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**UNIT TRUSTS IN MALAYSIA;
AN ANALYSIS OF THE RISK-RETURN TRADEOFF**

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**Unit Trusts in Malaysia;
An Analysis of The Risk-Return Tradeoff**

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Abstract

This paper examines empirically the risk-return relationship of the equity, balanced and fixed income funds in Malaysia over the 18 quarters ended December 1996 to March 2001. It also analyzes the dependence of fund performance on the benchmark performance and the ability of the fund managers in market timing and/or stock selection. The comparison of investment performance and risk levels between the three categories of unit trust funds, the market index (Kuala Lumpur Stock Exchange Composite Index, KLSE CI) and the Employees Provident Fund (EPF) is also performed.

Linear regression techniques are used to find the values of alpha and beta for computing the Sharpe ratio, the Treynor ratio and the Jensen's Alpha which are later used for analyzing the findings of the research.

The results of the research show that the riskier investment portfolios do not generate higher returns if the unadjusted total returns are used. However, when the risk-adjusted returns are adopted, the principle of high risk high return still holds. The study also reveals that except for the fixed income funds, the fund managers are not capable of timing the market and/or selecting stocks that will generate abnormal gains to unit holders. The adjusted returns from unit trust investment are also unable to outperform the adjusted returns from the EPF and KLSE CI. The R square and p-values derived from the regressions indicate that there is a statistically significant relationship among the equity & balanced funds with the KLSE CI. However, the relationship between fixed income funds and the KLSE CI is not significant.

Chapter 1 Introduction

1.1. Research Motivation

The concept of unit trust came into existence when the world's first unit trust called "The Foreign and Colonial Government Trust" was established in London in 1868. This basic structure and concept of unit trust, however was introduced into Malaysia in 1959 when the first unit trust company in the name of "Malayan Unit Trust Ltd." was established. Although Malaysia has introduced the concept of unit trust investment relatively earlier compared to the ASEAN neighbors, the industry did not enter its development stage until the 1980s. The period from 1980 to 1990 marks the entry of government participation in the industry and the formation of a committee called the Informal Committee for Unit Trust Funds. The committee which comprised of representatives from the Registrar of Companies (ROC), the Public Trustee of Malaysia, Bank Negara Malaysia (BNM) and the Capital Issues Committee (CIC) was established to regulate the unit trust business in the country. The number of new management companies being set up and fund units in circulation have grown rapidly during the period of 1993 to 1996. The statistics on the size, growth & development of the industry and the Net Asset Value (NAV) as a percentage to KLSE Market Capitalization over the years of 1993 to 2000 are shown on Appendices 1 to 4 at the end of this paper.

It is noticed that the number of management companies has grown tremendously from 16 in 1993 to 30 in 1996 before the outbreak of the financial crisis and subsequently to 34 in 2000. The units in circulation have also picked up from 17.029 billion in 1993 to 63.846 billion in 2000. The NAV was at its peak of RM59.955

billion in 1996 but dropped to RM33.573 billion the following year. However, from 1998 onwards, the NAV escalated gradually and has aggregated to RM43.299 billion in 2000.

Since the early 1990s, many fund companies are promoting the unit trust business actively and are trying to impress the unit holders that such investments are superior in terms of generating returns compared with leaving the resources in the EPF or keeping them in bank deposits. The fund companies also introduce different types of trust funds to suit the investors' expectations and risk tolerance level. Presumably, the fund category that has greater volatility must compensate the investors with higher returns for taking the extra risk, otherwise it will be more beneficial for the investors to be risk averse. Unfortunately the fund performance shown on various fund tables compiled by independent research companies appears to contradict the risk-return tradeoff in investment since the low risk income funds appear to be getting better total returns. Furthermore, the author's personal experience in unit trust investment through the EPF scheme during the past five to six years has also shown that the face value of the investment is less than the investment outlays even without taking into consideration the opportunity loss from the EPF dividends and time value of money. This superficial inconsistency in investment returns has prompted the author to conduct a research on the subject to establish whether the validity of the reward-to-variability theory holds.

1.2. Statement of Objectives and Hypotheses

An unit trust fund is often considered a safe and secured investment which will assist an individual in achieving his/her financial stability over the long run. It is also highlighted by the product promoters that by the pooling of capital into a diversified portfolio of investments managed by a team of professionals , the individual investor will not only enjoy the specialized expertise from these managers, but is also able to spread the risk of his/her investment over a wide portfolio of assets. To some extent, it is also implied that unit trust will be a better investment compared with other options such as investment in landed properties, stocks and shares, fixed or other bank deposits and so on. In short, unit trust is believed to be able to generate better returns than the EPF and bank deposits on the one hand, and will not expose the unit holders to excessive market risk as in the case of stocks and shares as well as landed properties on the other hand.

As stated by the Modern Portfolio Theory, investment in high volatility portfolios must be accompanied by higher returns and vice versa. However, over the period of analysis which is characterized by volatile market conditions associated with the regional financial crisis and rampant fluctuations in the KLSE CI, performance and market values of the unit trust funds are also adversely affected.

Therefore, besides giving an overview of the unit trust industry in Malaysia, the objectives of this paper are :

1. To test the consistency of the Modern Portfolio Theory with regards to the risk-return tradeoff in the context of unit trust investment in Malaysia for the 18 quarters from December 1996 to March 2001.
2. To analyze whether more aggressive trust funds which seek higher risk by investing a larger portion of its resources in more volatile assets are compensated with higher returns than the less aggressive funds.
3. To investigate whether the performance of the unit trust funds are dependent on the performance of the KLSE CI.
4. To assess whether the unit trust fund managers, in general, are capable of timing the market and/or selecting appropriate stocks that will yield abnormal gains to the unit trust investors.
5. To study and ascertain whether unit trust funds provide returns that are superior to the EPF scheme.

In line with the above objectives for this research, the following hypotheses will be tested empirically :

Hypothesis I

Ho : The investment performance of a high volatility unit trust fund is better than that of a low volatility unit trust fund

H1 : The investment performance of a high volatility unit trust fund is no different from that of a low volatility unit trust fund

Hypothesis II

Ho : The performance of unit trust funds is dependent on the performance of the market portfolio

H1 : The performance of unit trust funds is independent from the performance of the market portfolio

Hypothesis III

Ho : The fund managers, in general, are able to time the market

H1 : The fund managers, in general, are unable to time the market

Hypothesis IV

Ho : The investment performance of unit trust fund is better than that of the Employees Provident Fund

H1 : The investment performance of unit trust fund is no different or inferior from that of the Employees Provident Fund

1.3. Format of Paper

This paper consists of five chapters. Chapter 1 serves to introduce the unit trust industry in Malaysia and its development into a sizeable market. The research motivation which comprises the exploring of the possible inconsistent risk-return tradeoff in the recent unit trust performance and the personal interest of the writer on the subject matter is explained. Objectives of the research paper and the hypotheses to be tested are also stated in the chapter.

Chapter 2 deals with the review of literature pertaining to this research. An overview of the unit trust investment and some of its fundamentals are reviewed.

Measurement techniques on investment performance including the Sharpe, Treynor and Jensen measures are discussed to emphasize risk-adjusted returns instead of total returns to be considered when evaluating its performance. Literature on several studies pertaining to the relationship between risk and returns on investment of unit trusts are also reviewed in this chapter.

Chapter 3 focuses on the data and methodology used in this research and covers the following issues :

1. Selection of unit trust fund data for study
2. Sources of data used in the analysis.
3. Risk-adjusted fund returns for performance ranking
4. Data frequency

Chapter 4 presents the findings of the risk-return tradeoff analysis on the three categories of unit trust funds. Both the total and risk-adjusted returns approaches are discussed. The results of the hypothesis testing on areas of analysis such as dependence of fund performance on KLSE composite indexes and fund managers' market timing ability are elaborated. Several major policy implications from the perspectives of the investors, fund managers and policy makers arising from the research are discussed as well.

Chapter 5 summarizes the research findings and provides a conclusion to the study. The importance on the awareness of risk element and the use of risk-adjusted returns in performance evaluation for unit trust funds is highlighted.

Chapter 2 Literature Review

2.1. An Overview of Unit Trust Investment

Unit trust is an investment scheme which pools money from many investors who share similar financial objectives, investment strategies and risk tolerance. With the employment of professional fund managers, these pooled funds are then invested into a diversified portfolio of authorized financial assets based on the financial objectives written in the prospectus of the fund. Some objectives may be more aggressive and will involve greater risk in search of higher returns for the investors. Others may be less aggressive and emphasize on securing current income and the element of risk will be relatively less. Some examples of these assets are :

- Shares & stocks of public listed companies
- Securities of Government
- Bonds
- Money market instruments
- Liquid assets such as bank deposits

Among these assets, apparently the shares and stocks are the riskiest as they are exposed to the market volatility. The money market instruments and bank deposits are the least risky as they are usually short or medium term in nature and are backed by the financial institutions and monetary authority. Bonds and securities of Government are backed by the authorities but are usually long term in nature. Hence the expected returns from the riskier assets ought to be higher than that of the less risky assets.

In short, an unit trust attempts to allocate the financial resources of the individual investor in a similar way that he might adopt if he has the time, the inclination, the knowledge, the experience and exposure, and sufficient resources to spread his investments wisely among many businesses. One distinguishing feature about pooling and reinvestment of funds under the unit trust scheme is that it provides diversification as the pooled funds from thousands of individuals are definitely much more substantial as compared to that of an individual.

In Capital Market Theory, total risk of an investment portfolio consist of systematic and unsystematic risk. Systematic risk, measured by the beta value of the portfolio, is defined as the variability in all risky assets caused by the macroeconomic variables. Systematic risk is not diversifiable and will remain in the portfolio. Some examples of macroeconomic variables are variability of growth in money supply, fluctuations in interest rates and changes in other factors such as industrial production, corporate earnings and cash flow. Unsystematic risk, on the other hand, is the portion of risk unique to individual assets which can be diversified or eliminated by increasing the number of stocks/assets in a portfolio. When an investment portfolio is regarded as a completely diversified portfolio, it means all the unsystematic risk have been diversified leaving only the systematic risk in the portfolio. A completely diversified portfolio will have total risk consisting of only systematic risk as all the unsystematic risk have been eliminated.

The duty of the unit trust fund managers in this context is to select and include additional stocks or assets in a portfolio so that the unsystematic risk and ultimately the total risk will be minimized. John L. Evans and Stephen H. Archer (1968)

conclude from their study that about 90 percent of the maximum benefit of diversification was derived from portfolios of 12 to 18 stocks. Meir Statman (1987), in a study comparing the benefits of lower risk from diversification to the added costs with more securities concludes that a well-diversified stock portfolio must include at least 30 to 40 stocks in the portfolio

The common types of unit trust funds available in Malaysia are growth fund, balanced fund, fixed income fund, short term bond fund and Islamic fund. The investment objectives and consequently the risk level and expected returns associated with these funds differ from one another. A brief description of each of these funds is given as follows :

Growth Fund

The primary objective of a growth fund is to achieve long term capital appreciation, with income considered incidental. There are different types of growth funds available in the market and they may range from the ordinary growth fund to aggressive growth fund. The more aggressive growth fund will have a greater portion of its assets invested in stocks and equities and this investment can be as high as 90% to 95% of the NAV of the fund. Growth fund is generally expected to be able to generate higher returns over medium to long term, but is also associated with higher volatility. It is more suitable for long term investors who are prepared to assume higher risk and can withstand extended periods of market highs and lows in pursuit of capital growth.

Balanced Fund

A balanced fund will focus on attaining a balance between long term capital appreciation and a steady stream of regular income for its investors. The fund manager will invest partly in stocks and shares and partly in fixed income securities. However, the portion of investment in stocks and shares here will be less than that in the case of growth fund. The investment of fixed income securities in balanced fund is also to a lesser extent than that of the bond fund. It is more suitable for investors who are willing to take moderate rather than aggressive risk and are prepared to invest for medium to long term only.

Fixed Income Fund

The emphasis of a fixed income fund is to provide a steady stream of annual income to its unit holders with capital appreciation considered secondary. The fund will invest in government and government sponsored bonds, private debt securities, money market instruments for steady income and also redeemable loan stocks with convertible features to enhance the fund's opportunity for capital gain. Investors who are of conservative risk-reward temperament and are interested to seek stability of annual income and safety in investment for short to medium term will prefer this type of fund.

Short Term Bond Fund

The objective of a bond fund is to provide steady income to the investors with less emphasis to capital growth. The risk level is generally low because the emphasis of its investment is targeted at the less volatile assets such as bonds and money market instruments. As a result, the return of bond fund is expected to be lower compared with the growth or balanced fund. After investing in unit trust for some time and having reaped some profits in his portfolio, an investor may wish to switch part of his investment to bond fund if he anticipates the market will decline in the near future. There will be no additional fees or charges when funds are switched over to bond funds of the same management company.

Islamic Fund

Islamic funds in the market may have the objective of achieving capital growth or providing steady income flow to the investors. The priority or emphasis will differ from one fund to the other depending on the investment policies and strategies of the fund companies. However, all investments in the Islamic fund will comply with Syariah Principles. In other words, Islamic fund will only invest in “halal” assets and will exclude all portfolios of companies involved in conventional banking, insurance and financial services, gaming, alcoholic beverages and non-halal food products. In upholding the spirit of the Islamic concept of fund management, fund managers will only invest in companies that are approved by the Syariah Advisory Council of the Securities Commission.

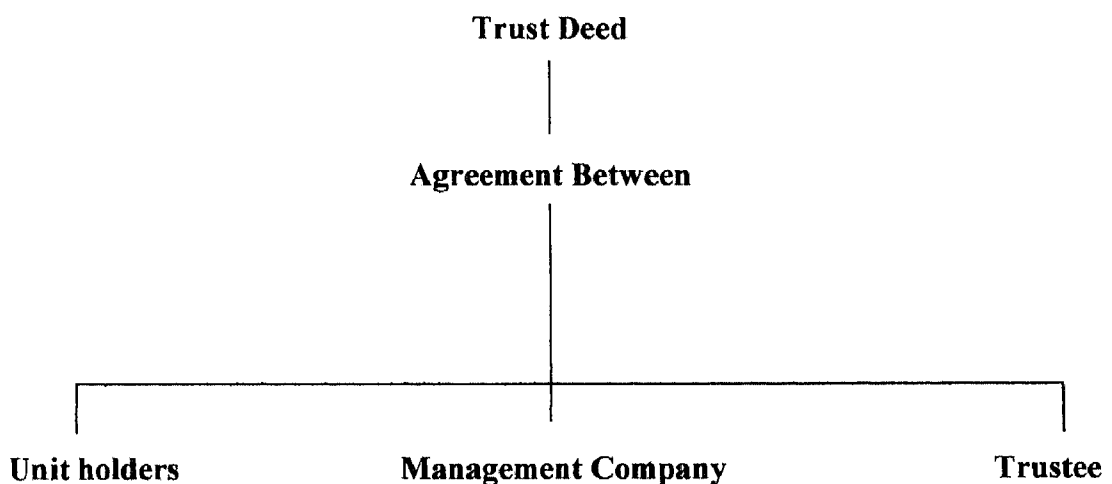
An unit trust fund is created out of a trust deed, which is essentially a three party agreement between the unit holders, the management company and the trustee.

The unit holders are basically the investors of the trust funds. The fund management company handles the marketing, administration and management of the investments.

In some cases, a merchant bank or an asset management company can also be appointed as an external investment manager to handle some or all of the

investments of the funds. The trustee acts as a custodian for the assets of the fund, such as the share certificates and bank accounts and is responsible to look after the

interest of the unit holders. As a security measure, the management company is not allowed to keep the assets of the fund.



To invest in unit trust fund, the investor has to approach the management company or its authorized agents and buy the units at the manager's prevailing selling price.

The investor can buy the units at any time so long as the units are still available and the fund has not reached its maximum approved size. Similarly the investor can also

sell back the units to the management company at the manager's prevailing buying price of the management company. If the total proceeds from the sale of the units exceed the cost of investment, the investor is said to have gained from the investment and vice versa.

Computation of NAV per unit, Selling Price and Buying Price

The Net Asset Value (NAV) per unit is computed by dividing the NAV of the unit trust fund with the number of units in circulation and forms the basis for the computation of selling and buying (repurchase) prices. The manager's selling price per unit is calculated by adding a service charge of between 5% to 7% to the NAV per unit and the manager's buying price per unit is equivalent to the NAV per unit if there is no repurchase fee. (Note : Source funds do not charge a repurchase fee). If a repurchase fee is imposed, the buying price will be the total of such repurchase fee plus NAV per unit.

Illustration 1 : Computation of NAV per unit

	RM
Total NAV	630,000,000
Units in circulation (units)	1,000,000,000
NAV per unit (Total NAV / Units in circulation)	0.63

Illustration 2 : Computation of Selling Price

	RM
NAV per unit	0.63
Add : Service charge (6.35% of NAV)	0.04
Selling Price per unit	0.67

Illustration 3 : Computation of Buying Price

	RM
NAV per unit	0.63
Add : Repurchase Fee	0.00
Buying Price per unit	0.63

Fees and Charges

Fees and expenses are charges that an investor will incur when he/she buys, sells or holds the unit trust fund. Some of these fees and expenses charged by the management companies, though they may differ from one another, include initial service charge, repurchase fee, management fee, trustee fee, brokerage expenses etc.

As these fees and charges are part of the costs that an investor will have to bear, it is therefore important for the investor to be aware and compare the Management

Expense Ratio (MER) for different types of funds before investing. MER is a ratio of the annual operating expenses of the relevant fund to the average net asset of the fund calculated on daily basis with the following formula :

$$\text{MER} = \frac{[\text{Annual operating expenses calculated on daily basis}] \times 100\%}{[\text{Average net asset of the fund calculated on daily basis}]}$$

Annual operating expenses will include management fees, trustee fees, audit fees, and other administrative costs. Excessive fees and charges, indicated by the excessive MER, will inevitably erode a significant portion of the gross income which is to be distributed to the investors from the fund. The investors are usually reminded to read the prospectus for more details before making the investment decision.

The fee structure of Kuala Lumpur Mutual Fund Berhad, one of the most established fund company in Malaysia, is attached as per Appendix 5 for illustration purpose.

Capital Appreciation and Dividend Income

An unit trust has the potential to generate returns to the investors in any one or more of the following ways :

- i. capital appreciation or growth in its portfolio or net asset values, and
- ii. dividend income to be distributed to the unit holders from time to time

The value of the unit trust fund is basically the total market value of the fund's underlying portfolio of investment and the value of a **unit** is essentially the total market value of the fund (the net asset value or NAV) divided by the number of units in circulation.

$$\text{NAV per unit (in RM)} = \frac{\text{Net Asset Value of the fund (in RM)}}{\text{Number of units in circulation}}$$

As such, when the value of portfolio goes up, the value of each unit will also increase. This increase in the value of each unit of the trust fund is known as **capital appreciation or growth**. Hence when the unit holder sells the units and the total proceeds received is more than the cost of purchase (inclusive of initial service charges), the unit holder is said to have realized profits or gains from the investment. In contrast, if the total sale proceeds is less than the investment outlay, the unit holder has suffered a loss from the undertaking. *Inter alia*, the rate of growth or otherwise over a period of time depends very much on the fund profile and the level of risk associated with the particular type of fund as well as the market conditions at a given point in time.

A portion of the income earned from the portfolio of securities under the fund is usually passed on to the unit holders as **dividends** after deducting its management and operating expenses. However, dividends are not guaranteed. If the fund makes very little or no profits, the fund may not pay any dividends to the unit holders. Furthermore, if the investment objective of a particular fund is to achieve capital