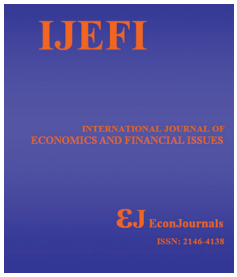

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Returns of Islamic Stocks in Saudi Arabia: Segmentation and Risk - Aversion

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ABSTRACT

This study investigates whether religious-based trading practices affect market returns. We use data from Saudi Arabia, which has clear defined religious rules on investing in stock markets. Using panel regression model, we find that non-Islamic stocks in this market have lower returns compared to Islamic stocks. These results conflict with Merton's market segmentation theory.

Keywords: Returns, Islamic Stocks, Risk-aversion, Segmentation, Investment
JEL Classifications: C58, E44, G32\

1. INTRODUCTION

Following Merton (1987) market segmentation theory, neglected stocks should outperform other stocks, compensating investors for limited risk-sharing. In this study, we use data with an Islamic religious background to investigate returns difference between stocks that are neglected by investors because they conflict with Islamic Shariah (non-Islamic stocks) and stocks that can be characterized as conforming with Islamic Shariah (Islamic stocks).

Although a number of studies examine the effect of Islamic Shariah on stock returns, there is no clear understanding of this effect (Merdad, 2012). In our study, we may expect that a significant portion of retail investors will follow Islamic trading rules in this Islamic society and neglect non-Islamic stocks as the level of religiosity is very high. According to a Gallup 2009 survey, the society of Saudi Arabia has a strong belief that religion is important in daily life. The survey shows that 93% of people in Saudi Arabia believe that religion is important in life.

We use data from Saudi Arabia stock market, where recently they adapted friendly foreigner's regulations to attract both foreign investors and firms (see, Saudi Arabia to give foreign investors full access to parallel stock market by Thomson reuters). However, Islamic investors in Saudi Arabia are considered to be bound by Islamic laws that could limit their investments in to Islamic stocks only. Consequently, the market would be subject to significant segmentation in case the majority of investors trades just Islamic stocks, which may be led to discouraging non-Islamic firms from listing in this market.

We use panel data regression model to mitigate the problems associated with estimation bias and multicollinearity, control for individual heterogeneity, as well as specifying the time-varying relation between dependent and independent variables (Baltagi, 2008; Hsiao, 2014).

We find that non-Islamic stocks have lower returns in comparison with Islamic stocks. These results conflict with market segmentation theory. One possible reason for the higher returns of Islamic stocks in Saudi Arabia is the high trading by retail investor, as cited by the Saudi Stock Market Report, 2015 (http://www.tadawul.com.sa). In the Saudi Arabia stock market, individual trading represents around 89% of the total trading value. Previous research has shown that religiosity is, in general, positively related to risk-aversion (Miller and Hoffmann, 1995; Hilary and Hui, 2009; Noussair et al., 2013). Thus, it is possible that the "segmentation" effect of Merton (1987) market segmentation theory in Saudi Arabia is

offset by the higher risk-aversion of Islamic religious retail traders who trade only Islamic stocks and require higher returns, leading to higher returns for Islamic stocks.

The rest of this paper is organized as follows. The next section presents the literature review. Section 3 is data and descriptive statistics. Section 4 presents the empirical tests, while Section 5 concludes.

2. LITERATURE REVIEW

Each society defines ethical investments in a different way. According to (Fabozzi et al., 2008), what is perceived as ethical differs between societies and changes over time.

Islamic societies define ethical investments in an Islamic religion context. The effect of religion on returns has been addressed in the context of Islamic stocks from the perspectives of mutual funds (Elfakhani et al., 2005; Abdullah et al., 2007; Hayat and Kraeussl, 2011; Bukhari and Azam, 2015) and stock indexes (Hakim and Rashidian, 2002; Hussein, 2004; Hussein and Omran, 2005; Hashim, 2008; Hassan and Girard, 2010; Abbes, 2012; Lobe et al., 2012; Walkshäusl and Lobe, 2012a; Walkshäusl and Lobe, 2012b; Al-Khazali et al., 2014; Canepa and Ibnrubbian, 2014; Ho et al., 2014; Jawadi et al., 2014; Kr and Fu, 2014; Ashraf, 2016). However, whereas some studies find that Islamic investments outperform non-Islamic investments, other studies either suggest the opposite or find that there is little or no difference (Merdad et al., 2015).

Following Merton (1987) market segmentation theory, neglected stocks should outperform other stocks componsating investors for limited risk-sharing. Further, from the literature we have observed that ethically neglected stocks typically outperform the market (Fabozzi et al., 2008; Hong and Kacperczyk, 2009; Kim and Venkatachalam, 2011; Luo and Balvers, 2014) and other acceptable portfolios (Liston and Soydemir, 2010). Thus, neglected non-Islamic stocks should outperform other stocks and Islamic stocks, compensating investors for limited risk-sharing. This leads us to hypothesize that non-Islamic stocks outperform Islamic stocks.

3. DATA AND DESCRIPTIVE STATISTICS

3.1. Data

Our study is based on stock markets in religious Islamic societies that have both "Islamic" and "non-Islamic" stocks (mixed markets), specifically the listed firms in Saudi Arabia. The Islamic screening strategy in this study divides the stocks into two categories: (i) The stocks of Islamic companies and (ii) the stocks of conventional companies or non-Islamic companies. We follow the list of the Al-Mashora and Al-Raya for Islamic Financial Consultancy to identify the Islamic-listed stocks in these stock markets.

The data has been collected from Thomson Datastream. Stock closing prices, shares outstanding, and trading volume are collected on a daily basis for the period 2004–2014. Furthermore, we also obtained the monthly firm-specific variables, including firm size, firm age, and market-to-book ratio (Table 1).

This table presents the number of listed Islamic firms in the Saudi Arabia stock market as the end of 2014 (based on the list of Al-Mashora and Al-Raya for the Islamic Financial Consultancy). This table also reports the total market capitalization as the end of 2014 in US dollars as well as the average market capitalization for listed firms in US dollars (taken from Thomson Datastream).

Table 2 reports the industry concentration of Islamic and non-Islamic stocks in the Saudi Arabian stock market, showing that the majority of the Islamic stocks are concentrated in the banking, insurance, and financial services industries. Thus, we control for the systematic risk that is attached to the stock industry.

Table 1: Saudi Arabia stock markets descriptions

Number of listed firms	Islamic firms	Percentage of Islamic firms (%)	Market cap in US$ (000,000')	Average firm market cap in US$ (000,000')
167	39	23	482,145	2,720

Table 2: Industry distribution of Islamic and non-Islamic stocks

Type of bank	Industrial	Utility	Transportation	Bank and loan	Insurance	Other financial
Islamic	48.3	0.0	0.0	13.8	34.5	3.4
Non-Islamic	70.9	4.3	3.4	6.8	11.1	3.4

Table 3: Summary statistics for return panel regression variables

	ER (%)	S (000')	MB	RT (%)	BT	T (%)	AG
Panel A: Mean, median, and SD							
Mean	0.60	14.93	1.03	0.54	0.95	131.13	8.69
Median	0.88	14.92	1.00	1.01	0.92	79.48	8.69
SD	0.08	0.25	0.22	0.02	0.06	1.83	0.16
Panel B: Median equality test							
Islamic	0.26	14.57	0.82	1.00	0.95	51.28	8.45
Non-Islamic	1.47	15.01	1.09	1.64	0.90	80.83	8.74
P	(0.74)	(0.00)	(0.00)	(0.41)	(0.00)	(0.00)	(0.00)

SD: Standard deviation

This table presents the industry distribution percentages of the listed Islamic and non-Islamic stocks in the Saudi Arabia stock market of our study as the end of 2014. The sector classification is from Worldscope's General Industry Classification. The percentage of Islamic stocks in each sector has been calculated as the number of Islamic stocks in that sector divided by the total number of Islamic stocks in the market; we calculated the percentage of non-Islamic stocks in each sector in the same manner.

3.2. Descriptive Statistics

Table 3 reports our main variables of interest and their corresponding distribution statistics. Panel A reports the overall market statistics for the return regression variables. We report the excess return ($ER_{i,t}$), firm size ($S_{i,t}$) beta of the stock ($BT_{i,t}$), monthly turnover ($T_{i,t}$), market-to-book ratio ($MB_{i,t}$), average monthly return for the previous 12 months ($RT_{i,t}$), and firm age ($AG_{i,t}$) as our main firm-level variables. Panel A shows that Saudi Arabia has high trading activity with a monthly average turnover of around 131%.

This table presents the summary statistics for the panel regression variables for 2007-2014. The mean is the time-series average of means, median is the time-series median of means, and standard deviations (SD) is the time-series average of SD. $S_{i,t}$ is the monthly natural logarithm of the firm market capitalization in local currency in thousands, $MB_{i,t}$ is the monthly log of the stock market-to-book ratio, $BT_{i,t}$ is the rolling beta for the industry to which firm i belongs (calculated at month t based on the previous 36 months), T_{it} is stock i's turnover ratio for the month t, $RT_{i,t}$ is stock i's average monthly return for the previous 12 months, and $AF_{i,t}$ is the log of the firm's age calculated on a monthly basis. Panel A reports the mean, median, and SD of the panel regression variables for the overall market data. Panel B reports the median equality test between Islamic and non-Islamic stocks for the panel regression variables. The P-values correspond to a Wilcoxon-Mann-Whitney signed rank median test.

Panel B of Table 3 reports the results of a median equality test for the return panel regression variables. This test allows for a determination of whether Islamic stocks are inherently different from non-Islamic stocks. We find that, at the median level, non-Islamic stocks do not have significantly higher excess returns when compared to Islamic stocks. In terms of trading activity in relation to the turnover ratio, we observe that the median level, non-Islamic stocks are traded more

Table 4: Return panel regression tests

	D	S	MB	RT	BT	T	AG
Panel A: Baseline OLS regression							
(1)	0.003	0.002***					
	(0.003)	(0.001)					
(2)	0.002	0.002*	0.002**				
	(0.003)	(0.001)	(0.001)				
(3)	0.003	0.002**	0.003***	−0.262***			
	(0.003)	(0.001)	(0.001)	(0.031)			
(4)	0.003	0.002**	0.003**	−0.261***	0.017**		
	(0.003)	(0.001)	(0.001)	(0.031)	(0.007)		
(5)	0.003	0.002**	0.003***	−0.261***	0.017**	0.000	
	(0.003)	(0.001)	(0.001)	(0.031)	(0.007)	(0.000)	
(6)	0.003	0.002**	0.003***	−0.261***	0.017**	0.000	0.000
	(0.003)	(0.001)	(0.001)	(0.031)	(0.007)	(0.000)	(0.002)
Panel B: Panel regression including industry dummies and robust standard errors							
(1)	0.003*	0.005***					
	(0.002)	(0.001)					
(2)	0.004	0.005***	0.002*				
	(0.002)	(0.001)	(0.001)				
(3)	0.004	0.006***	0.003**	−0.296***			
	(0.003)	(0.001)	(0.001)	(0.042)			
(4)	0.004	0.006***	0.003**	−0.294***	0.014		
	(0.003)	(0.001)	(0.001)	(0.042)	(0.010)		
(5)	0.004	0.006***	0.003**	−0.293***	0.015	0.000*	
	(0.003)	(0.001)	(0.001)	(0.042)	(0.010)	(0.000)	
(6)	0.005	0.006***	0.003***	−0.296***	0.016	0.000	0.004**
	(0.003)	(0.001)	(0.001)	(0.042)	(0.010)	(0.000)	(0.002)
Panel C: Panel regression including industry dummies, year dummies and robust standard errors							
(1)	0.003*	0.005***					
	(0.002)	(0.001)					
(2)	0.004*	0.005***	0.002*				
	(0.002)	(0.001)	(0.001)				
(3)	0.004*	0.006***	0.003**	−0.296***			
	(0.003)	(0.001)	(0.001)	(0.042)			
(4)	0.004*	0.006***	0.003**	−0.294***	0.014		
	(0.003)	(0.001)	(0.001)	(0.042)	(0.010)		
(5)	0.004*	0.006***	0.003**	−0.293***	0.015	0.000*	
	(0.003)	(0.001)	(0.001)	(0.042)	(0.010)	(0.000)	
(6)	0.005*	0.005***	0.004***	0.031***	−0.402***	0.000	0.000
	(0.003)	(0.001)	(0.001)	(0.011)	(0.047)	(0.000)	(0.002)

OLS: Ordinary least squares

frequently than are Islamic stocks. The higher turnover of Islamic stocks in some countries indicates that traders in Saudi Arabia may prefer to trade Islamic stocks and neglect non-Islamic stocks.

4. EMPIRICAL TESTS

To test the relative performance of Islamic and non-Islamic stocks, we apply a panel test, while controlling for firm-specific characteristics to determine whether non-Islamic stocks outperform Islamic stocks. Thus, we estimate stock returns as:

$$ER_{i,t}=\alpha_0+\alpha_1 D_{i,t-1}+\beta X_{i,t-1}+\varepsilon_{i,t} \quad (1)$$

Where $ER_{i,t}$ is the excess monthly return to the risk-free rate of stock i, regressed on the lagged previous monthly values of firm return predictors, which are $D_{i,t-1}$ as a dummy variable, equal to 1 if the stock is Islamic and 0 if non-Islamic; $X_{i,t}-1$ as the monthly firm-specific characteristics; and ε_t is the error term. The monthly firm-specific characteristics variables, $X_{i,t-1}$, are the log firm market capitalization, $S_{i,t}$; the industry rolling beta for stock i calculated from the previous 36 months, $BT_{i,t}$; the turnover ratio, $T_{i,t}$, for stock i; the log of the stock market-to-book ratio, $MB_{i,t}$; the average return for stock i in the 12 months, $RT_{i,t}$; and the log of the firm age, $AG_{i,t}$.[1]

The coefficient α_1 indicates whether Islamic stocks have higher or lower returns than non-Islamic stocks after controlling for firm-specific characteristics. The null hypothesis is that α_1 equals zero, whereas our expectation is that it will be significantly <0.

The results of the ordinary least squares (OLS) tests are reported in Panel A of Table 4. The results suggest that there is no significant return difference between non-Islamic and Islamic stocks, after controlling for firm-specific factors.

This table reports the coefficients of the panel regressions for 2007–2014. The dependent variable $ER_{i,t}$ is the monthly return net of the risk-free rate for stock i in month t, and $D_{i,t}$ is the dummy variable equal to 1 if the stock is Islamic and 0 otherwise. $S_{i,t}$ is the monthly natural logarithm for the market capitalization of firm i; $MB_{i,t}$ is the monthly log of the stock market-to-book ratio; $RT_{i,t}$ is the stock i average monthly return for the previous 12 months; and $BT_{i,t}$ is the rolling beta for the industry to which firm i belongs, calculated at month t based on the previous 36 months. $T_{i,t}$ is stock i's turnover ratio for the month t, and $AG_{i,t}$ is the log of the firm's age. The standard errors are in parentheses. ***1%, **5%, and *10% denote levels of significance.

To avoid the potentail autocorrelation and heteroskedasticity that may influence the OLS results, we repeat the tests including industry dummies and use a cluster-robust variance and covariance estimators (Arellano, 2003). Panel B of Table 4 reveal that we derive similar conclusion when we repeat the tests.

Furthermore, we include yearly dummy variables to control for the potential effect of changes in market trends that may affect stock returns such as, the Global Financial Crises (Hui, 2005; Deng et al., 2013). Panel C of Table 4 reveals that after controlling carefully for the year effect, we find that neglected non-Islamic stocks underperformed Islamic stocks, which conflicts with market segmentation theory.

5. CONCLUSION

The question we address in this study is whether investor religiosity affect stock market returns. We avail of data from Saudi Arabia.

We find significant returns difference between non-Islamic and Islamic. Specifically, neglected non-Islamic stocks have lower returns in comparison to Islamic stocks. These results conflict with Merton (1987) market segmentation theory.

It is possible that the higher returns of Islamic stocks in Saudi Arabia is caused by the high trading by religious retail investors. Previous research has shown that religiosity is, in general, positively related to risk-aversion (Miller and Hoffmann, 1995; Hilary and Hui, 2009; Noussair et al., 2013). Thus, it is also possible that the "segmentation" effect of the market segmentation theory in Saudi Arabia is offset by the higher risk-aversion of Islamic religious retail traders who trade only Islamic stocks and require higher returns, leading to higher returns for Islamic stocks.

REFERENCES

Abbes, M.B. (2012), Risk and return of Islamic and conventional indices. International Journal of Euro Mediterranean Studies, 5(1), 1-23.

Abdullah, F., Hassan, T., Mohamad, S. (2007), Investigation of performance of Malaysian Islamic unit trust funds: Comparison with conventional unit trust funds. Managerial Finance, 33(2), 142-153.

Al-Khazali, O., Lean, H.H., Samet, A. (2014), Do Islamic stock indexes outperform conventional stock indexes? A stochastic dominance approach. Pacific Basin Finance Journal, 28, 29-46.

Arellano, M. (2003), Panel Data Econometrics. Oxford: Oxford University Press.

Ashraf, D. (2016), Does Shari'ah screening cause abnormal returns? Empirical evidence from Islamic equity indices. Journal of Business Ethics, 134(2), 209-228.

Baltagi, B. (2008), Econometric Analysis of Panel Data. United Kingdom: John Wiley & Sons.

Bukhari, S.K.H., Azam, M. (2015), A comparative returns performance review of Islamic equity funds with socially responsible equity funds and the broader market indices. The Lahore Journal of Economics, 20(2), 53-75.

Canepa, A., Ibnrubbian, A. (2014), Does faith move stock markets? Evidence from Saudi Arabia. The Quarterly Review of Economics and Finance, 54(4), 538-550.

Deng, X., Kang, J.K., Low, B.S. (2013), Corporate social responsibility and stakeholder value maximization: Evidence from mergers. Journal of Financial Economics, 110(1), 87-109.

Elfakhani, S., Hassan, M.K., Sidani, Y. (2005), Comparative Performance of Islamic Versus Secular Mutual Funds. Egypt: In 12th Economic Research Forum Conference in Cairo. p19-21.

Fabozzi, F.J., Ma, K., Oliphant, B.J. (2008), Sin stock returns. Journal of Portfolio Management, 35(1), 82-94.

1 Following previous studies to minimize the influence of the outliers, we take the natural logarithm of the firm market capitalization, the stock market-to-book ratio, and the firm age (Galema et al., 2008; Hong and Kacperczyk, 2009).

Galema, R., Plantinga, A., Scholtens, B. (2008), The stocks at stake: Return and risk in socially responsible investment. Journal of Banking and Finance, 32(12), 2646-2654.

Hakim, S., Rashidian, M. (2002), Risk and Return of Islamic Stock Market Indexes. Vol. 8. UAE: In: 9th Economic Research Forum Annual Conference in Sharjah.

Hashim, N. (2008), The FTSE Global Islamic and the Risk Dilemma. AIUB Business and Economics Working Paper Series, 8.

Hassan, M.K., Girard, E. (2010), Faith-based ethical investing: The case of dow jones Islamic indexes. Islamic Economic Studies, 17(2), 1-31.

Hayat, R., Kraeussl, R. (2011), Risk and return characteristics of Islamic equity funds. Emerging Markets Review, 12(2), 189-203.

Hilary, G., Hui, K.W. (2009), Does religion matter in corporate decision making in America? Journal of Financial Economics, 93(3), 455-473.

Ho, C.S.F., Rahman, N.A.A., Yusuf, N.H.M., Zamzamin, Z. (2014), Performance of global Islamic versus conventional share indices: International evidence. Pacific Basin Finance Journal, 28, 110-121.

Hong, H., Kacperczyk, M. (2009), The price of sin: The effects of social norms on markets. Journal of Financial Economics, 93(1), 15-36.

Hsiao, C. (2014), Analysis of Panel Data. Cambridge: Cambridge University Press.

Hui, T.K. (2005), Day-of-the-week effects in US and Asia–pacific stock markets during the Asian financial crisis: A non-parametric approach. Omega, 33(3), 277-282.

Hussein, K., Omran, M. (2005), Ethical investment revisited: Evidence from dow jones Islamic indexes. The Journal of Investing, 14(3), 105-126.

Hussein, K.A. (2004), Ethical investment: Empirical evidence from FTSE Islamic index. Islamic Economic Studies, 12(1), 22.

Jawadi, F., Jawadi, N., Louhichi, W. (2014), Conventional and Islamic stock price performance: An empirical investigation. International Economics, 137, 73-87.

Kim, I., Venkatachalam, M. (2011), Are sin stocks paying the price for accounting sins? Journal of Accounting, Auditing and Finance, 26(2), 415-442.

Kr, K.R., Fu, M. (2014), Does shariah compliant stocks perform better than the conventional stocks? A comparative study stocks listed on the Australian stock exchange. Asian Journal of Finance and Accounting, 6(2), 155-170.

Liston, D.P., Soydemir, G. (2010), Faith-based and sin portfolios: An empirical inquiry into norm-neglect vs norm-conforming investor behavior. Managerial Finance, 36(10), 876-885.

Lobe, S., Rößle, F., Walkshäusl, C. (2012), The price of faith: Performance, bull and bear markets, and screening effects of Islamic investing around the globe. Journal of Investing, 21(4), 153-164.

Luo, H.A., Balvers, R.J. (2014), Social screens and systematic boycott risk. Forthcoming, Journal of Financial and Quantitative Analysis, 52, 365-399.

Merdad, H.J. (2012), Two Essays in Islamic Finance and Investment. PhD Thesis, University of New Orleans.

Merdad, H.J., Hassan, M.K., Hippler, W.J. (2015), The Islamic risk factor in expected stock returns: An empirical study in Saudi Arabia. Pacific Basin Finance Journal, 34, 293-314.

Merton, R.C. (1987), A simple model of capital market equilibrium with incomplete information. The Journal of Finance, 42(3), 483-510.

Miller, A.S., Hoffmann, J.P. (1995), Risk and religion: An explanation of gender differences in religiosity. Journal for the Scientific Study of Religion, 34(1), 63-75.

Noussair, C.N., Trautmann, S.T., Van de Kuilen, G., Vellekoop, N. (2013), Risk aversion and religion. Journal of Risk and Uncertainty, 47(2), 165-183.

Walkshäusl, C., Lobe, S. (2012a), Islamic equity investing: Alternative performance measures and style analysis. The Journal of Investing, 21(4), 182-189.

Walkshäusl, C., Lobe, S. (2012b), Islamic investing. Review of Financial Economics, 21(2), 53-62.