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Does Syariah-Compliant Stocks Overreact?

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Abstract

This is a preliminary study on stock overreaction behavior of syariah compliant stock in Bursa Malaysia over the period between January 1988 and December 2009. Results show that syariah compliant stock in Bursa Malaysia, like their conventional counterparts overreact. The overreactions are more pronounced during the sub-period prior to 1997 Asian Financial Crisis and Global 2008 Crisis. After the crisis the overreaction behavior seems to diminish.

Keywords: Stock Overreaction, Syariah compliant, Bursa Malaysia

1. Introduction

Studies on overreaction hypothesis on conventional stocks have been vastly documented in previous research (De Bondt and Thaler 1985, 1987; Spyrou et. al 2005; Saleh 2007 and Morad and Salehi 2011, among others). Recently, Morad and Salehi (2011) found that there has been investor's overreaction and it is possible to earn abnormal return by applying the contrarian strategy (inverse investment strategy) in the Tehran stock exchange. In Malaysia, many published works found evidences of overreaction in stock returns such as studied by Hameed and Ting(2000), Ahmad and Hussain (2001) and Lai et al (2003) Norli et al (2009). Although ample evidences have been presented by previous studies mention above, however, there still lack of research in this area on syariah-compliant stocks. It is known that the characteristics of syariah stocks are different from their conventional counterpart in the sense that for firms to be classified as syariah compliant, they need to meet certain regulations or to posses certain features. Questions may arise whether syariah stocks behave like conventional stocks? Do syariah compliant stocks are also the subjects of stock overreaction behavior? Do these stocks able to generate abnormal returns? This study aims to investigate the behavior of syariah compliant stocks with respect to stock overreaction hypothesis.

Stock overreaction hypothesis suggests that stocks that are past losers tend to outperform those of past winners. Therefore, the hypothesis point towards a potential profitable strategy known as Contrarian Strategy. This strategy asserts that investors are able to earn abnormal profit by buying past

losing stocks and simultaneously selling past winning stocks. This is because, according to stock overreaction hypothesis, stocks that performed poorly in initial period have a tendency to perform better in the successive period and vice versa. This usually due from investors actions who incline to overreact to new information but will correct their behavior once they realize of the misbehavior. For example, investors have a tendency to overly undervalued stocks that showed a series of negative earnings resulting in large drop in the stocks prices. The ensuing undervaluation makes market realize of the overreaction behavior and will correct themselves. Thus those losing stocks will tend to become winner in the following period.

The purpose of this paper is to study stock overreaction behavior in syariah compliant stocks in Bursa Malaysia. This paper is divided into four sections. Next section reviews the background of syariah compliant stocks in Bursa Malaysia. Section three outlines the methodology used in the paper and section four discusses the findings of the study.

2. Background of Syariah Compliant Stocks in Bursa Malaysia

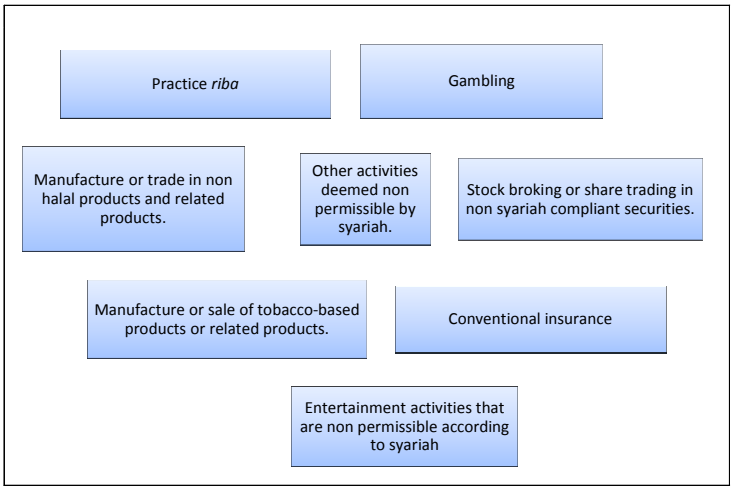
As of 27 May 2011, the Syariah advisory Council (SAC) of the Securities Commission Malaysia (SC) has approved 847 stocks as syariah compliant stocks. Table 1 summarizes information about stocks listed on the Bursa Malaysia.

Table 1: Syariah Compliant Securities on Bursa Malaysia

Main Market	Syariah compliant securities	Total securities	Percentage of syariah compliant securities
Consumer Products	130	142	92
Industrial Product	276	287	96
Mining	1	1	100
Construction	45	46	98
Trading/services	169	195	87
Properties	76	90	84
Plantation	38	41	93
Technology	102	104	98
Infrastucture (IPC)	7	7	100
Finance	3	38	8
Hotels	-	5	-
Close-end funds	-	1	-
Total	**847**	**957**	**89**

Source: Bursa Malaysia website.

Figure 1: Activities that are non-permissible by syariah principle

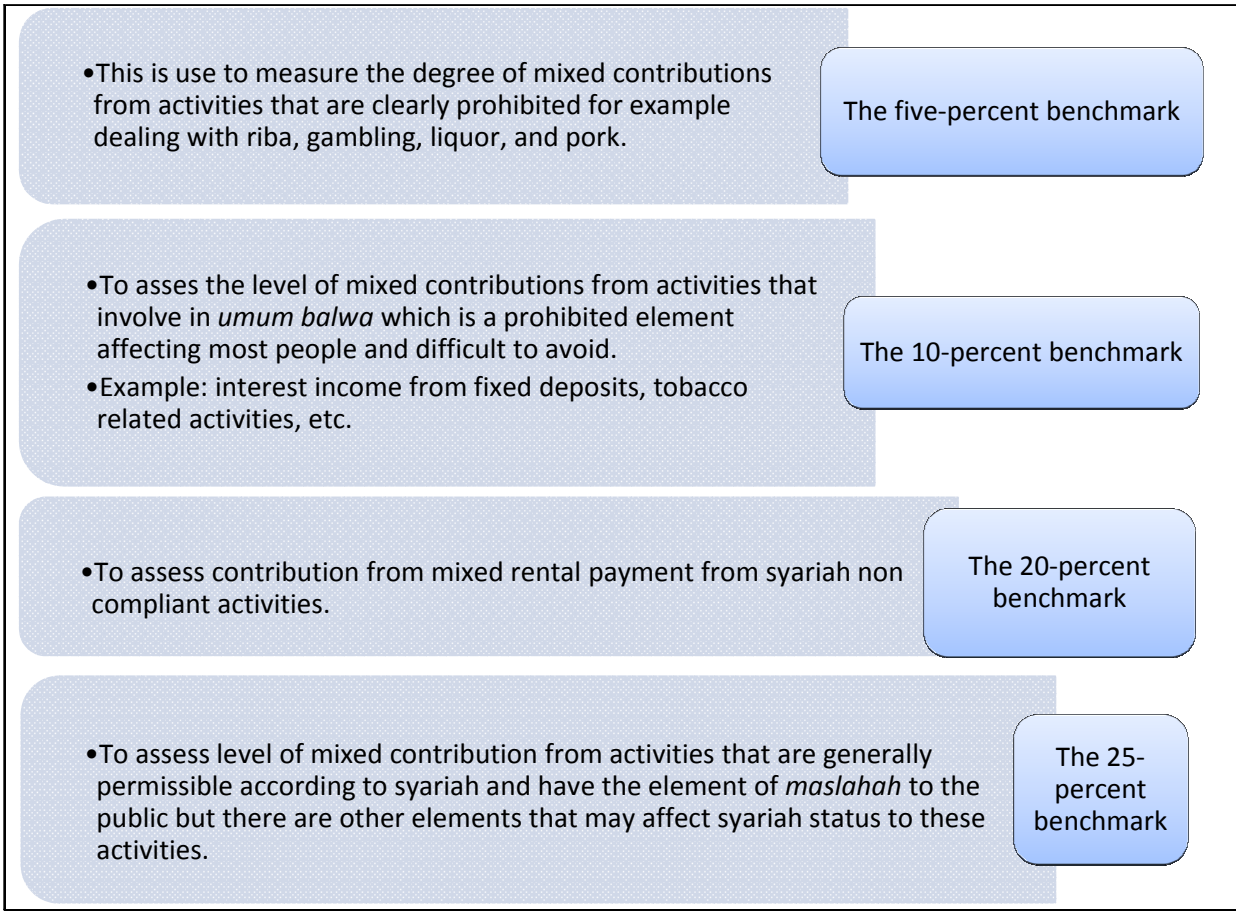


Source: Bursa Malaysia website.

The SAC has applied standard requirements in approving syariah compliant securities based on the activities of the companies listed on Bursa Malaysia. SAC classifies company as syariah non-compliant securities if they are dealings in certain activities. Figure 1 list activities that are non-permissible by syariah principle.

As outlined by SAC, for those that involve in both syariah permissible and non-permissible activities, there are two additional criteria need to be taken into account; first, the public perception and image of the company must be good, and second, the core activities of the company are important and benefited to the Muslim nation and the country. The non-permissible part should be immaterial, it is difficult to avoid and concern the rights of the non-Muslim which are accepted by Islam. The SAC also consider the degree of interest income earned by firms from interest bearings deposits and instruments as well as dividend received from non syariah securities. The SAC has established benchmarks based on *ijtihad* (reasoning from the source of syariah by qualified syariah scholars) to determine the acceptable level of permissible and non-permissible activities and income towards profit of a company. Companies whose contributions exceed the benchmark are classified as syariah non compliant. Figure 2 list the benchmarks used by SAC in classifying syariah compliant and non compliant companies.

Figure 2: Benchmarks imposed by SAC for syariah compliant.



Source: Bursa Malaysia websites

3. Methodology

This study employs basic methodology by De Bondt and Thaler (1985, 1987) to test for stock overreaction behavior in syariah compliant stocks in Malaysian stock market.

De Bondt and Thaler (1985) explain overreaction hypothesis as:

$$E\left(\bar{R}_{jt} - E_m\left(\bar{R}_{jt}|F_{t-1}^m\right)|F_{t-1}\right) = E\left(\bar{u}_{jt}|F_{t-1}\right) = 0$$

Where $\bar{R}_{jt}$ is the return on security j at time t F_{t-1},*is* all information at time *t-1*, $E_m\left(\bar{R}_{jt}|F_{t-1}^m\right)$ is the market expectation of the return on security *j* at time *t* conditional on the information assed by the market at time *t-1*. The efficient market condition states:

$$E\left(\bar{u}_{w,t}|F_{t-1}\right) = E\left(\bar{u}_{l,t}|F_{t-1}\right) = 0$$

Where $\bar{u}_{w,t}$ equals the mean abnormal returns of winners and $\bar{u}_{l,t}$ equals that of losers. The winners and losers are determined from abnormal positive (negative) returns in the prior period. In contrast to efficient market condition, the overreaction hypothesis implies that:

$$E\left(\bar{u}_{w,t}|F_{t-1}\right) < 0 \, and \, E\left(\bar{u}_{l,t}|F_{t-1}\right) > 0$$

If market has overreacted, the winner portfolio will experience a negative price adjustment during the subsequent period and vice versa.

The study covers data over a period from January 1987 to December 2009 thus provides 10 non-overlapping 24-month portfolio formation periods and the corresponding test periods. This study uses monthly closing price of all syariah compliant stocks listed on the main market of Bursa Malaysia collected from the *Datastream.* Monthly returns are computed as:

$$R_{it} = \left[\left(lnP_{it}\right) - \left(lnP_{it-1}\right)\right] * 100$$

Where, R_{it} represents return on security *i* at period *t*, P_{it} and P_{it-1} represent price on security *i* at period *t* and period *t -1*. The same calculation is carried out for return on market with the Kuala Lumpur Stock Exchange Composite Index (KLSE CI) being used as a proxy for the market. This study computes monthly market adjusted abnormal return (AR) for stock *i* as:

$$AR_{it} = R_{it} - R_{Mt}$$

Where R_{it} and R_{Mt} are returns for stock *i* and market *m*, respectively. The study computes cumulative abnormal returns (CAR_i) for every stock over the portfolio formation period (FP).

$$CAR_i = \sum_{t=1}^{T} AR_{it}$$

Following De Bondt and Thaler (1985), firms with formation period (FP) CARs in the top 20% are assigned to the winner portfolio (W) and those in the bottom 20% to the loser portfolio (L). Buying loser and selling winner forms arbitrage portfolios. The winner, loser and arbitrage portfolios are then held for the next 24 months.

In test period (month 25 to month 48), the CARs of all stocks in the winner and loser portfolios are recomputed. Test period CARs for all stocks in the winner and loser portfolios are calculated as follows.

$$CAR_{p,z,,t} = \sum_{t} \left(\frac{1}{N}\right) \sum_{i=1}^{N} AR_{it}$$

Where *z* is the test period (*1,2, ... Z*), *N* is the number of stocks assigned in each portfolio for each formation period and $CAR_{p,z,t}$ is the cumulative abnormal returns in month *t* of the test period *z* for portfolio *p*

The study then repeats the above method for all formation periods and their subsequent test period. One sample t-test is used to test the overreaction behavior. Negative significant t-values for the winner portfolio would suggest that there is evidence of stock overreaction existed in the sample, in which it implies that the winner portfolio has reversed and perform significantly badly during the test period. The reverse is true for the loser portfolio. Positive significant t-values for the loser portfolio

support the overreaction hypothesis by suggesting that the loser portfolio has performed significantly better in the test period.

The study also employs the independent samples t-test to ascertain the difference in mean cumulative abnormal return (CARs) of the two portfolios over the test period. Significant t-values in the differences would suggest that the mean returns of the two portfolios are different. A positive significant t-values support the overreaction hypothesis. It implies that loser portfolio has outperformed winner portfolio in the test period.

4. Results and Discussion

Table 2a and 2b display results of difference in means cumulative abnormal returns (CARs) between 2-year formation period and test period for loser and winner portfolios respectively. Table 2a reveals that loser portfolio in the initial period has significantly improved in the test period. Significant and positive mean differences of CAR at 1% significant level for the loser portfolio in 9 out of 10 periods suggest an overreaction behavior. Investors may have overly undervalued loser stocks in the initial period but corrected their action in the next period once realized of the overreaction behavior. These results are consistent with study by Ahmad and Hussain (2001).

Table 2a: CAR in formation period and test period of loser portfolios

Formation Period	Test Period	Mean CAR Test Period – Formation Period	t-value
06-07	08-09	0.9095	17.504***
04-05	06-07	1.4395	20.492***
02-03	04-05	0.2590	2.916**
00-01	02-03	0.6039	7.951***
98-99	00-01	0.5218	5.244***
96-97	98-99	1.5087	21.516***
94-95	96-97	-0.2381	0.303
92-93	94-95	0.6366	7.111***
90-91	92-93	1.1119	7.895***
88-89	90-91	0.6656	7.113***

Notes: i. *,** and *** denote significant at 10%, 5% and 1% respectively.
ii. $H_0 : CAR_{LTP} = CAR_{LFP}$ Ha : $CAR_{LTP} > CAR_{LFP}$

Table 2b: CAR in formation period and test period of winner portfolios

Formation Period	Test Period	Mean CAR Formation Period –Test Period	t-value
06-07	08-09	1.0648	15.214***
04-05	06-07	0.3358	5.317***
02-03	04-05	1.1858	14.927***
00-01	02-03	0.5286	6.904***
98-99	00-01	1.1076	19.882***
96-97	98-99	0.8916	5.456***
94-95	96-97	0.9263	6.491***
92-93	94-95	1.7121	12.735***
90-91	92-93	0.2145	1.269
88-89	90-91	0.8756	8.696***

Notes: i. *,** and *** denote significant at 10%, 5% and 1% respectively.
ii. $H_0 : CAR_{LTP} = CAR_{LFP}$ Ha : $CAR_{LTP} > CAR_{LFP}$

Similar results are also documented for the winner portfolio as shown in Table 2b. The study has shown that winner portfolios have significantly reversed in the subsequent test period thus consistent with the overreaction hypothesis. Positive and significant in mean difference of CAR

between formation and test period indicate stock overreaction behavior. During portfolio formation period, investors may have overreacted over a series of good news in those winning stocks resulting in overvaluation. Prices of those winning stocks may have overshot their true value. Once market becomes conscious of the overvaluation and take corrective action, prices move downward. The reversion behavior observed in those loser and winner portfolios are consistent with overreaction hypothesis.

The study then continues testing the performance of previous winner and loser portfolio in the test period. The purpose of the test is to investigate whether contrarian strategy works in syariah compliant stocks of Bursa Malaysia. If the study found that past loser portfolio outperformed past winner portfolio in the subsequent period, then Contrarian Strategy of buying past loser and selling past winner will generate positive and significant abnormal returns in the following period.

Table 3 details results of differences in Cumulative Abnormal Returns (CAR) between loser and winner in the test period for 24-month portfolio formation period between January 1987 and December 2009.

Table 3: Differences in CARs in the test period for 2-year portfolio formation

Formation Period	Test Period	Mean CAR			
		Loser	Winner	Difference	t-value
06-07	08-09	-0.0146	-0.3079	0.2933	4.1332***
04-05	06-07	-0.0903	-0.1371	0.04668	0.5875
02-03	04-05	-0.6389	-0.6058	-0.0331	-0.3513
00-01	02-03	-0.3278	-0.1675	-0.1602	-1.4655*
98-99	00-01	-0.2975	-0.3376	0.0402	0.4685
96-97	98-99	0.2656	-0.4287	0.6943	5.7087***
94-95	96-97	-0.6685	-0.3845	-0.2840	-1.6542**
92-93	94-95	0.2488	-0.3663	0.6151	4.5730***
90-91	92-93	0.6420	0.2116	0.4304	2.1950***
88-89	90-91	-0.3100	-0.1610	0.1300	1.4844*

Notes: i. *,** and *** denote significant at 10%, 5% and 1% respectively.
ii. $H_0 : CAR_L = CAR_W$ Ha : $CAR_L > CAR_W$

The study finds significant evidence of stock overreaction behavior in syariah compliant stocks of Bursa Malaysia in six of ten test periods. These findings are consistent with those of earlier studies by Norli et al (2009, 2010), Lai et al, (2003), Ahmad and Hussain (2001) and Hameed and Ting (2000) for all stocks listed on main board of Malaysian stock market. This study shows that six out of ten test periods mean CAR for loser portfolios are significantly greater than that of winners. These imply that investors are able to earn abnormal return by resorting to contrarian strategy of buying loser and selling winner in six out of ten 2-year portfolio formation period.

Notes that abnormal returns earned by contrarian strategy are more pronounced during the period prior to both 1997 Asian Financial Crisis and 2008 Global Financial Crisis. The study shows that investors are able to gain significant abnormal returns ranging from 1.5% to 5.7% prior to crises. The abnormal returns, however, become insignificant in the period after the 1997 Asian Financial Crisis. This evidence may suggest the inconsistency of Bursa Malaysia to the weak form of Efficient Market Hypothesis during that sub-period. However, the findings suggest that stock overreaction behavior diminishes after the crisis period. Possible reason could be due to different strategy employed by investors after the crisis. The crisis had reveals new information to investors thus resulting in them altering their approach and investment decision. The findings of this study are consistent with Norli et al (2009) for Malaysian Stock Market and Otchere and Chan (2003) for Japanase Stock Market.

In conclusion, the study implies that syariah-compliant stocks in Bursa Malaysia, like their conventional counterparts are also a subject of stock overreaction behavior prior to financial crisis. Stock overreaction behavior however diminishes after the crisis. These findings however do not take into account the size, risk and seasonality factors. According to Zarowin (1990), overreaction behavior

in stocks returns could be due to size effect. His study revealed that small stocks tend to outperform large stocks, and loser stocks are usually those of small size. Thus, the abnormal returns earned from contrarian strategy are not due to overreaction behavior but to size. Meanwhile, Chan (1988) propose risk as one of the factors that could results in overreaction behavior. Since risks are not constant overtime, there are possibilities that past loser are those with lower risk. However, their risk increased in the subsequent period resulting in higher returns. Because of that, evidence of reversion is observed. The opposite is true for the past winner. In our future study, we will include these factors to reinvestigate the stock overreaction behavior in syariah complinat stocks. In addition, we will also investigate the sensitivity of length of the formation on overreaction behavior. As shown by Saleh (2007), Campbell and Limmack (1997) the length of the formation period is also one important factor in this type of study.

References

[1] Ahmad, Z. and Hussain, S. (2001). "KLSE Long-Run Overreaction and the Chinese New Year Effect". *Journal of Business, Finance and Accounting,* 28(1) & 2*,* pp. 63-112.

[2] Campbell, K. and Limmack, R. (1997) "Long term overreaction in the UK stock market andsize adjustment. "*Applied Financial Economics*. 7, pp. 537-548.

[3] Chan, K.C. (1988). "On the Contrarian Investment Strategy". *Journal of Business,* 61, pp. 147-

[4] 4] De Bondt, W.F.M. and Thaler, R.H. (1985). "Does the stock market overreact?" *Journal of Finance*, pp. 793-805.

[5] De Bondt, W.F.M. and Thaler, R.H. (1987). "Further Evidence on Investor Overreaction andStock Market Seasonality". *Journal of Finance*, pp. 557-581.

[6] Gaunt, C., (2000)." Overreaction in the Australian Equity Market: 1974-1997". *Pacific Basin Finance Journal,* pp. 375-398.

[7] [7] Hameed, A. and Ting, S. (2000). "Trading Volume and Short Horizon Contrarian Profit: Evidence from the Malaysian Market." *Pacific Basin Finance Journal,* 8, pp. 67-84.

[8] Lai, M.M., Guru, B.K., and Fauzias, M.N., (2003). "Do Malaysian Investors Overreact?" *Journal of American Academy of Business,* 602. 193 *International Research Journal of Finance and Economics - Issue 34 (2009)*

[9] Morad, Mehdi and Salehi, Mahdi (2011). Evaluating The Investors' Overreaction To Financial Measures: Some Evidence of Tehran Stock Exchange*, International Journal of Academic Research, Vol. 3, pp. 1239-1247.*

[10] Norli, A., Annuar M.N., Taufiq, H. and Sazali, Z.A. (2009). Does Bursa Malaysia Overreact? *International Research Journal of Finance and Economics*, 34: 175-193.

[11] Otchere, I. And Chan, J. (2003). "Short-Term Overreaction in Hong Kong Stock Market: Can A Contrarian Strategy Beat the Market?" *Journal of Behavioral Finance,* 4, pp. 157-171.

[12] Saleh, W. (2007). "Overreaction: The Sensitivity of Defining the Duration of the Formation Period." *Applied Financial Economics. 17,* pp. 45-61.

[13] Spyrou, S. Kassimatis, K. and Galariotis, E. (2005). "Short Term Overreaction, Underreaction and Efficient Reaction: Evidence from the London Stock Exchange". SSRN paper series, pp. 1-47.

[14] Zarowin, P. (1990). "Size, Seasonality and Stock Market Overreaction". *Journal of Financial and Quantitative Analysis, 25,* pp. 113-125.