual reactions given by the stock prices to published news reports and determination whether an excessive return was obtained around the date of first announcement of the event to the market. Excess returns are the returns higher and lower that the normal returns that could be obtained in case of the announcement of related to the market. These returns are usually associated with the performance of the total return index on the date of the event and are called as Abnormal Returns (Sakarya, 2011: 153-154).

Examining the literature, it can be seen that event study technique has been also used in similar studies. For example, Aksu and Aytekin (2015), Yavuz, Yıldırım and Elmas (2015) has used this technique in their studies which investiges the relationship between corporate governance principles compliance grade and stock returns for the companies on BIST Corporate Governance Index.

The majority of the financial event studies used to measure market's extraordinary response to the happening of an event is composed of three successive stages: (1) determination of the event and the event date, (2) determination of the event window and (3) testing the suggested model and determining the effect on stock prices. As a result of these stages Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR) are calculated for the days before and after the date of the event. The steps to be flowed while making these calculations could be expressed as follows (Nadig, 2015: 4-5):

1- Abnormal Returns are calculated with respect to the difference between the actual return rate (R_{it}) and market return rate (R_{mt}) for every t days of the corporation subject to application.

$$AR_{it} = R_{it} - R_{mt} \quad (1)$$

2- 2- Each obtained Abnormal Return is divided by the number of corporations subject to application in order to calculate the Average Abnormal Return.

$$AAR_{it} = \sum_{i=1}^{N} (1/N) AR_{it} \quad (2)$$

3- Calculated daily Average Abnormal Return values are respectively added to each other in order to obtain the Cumulative Average Abnormal Returns (CAAR).

$$CAAR_{it} = \sum_{i=1}^{N} AAR_{it} \quad (3)$$

If the cumulative abnormal returns obtained by the above steps is different than 0, it is possible to assert that the announcement of the related event has an impact on the stock prices. In other words, it is possible that the investors could obtain an abnormal return from the related stocks. Therefore, such market is not efficient in semi-strong form. Besides, if obtained cumulative abnormal return yields equal or close to 0, it would indicate that the announcement of the related event does not have an impact on the stock prices. In this framework, it is possible to assert that such market is efficient in semi-strong form (Kaderli, 2007: 148).

In this study, in accordance with the aforementioned steps, first abnormal returns (AR_{it}) for day t are calculated for the stocks via the help of the formula in Equation 1, in order to obtain the Cumulative Average Abnormal Returns. Actual returns of the stocks were found on day t with the help of Equation 4:

$$R_{it} = (D+P_{it} - P_{it-1}) / P_{it-1} \quad (4)$$

where; R_{it} is the actual return of the stock i on day t, P_{it} is the closing price of stock i on day t, P_{it-1} is the closing price of stock i on day t–1, D is the profit share paid for stock i on day t.

Market return rate, R_{mt} in Equation 1 is calculated via Equation 5:

$$R_{mt} = (I_t - I_{t-1}) / I_{t-1} \quad (5)$$

where; R_{mt} is the daily return related to market, I_t is the closing value of the BIST100 on day t, I_{t-1} is the closing value of the BIST100 on day t–1.

Subsequent to calculation of Abnormal Returns, each Abnormal Return is divided by the corporation number subject to the application in order to obtain the Average Abnormal Returns and calculated daily Average Abnormal Returns are added to each other respectively and Cumulative Average Abnormal Returns were obtained.

Time period used in the studies conducted on short-term performance in literature differentiates between one-two days and six months. Choosing larger event windows could decrease the strength of the study; in addition as the investigated period is prolonged other news that could affect the stock market could cause effects on the related stocks' returns. In spite of that, shorter event window could reflect the important effects of the event more clearly (Sakarya, 2011: 152). In this study, the short-time effects of the announcement that corporations would be listed in the corporate sustainability indexes on the stock returns short-term impact on stock returns were scrutinized encompassing the returns from 10 days prior and 10 days later the announcement date.

The following hypotheses were set in this study, to test whether abnormal returns were obtained during the pre-event and post-event dates:

H_0: The announcements about the introduction of corporations to the BIST Sustainability Index have no effect on the stock returns of related corporations.

H_1: The announcements about the introduction of corporations to the BIST Sustainability Index affect the stock returns of related corporations.

Testing the H_0 hypothesis in this study means to test the efficiency of BIST in semi-strong form. If the H_0 hypothesis is accepted, no abnormal returns would be obtained from the stocks of the related corporations and hence the market would be accepted to be efficient in semi-strong form. While developing the hypothesis, it is assumed that other conjectural developments in the examined period can have an impact on prices. Based on this, it is anticipated the general election that held in 1 November 2015 in Turkey, had an impact on stock prices.

4. FINDINGS

In 2014 or 2015, daily actual return rates are calculated for 10 days prior and 10 days later of related time frame and by using these return rates abnormal returns (AR_{it}) and the cumulative average abnormal returns ($CAAR_{it}$) were calculated for the corporations included in the XUSRD Index for the first time. The findings are presented in Table 1 for 2014 and 2015.

Table 1: Average Abnormal Returns and Cumulative Average Abnormal Returns of the Corporations that were introduced to the XUSRD Index during either 2014 or 2015

	2014		**2015**	
Event Date	**AAR_{it}(%)**	**CAR_{it}(%)**	**AAR_{it}(%)**	**CAR_{it}(%)**
t-10	0,0007	0,0007	-0,0062	-0,0062
t-9	0,0002	0,0009	0,0060	-0,0002
t-8	-0,0059	-0,0050	0,0087	0,0085
t-7	-0,0020	-0,0069	-0,0018	0,0067
t-6	-0,0020	-0,0089	-0,0010	0,0057
t-5	0,0042	-0,0047	0,0004	0,0061
t-4	-0,0050	-0,0097	0,0013	0,0074
t-3	0,0021	-0,0076	-0,0030	0,0044
t-2	-0,0004	-0,0080	-0,0034	0,0009
t-1	0,0040	-0,0040	-0,0137	-0,0127
t=0	0,0004	-0,0036	0,0032	-0,0095
t+1	-0,0018	-0,0054	-0,0007	-0,0102
t+2	0,0083	0,0028	-0,0028	-0,0130
t+3	0,0091	0,0120	0,0063	-0,0066
t+4	-0,0004	0,0116	-0,0012	-0,0078
t+5	0,0003	0,0118	0,0078	-0,0001
t+6	-0,0043	0,0075	0,0027	0,0026
t+7	0,0021	0,0097	0,0044	0,0070
t+8	-0,0031	0,0065	0,0035	0,0105
t+9	0,0053	0,0118	-0,0001	0,0104
t+10	-0,0014	0,0105	0,0048	0,0152

As seen in Table 1, cumulative averages abnormal returns for 29 corporations are different than zero in the time frame of 10 days prior and 10 days later the event date for 2014 and 2015. On the day of the event (the day corporations are listed in the Corporate Sustainability Index) average abnormal returns were 0.04% in 2014 and 0.32% in 2015 for all corporations. According to this result determined for all corporations, hypothesis H_1 could not be rejected for both 2014 and 2015. Hereunder, it is possible to suggest that the announcements related to inclusion of corporations in the BIST Corporate Sustainability Index could impact the return of the stocks of related corporations. Figure 1 presents the event date for (15 in 2014, 14 in 2015) 29 corporations and the abnormal returns 10 days prior and 10 days later from this day 29 corporations listed in XUSRD index for the first time in years 2014 and 2015. Abnormal returns occurring 10 days prior and 10 days later from the event day presents a complex course for both 2014 and 2015 as seen in Figure 1. There were positive abnormal returns on certain days, while on certain others negative abnormal returns occurred. In other words, it was identified that abnormal returns could be obtained as a result of the announcement of the corporations that are or would be introduced to the index. As the obtained results are scrutinized, it is possible to state that generally investors give a positive reaction to the announcement of the corporations' entrance to the index. However, one day before and five days after the date of the event in 2015, it seems that negative abnormal returns occurred and as of the sixth day of the event the returns are observed to exhibit an increasing trend. The cause of this situation can be the effect of the general elections on the market that held in Turkey in 1 November 2015 which is two days before the event day.

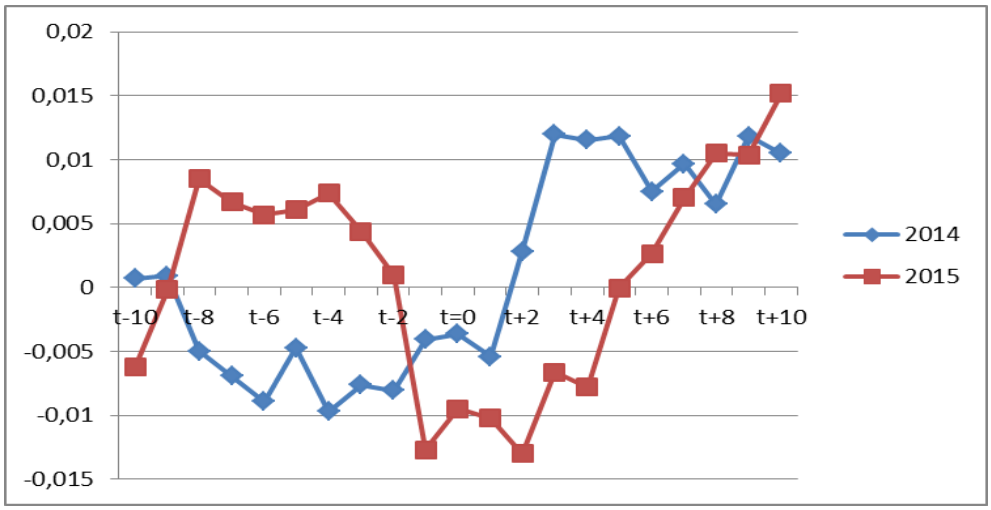

Figure 1: The Sensitivity of Cumulative Average Abnormal Returns to the Event Date

5. CONCLUSION

Due to the present societal problems, importance of corporate sustainability concept has increased in today's business world. Companies are one of the prior actors which are expected to behave in responsible manner about sustainability. Accordingly, stakeholders are now making increasing demands and also remunerate sustainability related activities of companies. Based on this, this study answers the question, drawing on a sample of companies listed on the XUSRD sustainability index in Turkey, if operating with

sustainability approach is valuable for investors or not and tries to understand how capital markets respond to a company's existence on a sustainability index. As far as we know, this study is the first study which investigates the investor reactions to 29 companies on XSURD index in Turkey.

In one of the years, 2014 and 2015, companies included in XUSRD index for the first time were investigated in terms of their announcement of being listed in the index to the public, in terms of the return of the stocks of these companies, through an event study. The results of the analysis indicated that prior and latter to the event, abnormal returns exhibited a complex course. In other words, companies within the index or would be included in the index could obtain abnormal returns from the stocks of the company upon their announcement to public. Since, the conducted analysis, cumulative average abnormal returns obtained 10 days prior and latter to the event fluctuated different than zero. This is an important indication that the market is not efficient in semi-strong form. Hence according to the efficient market hypothesis, for a market to be efficient or efficient in semi-strong form information of companies disclosed to public should not affect the returns of the stocks of that company in other words there should be no abnormal returns obtained from the stocks of these companies. Thereby, if abnormal increase or decrease occur in the stock returns of a corporation due to the disclosure of a private information related to that company to public, that market is not efficient in semi-strong form (Shleifer, 2004, p.6). As the findings of the study is scrutinized overall, hypothesis H_0 ,which indicates the market is efficient in semi-strong form, was rejected since the obtained cumulative average abnormal returns ($CAAR_{it}$) exhibits differences from 0 both in positive and negative directions, instead the alternative hypothesis H_1 that expresses the market is not efficient in semi-strong form was accepted. In this framework, it could be asserted that Turkey's market is not yet efficient in semi-strong form and the investors could obtain abnormal returns by taking advantage of the private information disclosed to public in this market.

Consequently, as corporate sustainability concept has entered the agenda of Turkey and has gained importance, it can be said that investors now, consider not only financial performance but also corporate sustainability activities of companies for their investment decisions. Therefore, companies should reevaluate their activities in terms of corporate sustainability to provide positive stock and firm performance. This positive performance can affect national economy positively in the long run.

The analysis of this study was carried on BIST Sustainability Index which has started to be calculated and published in 2014. There are only 29 corporations that exceed the threshold values and included in the index since November 2015 which can be considered limited. Despite this limitation, as far as we know, this study is the first study that investigates the investor reactions to corporate sustainability performances of companies in Turkey. Moreover, it is declared by BIST that, starting from 2016, volunteer companies from BIST 100 will be added to the list of companies to be assessed "The assessment list" and will be revised annually and announced by Borsa İstanbul in December. Moving from here, related analysis can be expanded in future studies. In addition, companies on and out of the sustainability index can be compared whether to see if there is a difference between their stock performance.

REFERENCES

ACCENTURE. (2010). A new era of sustainability: UN Global Compact-Accenture CEO study. www.unglobalcompact.org.

ADAMS, C. and ZUTSHİ, A. (2004). "Corporate Social Responsibility: Why Business Should Act Responsibly and be Accountable, Australian Accounting Review, 14 (34): 31-39.

AKSU, M. and AYTEKIN. S. (2015). "Kurumsal Yönetim İlkelerine Uyum Notu İle Hisse Senedi Getirisi İlişkisi: Bist Kurumsal Yönetim Endeksi (Xkury) Üzerine Bir Uygulama", Gümüşhane Üniversitesi Sosyal Bilimler Elektronik Dergisi, 13, pp. 201-219.

AYRES, R. (1995). "Statistical Measures of Unsustainability", R&D Working Paper No. 95/84/EPS. INSEAD: Fontainebleau.

BANSAL, P. (2005). "Evolving sustainability: A longitudinal study of corporate sustainable development", Strategic Management Journal, 26 (3): 197-218.

BANSAL, P. and ROTH, K. (2000). "Why companies go green: a model of ecological responsiveness", Academy of Management Journal, (13) 4: 717-736.

CARROLL, A. (1993). "Business & Society, Ethics and Stakeholder Management", South-Western Publishing, Second Edition.

CHEUNG, A.W.K., (2011). "Do Stock Investors Value Corporate Sustainability? Evidence from an Event Study". Journal of Business Ethics, 99 (2): 145-165.

CONSOLANDI, C., JAISWAL-DALE, A. POGGIANI, E. and VERCELLI, A. (2009). "Global Standards and Ethical Stock Indexes: The Case of the Dow Jones Sustainability Stoxx Index", Journal of Business Ethics, 87: 185- 197.

CORPORATE KNIGHTS, (2016). Global 100 Issue, Featuring 2016 Global 100 Most Sustainable Corporations in the World Ranking, http://www.corporateknights.com/ magazines/2016-global-100-issue/. 20.04.2016.

DEBORAH D. and MACGILLIVRAY, A. "The business of staying in business", The sigma Project, The R&D Report, New Economics Foundation March 2001.

DYLLICK, T. and HOCKERTS, K. (2002), "Beyond the Business Case for Corporate Sustainability" Business, Strategy and the Environment, 11: 130–141.

ECCLES, R. G., IOANNIS J. and SERAFEIM, G. (2011). "The Impact of a Corporate Culture of Sustainability on Corporate Behavior and Performance", Harvard Business School Working Paper 12-035, November.

ELKINGTON J. (1997). "Cannibals with Forks: the Triple Bottom Line of 21st Century Business", Capstone: Oxford.

FAMA, E.F. (1991). "Efficient Capital Markets: II", The Journal of Finance, Vol. XLVI, No.5, p.1575-1617.

GLADWIN T,, KENNELLY J. and KRAUSE TS. (1995). "Shifting paradigms for sustainable development: implications for management theory and research", Academy of Management Review, 20(4): 874–907.

GRAHAM, T. (2008). "A comparison of The Limits to Growth with 30 Years of Reality", Global Environmental Change,18 (3): 397–411.

HEYNS, G. (2012). "Companies that Invest in Sustainability Do Better Financially", Harvard Business Review, https://hbr.org/2012/09/sustainable-investing-time-to/

JONES, S., FROST, G., LOFTUS, J., and VAN DER LAAN, S. (2007). "An Empirical Examination of the Market Returns and Financial Performance of Entities Engaged in Sustainability Reporting", Australian Accounting Review, 17(41): 78-87.

KADERLI, Y. (2007). Yapılan İhracat Bağlantılarının İlgili Firmaların Hisse Senedi Getirileri Üzerindeki Etkisinin Olay Etüdü İle İncelenmesi: İstanbul Menkul Kıymetler Borsası'ndaki Bazı Firmalar Üzerine Bir Uygulama, Muhasebe ve Finansman Dergisi, 36: 144–154.

KARLSSON, J. and CHAKAROVA, Y.(2008). "Does Corporate Social Responsibility Pay off? – An Event Study of the Impact of Corporate Entry and Exit from the Dow Jones Sustainability World Index on the Market Value of a Company", Unpublished Advanced level Thesis, School of Business, Economics and Law, Goteborg University.

Lo, S.F. and SHEU, H.J, (2007). "Is corporate Sustainability a Value Increasing Strategy for Business?", Corporate Governance, 15(2): 345-358.

LOPEZ, V. M., ARMINDA G. and LAZARO, R. (2007). "Sustainable Development and Corporate Performance: a Study Based on the Dow Jones Sustainability Index", Journal of Business Ethics 75: 285-300.

LOURENÇO, I. C., BRANCO M.C., CURTO, J. D. and EUGÉNİO T. (2012), "How Does the Market Value Corporate Sustainability Performance?, Journal of Business Ethics, 108 (4): 417-428.

LOVINS A.B., LOVINS L.H. and HAWKEN P. (1999). "A road map for natural capitalism". Harvard Business Review 77(3): 145–158.

MORELLI, J. (2011). "Environmental Sustainability: A Definition for Environmental Professionals", Journal of Environmental Sustainability, 1 (1): 1-9.

NADIG, A. (2015). ''An Empirical Study of Stock Split Announcements of Select BSE Sectors Using Event Study Methodology'', SDMIMD Journal of Management, 6 (1): 1-12.

PRICE WATERHOUSE COOPER (PwC), (2012). "Do Investors Care about Sustainability? Seven Trends Provide Clues", http://www.pwc.com/us/en/ corporate-sustainability-climate-change/assets/investors-and-sustainability.pdf, 17.04.2016.

PRICE WATERHOUSE COOPER (PwC), (2014). "Sustainability Goes Mainstream: Insights into Investor Views, Investor Survey",http://www.pwc.com/us/en/ governance-insights-center/publications/assets/pwc-sustainability-goes-mainstream-investor-views.pdf 20.04.2016.

SAKARYA, Ş. (2011). İMKB Kurumsal Yönetim Endeksi Kapsamındaki Şirketlerin Kurumsal Yönetim Derecelendirme Notu Ve Hisse Senedi Getirileri Arasındaki İlişkin Olay Çalışması (Event Study) Yöntemi İle Analizi, ZKÜ Sosyal Bilimler Dergisi, 7 (13): 147–162.

SERRA, A. P. (2002), Event Study Tests – A Brief Survey, Working Papers Da FEP, No 117.

SHIH-FANG, L. and HER-JIUN, S. (2007). "Is Corporate Sustainability a Value Increasing Strategy for Business?", Corporate Governance 15(2): 345-358.

SHLEIFER, A. (2000), Inefficient Markets: An Introduction to Behavioral Finance, New York: Oxford University Press Inc.

STEKELENBURG A., V., GEORGAKOPOULOS, G., SOTIROPOULOU, V., VASILEIOU, K. Z. and VLACHOS, I. (2015). "The Relation between Sustainability Performance and Stock Market Returns: An Empirical Analysis of the Dow Jones Sustainability Index Europe", International Journal of Economics and Finance; 7 (7): http://www.ccsenet.org/journal/index.php/ijef/article/viewFile/45079/27037

TURNER, G. M.(2008). "A comparison of The Limits to Growth with 30 years of reality", Global Environmental Change, 18 (3): 397–411

UNITED NATIONS. (2007). "Indicators of Sustainable Development: Guidelines and Methodologies", New York: United Nations. http://www.un.org/esa/sustdev/natlinfo/indicators/guidelines.pdf

WILSON, M. (2003). "Corporate Sustainability: What Is It And Where Does It Come From?", Ivey Business Journal, 67:1-5.

YAVUZ, S., YILDIRIM, S. and ELMAS, B. (2015). "KURUMSAL YÖNETİM ENDEKSİ İLE ŞİRKET HİSSE SENEDİ GETİRİ İLİŞKİSİ: BIST'DE BİR UYGULAMA', Erzincan Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 8(2), pp. 73-82.

ZADEK S, PRUZAN P. and EVANS R. (1997). "Building Corporate AccountAbility – Emerging Practices in Social and Ethical Accounting", Auditing and Reporting. Earthscan: London.

www.borsaistanbul.com, BIST Sustainability Index, http://www.borsaistanbul.com/en/indices/bist-stock-indices/bist-sustainability-index 21.04.2016.

www.borsaistanbul.com, BIST Sustainability Index Ground Rules, http://www.borsaistanbul.com/docs/default-source/endeksler/bist-sustainability-index-ground-rules.pdf?sfvrsn=10 21.04.2016.

Appendix1: 29 Firms that were introduced to the XUSRD Index during either 2014 or 2015

1	AKBNK	AKBANK	11	GARAN	GARANTİ BANKASI	21	TOASO	TOFAŞ OTO. FAB.
2	AKSEN	AKSA ENERJİ	12	ISCTR	İŞ BANKASI (C)	22	TCELL	TURKCELL
3	AEFES	ANADOLU EFES	13	KCHOL	KOÇ HOLDİNG	23	TUPRS	TUPRAŞ
4	ARCLK	ARÇELİK	14	MGROS	MİGROS TİCARET	24	THYAO	TURK HAVA YOLLARI
5	ASELS	ASELSAN	15	OTKAR	OTOKAR	25	TTKOM	TURK TELEKOM
6	BRISA	BRİSA	16	PETKM	PETKİM	26	ULKER	ULKER BISKUVI
7	CCOLA	COCA COLA İÇECEK	17	SAHOL	SABANCI HOLDİNG	27	VAKBN	VAKIFLAR BANKASI
8	DOAS	DOĞUŞ OTOMOTİV	18	SAFGY	SAF GMYO	28	VESTL	VESTEL
9	EREGL	EREĞLİ DEMİR CELİK	19	TSKB	T.S.K.B.	29	YKBNK	YAPI VE KREDİ BANK.
10	FROTO	FORD OTOSAN	20	TAVHL	TAV HAVALİMANLARI			