Macroeconomics, Investor Sentiment, and Islamic Stock Price Index in Malaysia[*]

Mamunur Rashid[1], M. Kabir Hassan[2] and Ng Yuen Yein[3]

Asset prices are strongly connected to macroeconomic variables even in the presence of investor sentiment. On the other hand, if investor sentiment is a significant determinant in Islamic stock market, it will raise critiques on the need of Shariah compliant markets. Consequently, newer studies should investigate the need of separate capital markets for Muslims. This study examines the level of exposure of conventional and Islamic stock price indices in Malaysia to the relative change in investor sentiment index and macroeconomic factors. The study tested two separate models: one using macroeconomic variables in quarterly time series framework and the other using macroeconomic and sentiment data in a quarterly time series framework. This study reports that interest rates, currency index and FTSE Bursa Malaysia Composite Index pose greater influence on Islamic price index when compared to industrial production, consumer price index, money supply and investor sentiment indices. The results continue an important battery of debates on the requirement of *shari'ah* compliant capital market for Muslims. The study unlocks room for new studies on influence of sentiment in Islamic financial industry.

1. Determinants of Islamic Stock Prices

Researchers in behavioural finance establish strong influence of investor sentiment on asset prices (Baker & Wurgler 2006). Earlier studies investigated the influence of investor sentiment on asset prices of different sizes of companies (small versus large firms), various countries (developed versus emerging), and various sectors (finance, industrial

---

[1] Finance Nottingham University Business School The University of Nottingham, Malaysia
Email: mamunur.rashid@nottingham.edu.my
[2] Economics and Finance Department of Economics and Finance University of New Orleans
Email: mhassan@uno.edu
[3] Nottingham University Business School, University of Nottingham Malaysia

and properties) (Brown & Cliff 2004; Fauzias, Izani & Rashid 2013). These studies reported strong positive connection between investor sentiment and stock prices. Stock price tends to shoot upward during the state of higher investor sentiment. Investor sentiment is widely determined by the overly optimistic or pessimistic behaviour of the investors. Investor sentiment is also strong when investors rely on noise and invest in stocks that are difficult to arbitrage (Qiu & Welch 2006). The primary proxy to measure investor sentiment came from survey-based studies. Most recent studies employed a combination of surveys and secondary data to measure investor sentiment index.

Islamic finance industry has been growing at a double digit rate every year (E&Y 2013; Hassan, Rashid, Imran & Shahid 2010). The industry is operated on the Islamic *shari'ah*. Islamic *shari'ah* prohibits interest (*riba*), and production and use of alcoholic goods, investment in pornography and anything that oppresses basic human rights (Hassan & Rashid 2010). Islamic finance prohibits investment that involves excessive uncertainty *(gharah)* and gambling *(mysir)*. Islam also prohibits trading on goods that do not have physical existence (Chapra 1985). Islam advocates the value of entrepreneurship, production through integrity and hard work, and prefers equity than debt (Farooq 2007). Consequently, partnership, mutual solidarity and brotherhood are the symbols of Islamic economic system. It is prohibited by Quran and Hadith for Muslims to act on rumours. As it is clearly found from Surah Hujuraat (Quran 49:6) where Allah (*swt*) is saying, "O you who believe! If a Faasiq (liar — evil person) comes to you with any news, verify it, lest you should harm people in ignorance, and afterwards you become regretful for what you have done". It is found in Sahih Muslim that the Prophet (*pbuh*) said, "It is enough sin for a man to speak of everything that he hears". During the day of the Prophet (*pbuh*) when *Sahabat* (*ra*), the companions of the Prophet (*pbuh*), migrated from *Mokkah* to Ethiopia, there was a rumour that many people became Muslim in *Mokkah*, and the *Sahabat* went back to *Mokkah* to see them. However, they later found that it was simply a rumour, and they met with persecution at the hands on *Quraysh*. Finally, in the Kitab al-Buyu, the book of transaction, (Book 10 of Sahih Muslim), explains that Islam prohibits any sort of speculation for the purpose of individual gain at the cost of information disequilibrium or asymmetric information in business. Hence, Muslims, when they are investors or performing some

business activities, must verify the information they get, and they must not work on overly optimistic or pessimistic expectations.

Investor sentiment is defined as the propensity to speculate (Barberis, Shleifer & Vishny 1998). Any kind of speculation, either intentional or partaking, is considered *haram* (not permissible) in Islam. Another common concept of investor sentiment is that sentimental investors value rumours more than fundamentals (Baker, Wurgler & Yuan 2010), which is also against Islamic principles. Long-run significance of investor sentiment may also indicate that irrational investors outperform rational investors (Black 1986). Theoretically, *Shari'ah* compliant stock investment cannot have a long-run significant connection to investor sentiment. Islamic finance should rely on fundamentals, not on rumours. However, if investor sentiment has significant influence on Islamic *Shari'ah* stock index, it will probably close the gates for Islamic capital markets. We considered Bursa Malaysia as the ideal scenario as it constitutes the largest number of *Shari'ah* compliant stocks, which is over 80% of the total listed companies, and Malaysia is considered in the top three Islamic markets, alongside Saudi Arabia (KSA) and the United Arab Emirates (UAE) according to Ernst & Young (2013).

The 30 constituents in FTSE Bursa Malaysia *Hijrah* Index have gone through different screening processes that are different from FTSE Bursa Malaysia Composite Index by FTSE Bursa Malaysia, Securities Commission's *Shari'ah* Advisory Committee (SAC) and Yasaar Limited. Therefore, the factors which influence Malaysian Islamic stock market performance ought to be structurally different than the conventional stock market index. Islamic capital markets are still emerging and the studies on performance of Malaysian Islamic stock market are very rare, especially from the standpoints of the factors and impacts. We investigate the asset prices in Islamic stock markets in Malaysia using the *Hijrah* index as the dependent variable and a number of factors from the conventional, behavioural and macroeconomic determinants. We employed investor sentiment as one of the determinant to investigate whether sentiment is a strong determinant of Islamic finance in Malaysia or not. If sentiment is a strong determinant in the long-run, we can conclude that there is a strong need to redesign the capital markets for the Muslims. Table 1 summarizes the factors explaining the changes in stock prices in different countries. These factors are examined in the conventional setting where Islamic stock prices are not involved.

Table 1: Factors influencing asset prices in financial markets

Study by	Factors
Chen, Roll & Ross (1986)	Industrial production, inflation and long-term government bonds
Fama & French (1993), Maio & Philip (2013)	Market capitalisation and book-market ratio Fama-French three factor model
Maysami & Koh (2003)	Gross domestic product in Singapore
Fama & Schwert (1977), DeFina (1991)	Inflation rate
Geske & Roll (1983), Mukherjee & Naka (1995) Khil & Lee (2000), Ibrahim & Azizi (2003), Shabri et al.(2001), Ibrahim (2003)	Economic policy, inflation rate
Dhaka et al. (1993), Fama (1981)	Money supply in the United States
Mukherjee & Naka' (1995), Abdullah & Hayworth (1993)	Interest rate in Japan
Hussin, Muhammad, Abu & Awang (2012)	Interest rate in Malaysia
Baker and Wurgler (2006); Baker et al. (2010); Brown and Cliff (2004)	Investor sentiment in the United States and the markets of Europe and Canada.
Finter, Niessen-Ruenzi and Ruenzi (2012)	Investor sentiment in Germany

Table 1 presents a number of factors across a number of countries/markets from two competing paradigms: the efficient market and the behavioural finance. In recent years, researchers combine traditional factors with a sentiment index from behavioural finance to explain the movement in stock prices. However, the reach of studies in Islamic stock market has been very limited in this aspect. Dynamic relationship between Kuala Lumpur *Shari'ah* Index (KLSI) and Kuala Lumpur Composite Index (KLCI) was a matter of research for many years. According to Albaity and Ahmad (2008), Kuala Lumpur *Shari'ah* Index and Kuala Lumpur Composite Index tend to move in the same direction. It is quite usual as over 80% of the stocks that are in the composite are also *Shari'ah* compliant. Yusof and Majid (2007) provided strong evidence that interest rate did not connect well with the

Islamic stock market volatility. This is in line with Islamic principle that interest rate (riba) is not significant in explaining stock market volatility. However, as the composite index is strongly connected to Islamic index in Malaysia, and as the composite index and interest rates are connected strongly, it would be interesting to revisit the relationship between interest rate and Islamic stock index. Albaity (2011) found that monetary policy and inflation rates are important determinants of stock prices in Malaysia. Isa, Hassan and Azrul (2012) indicated that rate of inflation, money growth, interest rates, industrial production, foreign currency reserves, exchange rates, and monetary policy have positive relationship with *Shari'ah* Indices in Malaysia.

Studies on investor sentiment in Malaysia has appeared recently in various studies (Fauzias, Rashid, Ibrahim & Bai 2014; Nor, Ibrahim & Rashid 2013). These studies constructed investor sentiment index using a combination of survey and market-data based proxies. Later, the index was used to analyse the performance of stock indices, bank deposit, currency index and foreign direct investment in Malaysia. These studies reported strong positive relationship between investor sentiment index and the conventional stock indices. It indicates that in the state of the higher investor sentiment the stock market indices increase in value, and vice versa. If *Shari'ah* composite index strongly connected to conventional stock market index, we expect a strong positive connection between the proxy of investor sentiment and the *Shari'ah* stock index. The other macroeconomic variables that were considered alongside investor sentiment included money supply, gross domestic product, interest rate, and currency index.

2. Empirical Design

Hanif et al (2013) used OLS in determining the impact of financial sector variables on *Sha'riah* compliant cross-section stock return in Pakistan. Gupta et al (2013) also used OLS in determining the returns in Dow Jones Islamic stock market. This study introduces two proxies to represent investor sentiment in Malaysia. Consumer Sentiment Index (CSI) and the Business Condition Index (BCI) are quarterly publications of Malaysian Institute of Economic Research (MIER) that presents the expected consumption patterns of Malaysian consumers and expectations related to business activities of the Malaysian entrepreneurs in quarter in advance. The consumer sentiment index has been widely

used in the extant literatures. Michigan consumer sentiment index has been a widely used proxy for investor sentiment (Schmeling 2007, 2009). This study is the first of its kind to introduce the entrepreneurial sentiment alongside the consumer sentiment. However, since two indices are different in structure and norms, we conduct separate analysis having these proxies in different models instead using factor analysis or principal component analysis, which is suggested in many existing studies on Malaysia (Fauzias et al. 2013).

Table 2: Consumer Sentiment Index and Business Condition Index

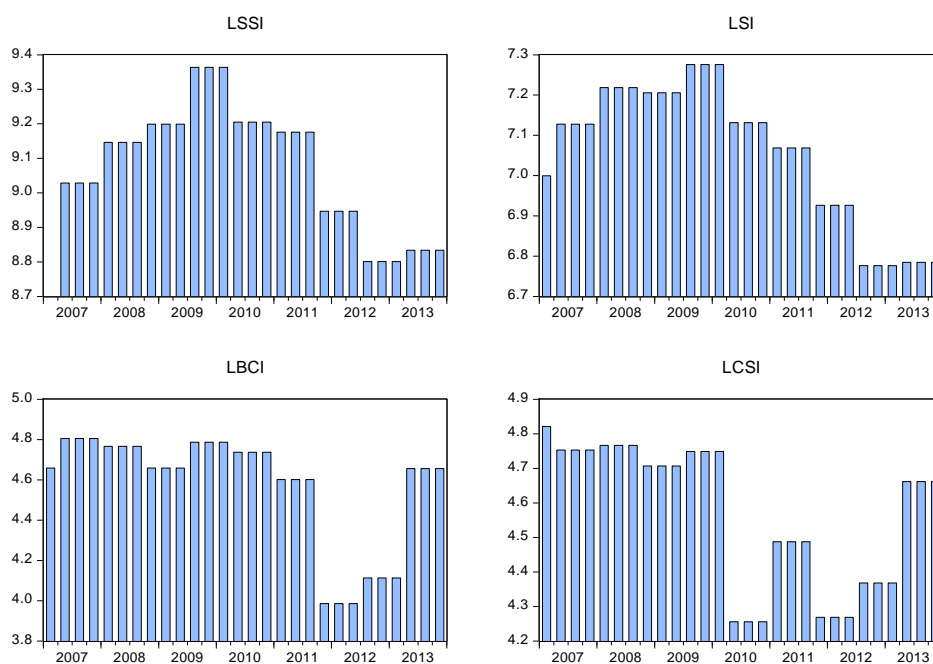| Consumer Sentiment Index	
SL	Questions/Issues
1	Household income
2	Expected financial condition
3	Expected employment condition
4	Inflation expectation
5	Expected investment in real estate or automobiles
Business Condition Index	
SL	Questions/Issues
1	Current and expected level of production
2	Level of sales
3	New job offerings
4	Level of inventory
5	Level of new orders placed

Source: MIER (2010)
Notes: The surveys are conducted by Malaysian Institute of Economic Research (MIER) on the inhabitants of the Klang Valley in Malaysia. The surveys are conducted quarterly basis and are published alongside other economic indicators on the MIER's website.

BCI and CSI started long back in the 1987. The *Shari'ah* stock market index is available from only 2007. If the data is considered is considered quarterly, we have a dataset from Q1 2007 until Q4 2013 at time of writing this report. Table 2 shows the items considered in the CSI and BCI questionnaires by MIER. Figure 1 illustrates the movement in four important variables considered for this study. The figure shows strong relationship between the sentiment proxies and the stock market indices. Time series variables are influenced by a number of statistical

violations. For instance, tests for unit root and heteroskedasticity, auto-correlation and normality tests were conducted.

Figure 1: Movement in important variables

Notes: LSSI – Natural log of Shariah stock index, LSI – natural log of (conventional) stock index, LBCI – natural log of business condition index, and LCSI – natural log of consumer sentiment index. The charts present the movement in key variable with respect to financial crisis and market turmoil.

Table 3 starts with very basic descriptive statistics. The descriptive statistics show that the consumer price index (CPI) is having a high correlation with money supply. We dropped CPI for further analysis. CPI was also highly correlated with some other key variables.

We tested for unit roots and presented the findings in Table 4. Augmented Dickey-Fuller (ADF) test, Phillips-Perron (PP) test, and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) tests were applied. After the right level of differencing and log transformation, we have conducted OLS. All the variables were first-differenced. The two models tested are given below in equation 1 and 2. Following Liu and

Shrestha (2008), we included a number of lag terms, especially with the dependent variable

Table 3: Descriptive Statistics

	LSI	**LSSI**	**LIPI**	**LCPI**	**LMNS**	**LINT**	**LBCI**	**LCSI**
Mean	7.0552	9.0777	12.0915	4.6956	13.6858	1.4752	4.5709	4.5667
Median	7.1279	9.1461	12.1129	4.7029	13.7092	1.6094	4.6587	4.6616
Maximum	7.2759	9.3639	12.2327	4.7431	13.7651	1.9021	4.8048	4.8211
Minimum	6.7762	8.8009	11.9197	4.6548	13.578	0.5306	3.9853	4.2556
Std. Dev.	0.1757	0.1807	0.0836	0.0304	0.0699	0.3685	0.2865	0.208
Correlation Coefficient								
LSI	1	0.929567	0.262387	-0.64395	-0.73461	0.624443	0.671867	0.473675
LSSI		1	0.525314	-0.36586	-0.4431	0.651531	0.616631	0.301608
LIPI			1	0.534987	0.306647	0.503142	-0.02298	-0.45046
LCPI				1	0.884022	-0.10263	-0.59942	-0.7145
LMNS					1	-0.36042	-0.60651	-0.65577
LINT						1	0.490383	0.297251
LBCI							1	0.680376
LCSI								1

Notes: LIPI – industrial production, LMNS – money supply, LINT – interest rate.
LCPI has high correlation with LMNS, hence was dropped from final analysis.

Table 4: Unit Root Test

Items	Level			1st Differencing			Remarks		
	ADF	PP	KPSS	ADF	PP	KPSS	ADF	PP	KPSS
LBCI	-1.711	-1.8377	0.1174	-4.742**	-4.8675	0.0807	I(1)	I(1)	I(0)
LCSI	-1.633	-1.7649	0.1446	-5.538**	-4.8235	0.142	I(1)	I(1)	I(0)
LSSI	-1.818	-1.7765	0.3173	-4.801**	-4.7423	0.1837	I(1)	I(1)	I(1)
LSI	-2.997	-3.2369	0.4818	-5.025**	-5.5577	0.169	I(1)	I(1)	I(1)
LMNS	-1.127	-1.8093	0.5	-1.98	-6.6351	0.1486	I(1)	I(1)	I(1)
LINT	-2.429	-2.5526	0.0499	-5.076**	-4.8009	0.1188	I(1)	I(1)	I(1)
LGDP	-1.655	-1.6047	0.4313	-4.823**	-5.0247	0.1646	I(1)	I(1)	I(0)
LCUR	-1.261	-1.2613	0.1683	-4.867**	-5.0767	0.1156	I(1)	I(1)	I(1)

Notes: Three tests (ADF, PP and KPSS) were being used in testing the presence of unit root in the data. The null hypothesis for Augmented Dickey Fuller (ADF) test and Phillip Perron Test are same. The null hypothesis (H_0) would be there is a unit root and the H_1 stated that there is no unit root. The results above indicated that the null hypothesis cannot be rejected. The confidence level applied here is 95% confidence level. ADF Critical value at level = -3.4671, at 1st differencing= -2.899**, ** means the test-statistic is significant at 5% level. The null hypothesis for KPSS test would be there is a unit root and the H_1 stated that there is no unit root. KPSS (Kwiatkowski-Phillips-Schmidt-Shin) at level =0.146, at 1st differencing= 0.463, test-statistic is significant at 5% level.

$$\Delta LSSI = \Delta LSI + \Delta LINT + \Delta LIPI + \Delta LMNS + \Delta LCUR + \Delta LBCI \quad \dots(1)$$

$$\Delta LSSI = \Delta LSI + \Delta LINT + \Delta LIPI + \Delta LMNS + \Delta LCUR + \Delta LCSI \quad \dots(2)$$

3. Discussion and Implication

Influence of investor sentiment in Islamic capital market is one of the focus of this study. Table 5 and 6 shows the results. In Table 5 we found equation 1 and 2 using two sentiment proxies. In Table 6 we extended the findings to reduce statistical bias by including some lag terms. We conducted trial-and-error method to find the best model with highest adjusted R-squared at the cost of minimum statistical biasness. Hence, Table 6 carries more significance while explaining the ultimate role played by various indicators.

Table 5: Regression outputs Panel I (without lag terms)

Variable	Model 1		Model 2	
	Coef.	Prob	Coef.	Prob
ΔLSI	1.292	0.000	1.321	0.000
ΔLMNS	1.118	0.000	1.090	0.000
ΔLIPI	0.161	0.333	-0.048	0.582
ΔLINT	-0.022	0.188	-0.023	0.019
ΔLCUR	0.661	0.260	1.189	0.002
ΔLCSI	0.082	0.010		
ΔLBCI			0.079	0.000
C	-2.750	0.000	-2.502	0.000
R Squared		0.997		0.993
F Statistics		132.2		86.95

Note: Dependent variable ΔLSSI

Table 6: Regression outputs Panel II
(reduced version after statistical cleansing)

Variable	Model 1		Model 2	
	Coef.	Prob	Coef.	Prob
ΔLSI	0.692	0.000	0.732	0.000
ΔLMNS	1.118	0.000	1.0003	0.000
ΔLSI (-1)	1.161	0.003	0.982	0.068
ΔLINT	-0.022	0.088	-0.083	0.691
ΔLSSI (-1)	0.661	0.060	0.788	0.002
ΔLCSI	0.791	0.000		
ΔLBCI			0.381	0.000
C	-0.620	0.000	-0.043	0.000
R-squared		0.956		0.986
Adj R-squared		0.952		0.983
F-statistic		132.1		86.92
Prob (F-statistic)		0.000		0.000
Wald F-statistic		274.8		690.4
Prob (Wald F-stat)		0.000		0.000
Durbin-Watson stat		1.87		2.089

Note: Dependent variable ΔLSSI

Table 6 shows that the *Shariah* index is positively influenced by both the sentiment proxies. Both consumer sentiment and entrepreneurial sentiment are strongly positively connected to stock market in Islamic market in Malaysia. Both the models fulfilled almost all the statistical requirements. The adjusted R-squared of the models are impressive, which is again very common in time series model. This part of the study is incomparable to existing studies as none of the past studies investigated the influence of investor sentiment on Islamic stock index in Malaysia in the presence of macroeconomic variable. Going forward from here comes the other macroeconomic factors. For instance, higher conventional stock index is strongly positively influence the Islamic stock market index. Even the past lag (lag 1) of the conventional stock

index shows similar positive strength. Money supply is another important and positively significant factor that influences Islamic stock market index in Malaysia. Interest rate, however, is strong negative in the first model with CSI and negatively insignificant in the second model with BCI. This somehow comes similar to earlier findings that interest rate may be taken as a negative factor in the Islamic stock market as Islamic principles prohibits interest rate (*Riba*). However, more studies are needed to test this relationship.

Past lag of the dependent variable LSSI also positively influences the Islamic stock market index, which is quite common in time series modelling. Autoregressive lag models can be suggested for future studies with more samples. Among the macroeconomic variables, only money supply and interest rates were significant in the reduced model (Table 6). It indicates that the lagged values capture the importance of the other macroeconomic variables, which also indicates that the economic variables require different regression tests to capture their importance.

These findings have far-reaching consequences for Islamic capital market all over the world. If the policymakers really like to see *Shariah*-based Islamic capital markets, and they also like to segregate the influence of non-Islamic factors influencing the Islamic stock index, a number of crucial decisions need to be made. If Islamic finance industry is influenced by CSI and BCI, it indicates that attitude towards Islamic financial industry has similarity with that of the conventional finance industry. This further indicates that investors are not taking Islamic finance differently than the conventional financial instruments. These findings raise important questions on the Islamic trading behaviour of the investors.

The results indicate that there could be three reasons behind a strong influence on such influence. Firstly, it may so happen that existing form of capital market is not fit for Islamic investors. Secondly, there is mixture of Islamic and conventional investors in the same market trading on Islamic assets. Thirdly, investors, either Islamic or conventional, share similar psychological limitations with respect to financial investment. As they are human being, they share similar behavioural limitations when they are choosing assets. Another issue is that there is no limitations, except for the religious bindings, that

investors cannot add an Islamic asset into a conventional portfolio. This mixture might be of serious violation of Islamic principles. All the three arguments presented above are true in practical sense. However, discussion on a unique Islamic capital market would be more appealing than the other points. The concepts of unique Islamic capital markets are still developing; and Islamic capital market where there will no such mixture that violates Islamic principles. All the Islamic financial assets are being traded alongside conventional financial assets in global market. Hence, it will take some time to devise out a unique Islamic capital market framework for Muslim world. This is the capital market where Islamic corporate finances would be available for long-term basis, which also triggers greater understanding and practice of corporate finance based on *Sunnah*. Unless we have a strong framework on corporate finance in Islam, it will be difficult to understand the unique requirement of an Islamic capital markets to Muslims.

Besides, behavioural characteristics of the investors are human attributes irrespective of their religion. For instance, overconfidence is found among Muslims and non-Muslims across the globe. Hence, it is common to see sentiment influencing Islamic stocks. However, it raises debate on to what is extent of the capital market trading that can be Islamic when we have strong role of sentiment in Islamic capital markets. Thus, significant influence of investor sentiment demands *Shari'ah* compliant capital market for Islamic investors. Islamic capital market will be an overhaul from the existing system of trading in stock market. Such a system will educate investors on ideal Islamic trading behaviour that will help reducing rumour-based transaction in financial markets.

Reference

Abdullah, D. A., 1993. Macroeconometrics of Stock Price Fluctuations. *Quarterly Journal of Business and Economics*, 32(1), pp. 49-63.

Albaity, M., 2011. A Comparative Study of the Performance, Macroeconomic Variables, and Firm's Specific Determinants of Islamic and non-Islamic indices: The Malaysian Evidence. pp. 1-213.

Albaity, M., 2011. Impact of the Monetary Policy Instruments on Islamic Stock Market Index Return. *Economics The Open-Access, Open-Assessment E-journal*, pp. 1-28.

Baker, M. P. & Wurgler, J., 2006. Investor Sentiment and the Cross-Section of Stock Returns. *The Journal of Finance*, pp. 1645-1680.

Baker, M. P., Wurgler, J. A., & Yuan, Y. 2010. Global, Local, and Contagious Investor Sentiment. *Journal of Financial Economics,* 104, pp. 272-287.

Barberis, N., Shleifer, A., & Vishny, R. 1998. A Model of Investor Sentiment. *Journal of Financial Economics,* 49 (3), pp. 307-343.

Black, F. 1986. Noise *Journal of Finance* 41 (3), pp. 529-543.

Brown, G. W., & Cliff, M. T. 2004. Investor Sentiment and the Near-Term Stock Market. *Journal of Empirical Finance*, 11 (1), pp. 1-27.

Chapra, M. U. 1985. Towards a Just Monetary System. Leicester: UK: The Islamic Foundation.

Chen, N. F., Roll, R. R. & Ross, S. A., 1986. Economic Forces and the Stock Market. *Journal of Business*, 14(3), pp. 383-403.

DeTina, R. H. 1991. Nov/Dec. Does Inflation Depress the Stock Market. *Business Review-Federal Reserve Bank of Philadelphia*.

Dhakal, D. K., 1993. Causality between the Money Supply and Share Prices: a VAR Investigation. *Quarterly Journal of Business and Economics*, 32(3), pp. 52-74.

El-Din, T.& El-Din, S., 2002.Towards an Islamic Model of Stock Market. *J.Kau: Islamic Economics,* 14, pp. 3-29.

E&Y. 2013. World Islamic Banking Competitiveness Report 201-2014: The Transition Begins Ernst & Young

Fama, E. F., 1981. Stock Returns, Real Activity, Inflation and Money. *American Economic Review*, 71, pp. 545-565.

Fama, E. F., 1986. Term Premiums and Default Premiums in Money Markets. *Journal of Financial Economics*, 17, pp. 175-196.

Fama, E., 1990. Stock Returns, Expected Returns and Real Activity. *Journal of Finance*, 45(4), pp. 545-565.

Farooq, M. O. 2007. Partnership, Equity-financing and Islamic finance: Whither Profit-Loss-Sharing? *Review of Islamic Economics* 11 (Special Issue):67-88.

Fauzias M. N., Ibrahim, I., & Rashid, M. 2013. Exposure to Investor Sentiment in Malaysia: Services versus Manufacturing Stocks. *Global Business & Economics Anthology* 1 (March 2013):239-248.

Fauzias, M. N., Rashid, M., Ibrahim, I., & Bai, Y. 2014. Investor Sentiment and Bank Deposits in Malaysia: Do Bank Managers Time the Market while Pricing Deposits? *Journal of Finance & Financial Services* 1 (1):71-84

Finter, P., Niessen-Ruenzi, A., & Ruenzi, S. 2012. The Impact of Investor Sentiment on the German Stock Market. *Zeitschrift für Betriebswirtschaft* 82 (2):133-163.

Geske, R. And Roll, R. 1983. The Monetary and Fiscal Linkage between Stock Returns and Inflation. *Journal of Finance*, 38, pp. 1-33.

Gupta, R., Hammoudeh, S., Simo-Kengne, B. D. & Sarafrazi, S., 2013. Can the Sharia-Based Islamic Stock Market Returns be Forecasted Using Large Number of Predictors and Models? pp. 1-26.

Hanif, M., Shah, Z. A. & Iqbal, A. M., 2013. Impact of Financial Sector Variables on Shari'ah Compliant Cross-Section Stock Returns. Proceedings of 5th Annual American Business Research Conference, pp. 1-24.

Hassan, M. K., & Rashid, M. 2010. Ethical Identity and Market Value of Islamic Banks. In *Ninth Harvard University Islamic Finance Forum (March 26-27, 2010)*. Harvard Law School, Harvard University, United States.

Hassan, M. K., Rashid, M., Imran, M. Y., & Shahid, A. I. 2010. Ethical Gaps and Market Value in the Islamic Banks of Bangladesh. *Review of Islamic Economics,* 14 (10), pp. 49-75.

Hussin, M. Y. M., Muhammad, F., Abu, M. F. & Awang, S. A., 2012. Macroeconomic Variables and Malaysian Islamic Stock Market: A Time Series Analysis. *Journal of Business Studies Quarterly*, 3(4), pp. 1-13.

Ibrahim, M. H. & Aziz, H. 2003. Macroeconomic Variables and the Malaysian Equity Market: a View through Rolling Subsamples. *Journal of Economic Studies*, 30(1), pp. 6-27.

Isa, N. M., Hasan, Z., & Abdullah, A. B. 2012.Relationship between Macroeconomic Variables and Malaysia Available *Shari'ah* Indices. *Colloquium on Humanities, Science & Engineering Research*, pp. 227-232.

Khil, J. &. Lee, B. S. 2000. Are Common Stocks a Good Hedge Against Inflation? Evidence from the Pacific-rim Countries.*Pasific-Basin Finance Journal*, 8(3-4), pp. 457-482.

Liu, M. H. & Shrestha, K. M., 2008.Analysis of the Long-term Relationship between Macro-economic Variables and the Chinese Stock Market using Heteroscedastic Cointegration. *Managerial Finance*, pp. 744-755.

Maio, P. & Philip, D., 2013. Macro Factors and the Cross-section of Stock Returns. Working Paper. Hanken School of Economics. pp. 1-81.

Majid, M. S. A., & Yusof, R. M. (2009). Long-run Relationship between Islamic Stock Returns and Macroeconomic Variables: An Application of the Autoregressive Distributed Lag Model. *Humanomics*, *25*(2), 127-141.

Maysami, R. C., Howe, L. C. & Hamzah, M. A. 2004. Relationship between Macroeconomic Variables and Stock Market Indices: Cointegration Evidence from Stock Exchange of Singapore: All-S sector Indices. *Jurnal Pengurusan*, 24, pp. 47-77.

Mukherjee, T. K. & Naka, A. 1995. Dynamic Relationship between Macroeconomic Variables and the Japanese Stock Market: An Application of a Vector Error Correction Model. *The Journal of Financial Research*, 18(2), pp. 223-237.

Qiu, L. X., & Welch, I. 2006. Investor Sentiment Measures. Working Paper Brown University and NBER.

Shabri, M., 2001. The Relationship between Stock Returns and Inflation: Evidence from Malaysia and Indonesia. Proceedings of the Malaysia Finance Association Third Annual Symposium. *Management Center: International Islamic University Malaysia*, pp. 517-547.

Shanken, J. & Weinstein, M. I., (2006). Economic Forces and the Stock Market Revisited. *Journal of Empirical Finance*, 13, pp. 129-144.

Schmeling, M. 2007. Institutional and Individual Sentiment: Smart Money and Noise Trader Risk? *International Journal of Forecasting* 23 (1):127-145.

———. 2009. Investor Sentiment and Stock Returns: Some International Evidence. *Journal of Empirical Finance* 16 (3):394-408.