STYLE ANALYSIS OF MALAYSIAN ISLAMIC BOND UNIT TRUST FUNDS

By

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ABSTRAK

Tesis ini mengkaji sama ada gaya peruntukan aset unit amanah akan berbeza daripada matlamat asal mereka sepanjang tempoh kajian dan sub-tempoh, iaitu semasa dan selepas krisis kewangan. Tempoh pengajian adalah enam (6) tahun bermula dari Januari 2007 hingga Disember 2012 dan telah dibahagikan ke dalam tempoh keseluruhan dari Januari 2007 hingga Disember 2012 dan dua sub-tempoh : Krisis kewangan dari Januari 2007 hingga Disember 2009 dan selepas krisis kewangan dari Januari 2010 kepada Disember 2012. Kajian ini menggunakan Indeks MSCI Malaysia Pertumbuhan, Indeks MSCI Malaysia Nilai, 1-bulan Kuala Lumpur Kadar Tawaran Antara Bank (KLIBOR), Indeks TRBPAM Bon Islam Kerajaan , Indeks TRBPAM Bon Islam Korporat, Indeks MSCI Dunia sebagai penanda aras bagi kelas aset. Jumlah 14 dana bon Islam yang digunakan sebagai sampel dan dianalisis menggunakan Return Based Style Analysis (RBSA).

Keputusan menunjukkan terdapat beberapa unit amanah yang mempunyai gaya yang berbeza yang ketara berbanding dengan matlamat asal mereka untuk tempoh keseluruhan dan dua sub- tempoh, sama ada semasa krisis kewangan atau tempoh selepas krisis kewangan. Perubahan dalam pulangan bulanan bagi kebanyakan dana untuk tempoh keseluruhan dan sub-tempoh terutamanya boleh dijelaskan oleh variasi dalam gaya mereka. Gaya purata tempoh keseluruhan dan dua sub-tempoh menunjukkan bahawa pengurus dana telah menumpukan pelaburan mereka terutamanya dalam bon, sama ada kerajaan atau bon korporat. Walau bagaimanapun, terdapat sebahagian kecil daripada pelaburan diletakkan dalam kelas aset lain seperti ekuiti dan instrumen pasaran wang. Purata pulangan dana boleh dijelaskan oleh perubahan dalam gaya dana.

Katakunci : Dana bon Islam, kelas asset, Return Based Style Analysis

ABSTRACT

This study examines whether or not asset allocation styles of unit trusts different from their original objectives over the study period and sub-periods, which are during and after the financial crisis. The period of study is six (6) years starting from January 2007 to December 2012 and has been divided into overall period from January 2007 to December 2012 and two sub-periods: financial crisis from January 2007 to December 2009 and post financial crisis from January 2010 to December 2012. This study uses MSCI Malaysia Growth Index, MSCI Malaysia Value Index, 1-month Kuala Lumpur Inter-bank Offer Rate (KLIBOR), TRBPAM Islamic Government Index, TRBPAM Islamic Corporate Index, MSCI World Index as benchmarks for asset classes. The total of 14 Islamic bond funds used as sample and analysed using Return Based Style Analysis (RBSA).

The results show there are some unit trusts that have significant different styles when compared to their original objectives for overall period and two sub-periods, either during financial crisis or post financial crisis period. The variation in monthly returns for most of the funds for overall period and sub-periods mainly could be explained by the variation in their styles. The average style of overall period and two sub-periods shows that fund managers have focused their investment mainly in bonds, either the government or corporate bonds. However, there is a small proportion of investment is placed in asset classes such as equity and money market instruments. The average fund returns could be explained mainly by the variation in the funds' styles.

Keywords : Islamic bond funds, asset classes, Return Based Style Analysis

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

1.0 Introduction

Various types of investment vehicles are available in the market to be chosen by today's investors, especially those related to the financial assets. However, each of these financial assets come with different levels of risk and return that will affect investors' decision making. Thus, investors may choose to invest in unit trusts or mutual funds as he would be able to hold a diversified portfolio with limited funds.

Based on FIMM Annual Reports, the statistic shows that the total net asset value (NAV) has increased tremendously in less than 10 years. The major contributors to the rapid growth of unit trusts are equity funds, Islamic funds and bond funds. However, only Islamic funds keep increasing its percentage of total NAV from 2004 to 2012, while equity funds and bond funds decrease over time within the same period. This because Malaysia becomes the world Islamic-finance hub with the main focus on sukuk where country holds the largest portion of the global sukuk market (The Borneopost, 24 February 2013). Hence, there are individual investors who are interested in putting their money in sukuk in order to take the

advantage of this situation, but it is hard for them to get direct access to sukuk compared to institutional investors (Bloomberg, October 2010). Thus, Islamic bond funds become one of the alternatives for individual investors to take advantage on sukuk. Generally, those who invested in sukuk would expect a fixed income. Thus, if we were to link it with the objective of unit trusts investing in sukuk, or Islamic bond unit trust funds, their objective would most likely fall under the income and balanced funds.

Fund managers would need to match the needs of investors with the objective of the funds. Thus, maintaining the objective of funds through asset allocation is necessary for fund managers. This has been a crucial process of developing an investment portfolio as highlighted by Gibson (1996) under the four-step approach to develop an investment portfolio. Sharpe (1992) introduced the concept of "effective asset mix" as one of the assets allocation process of the portfolio or also known as style management to help fund managers in determining their portfolio's style according to the fund's objective.

However, this issue is hardly covered in Malaysia (Lau, 2008). Further studies on style management are essential since it helps fund managers to manage their investment portfolios according to the need of investors.

1.1.Background

1959 was the pioneer year for unit trust industry in Malaysia through the establishment of the first asset management company called Malayan Unit Trust Ltd. As at 31 December 2012, the total Bursa Malaysia market capitalisation was RM 1465.70 billion, with the percentage of NAV to Bursa Malaysia Market capitalisation of 20.12%. This was a large increase compared to 2003 where the total Bursa Malaysia market capitalisation was only RM 640.28 billion, with the percentage of NAV to Bursa Malaysia market capitalisation of 10.95%. Based on the report by the Federation of Investment Managers Malaysia (2012), there are 53 newly launched funds that consist of 24.5% of Islamic fund and 75.5% of conventional funds. This is a good sign of growth in the unit trust industry.

Based on historical statistics of total NAV according to the style of the unit trusts, as shown in Figure 1.1, the statistic shows that the total net asset value (NAV) has increased from RM 28872.50 million in 2004 to RM 142643.60 million in 2012. The main contributors to this rapid growth of the unit trust industry are equity funds, Islamic funds and bond funds.

However, the NAV percentage of equity funds and bond funds has decreased over time from 49.83 % for equity and 17.41% for bond in 2004 to 19.32 % and 13.30% respectively. Only Islamic funds keep on increasing its percentage of total NAV of 14.89% in 2004 to 30.96% in 2012. This shows a positive sign of development in Islamic unit trusts in Malaysia.

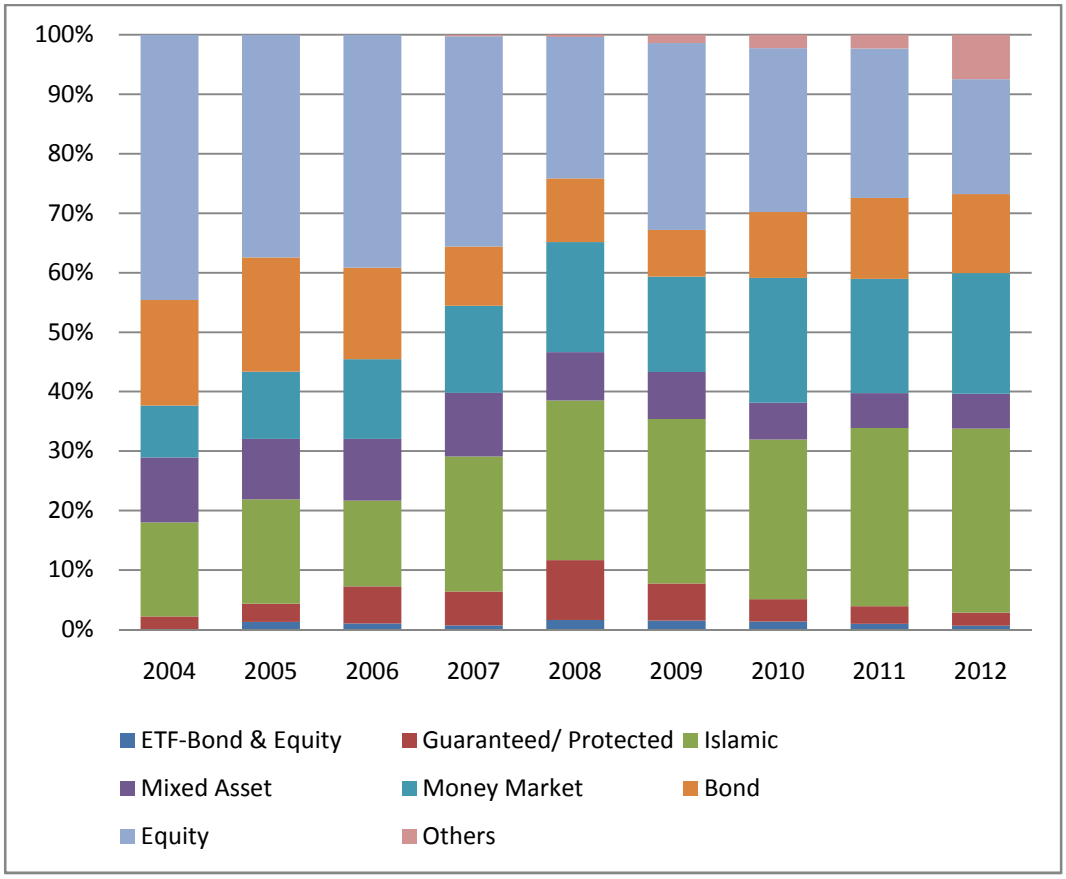


Figure 1.1
Net asset value of the unit trust funds (2004-2012)
Source: Federation of Investment Managers Malaysia (FIMM) Annual Reports

1.2.Problem Statement

Due to the uncertainty of the global economy, investors are becoming more sensitive to their investments. Those who are investing in unit trust funds are focusing on the objectives of the funds to fulfill their needs. As such, an asset allocation process that reflects the style of fund managers becomes essential so as to match the investors' objectives (Lau, 2008). Balancing the objectives of investors and fund managers complicated as the process of reallocating funds over time to maintain unit trusts' performance might lead to a change of funds' style. This is proven by a study conducted by Lau (2008) where the result showed that some fund re-classified their styles. For example, some fund reclassified from an income fund to growth fund after the analysis. Thus, further studies required in an effort of understanding unit trusts, especially in Malaysia. This would mean there is a deviation between the investors' objectives and that of fund managers. It is important for those investors being informed of the changes. Nevertheless, there is a potential that fund managers might not realize that their style had changed over time. Thus, a study required to examine whether or not unit trust funds' style changes over time.

There have been many study related to unit trust carried out throughout these past few years and most of them were mainly focused on performance of trust funds

such as Flecther and Forbes (2002), Ferreira et. al. (2012), and Hartono et al (2014). However, the number of studies focusing on portfolio's asset allocation (Sharpe, 1992; Faff et. al.,2012) is relatively small. In Malaysia, a number of studies related to unit trusts implemented, but most of them were also focused on performance of conventional and Islamic unit trust funds (Abdullah & Abdullah, 2009; Fauziah & Mansor, 2007; Abdullah et al, 2007; Hassan et al, 2010). There is a lack of research that looks into style of unit trust funds in (Lau, 2002, 2005, 2006, 2007 and 2008). Most of these studies only concentrate on the style analysis of an individual unit trust or a group of unit trust that look into equity funds, but not for other types of funds (Domain & Reichenstein, 2009). As Malaysia becomes the world Islamic-finance hub (The Borneopost, 24 February 2013) more researches on Islamic bond unit trust funds must be done. Furthermore, there is no study that relates style analysis of unit trust funds in different economic conditions being implemented in Malaysia[1]. Thus, this study is trying to fill the gap.

[1] This is to the author's knowledge

1.3. Research Questions

Based on the problem statement, there are two research questions such as follows:

1.3.1. Does the unit trust's style of asset allocation differ from the fund's original objective over the period of study?

1.3.2. Does the unit trust's style of assets allocation differ from the fund's original objective during and after the crisis period?

1.4. Research Objectives

Based on the research questions, there are two objectives of this study:

1.4.1. To examine whether or not the unit trust's style of asset allocation differs from the fund's original objective over the period of study.

1.4.2. To examine whether or not the unit trust's style of asset allocation differs from the fund's original objective during and after the crisis period.

1.5. Significance of Study

This study would help investors to ensure that the unit trust funds that they invest in do not deviate from their original objective. It would also help fund managers to see whether or not their fund's objectives change over time, so as corrective action could be undertaken. As for the regulators such as Bursa Malaysia and Securities Commission, the finding could help improve the existing guideline or policy to ensure the unit trust funds being offered to the public reflects the information about the fund's style so as not to mislead investors and a correct benchmark of the funds used. This is essential to protect the interest of investors. Lastly, this study would add to the body of knowledge by filling the gap on the lack of research focusing on style analysis in different economic condition.

1.6. Organisation of the Research Paper

This paper is arranged as follows: Chapter 2 is divided into two parts which are the underlying theory and empirical evidence. Chapter 3 discusses the methodology of this paper. Analysis of the result is covered in chapter 4 and chapter 5 concludes the study.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This section highlights the underlying theory and empirical evidence related to this study. It begins with discussion on modern portfolio theory, asset allocation, and style of the unit trusts. This followed by empirical evidence from previous studies.

2.1.Underlying Theory

Modern Portfolio Theory (Markowitz, 1952) that relates risks and returns stated that (1) at a given level of risks, the portfolio will generate the highest possible returns, or (2) minimization of risk at a given level of expected return. He further explained that a portfolio with diversified investment should have lower risk compared to the portfolio with a single investment. Based on this theory, investors or specifically unit trust managers will try to develop portfolios that are falls on the efficient frontier. This is because a portfolio that is fall on the efficient frontier classified as an optimum portfolio that theoretically has the highest returns at the given level of risk.

Diversification of portfolio to manage risks as suggested by Markowitz (1952) achieved through asset allocation. Sharpe (1992) highlighted that asset allocation plays a main part in variability of returns in a portfolio. He further explained that asset allocation is a process of allocating investment in the main asset class which will determine the portfolio's style. Thus, the style of a portfolio would normally determine its objective.

Investors would then realign individual objectives with portfolio objectives. However, Lau (2008) pointed out the problem of information asymmetries between fund managers and investors because the original objective of the portfolio or unit trust tends to deviate over time. Thus, investors could be misled by the fund's objectives declared by fund managers. Considering the importance of style analysis, there is not much research being done to look into this.

Most researchers focused on performance of funds (Jonathan & David, 2002; Ferreira et al, 2012; Hartono et al, 2014) but the number of studies on fund's style is very limited.

2.2.Empirical Evidence

Sharpe (1992) was the first to introduce style analysis in his study about asset allocation of the portfolio. He used unit trusts in The United States (US) and found that each of the selected funds has different style and selection of asset allocation and over time the investment in each asset classes tend to change.

Fung and Hsieh (1998) also looked into style analysis by using the US market with a focus on mutual funds and hedge funds. The result shows that fund managers' buy-and-hold objectives were similar to the original objectives used in their trading and mutual funds' style. Unlike previous studies, Dor and Jagannathan (2002) have highlighted importance of selecting the right benchmarks for style analysis and how it led to the wrong conclusion if the benchmark was wrongly chosen. This is because if the benchmark was wrongly selected, it would create a correlation anomaly that is a condition where the correlations among selected benchmarks are high and the standard deviations are similar. This would lead to wrong signals and the result of style analysis of each fund would be incorrect.

Unlike previous studies that did not focus directly on US-based funds that invest in international stocks, de Roon et al. (2003) examined the uses and implications of Return Based Style Analysis (RBSA). This study also compared the RBSA with actual portfolio objective by using selected US-based internationally investing funds. The result mainly shows the actual portfolio objective in general do not reveal the actual investment style of a fund.

Focusing on daily data, Rekenthaleret. al. (2004) compared portfolio-based style analysis with the RBSA by using diversified US equity funds[2]. The result shows portfolio-based and returns-based style analysis was useful in certain circumstances, but the portfolio-based approach is more accurate compared to RBSA. This result counters all criticism of the portfolio-based approach.

In a study done by Swinkels and Der Sluis (2006), they included time variation in RBSA in estimating the style exposure by using rolling regression. They also employed Kalman filter in their style analysis. It helped in improving the correlation between mutual fund returns and style indices. The result showed that RBSA helped in classifying the style of the funds and estimating the changes in the style of the funds over time. This is further supported by Bodson et. al. (2007).

[2] Portfolio-based style tools classify portfolios based on the characteristics of the underlying securities while returns-based style analysis compares the portfolio's total returns to the total returns of various style-based indexes and makes inferences about style based on how closely the portfolio returns resemble those of different indexes (Morningstar, 1 March 2007).

Since most of the previous studies used equity funds as their samples, Domian and Reichenstein (2009) shifted their focus toward using convertible bonds. They calculated the asset allocation of the selected convertible bonds and convertible bond indices from the period of 1998 to 2007 and two sub periods. The result shows that composition of asset allocation and styles for most of the convertible bond funds was small-cap growth stocks deviate from the original objective of generating income. The findings were similar to the previous studies in the US (Bodson et al., 2007; de Roon et al., 2003) where unit trust funds have different styles compared to the original objectives of the funds.

Studies on style analysis have also been implemented in other countries. In Netherland, ter Horst et. al. (1998) focused on Dutch mutual funds by examining style analysis and fund performance. They found that style estimated was similar to the original self-reported objective. Similar to the study by ter Horst et. al. (1998), Lee (1998) focused on investigating performance of the United Kingdom (UK) property funds by using style analysis. He analysed 37 UK property funds. The result shows that the funds' style were not static and changed over time compared to the original funds' objectives. The results were similar to Otter and Bams (1999) who also used UK equity funds. They combined Kuhn-Tucker algorithm and Monte Carlo simulation in order to statistically prove the result of the style analysis. They show that the number of equity funds that have different style compared to original funds' objectives decreased by 50%, which meant that

combination of Kuhn-Tucker algorithm and Monte Carlo simulation was better than using the style analysis alone.

Karacabey and Gokgoz (2006) did a study on the Turkish market. By using 11 actively managed individual retirement funds, they showed that the style of the funds differed from their original objective during good and bad economic conditions. This is a contrast to the finding reported in Australia using managed funds and superannuation funds data, Faff et. al. (2013), show that the funds' style was similar to the original objectives. However, different fund managers have different style of investment because differences in institutional and legal frameworks lead managers to invest differently.

Style analysis study has also been done in Malaysia by Lau (2002). This was the first study that analysed unit trusts asset allocation in Malaysia. Lau (2002) shows that, on average, each fund has different composition of asset classes or style as compared to the original funds' objectives. In a subsequent study, Lau (2008) decomposed the funds into various asset classes in his study on portfolio risks by using the Value-at- Risk approach. The result was similar to his previous study in which some of the funds being reclassified as a growth fund and value funds which deviate from the original objectives.

2.3.Summary

Previous studies looking into style analysis show that various results in different markets were due to the changes in economic conditions, types of funds, and location of the studies. A few approaches such as Kuhn-Tucker algorithm and Monte Carlo simulation are able to improve the results as by using both approach reduce the correlation between benchmark for asset classes and improve the result of statistical test. However, most of the studies focus on equity unit trust funds. There is no study on style analysis focuses on Islamic bond unit trust funds in Malaysia.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This section focuses on the sample selection process, the data and the method used in fulfilling the objectives of this study. The methodology used in this paper is mainly based on the study conducted by Sharpe (1992) and Lau (2008).

3.1.Sample Selection and Data Collection

The sample of this study selected based on the prospectus of unit trust funds issued by the asset management companies in Malaysia and the Federation of Investment Managers Malaysia (FIMM). This study is only focused on Islamic bond unit trust funds that invest approximately 60% to 90% of their funds in sukuk as it is highly demanded among investors (Bloomberg, October 2010). Islamic bond funds also expected to grow as the government's $444 billion development plan attracts international investors and spurs trading (Arabian Business.com, 2011). There are 18 Islamic bond funds available within January 2007 to December 2012.

Due to unavailability of a complete data within the period of study, 14 Islamic bond funds are included in this study as shown in Table 3.1.

Table 3.1
List of Selected Islamic Bond Unit Trusts

	Fund	Inception Date	Fund Objective
1	Amanahraya Syariah Trust	21 September 2006	Income[3]
2	AMB Dana Arif	27 April 2004	Balanced[4]
3	AmBon Islam	3 December 2001	Income
4	CIMB-I Enhanced Sukuk	23 February 2005	Balanced
5	CIMB-I Sukuk Fund	8 October 2004	Income
6	Dana Al-Fakhim	27 December 2001	Income
7	Eastspring Invt Dana Wafi	21 February 2005	Income
8	Hwang AIIMAN Income Plus	28 Jun 2004	Balanced
9	Kenanga Bon Islam	23 April 2004	Income
10	Libra ASnita BOND Oneinvest	18 March 2005	Income
11	MAAKL As-Saad	30 Jun 2003	Income
12	MIDF Amanah Shariah Money Market	5 April 2004	Balanced
13	Pacific Dana Murni	25 March 2003	Income
14	RHB Islamic Bond	18 September 2000	Income

Source: SignalInvest Personal

The data are taken directly from SignalInvest Personal's websites which provide the list of Islamic bond funds available in Malaysia. The list provides the name and the asset management companies available within the period of January 2007 to December 2012. It covers two different economic conditions which are (i) financial crisis from 2007 to 2009, and (ii) post financial crisis from 2010 to 2012

[3] According to Securities Industry Development Corporation (SIDC), income funds invest mainly in fixed income securities either bonds or sukuk offer by the government or private firms to generate return.

[4] According to SIDC, balanced funds invest mainly in equity stocks or fixed income securities to generate returns in term of capital appreciation and income (dividend or interest rate).

since this study is also focused on the different economic conditions (Karacabey and Gokgoz, 2006). Pre-financial crisis is not covered because there was no information provided on the asset class of those funds. The monthly data on net asset value (NAV), inception date, asset allocation information and other details on Islamic bond unit trust funds are collected from Morningstar Asia website (Dor and Jagannathan, 2002). As for asset classes to show the styles of unit trusts such as growth stocks, value stocks, cash, government bonds, corporate bonds, and international stocks, data collected from various website that are presented in Table 3.2. These asset classes selected are based on Lau (2008).

Table 3.2
Asset Classes' Indices

Asset Class	Description	Source of Data
Growth Stocks	*MSCI Malaysia Growth Index as quoted in MYR used to represent growth stock.	www.msci.com
Value Stocks	*MSCI Malaysia Value Index as quoted in MYR used to represent Value stock.	www.msci.com
Cash	Represent Malaysian money market instrument and 1-month Kuala Lumpur Inter-bank Offer Rate (KLIBOR) used.	Bank Negara Website
Islamic Government Bonds	TRBPAM Islamic Government Index** used as index for this asset class which represent Malaysian government bond and sukuk	Bond Pricing Agency Malaysia
Islamic Corporate Bonds	TRBPAM Islamic Corporate Index** used as index for this asset class which represent corporate bonds and sukuk.	Bond Pricing Agency Malaysia
International Stocks	*MSCI World Index as quoted in MYR used to represent all international stock indexes.	www.msci.com

* MSCI indices developed by Morgan Stanley Capital International
**TRBPAM stand for Thomson Reuters BPA Malaysia

According to Sharpe (1992), the selected asset classes should follow some criteria since the usefulness of the analysed results is highly dependable on the asset classes. The criteria are that all asset classes should be (i) mutually exclusive or asset classes should be in one class only; (ii) exhaustive or it represents all assets within the same class, and (iii) the return of the asset classes should have low correlations or different standard deviation if the correlations were high to ensure they represents the specific category.

3.2 Method

In order to fulfill the first objective of this study, which is to examine whether or not the unit trust's style of asset allocation reflects the fund's objective over the period of study, style analysis (Sharpe, 1992) is used. The same approach is also used to fulfill the second objective which is to examine whether or not the unit trust's style of asset allocation reflects the fund's objective during and after the crisis period.

Sharpe's (1992) style analysis uses quadratic programming in order to determine the funds' exposure towards the changes in the returns of major asset classes. This analysis is basically based on Sharpe's (1992) generic factor model which is as follows :

$$\widetilde{R_\iota} = [\, b_{i1}\widetilde{F_1} + b_{i2}\widetilde{F_2} + b_{i3}\widetilde{F_3} + \ldots + b_{in}\widetilde{F_n} \,] + \widetilde{e_\iota} \qquad (1)$$

Where

$\widetilde{R_\iota}$ = return of fund *i*

b_{in} = sensitivity of fund *i* to factor *n*

$\widetilde{F_n}$ = return factor *n* of fund *i* represent the asset class benchmark

$\widetilde{e_\iota}$ = non-factor return of asset *i* of mean zero with the assumption that the non-factor returns are uncorrelated

The generic model is actually similar to ordinary least squares (OLS) without intercept but in terms of data analysis process, it uses quadratic programming to analyse the return of unit trusts and asset classes.

The reason for not using the constant zero ordinary least squares (OLS) is mainly due to the fact that the results of constant zero ordinary least squares (OLS) are sometimes having negative values which contradicted to the constraints of style analysis. According to Sharpe (1992), style analysis has two major constraints: (1)

the sum of all coefficients factors is equal to 100% and (2) coefficients of all factors must be positive. Negative coefficients show that there are short positions in asset classes. However, Sharpe (1992) argues that fund managers rarely use the short position strategy as fund managers use buy-and-hold investment strategy. Thus, by prohibiting negative coefficients in the model, it will provide better and more usable results.

A key assumption of this model according to Sharpe (1992) is: the non-factor return for one asset ($\widetilde{e_i}$) assumed to be uncorrelated with non-factor return for other assets because the factors ($\widetilde{F_n}$) are only the sources of correlations among returns. This assumption aligned with the asset classes' criteria where each asset class should be (i) mutually exclusive, (ii) exhaustive, and (iii) the returns have low correlations or different standard deviation if the correlations are high.

The generic model (1) requires an adjustment in order to do the style analysis. The goals of this analysis are (1) to find the major asset class within the unit trusts analysis with the total of 100% based on the constraint employed in the model, (2) to select the style of unit trusts that minimizes the difference in terms of variance, and (3) to show the fund exposure to the variability in returns for each asset class over the period of study. However, this model does not show how good or bad the style of the unit trust is.

The generic model (1) rearranged into equation (2). Based on this equation (2) and the constraints of this analysis, the coefficient (b_{in}) will represent the weight of each asset class within the portfolio / unit trusts. This model is used in this study in order to analyse the style of each of the 14 selected Islamic bond funds for three different periods. The analysis for the whole period from 2007 to 2012 will fulfill the first objective of the study and the analyses for period of financial crisis (2007 to 2009) and post financial crisis (2010 to 2012) done to fulfill the second objective. The style obtained from all period's analysis will be compared to the original objective stated in the prospectus of each unit trust.

$$\widetilde{e_i} = \widetilde{R_i} - [\, b_{i1}\widetilde{F_1} + b_{i2}\widetilde{F_2} + b_{i3}\widetilde{F_3} + \ldots + b_{in}\widetilde{F_n} \,] \qquad (2)$$

Where

$\widetilde{e_i}$ = selection

$\widetilde{R_{i\ i}}$ = return of fund *i*

b_{in} = sensitivity of fund *i* to factor *n*

$\widetilde{F_n}$ = return factor *n* of fund *i*

The funds' returns and asset classes' are benchmark calculated using equation (3). This study uses the net asset value of each unit trusts to calculate the continuous compounding return for the fund used as the dependent variable (Lau, 2008). The calculation of the continuous compounding return for each unit trust is as follows:

$$R_{j,t} = \ln (P_{j,t} / P_{j,t-1}) \quad (3)$$

Where:

$R_{j,t}$ = the continuously compounded return of unit trusts fund *j* at time *t*

$P_{j,t}$ = the net asset value for unit trust fund *j* at time *t*

This study used return of unit trusts as the dependent variable as in previous studies (Sharpe, 1992, Lau, 2008, and Domian & Reichenstein, 2009) because it represents the changes in unit trusts as a whole. Independent variables represented by the value of each asset class. However, the value used is not the raw number of indices. This study will use returns of asset classes invested by fund managers that are being represented by the compounding return of the indices.

$$R_{m,t} = \ln (I_{j,t} / I_{j,t-1}) \quad (4)$$

and

$$R_{f,t} = \ln (1 + r_{f,t}) \quad (5)$$

Where

$R_{m,t}$ = the continuous compounded return for m benchmark portfolio for month t

$R_{f,t}$ = the continuous compounding risk free rate of interest for month t

$I_{j,t}$ = the asset class index at the end of month t

$r_{f,t}$ = 1-month Kuala Lumpur Inter-bank Offer Rate (KLIBOR)

This study used 1-month Kuala Lumpur Inter-bank Offer Rate (KLIBOR) to represent Malaysian money market instrument as in Lau (2009).

Subsequently, the R^2 or proportion of the variance in return as explained by the asset classes within the unit trust calculated as follows:

$$R^2 = 1 - [\ Var\ (\tilde{e}_\iota) / Var(\tilde{R}_\iota)\ ] \quad (6)$$

Equation (6) show that the variation of returns of unit trusts can be explained by (i) the variation of returns of each asset class within the unit trust or *style* that is represented by R^2, and (ii) the residual returns due to active management or *the selection* that is represented by $Var(\tilde{e}_i) / Var(\tilde{R}_i)$.

3.3 Hypothesis

This study focuses on the changes in unit trust funds' objective by comparing the original funds' objectives with the result of the style analysis. This paper proposed the following hypotheses:

Objective 1

H1: Fund's style does not deviate from the fund's original objective for the whole period of study.

Objective 2

H2: Fund's style does not deviate from the fund's original objective during financial crisis period.

H3: Fund's style does not deviate from the fund's original objective for post financial crisis period.

3.4 Summary

This chapter describes the sample of unit trust funds used in this study. An explanation on the method used in executing the style analysis is forwarded. All variables are clearly defined where which each of the unit trust's return represent the dependent variable while the index/rates act as a proxy of asset classes which represents the independent variables in the. The analysis continues with determining R^2.

CHAPTER 4

ANALYSIS OF FINDINGS

4.0 Introduction

This section provides discussions on analysis of the findings. The results of the analysis are then compared with the original objectives of the Islamic bond funds. The analyses are based on overall period of study and two sub-periods which are during and post financial crisis period. MSCI Malaysia Growth Index, MSCI Malaysia Value Index, 1-month Kuala Lumpur Inter-bank Offer Rate (KLIBOR), TRBPAM Islamic Government Index, TRBPAM Islamic Corporate Index, and MSCI World Value Index are used as benchmarks for asset classes within the funds. A total of 14 Islamic bond funds are analysed by using style analysis for each period of study.

4.1 Result of Asset Classes Test

Correlation analysis and descriptive statistical analysis are carried out by focusing on the third criteria in selecting asset classes as explained by Sharpe (1992) which is the return should yield either low correlations or different standard deviation if the correlations are high.

Table 4.1 shows the correlation between asset classes from 2007 to 2012. From the table, it can be seen that returns on growth stocks represented by MSCI Malaysia Growth Index and returns on value stock represented by MSCI Malaysia Value Index have a high correlation of 91.2%. Returns on MSCI Malaysia Value Index and returns on MSCI World Value Index that represent international stocks also have a high correlation of 64.8%. Similarly, the returns on MSCI Malaysia Growth Index versus MSCI World Value Index and Islamic government bond versus Islamic corporate bond also have high correlation of 69.4% and 57.6%. Due to the high correlation between these asset classes, the standard deviation for each class must be examined before they can be included in the style analysis.

Examination of the standard deviation for those asset classes shows that the standard deviations vary (refer to Table 4.2). Thus, there asset classes could still be used in the style analysis since their standard deviations are different.

Table 4.1
Correlation of Asset Classes (2007 to 2012)

	RMV	RMG	RI	GBI	CBI	KLIBOR
RMV	1					
RMG	.912	1				
RI	.648	.694	1			
GBI	-.049	-.025	-.002	1		
CBI	.179	.153	.034	.576	1	
KLIBOR	-.344	-.336	-.332	.1233	-.132	1

RMV - Value Stocks; RMG - Growth Stocks; RI - International Stocks; GBI – Islamic Government Bonds; CBI – Islamic Corporate Bonds; KLIBOR – Cash

Table 4.2
Descriptive Statistical of Asset Classes for Overall Period

	Overall Period (n = 71) (2007 – 2012)	
	Mean	Std. Deviation
RMV	0.00548	0.038436
RMG	0.002569	0.052378
RI	-0.00202	0.050481
GBI	0.003427	0.007212
CBI	0.004307	0.007417
KLIBOR	0.002467	0.000434

RMV - Value Stocks; RMG - Growth Stocks; RI - International Stocks; GBI – Islamic Government Bonds; CBI - Islamic Corporate Bonds; KLIBOR – Cash

Table 4.2 shows that the mean monthly returns of value stocks, Islamic government bonds, Islamic corporate bonds, and 1-month KLIBOR have positive value returns. This result concurs to Lau (2008). However, a positive mean return on growth stocks and a negative mean return on international stocks contradicts to Lau's (2008) finding.

The correlation and descriptive statistics for the sub-samples reported in Table 4.3. Similar to the overall period, returns on the growth stocks and value stocks for both sub-periods show that the two asset classes are highly correlated but their standard deviations are different. This can be observed in Table 4.4 where the standard deviation for value stocks is 0.048 during crisis period and 0.027 after crisis period while for growth stocks is 0.065 during crisis period and 0.037 after crisis period. There are a few other asset classes that are having high correlations such as RI versus RMV (67.9%), RI versus RMG (72.9%), and CBI versus GBI (60.8%) during crisis period, and RI versus RMV (59.1%) and RI versus RMG (60.2%) in post crisis period. However, since their standard deviation differs from one another, these asset classes are included in the style analysis for both sub-periods. It is important to ensure that each of the asset classes must fulfill the assumption to avoid wrongful assets classification because it could directly affect the style analysis results.

Based on Table 4.4, both sub-periods' mean monthly returns of value stocks, Islamic government bonds, Islamic corporate bonds, and 1-month KLIBOR have positive value which indicates that within both sub-periods, on average, these four asset classes have positive returns. However, growth stocks and international stocks show negative mean returns during financial crisis period which indicates that during this period both asset classes, on average, have negative returns. This is contradicting to post crisis period because during post crisis period these two asset classes show average positive returns.

Table 4.3
Correlation of Asset Classes Based on Sub-period

During Crisis Period (2007 – 2009)						
	RMV	RMG	RI	GBI	CBI	KLIBOR
RMV	1					
RMG	0.921	1				
RI	0.679	0.729	1			
GBI	-0.041	-0.006	0.049	1		
CBI	0.199	0.168	0.079	0.608	1	
KLIBOR	-0.430	-0.394	-0.426	0.149	-0.145	1

Post Crisis Period (2010 – 2012)						
	RMV	RMG	RI	GBI	CBI	KLIBOR
RMV	1					
RMG	0.905	1				
RI	0.591	0.602	1			
GBI	-0.096	-0.141	-0.230	1		
CBI	0.097	0.058	-0.196	0.280	1	
KLIBOR	-0.039	-0.044	0.017	0.012	0.032	1

RMV - Value Stocks; RMG - Growth Stocks; RI - International Stocks; GBI – Islamic Government Bonds; CBI - Islamic Corporate Bonds; KLIBOR – Cash

Table 4.4
Descriptive Statistics of Asset Classes Based on Sub-period

	Crisis Period (n = 35) (2007 – 2009)		Post-crisis Period (n = 36) (2010 – 2012)	
	Mean	Std. Deviation	Mean	Std. Deviation
RMV	0.005571	0.048	0.0054	0.027
RMG	-0.00298	0.065	0.0080	0.037
RI	-0.00737	0.059	0.0032	0.040
GBI	0.003224	0.0098	0.0036	0.0033
CBI	0.003922	0.010	0.0047	0.0031
KLIBOR	0.002554	0.007	0.0024	0.0002

RMV - Value Stocks; RMG - Growth Stocks; RI - International Stocks; GBI – Islamic Government Bonds; CBI – Islamic Corporate Bonds; KLIBOR - Cash

4.2 Individual Fund's Style

Individual fund's style analysis reported in Table 4.5, Table 4.6 and Table 4.7. AMB Dana Arif shows that the original objective of this fund is balanced fund. However overtime it deviates from the original style and turn out to be income fund in the overall period, during and post financial crisis periods. As observed in the tables, fund managers have invested around 90% to 100% in either Islamic government bonds or Islamic corporate bonds, and only a small portion of investment in other asset classes in the overall period, during and post financial crisis periods. The variation in monthly returns of this fund is highly explained by

the variation in style of the fund for all periods. This reflected in the high percentage of return attributable to style that range in between 84% to 95%.

CIMB I-Enhanced Sukuk's objective which was originally classified as balanced fund has also exhibited a style drift to income funds for overall period, during and post financial crisis periods. This is because for all periods of study, fund managers have invested about 88% of the fund into fixed income securities either in Islamic government bonds or Islamic corporate bonds. There is also an investment in other asset classes but only in small portion. Around 85% to 89% of the variation in the monthly return can be explained by the variation in style of funds and the rest by *selection* of funds.

The style analysis result for RHB Islamic bond shows that fund managers have invested around 99% to 100% in bonds in order to generate income for overall period, during and post financial crisis period. The style of the fund has drifted to be an income fund which is different from the original fund's objective. The results clearly show that 91% and 96% of the style of fund could explain the variation in monthly return for overall and post financial crisis period. However for the post financial crisis, only 72.98% of the variation in the style of fund could explain the variation of monthly returns which is relatively lower than other two periods of study.

As for Hwang AIIMAN Income Plus, it can be seen that the fund manager has invested about 60% in Islamic bond and the rest in equity. However, looking into the sub-period analysis result focusing on post financial crisis period, the result shows that the fund manager has invested about 99.51% in Islamic government bonds alone. This contradicts to the result during crisis period that shows only 48% of the fund manager investment is put in bonds and the rest in stocks. Thus, for the overall and post financial crisis period, the style of fund remain as income fund but during crisis, the style of fund drifted to balanced fund which is different from the fund's original objective. The variation in monthly return of this fund is highly explained by the variation in the style of fund for the overall period and post financial crisis periods which are about 70% and 96% respectively. The variation of monthly return during crisis period is only 55% which is relatively lower than the overall and post financial crisis periods and this mainly explained by the variation in the style of fund.

As for Kenanga Bon Islam, it is originally classified as a balanced fund but the result of style analysis for the overall period, during and post financial crisis period suggested that it has drifted to be an income fund. This is because fund managers have allocated around 94% to 98% in either Islamic government bonds or Islamic corporate bonds and only a small portion of the investment is put in other asset classes for the overall and sub-periods. The results also show that about 91%, 96%, and 86% of the variation in monthly return for the overall,

during and post financial crisis periods can be explained by the variation in the style of fund.

MAAKL As-Saad is originally classified as an income fund objective and has different style at different periods of study. The overall period, shows that MAAKL As-Saad the fund's style is a value fund because the fund managers have totally invested in value stocks. Looking into the post financial crisis period, the result shows that fund managers invested 100% in growth stocks, indicating that it is a growth fund. This is in contrast to the result during crisis period that shows 96% of fund managers' investment is in bonds and the rest in stocks. The findings show that for the overall and post financial crisis periods, the styles drifted from the original objective while during financial crisis, the objective and style are similar. The variation of monthly returns for the overall, during, and post financial crisis periods can be explained with a respective 98.92%, 89.11%, and 98.15% by the variation in fund's style.

The style of funds like Amanahraya Shariah trust, AmBon Islam, CIMB I-Sukuk Fund, MIDF Amanah Shariah Money Market, Pacific Dana Shariah, Dana Al-Fakhim, Eastspring Invest Dana Wafi, and Libra Asnita Bond are similar to the original objective of the funds which is an income fund for the overall period and sub-periods. Investments of these funds focused mainly on generating income through investment in Islamic corporate bonds or Islamic government bonds for

all periods. Other than AmBon Islam and CIMB I-Sukuk fund, beyond 70% to 90% of the variation in monthly return for the overall and sub-periods is attributable to the variation in the style of fund. For Am Bon Islam (CIMB I-Sukuk Fund) style of fund could only explain 59.89% (52.49%) and 70.42% (89.02%) of the variation in monthly return in the respective overall and post financial crisis. During financial crisis period, 46.66% (58.49%) of the variation in monthly return of AmBon Islam (CIMB I-Sukuk Fund) is attributable to the selection of fund rather than style of fund.

In comparison to previous studies, the result that show the unit trusts' style drifted from the original objective is consistent with Domian and Reichenstein (2009), Lau (2008), Bodson et. al. (2007), and de Roon et. al.(2003). A similar finding for during and post financial crisis periods is consistent to Karabacey and Gokgoz (2006). As for those funds that maintained their objectives throughout the study period, the result concurs to Lau (2002) and Lau (2008).

Table 4.5
Style Analysis for Period 2007 to 2012

Fund	Original Objective	RMV	RMG	RI	GBI	CBI	KLIBOR	New Style	Style
Amanahraya Shariah trust	Income	0.00	4.80	0.00	95.20	0.00	0.00	Income	99.54
AMB Dana Arif	Balanced	0.00	7.80	0.00	24.88	67.32	0.00	Income	90.16
Am Bon Islam	Income	1.69	3.74	0.00	26.80	67.77	0.00	Income	59.89
CIMB I-Enhanced Sukuk	Balanced	0.00	9.71	2.40	24.05	63.84	0.00	Income	87.83
CIMB I-Sukuk Fund	Income	0.00	1.31	0.00	29.14	69.55	0.00	Income	52.49
MIDF Amanah Shariah MM	Income	0.00	4.01	1.72	45.72	48.54	0.00	Income	80.06
Pacific Dana Shariah	Income	0.00	0.67	1.70	70.06	27.57	0.00	Income	77.35
RHB Islamic bond	Balanced	0.00	0.00	0.00	41.01	58.99	0.00	Income	91.06
Dana Al-Fakhim	Income	2.38	2.43	0.00	48.75	46.44	0.00	Income	96.31
Eastspring Invest Dana Wafi	Income	0.00	0.00	0.00	17.61	82.39	0.00	Income	94.28
Hwang AIIMAN Income Plus	Income	35.53	4.65	0.00	59.81	0.00	0.00	Income	70.40
Kenanga Bon Islam	Balanced	2.44	0.00	0.90	40.32	56.34	0.00	Income	91.04
Libra Asnita Bond	Income	0.00	0.00	0.40	44.17	55.43	0.00	Income	91.72
MAAKL As-Saad	Income	100.00	0.00	0.00	0.00	0.00	0.00	Value	98.92

RMV - Value Stocks; RMG - Growth Stocks; RI - International Stocks; GBI – Islamic Government Bonds; CBI – Islamic Corporate Bonds; KLIBOR – Cash

Table 4.6
Style Analysis for Financial Crisis Period 2007 to 2009

Fund	Original Objective	RMV	RMG	RI	GBI	CBI	KLIBOR	Style	style	Selection
Amanahraya Shariah trust	Income	0.00	5.75	0.00	60.10	34.15	0.00	Income	70.01	29.99
AMB Dana Arif	Balanced	0.00	10.72	0.00	6.69	82.59	0.00	Income	84.84	15.16
Am Bon Islam	Income	0.00	5.29	0.00	29.48	65.23	0.00	Income	53.34	46.66
CIMB I-Enhanced Sukuk	Balanced	0.00	12.00	0.00	29.12	58.88	0.00	Income	85.49	14.51
CIMB I-Sukuk Fund	Income	0.00	1.86	0.00	31.25	66.89	0.00	Income	41.51	58.49
MIDF Amanah Shariah MM	Income	0.00	2.24	0.00	37.05	60.71	0.00	Income	54.63	45.37
Pacific Dana Shariah	Income	2.46	0.07	2.29	53.68	41.49	0.00	Income	77.98	22.02
RHB Islamic bond	Balanced	0.00	0.00	0.24	31.27	68.49	0.00	Income	72.98	27.02
Dana Al-Fakhim	Income	6.36	0.00	0.00	39.32	54.32	0.00	Income	87.57	12.43
Eastspring Invest Dana Wafi	Income	0.00	0.00	0.00	30.74	69.26	0.00	Income	85.31	14.69
Hwang AIIMAN Income Plus	Income	40.05	11.63	0.00	48.32	0.00	0.00	Balanced	55.20	44.80
Kenanga Bon Islam	Balanced	2.84	0.00	0.95	34.12	59.71	2.37	Income	96.70	3.30
Libra Asnita Bond	Income	0.00	0.00	0.00	56.17	43.83	0.00	Income	80.75	19.25
MAAKL As-Saad	Income	0.44	0.00	2.93	22.89	73.73	0.00	Income	89.10	11.90

RMV - Value Stocks; RMG - Growth Stocks; RI - International Stocks; GBI – Islamic Government Bonds; CBI - Islamic Corporate Bonds; KLIBOR – Cash

Table 4.7
Style Analysis for Post Financial Crisis Period 2010 to 2012

Fund	Original Objective	RMV	RMG	RI	GBI	CBI	KLIBOR	Style	style	selection
Amanahraya Shariah trust	Income	0.00	0.00	0.00	100.00	0.00	0.00	Income	99.74	0.26
AMB Dana Arif	Balanced	0.00	0.00	0.28	99.72	0.00	0.00	Income	95.56	4.44
Am Bon Islam	Income	7.29	0.00	0.00	11.99	80.71	0.00	Income	70.42	29.58
CIMB I-Enhanced Sukuk	Balanced	0.00	5.19	6.51	8.14	80.16	0.00	Income	89.85	10.15
CIMB I-Sukuk Fund	Income	0.47	0.00	0.00	19.77	79.76	0.00	Income	89.02	10.98
MIDF Amanah Shariah MM	Income	13.48	0.47	7.06	78.98	0.00	0.00	Income	88.39	11.61
Pacific Dana Shariah	Income	0.00	0.00	0.00	100.00	0.00	0.00	Income	87.17	12.83
RHB Islamic bond	Balanced	0.00	0.00	0.00	86.51	13.49	0.00	Income	96.37	3.63
Dana Al-Fakhim	Income	0.00	0.00	8.57	91.43	0.00	0.00	Income	99.80	0.20
Eastspring Invest Dana Wafi	Income	0.00	0.00	0.00	0.00	100.00	0.00	Income	95.88	4.12
Hwang AIIMAN Income Plus	Income	0.17	0.00	0.32	99.51	0.00	0.00	Income	96.56	3.44
Kenanga Bon Islam	Balanced	0.18	0.00	1.39	62.39	36.04	0.00	Income	86.84	13.16
Libra Asnita Bond	Income	0.00	0.00	2.25	0.00	97.75	0.00	Income	95.14	4.86
MAAKL As-Saad	Income	0.00	100.00	0.00	0.00	0.00	0.00	Growth	98.15	1.85

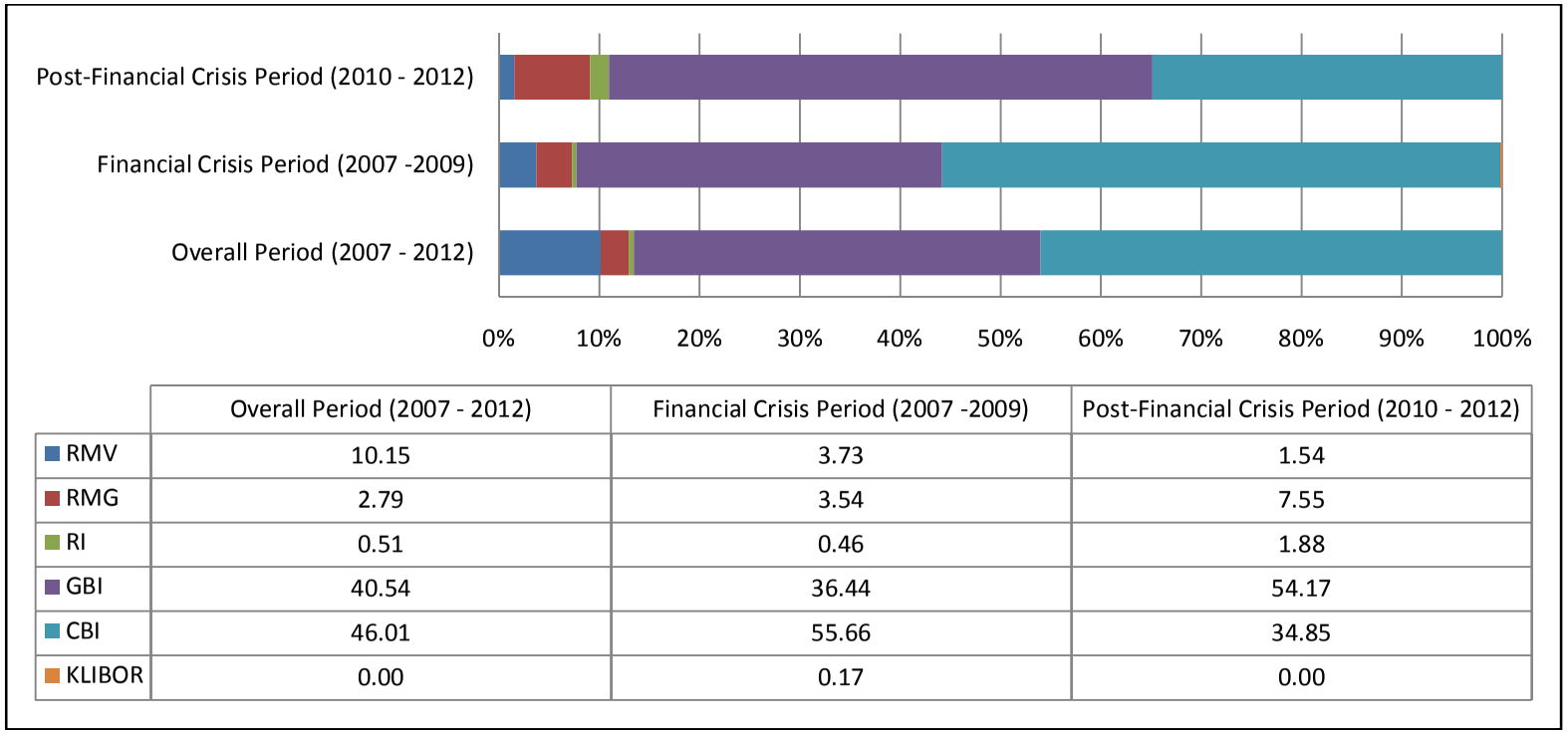
RMV - Value Stocks; RMG - Growth Stocks; RI - International Stocks; GBI - Islamic Government Bonds; CBI - Islamic Corporate Bonds; KLIBOR – Cash

4.3 Asset Allocation

Based on Figure 4.1, the result shows that during the financial crisis period of 2007 to 2009, on average, fund managers have allocated more than half or around 55.66% of their funds into Islamic corporate bonds and only 36.44% into Islamic government bonds. Fund manager were using the contrarian strategy which was to invest in Islamic corporate bonds when others focused on a safer securities, Islamic government bond. However, the allocation of securities during post-financial crisis period shows that on average, fund managers have allocated more funds in the Islamic government bonds (54.17%) instead of Islamic corporate bonds (34.85%). It is likely fund manager were also using the contrarian strategy even in a more stabilised economic condition. As for overall period of study (2007 to 2012), funds managers have invested around 46.01 % in Islamic corporate bonds and 40.54% in the Islamic government bonds.

Figure 4.1 also shows that, fund managers have also focused their allocation of funds towards other types of asset classes such as equity and money market instrument, but only in small portion as compared to investment in fixed income securities or bonds. During financial crisis period, fund managers only allocated a 7.77% of total funds into value, growth and international stocks as compared to 10.97% in the post-financial crisis period and 13.45% in the overall period of study (2007 to 2012). This is because during financial crisis period, fund

managers tend to limit their investment in stocks as it carries more risks where there is a high probability that companies may go into distress that could resulted in delisting. Money market instrument is only included in the portfolio during financial crisis but is very small. Only during financial crisis period funds managers invest in short-term assets although the portion is very small.



	Overall Period (2007 - 2012)	Financial Crisis Period (2007 -2009)	Post-Financial Crisis Period (2010 - 2012)
RMV	10.15	3.73	1.54
RMG	2.79	3.54	7.55
RI	0.51	0.46	1.88
GBI	40.54	36.44	54.17
CBI	46.01	55.66	34.85
KLIBOR	0.00	0.17	0.00

RMV - Value Stocks; RMG - Growth Stocks; RI - International Stocks; GBI - Islamic Government Bonds; CBI - Islamic Corporate Bonds; KLIBOR – Cash

Figure 4.1
Average Asset Allocations

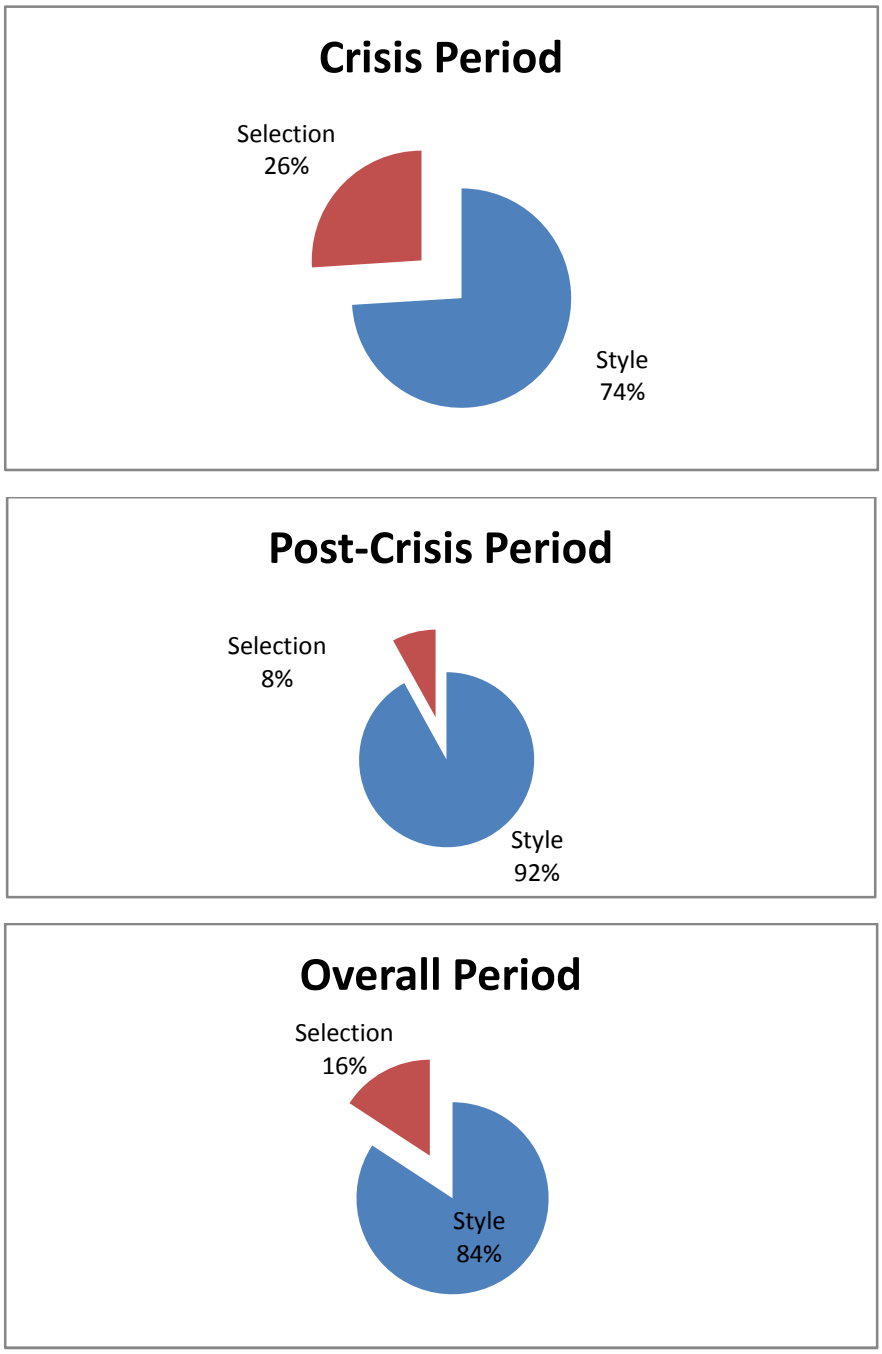


Figure 4.2
Average Style and Selection

Based on Figure 4.2, on average, about 74% of the variation in the monthly returns of the Islamic bond unit trusts funds could be explained by style and only 26% by the selection of funds during the financial crisis period. However, during the post financial crisis period, on average, style accounts about 92% of the monthly variation in returns and only 8% is attributable to the selection. Style of funds could explain better of the variation on monthly return during the post financial crisis period as compared to financial crisis period. Other observation is that proportion of selection is explaining the variation of monthly returns increases during the financial crisis period. For the overall period of study, 84% of the variation in monthly returns of the Islamic bond unit trust funds is attributable to style and 16% to selection of fund. The results of this study are consistent to Lau (2008), Lau (2002), and Sharpe (1992).

4.4 Summary

The results obtained show that the styles of some Islamic bond unit trust funds have drifted from their original objective. However, most of the funds are able to maintain their style and objective throughout the period of study. This result

concurs to the previous studies such as Domian and Reichenstein (2009), Lau (2008), and de Roon et al (2003).

Since the sample uses in this study taken from a group of Islamic bond unit trust funds, most of the funds managers focus their asset allocation towards fixed income securities such as sukuk offered by the government or corporation. Fewer funds allocated to value, growth and international stocks in the overall, during and post crisis periods. There is only a very small portion of funds allocated to the money market instrument and this only occurs during financial crisis period.

In terms of the variation in monthly returns of each unit trust fund, the result shows that most of the selected unit trust funds within the sample are highly influenced by the variation of style of the unit trusts. On average, beyond 70% to 92% of the variation in monthly return is attributable to style in the overall, during and post financial crisis period. However, there are some unit trusts, in which the variation of their monthly return is better explained by selection rather than by style during the financial crisis period.

CHAPTER 5

CONCLUSION

5.0 Introduction

This last chapter concludes the whole research. This section starts with a summary of this study. It continues with implication of the study, limitation, and recommendation for future research.

5.1 Summary of Study

This study focuses on examining whether or not asset allocation style of unit trusts will be different from their original objectives over the study period and sub-periods, which are during and after the financial crisis. This study uses 14 Islamic bond unit trust funds as sample. The period of study is six (6) years starting from January 2007 to December 2012 and divided into the overall period from January 2007 to December 2012 and two sub-periods: financial crisis from January 2007 to December 2009 and post financial crisis from January 2010 to December 2012.

Result show that there are some unit trust funds that have different styles when compared to their original objectives for the overall period and two sub-periods, either during financial crisis or post financial crisis period. MAAKL As-Saad shows, in which it was a value fund in the overall period and a growth fund in the post financial crisis periods. Both styles deviate from its original objectives. Nevertheless, during financial crisis period, the fund style and original objective remain intact. The variation in monthly returns could be explained by the variation in their styles in the overall and sub-periods. Fund managers have focused their investment mainly in fixed income securities either the Islamic government bonds or/and Islamic corporate bonds. However, there is a small proportion of investment placed in asset classes such as equity and money market instruments.

5.2 Implication of study

The finding of this study is useful for investors especially if they want to ensure their investment in unit trust funds does not deviate from the original objectives. This is important if investors want to hold a diversified portfolio. Once a fund deviates from its original objective, investors would need to re-allocate funds among different securities. The results act as a guideline for fund managers in managing their funds. They have got to ensure that their funds' original objective does not deviate or drifted to other categories. This is important as to align the

fund's objective with that of investors. The fact that same funds have drifted away from their original objective indicate that regulators such as the BM and SC would need to tighten its rules and regulation. They would need to ensure that accurate information about the funds that being disseminated to protect investors' interest.

5.3 Limitation

The major limitation of this study is the unavailability of data for asset classes' benchmark which led to the inability to focus on the pre financial crisis period. In addition, time constraint becomes a barrier for a more in-depth analysis to be done.

5.4 Recommendations for Future Research

Based on the outcomes of this study, future research could focus beyond Islamic bond funds. A comparative study of style analysis on Islamic and conventional unit trust funds could be implemented. It is also recommended that a study related to the relationship between the style of funds and performance of funds could be done in the future.

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APPENDICES

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]Amanahraya Syariah Trust
Report Created: 5/31/2014 11:19:52 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.15165246	0.1516525

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0	0
E7	return M'sia Growth	0.04796253	0.0479625
F7	Return International	0	0
G7	Return TRPAMALL Gove	0.95203747	0.9520375
H7	Return TRBPAMALL Corp	0	0
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0	D74<=1	Not Binding	1
E7	return M'sia Growth	0.04796253	E74<=1	Not Binding	0.9520375
F7	Return International	0	F74<=1	Not Binding	1
G7	Return TRPAMALL Gove	0.95203747	G74<=1	Not Binding	0.0479625
H7	Return TRBPAMALL Corp	0	H74<=1	Not Binding	1
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0	D74>=0	Binding	0
E7	return M'sia Growth	0.04796253	E74>=0	Not Binding	0.0479625
F7	Return International	0	F74>=0	Binding	0
G7	Return TRPAMALL Gove	0.95203747	G74>=0	Not Binding	0.9520375
H7	Return TRBPAMALL Corp	0	H74>=0	Binding	0
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]AMB Dana Arif
Report Created: 5/31/2014 11:24:08 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.02085851	0.0208023

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0	0
E7	return M'sia Growth	0.07515148	0.078013
F7	Return International	0	0
G7	Return TRPAMALL Gove	0.11603777	0.2487754
H7	Return TRBPAMALL Corp	0.80881075	0.6732116
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0	D74<=1	Not Binding	1
E7	return M'sia Growth	0.07801305	E74<=1	Not Binding	0.921987
F7	Return International	0	F74<=1	Not Binding	1
G7	Return TRPAMALL Gove	0.24877539	G74<=1	Not Binding	0.7512246
H7	Return TRBPAMALL Corp	0.67321157	H74<=1	Not Binding	0.3267884
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0	D74>=0	Binding	0
E7	return M'sia Growth	0.07801305	E74>=0	Not Binding	0.078013
F7	Return International	0	F74>=0	Binding	0
G7	Return TRPAMALL Gove	0.24877539	G74>=0	Not Binding	0.2487754
H7	Return TRBPAMALL Corp	0.67321157	H74>=0	Not Binding	0.6732116
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]AMBon Islam
Report Created: 5/31/2014 11:26:21 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.00421138	0.0042036

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0.01095344	0.0169093
E7	return M'sia Growth	0.04015114	0.0374061
F7	Return International	0	0
G7	Return TRPAMALL Gove	0.21879532	0.2679965
H7	Return TRBPAMALL Corp	0.7301001	0.6776881
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0.0169093	D74<=1	Not Binding	0.9830907
E7	return M'sia Growth	0.0374061	E74<=1	Not Binding	0.9625939
F7	Return International	0	F74<=1	Not Binding	1
G7	Return TRPAMALL Gove	0.26799649	G74<=1	Not Binding	0.7320035
H7	Return TRBPAMALL Corp	0.67768811	H74<=1	Not Binding	0.3223119
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0.0169093	D74>=0	Not Binding	0.0169093
E7	return M'sia Growth	0.0374061	E74>=0	Not Binding	0.0374061
F7	Return International	0	F74>=0	Binding	0
G7	Return TRPAMALL Gove	0.26799649	G74>=0	Not Binding	0.2679965
H7	Return TRBPAMALL Corp	0.67768811	H74>=0	Not Binding	0.6776881
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]CIMB-I Enhanced Sukuk
Report Created: 5/31/2014 11:28:12 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.01766797	0.0176387

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0	0
E7	return M'sia Growth	0.09322217	0.0971141
F7	Return International	0.02632936	0.0239634
G7	Return TRPAMALL Gove	0.1432965	0.2405018
H7	Return TRBPAMALL Corp	0.73715197	0.6384207
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0	D74<=1	Not Binding	1
E7	return M'sia Growth	0.0971141	E74<=1	Not Binding	0.9028859
F7	Return International	0.0239634	F74<=1	Not Binding	0.9760366
G7	Return TRPAMALL Gove	0.24050179	G74<=1	Not Binding	0.7594982
H7	Return TRBPAMALL Corp	0.63842071	H74<=1	Not Binding	0.3615793
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0	D74>=0	Binding	0
E7	return M'sia Growth	0.0971141	E74>=0	Not Binding	0.0971141
F7	Return International	0.0239634	F74>=0	Not Binding	0.0239634
G7	Return TRPAMALL Gove	0.24050179	G74>=0	Not Binding	0.2405018
H7	Return TRBPAMALL Corp	0.63842071	H74>=0	Not Binding	0.6384207
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]CIMB-I Sukuk Fund
Report Created: 5/31/2014 11:29:33 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.00178415	0.0017579

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0	0
E7	return M'sia Growth	0.01118517	0.0130905
F7	Return International	0	0
G7	Return TRPAMALL Gove	0.20072546	0.2913974
H7	Return TRBPAMALL Corp	0.78808937	0.6955121
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0	D74<=1	Not Binding	1
E7	return M'sia Growth	0.01309046	E74<=1	Not Binding	0.9869095
F7	Return International	0	F74<=1	Not Binding	1
G7	Return TRPAMALL Gove	0.29139741	G74<=1	Not Binding	0.7086026
H7	Return TRBPAMALL Corp	0.69551213	H74<=1	Not Binding	0.3044879
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0	D74>=0	Binding	0
E7	return M'sia Growth	0.01309046	E74>=0	Not Binding	0.0130905
F7	Return International	0	F74>=0	Binding	0
G7	Return TRPAMALL Gove	0.29139741	G74>=0	Not Binding	0.2913974
H7	Return TRBPAMALL Corp	0.69551213	H74>=0	Not Binding	0.6955121
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]MIDF Amanah Shariah MM
Report Created: 5/31/2014 11:30:40 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.03746257	0.0368132

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0	0
E7	return M'sia Growth	0.02154297	0.0400777
F7	Return International	0.02737892	0.0172291
G7	Return TRPAMALL Gove	0	0.4572138
H7	Return TRBPAMALL Cor	0.95107812	0.4854793
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0	D74<=1	Not Binding	1
E7	return M'sia Growth	0.04007774	E74<=1	Not Binding	0.9599223
F7	Return International	0.0172291	F74<=1	Not Binding	0.9827709
G7	Return TRPAMALL Gove	0.45721382	G74<=1	Not Binding	0.5427862
H7	Return TRBPAMALL Cor	0.48547934	H74<=1	Not Binding	0.5145207
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0	D74>=0	Binding	0
E7	return M'sia Growth	0.04007774	E74>=0	Not Binding	0.0400777
F7	Return International	0.0172291	F74>=0	Not Binding	0.0172291
G7	Return TRPAMALL Gove	0.45721382	G74>=0	Not Binding	0.4572138
H7	Return TRBPAMALL Cor	0.48547934	H74>=0	Not Binding	0.4854793
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]Pacific Dana Murni
Report Created: 5/31/2014 11:32:42 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.01244938	0.0124018

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0	0.0066914
E7	return M'sia Growth	0	0
F7	Return International	0.02028477	0.0169618
G7	Return TRPAMALL Gove	0.57537753	0.7006657
H7	Return TRBPAMALL Corp	0.4043377	0.275681
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0.00669143	D74<=1	Not Binding	0.9933086
E7	return M'sia Growth	0	E74<=1	Not Binding	1
F7	Return International	0.01696183	F74<=1	Not Binding	0.9830382
G7	Return TRPAMALL Gove	0.70066575	G74<=1	Not Binding	0.2993343
H7	Return TRBPAMALL Corp	0.275681	H74<=1	Not Binding	0.724319
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0.00669143	D74>=0	Not Binding	0.0066914
E7	return M'sia Growth	0	E74>=0	Binding	0
F7	Return International	0.01696183	F74>=0	Not Binding	0.0169618
G7	Return TRPAMALL Gove	0.70066575	G74>=0	Not Binding	0.7006657
H7	Return TRBPAMALL Corp	0.275681	H74>=0	Not Binding	0.275681
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]RHB Islamic Bond
Report Created: 5/31/2014 11:34:30 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.02098481	0.0209771

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0	0
E7	return M'sia Growth	0	0
F7	Return International	0	0
G7	Return TRPAMALL Gove	0.36134653	0.4100944
H7	Return TRBPAMALL Corp	0.63865347	0.5899056
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0	D74<=1	Not Binding	1
E7	return M'sia Growth	0	E74<=1	Not Binding	1
F7	Return International	0	F74<=1	Not Binding	1
G7	Return TRPAMALL Gove	0.41009442	G74<=1	Not Binding	0.5899056
H7	Return TRBPAMALL Corp	0.58990558	H74<=1	Not Binding	0.4100944
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0	D74>=0	Binding	0
E7	return M'sia Growth	0	E74>=0	Binding	0
F7	Return International	0	F74>=0	Binding	0
G7	Return TRPAMALL Gove	0.41009442	G74>=0	Not Binding	0.4100944
H7	Return TRBPAMALL Corp	0.58990558	H74>=0	Not Binding	0.5899056
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]Dana Al_Fakhim
Report Created: 5/31/2014 11:36:06 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.01682208	0.01681

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0.01652589	0.0237899
E7	return M'sia Growth	0.02842646	0.0243376
F7	Return International	0	0
G7	Return TRPAMALL Gove	0.5432641	0.487451
H7	Return TRBPAMALL Cor	0.41178355	0.4644216
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0.02378985	D74<=1	Not Binding	0.9762101
E7	return M'sia Growth	0.02433758	E74<=1	Not Binding	0.9756624
F7	Return International	0	F74<=1	Not Binding	1
G7	Return TRPAMALL Gove	0.48745099	G74<=1	Not Binding	0.512549
H7	Return TRBPAMALL Cor	0.46442158	H74<=1	Not Binding	0.5355784
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0.02378985	D74>=0	Not Binding	0.0237899
E7	return M'sia Growth	0.02433758	E74>=0	Not Binding	0.0243376
F7	Return International	0	F74>=0	Binding	0
G7	Return TRPAMALL Gove	0.48745099	G74>=0	Not Binding	0.487451
H7	Return TRBPAMALL Cor	0.46442158	H74>=0	Not Binding	0.4644216
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]Eastspring Invt Dana Wafi
Report Created: 5/31/2014 11:37:37 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.0192819	0.0191817

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0	0
E7	return M'sia Growth	0	0
F7	Return International	0	0
G7	Return TRPAMALL Gove	0	0.1760629
H7	Return TRBPAMALL Corp	1	0.8239371
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0	D74<=1	Not Binding	1
E7	return M'sia Growth	0	E74<=1	Not Binding	1
F7	Return International	0	F74<=1	Not Binding	1
G7	Return TRPAMALL Gove	0.17606295	G74<=1	Not Binding	0.8239371
H7	Return TRBPAMALL Corp	0.82393705	H74<=1	Not Binding	0.1760629
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0	D74>=0	Binding	0
E7	return M'sia Growth	0	E74>=0	Binding	0
F7	Return International	0	F74>=0	Binding	0
G7	Return TRPAMALL Gove	0.17606295	G74>=0	Not Binding	0.1760629
H7	Return TRBPAMALL Corp	0.82393705	H74>=0	Not Binding	0.8239371
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]Hwang AllMAN Income Plus
Report Created: 5/31/2014 11:38:15 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.03961454	0.0394991

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0.34218545	0.3553137
E7	return M'sia Growth	0.05243042	0.0465462
F7	Return International	0	0
G7	Return TRPAMALL Gove	0.45359786	0.5981401
H7	Return TRBPAMALL Corp	0.15178627	0
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0.3553137	D74<=1	Not Binding	0.6446863
E7	return M'sia Growth	0.04654619	E74<=1	Not Binding	0.9534538
F7	Return International	0	F74<=1	Not Binding	1
G7	Return TRPAMALL Gove	0.59814011	G74<=1	Not Binding	0.4018599
H7	Return TRBPAMALL Corp	0	H74<=1	Not Binding	1
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0.3553137	D74>=0	Not Binding	0.3553137
E7	return M'sia Growth	0.04654619	E74>=0	Not Binding	0.0465462
F7	Return International	0	F74>=0	Binding	0
G7	Return TRPAMALL Gove	0.59814011	G74>=0	Not Binding	0.5981401
H7	Return TRBPAMALL Corp	0	H74>=0	Binding	0
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]Kenanga Bon Islam
Report Created: 5/31/2014 11:39:44 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	0.00167699	0.001657

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	0.01534015	0.0243691
E7	return M'sia Growth	0	0
F7	Return International	0.01313083	0.009014
G7	Return TRPAMALL Gove	0.32438646	0.4031886
H7	Return TRBPAMALL Corp	0.64714257	0.5634283
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAv	1	J74=1	Not Binding	0
D7	Return M'sia Value	0.02436913	D74<=1	Not Binding	0.9756309
E7	return M'sia Growth	0	E74<=1	Not Binding	1
F7	Return International	0.00901402	F74<=1	Not Binding	0.990986
G7	Return TRPAMALL Gove	0.40318857	G74<=1	Not Binding	0.5968114
H7	Return TRBPAMALL Corp	0.56342827	H74<=1	Not Binding	0.4365717
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0.02436913	D74>=0	Not Binding	0.0243691
E7	return M'sia Growth	0	E74>=0	Binding	0
F7	Return International	0.00901402	F74>=0	Not Binding	0.009014
G7	Return TRPAMALL Gove	0.40318857	G74>=0	Not Binding	0.4031886
H7	Return TRBPAMALL Corp	0.56342827	H74>=0	Not Binding	0.5634283
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]Libra ASnitaBOND
Report Created: 5/31/2014 11:41:09 AM

Target Cell (Min)

Cell	Name	Original Value	Final Value
L7	res^2	0.01182562	0.0117835

Adjustable Cells

Cell	Name	Original Value	Final Value
D7	Return M'sia Value	0	0
E7	return M'sia Growth	0	0
F7	Return International	0.00483822	0.0040172
G7	Return TRPAMALL Gove	0.3274127	0.4416529
H7	Return TRBPAMALL Corp	0.66774909	0.55433
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAV	1	J74=1	Not Binding	0
D7	Return M'sia Value	0	D74<=1	Not Binding	1
E7	return M'sia Growth	0	E74<=1	Not Binding	1
F7	Return International	0.00401716	F74<=1	Not Binding	0.9959828
G7	Return TRPAMALL Gove	0.44165289	G74<=1	Not Binding	0.5583471
H7	Return TRBPAMALL Corp	0.55432995	H74<=1	Not Binding	0.44567
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	0	D74>=0	Binding	0
E7	return M'sia Growth	0	E74>=0	Binding	0
F7	Return International	0.00401716	F74>=0	Not Binding	0.0040172
G7	Return TRPAMALL Gove	0.44165289	G74>=0	Not Binding	0.4416529
H7	Return TRBPAMALL Corp	0.55432995	H74>=0	Not Binding	0.55433
I74	return KLIBOR	0	I74>=0	Binding	0

Microsoft Excel 12.0 Answer Report
Worksheet: [Book1.xlsx]MAAKL As_Saad
Report Created: 5/31/2014 11:42:06 AM

Target Cell (Min)

Cell	Name	Original Valu	Final Value
L7	res^2	10.8539508	10.853951

Adjustable Cells

Cell	Name	Original Valu	Final Value
D7	Return M'sia Value	1	1
E7	return M'sia Growth	0	0
F7	Return International	0	0
G7	Return TRPAMALL Gove	0	0
H7	Return TRBPAMALL Corp	0	0
I74	return KLIBOR	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
J74	rNAv	1	J74=1	Not Binding	0
D7	Return M'sia Value	1	D74<=1	Binding	0
E7	return M'sia Growth	0	E74<=1	Not Binding	1
F7	Return International	0	F74<=1	Not Binding	1
G7	Return TRPAMALL Gove	0	G74<=1	Not Binding	1
H7	Return TRBPAMALL Corp	0	H74<=1	Not Binding	1
I74	return KLIBOR	0	I74<=1	Not Binding	1
D7	Return M'sia Value	1	D74>=0	Not Binding	1
E7	return M'sia Growth	0	E74>=0	Binding	0
F7	Return International	0	F74>=0	Binding	0
G7	Return TRPAMALL Gove	0	G74>=0	Binding	0
H7	Return TRBPAMALL Corp	0	H74>=0	Binding	0
I74	return KLIBOR	0	I74>=0	Binding	0