A Comparative Analysis Of Socially Responsible Investing For Borsa Istanbul Stock Market

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Öz

Bu çalışmanın temel amacı, Borsa İstanbul (BIST) hisseleri tarafından hesaplanan, Katılım 30 Endeksi (KATLM), Kurumsal Yönetim Endeksi (XKURY) ve Sürdürülebilirlik Endeksi (XUSRD)'nin hisse senedi performansı ve muhasebe performansı üzerindeki etkilerinin incelenmesidir. Bu endekslerdeki tüm şirketler, sosyal sorumluluk üzerinde yatırım yapan şirketler olarak onaylanmıştır. Borsa performansının hesaplanması için riske göre düzeltilmiş performans ölçümleri, Sharpe Ratio, Treynor Measure, Jensen Measure, Information Ratio, M2 Performance Measure ve T2 Performance Measure kullanılmıştır. Muhasebe bazlı performans ölçümleri olarak varlıklar (ROA) ve özkaynak getirisi (ROE) kullanılmıştır. Yapılan hesaplamalar sonucunda, BIST'deki şirketler için sosyal sorumluluk ve finansal performans arasında pozitif bir ilişki olduğunu göstermektedir. Değerleme kısıtlamalarından biri BIST Sürdürülebilirlik Endeksi Kasım 2014 itibariyle hesaplamaya başlanmış olmasından kaynaklanmaktadır. Elde edilen çıktılara göre birinci sonuç; bağlam etik finansmanı kapsamındaki şirketlerin yatırım alternatiflerinin eksikliği, onlar için bir dezavantaj değildir. İkincisi ise etik finans bağlamında incelenebilecek olan İslami Finans, Türkiye'de son yıllarda popüler hale gelmiştir. Türk borsası gelişmekte olan bir finansal piyasadır. Bu çalışmanın bulguları, yerel ve uluslararası yatırımcıların ticaret stratejileri tasarlama, yatırım kararları alma ve risk yönetimi konularında etkilerini ortaya koymaktadır. Katılım bankacılığı prensiplerine uygun olarak faaliyet gösteren şirketlerin stoklarından oluşan KATLM Endeksi, riskli yatırımcılara alternatif teşkil etmektedir.

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Anahtar Kelimeler: Kurumsal Sosyal Sorumluluk, İslami Finans, Finansal Performans Değerlemesi

JEL Kodları: G20, G32, M14

Abstract

The purpose of this study is to examine the stock market performance and accounting performance of Participation 30 Index (KATLM), Corporate Governance Index (XKURY) and Sustainability Index (XUSRD), all of which are calculated by Borsa Istanbul (BIST) stock market. The companies in these indexes are approved as companies making socially-responsible investments. Design/methodology/approach – The risk-adjusted performance measures, Sharpe Ratio, Treynor Measure, Jensen Measure, Information Ratio, M^2 Performance Measure and T^2 Performance Measure were used in this article to calculate the stock market performance. The return on assets (ROA) and return on equity (ROE) were used as accounting-based performance measures. The results show that there is a positive relation between social responsibility and financial performance for companies in BIST. Research limitations/implications - BIST Sustainability Index has started to be computed as of November 2014, and it is one of the limitations of this study. Practical implications – First, the shortage of investment alternatives of companies covered within the context ethical finance is not a disadvantage for them. Second, Islamic Finance, which can be investigated within the context of ethical finance, has become popular in recent years in Turkey. KATLM Index, which is consisted of stocks of the companies operating compatible with the principles of participation banking, is an alternative for risk-averse investors. Originality/value - Turkish stock market is an emerging financial market. The findings of this study has implications for local and international investors for designing trading strategies, drawing investment decisions and risk management.

Key Words: Corporate Social Responsibility, Islamic Finance, Financial Performance Evaluation

JEL Codes: G20, G32, M14

1. INTRODUCTION

Ethical or socially responsible investing are on the rise during the last decade. There is an interaction between Socially Responsible Investing and Islamic Finance since both are values-based investing. Islamic Finance is governed by religious principles, and all the transactions are guided by social, moral and ethical considerations. In this study, the companies that are traded in Participation 30 Index (KATLM), Corporate Governance Index (XKURY) and the Sustainability Index (XUSRD), all of which are calculated by Borsa Istanbul (BIST) stock market, are approved as companies that are value-creating, ethical, namely making socially-responsible investments. In this context, we are attempting to answer three questions regarding ethical and socially-responsible investments. Our first research question is whether there is a difference between risk-adjusted returns of indices that are measured within the context of ethical finance and an index which can be accepted as a benchmark. Second, Islamic Finance, which can be investigated within the context of ethical finance, has become popular in recent years in Turkey. KATLM Index, which is consisted of stocks of the companies operating compatible with the principles of participation banking, is an alternative for portfolio investors. So, our research question is, whether it is relevant for the development of new Islamic financial products to compare the performance of KATLM Index and that of an index which can be accepted as a benchmark. Last, we are seeking an answer to the question whether the shortage of investment alternatives of companies covered within the context ethical finance is a disadvantage for them.

Borsa Istanbul brings together all the exchanges operating in the Turkish capital markets under a single roof since April 3, 2013. Borsa Istanbul is the only securities market in Turkey. As of February 2016, a total of 415 companies and 11 exchange traded funds were traded on Borsa Istanbul Equity Market, with 116 on the Star Market, 184 on the Main Market, 20 on the Emerging Companies Market, 48 on the Collective and Structured Products Market, 14 on the Pre-Market Trading Platform 33 on the Watchlist Companies Market (http://www.borsaistanbul.com/en/data/data/consolidated-data, accessed February 10, 2016).

The BIST 100 Index (XU100) used in the paper is used as the main index for Borsa İstanbul Equity Market. It consists of 100 stocks selected among the stocks of companies traded on the BIST Stars and BIST Main markets and the stocks of real estate investment trusts and ventures capital investment trusts traded on the Collective and Structured Products Market. BIST 100 index automatically covers BIST 30 and BIST 50 stocks (http://www.borsaistanbul.com/en/indices/bist-stock-indices, accessed February 10, 2016).

BIST Corporate Governance Index (XKURY) used in the paper aims to measure the price and return performances of companies traded on Borsa Istanbul Markets (except companies in WatchList and Lists C and D) with a corporate governance rating of minimum seven over ten as a whole and minimum of 6.5 for each section. The corporate governance rating is determined by the rating institutions incorporated by Capital Markets Board of Turkey (CMB) in its list of rating agencies as a result of their assessment of the company's compliance with the corporate governance principles.

Corporate Governance Index started to be calculated on August 31, 2007 with the initial value of 48,082.17. Ratings of companies included in BIST Corporate Governance Index is available in the company disclosures sent to the Public Disclosure Platform (PDP) (http://www.borsaistanbul.com/en/indices/bist-stock-indices/corporate-governance-index, accessed February 10, 2016). There are 50 companies in Corporate Governance Index as of January 2016.

BIST Sustainability Index (XUSRD) used in the paper aims to provide a benchmark for Borsa Istanbul companies with high performance on corporate sustainability and to increase the awareness, knowledge, and practice on sustainability in Turkey. Moreover, the index is a platform for institutional investors to demonstrate their commitment to companies managing environmental, social and governance (ESG) issues with high performance.

Borsa Istanbul has signed a cooperation agreement with Ethical Investment Research Services Limited (EIRIS) to create BIST Sustainability Index. By, with this agreement, EIRIS assesses Borsa Istanbul listed companies based on the international sustainability criteria. The assessment is based upon only publicly available information, and assessment costs of companies are covered by Borsa Istanbul. Johannesburg and Mexico Stock Exchanges are the other exchanges that EIRIS provides sustainability research service.

The detailed Research Methodology document which covers the indicators under each of the different ESG criteria, that the assessments are based upon, is revised by EIRIS to make it more understandable and simple for companies.

BIST Sustainability Index has been launched on the 4th of November, 2014 with the code XUSRD. The initial value of the index is 98.020,09 based upon the second session closing value of BIST 30 index on the 3rd of November 2014. The relative weight of each constituent is capped at 15%.

There is one index period for BIST Sustainability Index as November-October. EIRIS assessed BIST 30 constituent companies in 2014 and BIST 50 constituent companies in 2015. Starting from 2016, volunteer companies from BIST 100 are added to the list of companies to be assessed "The assessment list" is revised annually and announced by Borsa Istanbul in December. There are 29 companies in Sustainability Index as of January 2016 and 63 companies subject to assessment for 2016.

To be included in the index, companies should perform over the threshold for each criteria group. To incite the companies for better sustainability performance, it is thought to raise the thresholds gradually in the future.

The index provides competitive advantage to Turkish companies managing their corporate risks and opportunities effectively. An investible index on which new instruments can be developed is in place to attract capital for companies. The Index reflects companies' approach to important sustainability issues including global warming, draining of natural resources, health, security and employment, while allowing an independent assessment of their operations and decisions regarding these issues and, in a sense, their registration.

The Index offers companies the opportunity to compare their sustainability performance on both local and global level. With the Index, Borsa Istanbul provides companies an instrument for evaluating their performance and consequently adopting new targets or furthering their performance while allowing them to develop their risk management abilities for corporate transparency, accountability, and sustainability. This, in turn, allows companies to gain a competitive edge. Inclusion in the Index adds to their visibility and prestige.

The Index facilitates for companies the access to global clients, capital, and lower-cost finance. The project aims to create an instrument which allows investors to select and invest in companies that adopt principles of sustainability and corporate governance. Today, responsible investment is preferred mainly by institutional investors. BIST Sustainability Index encourages founding such funds, while facilitating for Index-constituent companies to get a larger share of such funds. At the same time, the Index offers a new financial asset category for all investors (http://www.borsaistanbul.com/en/indices/bist-stock-indices/bist-sustainability-index, accessed february 10, 2016).

Participation 30 Index (KATLM) used in the paper is a stock index formed of stocks traded at Borsa Istanbul National Market and conforming to Participation Banking principles. Stocks are selected based on Index Rules set up according to Participation Banking principles. Accordingly, the index covers companies that are not active in the fields of interest-based financing, trade, services, intermediation (banking, insurance, financial leasing, factoring and other interest-based activities), alcoholic drinks, gambling, games of chance, pork and similar food, press, publication, advertisement, tourism, entertainment, tobacco products, weapons, futures (gold, silver and currency trades). Moreover, companies are required to achieve some financial ratios to take part in the index. The rate of total interest-bearing debt of companies to market capitalization shall be lower than 30%; the rate of interest-bearing cash and securities to market capitalization shall be lower than 30%,and the rate of income from abovementioned fields to total income shall be lower than 5%. Top 30 companies with the biggest public market capitalization of such stocks that are in line with such rules constitute the index companies (http://www.katilimendeksi.org/subpage/116/, accessed February 10, 2016).

BIST Sustainability Index has started to be computed as of November 2014, and it is one of the limitations of this study. This study contributes to the existing literature by examining KATLM, XKURY and XUSRD indices together for the first time regarding ethical finance, by comparing their, stock market performance and accounting-based performance with the BIST National 100 (XU100) Index performance and by calculating their systematic risks, namely their betas. The remainder of this paper continues as follows. After an overview of relevant literature in Section 2, Section 3 provides data and discusses methodological issues, Section 4 discusses the results. We finish by summarizing our main findings.

2. LITERATURE

The corporate social responsibility (CSR) and socially responsible investing have been widely studied in the finance literature. These studies were first carried out in U.S. and later in other countries. There are very few studies about CSR or socially responsible investing for Turkey. In Table 1, studies and the findings are listed.

Table 1: Study of Corporate Social Responsibility And Socially Responsible Investing in Turkey

	Main Finding	Data & Study Period & Methodology
Başar & Başar (2006)	The current situation of social responsibility practices in Turkey is very poor.	ISE 100 & January-March 2005 & questionnaire
Pelit&Keleş& Çakır (2009)	Social responsibility dimension towards shareholders are the most positive dimension reported at hotel establishments.	Hotel Establishments in Ankara & 2007 & questionnaire
Ateşoğlu&Türker (2010)	Social responsibility activities of hospitality establishments in Mugla is improving.	Hospitality Establishments in Mugla & 2010 & questionnaire
Cingöz& Akdoğan (2012)	Managers think that CSR occurs with its four dimensions in their businesses. Legal responsibility has the highest mean among these dimensions.	Kayseri Organized Industrial Zone & 2012 & questionnaire
Çelik & Dinçer & Yılmaz (2012)	CSR activities of deposit banks in ISE improves bank's financial indicators.	ISE Deposit Banks & 2009-2011
Alparslan & Aygün (2013)	There's a positive relationship between CSR and firm performance and this positive relationship are significant with Tobin's q.	ISE & 2009-2010
Başar (2014)	There's a negative relationship between CSR costs and firm performance.	BIST Chemical - Petroleum and Plastic Sector & 2010-2012
Çıtak &Ersoy (2016)	The reaction of investors to the announcement of firms included in BIST Sustainability Index is positive for a relatively short period.	BIST 30 & January-March 2014

In early literature there are many research efforts to find the relationship between CSR and profitability (Moskowitz, 1972; Bragdon & Martin, 1972; Bowmn & Haire, 1975; Heinz, 1976; Sturdivant & Ginter, 1977; Alexander & Buchholz, 1978; Abbot & Monsen, 1979). All these studies produced varying results. The recent studies about the relationship between the social performance of firms and their financial performance are still mixed (Griffin & Mahon, 1997; Roman, Hayibor & Agle, 1999; Margolis & Walsh, 2001, 2003; Post, Preston & Sachs, 2002). Some scholars have found a positive relationship (Coffrey & Fryxell, 1991; Berman et al., 1999; Hillman & Keim, 2001). Other works find more ambiguous or negative relationships (McWilliams & Siegel, 2000).

Performance Management

The main idea in most of the classical measures of investment performance is essentially comparing the return of a managed portfolio over some evaluation period to the return of a benchmark portfolio. In our study XU100 is the benchmark portfolio. The risk-adjusted performance measures used in this article include Sharpe Ratio, Treynor Measure, Jensen Measure, Information Ratio, M^2 Performance Measure and T^2 Performance Measure.

The Sharpe Ratio

The Sharpe ratio, which is first introduced in Sharpe (1966), is the average return earned more than the risk-free rate per unit of volatility or total risk.

$$S_p = \frac{(r_p - r_f)}{\sigma_p}$$

Treynor Measure

Treynor's measure gives excess return per unit of systematic risk.

$$T_p = \frac{(r_p - r_f)}{\beta_p}$$

Jensen Measure

Jensen's measure is also called portfolio's alpha value. It is the average return on the portfolio over and above that predicted by the CAPM, using the portfolio's beta and average market return.

$$\alpha_p = r_p - [r_f + \beta_p(r_m - r_f)]$$

Information Ratio (Appraisal Ratio)

The information ratio divides the alpha of the portfolio by the nonsystematic risk of the portfolio.

$$Appraisal\ Ratio = \frac{\alpha_p}{\sigma_s}$$

Unsystematic risk (σ_s) = $\sigma_p - \beta_p$

M^2 Performance Measure

M^2 performance measure is developed by Modigliani and Modigliani(1997). It is used to characterize how well a portfolio's return rewards an investor for the amount of risk taken, relative to that of some benchmark portfolio and the risk-free rate.

$$M^2 = r_p^* - r_m$$

$$w_{rp} = \frac{\sigma_m}{\sigma_p}$$
$$w_{rf} = 1 - w_{rp}$$
$$\sigma_{p*} = w_{rp} * \sigma_p = \frac{\sigma_m}{\sigma_p} * \sigma_p = \sigma_m$$
$$r_{p*} = w_{rf} * r_f \mid w_{rp} * r_p$$

T^2 Performance Measure

T^2 performance measure is used to convert the Treynor measure into percentage return basis. It equates the beta of the managed portfolio with the market's beta of 1 by creating a hypothetical the portfolio made up of T-bills and the managed portfolio. If the beta is lower than one, leverage is used and the hypothetical portfolio is compared to the market (Bodie, Kane, Marcus, 2005, p.868)

$$T^2 = r_p^* - r_m$$
$$w_{rp} = \frac{\beta_m}{\beta_p}$$
$$w_{rf} = 1 - w_{rp}$$
$$\beta_{p*} = w_{rp} * \beta_p = \frac{\beta_m}{\beta_p} * \beta_p = \beta_m$$
$$r_{p*} = w_{rf} * r_f + w_{rp} * r_p$$

Risk-Free Rate

The risk-free rate of interest was derived from CBRT. The daily rate of return is calculated as follows:

$$i = (1 + Annualized\ Return)^{1/Period} - 1$$

where : i is the daily risk-free rate of interest;

the *period* is 252 .

2. DATA AND METHODOLOGY

The data used in this paper consists of daily stock market data for the period November 2014 – November 2015 from Borsa Istanbul. Daily return is calculated as the percentage logarithmic change in the value of index compared to previous day's reference value as in the following:

$$Y_t = \ln (P_t / P_{t-1})$$

XU100 is used as a proxy for market returns, and the daily return on Over/Night interest rates in BIST Interbank Repo Market as a proxy for the risk-free interest rate.

Figure 1: Time series plots of daily index closing prices

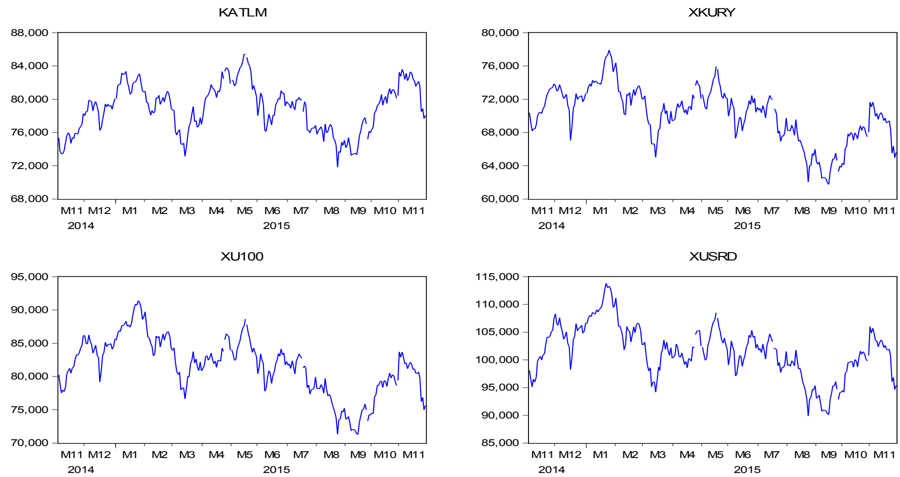

Figure 2: Time series plots of daily returns

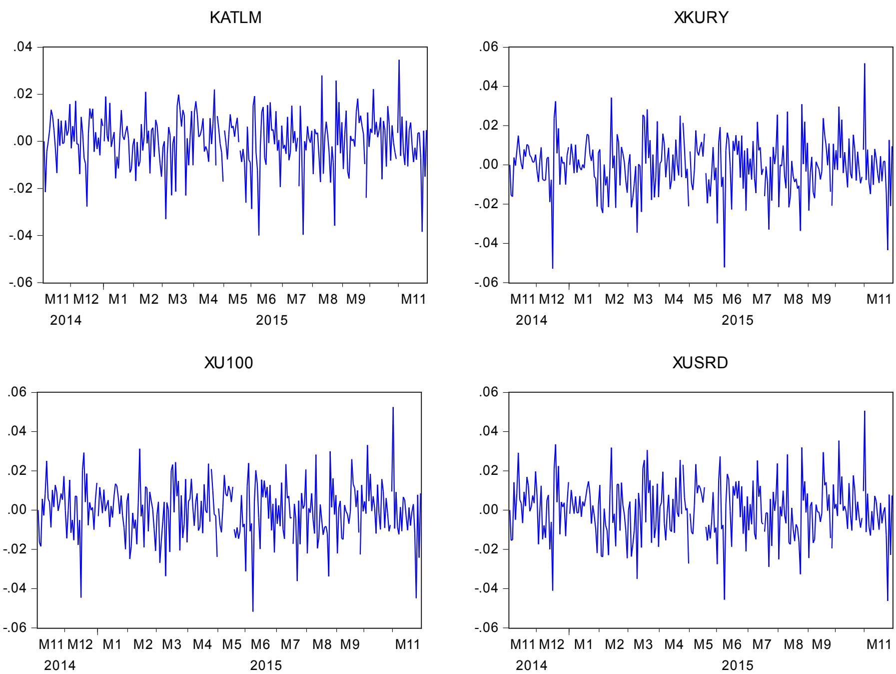

Table 2 reports summary statistics on the index returns. The sample includes four indexes with 268 trading days. All the indices except KATLM have negative returns, which range between -0.0003 (XKURY) to 0.0001 (KATLM). The minimum and maximum values suggest large dispersion of returns, which is confirmed by high standard deviation. XUSRD has the highest standard deviation of 0.0143 and KATLM has the lowest standard deviation of 0.0114. All the returns are skewed to the left, indicating negative skewness of returns. The kurtosis is greater than 3.0 for all of the return series, confirming typical leptokurtic distributions, with the return series having high peaks around the mean with thicker tails as compared to the normal distribution. All these high kurtosis values show extreme returns in return series (risk-averse investors like positive skewness and dislike negative skewness and high kurtosis).

Table 2: Summary statistics for index returns

	KATLM	XKURY	XUSRD	XU100
Mean	0.0001	-0.0003	-0.0001	-0.0002
Median	0.0011	0.0003	0.0000	0.0009
Maximum	0.0346	0.0518	0.0506	0.0526
Minimum	-0.0400	-0.0529	-0.0464	-0.0518
Std. Dev.	0.0114	0.0139	0.0143	0.0138
Skewness	-0.6313	-0.2634	-0.0462	-0.2520
Kurtosis	4.4398	4.6519	3.7831	4.4106
Jarque-Bera	40.9487	33.5717	6.9426	25.0554
Probability	0.0000	0.0000	0.0311	0.0000
Observations	268	268	268	268

Table 3 present correlations between index returns. They are all positive. The XU100 has the highest correlation with XUSRD and the lowest correlation with KATLM.

Table 3: Correlations for index returns

	KATLM	XKURY	XU100	XUSRD
KATLM	1.0000	0.8422	0.8856	0.8237
XKURY	0.8422	1.0000	0.9772	0.9582
XU100	0.8856	0.9772	1.0000	0.9815
XUSRD	0.8237	0.9582	0.9815	1.0000

Stock Market Performance

Our study employes the BIST National 100 (XU100) index return as a proxy for market returns (r_m). We employ six models of performance measurement. Table 4 reports the results of performance measures for all indexes. The beta coefficient, and the unsystematic risk, that is used to calculate appraisal ratio is calculated as follows:

$$\beta_p = \frac{(Covariance\ of\ market\ return\ with\ index\ return)}{Variance\ of\ market\ return}$$

$$\text{Unsystematic risk} = \sqrt{\text{Var (Realized Return} - \text{Estimated Return)}}$$

4. RESULTS AND DISCUSSIONS

Table 4: Performance Measures

	KATLM	XKURY	XUSRD	XU100	Risk Free Return
Average Return	0.0001	-0.0003	-0.0001	0.0002	0.0004
Standard Deviation	0.0114	0.0139	0.0143	0.0138	
Beta Coefficient	0.7304	0.9844	1.0144	1.0000	
Unsystematic Risk	0.0053	0.0029	0.0027	0.0000	
Sharpe Ratio	-0.0240	-0.0479	-0.0357	0.0453	
Treynor Measure	-0.0004	-0.0007	-0.0005	0.0006	
Jensen Alpha	0.0002	0.0000	0.0001	0.0000	
M^2 Measure	0.0003	0.0000	0.0001	0.0000	
T^2 Measure	0.0003	-0.0001	0.0001	0.0000	
Appraisal Ratio	0.0349	-0.0169	0.0457		

All these indices, XUSRD (1.0144) and XKURY (0.9844), have beta estimates of a larger or closer to one which may interpret that XUSRD and XKURY are more sensitive to financial risk factors in the market. In other words these indices are closely correlated with the market. When the residuals -the differences between the actual index return and the return predicted from the regression and measuring the unsystematic risk- are observed, their variances which representing the company-specific risks in other words unsystematic risk were highest for KATLM (0.0053). According to the performance measures in Table 4, KATLM and XUSRD index outperforms the XKURY and the market (XU100).

Accounting-Based Performance

In this part of the study, we examine whether differences in accounting-based performance exist for KATLM, XKURY and XUSRD which base their company selection on ethical screen compared to other indexes. In our study, firm financial performance is measured by two accounting variables. The financial data used are the return on assets (ROA) and return on equity (ROE). The source of our data is the Public Disclosure Platform database. The survey covers the firms included in the indexes for the year 2015.

Because size and risk can affect a firm's performance, we include firm characteristics such as size and risk as a control variable in regression equation (Ullman 1985, McWilliams, A., and D. Siegel 2000). Table 6 presents the results of the regression analysis using financial performance (ROA, ROE) as the dependent variable and the index dummies as the independent variables. The logarithm of assets (LNASSETS) is used as proxy for size, Long Term Debt/Total Assets (LTD/A) and Short Term Debt/Total Assets (STD/A) as the proxy for risk. For our analysis, we define dummy variables that are either 0 or 1 (for example if a company is included in KATLM index $D_{KATLM}=1$ otherwise $D_{KATLM}=0$)

$$ROA = b_0 + b_1 LNASSETS + b_2 LTD/A + b_3 STD/A + b_4 D_{KATLM} + b_5 D_{XKURY} + b_6 D_{XUSRD} + b_7 D_{XU100}$$

$$ROE = b_0 + b_1 LNASSETS + b_2 LTD/A + b_3 STD/A + b_4 D_{KATLM} + b_5 D_{XKURY} + b_6 D_{XUSRD} + b_7 D_{XU100}$$

Table 5 reports the descriptive statistics of financial performance measures (ROA and ROE) and the control variables (LNASSETS, LTD/A, STD/A). The mean-ROA for KATLM (0.11) and XUSRD (0.06) is greater than mean-ROA for XU100 (0.04) and XKURY (0.04). On the other hand, KATLM (0.19) has the lowest mean-ROE.

Table 5: Descriptive Statistics for 2015

		ROA	ROE	LNASSETS	LTD/A	STD/A
XU100	Mean	0.04	8.07	8.51	0.29	0.31
	Standard Deviation	0.14	31.82	1.37	0.30	0.28
	Coefficient of Variation	3.31	3.94	0.16	1.04	0.90
	Number of Companies	100	100	100	100	100
XKURY	Mean	0.04	13.73	8.54	0.30	0.30
	Standard Deviation	0.06	42.01	1.35	0.26	0.22
	Coefficient of Variation	1.50	3.06	0.16	0.86	0.73
	Number of Companies	52	51	52	52	52
KATLM	Mean	0.11	0.19	8.74	0.22	0.25
	Standard Deviation	0.08	0.12	1.09	0.26	0.13
	Coefficient of Variation	0.75	0.64	0.12	1.17	0.53
	Number of Companies	23	23	23	23	23
XUSRD	Mean	0.06	22.21	8.72	0.40	0.28
	Standard Deviation	0.10	50.57	1.64	0.26	0.18
	Coefficient of Variation	1.61	2.28	0.19	0.66	0.63
	Number of Companies	30	30	30	30	30

The results of our regression equation model explaining the relations between ROA/ROE and control variables, size (LNASSETS) and risk (LTD/A and STD/a) appear in Table 6. As can be seen (Table 6) each of the models is significant. ROE as the dependent variable is seen to be strongly related to LNASSETS at Prob.<0.01. When the dependent variable is ROA, LNASSETS is still significant (Prob.<0.10 level) but less strong. ROA is also strongly and negatively related (Prob.<0.01) to LTD/A and STD/A. Results for the index dummies (a positive coefficient for D_{KATLM} and D_{XUSRD} in all significant values) confirm that companies included in KATLM and XUSRD indexes are better able to create higher ROA.

Table 6: The results of the OLS Regression Model for ROA and ROE for the year 2015

Independent Variable	Dependent Variable			
	ROA		*ROE*	
	Coefficient	Prob.	Coefficient	Prob.
LNASSETS	0.0130	0.0645*	8.6240	0.0003***
LTD/A	-0.2419	0.0000***	15.0082	0.1727
STD/A	-0.2187	0.0000***	7.9641	0.4317
D_{KATLM}	0.0447	0.0315**	-10.0384	0.1437
D_{XKURY}	0.0106	0.6293	9.1953	0.2101
D_{XU100}	0.0214	0.4278	3.0611	0.7357
D_{XUSRD}	0.0553	0.0074***	11.1400	0.1014
C	0.0232	0.7399	-78.7889	0.0010***
R-squared	0.5825		0.2517	
Adjusted R-squared	0.5580		0.2073	

5. CONCLUSION

In this study, we are attempting to answer three main questions regarding the ethical and socially responsible investments. The first question is related to stock market performance. When we compare the returns on KATLM, XKURY and XUSRD indices that are examined regarding ethical performance with the return of our benchmark index XU100, we can see that the performance of the KATLM and XUSRD indices are relatively better than the XU100 Index. The KATLM Index, which is consisted of companies operating compatibly with the principles of the participation banking regarding Islamic finance, outperforms other indices in the study. Third, we examined the effect of the limited investment alternatives on the financial performance of the companies examined within the ethical finance context. Descriptive statistics for return on assets (ROA), return on equity (ROE) and financial risk indicators -here, the related ratios are long term debt/total assets and short term debt / total assets- are calculated. The highest mean-ROA is seen for KATLM and XUSRD indices. Interestingly, the lowest mean-ROE is seen for KATLM Index. KATLM Index has the lowest average financial risk, as well. According to the regression results, there is a significant positive relationship between KATLM and XUSRD indices and our dependent variable, ROA. Moreover, there is a significant negative relationship between financial risk and ROA.

These results show that there is a positive relation between social responsibility and both financial and stock market performance (Moskowitz, 1972; Parket & Eibert, 1975; Soloman & Hansen, 1985). When we analyzed the relation between XU100 and KATLM, we found that the beta, sensitivity of KATLM on XU100 is less than one. The beta for XKURY is also less than one. This shows an opportunity for risk-averse investors to use especially KATLM index and XKURY index as an alternative for their portfolios.

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