# Performance of Unit Trust Funds in Malaysia: A Comparison Between Conventional and Islamic Unit Trusts

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## ABSTRACT

*This paper reports the comparison of performance between Islamic and conventional unit trust funds in Malaysia. Least Square Methods were used to describe the overall growth of Malaysian unit trusts for the years 2004 to 2012 based on the number of launched funds, units in circulation, number of accounts and total net asset value. The results indicated that conventional unit trust funds grew exponentially while Islamic unit trusts grew linearly. The performances of 4 Islamic and 4 conventional unit trust funds based on their efficiencies (ratio of weighted sum of outputs to weighted sum of inputs) were measured using Data Envelopment Analysis over a three-year period (2010-2012). The performances were measured based on two inputs namely the Portfolio Turnover Ratio (PTR) and Management Expense Ratio (MER) while the output was the companies' annual returns. The outcome is the ranking of unit trusts performance which can be a good reference for investors. The finding shows that conventional unit trusts were the preferred investment among Malaysians. However, the growth of Islamic unit trusts was less affected by the world economic crisis compared to the growth of conventional unit trusts. This is reflected in the decrease of growth of the conventional unit trusts during the years 2007-2008, the time when the world economy was hit hard. On the contrary, the Islamic unit trust showed a gradually increasing growth during the same time period. CIMB conventional is found to be the best unit trust among the conventional unit trusts studied while Kuwait Finance House is found to be the best Islamic*

*unit trust in this study, second only to CIMB conventional. Public Bank unit trust performed consistently on the average while AmBank showed poor performance throughout the years. CIMB conventional performed better than CIMB Islamic but RHB Islamic and AmBank Islamic performed better than their conventional counterparts.*

**Keyword:** *Data Envelopment Analysis, Performance, Unit Trust.*

## INTRODUCTION

Nowadays, investors can choose from a list of investment alternatives such as investment in shares, properties, fixed deposit or unit trusts to generate income. Each alternative is associated with some level of risk and returns. Knowing the risk and possible returns of an investment provides security to investors in the long run (Tarmudi et al., 2012). Unit trust is more appealing and provides a wider investment base for small investors. The popularity of unit trust investment in Malaysia has shown an increasing trend, thus creating intense competitions among the unit trust fund management companies in the unit trust industry. As such, more innovative unit trust products have been developed and introduced in order to attract potential investors (Wan Rasyidah et.al, 2008). Due to the growing demand from Islamic investors, the Islamic unit trust funds were introduced in Malaysia in the middle of 1990's. Islamic unit trust operates in compliance with Shariah (Islamic law) principles.

Conventional and Islamic unit trusts may react differently to similar economic and political factors due to their differences in investment products and activities. Hence, there is a need to measure the performance of these unit trusts in order to identify the differences between them. Researches on performance of unit trust were carried out before using stochastic and parametric techniques (Wan Rasyidah et.al, 2008).

In this paper, the performance of Islamic unit trusts in comparison to the conventional unit trusts in Malaysia will be identified and reported. The growth of both Islamic and conventional unit trusts was analyzed over a nine-year period commencing January 2004 to December 2012 measured in terms of the number of launched funds, units in circulation, number of accounts and the total net asset value. The performance of eight unit trusts (4 Islamic and 4 conventional) were then measured using Data Envelopment

Analysis based on their efficiencies for the years 2010, 2011 and 2012. The findings will highlight the differences between the two types of unit trusts in terms of their annual growth and performance.

This paper is organized in such a way that introduction is given in Section 1 followed by reviews on related literature in Section 2. Methodology and implementation are discussed in Section 3. Results and discussions are presented in section 4 and finally conclusions are drawn in section 5.

## LITERATURE REVIEW

Previous studies have shown that investments in unit trusts in Malaysia do not generate a consistent investment gain though found to have significant relationship with the market trends (Mohd Rahimie, A.K., 2010). There are two types of unit trust in Malaysia namely the conventional and Islamic unit trusts. The conventional unit trust funds would be able to invest in any Malaysian assets without any restriction. However, the Islamic unit trusts focuses on the portfolio of 'halal' stocks and bonds complying with the Syariah principle. So, companies involved in activities, products or services related to conventional banking, insurance and financial services, gambling, alcoholic beverages and non-halal food products and also companies whose products can cause illness, death, disease or even promote social ills such as tobacco are not allowed (Maslina and Razali, 2006). The performances of both conventional and Islamic unit trusts are affected by several factors such as the economic and political situations of the country (Norma et al. 2010). Thus, information on the performance of unit trust is important to investors to ensure maximum return on their investments. Comparing the growth and performance of the two types of unit trust is important and relevant for investors in Malaysia. This is because of the dual financial system in which Islamic unit trust companies and conventional unit trust operate simultaneously in this country (Norma et. al, 2010). The performance of funds is influenced by political and economic conditions of a country since the market will be badly affected during an economic crisis. However, the differences on the impact of crisis on conventional and Islamic unit trusts may or may not be statistically significant since conventional funds have better diversification level compared to Islamic funds (Abdullah, 2003).

Researchers have studied the performance of unit trust by using the standard performance measurement for funds known as Adjusted Sharpe, Treynor and Alpha Indices. In these performance measurements, the composite index of the Kuala Lumpur stock exchange (KLSE) represented the market benchmark for the conventional funds and Islamic conventional funds index as a proxy for the market. Generally, these measurements are based on business concepts of risk assessment and return profiles (Maslina and Razali, 2006). Mohamed and Wan Rasyidah had done a comparable performance between Islamic and conventional unit trust in Malaysia based on financial risk on three different objectives namely growth, income and balance. They had also used Sharpe, Treynor and Alpha Index in their study (Mohamed, S. and Wan Rasyidah, 2011). In our own study, Data Envelopment Analysis (DEA) was used to measure the performances of several conventional and Islamic unit trust funds in Malaysia based on their efficiencies. Once measured, the performances of unit trust understudied are ranked and compared.

DEA is a linear programming based technique for measuring relative efficiencies of a fairly homogenous set of decision making units (DMUs). DEA method is based on linear programming (LP) approach to estimate the efficient frontiers. An LP is an optimization method where all involved functions are expressed as linear functions in x; in particular, all the constraints are linear equalities or inequalities. The primary advantage of DEA is that it considers multiple factors and does not require parametric assumptions of traditional multivariate methods (Lewis, S., 2000).

DEA had been used to measure performance of competitors in many fields by focusing on the efficiencies of relevant factors to improve performance of funds (Khalid, S. and Ahmad, B., 2006). Norma et. al, (2010) had done a comparative analysis of performance of conventional and Islamic unit trust in Malaysia based on data for the years 2002 to 2005. In their study, the performance was measured based on two input factors which were the portfolio turnover ratio (PTR) and a management expense ratio (MER). The output used in that study was Returns. On the other hand, Lotfi and Navidi had used DEA to rank the efficiencies of 20 Iranian bank branches. In their study the performance of the bank branches were ranked to determine branches which were efficient and those which were inefficient in their services (Lotfi et. al, 2011). Norma et.al, reported an application of DEA analysis to examine the efficiency of the unit trust industry in the United States, by examining the relationship between return (representing

benefit) and expense ratio, turnover, risk and loads (representing costs) (Norma et. al, 2010). The results showed that the efficiency of unit trust was not related to transaction costs and that the impact of scale effect was mixed.

In our study, the performance of several Islamic and conventional unit trust funds in Malaysia were measured using DEA based on their efficiency using data collected in 2010, 2011and 2012. In addition to the performance measurement by DEA, the growth functions representing both types of unit trusts were identified using Least Square methods over a nine-year period of 2004-2012. Four Islamic unit trust funds namely AmIslamic Bank, RHB Islamic Bank, CIMB Islamic Bank and Kuwait Finance House and four conventional unit trust funds including AmBank, RHB Bank, CIMB Bank and Public Bank were compared in terms of growth and performance efficiencies.

## METHODOLOGY AND IMPLEMENTATION

The research methodology is divided into two parts. Data on unit trust funds studied were gathered from respective funds' annual reports available online.

### Part 1: Identification of growth of unit trust funds using Least Square Method

Growth patterns of conventional and Islamic unit trust in Malaysia from 2004 to 2012 were identified using least square method based on the number of launched funds, units in circulation, number of accounts and total net asset value of funds. The best growth function is identified based on the smallest Sum Squared Errors (SSE). The idea behind the linear least squares method as used by Stan Brown (2007) is to minimize the sum S such that

$$S = \sum_{i=1}^{N} \left( y_i - \sum_{k=0}^{\infty} a_k x_i^k \right)^2 \qquad (1)$$

where
$x_i$ = value of the independent variable for the $i^{th}$ observation
$y_i$ =value of the dependent variable for the $i^{th}$ observation.

## Part 2: Measurement of unit trust performance using Data Envelopment Analysis

Data were extracted from the Annual Reports of eight unit trust companies studied for the years 2010, 2011 and 2012. The data include:

1. Input factors: Portfolio Turnover Ratio (PTR) and the Management Expenses Ratio (MER).
2. Output factor : Annual Returns.

The efficiency score is defined as:

$$Efficiency = \frac{weighted\ sum\ of\ outputs}{weighted\ sum\ of\ inputs} \qquad (2)$$

For the 8 unit trusts, each with two inputs and one output, the relative efficiency score of a unit trust is obtained by solving the following model:

(3)

$$\max \quad \frac{\sum_{k=1}^{s} v_k y_{kp}}{\sum_{j=1}^{m} u_j x_{jp}}$$

$$s.t \quad \frac{\sum_{k=1}^{s} v_k y_{ki}}{\sum_{j=1}^{m} u_j x_{ji}} \le 1 \quad \forall i$$

$$v_k, u_j \ge 0 \quad \forall k, j$$

Where

$k = 1,2,3, ....,8$

$j = 1,2,$

$i = 1,$

$y_{ki} = amount\ of\ output\ k\ produced\ by\ DMU\ i,$

$x_{ji} = amount\ of\ input\ j\ utilized\ by\ DMU\ i,$

$v_k = weight\ given\ to\ output\ k,$

$u_j = weight\ given\ to\ input\ j,$

The fractional program shown in (3) can be converted to a linear program as shown in (4).

$$\begin{aligned} \max \quad & \sum_{k=1}^{s} v_k y_{kp} \\ s.t \quad & \sum_{j=1}^{m} u_j x_{jp} = 1 \\ & \sum_{k=1}^{s} v_k y_{ki} - \sum_{j=1}^{m} u_j x_{ji} \le 0 \quad \forall i \\ & v_k, u_j \ge 0 \quad \forall k, j. \end{aligned} \tag{4}$$

The above calculation was run eight times to generate the relative efficiency scores of all the DMUs which in this case were the unit trust funds. Each DMU selects the input and output weights that maximize its efficiency score. In general, a DMU is considered to be efficient if it obtains a score of 1 and a score of less than 1 implies that it is inefficient.

## RESULTS AND DISCUSSION

Discussions of results are divided into two parts corresponding to two different parts in the methodology.

### Part1: Unit Trust Growth Patterns

Growth patterns of Islamic and conventional unit trusts were compared based on several indicators which include number of launched funds, number of units in circulation, number of accounts and total Net asset values (NAV) for the years 2004-2012 covering all Islamic and Conventional unit trusts traded in Malaysia. The growth patterns are shown in Figures 1-4 below.

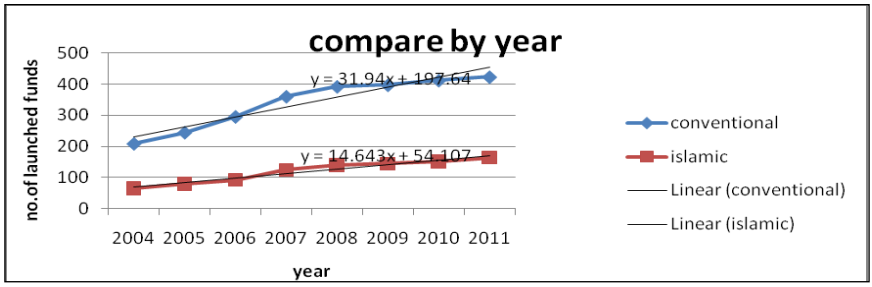


**Figure 1: Growth Trend Lines for Number of Launched Funds for 2004-2012**

Figure 1 shows the linear growth patterns for Islamic and conventional unit trust funds in Malaysia based on the number of launched funds for the year 2004-2012. Both types of funds showed increasing volume of funds launched with conventional funds having more funds being launched.

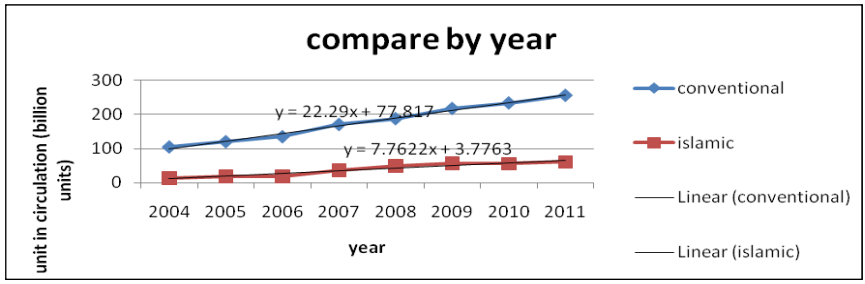


**Figure 2: Growth Trend Lines for Units in Circulation for 2004-2012**

Figure 2 shows the linear growth patterns for Islamic and conventional unit trust funds in Malaysia based on units in circulation (billion units) for the year 2004-2012. Both types of funds showed increasing number of units in circulation with conventional funds having more units being circulated.

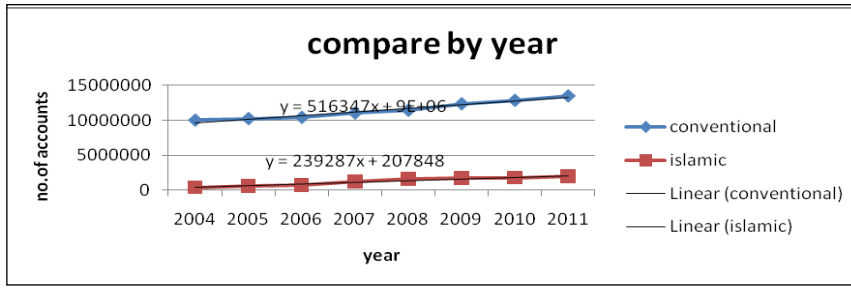


**Figure 3: Growth Trend Lines for Number of Accounts for 2004-2012**

Figure 3 shows the linear growth patterns for Islamic and conventional unit trust funds in Malaysia based on the number of accounts for the year 2004-2012. Both types of funds showed increasing number of accounts with conventional funds having more accounts created.

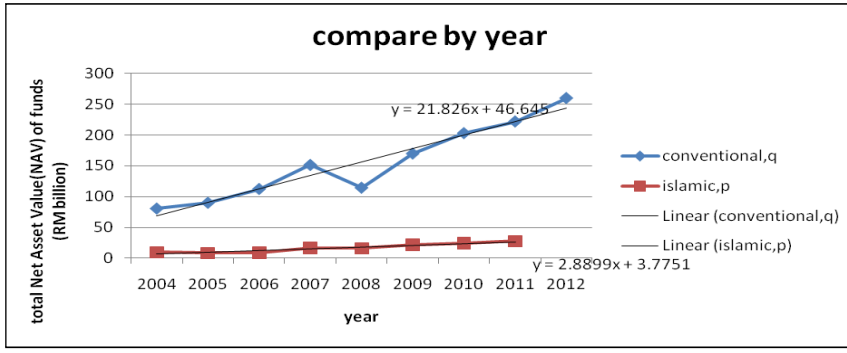


**Figure 4: Growth Trend Lines for Net Asset Value (NAV) for the Year 2004-2012**

Figure 4 shows linear the growth patterns for Islamic and conventional unit trust funds in Malaysia based on total net asset value (NAV) for the year 2004-2012. Both types of funds showed increasing total net asset value with conventional having bigger total NAV.

Observations on the two types of unit trust funds growth patterns show that in general conventional unit trust in Malaysia are still bigger in terms of volumes when compared to Islamic unit trust for each year starting from 2004 to 2012 as shown in Figures 1-4. Although both conventional and Islamic unit trust studied indicated increasing trends as measured in terms of number of launched funds, number of accounts, units in circulations

and total NAV, conventional unit trusts grew at a bigger rate (exponential growth) compared to Islamic unit trust (linear growth) over the nine-year period as shown in Figure 5.

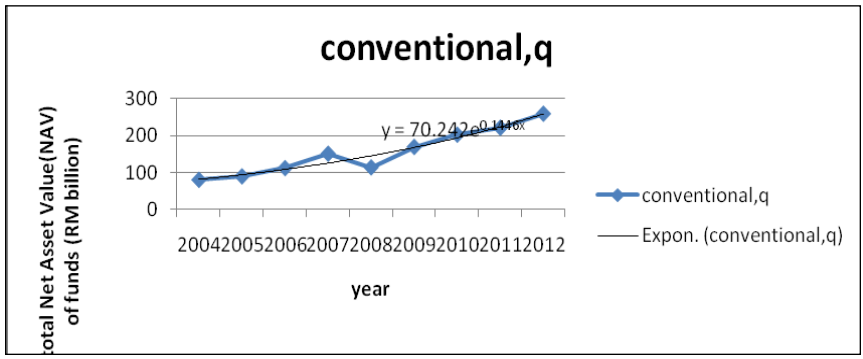


**Figure 5: Exponential Best Fit Curve for Total Net Asset Value (NAV) of Conventional Unit Trusts for the Year 2004-2012**

Figure 5 shows the exponential growth patterns for Islamic and conventional unit trust funds in Malaysia based on total net asset value (NAV) for the year 2004-2012. Both types of funds showed increasing total net asset value with conventional unit trust having bigger total NAV. This is not surprising since Islamic unit trusts are still new to Malaysians in general. Thus, investors were more attracted to invest in conventional unit trust funds. However, it is interesting to note that the growth of the conventional unit trust had dropped significantly in the year 2008 before picking up again in the following year. This could be due to the world economic crisis which took place around 2007-2008. Nevertheless, the growth of Islamic unit trust funds was more stable and less affected during the same period of time. In fact Islamic unit trusts showed increasing growth throughout the nine year period (2004-2012).

The Sum Squared Errors (SSE) for the growth trend curves were calculated to estimate the fitting of the curves representing each data set. The SSE values are tabulated in Table1 and Table2. The finding shows that linear trend lines fit the growth of Islamic unit trusts better than the conventional unit trusts since the SSE is lower for the Islamic unit trusts. Exponential curves found to fit the growth of conventional unit trust better as reflected by smaller SSE values shown below.

Let

$q$ = actual NAV value for conventional
$p$ = actual NAV value for islamic
$q'$ = predicted NAV value for conventional
$p'$ = predicted NAV value for islamic

Then

*Predicted value, p'* = $3.2617x + 2.5358$, *where* $x = n$, $n$ = the number of years (1, 2, ..., 9)
*Predicted value, q'* = $21.826x + 46.645$, *where* $x = n$, $n$ = the number of years (1, 2, ..., 9)
*Square Error = (actual value - predicted value)*$^2$

**Table 1: The SSE Value for Conventional and Islamic Unit Trusts for the Year 2004-2012 using Linear Best Fit Line**

| n | year | NAV for conventional, q | NAV for Islamic, p | Total NAV | NAV for conventional % | NAV for Islamic % | q' | (q-q')^2 | p' | (p-p')^2 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2004 | 80.624 | 9.761 | 90.385 | 89.20 | 10.80 | 68.471 | 147.695409 | 5.7975 | 15.70933225 |
| 2 | 2005 | 89.998 | 8.487 | 98.485 | 91.38 | 8.62 | 90.297 | 0.089401 | 9.5549 | 1.14041041 |
| 3 | 2006 | 112.309 | 9.101 | 121.41 | 92.50 | 7.50 | 112.123 | 0.034596 | 12.4448 | 11.18099844 |
| 4 | 2007 | 151.244 | 16.785 | 168.029 | 90.01 | 9.99 | 133.949 | 299.117025 | 15.3347 | 2.10337009 |
| 5 | 2008 | 114.318 | 16.118 | 130.436 | 87.64 | 12.36 | 155.775 | 1718.682849 | 18.2246 | 4.43776356 |
| 6 | 2009 | 169.626 | 22.08 | 191.706 | 88.48 | 11.52 | 177.601 | 63.600625 | 21.1145 | 0.93219025 |
| 7 | 2010 | 202.768 | 24.044 | 226.812 | 89.40 | 10.60 | 199.427 | 11.162281 | 24.0044 | 0.00156816 |
| 8 | 2011 | 221.599 | 27.86 | 249.459 | 88.83 | 11.17 | 221.253 | 0.119716 | 26.8943 | 0.93257649 |
| 9 | 2012 | 259.49 | 35.361 | 294.851 | 88.01 | 11.99 | 243.079 | 269.320921 | 29.7842 | 31.10069824 |
| | | | | | | | **SSE** | 2509.822823 | **SSE** | 67.53890789 |

The SSE values for Islamic and conventional unit trust funds using linear approximation trend lines are tabulated in Table 1. Lower SSE value for Islamic unit trust funds (67.53890789) shows that the growth of Islamic unit trust funds is suitable to be approximated using linear growth approximation.

**Table 2: The SSE Value for Conventional and Islamic Unit Trusts for the Year 2004-2012 using Exponential, Logarithmic and Quadratic Best Fit Curves**

| | exponential | | logarithm | | poly | |
|---|---|---|---|---|---|---|
| year | q' | (q-q')^2 | q' | (q-q')^2 | q' | (q-q")^2 |
| 2004 | 81.17006 | 0.298178 | 47.625 | 1088.934 | 83.0428 | 5.850593 |
| 2005 | 93.79827 | 14.44206 | 100.3264 | 106.6752 | 93.9402 | 15.54094 |
| 2006 | 108.3911 | 15.34957 | 131.1547 | 355.16 | 107.9602 | 18.91206 |
| 2007 | 125.2543 | 675.4622 | 153.0277 | 3.181703 | 125.1028 | 683.3623 |
| 2008 | 144.7411 | 925.5632 | 169.9938 | 3099.793 | 145.368 | 964.1025 |
| 2009 | 167.2595 | 5.600382 | 183.8561 | 202.4945 | 168.7558 | 0.757248 |
| 2010 | 193.2813 | 89.99828 | 195.5764 | 51.71853 | 195.2662 | 56.277 |
| 2011 | 223.3514 | 3.070989 | 205.7291 | 251.8537 | 224.8992 | 10.89132 |
| 2012 | 258.0998 | 1.932591 | 214.6844 | 2007.544 | 257.6548 | 3.367959 |
| | SSE | 1731.717 | SSE | 7167.354 | SEE | 1759.062 |

Table 2 tabulates the SSE values using Exponential, Logarithmic and Quadratic approximation for conventional unit trust funds. Exponential approximation found to have smallest SSE value which indicates that the growth of conventional unit trust funds follows the exponential approximations over the period 2004 to 2012.

## Part 2: Performance Measurement using DEA

In this section, findings on the performance measurement based on efficiencies for eight (8) unit trust funds are discussed.

**Table 3: Input (MER and PTR) and Output (Return) Data for the Year 2010, 2011 and 2012**

| UNIT TRUST FUND/YEAR | 2010 | | | 2012 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|---|
| | MER | PTR | RETURN | MER | PTR | RETURN | MER | PTR | RETURN |
| AmBank | 1.23 | 1.25 | 4.47 | 1.20 | 1.35 | 4.96 | 1.19 | 0.98 | -26.15 |
| CIMB | 0.59 | 0.31 | 10.31 | 0.57 | 0.08 | 7.58 | 0.58 | 0.16 | 15.98 |
| RHB Bank | 0.95 | 0.43 | 5.00 | 0.99 | 0.58 | 12.30 | 0.97 | 0.31 | -0.66 |
| Public Bank | 1.56 | 0.31 | 9.11 | 1.56 | 0.17 | 3.51 | 1.53 | 0.24 | 5.87 |
| AmIslamic Bank | 0.59 | 0.56 | 7.90 | 0.92 | 1.09 | -5.63 | 0.76 | 0.25 | 1.16 |
| RHB islamic | 1.13 | 0.37 | 8.60 | 0.13 | 0.42 | 8.14 | 1.31 | 0.91 | -0.40 |
| CIMB Islamic | 1.81 | 0.97 | 7.16 | 2.37 | 1.05 | -0.31 | 1.73 | 0.76 | 11.32 |
| Kuwait Finance | 1.97 | 0.71 | 29.70 | 2.01 | 0.58 | 16.55 | 2.17 | 0.64 | 13.22 |

Table 3 shows the input data (MER and PTR) and output data (Return) of unit trust funds for the year 2010, 2011 and 2012 for 4 Islamic unit trusts (AmIslamic Bank, RHB Islamic, CIMB Islamic, Kuwait Finance House) and 4 conventional unit trusts (AmBank, CIMB, RHB Bank, Public Bank). Efficiencies for the 8 unit trust were measured using PTR and MER as inputs and Total Return as output. The calculated efficiencies using DEA and ranking of unit trusts for each year are shown in Tables 4-6 below.

**Table 4: Performance Efficiency for the Year 2010**

| | Output | Input | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Unit Trust Fund | Return | PTR | MER | Weighted output | Weighted input | Efficiency | Working | rank |
| AmBank | 4.47 | 1.25 | 1.23 | 0.15 | 1.02 | 0.15 | -0.87 | 8 |
| CIMB | 10.31 | 0.31 | 0.59 | 0.35 | 0.35 | 1.00 | 0.00 | 1 |
| RHB Bank | 5.00 | 0.43 | 0.95 | 0.17 | 0.53 | 0.32 | -0.36 | 6 |
| Public Bank | 9.11 | 0.31 | 1.56 | 0.31 | 0.67 | 0.46 | -0.36 | 5 |
| AmIslamic Bank | 7.90 | 0.56 | 0.59 | 0.27 | 0.47 | 0.57 | -0.20 | 3 |
| RHB Islamic | 8.60 | 0.37 | 1.13 | 0.29 | 0.56 | 0.52 | -0.27 | 4 |
| CIMB Islamic | 7.16 | 0.97 | 1.81 | 0.24 | 1.07 | 0.22 | -0.83 | 7 |
| Kuwait Finance | 29.70 | 0.71 | 1.97 | 1.00 | 1.00 | 1.00 | 0.00 | 1 |
| weight | 0.03367 | 0.48937 | 0.33124 | | | | | |

Table 4 shows the DEA calculated efficiency and ranking of unit trust funds for the year 2010. CIMB and Kuwait Finance House found to be the most efficient unit trust funds in 2010 while AmBank performed the worst.

**Table 5: Performance Efficiency of Unit Trusts Funds for the Year 2011**

| | Output | Input | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Unit Trust Fund | Return | PTR | MER | Weighted output | Weighted input | Efficiency | Working | rank |
| AmBank | 4.96 | 1.35 | 1.2 | 0.14 | 1.00 | 0.14 | -0.86 | 6 |
| CIMB | 7.58 | 0.08 | 0.57 | 0.22 | 0.22 | 1.00 | 0.00 | 1 |
| RHB Bank | 12.3 | 0.58 | 0.99 | 0.35 | 0.58 | 0.61 | -0.23 | 3 |
| Public Bank | 3.51 | 0.17 | 1.56 | 0.10 | 0.57 | 0.18 | -0.47 | 5 |
| AmIslamic Bank | -5.63 | 1.09 | 0.92 | -0.16 | 0.79 | -0.20 | -0.95 | 8 |
| RHB Islamic | 8.14 | 0.42 | 0.13 | 0.23 | 0.23 | 1.00 | 0.00 | 2 |
| CIMB Islamic | -0.31 | 1.05 | 2.37 | -0.01 | 1.23 | -0.01 | -1.24 | 7 |
| Kuwait Finance | 16.55 | 0.58 | 2.01 | 0.48 | 0.90 | 0.53 | -0.43 | 4 |
| weight | 0.02872 | 0.45839 | 0.31765 | | | | | |

Table 5 shows the DEA calculated efficiency and ranking of unit trust funds for the year 2011. CIMB and RHB Islamic found to be the most efficient unit trust funds in 2012 while AmIslamic Bank performed the worst.

**Table 6: Performance Efficiency of unit trusts funds for the year 2012**

| | Output | Input | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Unit Trust Fund | Return | PTR | MER | Weighted output | Weighted input | Efficiency | Working | rank |
| AmBank | -26.15 | 0.98 | 1.19 | -1.64 | 2.05 | -0.80 | -3.69 | 8 |
| CIMB | 15.98 | 0.16 | 0.58 | 1.00 | 1.00 | 1.00 | 0.00 | 1 |
| RHB Bank | -0.66 | 0.31 | 0.97 | -0.04 | 1.67 | -0.02 | -1.71 | 7 |
| Public Bank | 5.87 | 0.24 | 1.53 | 0.37 | 2.64 | 0.14 | -2.27 | 4 |
| AmIslamic Bank | 1.16 | 0.25 | 0.76 | 0.07 | 1.31 | 0.06 | -1.24 | 5 |
| RHB Islamic | -0.40 | 0.91 | 1.31 | -0.03 | 2.26 | -0.01 | -2.28 | 6 |
| CIMB Islamic | 11.32 | 0.76 | 1.73 | 0.71 | 2.98 | 0.24 | -2.27 | 2 |
| Kuwait Finance House | 13.22 | 0.64 | 2.17 | 0.83 | 3.74 | 0.22 | -2.91 | 3 |
| weight | 0.06258 | 0.00000 | 1.72414 | | | | | |

Table 6 shows the DEA calculated efficiency and ranking of unit trust funds for the year 2012. CIMB was found to be the most efficient unit trust fund in 2012 followed by CIMB Islamic and Kuwait Finance House. Am Bank remains to be the least performing unit trust fund.

From the above tables, performance analysis for the Islamic and conventional unit trusts can be summarized as follows:

1. CIMB unit trust shows consistently superior performance compared to others throughout 2010-2012.
2. AmBank and AmIslamic Bank unit trust funds on the other hand showed poor ranking performance for 2010-2012.
3. Public Bank unit trust had consistently shown average performance throughout the three-year period.
4. CIMB Islamic unit trust started at the low ranking however picked up fast to be among the top three.
5. Among the Islamic unit trusts, Kuwait Finance House showed the best performance.
6. RHB Islamic performs better than RHB conventional. Similarly, AmBank Islamic performs better than AmBank conventional unit trusts.

## CONCLUSIONS AND RECOMMENDATIONS

The trend lines and curves which represent the growth of Islamic and Conventional unit trusts based on the number of launched funds, units in circulation, number of accounts and the NAV showed that conventional unit trust is still the preferred investment among Malaysians. This could due to the popularity of the conventional unit trusts since Islamic unit trust products are relatively new in this country. In other words the conventional unit trusts are more established thus investors are more confident to invest in it. However, it is interesting to note that the growth of Islamic unit trust are less affected by the world economic crisis compared to the conventional unit trusts since conventional unit trusts showed a decrease in growth during the years 2007-2008 when the world economic was hit hard. However, Islamic unit trust showed a steadily increasing growth during the same year period.

By using DEA formulation, the performances of conventional and Islamic Unit Trust for the year 2010 until 2012 were measured and ranked based on their efficiencies. CIMB conventional was found to be the best unit trust among the conventional unit trusts while Kuwait Finance House was found to be the best Islamic unit trust studied, second to CIMB conventional. Public Bank unit trust performs consistently on the average while AmBank showed poor performance throughout the years. CIMB conventional performs better than CIMB Islamic but RHB Islamic and AmBank Islamic performed better than their conventional counterparts. In conclusion, it is feasible to use Data Envelopment Analysis method to measure and rank the performances of unit trusts based on their efficiencies. The outcome of this research is the ranking of unit trust performance which can be used as a guide for investors in choosing the appropriate unit trust fund to invest in order to guarantee good returns for their investments. For future research it is recommended that analysis of performance include more unit trust funds so that a more comprehensive and accurate comparison between conventional and Islamic unit trust funds can be made.

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