

# Does Shariah Compliant Stocks Perform Better than the Conventional Stocks? A Comparative Study of Stocks Listed on the Australian Stock Exchange

# Krishna Reddy & Mingli Fu Department of Finance Waikato Management School, University of Waikato

Received: August 11, 2014 Accepted: Sep. 26, 2014 Published: December 1, 2014

doi:10.5296/ajfa.v6i2.6072 URL: http://dx.doi.org/10.5296/ajfa.v6i2.6072

#### **Abstract**

A rapid growth of Islamic finance in the past decades has motivated many investors to focus on Islamic stocks rather than conventional stocks. The argument whether the performance of Shariah compliant stocks are better compared to the conventional stocks still remains an open question. Therefore, this research examines whether there are differences in performance between the Shariah compliant stocks and the conventional stocks listed on the Australian Stock Exchange (ASX) for the period 2001-2013. Our findings show that there is a statistically significant difference in performance of the Islamic and conventional stocks listed on the ASX in terms of risk, otherwise the performance of the Islamic stocks tends to be similar to the conventional stocks. In addition, we report a statistically significant relationship between the returns of Shariah compliant and conventional stocks.

**Keywords:** Beta, Global Financial Crisis, Jensen's Alpha, Islamic finance, Risk, Sharpe ratio, Treynor ratio



#### 1. Introduction

The first Islamic Index was established in the Dow Jones Market in December 1995 to enable Islamic fund managers to list businesses in the capital markets. Since its establishment, investment in Islamic stocks has experienced remarkable growth. At the end of 2002, there were 105 Islamic equity funds worth approximately US\$5 billion with 48 percent located in the Middle East, 30 percent in Europe and North America, and 22 percent in Asia (Falaika, 2002). Consequently, various capital markets and financial institutions around the world now have established their own Islamic Indices. For example, the Kuala Lumpur Stock Exchange Shari'ah Index (KLSESI) introduced by Bursa Malaysia (the Malaysian Stock Exchange) is considered to be an important mechanism of promoting the accomplishment of the Islamic capital markets plan. According to Walkshäusl and Lobe (2012), Shariah-complaint assets are in access of \$939 billion worldwide and over 600 Islamic funds are available, thus investors are shifting their assets from actively managed mutual funds to passive index-based investments.

Islamic investment is based on Shariah principles, that is, it prohibit activities with elements of usury (riba), gambling (maisir), and ambiguity (gharar) and also prohibit activities like producing products or delivering services which are against Islamic teaching such as pornography, producing/selling alcohol, casino etc (Securities Commission announcement, 2002). Therefore, all Islamic financial products listed in the Islamic Index need to have Shari'ah compliance and there are different additional criteria that are sometimes used in screening the permissible companies as well.

Since many stocks performed poorly during the Global Financial Crisis (hereafter GFC) period, many researchers have argued whether the GFC has had less impact on the Shariah complaint stocks compared to the conventional stocks. Some researchers (Abbes, 2012) have also argued that the difference in performance between the two types of stocks should be minimal and some have argued that conventional stocks should outperform the Islamic stocks (McGowan & Junaina, 2010). However, only limited research has been undertaken to date that relate to conventional and Islamic stocks using comparative areas of sectorial/industry, market capitalisation, price earnings ratio, market to book value ratio, debt to equity, and returns. Therefore, we extend the literature on the debate and undertake a comparative performance analysis of the conventional and Islamic stocks. In addition, we also investigate whether the conventional and Islamic stocks have performed differently during three different periods, that is, before, during and after the GFC period. We have collated data from the Australian Stock Exchange (ASX) for the period 2001-2013 to investigate whether investors in Shariah products earn a higher rate of return compared to the conventional stocks. We have used Australia as a case study because it has a large and open economy and data is readily available for both investment types. Although Australia is not an Islamic country the trend shows that investors are seeking alternative types of investment that are either ethical or have potential to hedge against risk. Therefore, our study has potential to benefit the regulators, fund managers, investment analysts, and general investors in terms of gaining better understanding of the similarities and differences between the conventional and Islamic stocks,



and how their performance deviates during different economic situations. The findings of our study will provide investors some valuable guidelines regarding optimal investment choices between conventional and Islamic stocks. Moreover, our findings of the test relating to whether the Islamic stocks have more reliance compared to the conventional stocks when a stock exchange experiences a declining trend will provide an improved understanding to the debate.

Section 2 provides a brief background of Shariah and Section 3 provides a brief review of the literature. Section 4 presents the data and the method used in this research and Section 5 presents results and discussions. Section 6 presents the conclusion for this study.

# 2. Background of Shariah stocks

Islamic investment principles emphasise ethical investing (known as Shariah-compliant investments) that complies with the principles of Shariah, which is the Islamic law that governs every facet of Muslim's life. Investments in financial instruments with fixed income, such as, preferred stocks, bonds and some derivatives (e.g. options) are unacceptable as they promise a fixed rate of return and grant no voting rights (Walkshäusl and Lobe, 2012). Furthermore, Islamic investors are not permitted to purchase stocks of companies whose main business activities are alcohol, gambling, conventional financial services, entertainment, pork-related products, tobacco, and weapons (Islamic Finance & Investment, 2014). Moreover, some financial ratios has also been used to screen companies. For example, Hussein and Omran (2005) reported that when the level of the debt in companies are over one third of market capitalisation, they are not Shariah compliant stocks. A purification process need to be carried out to eliminate or clean the portfolio of interest income or other impermissible revenue sources. According to Abdelsalam, Duygun, Matallín-Sáez and Tortosa-Ausina (2014), one way of cleansing impermissible income is to donate it to charities and to non-government organisations.

# 3. Literature Review

Recent literature has investigated the relationship between the Islamic and conventional financial markets in regard to the returns and their variability, and have also analysed the correlative performance of those markets during the GFC. Indices of different regions have been used to evaluate these markets, such as, Dow Jones indices or FTSE indices (Ahdi, et al., 2013). Wilson (2004), Nisar (2007), Keigher and Bauer (2000), and Derigs and Marzban (2008) have presented standard rules to examine or screen whether a specific company based on Shariah law is halal (lawful) or haram (unlawful). Some researchers argue investment in Islamic stocks leads to avoidance of speculation and unnecessary risk taking (Obaidullah, 2001; Naughton and Naughton, 2000). Dewi and Ferdian (2010), argue that Islamic finance is free of interest, gambling and ambiguity, therefore can help resolve the financial crisis issues. According to Ahmed (2009), financial crisis arises because financial organisations charge interest and engage in risky investments and therefore, obeying Islamic financial requirements can help avoid financial crises. Usmani (1999), argue that it is difficult to find companies that strictly comply with Shariah based principles.



However, a number of studies have compared the performance of conventional indexes and Islamic Indexes in terms of equity investment (Siddiqui, 2000, 2002; Ahmad and Mustafa, 2002; Mamat, 2002). For example, Forte and Miglietta (2007) were the first to examine whether the Islamic mutual fund belongs to the socially responsible mutual funds (SRI) group or are fundamentally different. Their findings suggest that there are significant differences between Islamic investments and both traditional and SRI indices in regard to their profile and portfolio. SRI funds tends to perform well and have better reputation, and have lower cost due to lower turnover rate. Although there are similarities between the Islamic and SRI funds, the main difference is that the Islamic funds are non-interest bearing investments (Osamah, Hooi & Anis, 2014, p. 30).

Some researchers have also compared the differences in risk and return between the Islamic investment instruments and the conventional investments. For example, Hayat and Kraeussl (2011) compared the performance of the Islamic equity funds (IEFs) and the conventional equity funds and reported that the traditional equity benchmarks outperform IEFs. Furthermore, the underperformance of IEFs increased during the recent financial crisis period. Based on the CAPM Model, Hussein (2004) reported that both the Islamic index and the FTSE All-World index performed well during the entire period (July 1996 to August 2003). They report that the returns on the Islamic index are statistically abnormally higher in the bull market period (July 1996 to March 2000) even though it underperformed the conventional index in the bear market period (April to August 2003). Hakim and Rashidian (2004) applied the co-integration and causality tests and reported that no correlation exists between the Islamic index and the Wilshire 5000 index or the three-month Treasury bills. Their finding also show that the Wilshire 5000 or the three-month Treasury bill is not the reason for the results experienced for the Islamic index. The implication of their results are that the factors are independent from the broad market or interest rates turns to affect the Islamic index (Osamah, Hooi & Anis, 2014, p. 31).

However, later researchers have reported evidence of correlation between conventional market indices between North American, European Union, Far East, and Pacific markets compared to the Islamic index returns (Dania and Malhotra, 2013). They argue that the price of Islamic and conventional securities corresponds to macroeconomic elements. The findings of their research show that common factors affect the equity price of Islamic and conventional bonds and that the gap resulting from different Islamic and conventional financial practices tends to be minimal (Krasicka &Nowak, 2012, p. 1). An evaluation of the risk performance of the Jakarta Islamic Stock Index (JASKISL) and the conventional Jakarta Composite Index (JCI) using GARCH models show that Islamic stock index is safer than traditional stocks (Sukmana and Kholid, 2012).

Based on a comparison of the investment performance of the Islamic ethical portfolios and traditional benchmark portfolios, results show that the returns are not substantially negatively affected by the use of Islamic ethical screens (Hassan et al., 2005; Hoepner et al., 2011, 847). Hoepner et al. (2011) examined the financial performance and the style of investment of 265 Islamic equity mutual funds in 20 countries. They reported that the type of Islamic fund investment is to some extend related to the growth of stocks and that the mainstream Muslim



economics funds exhibit an obvious preference for small ccorporations with low capitalisation that are referred to as small cap (Hoepner, 2011, p. 831). They also reported that the Islamic indices had a pattern of investing in small-cap companies compared to conventional counterparts who invest more in large corporations that are likely to be operating in sector-bands (Hoepner et al., 2011, p. 847). In summary, there is no consensus in the literature regarding the directional relationship between Islamic stock market and conventional stock markets.

#### 4. Data and Method

The weekly stock prices and financial ratios were collated for companies listed on the Australian Stock Exchange (ASX) for the period 2001-2013 from ASX official website, Morningstar and Datastream databases. Fifty Shariah stocks and fifty conventional stocks was used to build a portfolio. All the chosen stocks were ranked according to their market capitalisation. The rebalancing of the portfolio was done on a weekly basis. Companies were selected to be Shariah compliance if the income derived by company are not from the sale of alcohol, tobacco, pork, pornography, gambling and military equipment. Also, not engaged in short selling and the use of leverage is within the required level, that is, below one third of their market capitalisation. Companies selected for this research belong to the following industry: industrial metal & minerals, gold, building materials, aluminium, Coal, Steel, Oil & Gas E&P, utilities regulated Electric, Engineering & Construction, Utilities-Regulated Gas, Telecom Services, Medical Care, Utilities-Independent Power Producers, Copper & Gas Refining & Marketing.

The weekly return  $(R_t)$  is determined by Ln  $(P_t/P_{t-1})$  where  $P_t$  is the change in the weekly stock price for the period t and  $P_{t-1}$  is the price of stock in the period t-1.

Standard deviation and beta efficiency are the proxies for the total risk and is also used to estimate the volatility of the investment. To examine whether the differences are significant between the average return, standard deviation and the beta of the Shariah and conventional stocks, the Mann Whitney U-test and Independent Samples T-test is used. The testable null hypotheses are stated as follows:

H<sub>1</sub>: Shariah stocks' returns are not significantly different from the returns of the conventional stocks.

H<sub>2</sub>: Shariah stocks are not significantly riskier than the conventional stocks.

# 4.1 Risk-Adjusted Return Measurement

If risk is positively associated with the returns, then portfolio performance need to include both, returns risk. According to the Capital Market Theory, the risk adjusted return incorporates risk in computing the returns and it is assumed that investors are holding diversified portfolios. Three popular ratios that are used as performance measures include: Sharpe ratio, Treynor ratio and Jensen's Alpha.

The Sharpe ratio can be computed as follows:



$$Sp = \left(\frac{Ri - Rf}{\sigma p}\right)$$

where

 $S_p$  is the Sharpe ratio,  $R_i$  equals the t period portfolio return,  $R_f$  is the return on Australian three months treasury bills during t period (proxy for the risk-free rate), and the standard deviation of the portfolio is  $\sigma_p$ . The higher the Sharp ratio, the better the performance and vice versa.

There are some similarities between Treynor ratio and Sharpe ratio except Treynor uses beta to measure risk instead of standard deviation. The formula for calculating the Treynor ratio is as follows:

$$Tp = \left(\frac{Ri - Rf}{\beta p}\right)$$

where

 $T_p$  is the Treynor ratio and  $\beta_p$  is portfolio beta.

Alpha is the excess return of the portfolio in the formula of Jensen ratio. A higher Alpha ratio indicates that the portfolio has a good risk-adjusted returns and vice versa (Pareto, 2008). The formula for calculating Jensen's Alpha is as follows:

$$\alpha j = (Rj - Rf) - \beta (Rm - Rf)$$

where

 $\alpha$  is Jensen's Alpha,  $R_j$  is the average portfolio returns over t period,  $R_m$  is the average market return over t period.

# 4.2 Multiple Regression Analysis

In order to estimate the relationship of Shariah and conventional returns to the chosen variables, the correlation of the stock returns and financial ratios are examined by the multiple regression analysis. The formula is shown as follows:

$$R_t = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \epsilon$$

where:

 $R_t$  is the Yearly Return of the stock;  $X_1$  is the Debt to Equity ratio (DER) = Total Debt/ Total Equity;  $X_2$  is the Earnings Per Share Ratio (EPS) = Earnings available for common stockholders/Numbers of shares of common stock outstanding;  $X_3$  is the Price Earnings ratio (P/E Ratio) = market price per share of common stock/ EPS;  $X_4$  is the Net Profit Margin (NPM) = Earnings available for common stock/ Sales;  $X_5$  is the Return on Equity (ROE) = Earnings available for common stock / common stock equity;  $X_6$  is the Price to Book Value



(PBV) = Market price per share of common stocks/ Book value per share of common stocks;  $\varepsilon$  is the Random Error term.

In this model, the linear regression least squares method is used with 10% significance level. We propose our further five hypotheses as follows:

H<sub>4</sub>: Stock returns are not significantly related to Debt to Equity Ratio (DER).

H<sub>5</sub>: Stock returns are not significantly related to Earnings per Share (EPS).

H<sub>6</sub>: Stock returns are not significantly related to Net Profit Margin (NPM).

H<sub>7</sub>: Stock returns are not significantly related to Return on Equity (ROE).

H8: Stock returns are not significantly related to Price to Book Value (PBV).

#### 5. Results and Discussion

The Islamic portfolio contains 50 Shariah compliant stocks which are selected based on Shariah law and are ranked according to their market capitalisation. The conventional stocks has the same number of stocks and is also chosen based on their market capitalisation ranking in the ASX100. Companies that own both Shariah compliant stocks and conventional stocks are not selected.

# 5.1 Difference in Mean Results

For data that are normally distributed, we use the Independent Sample t-test; for data that is not normally distributed, we have used the non-parametric Mann Whitney U-test. Table 1 reports the mean, standard deviation and beta of two types of stocks including the missing values and outliers.

Table 1. Return, Standard Deviation and Beta Comparison of Shariah and Conventional Stocks based on all the value

Measures		Sample Size		Mean			
	Islamic	Conventional	Total	Islamic	Conventional	Mean	
	Portfolio	Portfolio		Portfolio	Portfolio	Difference	
				Returns	Returns		
Weekly	83	42	41	0.004	-0.006	0.010	
return on						(0.847)	
the							
stocks							
Risk $(\sigma)$	100	50	50	0.062	0.043	0.018***	
						(3.746)	
Beta (β)	100	50	50	0.864	0.808	0.056	
						(0.668)	

Asterisks indicate significance at 10% (\*) 5% (\*\*) and 1% (\*\*\*)



Results reported in Table 1 show that there are differences in the returns and risk between the Shariah Compliant stocks and Conventional Stocks. For example, the mean value of weekly returns of Shariah stocks is greater than that of the conventional stocks (0.004> -0.006) but the difference is not statistically significant. The stability of securities are estimated by standard deviation. Table 1 shows that standard deviation of the Islamic stocks (0.062) is higher than that of conventional stocks (0.043) and the difference is statistically significant at 1% level. Our results suggest that Islamic stocks are less stable than conventional stocks. Similarly, results for beta suggest that Islamic stocks are more sensitive to the market compared to the conventional stocks, that is, beta for Shariah stocks are greater than the beta of the conventional stocks (0.864> 0.808). However, the difference for beta is not statistically significant. The plausible reason could be that Shariah compliant companies have smaller market capitalisation compared to the conventional stocks (Hoepner, 2011, p. 831).

Results reported in Table 2 are similar to that reported in Table 1, but exclude outliers and missing values and therefore provide a robustness test for Table 1. In addition, Wilcoxon rank-sum analysis is also undertaken but results are not reported. The two-sample Wilcoxon rank-sum (Mann Whitney U-test) test provide the same findings. The results reported in Table 2 confirms our findings reported in Table 1, that Shariah compliance stocks are more risky.

Table 2. Return, Standard Deviation and Beta comparison of Shariah and conventional Stocks excluding missing values and outliers

Measures	Sample Size			Mean			
	Islamic Portfolio	Conventional Portfolio	Total	Islamic Portfolio	Conventional Portfolio	Mean Difference	
				Returns	Returns		
Weekly	75	35	40	0.006	-0.005	0.010	
return on						(0.907)	
the							
stocks							
Risk $(\sigma)$	75	35	40	0.059	0.043	0.016***	
						(3.338)	
Beta (β)	75	35	40	0.865	0.817	0.048	
						(0.516)	

asterisks indicate significance at 10% (\*) 5% (\*\*) and 1% (\*\*\*)

In summary, results reported in Tables 1 and 2 show that Shariah compliant stocks are riskier than conventional stocks. Our results relating to returns suggest that the screening criteria used to select Shariah compliant stocks do not affect the performance of the Shariah stocks. However, Setiawan and Oktariza (2013) argue that conventional portfolio is more risky than Islamic stocks in Malaysia. A plausible reason for the differences in our results could be that the Islamic market in Australia is less diversified compared to Malaysia. Furthermore, Albaity and Ahmad (2008) reported that the conventional index in Malaysia minimally



outperforms the Shariah stocks index. However, our results show that there is no significant difference in returns between Shariah stocks and conventional stocks in Australia

## 5.2 Risk Adjusted Return Performance Result

Risk-adjusted return is used to provide a comprehensive analysis of the risk and returns for both, Shariah and conventional stocks portfolio for the period 2001 to 2013. Table 3 reports Sharpe Ratio, Treynor Ratio and Jensen's Alpha for Shariah and conventional stock portfolios, and compares their performance during the three different periods, that is, before, during and after the Global Financial Crisis. The results reported in Table 3 show that the performance of Shariah and conventional stocks are similar.

Although the average value of Islamic and conventional portfolio is negative during the sampling period, it shows that the Sharpe, Treynor and Jensen ratios of Islamic portfolio are greater than that of the conventional portfolios. This indicates that the Islamic portfolio is performing better compared to the conventional portfolio, and is more diversified as the Sharp ratio has a negative relationship between risk and return. Specifically, the value of Sharp Ratio for Shariah stocks (-0.467) is higher than the value for conventional stocks (-0.821). The Treynor and Jensen ratios of the two types of portfolio are not substantially different. A plausible reason could be that the weekly returns of both Islamic and conventional stocks are mostly negative.

Table 3.1. Risk-Adjusted Return Performance of Shariah and Conventional Stocks

	Sharpe ratio		Treynor ratio		Jense		
Year	Islamic portfolio	Conventional portfolio	Islamic portfolio		Islamic portfolio	Conventional portfolio	<b>Economic</b> <b>Situation</b>
2001	-0.314	-0.656	-0.041	-0.035	-0.008	0.004	
2002	-0.480	-0.828	-0.093	-0.051	-0.021	-0.012	
2003	-0.422	-0.706	-0.082	-0.083	-0.016	-0.020	Before crisis
2004	-0.503	-1.010	-0.026	-0.041	0.004	-0.007	CHISIS
2005	-0.554	-1.078	-0.064	-0.061	-0.012	-0.013	
2006	-0.472	-1.050	-0.032	-0.047	0.002	-0.009	
2007	-0.548	-0.976	-0.037	-0.044	0.000	-0.006	During crisis
2008	-0.553	-0.684	-0.053	-0.060	-0.004	-0.010	
2009	-0.165	-0.317	-0.017	-0.020	0.003	0.000	
2010	-0.498	-0.998	-0.028	-0.041	0.004	-0.008	After
2011	-0.695	-0.775	-0.038	-0.046	-0.001	-0.008	crisis
2012	-0.397	-0.892	-0.024	-0.029	0.002	-0.003	
2013	-0.472	-0.700	-0.031	-0.025	-0.007	-0.002	
Average	-0.467	-0.821	-0.044	-0.045	-0.004	-0.007	



Table 4 reports the results of the performance of the two type of portfolios for different economic situations. Before the GFC period, Shariah stocks had a higher Sharpe ratio but it is not much different from the Treynor or Jensen's Alpha compared to the conventional stocks. However, during the GFC period the performance of both portfolios were worse than their performance before the GFC period and Islamic stocks tends to have larger ratios compared to the conventional stocks. The difference of the mean for the two types of stocks is not large. Moreover, the results for the after GFC period show that both Islamic and conventional stocks have recovered and show a slight increase. Islamic stocks continue to perform better than conventional stocks.

Our results confirm the results reported by Natarajan and Dharani (2012) for India. However, our results are different to those reported by Rahmayanti (2003) and Hussein and Omran (2005) that compared to a conventional portfolio, the performance of Shariah portfolio is relatively dissimilar within the same period.

Table 4. Risk Adjusted Return Performance for Shariah and Conventional portfolio before, during and after the crisis

Economic	Average Sharpe ratio			Average Treynor ratio			Average Jensen's Alpha		
Situation	Islamic portfolio	Conventional portfolio	Mean Difference	Islamic portfolio	Conventional portfolio	Mean Difference	Islamic portfolio	Conventional portfolio	Mean Difference
Before crisis	-0.458	-0.888	0.430	-0.056	-0.053	-0.003	-0.008	-0.009	0.00107
During crisis	-0.55027	-0.82995	0.280	-0.04481	-0.05195	0.007	-0.0019	-0.0079	0.00600
After crisis	-0.44534	-0.73634	0.291	-0.02762	-0.03240	0.005	0.00018	-0.00408	0.00426

#### 5.3 Multiple Regression Analysis Result

Ordinary Least Square (OLS) regression is used to investigate whether the dependent variable (stocks returns) are relate to the financial ratios (independent variables) measured by: Debt to Equity Ratio (DER), Net Profit Margin (NPM), Return on Equity (ROE), Earning Per Share (EPS), Price Earnings Ratio (PE) and Price to Book Value (PBV).

Results reported in Table 5 show that the returns of Islamic and conventional stocks are affected by different independent variables stated above. Among all the financial ratios, the coefficients of DER, NPM and ROE are statistically significant for the Shariah stock returns and the coefficients of DER and ROE are statistically significant for the conventional stocks. The coefficient of DER is negative and is statistically significant, suggest that leverage has a negative effect on stock returns for both types of stocks. The coefficient of ROE is positive for the Shariah portfolio and negative for the conventional portfolio, thus suggest that higher



ROE leads to higher returns for Shariah portfolio and lower returns for conventional portfolios. NPM has a negative coefficient for the Shariah stock returns, thus suggest that high NPM leads to lower returns. However, our results are contrary to that reported by Martani et al. (2009), that NPM has a positive relationship with the stock returns. However, the coefficient of NPM for conventional stocks is larger than the Shariah stocks, thus suggest that Islamic stocks are better performing than the conventional stocks. The coefficient of PBV is positive for the Shariah portfolio and negative for the conventional and both are not statistically significant. Our results suggest that Shariah portfolio is performing better than conventional stocks. However, Martani et al. (2009) reported that PBV has a positive coefficient with types of stock returns. The results for PE is not statistically significant for both type of portfolios.

Table 5. OLS Regression Model Results

	Islamic	portfolio	Conventional portfolio		
	b	(t)	b	(t)	
Intercept	14.771	(0.895)	-2.927	(-0.158)	
DER	-0.039*	(-1.824)	-0.020*	(-1.920)	
EPS	0.000	(0.003)	-0.491	(-0.315)	
PE	-0.051	(-1.000)	-0.001	(-0.125)	
NPM	-0.006*	(-1.930)	-0.010	(-0.263)	
ROE	0.305**	(2.538)	-0.079***	(-2.933)	
PBV	0.005	(0.166)	-0.022	(-1.268)	
Year dummies	yes		yes		
Industry dummies	yes		yes		
F statistic		4.865***		11.246***	
R-squared		0.338		0.532	
No. of Obs		325		466	

Asterisks indicate significance at 10% (\*), 5% (\*\*), and 1% (\*\*\*).

### 6. Conclusion

This study examined the performance of the Shariah stocks and the conventional stocks listed on the ASX for the period 2001 to 2013. The Mann Whitney U-test and Independent Samples T-test shows a statistically significant difference in risk, with the Islamic stocks being more risky. Our results are similar to that reported in other countries (Hoepner, 2011), which shows that Islamic companies tends to be smaller and are relative undiversified. However, our results for beta and weekly returns are not statistically significantly different for both Islamic



and conventional stocks. The investigation of portfolios of two types of stocks using risk-adjusted returns show that these two portfolios behave in a similar way and the Sharpe ratio shows the Islamic portfolio had a higher adjusted returns than the conventional stocks.

The relationship between the financial ratios and the stock returns was examined using OLS regression. Our results show that DER and ROE have a statistically significantly positive relationship with the returns of both Shariah and conventional portfolios and NPM has a statistically significantly negative relationship with Islamic portfolio returns. Our results suggest that performance of Shariah stocks tends to be better higher compared the conventional portfolio returns. Our results suggest that ROE has the most impact highest impact on both stock returns.

#### References

Abdelsalam, O., Duygun, M., Matallín-Sáez, J. C., & Tortosa-Ausina, E. (2014). Do ethics imply persistence? The case of Islamic and socially responsible funds. *Journal of Banking and Finance*, 40, 182-194. http://dx.doi.org/10.1016/j.jbankfin.2013.11.027

ABS. (2009). Australian Social Trends. Retrieved from http://www.abs.gov.au/

ABS. (2010). Labour Force, Australia. Retrieved from http://www.abs.gov.au/

Abbes, M. (2012). Risk and Return of Islamic and Conventional Indices. *International Journal of Euro-Mediterranean Studies*, *5*(1), 1-23. http://dx.doi.org/10.1007/s40321-012-0001-9

Ahmad, A. & Mustafa, S. (2002). The Dow Jones Islamic Indices: weathering the storm into brighter. *Islamic stock Index*. Retrieved from www.Islamiqstocks.com

Ahmed, H. (2009). Financial Crisis: Risks and Lessons for Islamic Finance. *ISRA International Journal of Islamic Finance*, *I*(1), 7-32.

Ahmad, Z. & Ibrahim, H. (2002). A study of the performance of the KLSE Syari'ah index. *Malaysian Management Journal*, 6(1), 25-34.

Ahdi, A., Shawkat H., Duc, N. & Soodabeh, S. (2013). How strong are the causal relationships between Islamic stock markets and conventional financial systems? Evidence from linear and nonlinear tests. *Journal of International Financial Markets, Institutions and Money, 28.* Retrieved from http://www.sciencedirect.com/science/article/pii/S1042443113000978

Albaity, M. & Ahmad, R. (2008). Performance of Syariah and Composite Indices: Evidence from Bursa Malaysia. *Asian Academy of Management Journals of Accounting and Finance*, 4(1), 23–43.

Arouri, M. E., Ameur, H. B., Jawadi, N., Jawadi, F., Louhichi, W. (2013). Are Islamic finance innovations enough for investors to escape from a financial downturn? Further evidence from portfolio simulations. *Applied Economics* 45(24), 3412-3420. http://dx.doi.org/10.1080/00036846.2012.707776



Ashraf, D. and Mohammad, N. (2014). Matching perception with the reality-Performance of Islamic equity investments. *Pacific-Basin Finance Journal*, 28, 175-189. http://dx.doi.org/10.1016/j.pacfin.2013.12.005

ASX. (2014). *About ASX Corporate overview history*. Retrieved from http://www.asx.com.au/about/history.htm

ATO. (2009). Commissioner of Taxation Annual Report 2008-09. Retrieved from https://www.ato.gov.au/

Australian Market Indices. (2013). *Index Compositions*. Retrieved from http://www.robertbrain.com/files/ASX-index-composition.pdf

Bloxham, P. & Kent, C. (2009). Household Indebtedness. *The Australian Economic Review*, 42(3), 327-39. http://dx.doi.org/10.1111/j.1467-8462.2009.00564.x

Choudhury, M. A. (2001). Islamic venture capital. *Journal of Economic Studies*, 28(1), 14-20. http://dx.doi.org/10.1108/01443580110361382

Dania, A. & Malhotra, D.K. (2013). An empirical examination of the dynamic linkages of faith-based socially responsible investing. *Journal of Wealth Management 16*(1), 65-79. http://dx.doi.org/10.3905/jwm.2013.16.1.065

Derigs, U. & Marzban, S. (2008). Review and analysis of current *Shari'ah*-compliant equity screening practices. *International Journal of Islamic and Middle Eastern Finance and Management*, 1(4), 285-303. http://dx.doi.org/10.1108/17538390810919600

Dewi, M. K. & Ferdian, R. I. (2010). *Islamic Finance: A therapy for healing the global financial crisis*. University of Indonesia. Retrieved from http://www.iefpedia.com/english/wp-content/uploads/2009/10/Islamic-Finance-A-Therapy-fo r-Healing-the-Global-Financial-Crisis.pdf

Dwyer, G. P. & Tkac, P. (2009). The financial crisis of 2008 in fixed-income markets. *Journal of International Money and Finance, Elsevier, 28*(8), 1293-1316. http://dx.doi.org/10.1016/j.jimonfin.2009.08.007

Edey, M. (2009). Financial system developments in Australia and abroad. *RBA Bulletin*. Retrieved from www.rba.gov.au/publications

Eslake, S. (2009). The global financial crisis of 2007-2009: An Australian perspective. *Economic Papers*, 28(3), 226-238. http://dx.doi.org/10.1111/j.1759-3441.2009.00034.x

Falaika. (2002). *Islamic investment criteria*. Retrieved from http://www.failaka.com/Failaka% 20Research.html

Forte, G. & Miglietta, F. (2007). *Islamic mutual funds as faith-based funds in a socially responsible context*. Working Paper, Bocconi University.



Girard, E. C. & Kabir, M. (2008). Is there a cost to faith-based investing: Evidence from FTSE Islamic indices? *Journal of Investing* 17(4), 112-121. http://dx.doi.org/10.3905/JOI.2008.17.4.112

Green, H., Harper, I. & Smirl, L. (2009). Financial Deregulation and household debt: the Australian experience. *The Australian Economic Review*, 42(3), 340-6. http://dx.doi.org/10.1111/j.1467-8462.2009.00561.x

Hakim, S. & Rashidian, M. (2004). *Risk and Return of Islamic Stock Market Indexes*. Paper presented at the International Seminar of Nonbank Financial Institutions: Islamic Alternatives, Kuala Lumpur, Malaysia.

Hassan, A., Antonious, A. & Paudyal, D.K. (2005). Impact of ethical screening on investment performance: the case of the Dow Jones Islamic Index. *Islamic Economic Studies 13*(1), 67-97.

Hayat, R. & Kraussl, R. (2011). Risk and return characteristics of Islamic equity funds. *Emerging Markets Review, 12,* 189-203. http://dx.doi.org/10.1016/j.ememar.2011.02.002

Hoepner, A. G. F., Rammal, H. G. & Rezec, M. (2011). Islamic mutual fund's financial performance and international investment style: evidence from 20 countries. *European Journal of Finance* 17(9-10), 829-850. http://dx.doi.org/10.1080/1351847X.2010.538521

Hussein, K. A. (2004). Ethical Investment: Empirical Evidence from FTSE Islamic Index. *Islamic Economic Studies*, *12* (1), 21-40.

Hussein, K. & Omran, M. (2005). Ethical investment revisited: Evidence from Dow Jones Islamic Indexes. *Journal of Investing*, 14(3), 105–126. http://dx.doi.org/10.3905/joi.2005.580557

Islamic Finance& Investment. (2014). *Principles of Islamic Finance*. Retrieved from http://www.mcca.com.au/about-us/

Keigher, R. P. & Bauer, C. J. (2000, September). *Islamic equity funds: challenges & opportunities for fund managers*. Paper presented at Fourth Harvard University Forum on Islamic Finance.

Krasicka, O. & Nowak, S. (2012). What is in it for me? A primer on difference between Islamic and conventional finance in Malaysia. *Journal of Applied Finance and Banking* 2(2), 149-175.

Lim, G. C., Chua, C. L., Claus, E. & Tsiaplias, S. (2009). Review of the Australian Economy 2008-09: Recessions, Retrenchments and risks. *The Australian Economic Review*, 42(1), 1-11. http://dx.doi.org/10.1111/j.1467-8462.2009.00543.x

Lim, G. C., Chua, C. L., Claus, E. & Tsiaplias, S. (2010). Review of the Australian Economy 2009-10: On the road to recovery. *The Australian Economic Review*, 43(1), 1-11. http://dx.doi.org/10.1111/j.1467-8462.2009.00582.x



Mamat, A. R. (2002, March). *Shari'ah index – a performance indicator*. Paper presented at the Shari'ah Equity Investment & Islamic Indices Seminar, Securities Commission, and Kuala Lumpur, Malaysia.

Martani, D., Mulyono R. & Khairurizka, R. (2009). 'The effect of financial ratios, firm size, and cash flow from operating activities in the interim report to the stock return. *Chinese Business Review, ISSN 1537-1506*, pp. 44-55.

McGowan, C. & Junaina, M. (2010, March). The Theoretical Impact Of The Listing of Syariah Approved Stocks on Stock Price and Trading Volume. *International Business & Economics Research Journal*, 9(3), 11-19.

Natarajan, P. & Dharani, M. (2012). Shariah Compliant Stocks in India - a Viable and Ethical Investment Vehicle. *Arabian Journal of Business and Management Review*, 1(6), 50-62.

Naughton, S. & Naughton, T. (2000). Religion, ethics and stock trading: the case of an Islamic equities market. *Journal of Business Ethics*, 23(2), 145-59. http://dx.doi.org/10.1023/A:1006161616855

Nisar, S. (2007). Islamic norms for stock screening. *Islamic Banking and Finance Magazine*, 12, 95-113.

Obaidullah, M. (2001). Ethics and efficiency in Islamic stock markets. *International Journal of Islamic Financial Services*, 3(2), 15-23.

Osamah, A., Hooi, L. & Anis, S. (2014). Do Islamic Stock Indexes Outperform Conventional Stock Indexes? A Stochastic Dominance Approach. *Pacific-Basin Finance Journal*, 28. Retrieved from http://www.sciencedirect.com/science/article/pii/S0927538X13000644

Pareto, C. (2008). *Measure Your Portfolio's Performance*. Retrieved from http://www.investopedia.com/articles/08/performance-measure.asp

Pomfret, R. (2009a). The post-2007 financial and policy challenges facing Australia. *Economic Papers*, 28(3), 255-263. http://dx.doi.org/10.1111/j.1759-3441.2009.00030.x

Purnomo, Y. (1998). Keterkaitan Kinerja Keuangan dengan Harga Saham. *Usahawan*, 27 (12). As cited in Martani, D., Mulyono, R. & Khairurizka, R. (2009). The effect of financial ratios, firm size, and cash flow from operating activities in the interim report to the stock return. *Chinese Business Review*, ISSN 1537-1506, pp. 44-55.

Securities Commission. (2002). List of Securities Approved by the Shari'ah Advisory Council of the Securities Commission. Securities Commission, Kuala Lumpur, 24 October.

Setiawan, C. & Oktariza, H. (2013). Syariah and Conventional Stocks Performance of Public Companies Listed on Indonesia Stock Exchange. *Journal of Accounting, Finance and Economics*, 3(1), 51 – 64.

Rahman, A., Yahya, M. & Nasir, M. (2010). Islamic norms for stock screening: A comparison between the Kuala Lumpur Stock Exchange Islamic Index and the Dow Jones Islamic Market



Index. *International Journal of Islamic and Middle Eastern Finance and Management, 3*(3), 228-240.

Ray, S. (1993). Self-Regulation and the Australian Stock Exchange. *Business Regulation and Australia's Future*. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.199.4902&rep=rep1&type=pdf

Siddiqui, A. R. (2000, July). *Dow Jones Islamic Market Index*. Paper presented at Islamic Banking and Finance Conference, Hilton Long Beach, CA.

Siddiqui, A. R. (2002, March). *Transparency and accountability: Dow Jones Islamic Market Index*. Paper presented at The International Islamic Finance Forum, Dubai.

Sukmana, R. & Kolid, M. (2012). Impact of global financial crisis on Islamic and conventional stocks in emerging market: an application of ARCH and GARCH method. *Journal of Accounting and Finance*. Retrieved from http://www.iefpedia.com/english/wp-content/uploads/2010/12/Impact-of-global-financial-cris is-on-Islamic-and-conventional-stocks-Muhamad-Kholid.pdf

Usmani, T. (1999). Principles of Shari'ah governing Islamic investment funds. *International Journal of Islamic Financial Services*, 1(2), 45-58.

Walkshäusl, C. and Lobe, S. (2012). Islamic investing. *Review of Financial Economics*, 21, 53-62. doi:10.1016/j-rfe.2012.03.002.

Wilkins, R. & Wooden, M. (2009). Household debt in Australia: the looming crisis that isn't. *The Australian Economic Review*, 42(3), 358-66.

Wilson, R. (2004). Screening criteria for Islamic equity funds. In Jaffer, S. (Ed.), *Islamic Asset Management: Forming the Future for Shari'ah-Compliant Investment Strategies*. Euromoney Institutional Investor PLC, London.