CHAPTER NINE

CONCLUSION

Investors in any markets have one goal under the new classical theory of economics that is to maximize utility. Rational investors are only focusing on maximizing their return as well as minimizing their risk. There is no indication in the traditional finance about maximizing the non-financial returns of investment portfolios. The non-financial return comes from investing on what an individual feels is good. In UK and the US, there are the ethical investment portfolios and the socially responsible investment portfolio respectively. These investment portfolios follow certain criteria to include or exclude certain investment portfolio. These criteria can be positive whereby companies are included or negative criteria whereby companies are excluded. Since these kinds of investment portfolios do not fit the traditional view of finance a lot of criticism has been thrown at these investment portfolios. Since the efficient market portfolio uses all the companies available in any market to derive the best portfolio available the critics of screened investment portfolios claim that such investment portfolios will lose the advantage of using the whole pool of stocks to invest in. Most of the criticism is because such investment portfolios are not going to include many of the well performing firms in the markets because these firms do not fit the criteria. Therefore, these screened investment portfolios will underperform the non-screened investment portfolio. Other issues pointed by the critiques are the extra cost of monitoring and filtering these investment portfolios. The screened investment portfolio is not confined to ethical or social responsible investment portfolios. Nowadays there are the Islamic investment portfolios that follow the rules and laws of Islam. Islamic investment portfolios are also called screened investment portfolios but they differ in the methods of

screening. The Islamic investment portfolios have certain criteria that are fixed for any investment portfolios but there are some issues, which are left to the interpretation of the scholars.

This thesis examines three main issues concerning the performance of the Islamic investment portfolios in Malaysia. The first part of the thesis compares the risk and returns performance between an Islamic stock market index represented by Kuala Lumpur Syariah Index (hereafter KLSI), and a conventional stock market index represented by Kuala Lumpur Stock Index (hereafter KLCI) in the short and the long run. The second part of the thesis compares the impact of selected macroeconomic variables and their long and short run relationship with KLSI and KLCI. The third part of the thesis investigates difference in returns between companies in KLSI and non-KLSI and the impact of firm specific variables on these firms. Time series and panel data techniques are used to analyze the data. The summary of all the findings is given in the following subsections.

9.1 Risk and Returns of KLSI and KLCI

This part of the thesis examines the performance of KLSI and KLCI and their short and long run relationships. KLCI consists of the largest 100 listed in the main board of Bursa Malaysia while KLSI has 826 companies on the time of the study. KLSI is a screened index that does not have a fixed number of companies but keeps on including and excluding companies that do not fit the criteria. Using historical data of returns of KLSI and KLCI from 1999 to 2005 on daily basis the following results are found.

First, the mean returns and standard deviation indicate that KLSI underperforms KLCI in returns but in terms of risk, KLSI seems to be less risky than KLCI. This might be because of several reasons. It might be due to its newness, the positive relationship between size

and returns in developing countries, or due to the flexibility of the screening criteria of KLSI compared to other Islamic indices such as DJIMI or FTSEGII. To confirm whether this underperformance is statistically significant, a t-test for difference in mean returns was used and it is found that there is no significant difference between KLSI and KLCI. Therefore, investors who choose Syariah compliant securities are not substantially worse off than those who choose non-Islamically compliant stocks. In consequence, there is no harm for investors investing in the Syariah compliant index.

Second, four measurements of risk-adjusted returns are used and the results indicate that KLCI has higher returns as well as higher risk while the opposite is true for KLSI where it yield lower returns and lower risk. These results are consistent with the theory of finance where higher risk assets yield higher returns than low risk assets that yield lower returns. Although the Islamic investment portfolio follows the same benchmark as the conventional investment portfolio, however, Muslims or investors in Islamic investment portfolios acquire an extra reward that is the non-financial reward.

Third, long, and short run dynamics between both indices are investigated. To test the long and short run relationships between KLCI and KLSI time series techniques are used. The results of the unit root test shows that KLCI and KLSI returns are integrated of degree one. In other words, KLCI and KLSI returns are stationary. To test the long run relationship a cointegration test is performed and it is found that KLCI and KLSI are cointegrated. This indicates that both indices move together and will converge in the long run. This implies that the screening criteria of KLSI do not affect it or cause it to divert from the market trend. In other words, the exclusion or the inclusion of companies along the way does not influence the KLSI to deviate from the movement of the market. Since KLCI and KLSI are

cointegrated, any further test of causality has to include the error correction mechanism. After performing Vector Error correction Model (hereafter VECM) regression it is found that the error correction coefficient indicates the adjustment of KLCI to any deviation from the equilibrium. In other words, KLCI adjusts slowly to the deviation from its long-term equilibrium. In addition, the Granger causality, measured by the overall significance of the model, the F-value, confirms the bivariate bidirectional causality.

To reconfirm the bidirectional causality variance decomposition and impulse response are done. The results show that the KLCI is the most exogenous which indicates that KLSI is not influential. On the other hand, KLSI is the most endogenous (i.e. least exogenous) suggesting that KLCI is influential, though not statistically significant. Since variance decomposition is sensitive to the variables' ordering, a different ordering is used and the results suggest that KLSI is the most exogenous while KLCI is the most endogenous. On the other hand, impulse responses confirm the results of the variance decomposition supporting the influence of KLSI on KLCI but not vice versa. This is true since the responses of KLCI to one standard deviation of KLSI are higher while the opposite is not true.

In summary, the results suggest that there is no difference in returns between KLCI and KLSI, indicating that there is no penalty in investing in Islamic index. The long-term equilibrium indicates that KLCI and KLSI are moving together and hence, a prediction of one based on the other is beneficial. In addition, causality between KLSI and KLCI implies that there is a feedback in the cause and effect relationship between these indices.

9.2 Macroeconomic Variables with KLSI and KLCI

This part of the thesis investigates the influence of macroeconomic variables, the long run relationship, and the short run dynamics on KLCI and KLSI. The macroeconomic variables used in this part are industrial production (IP) as a proxy for real GDP, Consumer Price Index (CPI) as a proxy for price level movements, narrow definition of money supply (M1) and world oil prices to account for external shocks (OIL). Using monthly data from 1999 to 2006, the following results are found.

First in term of the stationarity of the variables, it is found that all the variables are not stationary or have a unit root problem in the level. Consequently, the first difference is used for all the variables and the unit root problem is eliminated. In order to examine the long-term relationship between the indices and the macroeconomic variables, a cointegration test is performed. It is found that KLCI and KLSI are cointegrated with the macroeconomic variables. In addition, the results indicate that both KLSI and KLCI react similarly to the selected variables. The indices are positively related to real activity, and inflation while negatively related to oil prices and money supply.

Second, in terms of short run dynamics, there were bidirectional dynamics between KLSI KLCI and money supply, unidirectional causality from the rate of inflation toward KLCI and KLSI, and from Money supply toward real activity. This means that the real GDP is affected by the any increase in money supply and that money supply lead and GDP lag. Therefore policy makers can target any shock to the stock market if there is any need to boost the economy. Similarly, the money supply seems to cause KLSI and KLCI this indicates that any increase in the money supply will find its way to the stock market. In

addition, the unidirectional causality between inflation and KLSI and KLCI indicate that the increase in the price can be reflected and sensed by KLSI and KLCI. This means that KLCI and KLSI are good hedge against inflation.

Third, going beyond Granger causality impulse response suggests that all the variables have bidirectional dynamics when the entire variables are included. Variance decomposition indicates that the most endogenous variable is money supply while the most exogenous variable is inflation. In addition, stock market in general seems to be a good hedge against inflation, which might attract foreign investors to invest in KLSI, or any other index that encompasses the majority of the stocks listed. These results suggest that KLSI and KLCI react to the same variables almost in the same manner. This indicates that the screening act does not affect KLSI in terms of its reaction to macroeconomic variable similarly as KLCI. In other words, being a screened investment portfolio in Malaysia does not exclude it from reflecting the overall performance of the economy. Since KLCI track the largest 100 company in Malaysia, it is used as a signaling indicator for the overall economy. Moreover, since KLSI react similarly to the selected macroeconomic variables as KLCI this indicate that KLSI is also a signaling indicator for the overall economy.

9.3 Firm Specific Determinants and Syariah and Non-Syariah Firms

This part of the thesis examines whether there is a significant difference between Syariah and non-Syariah firms in terms of their returns, to examine the firm specific selected variables that influence Syariah firm and non-Syariah firms, to investigate the significant difference in the reaction of Syariah and non-Syariah firms to the same selected firm specific variables. The firm specific variables used with firm returns (R) in this part are market capitalization (MC) as a proxy for size, market to book ratio (MTB), price earnings

ratio (PER), market risk or beta (Beta) and total debt (DEBT). Using yearly data from 2000 to 2006, and a sample of 300 companies, split into 150 Syariah and 150 non-Syariah subsamples, the following results are found.

First, using all the 300 hundred firms Results indicate that there is no significant difference between Syariah and non-Syariah firms in terms of returns. Subsequently, it is safe to invest in Syariah firms without paying any penalty for doing so. In addition, total Debt, market risk and market to book ratio are the most significant factors affecting the studied firms.

Second, when the sample was split the significant variables explaining returns in non-Syariah firms are market to book, total debt, and market risk. On the other hand, in Syariah firms only market to book and price earnings ratio are the significant variables. The results suggest that more variables explain the variation in non-Syariah firms while only two variables explain the variation in Syariah firms. Market to book which represent the growth of the firm is common in both types of firms. This means that an investors looking for Syariah compliant can use market to book ratio and price earnings ratio to choose a well performing firms. On the other hand, investors in non-Syariah firms need to evaluate the market risk, total debt, and market to book in order to choose well performing firms. It seems that the screening act has eliminated the market risk and the risk of debt automatically although there are no specific criteria for Syariah firms to be included in KLSI on the level of debt that should be avoided.

An interesting result is about the market capitalization or the size of the firm. Size of the firm is only not significant in affecting return but it is negative. This indicates that the

bigger the firm the lower the return which different from the mainstream theory. The finance theory indicates that lager firms normally yield positive returns than small firms. One of the criticisms on screened investment portfolio is that it excludes large firms and therefore it risks being concentrated in small firms where returns are usually low. In this case smaller firms seems to have higher returns indicating that the critique on the size of the firm as being one of the issue against screened investment portfolio might not be valid.

Table 9.1 Null hypotheses

	Hypothesis	Expected results	Reasons	Bases	Results
Part one	H_1: There is no significant difference in returns between Syariah and non-Syariah index.	Reject	Screened investment portfolio yields lower returns because of under-diversification	Langbein and Posner (1980)	Do not reject
	H_2: There is no long-term relationship between Syariah and non-Syariah indices.	Do not reject	Screening act leads screened investment portfolio to behave differently than unscreened investment portfolio.	Hickman et al (1999)	Reject
	H_3: Syariah index does not cause non-Syariah index	Do not reject	Screened index has low correlation with overall market while non-screened index has high correlation overall market.	Hickman et al (1999)	Reject
	H_4: Non-Syariah index does not cause Syariah index	Do not reject	Screened index has low correlation with overall market while non-screened index has high correlation overall market.	Hickman et al (1999)	Reject
Part two	H_5: There is no long run relationship between the selected macroeconomic variables and the Syariah index	Do not Reject	Screening act causes screened investment portfolio to behave differently than unscreened investment portfolio towards similar macroeconomic variables.	Hickman et al (1999)	Reject
	H_6: There is no significant difference of returns between Syariah	Reject	Screening act causes screened investment portfolio to behave	Hickman et al (1999)	Do not reject

	and non-Syariah indices in their reaction to macroeconomic variables.		differently than unscreened investment portfolio towards similar macroeconomic variables.		
Part three	H_7: There is no significant difference between Syariah firms and non-Syariah firms in term of returns.	Reject	Either Screening act leads screened firms to under-perform or out-perform non-screened firms.	Angel And Rivoli (1997)	Do not reject
	H_8: There is no significant difference in the reaction of Syariah and non Syariah firms to the same selected firm specific variables	Reject	Either Screening act leads screened firms to under-perform or out-perform non-screened firms.	Angel And Rivoli (1997)	Do not reject

Table 9.1 summarizes the null hypotheses that are tested in this study. The findings indicate that in all cases the opposite of the expected results are found. The results indicate that in the first part of the study, which deals with the performance of risk and returns of Syariah and non-Syariah indices, the first hypothesis is not be rejected while the other three hypotheses are rejected. For the second part of the study, which focuses on the macroeconomic determinants of stock indices, the first hypothesis is rejected while the second is not. The third part deals with the firm's specific determinants of islamically screened and non- islamically screened firms. The results show that the two hypotheses are not rejected.

9.5 Limitations of the study and future research

The main limitation of this study is that it is confined to one market. The behavior of screened and non-screened investment portfolio would have been interesting if different market such as Dow Jones Islamic Market and FTSE Islamic are compared. These two markets have extra screening criteria that go beyond product screening practiced in

Malaysia. Dow Jones Islamic market index and FTSE Islamic follow activity screening which involve looking at the balance sheet of each firm for certain benchmarks in terms of debt and account receivable and the amount of interest it acquires. Other limitations could be the time interval used in this study that is limited to six to seven years in terms of monthly and yearly data. A longer time horizon might give more insight into the dynamics of different variables that might affect stock returns. In addition, different macroeconomic variables and firm specific variables could be used to investigate their impact on stock returns. Portfolio formation of Syariah and non-Syariah investment portfolios is another area that can be investigated. Lastly, it will be interesting to study the recent period of mortgage crisis and whether the Islamic investment portfolios were affected as much as the non-Islamic investment portfolios.