Comparative Study of Conventional and Shariah-based Unit Trust Funds Performance of Public Mutual Berhad

Norafiqah Bt Norman, Mahmoud Khalid Almsafir and Ayman Smadi

Graduate Business School, College of Graduate Studies, Universiti Tenaga Nasional, Putrajaya Campus, Jalan IKRAM-UNITEN, 43300 Kajang, Selangor, Malaysia.

Abstract: The Malaysian unit trust industry has experienced a positive growth since the introduction of Amanah Saham Nasional in 1981 and the introduction of Islamic unit trust led to the establishment of Securities Commission in 1993. Public Mutual Berhad is the largest private unit trust company in Malaysia and the most awarded unit trust fund manager in the Islamic unit trust sector. The main objective of this study is to evaluate the performance from return performance perspective of conventional and shariah-based unit trust fund in terms of economic condition and risk-return profile. This study helps investors in their decision making and enables Public Mutual Berhad to improve their funds' performance. This study focuses on seven conventional equity funds and seven shariah-based equity funds of Public Mutual Berhad. The data are computed for ten year period from January 2003 to December 2012 and divided into three sub-periods which are before financial crisis, during financial crisis and after financial crisis. Benchmarks used in this study are FTSE Bursa Malaysia KLCI (FBM KLCI) for conventional funds, FTSE Bursa Malaysia EMAS Shariah Index (FBMS) for shariah-based funds and three-month Treasury-bill as risk-free rate benchmark. Three standard methods of Sharpe index, Treynor index and Jensen index are used in this study to evaluate the performance of unit trust funds. The result found that conventional unit trust funds perform better during non-crisis and after crisis period while shariah-based unit trust funds have better performance during financial crisis period. Conventional funds also have higher standard deviation than shariah-based funds which implied that conventional funds are more risky than shariah-based funds. Additionally, systematic risk analysis shows that shariah-based funds have lower beta value than conventional funds, hence it shows that shariah-based funds are less sensitive to the changes in the market. The result also found that risk-return profile is related with the return performance of funds. The results found in this study led to the acceptance of the hypotheses of economic condition does influence the performance of funds and risk-return profile has relationship with the performance of funds. This study could be further investigated in a bigger sample and characteristics while performance can be measured using other technique than Sharpe index, Treynor index and Jensen index.

Key words: conventional unit trust; shariah-based unit trust; unit trust performance; financial crisis; risk-return

INTRODUCTION

1.1. Background of Study:

Unit trust fund is a scheme that managed professionally to collects and pool money from investors (Fadila *et al.*, 2011). The pooled money then will be invested in diversified portfolio of securities that permitted under the Securities Commission's Guidelines on unit trust funds. Unit trust in Malaysia started with the establishment of Malayan Unit Trust Ltd in 1959. Malaysian Capital Market gets an overwhelming response when Permodalan Nasional Berhad (PNB) set up Amanah Saham Nasional (ASN) in 1981. The Malaysian Capital Market experiencing growth over the last few years and there is a demand of Islamic financial products from Islamic investors. Islamic unit trust fund is one of the Islamic financial products present in the market and operated in compliance with shariah principles (Bashir and Nawang, 2011). Securities Commission (SC) was established on 1st March 1993 due to the introduction of unit trust fund to the Islamic Capital Market (ICM). SC was established to promote and to maintain fair, efficient, secure and transparent securities and future markets. SC also responsible to supervise and regulates all issues related to the unit trust schemes, the trust fund companies and the investors. Public Mutual Berhad is the largest private unit trust company in Malaysia. It incorporated in July 1975 and began the operations in 1980 with the launching of Public Savings Fund. Public Mutual Berhad currently manages more than 90 funds with a total net asset value (NAV) of RM55.5 billion and command a 40.5% market share in the private unit trust industry as at 31 March 2013. It is the most awarded unit trust company with 212 awards to date and 68 out of these are for Islamic funds which make Public Mutual Berhad as the most awarded unit trust fund manager in the Islamic unit trust sector.

Corresponding Author: Norafiqah Bt Norman, Graduate Business School, College of Graduate Studies, Universiti Tenaga Nasional, Putrajaya Campus, Jalan IKRAM-UNITEN, 43300 Kajang, Selangor, Malaysia.
E-mail: ieka_nn252@yahoo.com.my

1.2. Problem Statement:

This study will focus on the performance of shariah-based and conventional of unit trust funds managed by Public Mutual Berhad as there is a growth of Islamic unit trust fund within the financial institution. The performance of Islamic and conventional unit trust as both unit trust funds are expected to have different return performance since Islamic unit trust are subject to both capital market rules and shariah principles while conventional unit trust subject only to the capital market rules. Unit trust funds are volatile in the capital market and factors such as the economic condition and the risk-return profile will affecting the performance of unit trust fund in the market.

1.3. Objective of Study:

The main objective of this study is to evaluate the performance from return performance perspective of shariah-based and conventional unit trust fund of Public Mutual Berhad.

1.4. Research Question:

To achieve the objective of this study, the following research questions have been developed:
1. Does the economic condition influencing the performance of Islamic and conventional unit trust funds of Public Mutual Berhad?
2. Is there any relationship between the risk-return level with the performance of Islamic and conventional unit trust fund of Public Mutual Berhad?

1.5. Significance of Study:

This study is significant as researcher will gain more knowledge about shariah and conventional unit trust fund and its performance in the market. The unit holder of unit trust fund also can make an effective decision from the information. This study also will help Public Mutual Berhad to improving their fund performance and offering unit trust that have higher performance.

MATERIALS AND METHODS

2.1 Literature Review:

Kusairi *et al*. (2013) present characteristics, monetary environment and performance of mutual funds: Malaysian evidence. This paper use regression analysis to evaluate 420 mutual funds from January 2000 to June 2012 with benchmark of Malaysia Gold Shariah Price Index and KLSE Composite Index. The results show that performance of all funds are lower than benchmark except Asia Pacific that has a positive alpha which implies that mutual fund performance of this area is higher than benchmark. This study indicates that fund performance will be affected differently based on different monetary environment and, fund managers also don't have timing ability to utilize the market information and get high return.

Hammami *et al*. (2013) determine mutual fund performance in Tunisia: a multivariate GARCH approach. This paper examines the performance of 30 Tunisian open-end mutual funds from January 2002 to December 2010 using conditional multifactor model. The results show that implementation of multivariate GARCH method cause the persistence in mutual fund performance due to the fact that the Jensen alphas are estimated more precisely. Mutual funds also outperform the benchmark when multivariate GARCH model being implemented.

Cuthbertson and Nitzsche (2013) determine performance, stock selection and market timing of the German equity mutual fund industry. The false discovery rate (FDR) is used to examine both model selection and performance measurement from January 1990 to December 2009. Using FDR in model selection implies inclusion of market timing variables and result an increased in truly positive alpha funds. However, a result similar to the 3F model are obtained when the contribution of both security selection and market timing are being measured.

Garcia (2013) examines the persistence of European mutual fund performance between 1988 and 2010 for equity mutual funds. The results indicate that European mutual funds show strong evidence of significant performance which constant across investment style on an annual basis and longer term. Conditional measures also more informative and have stronger significance about future performance however, the average performance is negative for all fund portfolio and have poorer performance.

Bodson *et al*. (2013) present a global approach to mutual funds market timing ability. This paper evaluates market timing abilities of mutual fund managers from the market-return, market wide volatility and aggregate liquidity perspectives while return are measured using Fama-French and Carhart model. The results show that mutual fund managers seen to not have significant return timing abilities although there is an existence of volatility and liquidity timing abilities. From the fund-by-fund basis, it indicates that on average 6% of mutual funds display return market timing abilities result from 13% of volatility and 18% of liquidity market timing.

Cao *et al*. (2013) investigate whether mutual fund managers time market liquidity by collecting data from CRSP Survivor-Bias-Free US Mutual Fund Database. The results show that fund managers timing market liquidity at both of portfolio level and individual level as they increase market exposure when the market more liquid and vice versa. Liquidity timing also tends to have longer history, higher expense ratios and higher turnover rates.

Badrinath and Gubellini (2012) verify whether conditional mutual fund outperformance exist using Conditional Asset Pricing Model (CAPM). The results indicate that recession protection is only offered by certain types of equity mutual funds and managers of small-cap and mid-cap growth equity funds are able to achieve outperformance by reducing their risk compared to mechanically construct passive portfolios. In addition, the separation of mutual fund by investment objective offers the best possible spread in conditional performance.

Kassim and Kamil (2012) and Merdad *et al*. (2010) evaluate the performance of Islamic and conventional unit trust. The performances are measured using raw return, Treynor Index, Adjusted Jensen Alpha Index, Adjusted Sharpe Index, Sharpe ratio, Modigliani and Modigliani measure, TT measure and information ratio. The results for both paper show that Islamic unit trust funds outperform the market during crisis period compared to during non-crisis period. Islamic unit trusts also shown to be well managed throughout the analysis as it have good diversification level in all sub-period. Investors should diversify their portfolio accordingly during different economic condition as it will give an impact to the unit trust funds' performance.

Razzaq *et al*. (2012) investigate the performance of Islamic mutual funds in Pakistan. This paper analyze the performance of open-ended funds from 2009 to 2010 using performance measures of Sharpe ratio, Treynor Index, Jensen's Alpha and information ratio based on Capital Asset Pricing Model (CAPM). The results show that from the Sharpe ratio, Islamic mutual funds' overall performance are positive while Treynor Index found that moderate funds have better result in the market. Islamic mutual funds also found to have better performance according to the information ratio although Jensen's Alpha indicates that Islamic mutual funds are underperformed in the market. Longer period of data can be studied in the future as this paper only analyzed the performance from 2009 to 2010.

Suhana *et al*. (2012) assess the performance analysis on Islamic unit trust. The performance of 4 Islamic unit trust funds and 4 conventional unit trust funds are measured using Sharpe, Treynor and Jensen in comparison with KLCI. The results from Sharpe and Treynor index show that both Islamic and conventional unit trust funds underperform the market. While Jensen index shows that funds have negative value and fund managers don't have much ability to manage the unit trust funds. The poor performance of unit trust funds means that companies must make an improvement for the unit trusts that have poor result.

Dewi and Ferdian (2012) evaluate the performance of Islamic mutual funds in Indonesia and Malaysia from January 2006 to April 2009. The performance is evaluated using 5 different performance measure: Sharpe, Treynor, Jensen, Snail Trail Methodology and Market Timing. The empirical results show that Indonesian Islamic mutual funds slightly outperform the Malaysian Islamic mutual funds in terms of the ass*et al*location funds. However, Sharpe index indicate that Malaysian ass*et al*location funds were relatively better diversified Indonesian counterpart. This study also shown that fund managers in both countries have no market timing ability to increase the funds' return as a whole.

Tang *et al*. (2012) determine the size and performance of Chinese mutual fund: the role of economy of scale and liquidity from 2004 to the first half of 2010. The results show that an inverted u-shape relationship exist between fund size and the performance as scale of economy play important role in small funds while liquidity is substantial for large funds. This combination explains reasonably well regarding the relationship between fund size and mutual funds' performance.

Chieh (2012) presents return persistence and investment timing decisions in Taiwanese domestic equity mutual funds. This paper evaluates 200 domestic equity mutual funds between 1996 and 2009. The results show that performances in the previous year tend to be the same in the following year. In addition, investors timing performance is negatively related to fund size, length of fund history and funds' momentum style but positively related to value-style funds.

Yong and Jusoh (2012) specify the fund characteristics and fund performance: evidence of Malaysian mutual funds. 69 Malaysian mutual funds are evaluated between January 2006 and December 2009. The results show that higher risk provides higher return and management expenses do influence fund performance. This paper also found that young funds perform better than the old ones in the market. However, fund size and turnover ratios have no significant relationship with the fund performance.

Nassir *et al*. (2012) investigate the performance of Malaysian Islamic unit trust based on consistency ranking using the Sign Test. The results indicate that only four unit trust show non-random behavior in ranking while others show that the consistency in ranking is random and unpredictable consistent with the efficient market hypothesis. However, investors might have difficulties in choosing Islamic unit trust as there only several types that have consistency in ranking.

Rahman *et al*. (2012) evaluate mutual fund performance: an analysis of monthly returns of an emerging market. Jenson, Treynor, Sharpe and statistical models are used to measure the performance. The result show that most of the mutual funds perform better in the market according to Jenson and Treynor but not up to the benchmark for the Sharpe ratio. The growth oriented funds are found to not perform better in terms of total risk and not offering advantages of diversification to the investors.

Ferreira *et al*. (2012) present the determinants of mutual fund performance: a cross-country study of open-end equity mutual fund in 27 countries from 1997-2007. The results show that equity mutual funds around the world underperform the market. The US evidence of diminishing returns to scale is not significantly true as the performance of funds outside the USA and funds that invest overseas are not negatively affected by scale. This study indicates that mutual funds have better performance in the countries with liquid stock markets and strong legal institutions.

Soo (2011) determines market timing and selectivity performance: a cross-sectional analysis of Malaysian unit trust funds. This paper use Jensen's model to measure the overall performance and, Henriksson and Merton model to separate the performance into market timing and selectivity components. The results show that selectivity performance negatively related to fund size, risk and expense ratio compared to the positive relationship found for market timing performance. The findings also indicate that a fund's investment objective, age and turnover have no significant relations with the selectivity and market timing skills.

Mansor and Bhatti (2011) explore Islamic mutual funds performance for emerging market, during bullish and bearish: the case of Malaysia. Method that been used to measure the performance are Sharpe ratio, Treynor Index, Jensen's alpha, Modigliani measure, information ratio and adjusted Sharpe ratio. The results show that both Islamic and conventional mutual fund perform better than the market portfolio. In addition, the performance measure found that Islamic mutual fund outperform conventional mutual fund in 1995-1996 but underperform in 2005-2006. Both mutual funds have different performance during different economic cycle depending on their nature. However, this study only focuses on evaluating the overall performance while the individual performance is not explored by researcher.

Bashir and Nawang (2011) investigate Islamic and conventional unit trusts in Malaysia: a performance comparison. The monthly return of KLCI and KLSI are measured using Sharpe Index, Treynor Index and Jensen's Alpha to find out their performance. The results show that Islamic funds' average return is lower than the market portfolio compared to conventional funds. However, conventional funds have the lowest standard deviation in terms of risk-return characteristics. This study also indicate that fund managers have poor timing ability and unable to identify good stock as well as to forecast price movements of the general market.

Fadila *et al*. (2011) analyzing the performance of different economic cycles towards unit trust funds: a case of Public Mutual Berhad. This paper used Holding Period Return (HPR), Sharpe Index, Treynor Index and Jensen Index to determine the performance from 2001 to 2010. The results show that there is an effect between the different economic cycles with the unit trusts' performance. There is also a relationship between the unit trusts performance and different economic cycles as it has positive relationship between Sharpe Index and Treynor Index performance. Investor should be aware on the economic cycles before invest in unit trust.

Mansor and Bhatti (2011) determine risk and return analysis on performance of the Islamic mutual funds: evidence from Malaysia. This paper use monthly aggregate returns to evaluate the performance from 1996 to 2009 with KLCI index as the market benchmark. The results show a strong relationship between the Islamic and conventional portfolios with the market portfolio as both portfolios follow the market movement. On average, Islamic funds provide lower return than conventional and the result is statistically insignificant. This study also indicates that Islamic funds have more risk than conventional funds as the volatility is higher in the market. Islamic mutual funds didn't perform better than expected and more risky than as it still new in the market.

Hayat and Kraeussl (2011) analyze risk and return characteristics of Islamic equity funds using a sample of 145 Islamic equity funds from 2000 to 2009. The results show that IEF's underperforms both Islamic and conventional equity benchmarks during financial crisis as it's a low risk investment hence having lower returns. This study also found that fund managers are bad market timers as it reducing the fund's return while they try to timing the market. Investors should invest in other funds that have better option in risk and return as equity funds have poor performance.

Bialkowski and Otten (2011) evaluate the emerging market mutual fund performance: evidence for Poland. This paper use multi-factor Carhart model to evaluate the performance of 140 funds from 2000-2008. The results show that in the emerging market, Polish mutual funds underperform their relevant benchmarks and domestic funds outperform international funds. Both domestic and international funds also have exposure outside their region as domestic funds invest internationally and vice versa in the local market. This study also indicate that domestic managers able to beat their local market by adding back management fees to excess returns but they charging too high in the market.

Zhao *et al*. (2011) determine mutual funds performance evaluation based on endogenous benchmarks. This paper evaluates 25 actual mutual funds operating in the Chinese market for years 2005 and 2006. The results show that average efficiency decline in 2006 although the market environment was much better in 2005 due to

the relaxing of system risk control. Depend mostly on system risk control causes majority of mutual funds to not show persistence in efficiency.

Saad *et al.* (2010) present a comparative analysis of the performance of conventional and Islamic unit trust companies in Malaysia. This paper using Data Envelopment Analysis (DEA) to investigate the efficiency of 27 unit trust companies from 2002-2005. The results show that some of the Islamic unit trust companies perform better than conventional companies in terms of the efficiency. This study also indicates that technical efficiency is the main contributor in enhancing the efficiency of Malaysian unit trust industry. However, further studies should be done on the Islamic unit trust companies as only five companies are being investigated in this study.

Ming and Siok (2010) evaluating the mutual fund performance in an emerging Asian economy: the Malaysian experience. This paper examines the performance of 311 mutual funds from January 1990 to December 2005 in Malaysia. The results found that mutual fund performance yielded superior returns against benchmark with relatively low systematic risk in the emerging economy. The CAPM, Fama-French three-factor model and Cahart four-factor model indicated that beta, size and momentum factors are significant factor in explaining equity fund returns.

Trainor (2010) presents the performance measurement of high yield bond mutual funds. This paper examines conditional excess returns for individual high yield bond mutual funds. The results in overall performance show that high yield bond funds underperform the CSFB high yield index by 1.6 percent on an annualized basis which is 0.5 percent more than the average expense ratio. While the individual performance indicate that funds exhibit performance persistence and top ranked funds in one period outperform bottom ranked funds over the proceeding period by an average of 2.7 percent annually.

Abdullah (2009) investigate the performance of Malaysian unit trust investing in domestic versus international markets. This paper used Sharpe, Treynor and Jensen to measure the performance of 26 local funds and 23 internationally invested from June 2004 to May 2008. The results of Sharpe measure show that risk-adjusted performance of internationally diversified funds is not significantly different from the performance of well diversified domestic funds. However, investment of funds internationally just conducted in 2005 hence longer period of data can be studied in the future to get more result.

2.2 Methodology:

2.2.1 Data Collection Method:

This study focuses on conventional and shariah-based equity unit trust funds of Public Mutual Berhad. The data are collected from the company's website, annual report and fund's prospectus. The benchmark use for conventional unit trust funds is FTSE Bursa Malaysia KLCI (FBM KLCI), FTSE Bursa Malaysia EMAS Shariah Index (FBMS) for shariah-based unit trust funds and three-month Treasury-bill that use as risk-free rate benchmark.

2.2.2 Sampling:

The sample of this study consists of 7 conventional equity funds and 7 shariah-based equity funds. The data are computed for the 10 year period starting from January 2003 to December 2012 which is divided into three sub-periods reflecting the changing of economic condition. The period from January 2003 to December 2006 are labeled as non-crisis period, January 2007 to December 2009 as during crisis period and from January 2010 to December 2012 are labeled as after crisis period.

2.2.3 Data Screening:
2.2.3.1 Measurement of Performance:

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

$$R_{i,t} = \frac{NAV_t - NAV_{t-1} + D_t}{NAV_{t-1}}$$

Where $R_{i,t}$ is rate of return of the *i* unit trust at time *t*, NAV_t is net asset value at time *t*, NAV_{t-1} is net asset value one period before time *t and* D_t is the dividend or cash reimbursement at time *t*.

Three standard methods are used in this study to evaluate the performance of the conventional and shariah-based unit trust funds which are Sharpe index, Treynor index and Jensen Alpha index. Sharpe index can be calculated by:

$$S_i = \frac{(Rp - Rf)}{\sigma p}$$

Where S_i is Sharpe index measure for fund i, $(Rp - Rf)$ is the result by subtracting risk-free rate from the rate of return for a portfolio and σp is standard deviation of the portfolio returns.

However, Sharpe index was found to have biasness and was modified to Adjusted Sharpe index by Jobson and Korkie (1981). Adjusted Sharpe index can be calculated as follows:

$$AS_i = \frac{S_i \times N}{N + 0.75}$$

Where AS_i is the adjusted Sharpe index measure for fund i, S_i is Sharpe index measure for fund i and N is the number of observations.

Treynor index is the first measurement of portfolio performance that included risk. This method focused on the funds indiversifiable risk known as the systematic risk and measured by beta. Treynor index can be formulated by:

$$T_i = \frac{R_i - RFR}{\beta_i}$$

Where T_i is Treynor measure for fund i, R_i is the average return for fund i, RFR is average return on a risk free investment and β_i is systematic risk or beta for fund i.

The Jensen index was developed based on the capital asset pricing model (CAPM) by Jensen (1968). It can be calculated as follows:

$$\alpha = R_p - [R_f + (R_m - R_f)\beta]$$

Where R_p is the realised return of portfolio, R_f is the risk-free rate and R_m is the market return.

However, this method was modified and named as Adjusted Jensen index by Jobson and Korkie (1984) due to the biasness. The Adjusted Jensen index can be measured by:

$$AJ_i = \frac{\alpha_i}{\beta_i}$$

Where α_i is the alpha or the Jensen measure for fund i and β_i is the systematic risk or beta for fund.

2.2.3.2 Measurement of Risk:

Standard deviation is used for the measurement of total risk on investment. It can be calculated by:

$$\sigma = \sqrt{\frac{\sum (R_{i,t} - R_i)^2}{N - 1}}$$

Where $R_{i,t}$ is rate of return of the i unit trust at time t, R_i is the average return for fund i and N is the number of observations.

The systematic risk on investments is measured using beta which can be explain by:

$$\beta_i = \frac{Cov(R_i, R_M)}{Var(R_M)}$$

Where β_i the systematic risk or beta for fund i, $Cov(R_i, R_M)$ is the covariance between fund returns R_i and market returns R_M, and $Var(R_M)$ is the variance of market returns R_M.

2.2.4 Conceptual Framework:
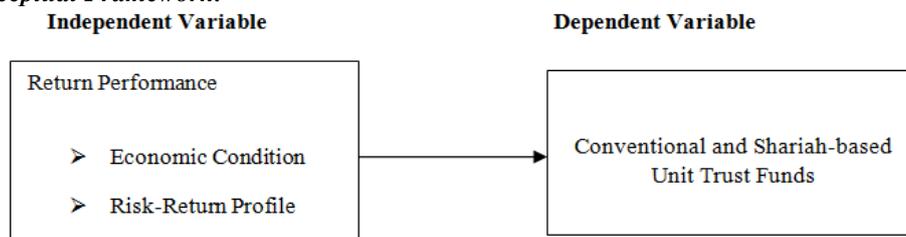
2.2.5 Research Hyphothesis:
Hypothesis 1:
H1$_a$ Economic condition does influence the performance of Islamic and conventional unit trust funds of Public Mutual Berhad.
H1$_b$ Economic condition does not influence the performance of Islamic and conventional unit trust funds of Public Mutual Berhad.

Hypothesis 2:
H2$_a$ There is a relationship between risk-return level and the performance of Islamic and conventional unit trust fund of Public Mutual Berhad.
H2$_b$ There is no relationship between risk-return level and the performance of Islamic and conventional unit trust fund of Public Mutual Berhad

Results:

Table 1: Descriptive statistic of conventional and shariah-based unit trust, market, risk-free rate, standard deviation, beta and level of significance.

Period	N	Average Return	Standard Deviation	Beta	Sig.
Whole period (Jan 2003 – Dec 2012)					
Conventional unit trust	61	0.1417	0.2273	1.021	0.000
Market (FBM KLCI)	61	0.1220	0.2158	1.000	
Risk-free rate	61	0.0283			
Shariah-based unit trust	40	0.1340	0.1878	0.944	0.000
Market (FBMS)	40	0.1070	0.1909	1.000	
Risk-free rate	40	0.0285			
1) Non-crisis (Jan 2003 – Dec 2006)					
Conventional unit trust	22	0.1453	0.1270	0.941	0.000
Market (FBM KLCI)	22	0.1194	0.1288	1.000	
Risk-free rate	22	0.0272			
Shariah-based unit trust	8	0.1224	0.0863	0.888	0.000
Market (FBMS)	8	0.0628	0.0965	1.000	
Risk-free rate	8	0.0278			
2) During crisis (Jan 2007 – Dec 2009)					
Conventional unit trust	18	0.1454	0.3568	1.025	0.000
Market (FBM KLCI)	18	0.0974	0.3439	1.000	
Risk-free rate	18	0.0295			
Shariah-based unit trust	11	0.1227	0.3294	0.947	0.000
Market (FBMS)	11	0.0841	0.3387	1.000	
Risk-free rate	11	0.0291			
3) After crisis (Jan 2010 – Dec 2012)					
Conventional unit trust	21	0.1351	0.1726	1.142	0.000
Market (FBM KLCI)	21	0.1445	0.1453	1.000	
Risk-free rate	21	0.0285			
Shariah-based unit trust	21	0.1443	0.1082	1.000	0.000
Market (FBMS)	21	0.1359	0.0921	1.000	
Risk-free rate	21	0.0285			

Table 2: Performance of conventional and shariah-based unit trust funds against the market.

Period	Adjusted Sharpe Index	Treynor Index	Adjusted Jensen Index
1) Non-crisis (Jan 2003 – Dec 2006)			
Conventional:			
Number of sample	6	6	6
No. of funds outperform FBM KLCI	4 (66.67%)	5 (83.33%)	5 (83.33%)
Shariah-based:			
Number of sample	3	3	3
No. of funds outperform FBMS	2 (66.67%)	2 (66.67%)	2 (66.67%)
2) During crisis (Jan 2007 – Dec 2009)			
Conventional:			
Number of sample	6	6	6
No. of funds outperform FBM KLCI	4 (66.67%)	4 (66.67%)	3 (50%)
Shariah-based:			
Number of sample	4	4	4
No. of funds outperform FBMS	3 (75%)	3 (75%)	2 (50%)
3) After crisis (Jan 2010 – Dec 2012)			
Conventional:			
Number of sample	7	7	7
No. of funds outperform FBM KLCI	2 (28.57%)	3 (42.85%)	2 (28.57%)
Shariah-based:			
Number of sample	7	7	7
No. of funds outperform FBMS	1 (14.28%)	2 (28.57%)	3 (42.85%)

The above table of Table 1 and Table 2 are the results for the measurement of performance and risk for conventional and shariah-based unit trust funds.

Discussion:

Table 1 from the findings summarizes the descriptive statistic of conventional and shariah-based unit trust funds, market return, risk-free rate, standard deviation, beta and level of significance. The result shows that conventional funds have a better performance than shariah-based funds although both funds outperform the market in the 10 year period. For the non-crisis period, it has been found that conventional funds and shariah-based funds yielded a return of 14.53% and 12.24% respectively. Conventional funds perform better in this period and both conventional and shariah-based funds outperform the market. Conventional funds maintain the performance during crisis period with return of 14.54% while shariah-based funds yielded return of 12.27%. Both funds also outperform the market during crisis period. The result from after crisis period shows that conventional funds face slump in their performance with yielded return of 13.51% which decreased from during crisis period. Shariah-based funds yielded return of 14.43% for after crisis period and perform better than conventional funds as well as outperform the market. Standard deviation measures the total risk of the unit trust funds. The larger the value of standard deviation, the higher the risk covered by the unit trust funds. By comparing the standard deviation of conventional and shariah-based unit trust funds for the whole period from January 2003 until December 2012, it is found that conventional funds have higher standard deviation compared to shariah-based funds with the value of 22.73%. High standard deviation means that conventional funds are more risky than the shariah-based funds. In addition, beta is used to measure the systematic risk of the market. The high value of beta shows the sensitivity of funds to the changes in the market. Table 1 show that for the whole period from January 2003 until December 2012, conventional funds have higher beta value of 1.021 compared to shariah-based 0.944. The result also shows that conventional funds have higher beta value than shariah-based funds in all sub- period. This implies that shariah-based funds are less sensitive to the changes in the market compared to conventional funds. However, conventional funds have lower beta value than market during crisis period which means that both funds cannot change much relative to the market. Level of significance is used to evaluate the hypothesis and determine the relationship between risk-return profile and fund's performance. The result shows that there is significant relationship between risk-return profile and the fund performance as it is significant $0.000 < 0.005$ at 5% level. It means that risk-return profile is related and has relationship with fund's performance. Meanwhile Table 2 presents the performance of conventional and shariah-based funds against the market from January 2003 until December 2012 which consists of Adjusted Sharpe index, Treynor index and Adjusted Jensen index. It is shown that during non-crisis period, majority of conventional and shariah-based funds outperform the market with the highest value are 83.3% in terms of Treynor index and Adjusted Jensen index for conventional funds, and 66.67% in terms of Adjusted Sharpe index and for shariah-based funds. During crisis period, most of funds outperform the market and shariah-based funds have better performance than conventional funds with 75% of funds outperform the market than 66.67% in terms of Adjusted Sharpe index and Treynor index. While in terms of Adjusted Jensen index, 50% of conventional and shariah based funds outperform the market. The result for after crisis period shows decreased in fund's performance with not even half of the funds outperforms the market. There are 42.85% of funds outperform the market in terms of Treynor index for conventional funds and Adjusted Jensen index for shariah-based funds. Meanwhile, 28.57% of funds outperform the market in terms of Adjusted Sharpe index and Adjusted Jensen index for conventional funds while Treynor index for shariah-based funds. A relatively lower result is seen for shariah-based funds with only 14.28% of fund able to perform well than the market and this brings to one of the lowest average result among other sub-period.

Conclusion:

This paper focuses on evaluating the conventional and shariah-based unit trust funds performance of Public Mutual Berhad over the period from 2003 until 2012. Performance is analyzed from return performance perspective by measuring it against the appropriate benchmark with three standard methods which is Sharpe index, Treynor index and Jensen index. The study found that conventional funds perform better than shariah-based funds in non-crisis and after crisis period while shariah-based unit trust funds have better performance and outperform the market during crisis period. The findings are robust based on the various measurement method used in this study. Additionally, the beta value suggests that conventional funds are more sensitive to the change in the market compared to shariah-based funds for the whole period although conventional funds are less sensitive to the changes in the market during non-crisis period. In terms of risk-return profile, conventional funds have higher standard deviation than shariah-based funds although it has lower value during non-crisis period. This implied that the risk is consistent with the objective of conventional unit trust funds. The result also found that economic condition and risk-return profile are related and have relationship with the funds' performance hence the hypotheses for this study is accepted. This study will help investors to make decision since information and prior knowledge are provided in this study regarding the conventional and shariah-based unit trust funds. The findings of this study also could be further evaluated for a bigger sample, characteristic and types of conventional and shariah-based funds. Performance also can be measured by using other technique than Shrape index, Treynor index and Jensen index.

REFERENCES

Abdullah, 2009. The performance of Malaysian unit trusts investing in domestic versus international markets. Asian Academy of Management Journal of Accounting and Finance, 5(2): 77-100.

Badrinath and Gubellini, 2012. Does conditional mutual fund outperformance exist?. Managerial Finance, 38(12): 1160-1183.

Bank Negara Malaysia (BNM). Monthly Statistical Bulletin June 2013. www.bnm.gov.my.

Bashir and Nawang, 2011. Islamic and conventional unit trusts in Malaysia: A performance comparison. Journal of Islamic Economics, Banking and Finance, 7(4).

Bialkowski and Otten, 2011. Emerging market mutual fund performance: Evidence for Poland. North American Journal of Economics and Finance, 22: 118-130.

Bodson, *et al.*, 2013. A global approach to mutual funds market timing ability. Journal of Empirical Finance 20: 96-101.

Cao, *et al.*, 2013. Do mutual fund managers time market liquidity?. Journal of Financial Markets, 16: 279-307.

Chieh, 2012. Return persistence and investment timing decisions in Taiwanese domestic equity mutual funds. Managerial Finance, 38(9): 873-891.

Cuthbertson and Nitzsche, 2013. Performance, stock selection and market timing of the German equity mutual fund industry. Journal of Empirical Finance, 21: 86-101.

Dewi and Ferdian, 2012. Evaluating performance of Islamic mutual funds in Indonesia and Malaysia. Journal of Applied Economics and Business Research (JAEBR), 2(1): 11-33.

Fadila, *et al.*, 2011. Analyzing performances of different economic cycles towards unit trust funds: A case of Public Mutual Berhad. International Conference on Management (ICM 2011) proceeding, pp: 1541-1557.

Ferreira, *et al.*, 2012. The determinants of mutual fund performance: A cross-country study. Review of Finance, 0: 1-43.

Garcia, 2013. The persistence of European mutual fund performance. Research in International Business and Finance, 28: 45-67.

Hammami, *et al.*, 2013. Mutual fund performance in Tunisia: A multivariate GARCH approach. Research in International Business and Finance, 29: 35-51.

Hayat and Kraeussl, 2011. Risk and return characteristics of Islamic equity funds. Emerging Markets Review, 12: 189-203.

Kassim and Kamil, 2012. Performance of Islamic unit trusts during the 2007 global financial crisis: Evidence from Malaysia. Asian Academy of Management Journal, 17(2): 59-78.

Kusairi, *et al.*, 2013. Characteristics, monetary environment and performance of mutual funds: Malaysian evidence. Business and Information, pp: 1115-1125.

Mansor and Bhatti, 2011. Islamic mutual funds performance for emerging market, during bullish and bearish: The case of Malaysia. 2nd International Conference on Business and Economic Research (2nd ICBER 2011) proceeding, pp: 770-789.

Mansor and Bhatti, 2011. Risk and return analysis on performance of the Islamic mutual funds: Evidence from Malaysia. Global Economy and Finance Journal, 4(1): 19-31.

Merdad, *et al.*, 2010. Islamic versus conventional mutual fund performance in Saudi Arabia: A case study. Department of Economics and Finance, University of New Orleans, New Orleans, USA, 23(2): 157-193 (2010 A.D/1431 A.H).

Ming and Siok, 2010. Evaluating mutual fund performance in an emerging Asian economy: The Malaysian experience. Journal of Asian Economics, 21: 378-390.

Nassir, *et al.*, 2012. Performance of Malaysian Islamic unit trusts based on consistency of ranking. Greener Journal of Medical Sciences, 2(1): 012-021.

Public Mutual Berhad. Funds' report. www.publicmutual.com.my.

Rahman, *et al.*, 2012. Mutual fund performance: An analysis of monthly returns of an emerging market. Research Journal of Finance and Accounting, 3(4).

Razzaq, *et al.*, 2012. Performance of Islamic mutual funds in Pakistan. Economics and Finance Review, 2(3): 16-25.

Saad, *et al.*, 2010. A comparative analysis of the performance of conventional and Islamic unit trust companies in Malaysia. International Journal of Managerial Finance, 6(1): 24-47.

Soo, 2011. Market timing and selectivity performance- A cross-sectional analysis of Malaysian unit trust funds. Centerforpbberfr.rutgers.edu/2011PBFEAM.

Suhana, *et al.*, 2012. Performance analysis on Islamic unit trust. Proceedings International Conference of Technology Management, Business and Entrepreneurship 2012 (ICTMBE2012), pp: 643-655.

Tang, *et al.*, 2012. Size and performance of Chinese mutual funds: The role of economy of scale and liquidity. Pacific-Basin Finance Journal, 20: 228-246.

Trainor, 2010. Performance measurement of high yield bond mutual funds. Management Research Review, 33(6):. 609-616.

Yong and Jusih, 2012. Fund characteristics and fund performance: Evidence of Malaysian mutual funds. International Journal of Economics and Management Sciences, 1(9): 31-43.

Zhao, *et al.*, 2011. Mutual funds performance evaluation based on endogenous benchmarks. Expert Systems with Application, 38: 3663-3670.