The Islamic mutual fund performance: New evidence on market timing and stock selectivity

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Abstract—**This study evaluates overall monthly performances of 128 Islamic mutual funds (IMFs) for the period of January 1990 to April 2009. It employs Sharpe, Treynor and Jensen ratios to the risk-adjusted return performance based on extended version of CAPM model. The evidence based on aggregate returns performance reveals, on average IMFs in Malaysia outperform its Conventional peers and the market portfolio proxy by the KLCI return. It also shows the significantly positive stock selectivity skill and market timing ability among Islamic and Conventional mutual fund Managers in Malaysia, and indicates that IMFs fund managers have superior performance in stock selectivity skill, but inferior performance in market timing ability relative to their conventional counterparts.**

Keywords- Islamic mutual fund; Islamic unit trust; performance evaluation, market timing, stock selectivity

I. INTRODUCTION

Investment in IMFs is increasingly popular in the current market due to the developments of the Islamic finance (IF) worldwide, which illustrate IF becoming an important part of the international financial system. There is a continuous demand for the Islamic funds industry, with the industry currently the fastest growth area of the Islamic financial system. The growth of the IMFs is crucial, as it indirectly influences and illustrates the continuing improvement of the global Islamic financial market.

The growth of the IMFs in Malaysia, which is in a similar pattern, is expected to increase from a higher demand from local and foreign markets, as well as from increasing level of awareness and confidence among investors. The industry in Malaysia, which started in 1990s, has grown tremendously, with an increase from 2 funds in 1993 to 150 funds at the end of December 2009. Thus, better performance of IMFs can be seen to lead to continuing development in IF, particularly in increasing confidence levels among investors and market players towards Shariah-compliant products. IF in general has increased tremendously in the global market ([2-3], with IMFs holding the capability to bring profit and maintain positive returns during the

bearish market [4-6]. Therefore, IMFs be seen as an alternative for conventional investors, in their portfolio selection, especially during market depressions. Since the performance of IMFs is improving with time, the funds could be a good hedging investment, specially against market downturns [5].

Many conventional financial institutions offer Shariah-compliant investment products as there is evidence of strong performance between the IMFs in relation to the conventional benchmark (S&P 500 Index) and the Islamic benchmark (FTSE Islamic Indices) during the recession [7]. As a result, several Islamic indices have emerged in globally to provide remarkable comparisons of performance between funds and respective benchmarks. This trend leads towards the integration of IF with conventional finance, which can improve supply of information and spur IMFs.

Essentially, Shariah-compliance IMFs differ conceptually and operationally from their conventional counter parts, even though both funds have the same objective to satisfy their shareholders and gain above average returns. Shariah-compliance requires activities of the mutual funds (MFs) to be quarantined from companies involved in activities or products related to conventional banking, insurance or financial services for gambling, alcoholic beverages and non-halal food products. Similar to conventional mutual funds (CMFs), participants in IMFs become shareholders and receive an equity position on the underlying securities. In Malaysia for example, about 88% of shares listed in Kuala Lumpur Stock Exchange (KLSE) are Shariah-compliant, which represents two-thirds of the Malaysian market capitalization [8].

Thus, the aim of this study is to investigate the performance of IMFs for the period of January 1990 to April 2009 in relation to its CMFs and the respective market benchmark. We expect that the return performance of the IMFs is higher than the CMFs, due to the high growth of Islamic funds, particularly in Malaysia [2-3, 9]. Abdullah [9], indicates that the MF industry in Malaysia has the potential to grow even faster. This potential depends upon new catalysts, the removal of the impediments by the SC, and the liberalization of foreign-exchange administration rules by the

Malaysian Central Bank in 2007 for MF investments in foreign markets, so that fund managers can to invest up to 50% of net asset value in foreign currency.

The recent figure of IMFs, as reported by the Failaka advisors is that there were 377 Islamic funds in operation globally in March 2009, and Malaysia alone dominated more than one third of the funds, that is 149 funds in December, 2008, based on the database from Securities Commission, Malaysia. Since more IMFs are belong to Malaysia, in examining the Islamic MF industry in Malaysia, it will convey the trends and movement of the IMFs globally.

This study is important, as it will provide regulators and investors sufficient information regarding the performance of MFs in the Malaysian market, which can also represent the behaviour of Islamic funds performance in emerging markets. The results will benefit market players, fund managers and investors who plan to material their investment funds in such a market. Moreover, to the best of our knowledge, the data used in this study is more recent, at length and comprehensive relative to previous studies.

The findings of this study reveal that IMFs perform comparatively better to their conventional counterparts and market benchmark proxy by the Bursa Malaysia Kuala Lumpur Composite Index (KLCI). In particular, both Islamic and conventional MFs in Malaysia outperform their market benchmarks with results statistically significant. One possible reason is that by prolong the duration of the study period. However, this study provides inconsistent evidence to the most previous findings, with most previous studies revealing that Malaysian MFs underperformed its market benchmark (see for example [10-12]. Collectively, no studies have provided evidence that IMFs can outperform its market benchmark (see for example, [4-6], although, there were cases where IMFs performed better than the market benchmark. This was however only during the market downturn [4, 7, 13].

This study also provided new evidence of positive market timing ability and stock selectivity skills of IMFs managers. The result of positive market timing are consistent with Hayat [14] but converse with Annuar et al. [15], Elfakhani et al. [5] and Ahmed [16]. Moreover, there is statistically significant evidence of superior performance in terms of fund managers' market timing and stock selectivity skills in Malaysia, over the period of January 1990 to April 2009. Other important findings denote that there is a negative correlation between market timing and selectivity skill performance among Islamic fund managers in Malaysia within the similar period.

The rest of the paper is organized as the following. The next section reviews the literatures, which is followed by section III, which describes the models and provides performance analysis based empirical results obtained, whilst section IV will provide summary and conclusions.

II. LITERATURE REVIEW

A. General Market Overview

World Islamic funds have experienced excellent growth during the late 1990s, as they benefited from the technology boom and record oil price. Most Islamic funds demonstrated high positive returns, even higher than their benchmarks. The number of funds globally increased from 8 prior to 1992, to 95 funds (with USD \$5 billion assets) in 2000 [5, 13], which illustrates a record growth of 1,087.5% within 8 years. The number of IMFs has grown tremendously, at approximately 135.9% average annually. The total assets for Islamic equity funds have sprung from USD800 million in 1996 to USD3.6 billion in 2003 [6], and according to Abderrezak, there were 29 Islamic equity funds in the year 1996, with the number increasing to 232 funds, based on the latest list provided by Failaka Advisors in March, 2009. Out of the list, Malaysia alone conquered 68 funds, with the data on world Islamic equity funds showing a significant impact, with the growth of the funds at 700% over the past 13 years (13 years refer to the period 1996 to March, 2009; the calculation is based on 232-29*100). Since 2009, more funds have been launched with brighter market expectations, as knowledge of the Islamic financial system continually increases globally.

As reported by Securities Commission Malaysia (SC) in December 1999, about 7.83% of the Kuala Lumpur Stock Exchange market capitalization (KLSE MC) belong to the MFs industry. The IMFs industry was just about 0.25%, with the total net asset values (NAV) made up about 3.21%. Therefore, it is clear that despite the encouraging progress of IMFs, since the industry has started to grow in 1990s, it's market share remains relatively small.

There is continuous growth of IMFs in Malaysia. Data in April, 2009 indicated that there were 141 IMFs in Malaysia, increasing from 13 funds in December 1999. The net asset values of these funds increased from RM1.39billion to RM18.31billion, with a total NAV RM150.472billion, and units in circulation amounting to 50.76billion units. Meanwhile, the NAV of the industry is about RM150.47 billion (representing 19.95% of the total market shares), consisting of the NAV of about RM132.16 billion and RM18.3billion for Conventional and Islamic funds respectively. The values have increased to RM191.71billion in 2009, with IMFs having increased from RM18.31billion to RM22.08 billion within the same period, and the units in circulation for the total industry increasing to 273.88 billion units, compared with 236.39 billion units in 2008.

B. Islamic Mutual Funds Performance

Not many studies have previously been conducted on investment performance of IMFs. The works of [4-7, 13, 18-19] for example, are worth noting. Therefore, the evidence for the IMFs performance is very small, with most studies concentrating on small sample sizes and covering a short period of study.

An earlier study by Ismail and Shakrani [19] analyzed the weekly price data for 12 IMFs and the Shariah Index for the period of 1 May 1999 until 31 July 2001, and found that the adjusted-R^2 and standard error of the conditional relationship was higher in down-markets than in up-markets. This suggests that beta is an appropriate measure for market risk and could be used as a tool in explaining cross-sectional differences in Islamic unit trusts' returns during market downturn.

Elfakhani et al. [5] and Elfakhani and Hassan [7, 13] used a sample of 46 IMFs to track the performance of IMFs between the January 1, 1997 and August, 31 2002. They found no statistical difference in the performance funds compared to their respective indices. Ismail and Shakrani [7] further suggested that the behaviour of IMFs does not differ substantially from other conventional funds, with some IMFs over performed their benchmarks whilst others underperformed them. The major observation of the study revealed the strong performance of IMFs relative to both benchmarks namely, S&P 500 and FTSE Islamic indices, during the recession period. Since there is no significant risk-adjusted abnormal reward or penalty associated with investing in Shariah-compliant and/or IMFs, they concluded that conventional investors would consider IMFs in portfolio collection, especially during slow market periods.

However, there is high possibility that such a result could be biased, due to the short time frame in which the study was conducted. In addition, the IMF industry was still in its early stage of the development during so Islamic fund managers would of had limited experience, and a rather limited diversification in portfolio funds, due to fund availability of Shariah-compliant products.

The study by Abdullah et al.[4] found similar findings to Elfakhani et al.[5] and Elfakhani and Hassan [7, 13] and concluded that conventional funds perform better than Islamic funds during good economic periods, and vice-versa during bad economic periods. Abdullah et al. studied the returns performance of the IMFs and CMFs over the period 1995-2001, and found that both categories slightly underperformed the market, and offered relatively poor selection and market timing ability for all classes of funds. Recently, Abderrezak [6] found similar performance abilities of Islamic and ethical funds, and using the Fama's performance measures revealed no significant difference in performance between Islamic and ethical funds. Overall, both groups failed to outperform the S&P 500, the conventional index proxy for the US stock market.

Indeed, in the Malaysian market, most of the findings revealed a similar pattern (see for example [10-12]). The MFs performance in Malaysia was unable to outperform its market benchmark, and as a group, none of the studies denoted that IMFs in Malaysia could outperform its market performance (see for example, [4-6]. One possible reason is that IMFs in particular is still new and as a result, the scope of research and involvements of practitioners and academics on this topic is still limited.

Since the most significant finding of the previous studies denoted that the fund portfolio perform better during the crisis (see [4-7, 13]), implying that its returns performance show a mild correlation with market movement, and as a result suggests that IMFs is a good hedging investment against market downturns.

C. Funds Performance based on Market Timing and Stock Selectivity

Globally, discussion of market timing and stock selectivity are rich and span for several decades. Some of the more important earlier studies which demonstrate a poor performance by MF managers are Cheng and Lewellen [20] and Henriksson [21], who provide evidence of negative market timing skills. Cheng and Lewellen [20] applied parametric test and denoted that fund managers are collectively unable to outperform a passive investment strategy as well as market timing skills, covering 67 MFs over the period of January 1971 to December 1979. Henriksson [21] on the other hand, applied parametric and non-parametric tests for 116 MFs for the period 1968 to 1980, and found no empirical evidence that MF managers were able to outperform the investment selection strategy, and perform successfully on market timing.

Kon [22] and Henriksson [21] found negative correlation between market timing and stock selection skills. Kon studied 37 funds from January 1960 to June 1976 and observed that fund managers as a group have no special information to outperform on returns of the market portfolio. However, it provided evidence of significant superior timing ability and selection skills performance at the individual level. Whereas, Lehmann and Modest [23] and Lee and Rahman [24] found evidence of positive selection abilities and superior market timing among fund managers at the individual funds level. Lehmann and Modest used the APT model, and found significant measurements of abnormal market timing and stock selectivity of the MFs performance. Similarly, Admati et al. [25] confirmed that the Treynor Mazuy (1966) model (TM model) is a valid measure of market timing ability, with Lee and Rahman further detecting selection ability and market timing ability of a MF manager based on monthly returns for 87 months from January 1977 to March 1984 for a sample of 93 MFs. They reported 14 funds out 37 funds had overall positive timing, but none of them were statistically significant.

Ippolito [26] studied the MF performance for the period of 1965 to 1984, with a sample 143 MFs, found evidence of positive alpha within the period, implying that there is a positive stock selectivity performance of MFs. Furthermore, Chen et al. [27] provides consistent evidence with [20-22], that collectively MF managers have no market timing ability for the period of January 1977 to March 1984. The study was conducted on 93 MFs for a period of 87 months and denoted a trade-off exists between market timing and security selection ability.

Elton et al. [28] also argues that no evidence was found that MF managers are able to time the market successfully. They examined the overall portfolio performance of MFs for the period of 1965 to 1984 by adopting the original TM model. In addition to this their study found that a fund manager who had no selection ability and selected small stocks had a negative alpha in the Jensen [29] period of the study (1955 -1964) and (1945 – 1964), and a strong positive alpha in the Ippolito [26] period (1965-1984). Specifically Elton et al. provided contrasting evidence to Ippolito [26] and concluded that MF managers underperformed passive portfolios, with funds consisting of higher fees and turnover underperformed funds with lower fees and turnover.

Later, Bello and Janjigian [30] documented positive and significant market timing abilities and security selection abilities for 633 MFs within the most recent period of 1984

to 1994. They used the extended TM model by controlling the effects of non S&P 500 assets held in MF portfolios. The evidence from the original TM model however failed to reveal a positive market timing ability. In the global market, the market timing ability is becoming a common phenomena with some MFs providing evidence of negative market-timing ability as reported by [20-22, 27], and some whereas revealing the positive market-timing (see for example [23-24, 30].

It is important to note that very few studies are conducted in relation Malaysia. Among others are, Annuar et al.[15] who found the Malaysian MFs during the 1990 to 1995 appeared to posses no market timing ability, but superior selection ability skills. It found a positive correlation between selectivity and timing performance among the funds. Recently, Abdullah et al. [4] found poor selectivity performance of stock selection ability skills and market timing ability of the Islamic and Conventional fund managers in Malaysia, for the period of January 1992 to December 2001. Elfakhani et al. [5] also indicated similar results during the period of January 1997 to August 2002, whilst Ahmed [16] in general observed, fund managers performed poorly in security analysis and market timing. He tested 60 individual funds within the period of 1998 to 2004 and found that only 2 funds were superior in timing ability. Lastly, Hayat [14] noted a relatively better market timing ability among Islamic fund managers in Malaysia from the period of August 2001 to August 2006.

III. MODEL AND PERFORMANCE ANALYSIS

A. The Data

The study uses monthly returns from January 1990 to April 2009 obtained from the Morningstar Database. Our sample was drawn from the 530 Malaysian MFs included in the Morningstar database at the end of April 2009. The data for IMFs was matched in the numbers of MFs provided by the Securities Commission, Malaysia (SC). At the end of April 2009, there were about 554 approved MFs in Malaysia, which consisted of 141 IMFs and 413 CMFs. We identified 141 IMFs falling into one of five broad categories based on the fund types: alternative, allocation, equity, fixed income and money market. To avoid survivorship bias, therefore, we considered all the funds in our study. Survivorship bias happened when funds that have stopped reporting information or ceased operation are purged from the databases and regarded as uninteresting to investors [31, p.66]. Since the performance of the disappearing funds is typically worse than the performance of the surviving funds, by disregards some the funds, we will unable to portray the full performance of funds. We further restricted the sample to include only the 128 IMFs with a minimum of 12 months returns. As a result, 13 funds were excluded in the sample. All the 128 IMFs in the final sample fell into all five categories. For comparison purposes, we used 350 CMFs out of 391 CMFs obtained from the Morningstar. The 350 funds all also fell into the five categories over the similar period, with 41 funds that were less than a year excluded. From 413 CMFs in Malaysia as at the end of April 2009, we excluded 41 funds as they did not matched to the criteria of having at least 12 monthly returns and 22 funds were excluded because of unavailable data. The impact of the survivorship bias was not argued in this portfolio, with the disappearing of non-surviving funds in this category actually increasing the overall performance of the funds.

The market index proxy by the Bursa Malaysia Kuala Lumpur Composite Index (KLCI) is used to represent a market return, with the monthly data of the KLCI index obtained from DataStream. In addition to this, some statistical data especially concerning IMFs and CMF features, and the development of the Malaysian MF industry are obtained from annual reports of the SC and the Federation of Investment Managers Malaysia (FIMM) website. The calculation of the monthly market return, (R_{Mit}) is as follows:

$$R_{Mit} = \ln(Mi_t) - \ln(M_{it-1})$$

(1)

B. Sharp Ratio

In mutual fund research, the Sharpe ratio (SR) has been used as a measure of the standard performance of the funds. Many previous studies have used SR to evaluate portfolio performance [5, 32-38]. This paper adopts the ex post SR introduced by Sharpe [37-38] to examine risk return trade-offs of the fund's portfolio. Historical data will reflect actual performance of the fund's portfolio, with the formula calculated as follows:

$$SR = \frac{\overline{r}_i - \overline{r}_f}{\sigma_i}$$

(2)

In eq. (2), $\overline{r}_i$ represents the mean returns to the portfolio, $\overline{r}_f$, the mean returns to a risk-free asset, and σ_i, the standard deviation of returns on the portfolio. The average return of KLIBOR 1-month rate is used as the risk free rate. Table 1 reports the summary statistics of all IMFs in the sample and the CMF portfolio. In addition, the KLCI return is presented to represent the market return. The table also includes the Sharpe ratio to indicate one of the risk-adjusted performance measures used in this paper. Sharpe ratio estimates the return to risk trade-off by dividing the average excess returns of a fund portfolio over the sample period with the standard deviation of returns within the same period. Therefore, the higher the Sharpe ratio, the better is the performance of a portfolio.

Over the period of the study, the average IMF earned a higher than average monthly return than its Conventional peers: 0.98% versus 0.63%, with the fund associated with higher standard deviation as well (5.59%). It is therefore suggests that Islamic funds were more risky, but provides substantially higher returns. The SR indicates that Islamic funds outperformed Conventional funds and the market portfolio on the return to risk basis. Surprisingly, average monthly return on the market portfolio is lower (0.24%), and risk is strongly higher (8.09%) relative to the IMF and CMF portfolio.

The Sharpe ratio of the market return also suggests that the market underperforms Islamic funds as well as the

Conventional funds. The Sharpe ratio reported that the IMF performs better rather than other portfolios.

TABLE 1. SUMMARY STATISTICS OF THE ISLAMIC AND CONVENTIONAL MUTUAL FUNDS

Fund portfolio	Return(%)	St. Dev(%)	Sharpe ratio	N(Obs)
IMF	0.982	5.591	0.107	128(232)
CMF	0.633	4.710	0.053	350(232)
KLCI	0.244	8.091	0.017	

Notes: This table presents summary statistics on Islamic and Conventional mutual funds and on the KLCI index based on the monthly aggregated return. The Islamic and Conventional fund returns are calculated based on an equally weighted portfolio of all funds belong to each of the portfolios. The KLCI return represents the market return is calculated based on monthly indices prices as follows: $R_{Mit} = \ln(M_t) - \ln(M_{it-1})$. Mean returns, standard deviation and Sharpe ratio are reported based on monthly basis. The Sharpe ratio is defined as the excess mean return of a portfolio to the standard deviation of return. The sample period is from January 1990 to April 2009 and the total samples are 478 funds.

C. Treynor Index

Since there is no assurance that the past performance is the best forecast for the future performance, then the Sharpe ratio measure shall compliment the other measures. We extend the risk-adjusted performance measurement to the other measure known as Treynor Index (TI). This ratio gives excess return per unit of risk, but using systematic risk, i.e. beta of a portfolio instead of the total risk of a portfolio (standard deviation). The beta of a portfolio is the standard deviation of the portfolio divided by the standard deviation of the returns from the market as a whole. In other words, beta represents the systematic risk of the portfolio as measured against the market benchmark. Thus, we estimate the TI by dividing the excess return of a portfolio with its beta. The formula is as follows:

$$TI = \frac{\bar{r}_i - \bar{r}_f}{\beta_i}$$

(3)

Where $\bar{r}_i$, average return on the portfolio, $\bar{r}_f$, average return of KLIBOR 1-month rate and β_i belongs to beta for the portfolio.

D. Jensen Alpha

The other risk-adjusted performance measure is Jensen's alpha. This ratio is measured based on the difference between the return on a fund portfolio and the return on the benchmark based on single factor Capital Asset Pricing Model (CAPM) model. This CAPM model is recognized as the most widely employed benchmark model in evaluating the fund performance measurement. The single factor of CAPM model is formulated as follows:

$$\bar{r}_{it} - \bar{r}_{ft} = \alpha + \beta_{it}(\bar{r}_M - \bar{r}_{ft}) + \varepsilon_{it}$$

(4)

The left hand side eq. (4); $\bar{r}_{it} - \bar{r}_{ft}$, the mean excess return on the portfolio, in the situation that the average returns of a portfolio above a risk-free rate. $\bar{r}_f$ is the risk-free rate at t measured by the KLIBOR 1-month rate. α is the excess risk-adjusted return, i.e. referred to Jensen's alpha, β_{pt} is the systematic risk of the security, $\bar{r}_M - \bar{r}_f$ is the market risk premium and $\bar{\varepsilon}_{it}$ is the error term. The eq. (4) can also be derived into the following:

$$\bar{r}_{pt} = \alpha + \beta_{pt}(\bar{r}_M - \bar{r}_f) + \varepsilon_{pt}$$

(5)

The Jensen alpha is the portfolio's alpha value (α_p). Based on a theory of market efficiency, when the CAPM is correctly specified and the securities is correctly priced, then α shall be zero. If a security exhibits superior performance, then the α should be positive and statistically significant [39].It is derived as the following:

$$\alpha_{pt} = \bar{r}_{pt} - [\bar{r}_f + \beta_{pt}(\bar{r}_M - \bar{r}_f)]$$

(6)

Empirical results of the single factor CAPM analysis are reported in Table 2. The t-statistic of each coefficient also reported, with the difference portfolio added in the analysis to identify the style differential between these two portfolios in relation to their market benchmark. The difference portfolio is constructed, follow Bauer et al. [40] by subtracting the CMF returns from the IMF returns, in order to identify the performance differential between these two portfolios. The null hypothesis is that there is no significant difference between the returns performance of these two groups. The regression results show that both IMFs and their conventional counter parts perform better than the market return, proxy by the KLCI. The observed alphas (0.68% and 0.32% respectively) are statistically significant at the 5% level. Theα represents the Jensen alpha, and denotes that the IMF outperforms the CMF. Meanwhile, the TI suggests that the IMF portfolio outperforms its conventional peers and the market portfolio. The performance results from the difference portfolio show the alpha and beta are very statistically significant, at 1% level. Thus, the null hypothesis can be rejected, implying there is a strongly statistically significant difference in terms of performance and style differential between these two portfolios.

TABLE 2. EMPIRICAL RESULTS OF THE SINGLE FACTOR CAPM MODEL

Fund portfolio	α (Jensen α)	β	Adj. R²	TI
IMF	0.677	0.570	0.68	1.047
	(3.28) ***	(22.35) ***		
CMF	0.321	0.516	0.78	0.481
	(2.23) **	(29.03) ***		
Market (KLCI)	0.0000	1.000	1.00	-0.141
Difference	0.357	0.054	0.03	
	(2.41) ***	(2.97) ***		

Notes: This table reports the results from CAPM-single factor regressions on a monthly basis. The performance measurement of both portfolios are estimated based on the model in Equation (5): $\bar{r}_{it} - \bar{r}_f = \alpha + \beta_{it}(\bar{r}_M - \bar{r}_f) + \varepsilon_{it}$. The difference portfolio is constructed by subtracting the Conventional mutual funds returns from the Islamic mutual funds returns portfolio. The α represents the Jensen alpha, whereas β is the systematic risk. The Treynor Index and Jensen alpha (represents by the α), are also presented. The sample period is based on monthly data from January 1990 to April 2009 and the total samples are 478 funds. The asterisks, ***, **, * denote that the coefficient of the variable is significant at the 1%, 5%, and 10% respectively. The reports of the t-stats are in parentheses.

E. Stock Selectivity Skill and Market Timing Ability

Finally, the study incorporated the extended CAPM, namely TM quadratic model, firstly introduced by Treynor and Mazuy [41] to evaluate the performance of the MFs. In particular, this model will identify the market timing ability and stock selectivity skills of a fund manager in managing fund performance. The study adopts the CAPM as in eq. (5),

with the excess return of a portfolio obtained by the return minus the risk free rate. The monthly Kuala Lumpur Interbank Offered Rate (KLIBOR) is used as a proxy for the risk free rate.[1]

Following Chen et al.[27, p.660], α_i represents the active or passive strategy of fund managers to manage the fund performance. In other words, this α_i indicates the stock selectivity skill of the fund managers in managing the investment portfolio. If the fund manager has an ability to forecast security prices, the α_i will be positive. On the other hand if the fund manager is not doing well in fund selection, the α_i will be negative. The passive strategy can be expected to yield a zero intercept. The independent variable, which is the excess market risk premium (market return minus the risk free rate) in eq. (5) can also represent the stock selectivity skill of a fund manager to appreciate the security prices. Hence, the β_{it} in the model can be specified as follows:

$$\beta_{it} = \bar{\beta}_i + \theta_i R_{Mt} + \varepsilon_{it} \tag{7}$$

In eq. (7), β_{it} indicates the systematic risk of a mutual fund portfolio, which can be decomposed into mean beta, represent the beta level in the absence of the market timing. The $\bar{\beta}_i$ will change due to market timing $\theta_i R_{Mt}$ and the error term, ε_{it} in order to capture the fund manager's ability to successfully time the market. In the situation when the fund managers are engaged with the market timing, they can shift the portfolio beta (β_{it}) according to their expectations. Since the beta of the stocks can respond differently to the market changes, the portfolio beta is expectedly to change even though the fund managers are not actively involved in the market timing. As a result, eq. (5) can be substituted into eq. (7) to yield the model as the following:

$$\bar{r}_{it} - \bar{r}_{ft} = \alpha_i + \bar{\beta}_{it}(\bar{r}_{Mt} - \bar{r}_{ft}) + \bar{\theta}_{it}(\bar{r}_{Mt} - \bar{r}_{ft})^2 + \varepsilon_{it} \tag{8}$$

Table 3 reports the average alphas and coefficients estimates of the TM quadratic model as in eq. (8). The alpha estimates for both portfolios are positive implying that fund managers of both portfolios actively managed the funds and performed well in stock selectivity skills. The t-stat reveals significantly different for the IMFs indicating that on average the portfolio strongly outperforms the market and the CMFs. The beta coefficients of both portfolios are also positive, but below than 1, implying that both funds are less risky than the market portfolio. Moreover, the coefficient estimates θ for the IMFs and CMFs are positive and statistically significance at 10% and 1% level respectively, implying that both portfolios have positive market timing ability.

The evidence in Table 3 also denotes that the IMF performs slightly better than the top performer of the CMF, in stock selectivity skill and market timing and the results are statistically significant.

TABLE 3. PERFORMANCE MEASURES ON MARKET TIMING AND SELECTIVITY SKILL

Fund Portfolio	α	β	θ	N(Obs)
IMF	0.526	0.577	0.002	128
	(2.38) **	(22.52) ***	(1.85) *	(232)
CMF	0.119	0.524	0.003	350
	(0.79)	(30.00) ***	(3.63) ***	(232)
Difference	0.408	0.052	-0.001	
	(2.56)**	(2.82)***	(-8.7)	
Top performer	0.328	0.506	0.003	128
	(2.07)**	(27.48)***	(2.95)***	(232)
Middle performer	-0.142	0.543	0.004	128
	(-0.95)	(31.11)***	(4.10)***	(232)
Low performer	-0.718	0.713	0.007	128
	(2.07)**	(18.06)***	(3.64)***	(232)

Notes: The asterisks, ***, **, * denote that the coefficient variable is significant at the 1%, 5%, and 10% respectively. The reports of the t-stats are in parentheses. N represents the total numbers of funds in each portfolio. The sample period is based on monthly data from January 1990 to April 2009. The difference portfolio is also added in the analysis in order to identify the style differential of between these two portfolios in relation to their market timing ability and stock selection skill. There is a statistical significant difference between the style of the Islamic and Conventional mutual funds on the stock selectivity skill but not in market timing ability. Since the Islamic funds focus on investment portfolios consist of Shariah-compliant products, it is expected to be difference. For comparison purposes, the study also compares the Islamic portfolio with top performer, middle performer and low performer of the Conventional mutual funds within the period.

The results of positive market timing and stock selectivity in this study are conversed with [16] and Elfakhani et al (2005), as they denoted that Malaysia had negative market timing and stock selectivity skills for the period of January 1997 to August 31, 2002. The contrasting finding can be due to the ASEAN crisis, the shorter duration of the study period and the limited sample of IMFs. However, the evidence of positive market timing ability of the fund managers supports the previous study by [14].

Moreover, study examines the IMF performance of selectivity and timing ability by investigating the fund portfolio based on fund types. The result in Table 4 indicate that the type of allocation funds have negative selectivity and significant positive timing which are consistent with the previous studies of Kon (1983); Henriksson (1984) and Chen et al (1992). However, there is a trade-off between stock selection and market timing ability for the allocation funds involved. The alternative has statistically insignificant negative selectivity and timing ability, with the equity fund type holding a positive selectivity and significant positive timing, whilst the money market has significant positive selectivity but insignificant positive timing ability. The fixed income whereas has statistically significant positive selectivity and insignificant positive market timing ability.

The result of the overall sample reveals significant positive stock selectivity and market timing ability of the IMFs performance over the period of January 1990 through April 2009. The results are inconsistent with most of the previous findings [21-22, 27], but strongly consistent with the prior findings of Lehmann and Modest [23], who found statistically significance of the MFs performance in stock selectivity and market timing ability based on US MFs for the period of January 1968 to December 1982.

TABLE 4. IMF PERFORMANCE ACCORDING TO TYPE OF THE FUNDS

	Mean	σ	α	β	θ	N (Obs)
AL	-0.123	5.204	-0.057	0.543	0.002	32
			(-0.28)	(23.83)***	(2.05)**	(155)
AV	-0.077	0.453	-0.049	0.023	-0.002	8
			(-0.72)	(1.60)	(-0.83)	(56)
EQ	0.434	5.849	0.349	0.609	0.003	57
			(1.53)	(23.09)***	(2.02)**	(232)

FI	0.120	0.545	0.112 (1.72)*	-0.013 (-1.11)	0.000 (0.26)	17 (103)
MM	1.657	9.477	1.598 (2.63)***	0.511 (7.27)***	0.002 (0.59)	14 (231)
OS	0.597	5.585	0.526 (2.38)**	0.577 (22.52)***	0.002 (1.85)*	128 (232)

Notes: The Islamic mutual fund is divided into five types, namely allocation (AL), alternative (AV), equity (EQ), fixed-income (FI) and money market (MM). The OS is the overall sample. The asterisks, ***, **, * denote that the coefficient variable is significant at the 1%, 5%, and 10% respectively. The reports of the t-stats are in parentheses. The sample period is based on monthly data from January 1990 to April 2009 and the total samples are 128 funds. N represents the total numbers of funds in each portfolio and Obs is the number of observations.

To identify the correlation between the selectivity and market timing ability performance among the Islamic mutual funds, the study conducts the correlation test for each type of the funds and for the overall performance. The results are presented in Table 5.

TABLE 5. CORRELATION BETWEEN SELECTIVITY AND MARKET TIMING

Type of Islamic mutual funds	Correlation Coefficient
Allocation	-0.161125
Alternative	-0.104130
Equity	-0.133207
Fixed-income	-0.091223
Money market	-0.133014
Overall sample	-0.133207

It seems there is evidence of a substantive mild correlation between timing and selectivity of the IMFs over the period of January 1990 to April 2009, whilst result of overall sample indicates a negative correlation between selectivity and market timing performance among Islamic fund managers in Malaysia. It also indicate a mild correlation between selection and timing performance of all types of the IMFs, which is consistent with the work of Kon (1983) and Henriksson (1984), but contrast to Annuar et al. [15]. Annuar et al. who found the Malaysian MFs during the 1990 to 1995 appeared to have a positive correlation of selectivity with timing performance.

IV. SUMMARY AND CONCLUSIONS

The objective of this paper was to investigate the performance of the IMF, and to provide recent evidence of stock selectivity skills and market timing ability of funds managers in Malaysia. The paper evaluated the monthly aggregate performance of the IMF comparatively with its Conventional peers over the period of January 1990 to April 2009.

The main finding in this paper is that both IMF and CMF portfolios perform better than the KLCI return, proxy for the market portfolio. The returns performance of IMFs is better than CMFs, with the result statistically significant. Also, there is a strong correlation between the IMFs and CMFs portfolios, with both portfolios with their market portfolio, indicating market movement has given direct impact on the development of the MF industry in Malaysia.

The significant finding of this paper is that it provides evidence of positive stock selectivity skill and market timing ability of the fund managers in Malaysia. The superior performance in stock selectivity skills among Islamic fund managers is statistically significant at 5% level, with the Conventional counterparts having a statistically insignificant

difference. The Islamic fund managers performed better in stock selectivity skill (significant at 10%), while the Conventional fund managers performing better in market timing ability (significant at 1%) in relation to the market performance. The performance of the IMFs in stock selectivity skill is higher, and in market timing ability is slightly lower than its CMFs peers, with both statistically significant at 5% and 10% respectively.

The new evidence of stock selectivity skill and market timing ability will certainly be of interest to investors and market players. These results provide investors some relevant information for investing in IMFs worldwide. At the same time, this information will benefit regulators, market players and potential investors who plan to diversify their portfolios in a new emerging market, particularly in Malaysia.

The paper also provides evidence of a negative correlation between stock selectivity skill and market timing ability of each type of the funds managed by the Islamic fund managers in Malaysia.

Other important findings denotes that the Sharpe ratio, Treynor Index and Jensen alpha of the IMFs are higher than the CMF, suggesting that the returns performance of the IMFs is better than its Conventional counterparts.

However, this study is limited to the evidence of fund performance based on aggregate returns for the overall market cycle. The investigation on the performance based on different market cycles could give a different point of view. Furthermore, none of the studies so far have focused on factors that affect the timing and selectivity performance of the IMFs separately. We leave this matter for future research.

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