



Investigation of performance of Malaysian Islamic unit trust funds

Comparison with conventional unit trust funds

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Abstract

Purpose – One of the implications of Islamic investment principles is the availability of Islamic financial instruments in the financial market. The main aim of this research is to observe the differences in terms of performance between Islamic and conventional mutual fund in the context of Malaysian capital market.

Design/methodology/approach – To achieve the major objectives of this paper standard methods were used for evaluating the mutual funds performance, for example, Sharpe index and adjusted Sharpe index, Jensen Alpha, Timing and selectivity ability. The scope of the paper is to measure the relative quantitative performance of funds which was managed based on two different approaches.

Findings – The basic finding of the paper is that Islamic funds performed better than the conventional funds during bearish economic trends while, conventional funds showed better performance than Islamic funds during bullish economic conditions. In addition to that finding, both conventional and Islamic funds were unable to achieve at least 50 per cent market diversification levels, though conventional funds are found to have a marginally better diversification level than the Islamic funds. The results also suggest that fund managers are unable to correctly identify good bargain stocks and to forecast the price movements of the general market.

Research limitations/implications – The main limitation is that the samples of conventional and Islamic mutual funds were from one developing market. The findings could be better validated if the sample included the mutual funds from other developed and developing economies, where both Islamic and conventional funds are available.

Practical implications – The findings suggest that having Islamic mutual funds in an investment portfolio helps to hedge the downside risk in an adverse economic situation.

Originality/value – So far there is no published evidence on the relative performance of Islamic and conventional mutual funds in Malaysia as well as other developing countries. Therefore, this paper adds new knowledge to the mutual funds literature.

Keywords Performance management, Financial risk, Islam, Fund management, Unit trusts

Paper type Research paper



Introduction

Mutual fund or better known as unit trust fund in Malaysia is an investment vehicle created by asset management companies specializing in pooling savings from both retail and institutional investors. Individual investors seeking liquidity, portfolio diversification

and investment expertise are increasingly choosing unit trust funds as their investment vehicle. However, these investors do differ in their preferences based on their risk threshold, liquidity needs and their needs to comply with religious requirement.

Over the past decades, Malaysian capital market has been growing at a very fast pace and this has been supportive of the various complex needs of the country. In view of the fact that capital market is functioning based on interest, it is therefore not surprising that the operation of capital market does not conform to the Shari'ah principles (Islamic law as revealed in the Quran and Sunnah). Hence, it is difficult for Muslim investors representing more than 50 per cent of the total population, to participate freely in the Malaysian capital market. The increasing demand for alternative investment vehicles, which conform to the Shari'ah principle has prompted the Malaysian government to introduce various measures with the aim of boosting the Islamic capital market (ICM). For examples, among other measures, an Islamic bank was established in 1980 and the Kuala Lumpur Shari'ah Index was introduced in 1999 with the objective of fulfilling the investment needs of Muslim investors. Based on the Shari'ah principle, transactions taking place in the capital market should be free from prohibited activities or elements such as usury (*riba*), gambling (*maisir*) and ambiguity (*gharar*). Islamic investing can be defined as investment in financial services and other investment products, which adhere to the principles established by the Shari'ah[1]. These principles require that:

- (1) Investment must be made in ethical sectors. In other words, profits cannot be generated from prohibited activities such as alcohol production, gambling, pornography etc. In addition, investing in interest (*riba*)-based financial institutions are not allowed.
- (2) All wealth creation should result from a partnership between an investor and the user of capital in which rewards and risks are shared. Returns in invested capital should be earned rather than be pre-determined.

One of the implications of Islamic investment principles is in the availability of Islamic financial instruments in the financial market. The Shari'ah's prohibition against *riba* (interest) and some Fiqhi (Islamic Jurisprudence) issues in the interpretation of *gharar* (excessive risk) suggests that many of the instrument products, which are available to conventional funds are not available to Islamic funds. In the case of financial services, for instance Islamic banking, it is not much of a hassle for a conventional bank to open up Islamic banking window as an Islamic investment arm. However, in the case of Islamic investment instruments for example, Islamic unit trust funds, fund managers do have some limitations in selecting stocks to form part of their portfolio. Even though most of the banks listed in Bursa Malaysia have Islamic banking arms, due to the Shari'ah guidelines, fund managers are unable to include banking stocks in their portfolio. Furthermore, due to the absence of Islamic money market, Islamic unit trust funds depend solely on the equity market for investment. For conventional equity unit trust funds, fund managers do not invest solely in the equity market. Rather, a fraction of their investment goes to the money market, which comprises of risk free investments. Table I presents the investment proportions of conventional equity funds in Malaysia over the seven-year period, from 1995-2001.

Before the outbreak of the financial crisis in 1997, the Malaysian economy had registered high growth for a decade, averaging at 8.5 per cent per annum. Due to high GDP growth rate and inflows of foreign capital, cyclical sectors such as banking sector, property and entertainment sectors had recorded high performance in the stock market[2]. Unlike Islamic unit trust funds, conventional funds do not have any

restrictions to incorporate these high performing stocks into their portfolio during good economic conditions. Similarly, during financial crisis in 1997, stocks in the cyclical sectors recorded the worst performance and consequently, this was reflected in the poor performance of conventional unit trust funds. However, given that Islamic funds have limited investment choices, their performances were, therefore, not subjected to the cyclical effects of the economy.

While conventional funds are subjected to the capital market laws, Islamic funds are subjected not only to the capital market laws but also to the Quranic law of economics. Based on this strategic difference, the purpose of this paper is to provide an understanding on the performances of these two diverse unit trust funds in the Malaysian capital market, namely conventional and Islamic funds. Islamic funds are relatively new as compared to the conventional funds. In the Malaysian context, so far, there is no published evidence on the comparison of performance between Islamic funds and conventional funds. This study intends to fill the gap in the literature by providing further empirical evidence on the Malaysian unit trust funds. The rest of the paper unfolds as follows: Review of previous studies provides a brief review of the relevant literature. Data and methodology outlines the methodology and the measures of performance used. Results and discussion discusses the findings from the empirical analysis and Results and discussion provides concluding remarks.

Review of previous studies

The literature on the performance of mutual funds has long standing issues. The issues addressed by previous studies include the risk-return performance, selection and market timing abilities of fund managers and the level of diversification of mutual funds. McDonald (1974) estimates the Sharpe, Treynor and Jensen measures for 123 mutual funds using monthly data for the period between 1960 and 1969. The findings show that majority of the funds did not perform as well as the New York Stock Exchange (NYSE) index.

Kon and Jen (1979) examines the non-stationarity of the market-related risk for mutual funds over time. They separate their samples into different risk regimes and then run the standard regression equation for each such regime. Using a sample of 49 mutual funds and their net monthly returns from January 1960 to December 1971, they find the existence of multiple levels of beta for 37 funds. This implies that there are a large number of funds engaging in market timing activities. Kon (1983) extends his analysis to examine both market timing and selectivity performance. He finds that 14 funds have positive overall timing performance but none is statistically significant at a reasonable level. Five out of 23 funds show statistically significant overall selectivity performance.

	1995	1996	1997	1998	1999	2000	2001
Industrial products (%)	9.65	12.87	13.42	8.82	10.58	4.80	8.9
Consumer products (%)	6.53	5.72	7.23	4.61	6.13	7.97	7.54
Trading/services (%)	19.99	24.69	20.68	20.91	22.12	22.58	22.9
Finance (%)	16.00	14.08	15.12	11.24	12.52	46.86	17.44
Property (%)	8.15	7.16	3.51	2.81	2.74	4.05	2.21
Construction (%)	2.48	8.12	4.07	5.43	8.00	0.00	6.51
Plantation (%)	10.95	5.06	15.09	5.49	4.18	9.60	5.65
Others (%)	2.04	3.69	9.99	6.06	5.49	0	7.83
Total equities (%)	75.78	76.45	89.07	64.57	71.07	95.86	78.98

Table I.
Average investment
among sectors for
conventional funds:
1995-2001

In their study, Chen *et al.* (1992) examine a sample of 93 mutual funds covering a period from January 1977 through March 1984 by using a quadratic market model in conjunction with a systematically varying parameter regression method. The results indicate that fund managers do not possess market timing abilities. Furthermore, they find a trade-off between market timing and security selection abilities.

Annuar *et al.* (1997) use the Treynor and Mazuy model to examine the selectivity and timing performance of 31 unit trust funds in Malaysia for the period of July 1990 through August 1995. On average, the selectivity performance of the funds is positive and the timing performance is negative. The study finds a positive correlation between selectivity and timing performances. The results also show that the funds have not achieved the expected level of diversification and the risk-return characteristics of the unit trust funds are generally inconsistent with their stated objectives.

Shamsher *et al.* (2000) conduct a study on the performance of 41 actively and passively managed funds in Malaysia covering the period from 1995 through 1999. The performance measures used are the Sharpe's index, the Treynor's index and the Jensen's index. The findings reveal no significant differences in the performance of actively and passively managed funds. Moreover, the returns of these funds are lower than the returns of the market portfolio. The diversification levels of these two funds are less than 50 per cent of the diversification level of the market index as proxied by the Kuala Lumpur Composite Index (KLCI). The selection skills of active fund managers are no better than that of the passive fund managers. The market timing abilities of managers are found to be poor for both the actively and passively managed funds.

Data and methodology

This study focuses on equity-based unit trust funds and the sample consists of both Islamic and conventional funds. The conventional funds are further divided into governmental and non-governmental funds, which include growth funds, income funds and balance funds. The sample consists of 65 funds, 14 of which are Islamic funds.

Monthly returns adjusted for dividends and bonuses distributed to unit holders are computed for the 10-year period starting from January 1992 through December 2001. To serve as a market benchmark, the returns on the KLCI i.e. the KLCI (formerly known as the KLSE Composite Index) are used as a proxy for the returns on the market portfolio and the risk free rate is proxied by the three-month Treasury Bills[3]. In view of the fact that the Malaysian economic conditions changed dramatically as a result of the financial crisis in 1997, we divide the study period into three different periods to ascertain the impact of the economic conditions on the performance of unit trust funds. The three different periods are: pre-(1992-1996), during (1997-1998) and post-(1999-2001) financial crisis.

Measurement of performance

The returns on the unit trust funds are derived from two components namely income and the capital gain. The rate of returns for each fund is calculated as follows:

$$R_p = \frac{NAV_t - NAV_{t-1} + D_t}{NAV_{t-1}} \quad (1)$$

where

R_p = Total return of a portfolio (individual fund);

NAV_t = Net Asset Value at time t ;

NAV_{t-1} = Net Asset Value one period before time t ; and
 D_t = Dividend or cash disbursement at time t .

In this study, we employ three standard methods namely the Treynor's Index, the Sharpe Index and the Jensen Index and Adjusted Jensen Index to evaluate the performance of unit trust funds. Due to the biasness in the estimation of the standard deviation, the Sharpe's Index has been modified by Jobson and Korkie (1981) to become the Adjusted Sharpe Index. This study also employs Adjusted Sharpe Index, which is expressed as follows:

$$AS_I = \frac{S_I \times \text{no. of observations}}{\text{no. of observations} + 0.75} \quad (2)$$

Modigliani and Modigliani (1997) propose an alternative risk adjusted measure which is easier to understand. The measure expresses a fund's performance relative to the market in percentage terms, which is given as follows:

$$MM = \frac{R_p - R_f}{\sigma_i} \times \sigma_m \quad (3)$$

where

MM = Modigliani measure;

R_p = ex post adjusted returns on the mutual funds over the measurement period;

R_f = risk-free rate of return on corresponding period on a government security;

σ_i = standard deviation of returns of the mutual funds; and

σ_m = standard deviation of market (index) excess return.

An additional performance measure known as Information ratio, is defined as follows:

$$\text{Information ratio} = \frac{\text{Fund return} - \text{Benchmark return}}{\text{Standard deviation (fund return} - \text{Benchmark return)}} \quad (4)$$

Measurement of risk, selectivity and timing

The total risk on investments is measured using the standard deviation. Unlike the standard deviation, which is an absolute measure of variability, the coefficient of variation is a relative measure of variability. The coefficient of variation (CoV) ratio which measures the amount of risk assumed per unit of average returns, is expressed as follows:

$$\text{CoV} = \frac{\sigma_i}{E(R_i)} \quad (5)$$

where

σ_i = standard deviation (total risk) of asset i ; and

$E(R_i)$ = average return of asset i .

The stock selection and market timing performances of each fund are estimated using the Treynor and Mazuy (1966) model and the equation is as follows:

$$R_p = \alpha_p + \beta_p(R_m) + \gamma(R_m)^2 + \mu \quad (6)$$

where

R_p = dividend-adjusted return on portfolio per cent minus the yield on 91-day Treasury Bill's rate;

α_p = coefficient that indicates estimated selectivity skill;

β_p = beta risk of unit trust;

R_m = observed return on the KLSE Composite Index minus R_f (risk-free rate);

γ = coefficient that indicates market-timing skill; and

μ = residual excess return on portfolio per cent.

A positive and significant α and γ indicate superior selectivity and market-timing skills, respectively. Finally, heteroscedasticity and serial correlation problems, which are common in any regression based model, are corrected by using White's (1980) correction test and Newey-West's (1987) correction test.

Results and discussion

Non risk-adjusted returns of unit trust funds

Table II summarizes the non risk-adjusted returns for both Islamic and conventional funds, which include governmental and non-governmental funds. Also reported are the returns of the market portfolio as proxied by the KLCI. During the pre-crisis period, among the portfolios, KLCI achieves the highest level of average monthly returns. The average monthly returns for Islamic funds, conventional funds, be they governmental or non-governmental funds are below the average monthly return of the KLCI. This suggest that unit trust funds under-perform the market on a non risk-adjusted basis.

During the crisis, the stock market was badly affected by the economic downturn and this was reflected by a negative average monthly return of -1.98 per cent for the KLCI which recorded the lowest level of returns among the portfolios. The performances of Islamic and non-governmental funds appear to be better during the crisis period than during the pre-crisis period. For conventional and governmental funds, their average monthly returns during the crisis period are lower than during the pre-crisis period.

The results for the post-crisis period reveal that the market portfolio, KLCI experiences the highest level of average monthly returns. The average monthly returns for all of the unit trust funds during the post-crisis period are better than those recorded during the pre-crisis period.

Over the 10-year period, the average monthly return of the market is 0.81 per cent. The average monthly returns for Islamic, conventional and non-governmental funds are 0.72, 0.73 and 0.54 per cent, respectively. This suggests that most of the funds, under-perform the KLCI. Exception to this is the government funds which record an

	Pre-crisis	During crisis	Post-crisis	Overall
Islamic funds	0.000781	0.024430	0.004767	0.007197
<i>t</i> -statistic	(-0.543283)	(0.860750)	(-0.242770)	(-0.029178)
Conventional funds	0.006926	0.003064	0.007751	0.007309
<i>t</i> -statistic	(-0.496229)	(0.662587)	(-0.317379)	(-0.048464)
Governmental funds	0.011311	0.005057	0.012837	0.011949
<i>t</i> -statistic	(-0.052740)	(0.509891)	(-0.050591)	(0.143911)
Non-governmental funds	0.002673	0.009267	0.004742	0.005359
<i>t</i> -statistic	(-0.802749)	(0.863347)	(-0.443947)	(-0.159691)
Market (KLCI)	0.012147	-0.019811	0.014647	0.008103

Table II.
Non risk-adjusted
returns of unit trust
funds over market
portfolio

average monthly returns of 1.19 per cent. One plausible reason for this is that these government funds are closely monitored by government agencies which are responsible for ensuring good performance of the funds. Therefore, these government funds may have better opportunities of investing in government-backed projects as compared to any other funds. Furthermore, government-backed projects are relatively more secure and stand a better chance of generating good returns.

Risk-adjusted average monthly returns of unit trust funds

Table III presents the comparative performance analysis over a 10-year period for Islamic funds vs conventional funds as well as for governmental vs non-governmental funds.

It is shown that conventional funds perform better than Islamic funds during the pre-crisis period using various types of performance measures: Adjusted Sharpe Index, Treynor Index, Adjusted Jensen Index, Modigliani Measures and the Information Ratio. However, the opposite is also true during the crisis and post-crisis periods. During the crisis period, regardless of the type of return measurements used, Islamic

Period	Funds	Adjusted Sharpe's Index	Treynor's Index	Adjusted Jensen's Alpha Index	Modigliani Measures	Information Ratio
Pre-crisis	Islamic funds	-0.1047	-0.0086	-0.0158	-0.0073	-0.3592
	Conventional funds	-0.0196	0.0028	-0.0044	-0.0014	-0.1296
	<i>t</i> -statistic	(-1.841)*	(-1.068)	(-1.068)	(-1.837)*	(-1.488)
	Governmental funds	0.0225	0.0109	0.0037	0.0015	-0.0144
	Non-governmental funds	-0.0673	-0.0049	-0.0121	-0.0047	-0.2091
	<i>t</i> -statistic	(2.495)**	(1.904)*	(1.904)*	(2.496)**	(2.224)**
During crisis	Islamic funds	0.0025	0.0031	0.0284	0.0013	0.2459
	Conventional funds	-0.1523	-0.0494	-0.0241	-0.0268	0.2458
	<i>t</i> -statistic	(2.598)**	(1.366)	(1.3657)	(2.575)**	(0.001)
	Governmental funds	-0.1798	-0.037	-0.0117	-0.0319	0.1998
	Non-governmental funds	-0.0879	-0.0377	-0.0123	-0.0151	0.2677
	<i>t</i> -statistic	(-1.650)	(0.017)	(0.017)	(-1.645)	(-0.285)
Post-crisis	Islamic funds	0.0393	0.0209	0.0088	0.0181	-0.0685
	Conventional funds	0.0183	0.0025	-0.0095	0.0125	-0.0457
	<i>t</i> -statistic	(0.766)	(0.216)	(0.216)	(1.235)	(-0.422)
	Governmental funds	0.0035	0.0264	0.0143	0.0099	-0.0109
	Non-governmental funds	0.0308	-0.0017	-0.0138	0.0153	-0.0673
	<i>t</i> -statistic	(-1.105)	(0.367)	(0.367)	(-1.326)	(1.274)
Overall	Islamic funds	-0.0053	-0.0998	-0.0138	-0.00057	-0.0084
	Conventional funds	-0.0324	-0.0088	-0.0127	-0.0038	-0.0084
	<i>t</i> -statistic	(1.169)	(-0.037)	(-0.036)	(1.184)	(-3.9E-05)
	Governmental funds	-0.0207	0.0073	0.0036	-0.0024	0.0345
	Non-governmental funds	-0.029	-0.0159	-0.0197	-0.0034	-0.029
	<i>t</i> -statistic	(0.390)	(0.852)	(0.852)	(0.391)	-1.03

Table III.
Risk adjusted monthly returns of different classes of unit trust funds

Notes: * Indicates significance at the 10 per cent; ** indicates significance at the 5 per cent

funds record positive average monthly while the conventional funds show negative average monthly returns. In the post-crisis period, the performance of Islamic funds is also better than that of the conventional funds.

An intuitive explanation for this is that since Islamic funds are restricted to invest in products, which comply with the Shari'ah principles, the investment choices of Islamic funds are relatively limited in scope when compared to the investment choices available for conventional funds. Conventional funds tend to perform better than the Islamic funds during bullish market trend because conventional funds are able to invest in any stocks including those with high risks exposure. Accordingly, the risk-return trade off suggests that the returns from investing in risky investments should be high in order to compensate investors for the high level of risks assumed. The opposite is also true during bearish market trend. Since the investment of Islamic funds excludes usury, gambling and ambiguity or uncertainty elements, Islamic funds have a lower degree of risk exposure than conventional funds and therefore are able to minimize their overall risk level. This contributes to making the investment of Islamic funds relatively less volatile during the crisis period and thus, resulting in a better return during bearish economic conditions. Nevertheless, the differences in the performance between Islamic and conventional funds are marginally significant.

Similarly, a comparative analysis for the governmental and non-governmental funds reveals that governmental funds perform better than non-governmental funds during the pre-crisis period and the differences are statistically significant. However, during and after the crisis periods, the differences in the performance between these two funds are no longer statistically significant. This could be due to the fact that "special attention" is given by the Malaysian government in its effort to minimize political risk and to ensure that all conventional funds be they governmental or non-governmental, are equally competitive in the market.

Differences in risks of unit trust funds

Beta, standard deviation and coefficient of variation are used to measure systematic risk, total risk and risk per unit of returns. As shown in Table IV, over the 10-year period, the beta values of Islamic funds and conventional funds are 0.251 and 0.383, respectively. This suggests that Islamic funds are less sensitive to changes in the market as compared to conventional funds. Such findings are not surprising given that Islamic funds are restricted to invest in Shari'ah-approved stocks only. Within the conventional funds, governmental funds appear to show a higher level of systematic risks than the non-governmental funds. The beta values for both governmental and non-governmental funds are 0.4877 and 0.2998, respectively. This implies that changes in the market will have greater impact on the governmental funds than on the non-governmental funds.

Table IV also reveals that the investment returns of Islamic funds are less variable and thus less risky than the conventional funds. Over the 10-year period, the standard deviation of returns of 0.1295 for the Islamic funds is lower than that of the conventional funds which is 0.1566. The findings also indicate that the variability of returns for governmental funds is much higher than that of the non-governmental funds. The standard deviation of returns for governmental and non-governmental funds are 0.2100 and 0.1262, respectively.

In terms of risk per unit of return, as shown in Table IV, Islamic funds have a lower value than conventional funds. The coefficient of variations for Islamic and conventional funds are 17.9972 and 21.4178, respectively. On the other hand, although the standard deviation of returns for governmental funds is higher than that of the

Funds	Beta			Overall
	Pre-crisis	During crisis	Post-crisis	
Islamic funds	0.575769	0.374707	0.141840	0.251128
Conventional funds	0.679004	0.647849	0.168516	0.383173
<i>t</i> -statistic	(-0.866223)	(-1.443814)	(-0.616671)	(-1.901845)
Governmental funds	0.730952	0.819279	0.171547	0.487663
Non-governmental funds	0.638741	0.477680	0.159892	0.299827
<i>t</i> -statistic	(1.132801)	(2.036165)*	(0.31649)	(3.128808)**
Standard deviation				
Islamic funds	0.050421	0.237621	0.072436	0.129528
Conventional funds	0.092819	0.221600	0.108288	0.156552
<i>t</i> -statistic	(-0.935872)	(0.114755)	(-0.711171)	(-0.399858)
Governmental funds	0.115341	0.263680	0.150526	0.210029
Non-governmental funds	0.067686	0.207518	0.079931	0.126238
<i>t</i> -statistic	(1.275648)	(0.446388)	(1.574359)	(1.390866)
Coefficient of variation				
Islamic funds	64.524025	9.726549	15.196741	17.9972
Conventional funds	13.400770	72.313126	13.970884	21.417863
<i>t</i> -statistic	(1.44431)	(0.892007)	(0.59148)	(-0.739998)
Governmental funds	10.197726	52.146350	11.725764	17.576680
Non-governmental funds	25.22635	22.393470	16.856388	23.557523
<i>t</i> -statistic	(-1.033506)	(0.810646)	(0.77804)	(0.64716)

Table IV.
Differences in risks of
unit trust funds as
measured by beta

Notes: * Indicates significance at the 10 per cent; ** indicates significance at the 5 per cent

non-governmental funds, the relative variation of governmental funds is smaller than that of the non-governmental funds. However, the differences in risks between Islamic and conventional funds as well as between the governmental and non-governmental funds are only marginally significant.

Diversification level of unit trust funds

The coefficient of determination, R^2 is used to measure the degree of diversification of the fund relative to the diversification of the market portfolio. The results in Table V shows that conventional funds have a marginally better diversification level than the Islamic funds.

Since conventional funds do not have much restrictions in terms of their investment choices, it is therefore not surprising that the R^2 of 0.2854 for conventional funds is higher than the R^2 of 0.2618 for the Islamic funds. Meanwhile, during the same period,

Funds	Objective			Overall
	Income	Balance	Growth	
Islamic funds	0.235441	0.266965	0.265875	0.261839
Conventional funds	0.264147	0.242193	0.324325	0.285356
<i>t</i> -statistic	(-0.38706)	(0.336758)	(-0.71418)	(-0.45434)
Governmental funds	0.347976	0.234743	0.331997	0.276533
Non-governmental funds	0.228837	0.254262	0.305018	0.281843
<i>t</i> -statistic	(0.1900223)	(-0.363497)	-0.31	(-0.113327)

Table V.
Diversification level (R^2)
of unit trust funds

there are hardly any differences in the diversification level between governmental and non-governmental funds. This could be due to the fact that both of the funds have almost equal investment opportunities. Nevertheless, the differences in the levels of diversification for the funds are not statistically significant. The findings of low diversification level for the funds are consistent with the results of previous studies such as Koh *et al.* (1987), Shamsher and Annuar (1995) and Shamsher *et al.* (2000).

Selection performance of unit trust funds

The results in Table VI indicate that the selection abilities of Islamic and conventional fund managers are negative and statistically significant. Although both fund managers have poor selectivity performance, the selection ability of conventional fund managers seems to be better than that of the Islamic fund managers. The selection abilities of governmental and non-governmental funds are also negative, but only the non-governmental fund managers show statistically significant negative selection ability.

Market timing performance of unit trust funds

Table VII presents findings on the market timing abilities of fund managers. For the overall period, the negative timing coefficients for Islamic and conventional fund

Funds	α^a			
	Pre-crisis	During crisis	Post-crisis	Overall
Islamic funds	-0.013337 (-2.8908)*	-0.043725 (-0.7160)	-0.028864 (-2.3133)**	-0.027293 (-3.2724)*
Conventional funds	-0.013879 (-2.3077)**	0.012405 (0.3871)	-0.025880 (-1.7145)***	-0.016079 (-2.2287)**
Governmental funds	-0.007537 (-0.7662)	0.014876 (0.2834)	-0.014273 (-0.6611)	-0.006831 (-0.6550)
Non-governmental funds	-0.020130 (-3.3202)*	-0.004075 (-0.1322)	-0.031613 (-2.4446)**	-0.024083 (-3.7241)**

Notes: * Indicates significance at the 1 per cent; ** indicates significance at the 5 per cent; *** indicates significance at the 10 per cent; ^aHeteroscedasticity and serial correlation problems are corrected by using White's correction test (1980) and Newey-West's correction test (1987) when necessary

Table VI.
Selection performance
(α) of unit trust funds

Funds	γ			
	Pre-crisis	During crisis	Post-crisis	Overall
Islamic funds	-0.554124 (-1.4531)	1.246815 (0.8254)	0.200465 (0.7684)	-0.045612 (-0.2096)
Conventional funds	-0.330591 (-0.6651)	-0.532492 (-0.6719)	0.256704 (0.8133)	-0.427398 (-2.2706)*
Governmental funds	-0.353337 (-0.4346)	-0.034723 (-0.0267)	-0.017918 (-0.0397)	-0.613115 (-2.2535)*
Non-governmental funds	-0.393200 (-0.7846)	-0.270850 (-0.3552)	0.354440 (1.3108)	-0.216750 (-1.2847)

Note: * Indicates significance at the 5 per cent

Table VII.
Market timing
ability (γ) of mutual
funds managers

managers suggest that both managers do not possess good market timing abilities. However, the timing coefficient for Islamic funds is not statistically significant. This could be due to the fact that the investment choices of Islamic fund managers are less dependent on the fluctuation of the economy since their investments are not cyclical in nature. Similarly, over the 10-year period, the governmental and non-governmental fund managers also show poor market timing abilities but the timing estimate is only significant for the governmental funds. The results of negative timing performance are consistent with most of the previous findings for examples: Henriksson (1984), Chen *et al.* (1992), Coggin *et al.* (1993) and Annuar *et al.* (1997).

Conclusion and implication

The primary focus of this study is to ascertain the relative performance of Islamic and conventional funds across different economic conditions. The study further divides the conventional funds into governmental and non-governmental funds. In this regard, we conduct a comparative performance analysis between Islamic and conventional funds as well as between governmental and non-governmental funds over three different economic periods namely pre, during and post economic crisis. The results show that performances of the funds are marginally below than that of the market.

A relative measure of variability indicate that Islamic funds are less risky than conventional funds. Similarly, governmental funds are found to be less risky than non-governmental funds. Both Islamic and conventional funds have diversification levels which are less than 50 per cent of the diversification level of the market portfolio. Although governmental funds have a marginally better diversification level than the non-governmental funds, their diversification levels are also below 50 per cent. Poor selection and market timing abilities are documented for all classes of funds – Islamic, conventional, government and non-government funds.

Our results also indicate that Islamic funds perform better than conventional funds during bearish economic trend i.e. during the crisis period. However, during bullish trend defined as the pre-crisis period, the performance of conventional funds is better than that of the Islamic funds. This implies that Islamic funds can be used as a hedging instrument during any financial meltdown or economic slowdown. The findings of the study may have important implications for investors and regulatory agencies of the unit trust industry. In view of the fact that conventional funds perform better than Islamic funds during good economic period and vice-versa during bad economic period, this provides good justification for the market regulators to further enhance the ICM in Malaysia.

Notes

1. List of Securities Approved by Shari'ah Advisory Council of the Securities Commission, 26 October 2001. Securities Commission.
2. Based on the Shari'ah guideline, investment in the property sector, which normally has a debt level of more than 50 per cent, is not permitted.
3. The continuous monthly risk-free return is calculated using the following equation:
$$r_{it} = (\ln[1 + r_{it}]/12).$$

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