CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Unit trusts are an investment instrument for individuals to invest in the capital market and their performance has always been a significant issue. The evaluation of portfolio performance is an important part of investment management. The performance of unit trusts is closely related to the Efficient Market Hypothesis and has been a research issue in the finance literature for a long time. The term *unit trusts* is used in Malaysia as in the U.K., it is synonymous with *mutual funds,* which is the term commonly used in North America. There is well-documented research and ample literature in mutual funds found in developed countries, the majority being from the U.S., which show mixed results concerning the performance of mutual funds and their benchmark. The issue of the performance evaluation of portfolio managers is still to be resolved after three decades and is the subject of considerable research and debate.

The classic studies, Sharpe (1966) and Jensen (1968) documented that unit trusts underperformed the common market indices. More recent research, like Malkiel (1995), Gruber (1996), Elton, Gruber and Blake (1996), and Carhart (1997) also reported the same findings, suggesting that investors will benefit if they buy low expense and non-actively managed index funds. One issue raised is why there is a tremendous growth in actively managed unit trusts, while, on average, it is performing worse than the passively managed unit trusts such as the index funds. This puzzle was examined by Gruber (1996), who attributed the reasons why individuals prefer to invest in actively managed mutual funds to the services provided by the unit trust management

companies, like record keeping and the ease of moving of money around to other funds by investors; the professional management in securities selection by fund managers; the diversification benefits; and low transaction costs. Gruber documented that the superior active management of open-ended mutual funds is not priced because funds are bought and sold at their net asset value. As a consequence, past performance is predictive of future performance.

This study concerns an area of interest of unit trust investors' risk investing in funds managed by the same Unit Trust Management company. The Unit Trust Management company is also known as Fund Family or Fund Complex in academic literature. It is Malaysian Incorporated, a subsidiary of financial service company or other institutions approved by Security Commission. A management company is a company that establishes a fund; issues, offers for subscription, makes an invitation to subscribe for or purchase units of the fund; and operates and administers the fund. In order to obtain the Capital Markets Services Licence, a management company must be an entity incorporated in Malaysia; have a minimum of 30 per cent Bumiputera equity; not have more than 49 per cent foreign equity; and have a minimum shareholders' funds of RM10 million at all times. (Securities Commision, 2008). The first part of the study aims to examine the impact of unit trust company's fund investments on investor risk.

Another issue that attracts the researchers' interest is the persistence of fund performance over long term and short term periods. The short term persistence is also known as the hot-hand phenomenon. The Efficient Market Hypothesis (EMH) states that future assets performance cannot be determined with reference to the past performance of these assets. In a perfectly efficient market, managerial superiority is a result of chance and it does not reflect the managers' skill. The persistence of

performance indicates the sustainable superior performance of the manager. The documented evidence of performance persistence is against the EMH.

Gruber (1996) argued that investors who chase past performers are rational wealth maximisers and that they actually benefit from this action. In addition, the use of past performance by investors to allocate their capital can influence a funds future performance. Fund managers are motivated to improve their performance. It benefits both the investors and the fund managers if fund performance persists. With this phenomenon, fund managers can position themselves relative to their competing peers and take the necessary decision or improvement to make themselves more competent. While for the investors, they are able to allocate their capital more efficiently to funds that are better managed.

Hendricks, Patel and Zeckhauser (1993), Goetzmann and Ibottson (1994), and Brown and Goetzmann (1995) showed the existence of the hot-hand phenomenon. Meanwhile, Grinblatt and Titman (1992), Elton, Gruber, Das and Blake (1996) showed that mutual fund performance persists over a longer period of five to ten years and commented that this superiority is due to the managers stock selectivity ability and the possession of differential information by the managers. Hence, future performance can be predicted from the past performance and with the use of certain investment strategies, investors are able to earn abnormal returns. However, the early studies by Sharpe (1966) and Jensen (1968) discovered no existence of mutual fund performance persistence.

This evidence of past performance is predictive of future performance was shown in the flow of new monies into and out of mutual funds, trailing the past performance. However, there were monies that remained in funds that performed badly in the

previous period. Gruber (1996) explained this by classifying investors into two groups – the sophisticated and the disadvantaged clientele. The above mentioned holding is more likely due to the disadvantaged clientele who do not move their money out of the inferior fund because of the restriction in the pensioner's plan or for capital gain tax reasons. The evidence of funds with good past returns were rewarded with large cash flows into the funds; however, funds with bad past returns did not experience equal outflows and were well documented by Gruber (1996), Sirri and Tufano (1998), Chevalier and Ellison (1999).

The unit trust funds performance in Malaysia was not attractive because most of the studies in the local market on unit trust generally conclude underperformance when compared to a passive benchmark such as a market index. These studies include Leong and Aw (1997); Abdullah, Hassan and Mohamed (2000, 2007); Md-Taib and Isa (2007). According to Badri and Abdullah (2006); Kok, Goh and Wong (2004); Abdullah, Hassan and Mohamed (2000, 2007); Soo (2003)), some attribute the poor performance to the poor selectivity ability and market timing.

1.2 PROBLEM STATEMENT

The problem statements are based on several aspects. Diversification is the utmost important investment factor to be considered by the investors who aim to reduce risks. The goal of investment is to obtain the highest possible return with the minimum possible volatility. Unit trusts play an important role being one of the crucial investment vehicles in today's economy. Investors have to decide on the most suitable asset allocation, that is, the blend of asset classes to match with the risk profile. However, it may not be adequately diversified if the investors invest all their money in local funds or directs all the investments into funds managed by the same fund family. Indeed,

diversification can be achieved with a portfolio of 10 funds which includes local, global and regional equities and bonds funds (Mehrotra, 2011). Chew (2010) argued that diversification can be achieved through allocation of funds across different geographical regions, sectors and investment strategies and also across different fund managers.

Unit trust funds are sold through unit trust agents or unit trust consultants (UTCs) or financial planners. There are about 75,000 unit trust consultants (UTCs) as at the end of 2009. These unit trust agents are required to be registered unit trust agent for one unit trust management company. This requirement physically limits the choice of funds an agent can recommend to potential investors. Studies showed that UTCs are still the most sought-after intermediary for the Malaysian public (Tan, 2011).

The role of unit trust agents is to assist the potential investors to analyse their financial situation, set up investment goals and propose an investment plan to achieve their goals by investing in a range of products offered in a management company. The uniqueness of the role played by unit trust agents in Malaysia and their attachment to one unit trust management company entice the Malaysian investors to invest in funds managed in the same unit trust management company. But, it can bring about a possible conflict of interest. This conflict arises when unit trust consultants attempt to promote different funds with different objectives which belong to the unit trust management company that they registered with. However, studies showed that it is less similar and hence more diversified if the investment of funds is made in funds across different fund families (Elton *et al,*. 2007; and Park, 2009). In addition, the level of diversification is found to be low in Malaysia (Leong and Aw, 1996). This is supported by the low number of stocks held in funds in Malaysia. The average number of stocks held by fund companies is generally below 30 (between December 2007 to May 2008, as reported in Chapter 2,

Table 2.6) while 30 stocks and above is required in a portfolio in order for diversification to work well (Statman, 1987; and O'Neal, 1997). Thus, diversification is a relevant issue in unit trusts in Malaysia. The more uncorrelated the returns derived in a portfolio, the more predictable the result will be.

On the other hand, one of the very remarkable characteristics in the Malaysian unit trust industry is the vast growth of funds which are operated by several fund management companies. The top five (ten) largest fund management companies, or fund families, have dominated nearly 60 (80) per cent of the total approved fund size (2008). The descriptive statistics on unit trusts families and approved fund size in Malaysia as at 30 October 2008 is presented in Chapter 2 (Table 2.5). Fund companies are ranked in the order of size from large to small according to the fund size reported. This unique characteristic of unit trust industry in Malaysia aggravates the problem of choosing funds which belongs to one fund family.

For this reason, this study examines the issues related to the risk and return of unit trust investment within a funds family versus across fund families. These three issues are described below.

1.2.1 Funds Correlation and Common Stock Holdings Within and Between Fund Families

It has been claimed by large unit trust management companies that they are able to take advantage of bulk purchase and thus reduce the transaction cost for investors. It is, to a certain extent, true that large unit trust management companies are a source of value to investors as they offer economies of scale and scope derived from the sharing of

research resources and information, lower marketing and distribution costs, etc. Many studies (e.g., Latzko, 1999; Malhotra, Merisetty and Ariff, 2001; and Rea, Reid, Millar, 1999) concluded that the fund investors benefited from economies of scale. The operating expense ratios are inversely related to the asset growth in general; and the operating expense ratios of large funds are generally lower than small funds.

On the other hand, investors tend to invest in funds in a single large management company for ease of management. In addition, investors are able to freely switch their funds from one objective to another within the management company with just paying a minimum fix cost. Due to these benefits, investors invest their monies in funds managed by one large unit trust company. Thus, for simplicity, convenience and economic reasons, investors hold funds in one management company. However, investing in funds in the same company might not benefit the investors. This could be due to the increased risk and the reduced diversification, which have an adverse impact on investment. Unit trusts under the same management company experience high commonality because they share the same source of research information, same marketing activity and same administration support; and, very often, they have a prescribed investment style that is applied across the family. As such, the correlation of funds within fund family are high which reduce the diversification in a within family investment. In addition, the level of diversification is low in Malaysia (Leong and Aw, 1996) enhances the role of diversification in mutual fund family.

Elton *et al.* (2007) argued that the risk of investing in a single family of funds is higher than diversifying across families. Therefore, investing in one single management company increases the risks and reduces diversification. Moreover, there is family favouritism over some high value funds in a family and resources will be shifted from

funds in a family to those funds that the family favours, as evident in Massa (2003); Guedi and Papastaikoudi (2004); and Gasper, Massa and Matos (2006).

The study is based on the verification by Brown and Goetzmann (1995) that persistence is correlated across managers; thus, it is a group phenomenon. The question here is whether it is a wise decision for investors to invest all their money in funds managed by the same unit trust management company. The various reasons are discussed in the next paragraph. Indeed, investing in a large company offers the benefits of switching to other funds in the company with zero costs or just a small charge, as there is minimum paperwork, also making it easier for investors to monitor their investment.

Nonetheless, investing all capital in one fund management company can increase risk, reduce diversification and adversely affect the investment. Elton *et al.* (2007) claimed that many mutual fund families, especially the small ones, offer many similar funds with different names. Family funds are marketed with different names, different styles, different growth strategies and objectives, but with a similar risk profile. If the market goes down, investing in funds within a family will not be as diversified as holding funds across fund families. Thus, investor risk is higher within family than between families. The correlation between funds outside the fund family is lower, as compared to the correlation of funds within a fund family. Hence, the lower correlation between funds outside a family is the reason for cross family diversification. By investing in funds across families, investors reduce their total portfolio risk without jeopardizing their return (Elton *et. al.*, 2007) and Park (2009).

Some attributes of large fund management companies include the ease of management of investment hold; lower transaction costs; economies of scale, which are experienced

by large companies; sharing research information resources; and expenses across funds in the company. A large amount of unit trust expenses are fixed cost. The ratio of fund expenses to the average asset value reduces as the asset grows. The economies of scale and scope in large funds and large fund complexes were established by Latzko (1999), Rea, Reid, Miller (1999), Khorona and Servaes (1999), Khorona, Servaes and Tufuno (2009). In addition, investors enjoy zero cost of switching from fund to fund with different objective classifications in Malaysia.

Conversely, Elton *et. al.* (2007) observed that investing in large fund companies lowers diversification and increases the risk to investors, as the correlation within families is higher than across families. This is because managers in a family, having access to the same research resources, with a similar view on stocks, leads the different family funds to hold the same stocks even though they have different objectives. Some families have even imposed investment approaches, which restrict the investment option of funds. One of the reasons that contribute to high correlation within the family is high common holdings.

1.2.2 Performance Persistence of Fund Family

The evaluation of unit trust performance is always a significant issue. This is because the assessment of portfolio performance is an integral part of the investment management process to feedback to managers and investors for decision making. If the market is perfectly efficient, superior performance is a result of chance. Then, it is not due to managers' superior performance abilities. However, if fund managers do have sustainable superior skills, this skill is reflected in the persistence of fund performance.

The two main issues in the performance of unit trusts that concern unit trust investment are: First, whether the professionally managed funds yield a higher return than the passive investment strategy; and Second, whether or not such performance persists.

In recent studies, as reviewed in chapter 3, the empirical results on performance persistence are mixed and remain unresolved. The findings of the research have implications concerning various aspects. The study of performance persistence is to test the Efficient Market Hypothesis (EMH). EMH asserts that security prices reflect all available information (Fama, 1970). If EMH holds, it is of no use to analyse past information in order to obtain abnormal returns because rational investors react immediately to information released and arbitrage takes place quickly.

This new evidence of fund family performance persistence would add practical value to the Malaysian investors who tend to cluster their money in funds managed by a single management company. This research will answer the question of whether fund families in Malaysia can consistently outperform the market and whether past superior performers are future superior performers. Furthermore, the Malaysian capital market has only a fairly short history and limited data. Therefore, it is really in need of research.

1.2.3 Star Performers And The Spillover Effect

Another issue of concern is the response of the Malaysian unit trust investors to the star status of funds and fund families. The main reason of investing in unit trusts, other than diversification, is profit seeking. Past studies documented that although there is a lack of evidence of persistence in abnormal returns (e.g., Gruber, 1996; Carhart, 1997; and Zheng, 1999), evidence of investors chasing performance was found (Chevalier and

Ellison, 1997; Nanda *et al.*, 2004; Del Guercio and Tkac, 2008). Sirri and Tufano (1998) inferred that funds are typically part of a large complex and the investor decision, measured by fund flows, is significantly related to the membership in a large complex. The investors' behaviour when investing in mutual funds is examined. Specifically, this research examines the impact of investor decision on the performance of fund management companies.

In addition, mutual fund management companies were found to signal their superior performance by advertising their star performing funds to attract investors' attention and investment to other funds in the companies in the developed mutual fund markets according to Huij and Verbeek (2007) and Huang, Wei and Yan (2007). Large families attribute total profit to the whole family, rather than the performance of a single fund. They are inclined to take advantage of the spillover effect to increase their total money inflow. Huij and Verbeek (2007), Nanda *et al.* (2004) and Zhao (2004) observed the existence of the spillover effect in families that own at last one superior performing fund. In other words, the non-star funds that belong to a star family benefit in this higher new capital inflow compared to the other non-star funds belonging to the non-star families. In addition, cross-fund subsidisation was also documented in the US by Guedj and Papaskuodi (2004) and Gasper, Massa and Matos (2006) where performance was transferred among funds within family. Membership of mutual fund family may induce fund manager to sacrifice investors' interest for fund family's benefit. In light of this, both the star phenomenon and spillover effects in the Malaysian unit trust industry are also investigated in this thesis.

In Malaysia, the issue of the impact of unit trust companies on investors risk or return is yet to be explored. This thesis will provide evidence concerning the impact of unit trust

management company membership on investor's risk, in terms of the relationship of price movement of two funds, and the persistence of unit trust company return from the perspective of an emerging country. In addition, this thesis also provides evidence of the response of investors on fund company performance and other company variables.

1.3 RESEARCH QUESTIONS

The above research problems provide opportunity for this study. The research questions below are formulated based on the discussion of the above problem statements.

1.3.1 Research Question 1

What is the impact of unit trust company membership on investor risk?

Research Question 1(a): Can any risk reduction benefit be achieved by investing in funds across different families?

The issue of risk associated with confining unit trust investments to a single fund company is addressed in this part of the study; that is, the risk and return of investing in funds within one unit trust management company are explored. Specifically, this section examines whether the return correlations of funds within the company are higher than diversifying across different companies.

In the Portfolio Theory, Markowitz (1952) introduced the concept of diversification and showed that combining asset classes in an appropriate way allowed investors to generate a higher return without increasing risk in their portfolios. Correlation plays an important role in diversification. The relationship of the movement of price between the two securities is measured as the correlation between the two securities. It is expressed by the correlation coefficient. Investments in funds across management companies that

have low correlations allow investors to diversify their portfolio. However, when the correlation across asset classes is high, it is more difficult to diversify a portfolio just by spreading assets across various funds or different asset classes. As such, this research examines whether the return correlation of funds within the company is higher than diversifying across different companies. A concentration of investment in one fund company could lead to an increase in total portfolio risk and reduce the investor's portfolio diversification.

Elton *et al.* (2007) provided evidence that funds are more closely correlated within a fund family than across other fund families when they have the same objective. They divided the increase in correlation into the funds common reaction to join market movements and the increase in correlation as a result of residual correlations. They stated that the majority of the groupings are due to residual correlation. In addition, Elton *et al.* (2007) commented that investing in a family of funds increases risk and reduces diversification. It is like putting all of one's eggs into one basket. The risk profiles of many funds that are managed by one company are very different, even though they have different names with different objectives and they fall under different categories of fund with different growth potential. Hence, this study examines whether it would be better for investors to add funds from multiple companies to reduce their total portfolio risk.

Research Question 1(b): What is the extent of common stockholdings within a fund family as compared to across different families?

Elton *et al.* (2007) provided evidence that about 60 per cent of the difference in the return correlations of funds within and between the companies is explained by the common holding of stocks in funds in the U.S. and about 30 per cent was due to a

common response to non-market factors, such as industry and sector related factors, known as the idiosyncratic factors. This may be due to the commonalities of family management and investment strategy and the similar exposure of in family funds to economic sectors and industries. Funds are more similar within family than outside as portfolio managers inside the family have access to the same source of information, either from the family's research team or from the same external advisors. Some families even have a spelt out investment style, which influences the securities managers' decision. These will be the main explanation for the common opinion and the common stockholding.

Elton *et al.* (2007) used Fama and French's (1993) multi-index model to capture all the non-market factors. The size, value, three bond index and five industry portfolio factors were included in the model. Elton *et al.* (2007) attributed the remaining correlations in residual to the common holdings of stocks in funds. In addition, the family's relation with the stockbrokers may also influence the common stock holding in the new offering. Their reported size of common holdings is appalling. This research question addresses the magnitude of the common holding of stocks in funds within and between fund families in Malaysia.

1.3.2 Research Question 2

To what extent does the Efficient Market Theory hold in the unit trust industry in Malaysia at the family fund level in terms of performance persistence?

The question here is whether the best performing unit trust company in Malaysia in the current period is also the best performing company in the subsequent period. This study examines whether the superior performance continues into future periods. The family performance persistence is therefore examined. However, EMH Theory stated that all

the past information has already reflected in the securities prices[1]. If the past return of unit trusts can be used to predict future returns consistently, it invalidates the EMH assumption. Thereby, if the EMH holds, performance should not persist.

The performance persistence is examined in several contexts. The investors base their investment decision on the past track record of funds, and then only the fund performance persists. The persistence of the loser has the same implication on the investors trading strategies. The persistence of good performing funds suggests that some managers have superior ability where the funds that they manage perform well and continue to do so in the near future. In these cases, actively managed funds perform better than passive benchmark portfolio. However, past performance offers no guidance to future performance if the Efficient Market Hypothesis is correct. Even the best manager is not going to perform better than the market; any excess return is because of luck rather than skill. If this is the case, investors would question why they should invest in actively managed funds instead of the index-based portfolios.

Performance persistence analysis is well covered in the literature on the U.S. mutual funds, starting from the classic papers of Sharpe (1966) and Jensen (1968) using data for all funds from 1954 to 1963 and 1945 to 1964, respectively. They found no evidence of performance persistence. Jensen concluded that the performance of mutual funds net of expenses underperformed the passively managed portfolio with the same level of risk. Carlson (1970) found no evidence of performance persistence on 10-years and 5-years data, from 1948 to 1967. The later U.S. studies of unit trust performance

[1] The price of unit trusts in Malaysia is determined by its Net Asset Value (NAV). NAV is calculated as the current market value of the fund's net assets (securities held by the fund minus any liabilities) and divided by the number of units in circulation. The NAV of a unit trust is usually calculated daily. A fund will issue and redeem shares and interests at a price calculated by reference to the NAV of the fund.

persistence (Hendrick, Patel, and Zeckhauser, 1993; Goetzmann and Ibbotson, 1994; Brown and Goetzmann, 1995; and Carhart, 1997) broadly documented the existence of short term persistency, of one to three years, of past performance. Grinblatt and Titman(1992), Elton *et al.*(1993) and Elton *et al.* (1996), however, showed that mutual fund performance persists over a longer time period of five to ten years. Consequently, retail investors can select funds that perform well in the past and these funds, by chance, will perform superiorly in future if performance persistence exists.

Consequently, moving one step forward from the individual fund level to the fund family level, the question is whether retail investors can utilize past information to differentiate good or bad fund companies and whether good performing companies continue to have funds that achieve good performance in the following period. These issues support the view of Brown and Goetzmann (1995), that common management strategies have an effect on the short term performance persistence of mutual funds family.

The mutual fund family performance persistence was examined by Cheng, Pi and Wort (1999) outside the U.S., who found no evidence of hot-hand and icy-hand phenomenon in the Hong Kong mutual fund houses during the ten year period from 1986 to 1995. In the same study, the authors also documented that the documented two hot-hand fund houses have higher overall relative performance. As a result, good or bad fund houses can be differentiated using past performance. The analysis done by Hendrick *et al.* (1993) and Malkiel (1995) provided evidence that investors are able to earn significant abnormal returns by investing in the hot-hand mutual funds. The next issue raised is whether investing in funds managed by hot-hand management companies is indeed

beneficial to investors in terms of absolute returns. Hence, this study also examines whether good performing companies provide high excess returns to investors.

1.3.3 Research Question 3

Do the star phenomenon and spill over effects exist in the Malaysian unit trusts market?

In this section, the following questions are examined: (1) Whether the decision of investors is affected by the star identity of unit trust companies? (2) Whether spillover effects exist within the star company? and (3) Do investors in emerging markets behave similarly to those in the developed market?

Generally, studies (Jensen, 1968; and Fama, 1970) in mutual fund performance support the Efficient Market Hypothesis (EMH). If the EMH is correct, no investor is able to earn abnormal returns in the long run based on past performance (Fama, 1970). While the EMH assumes that investors are rational, the behavioural finance starts to question this assumption. The failure of EMH in fact can be explained by the field of behavioural finance. Investor decision is examined in terms of the flow of funds. Studies analysing the relationship between performance and fund flows provide evidence that investors tend to invest in recent superior performing funds and shift their money out of the poorly performing funds (e.g., Spitz, 1970; Ippolito, 1992; Hendrick *et al.*, 1993); Malkiel, 1995; Chevalier and Ellison, 1997; Sirri and Tufano, 1998; Barber, Odean and Zheng, 2005; DelGuercio and Tkac, 2002; Nanda, Wang and Zheng, 2004; and Huang, Wei and Yan, 2007).

According to the theory of representativeness heuristics, potential investors judge stocks or funds based on past returns (Kahnman and Tversky, 1973). Based on classical financial theory, it is expected that unit trust investors will consider the past

performance when forming their investment decision. In addition, some studies documented the existence of the decomposition effect, the tendency to sell winners too early while riding on losers for too long (Shefrin and Statman, 1985; Grinblatt and Kelohajur, 2000; Weber and Camerer, 1998; Ocean, 1998). The decomposition effect is explained in the prospect theory (Kahneman and Tversky; 1979), which clarifies several financial behaviours**.** Instead, the response of holding on to the winners to enjoy further gains and to sell losers to prevent more losses should be the appropriate investment decision.

Goetzmann and Pele (1997) explained the response of investors on past performance as cognitive dissonance *(*Festinger, 1957), which stemmed from the regret theory. cognitive dissonance is an unpleasant feeling that is attributable to having contradicting thoughts at the same time. This theory suggests that people change their beliefs, attitudes and actions to ease dissonance. Barber, Odean and Zheng (2005) argued that representativeness heuristics induces a person to be overly optimistic about the future performance of past winners while being overly pessimistic about the future of the past losers.

The issue to be addressed here is to what extent the behavioural theory of finance, in terms of the star effect and the spillover effect, is able to explain the behaviour of unit trust investors in emerging markets such as Malaysia. Specifically, this study examines the extent the investor's decision, measured by fund cash flows, is affected by the star performance of other funds in its family; and also the extent the star funds benefit from their star identity. The role of fund family membership in determining individual investor's mutual funds holding is observed here. A company's reputation is reflected in family membership and is determined through many possibilities such as good

performance, advertising, service provided, and word-of-mouth. Yates (2007) provided evidence that mutual fund family reputation is an important factor in individual investment decisions. In addition, the relationship between new money growth of non-star funds within a star family and those in the non-star family such as the spillover effect are examined in this dissertation.

It is expected that investors in Malaysia behave differently from those in the developed market because of less investor sophistication, less competitive unit trust market in Malaysia and the lack of an information dissemination channel to be accessed by the investors. The determinants of fund flows will not be the same as the evidence found in the U.S. literature. This study also aims to examine this issue.

1.4 RESEARCH OBJECTIVES

The general objective of this study is to examine the impact of unit trust company membership on investor risk and return.

The specific objectives of this dissertation are as follows:

1. To examine whether total portfolio risk reduction can be achieved through diversifying investment in unit trust funds across different fund companies.
2. To examine the extent of common stockholdings of funds within a fund company, as compared to across different companies.
3. To examine whether total portfolio risk reduction can be achieved through diversifying investment in unit trust funds across Islamic and conventional funds.
4. To examine whether the performance persistence of unit trust fund companies in Malaysia exists, in relation to the efficient market theory.

5. To examine whether there is any gain for investors through investing the capital in the performance persistent family.
6. To examine the impact of star identity on the new capital flow growth and to identify whether the fund spillover effect exists.
7. To study the behaviour of unit trust investors by examining the determinant of fund flows.

1.5 SIGNIFICANCE OF THE STUDY

This study is significant from several aspects:

1. The main issue to be examined is the impact of fund management company membership on investors' risk and return. This study is motivated by the distinctive characteristics in the Malaysian unit trust industry, which is the common fund management companies organization; the largest fund management companies in Malaysia make up most of the total approved fund size in the Malaysian unit trust market. This means that the tendency of investors to invest in funds managed by the same unit trust family is very high. This study examines the effects of unit trust fund commonality on investors risk by examining the fund return correlations and fund common stockholdings. This study also extends further into the issue of the possibility of risk reduction through diversifying across conventional and Islamic funds.

2. Since performance persistence is correlated across managers, thus whether past superior family performance can be used as a guide to predict future family performance is an important issue. This study aims to investigate the performance persistence of Malaysian fund families. It contributes to mutual fund literature by providing evidence in mutual fund family performance

persistence in Malaysia, an emerging market's perspective. This study will provide a guide to unit trust investors as to whether past performance information can be used for future investment decisions. Additionally, the performance persistence is analysed for the aggregate funds managed by each fund family. This is done because different funds in the same fund management companies are managed by the same team of managers in Malaysia.

3. The study of performance persistence of Malaysian fund families provides evidence to unit trust investors as to whether past family-level performance information can be used for future investment decision. The findings challenge the extent to which the Efficient Market Hypothesis holds in Malaysia's unit trust industry.

4. Different funds in the fund companies are managed by the same team of managers in Malaysia. Analysing the fund family's aggregate performance persistence allows the assessment of whether fund managers in Malaysia have sustainable superior skills. The assessment of fund manager's superior selectivity skill is closely related to market efficiency, information distribution in financial market and even the rationality of managers and investors behaviour. Under the assumption of the Efficient Market Hypothesis, superior performance is a result of chance and all the financial assets reflect their true price. Any mispricing would be recognised and taken up by arbitrageurs who have superior investment ability. If this is true, some fund managers might outperform a passive strategy or others might underperform it. Their performances are expected to be random over time. Thus, if a manager has sustainable superior

skills, it should be shown in the performance persistence of the funds that they manage.

5. This study examines the response of fund capital flows, which provides evidence of the behaviour of unit trust investors in Malaysia. Lynch and Musto (2003) make a point in their concluding remarks that fund flows contain greatly useful information that the past performance cannot provide. The findings of this study contribute to the behavioural finance literature by providing new evidence concerning the behaviour of unit trust investors in the emerging markets, who are expected to behave very differently from those in the developed market. The mutual fund industry in emerging markets displays some unique characteristics, which are very different from those in the developed countries. For instance, the degree of competitiveness is lower, the information dissemination process is less efficient in the developing market, the less sophisticated investors or organization of the mutual fund industry leads to higher search costs and more passive investor lower level of financial literacy who make decisions on a familiar basis, or may bring about sub-optimal decision. In addition, in contrast to the developed market, there is an absence of independent brokers between retail investors and mutual fund managers in Malaysia. Most unit trust consultants who market the funds are members of the funds holding company. For this reason, when consumers seek advice concerning fund investment, the advice given may be biased because of a conflict of interest. Consequently, investors in the emerging markets may behave differently from those in the developed market.

6. This study is a challenging task, a priori research encounters certain limitations concerning the availability of data. In more developed countries, a well-established database is available to capture all fund information, including the capital flowing in and out of the fund by category of investors. The public can access fund information easily through the payment of a fee. However, this is not so in Malaysia, there is no one comprehensive database to keep track of historical fund information, with the exception of Bloomberg, which only keeps records of the individual fund's net asset value. The non-performance data, like the portfolio turnover ratio, management expense ratio, the securities holding by individual funds, are only published in the funds annual reports while its historical information is not readily available.

1.6 CONTRIBUTION OF STUDY

The study examines the risk and return of investing in unit trust companies and the investor investment behaviour towards the past superior performance of individual funds and the superior performance of fund companies. There is lack of published research performed on the unit trust industry at the family fund level, specifically on both the risk and return of investing in one single unit trust management company, in the literature with regards to the emerging market such as Malaysia. This dissertation makes several meaningful contributions to the literature and the practical perspective.

First, the thesis provides evidence concerning whether a common manager of funds (Brown and Goetzmann ,1995) exists, by examining the return correlation of funds and common stock holdings within a fund family, as compared to those outside. The common management across funds has an adverse impact on investors, which may reduce portfolio diversification. In this study, fund return correlations and the common

stock holding of funds are used as a proxy of the level of diversification in fund families. The return correlations of funds within Malaysian unit trust companies and the return correlation between families are determined and compared. As the diversification level of mutual funds in Malaysia is low, as reported by Leong and Aw (1997), this study of the risk associated with limiting unit trust investments to a single fund company make a significant contribution to both the investors and the fund literature. This analysis contributes to the possibility of risk reduction benefits by investing in funds across different Malaysian unit trust companies. This study contributes to the unit trust investors in that their investment strategy can be planned to further reduce risk by diversifying their investment in funds that are managed by different companies.

Second, the study extends the work of Elton *et al.* (2007) by analysing the possible diversification and risk reduction by taking into account a combination of Islamic and Conventional funds. Abdullah, Hassan, Mohamed (2007) provided evidence that the diversification level is lower in Islamic funds than in conventional funds. When Islamic combinations of funds are considered in this study, evidence of a lower pair wise return correlation and common stock holdings are found for funds that are diversified across Islamic and conventional funds. Accordingly, this study provides evidence of whether diversification benefits can be achieved through holding a portfolio that includes both Islamic funds and conventional funds.

Third, the thesis provides new evidence to the mutual fund literature concerning whether the superior performance of unit trust companies in Malaysia persists over the short term. This finding adds value to the body of knowledge of whether the Efficient Market Hypothesis holds. The EMH purports that all past information has already been reflected in the security price. This finding also has a large economic impact on the

investment strategy. If the performance of a fund company in Malaysia persists, investors should benefit from investing in these constantly well-performing companies while avoiding the consistently ill-performers. This finding implies that a weak form of Efficient Market Hypothesis holds in the unit trust market in Malaysia. This can be claimed as a new finding of family fund performance persistence in the emerging capital market literature. It also provides a guide to investors in Malaysia that the past superior performance of unit trusts of up to one quarter can be used as a guide for investment decisions.

Fourth, from a practical aspect, this study provides some guidance for investment decisions. Investors are advised to diversify their investment in funds across different fund families and also to include funds with a mixture of Islamic funds and conventional funds in their portfolio for risk reduction purposes. The recent past superior performance of a fund family of up to one quarter can be used as a guide for investment decisions since the superior performance of fund families persist. In addition, investors are found to respond to fund families factors such as past fund returns, company size, number of funds in the company, company age, MER and PTR.

Lastly, the findings of this study generate a perspective for the unit trust regulator in Malaysia.

1.7 DEFINITION OF TERMS

The term 'unit trust management company' and 'unit trust family' or 'mutual fund family' is used interchangeably throughout thesis to refer to the unit trust operators. The terms 'unit trusts' and 'mutual funds' are used equally to refer to funds that are

managed by financial institutions including banks, insurance companies and investment firms. The term 'unit trusts' is used in Malaysia as in the U.K., it is synonymous with 'mutual funds', which is commonly used in North America. 'Superior performance persistence fund family' is used interchangeably with 'hot-hand fund family' while 'inferior performance persistence fund family' is used interchangeably with 'icy-hand fund family'.

1.8 ORGANISATION OF THE DISSERTATION

This dissertation is part of a broader research plan addressing the mutual fund family matter. Three main issues are examined. First, the risk reduction benefit by investing in funds across different families is studied by comparing the return correlations of funds within the family and across different families. The sources and the extent of the higher correlation within a fund family, as compared to across different families, are explored. Second, the performance persistence at the Malaysian unit trust family level is inspected. Lastly, the extent of whether the investors' decision is affected by the star identity in a unit trust family and whether the whether spillover effect exists within the star family are identified. This is measured using the new flow growth into the funds in the family.

This dissertation is organized in the following manner.

Chapter 1 introduces the subject matter and describes the issue briefly. The motivation of the study is addressed, followed by the specification of the research questions and research objectives. The contributions of the study are discussed.

Chapter 2 discusses the product of unit trusts, the operating companies, the regulator, unit trust industry and its development in Malaysia. It highlights the characteristics of the Malaysian unit trust industry and justifies why the setting of the Malaysian unit trust industry is well suited for the purpose of this study.

Chapter 3 presents a review of the related literature involving fundamental theories and empirical evidence pertaining to the study of unit trusts. The literature on unit trusts is identified in the context of the Malaysian unit trusts, which leads to the formulation of the research framework for this study.

In Chapter 4 a set of hypotheses is formed based on the argument of the literature. The source of data and the research methodology employed in the study are defined. The necessary variables are specified.

Chapter 5 presents the research findings. The research hypotheses are analysed and the results are compared to the previous results in the earlier literature. This explains the impact of unit trust company membership on investors risk and return. The discussion and the interpretation of the results are included in this chapter.

Chapter 6 provides the overall conclusion drawn from the research findings with all possible arguments given to justify the findings. The implications of this study on various stakeholders are discussed. The evaluation and recommendation are thus provided. It also explains the limitations of the study, specifically, concerning unit trusts data competency. The potential issues for future research are also identified based on the current study.