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A Comparative Analysis Between Shariah-compliant & Non-Shariah compliant Stocks

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ABSTRACT

The study reported by this paper investigated the behaviour of stock returns among Shariah-compliant firms and non-Shariah compliant firms of service industry in Malaysia. The data of 50 firms listed in Bursa Malaysia were obtained from 2008 to 2012. It focused on the relationship between the stock returns and the financial ratios (firm size, market to book ratio, price-earnings ratio and total debt) as the microeconomic variables. While the gross domestic product (GDP), interest rate and inflation rate as the macroeconomic variables toward the stock return. Using regression analysis applying OLS technique, the results showed a significant similarity between Shariah-compliant firms and their counterparts. For Shariah-compliant firms, it is found that firm size and total debt is the most significant variables explaining returns, on the other hand, for non-Shariah compliant firms, price-earnings ratio, interest rate and inflation rate are the most significant variables influencing returns.

1. Introduction

The stock market is one of the avenues for firms to raise funds and for investors to invest their surplus funds. According to Paudel (2005) due to the stock market liquidity, the firms can acquire immediate capital, hence facilitating capital allocation, investment and growth. The role of the stock market is becoming more crucial, and their role should not be ignored. However, Albaity and Ahmad (2011) stated that not all stocks listed on the stock exchanges are permissible for Muslims as they must choose only Shariah-compliant compliant firms which operations are in line with the Shariah principles such as the prohibition of interest, risk sharing and prevention of speculation.

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The previous studies mainly focused on the micro variables that influence the stock return (Pandey, 2001; Albaity & Ahmad, 2011; Petcharabul & Rompasert, 2014; Dita & Murtaqi, 2014; Dadrasmoghaddam & Akbari, 2015; Allozi & Obeidat, 2016). Similar observations were also made by Rjoub, Turgut & Nil, 2009; Coovadia, 2014; Mahmood, Nazir & Junid, 2015; and Shawtari, 2015) determined the macro variables affect the stock return. According to Albaity & Ahmad (2011), stock performance irrespective of Shariah or non-Shariah are sensitive to changes in these micro and macro variables. The main research question that has led a rigorous analysis of stock returns among the two type of firms is as follows; "What are the relationship between micro variables (firm size, market to book ratio, price-earnings ratio and total debt) and macro variables (Gross Domestic Product (GDP), interest rate and inflation rate) toward the returns of Shariah and non-Shariah compliant stocks respectively?"

2. Literature Review

The introduction of Shariah-compliant stocks arises several theoretical arguments that predict how it gives impacts to the value and the liquidity of included stocks. Interestingly, the conventional finance theories which are also known as the Efficient Market Hypothesis (EMH) proposed that an efficient market indicates a future change in the price of an asset and influence the price today by fully reflect based on the available information. The alteration of the price will occur immediately when any new data are providing relevant information about the future price. Shariah compliant stocks' introduction has become a phenomenon in the Malaysian market and cannot be considered a totally information free event. According to Sadeghi (2008), the information conveyed to the market because of Shariah-compliant stocks' introduction could affect both expected cash flows and the required rate of returns of the firms. The firm size and market to book ratio are the most significant variables in explaining the relationship towards the stock return. Market to Book ratio (MTB) is calculated by using the market value per share over book value per share, and the relationship between MTB and stock returns is positive indicating that the higher the MTB ratio, the higher the return. Pandey (2001) investigated the factors that influenced the returns of 247 Malaysian listed firms with annual data from 1993 to 2000, respectively. The findings showed that the MTB ratio, price-earnings ratio and dividend yields were significant and positive related to the stock return. However, the only size was negatively related to returns.

A high price-earnings ratio (PER) describes excellent growth opportunities of the firm, which tends to give high future earnings, whereas a low PER indicates that the stocks undervalued. Pandey (2001) found that the higher the debt offerings by a firm, the lower its returns. According to Kim et al. (2005), the GDP growth could have predictive power to the stock returns. During the high economic growth period, there is confidence within the economy, and this would stimulate demand for products and services by the players. Statistically, the growth in GDP is expected to have a positive influence on the excess returns for property stocks. On the contrary, when the economic downturn occurred accompanied by high economic volatilities, the investors' confidence or trust on the prospect of the economy may be dampened. As a consequence, it associated with a lower expected excess return on investment assets and capital, including property stocks (Kim et al., 2005).

In theory, investors in portfolios of bonds and stocks control the relationship between stock return and the interest rate (Apergis and Eleftheriou, 2002). When higher interest rates, investors will prefer bond as stock prices will decrease and vice versa. This negative relationship has been disclosed by Gjerde and Sættem (1999). Emrah (2009) pointed out that inflation rates vary around the world and over time, and it is essential to consider the effects of inflation on the stock return. In theory, stocks should be inflation neutral, and rising inflation should have no impact on stock valuations.

3. Methodology

This study is based on secondary panel data which the data consists of two sets of stocks: Shariah-compliant stocks and non-Shariah compliant stocks in the service sector industry. The firm is the unit of analysis in this study to collect the data. In details, only 141 firms are thriving under the screening process out of 204 firms. Thus, due to the inaccessibility of information, only 50 firms are selected from Shariah-compliant firms and non-Shariah compliant firms split into 35 Shariah and 15 non-Shariah subsamples. The data used is annual data during the five years of the research period (2008 – 2012). The data are collected from the Osiris database and Thomson Reuters datastream.

The multiple regression analysis aims to investigate how Shariah and non-Shariah firms react to the same selected variables by testing and examining the relationship between stock return and selected independent variables as defined in the equation below:

$$R_{it} = \alpha + \beta_1 MC_{it} + \beta_2 MTB_{it} + \beta_3 PER_{it} + \beta_4 DEBT_{it} + \beta_5 GDP_{it} + \beta_6 INT_{it} + \beta_7 INF_{it} + \varepsilon_{it}$$

Where:

R_{it}: Annual stock return of firm *i* at time *t*

MC_{it} : Firm size (MC) = Pt * Nt

MTB_{it} : Market to Book ratio (MTB) = $\frac{\text{Market value of the firm}}{\text{Book value of the firm}}$

PER_{it}: Price-earnings ratio (PER) = $\frac{\text{Market value per share}}{\text{Earnings per share}}$

$DEBT_{it}$: Total debt (DEBT) = Long term debt + short term debt

GDP_{it}: GDP

INT_{it} : Interest rate

INF_{it}: Inflation rate

ε_{it} : Random error

This study applies the panel data model and ordinary least squares (OLS) techniques to tackle the heteroscedasticity and non-normality distributed residuals. Whereas the standard errors of the coefficients estimates are incorrect, this study used white's corrected standard errors (white's method) to obtain a correct standard error because white's test does not depend on the normality assumption which might make suitable results. When data are ordered in chronological order, the error on one period may affect the error on the next periods, so this study employs the Durbin-Watson (DW) test for recognizing the autocorrelation. The results of DW test indicate no serial correlation in all applied regressions because of the DW test statistic amount is very close to 2. All the variables transformed to the natural logarithm because the natural logarithm helps symmetrically and normality in the data distribution.

Table 1: Pearson Correlation Analysis (Shariah Compliant Firms & Non-Shariah Compliant Firms)

	SR		MC		MTB		PER		DEBT		GDP		INT		INF	
	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC
SR	1.0	1.0	-0.14	0.15	-0.098	0.01	0.07	0.05	-0.049	0.11	-0.250	-0.216	-0.047	-0.153	-0.192	-0.363
MC			1.0	1.0	0.52	0.43	0.06	0.34	0.86	0.93	0.046	-0.012	-0.098	-0.361	-0.047	-0.317
MTB					1.0	1.0	-0.004	0.17	0.42	0.31	0.004	0.073	-0.018	-0.172	-0.015	-0.101
PER							1.0	1.0	0.06	0.30	-0.14	-0.092	-0.069	-0.361	-0.143	-0.358
DEBT									1.0	1.0	0.038	-0.027	-0.118	-0.31	-0.065	-0.279
GDP											1.0	1.0	-0.052	-0.061	0.367	0.346
INT													1.0	1.0	0.799	0.803
INF															1.0	1.0

Note: SR is the stock return, MC is the market capitalization, MTB is the market-to-book ratio, PER is the price-earnings ratio, DEBT is the total debt, GDP is the gross domestic product, INT is the interest rate, INF is the inflation rate, SC is the Shariah-compliant firms and NSC is the non-Shariah compliant firms

Table 2: Panel Data Analysis (Shariah Compliant Firms & Non-Shariah Compliant Firms)

Variables	SR					
	Pooled Data Analysis		Fixed Effect Data Analysis		Random Effect Analysis	
	SC	NSC	SC	NSC	SC	NSC
Intercept	-0.705015(0.8320)	-1.591459(0.1531)	-2.077171(0.1050)	-0.982490(0.2125)	-0.065888(0.9520)	-1.633504(0.1419)
MC	-0.848841(0.0000)**	0.119660(0.2417)	0.672370(0.0000)**	0.145529(0.5321)	-0.256137(0.0054)**	0.125600(0.2795)
MTB	-0.134486(0.2580)	-0.013330(0.6243)	0.019888(0.8055)	-0.023200(0.5710)	-0.016658(0.7173)	-0.015037(0.6180)
PER	0.000881(0.4920)	-0.0040(0.0206)**	0.002085(0.0614)	0.009156(0.0296)*	0.000609(0.6383)	-0.00241(0.0294)*
DEBT	1.491539(0.0000)**	-0.081630(0.3768)	-0.654878(0.0001)**	-0.107988(0.6495)	0.191848(0.0211)*	-0.089377(0.4037)
GDP	-0.011284(0.5795)	0.010272(0.6272)	5.58E-05(0.9973)	0.007793(0.5944)	-0.034589(0.1030)	0.010608(0.6112)
INT	-0.594180(0.4423)	0.445248(0.0449)*	0.470327(0.0400)*	0.266397(0.0755)*	0.248026(0.2545)	0.450956(0.0402)*
INF	-0.043023(0.5935)	-0.1959(0.0030)**	-0.015161(0.6229)	-0.1224(0.0061)**	-0.116923(0.0697)	-0.1948(0.0027)**
R^2	0.372299	0.212871	0.620557	0.469628	0.120665	0.219594
Prob(F-statistic)	0.000000	0.021879	0.000000	0.011267	0.002904	0.017627
Observation	139	74	139	74	139	74

** Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

Table 1 presents the relationship between the stock return of Shariah-compliant firms with its determinants. The result shows that only the price-earnings ratio is positively correlated with the stock return. It indicates the variable is significant in explaining the relationship for the stock return. While the other variables such as market capitalization, market to book ratio, total debt, GDP, interest rate and inflation are negatively correlated with the stock return. While the relationship between the stock return of non-Shariah compliant firms with its determinants shows the only market to book ratio and price-earnings ratio are positively correlated with the stock return. It indicates the variable is significant in explaining the relationship for the stock return. The other variables such as GDP, interest rate and inflation are negatively correlated with the stock return. Besides, none of the variables shows serious multicollinearity problem in the model. The correlations among the independent variables are not a severe problem.

In verifying the relationship between the stock return with its determinants (MC, MTB, PER, DEBT, GDP, INT and INF), based on the statistical diagnostic test reported, the regression analysis then

is carried out using GLS techniques. It is implemented on the panel data that consist of time series and intercepts, which consider the pooled regression, fixed effects and random effects. The estimation period is from 2008 to 2012, and the balanced panel data analysis is used for estimation.

Table 2 reveals the differences in factors influencing the returns of Shariah-compliant firms. The pooled data analysis, fixed data analysis and stochastic data analysis concluded that out of seven independent variables, only market capitalization and total debt have a significant relationship with the stock performance. Wong supported this result. Tan and Liu (2006) stated that firm size is the most significant variables in explaining the relationship towards the stock return in the Shanghai Stock Exchange, China. Pandey (2001) also concluded that total debt is one of the influencing variables in explaining the returns of Malaysian firms. R^2 value of the study implies that 37.23% of fitness can be observed in the pooled data analysis. The percentage of the model measures that 37.23% of the total variation in the stock returns is explained by the independent variables jointly. For the fixed data analysis and the random data analysis, R^2 value of the study implies about 67.93% and 12.07%.

On the other hand, the pooled data analysis, fixed data analysis and stochastic data analysis of the non-Shariah compliant firms concluded that out of seven independent variables, only price earning ratio and inflation rate have a negatively significant relationship with the stock performance. Campbell and Shiller supported this result (1988) stated that PER has a significant relationship towards the long-term stock returns. Muradoglu and Metin (1996) indicate the negative relation between stock return and inflation persists when other monetary variables are included in the model. Also, the interest rate is the only variable that has a significant positive relationship. Apergis and Eleftheriou supported this finding (2002) found a positive correlation between interest rates and stock prices in the Athens Stock Exchange. R^2 value of the study implies that 21.29% of fitness can be observed in the pooled data analysis. The percentage of the model measures that 21.29% of the total variation in the stock returns is explained by the independent variables jointly. For the fixed data analysis and the random data analysis, R^2 value of the study implies about 46.96% and 21.96%.

4. Conclusion

In detail, there are two microeconomic variables which are the most influential in explaining the Shariah-compliant firms stock performance that is market capitalization (firm size) and total debt. This result was supported by Wong, Tan and Liu (2006) who stated that firm size is the most significant variables in explaining the relationship towards the stock return in the Shanghai Stock Exchange, China. Pandey (2001) also confirmed that total debt in one of the influencing factors that affect the returns. While GDP and inflation rate are not significant in explaining the stock return for Shariah-compliant firms.

On the other hand, for the non-Shariah compliant firms, the most influential variables are the interest rate and inflation rate. The interest rate shows that there is a significant positive relationship, and the result was supported by Apergis and Eleftheriou (2002). Besides, for the inflation rate, it shows there is a negatively significant relationship with the stock performance.

5. Recommendation

From this study, it is recommended for investors who prefer Shariah-compliant stocks in deciding to choose firms that have a more significant market capitalization (firm size) and low total debt as these factors affect their returns. On the other hand, those who are not concern about Shariah compliance will take into considerations inflation and interest as criteria for their investment.

References

Albaity, M. & Ahmad, R.(2011). A Comparative Analysis of the Firm-Specific Determinants of Syariah Compliant Versus on-Syariah Compliant Firms in Bursa Malaysia. *Asian Journal of Business and Accounting*, 4(1), 59-84.

Allozi, N. M & Obeidat, G. S. (2016). The Relationship between the Stock Return and Financial Indicators (Profitability, Leverage): An Empirical Study on Manufacturing Companies Listed in Amman Stock Exchange. *Journal of Social Sciences,* 5(3), 408 - 424.

Apergis, N. & Eleftheriou, S. (2002). Interest Rates, Inflation, and Stock Prices: The Case of the Athens Stock Exchange. *Journal of Policy Modeling*, 24, 231-236.

Campbell, J. & Shiller, R. (1988). Stock Prices, Earnings And Expected Dividends. *Journal of Finance*, 48, 1661-1676.

Coovadia, M. (2014). The Dynamic Relationship between Economic Factors and the South African Stock Market. University of the Witwatersrand, Johannesburg.

Dadrasmoghaddam, A. & Akbari, S. M. (2015). Relationship between Financial Ratios in the Stock Prices of Agriculture-Related Companies Accepted on the Stock Exchange for Iran. *Research Journal of Fisheries and Hydrobiology,* 10(9),586-591.

Dita, A. H. & Murtaqi, I. (2014). The Effect of Next Profit Margin, Price to Book Value and Debt to Equity Ratio to Stock Return in the Indonesian Consumer Goods Sector. *Journal of Business and Management,* 3(3), 305 - 315.

Emrah, O. (2009). The Relationship Between Stock Returns And Macroeconomic Factors: Evidence From Turkey. The University Of Exeter.

Fama, E.F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *Journal of Finance*, 25, 383-417.

Gjerde, O. & Saettem, F. (1999). Causal Relations among Stock Returns and Macroeconomic Variables in a Small, Open Economy. *Journal of International Financial Markets, Institutions and Money*, 9, 61-74.

Kim, S.J., Moshirian, F. & Wu, E. (2005). Dynamic Stock Market Integration Driven by the European Monetary Union: An Empirical Analysis. *Journal of Banking & Finance*, 29(10), 2475-2502.

Mahmood, I., Nazir, F. & Junid, M. (2015). Stock Prices and Inflation: A Case Study of Pakistan. *Journal of Asian Business Strategy*, 4(12) 217-223.

Muradoglu, G. & Metin, K. (1996). Efficiency of the Turkish Stock Exchange with Respect to Monetary Variables: A Cointegration Analysis*. European Journal of Operational Research*, 90(3), 566-576.

Pandey, I. M. (2001). The Expected Stock Returns of Malaysian Firms: A Panel Data Analysis. Working Paper No. 2001-09-01 Indian Institute of Management, India.

Paudel, N. P. (2005). Financial System and Economic Development, Nepal Rastra Bank in Fifty Years, Part –II, Financial System. Kathmandu: NRB.

Petcharabul, P. & Romprasert, S. (2014). Technology Industry on Financial Ratios and Stock Returns. *Journal of Business and Economics,* 5(5), 739-746.

Sadeghi, M. (2008). Financial Performance of Shariah-Compliant Investment: Evidence from Malaysian Stock Market. *International Research Journal of Finance and Economics,* 20, 15-26.

Shawtari, F. & Salem, M. A. (2015). Long Run Relationship between Macroeconomic Indicators and Stock Price: The Case of South Africa. *Journal of Internet Banking and Commerce.*

Turgut, T., Rjoub, H. & Nil, G. (2009). The Effects of Macroeconomic Factors on Stock Returns: Istanbul Stock Market. Studies in Economics and Finance, 26(1), 36 – 45.

Wong, K. A., Tan, R. S., & Liu, W. (2006). The Cross-Section of Stock Returns on the Shanghai Stock Exchange. *Review of Quantitative Finance And Accounting*, 26(1), 23-39.