CHAPTER 6

SUMMARY AND CONCLUSION

6.1 INTRODUCTION

This chapter sums up the research findings. The contributions and limitations of this study are discussed. The chapter ends with suggestions for future research. This chapter is organised as follows. Section 6.2 sums up the findings of this study as a whole. Based on the findings, Section 6.3 discusses the possible implications of the study. Section 6.4 reviews the research limitations. Section 6.5 provides several possibilities for further research. In Section 6.6, the research is concluded.

6.2 SUMMARY OF RESEARCH FINDINGS

This study was designed to examine the risk and return of investing in funds within a unit trust family versus investing in different funds belonging to different fund families. The study sample consists of 222 funds within 15 fund management companies, spanning a period between January 2003 and December 2009. For this purpose, thirteen hypotheses have been formulated. Both the parametric and non-parametric methodologies are adopted in the study.

The overall study can be divided into three main parts. The first part examines the issue of the diversification benefits of investing within a unit trust family versus across different families. In this part, four hypotheses were developed to investigate the return correlations and commonality of funds within a fund family as compared to funds across different fund families. The second part of the study involves analysing the performance persistence of fund families as Brown and Goetzmann (1995) argued that common management strategy have an effect on short term performance persistence of mutual fund family. In this section, three hypotheses were formulated, that is hypotheses 5 to 7. These hypotheses examine whether the performance persistence phenomenon identified in the developed market of the U.S. and the U.K. also exists in a small developing market of Malaysia. This leads to the question of whether the Malaysian investors can predict future fund family performance based on the past returns; thereafter, applying such useful past information for fund investment decisions. The final part of the study examines the response of the Malaysian investors to the star identity and attributes of funds and fund families, using the new money growth model. Five hypotheses are formulated for this section. The hypotheses examine the response of investors to the performance of fund families and the star identity of funds to families.

For the first part of the study, this study finds supportive evidence for H_a1 that the correlation of the return of funds within a fund family is higher than across different fund families. This suggests fund return correlations within a fund family in Malaysia are consistently and significantly higher than the across fund companies return correlation. The higher portfolio risk is accompanied by investing in funds within a fund family as compared to diversifying across fund families. The study also finds supportive evidence for H_a2 hypothesis that the common stock holding in unit trusts within a fund family is higher than across fund families. This result implies that stocks in funds within a fund family in Malaysia are more similar than funds across families. In addition, this study finds supportive evidence for hypothesis H_a3, that the mean return correlations between Islamic funds are larger than the correlation between the Islamic and conventional funds. It is similar for hypothesis H_a4, which states that the mean common holding of the Islamic funds is larger than the mean common holding between Islamic and conventional funds. Restricting investment in Shariah funds lowers the diversification benefits. Shariah restrictions on stock investment do have an impact on fund return correlation and diversification, which is mainly due to the high level of similarity in stockholdings in the Islamic funds.

For the second part, the study finds supportive evidence for $H_a5(a)$ – that well-performing unit trusts families continue to perform better than other unit trusts families in the subsequent month. However, no supportive evidence was found for $H_a5(b)$ that poor-performing unit trust families continue to perform poorer than other unit trust families in the subsequent month. Therefore, the hot-hand phenomenon was supported by this study, but not the icy-hand. This means that the superior performance of a fund family tends to persist into the future period, but not the inferior performance of a fund family. However, the hot-hand phenomenon exists for monthly and quarterly returns and disappears after a period of more than six-months. The test evidence supports hypothesis H_a6 – that the hot-hand unit trust families are the overall superior performers in general. The finding signifies that the hot-hand fund companies are performing well among their peers, and that the negative performance persistence fund families are not necessarily the overall ill-performers. Some weak evidence is found to support hypothesis H_a7, which states that there is gain for investors from investing in a company whose performance persists as shown in the significant positive correlation between the annualised excess return and repeat winning ratio.

For the final section of the study, no supportive evidence was found for either hypothesis $H_a8(a)$, which states that the spillover effects exist within the one-year star families; and $H_a9(a)$ – that one-year star funds generate more money inflows than non-star funds. However, some supportive evidence was found to support hypothesis H_a8(b), which states that the spillover effects exist within the three-year star families; and H_a9(b) – that three-year star funds generate more money inflows than non-star funds.

On the other hand, while no evidence was found to reject H_010 (a) and H_010 (c) some supportive evidence was found to support H_a10(b) that having a three-year Lipper rated star fund increases family level new money flows. It is concluded that: (1) the money flows into the non-star funds in a one-year star family are not higher than other non-star funds in the one-year non-star family; (2) the money flows into the non-star funds in a three-year star family are greater than other non-star funds in the three-year non-star family; (3) no higher money flows into the one-year star fund as compared to the one-year non-star fund; (4) there is higher money flows into the three-year star fund as compared to the three-year non-star fund; (5) family-level new money growth does not increase as a consequence of the existence of a one-year Lipper rating star fund in a fund family; having a one-year Lipper rated star fund in family would not attract new capital into the family as a whole; and (6) family-level new money growth does increase as a consequence of the existence of a three-year Lipper rating star fund in a fund family; having a three-year Lipper rated star fund in family would somehow help to attract new capital into the family as a whole. In the study of the investor response and past performance, supportive evidence was found to support H_a11 that there is a positive relationship between fund flows and past performance. Likewise, supportive evidence was found to support H_a12 that there is a positive relationship between fund flows and number of funds in the fund family.

6.3 IMPLICATIONS OF THE STUDY

6.3.1 Implications for Theory

Our evidence is consistent with the diversification benefit stated in the portfolio theory (Markowitz, 1952). Funds within a fund family yield higher return correlations as compared to funds across different fund families. Therefore, diversifying investment across fund families reduces the portfolio risk for unit trust investors in Malaysia. This mechanism works well where the level of unit trust fund diversification in Malaysia is low, as reported by Leong and Aw (1997). There are rooms for diversification by investing in unit trust funds across unit trust families. In addition, risk can be further reduced by mixing the Islamic with conventional funds or mixing the money market funds with other funds in investment portfolio.

Over the last three decades, the study of the performance evaluation of mutual funds has been one of the most examined topics, with recent attention focuses on the predictability patterns of fund performance. Mixed evidence has been documented in the literature. In this study, there is only weak evidence in support of fund family's performance persistence. The hot-hand phenomenon is documented for the rolling period of up to quarterly returns. No evidence of performance persistence is found for the six-month and twelve-month rolling period. In addition, the inferior performance of a fund family is not persistent. Overall, the evidence found in the unit trust market in Malaysia is not inconsistent with the Efficient Market Theory (Fama, 1970). Some fund managers do exhibit sustainable superior performance over a short term period. It is debatable whether one can conclude that the Malaysian unit trust market is inefficient based on the findings in this study. Our finding is closer to the argument of Grossman and Stigliz (1980) who claimed that managers just earn sufficient to cover the cost of information because information is costly. This finding adds value to the body of knowledge about the Efficient Market Hypothesis, which purports that all past information has already been reflected in security prices and no one is able to earn abnormal returns consistently. Any evidence of superior performance persistence would be inconsistent with the semi-strong form efficient market. The finding in this study suggests that the weak form of Efficient Market Hypothesis (Fama, 1965) holds in the unit trust market in the emerging market of Malaysia.

However, the Prospect Theory (Kahneman and Tversky, 1979) suggests that the behaviour of investors, which exhibits a disposition to sell winners and ride losers, seems to be present in the Malaysian unit trust market. It is found in this study that the growth of a fund's new money flow and past performance of fund families are significantly related; this is in line with the Representative Heuristic Theory where investors tend to be overly optimistic about the future performance of past winners and overly optimistic about past loser. There is only a weak relationship is found between the star identity and the growth of a fund's new money. We attribute this finding to the disposition effect of the star funds.

6.3.2 Implications for Investors

Obviously, the findings of this study provide an insight to the investors on the risk and return of investing in funds within a unit trust family as compared to investment across different families. The evidence of the high level of commonality of funds within a fund family is provided in the form of higher return correlations and higher common holdings. This signifies to the investors that they should invest their money across funds managed by different unit trust companies to reduce portfolio risk. They should also be aware that portfolio risk can further be reduced by diversifying across the Islamic and conventional funds. In addition, the performance persistence is examined at the fund family level, rather than at the individual fund level. This indicates to the Malaysian investors that past superior fund family returns can only be used as a guide to predict future performance up to one-quarter and not longer than that. This analysis shows that the hot-hand family is also the overall good performing family in the industry as a whole, however, investing in superior performance persistence is not directly associated with the actual gain to the investors. No evidence of icy-hand is found in this study. The inferior fund returns do not continue into the near future period. Therefore, it is concluded that there is no reliable strategy to use historical information in order to avoid future ill-performing funds.

The study on fund flows provides evidence concerning the way investors respond to the past superior performance and the star identity of a fund family. As per Lynch & Musto (2003), fund flows capture useful information. This evidence aids investors to make future investment decisions rationally. The Malaysian investors make short-term decisions to trade funds based on past performance of a fund family as a whole rather than the past returns of individual funds. Nevertheless, the evidence of the impact of star identity on fund flows is only significant in the three-year Lipper rated star fund family. This finding may be due to the disposition effects of the human behaviour, which stems from the Prospect Theory – funds that make a profit are disposed off and the losers are retained (Shefrin and Statman, 1985; Grinblatt and Kelohar, 2001; Weber and Camerer, 1998; Odean, 1998). Thus, the evidence of money inflows and outflows are neutralised in the one-year star identity and one-year Lipper star family.

This study finds evidence of a significant positive relationship between the number of funds offered in fund families and a fund’s new money growth. This is in line with the opinion that fund families are inclined to have more funds within the families and this increases the correlation of funds within a family. Indeed, investors are attracted to put their money into funds within fund companies, with the aim of seeking economy of scale, which is reflected in lower management expenses or other advantages such as the ease of management of their investments or to enjoy low switching costs, without paying any attention to the higher correlation documented within a fund family.

In addition, this study also implied fund family favouritism towards certain funds in a family and resources transferred from some other funds within a family to those favoured funds (Massa, 1998; and Gasper, Massa and Matos, 2006) does not exist in the Malaysian unit trust market. However, the disadvantage of investing in fund companies in Malaysia is subject to the limitation of the high correlation of funds within a fund family.

6.3.3 Implications for Unit Trust Management Companies

These findings would also benefit the unit trust management companies whose role is to engage in fair and sound asset management activity. The finding of the higher degree of fund commonality within a fund management company as compared to across companies in terms of higher fund return correlation and fund common stockholdings, creates awareness for the fund management companies. The result shows that funds with the same objective are more closely correlated within the fund company than across other fund companies in Malaysia; and the common stockholdings in funds within a fund company is higher than across companies in Malaysia. This evidence highlights to the fund managers that further diversification of stockholdings in funds is needed in the near future. Fund managers should be aware that common stockholdings play a vital role in fund return correlation and, hence, the risk profile of the fund. The inclusion of a diverse set of securities in the fund portfolios managed by them eases the commonality problem in fund management companies.

The results reported in the fund flow study shows that there is no evidence of spillover effect and star phenomenon exists in the Malaysian unit trust industry. This signifies to the unit trust companies the ineffectiveness of the star creating strategy and advertising effort to maximize their market shares. However, the Lipper star does have a long term marketing effect in attracting money into a fund family.

If the disposition effect exists, it does no good for the unit trust families to advertise the star performing funds, as these activities will lead to the outflows of capital from these funds. Alternatively, fund families may advertise the longer term superior performance to attract investment.

Furthermore, this study finds that the number of funds offered by the company has a positive impact on a company's fund flow. This indicates that a fund company's strategy of offering more funds helps to attract investment in Malaysia. A fund company may increase the number of funds offered in order to capture money into its company.

6.3.4 Implications for the Regulator

The results of this study suggest to the regulator that more fund management companies should be approved and that smaller fund management companies should be encouraged to launch more new funds so that investors could invest in various funds managed by different families for diversification purposes. Furthermore, the growth of the Malaysian unit trust industry should be encouraged and promoted. With more competing unit trust management companies in the industry, the efficiency of fund management would be improved, which benefits both the economy as well as the consumers. In addition, the regulators should think of some kind of having a standardisation in data recording within the fund companies, and also to suggest the development of a unit trust data base.

6.3.5 Implications for Academics

This study extends the literature on fund families research (Jain and Wu, 2000; Mamaysky and Spiegel, 2002; Guedij and Papastaikoudi, 2004; Nanda *et al.,* 2004; Ciccotello, Miles and Walsh, 2006; Gaspar, Massa and Matos, 2006; Kempf and Ruenzi, 2007, 2008; Huj and Verbeek, 2007) by examining the risk and return in respect of the mutual fund families in an emerging market context such as Malaysia. The results in this study provide useful information to the mutual fund literature as to whether the findings in developed markets may carry over to developing markets. The evidence of diversification benefit stated in the portfolio theory is consistent in both markets. While mixed evidence was documented for mutual fund performance persistence in the U.S., weak evidence of unit trust family performance persistence was found in Malaysia. In addition, unit trust investors in Malaysia are responding differently to the star identity of fund management companies as compared to those in the U.S. Such evidence is essential as the mutual fund literature in emerging markets is comparatively insufficient and lacking.

The results of the higher correlation of fund returns and the higher common stockholdings in funds within a fund company than across other fund companies in Malaysia, and the results of the performance persistence of a fund company, provide evidence of the impact of common management strategies on the fund management company. The evidence of fund family performance persistence implies evidence of impact of common management strategy in the Malaysia unit trust market. Further, more studies are needed to provide further insights into the Efficient Market Hypothesis in relation to funds pricing. This study finds evidence of performance persistence in the short return interval, which is inconsistent with the Efficient Market Hypothesis, though the evidence is weak since it exists in a rolling period of up to one quarter. At this time, we are unable to ascertain if our results are due to the autocorrelation of the fund prices, or it is just data specific.

6.4 LIMITATIONS OF THE STUDY

The main limitations of this study are four-fold.

1. There is no objective classification system for unit trust funds in Malaysia. As such, the fund's objective is mapped according to the Investment Company Data Inc. (ICDI) objective classifications obtained from the CRSP survivor-bias-free U.S. Mutual Fund database to categorize funds into similar risk classes. The mapping of funds' objective classification is done by going through each individual fund's objective listed in the fund prospectus and mapping the objective manually to a specific classification. This may be subject to error.

2. Another limitation of the study in Malaysia concerns the detailed portfolio holding, the securities in which funds are invested. For each fund, this information is disclosed semi-annually, that is, during the fund's financial year-end, in the fund's annual reports or in the interim reports. There is no published statistic in Malaysia that provides this information. Moreover, each individual fund has different financial year ends, even for funds belonging to the same family. This makes the comparison difficult because the portfolio holding may

change from time to time depending on the fund's objective and fund's investment strategy of fund managers. Furthermore, when the fund's portfolio holding at a predetermined cut-off date was requested from the individual fund managers, the request was turned down by most of the unit trust management companies. The reason given was generally the same – the funds' portfolio holding would only be disclosed in the fund's annual reports or in the interim reports. Otherwise, the information is confidential. They are less willing to provide information for research purposes. Another problem experienced in data collection is that some unit trust management companies do not publish their fund annual reports online; while a few publish part of the full annual report on their website, the portfolio stockholdings in the fund are not on the website. Therefore, the data for this study were collected manually from the Securities Commission Library by searching through the hard copies of prospectus and annual reports. As such, the stockholdings in a fund's portfolio reported in the annual report or the interim report were used, depending upon which fell in the first half of the calendar year 2008, from 31 December 2007 to 31 May 2008. Hence, the maximum time variance in the sample is six months. Again, these data may be subject to error and omission.

3. The fund Management Expense Ratio and Portfolio Turnover Ratio are calculated and published annually in fund reports. The funds total net assets, which were extracted from Bloomberg database, were incomplete and some had omitted data. Additionally, funds that ceased operation are no longer listed in the database. In order to overcome this problem, the total net asset value of funds was also obtained from the daily leading newspapers collected manually from various libraries and the funds' PTR and MER are obtained from the financial

report collected manually from the Security Commission library. For these reasons, the flow model is regressed on a yearly basis, rather than a monthly period.

4. This study is limited to the existence and availability of good data. Collecting data manually and from different sources will be prone to making errors and inconsistencies. Hence, the validity of the results is dictated by the availability of good data.

6.5 FUTURE RESEARCH

The list of unresolved issues suggests that mutual fund studies will continue to be an appealing possibility of research in financial economics for years in the future. Accordingly, some further research ideas are highlighted on the basis of findings from this study as well as from previous studies.

1. Re-examine the similar model of fund flows by using monthly data for a longer period. In acknowledging the limitation of data in this study, the use of a larger sample size would yield better evidence for research concerning responsiveness of fund flows on past performance and family's star status.

2. This research mainly uses the quantitative approach with a secondary data set. Further research can engage in conducting a survey and questionnaire to examine investor's behaviour and factors influencing investor's fund company selection decisions. The findings of the qualitative approach may explain more of the investors' behaviour in this paper.

3. To examine some additional interesting variables and their relationship in the flows and performance model, such as the relationship of the advertising effect on flow response.

4. Research into the fund performance-flow relationship in Malaysia using different performance measurements – risk-adjusted returns, Jensen alpha, Fama and French's three factors and four factors alpha.

5. It is suspected that the disposition behaviour has caused the weak findings of the response of fund flows to the star identity in this study. It is worth exploring whether the disposition effect, the tendency to sell winners and hold losers, exists among the Malaysian unit trust funds and how this effect induces fund performance and fund flows.

6.6 CONCLUSION OF THIS STUDY

In this research, unit trust funds are examined from a different perspective than the majority of current literature. In this research, instead of regarding a unit trust fund as an independent entity, it is deemed as part of a large group, the fund family. As such, the objective and the risk of investing in funds and of the fund family it belongs to are different. These differences may possibly result in differences between the expected returns and the actual returns obtained by investors croped up from the risk difference. Therefore, this dissertation examines the impact of unit trust management company membership on investors risk and return.

6.6.1 What is the Impact of Unit Trust Family Membership on Investors Risk?

The first objective of this study is to examine if there is any difference in investors risk of investment in unit trust funds in one fund company as compared to investment across different fund companies. Unit trust investment is widely reported for its diversification benefits. However, due to high search costs in Malaysia, investors tend to direct their money into a single fund family that sell funds with a variety of choices. In addition, fund investment in a single fund family offers the advantage of ease of management; a consolidated statement that compiles all the fund holdings in one report is received by investors; and the potential for economies of scale and scope of investing in a large management company with better quality research (Malhotra and McLeod, 1997; Collins and Mack, 1997). Furthermore, transaction costs for investors are also lowered and low switching cost is charged across funds within one fund family (Elton *et al.*, 2006). However, the membership of a mutual fund family may induce fund managers to sacrifice investor interests for the benefit of the fund family (Massa, 1998; Guedj and Papastaikuodi, 2003; Gasper, Massa and Matos, 2006).

The research findings in this study show that investors in Malaysia are better off by investing in funds across different fund families because of the lower correlation of fund price movement. This is in line with the U.S. studies by Elton *et al.* (2007), and Park (2009), who found that funds with the same objective are more closely correlated within a fund family than across other fund families. This study also provides evidence that the portfolio risk can be further reduced by investing in a combination of funds consisting of a mixture of funds across the conventional and the Islamic objectives. This is in line with Abdullah, Hassan and Mohamad (2007), who showed that conventional funds are found to have a marginally better diversification level than the Islamic funds. In addition, it is noticed that money market funds stand out as good diversification due to their low correlation with the other funds.

Furthermore, this study examines the extent of common stock holding of funds within a fund company as compared to across different companies. The higher return correlation within fund companies is closely related to the high level of fund commonality in families. The two possible sources of within fund family commonality are the common stockholdings in a fund and the common management of funds in fund families. A single manager or a team of managers often supervise multiple funds, even in different objectives, which may lead to the high level of similarity of funds within a family. On the other hand, Elton *et al.* (2007) documented that approximately 60 per cent of the higher correlation is attributed to the common stockholdings in funds within a fund family. In this study, the common portfolio holding when comparing two funds within fund companies is found to be consistently higher than when a fund is compared to another fund outside the company. The results are consistent for all the objective categories. These results imply that stocks in funds within a fund family in Malaysia are more similar than funds across families. The finding highlights to the fund managers that common stockholdings play an important role in fund return correlation and, hence, a significant impact on the portfolio risk of fund.

As such, from an investor's point of view, restricting investment in unit trusts to one fund company limits the diversification benefits. The higher portfolio risk is because the funds within a family have relatively greater similarity, which is captured in the increased correlation. Therefore, funds that have different names in a company do not mean they are different funds. Even though after the Islamic objective is considered, the commonality of funds in the same fund is higher than those across companies. Thereby, investors should spread their money across several fund companies. The welfare of investors would definitely be improved by investing widely across several companies, instead of one, since the total portfolio risk will be reduced by doing so.

Some possible reasons that funds are highly correlated within a fund family are as follows. First, the unit trust fund managers in Malaysia have specific preference over several stock counters, even though they attempt to diversify their holding across all stocks available on the stock exchange or a common view on individual companies will lead to similar choice of securities holding in fund portfolio. Second, since fund companies are coordinated entities, the team of portfolio managers within fund companies are expected to have access to the same research information obtained from the internal research team or from outside advisors. Third, these fund companies often have a prescribed investment strategy that affects the stocks in which they invest. This similar view on stock performance will result in similar securities being held in the funds even though the fund objectives are different. Fourth, a family-wide prospect on the general economy will also lead to an identical investment in certain economic sectors. Fifth, unit trusts in Malaysia are managed by one management portfolio team within a fund management company. As a result a common decision is made for all funds in the family, which adds to the commonalities of funds in relation to the individual securities and the particular sectors in which funds are invested. Sixth, the family's relationship with the stock brokerage firm will lead to common holdings of new offering of stocks in funds managed by the same family.

Further, fund companies generate revenues when they capture as much capital of the investors as possible. For this reason, fund families offer a variety of funds with different objectives, albeit closely correlated. They do so in order to retain investment within their company and to capture investment that searches for diversification across different fund objectives. Khorana and Servaes (2003) showed that product proliferation is important in order to be competent among mutual fund families. Massa (2003) argued that families tend to offer multiple funds across fund categories to limit competition and to increase market coverage. Evidence of a significant positive relationship between the number of funds offered in fund families and the fund flows is found in this study. This evidence is related to the argument that as more funds are launched within fund families, the correlation of these funds are higher. However, this study documented that the naïve investors tend to be attracted to these larger fund families with the aim of diversification or other benefits like the ease of management of their investment.

Another reason for funds within a fund company having high correlation is the well-documented positive impact of star funds on the fund company's cashflows in the subsequent period, as documented in Nanda *et al.* (2004), and Khorana and Servaes (2003). The authors argued that offering a large number of funds in a family is a familiar strategy for maintaining a top performing fund. This leads to a high correlation within a fund family when more funds are launched to attract capital. Nevertheless, this explanation does not seem applicable to unit trust funds in Malaysia, seeing that there is no strong evidence of star impact on the fund flows in Malaysia. In spite of this, we documented evidence of positive relationship between fund flows and number of funds in family.

6.6.2 To What Extent Does The Efficient Market Theory Hold in the Unit Trust Industry at The Fund Family Level in Terms of Performance Persistence?

The second objective investigates the extent of the Efficient Capital Market Theory hold in the case of unit trust fund family returns by examining the performance persistence in unit trust fund families in Malaysia. Some empirical studies demonstrated that the relative performance of mutual funds persists from period to period (Hendrick *et al.*, 1993; Goetzmann and Ibbotson, 1994; Elton *et al.,* 1996; and Gruber, 1996). Carhart (1997), and Wermer (2000) showed that most of the persistence effect is due to factors other than the superior managerial ability. This study expands on Brown and Goetzmann (1995) who suggested that future examination of the persistence outcome should focus upon a search for common management strategies. They commented that performance persistence in mutual funds is correlated across managers. This study treats unit trust funds as a larger group rather than a completely independent entity and the performance persistence is examined at the fund family level where the common strategies are expected in funds within the company. This study discovers the existence of the hot-hand phenomenon in unit trust companies in Malaysia, while the long-term (six months or more) performance of unit trust company investments is not found to be persistent. This is not in line with Cheng *et al.* (1999) who documented no hot-hand phenomenon in Hong Kong fund houses in their month-by-month rolling sample data. In general, unit trusts superior performance is found to be persistent over one month and three months in Malaysia. However, there is no evidence of inferior performance persistence, except for HLG, RHB, AMI and AVE (monthly analysis) and RHB, ING, AVE and APX (quarterly analysis). Hence, the short-term track record of a superior fund company can be used by the Malaysian investors for investment decision making, probably up to one quarter. However, it does no good for investors to use past inferior performance for future fund prediction.

There are several possible explanations for the existence of the hot-hand phenomenon. First, it could be because the majority of the investors in Malaysia are unsophisticated investors, which leads to this persistence evidence, as explained in Sirri and Tufano

(1997), and James and Karceski (2001). This persistence of fund performance is found to be shorter than the evidence identified in the U.S. funds of one to three years. The shorter-term evidence was documented in Hendrick *et al.* (1993), Goetzmann and Ibbotson (1994), Brown and Goetzmann (1995) and Wermer (1997) while Grinblatt and Titman (1992), and Elton *et al.* (1996) observed longer-term performance persistence.

Second, it could be that the Malaysian market is less informationally efficient. This leads to the short-term performance persistence, which contradicts the efficient market hypothesis. Due to the less well-informed investors in Malaysia, there is less competition among the informed investors who try to realise the surplus generated by genuinely skilled fund managers. For this reason, the superior mutual fund performance persists to the subsequent month and this effect continues up to one quarter.

Third, this phenomenon can be partially explained by the market momentum. The rising market tends to rise further. This is followed by a period of decrease and it continues to decrease in the under-performance period. Daniel, Hirschleifer, and Subrahmanyam (1998) and Barberis, Shleifer, and Vishny (1998) attributed the emergence of the momentum effects to the irrational human behaviour, namely, the cognitive biases and heuristic where investors under-react to new information.

Finally, Brown and Goetzmann (1995) suggested that persistence is possibly not an account of individual manager stocks selection ability, it is a group behaviour that arises from the common management strategy, which is similar to the herding theories of behaviour among fund managers, as in Grinblatt, Titmann and Wermer (1994). Brown and Goetzmann (1995) also explained that persistence is an effect of markets failing to regulate the underperformers.

A fund company that is able to repeat past superior performance exhibits a high probability of overall superior performer. Thus, past information provides a guide to recognize good and bad fund management companies. There is some weak relationship between hot-hand statistical significance and its economic impact; investors do seem to be able to make substantial excess returns from investing in short-term performance persistent fund companies. A possible explanation for the weak evidence is that the excess return, in the winning family is too small to facilitate a significant impact. It is also concluded that common management strategies do have an impact on performance persistence.

6.6.3 To What Extent Is The Behavioural Theory of Finance Able to Explain The Behaviour of Unit Trust Investors in Emerging Markets Such As Malaysia?

The third objective of this thesis studies the behaviour of unit trust investors by exploring the relationship between the past superior returns and the fund flows, the impact of star status on the new capital flow growth and the fund spillover effects. It is expected that the ranking position of funds within a company would determine the fund flows into and out of the company because these companies advertise their superior performing funds. Sirri and Tufano (1998), and Jain and Wu (2000) found that fund families that advertised experienced abnormally large cash inflows. The advertising campaign of funds frequently focus on past performance; this is because investors are reported to chase past winners (Berk and Green, 2004; and Hendricks *et al.,* 1993). Thus, funds that are ranked on top of the fund list in fund companies are advertised and these funds are expected to obtain larger fund flows, as in Jain and Wu (2000).

In this study, the new money growth of a one-year star fund did not seem to be higher than that of a non-star. This finding is consistent with Sinha and Jog (2005), who used the Canadian data; and Ouyang (2008), who used the Chinese data, however, it contradicts Nanda *et al.* (2004) in the U.S. study. The finding is explained in this way. The recent year top position of a fund within a fund family leads to fund outflows to a certain extent. However, the three-year Lipper star rated fund do attract capital inflows. In addition, it is found that past information is used to predict a funds' future performance in unit trust investment in Malaysia, consistent with Gruber (1996), Feuerborn (2001) and Pontari et al. (2009). Therefore, it might be argued that fund investors in Malaysia seem to chase the past performance of fund companies, rather than the performance of an individual fund.

The plausible reasons for this finding is that the Malaysian investors might believe that past star performance does not ensure future superior performance and that it may be due to the Malaysian investors being affected by the disposition effect stemmed from the Prospect Theory (Shefrin and Statman, 1985; Grinblatt and Kelohar, 2001; Weber and Camerer, 1998; Ocean, 1998). Investors in Malaysia do not seem to believe that the recent star identity of funds company conveys information about the quality of the company to which the fund belongs, in respect of the quality of research, or the superior fund picking ability of the manager, or the good monitoring activities of fund managers. The disposition effect, described by Shefrin and Statman (1985), is that investors tend to dispose of the funds that make money and ride on the inferior funds. The star funds may be the target for those investors to sell in order to capitalise gain. It is concluded that the Malaysian investors are influenced by the disposition effect that winning funds are disposed off while the losing funds are ridden on. In another study by Grinblatt and Keloharju (2000), it is deduced that unsophisticated investors are excessively impatient to realize their winning stocks or to buy losing stocks, whereas sophisticated investors are patient enough to do the opposite. Also, according to Gruber (1996), investors can be categorised into the sophisticated investors and disadvantaged clientele, which consists of the unsophisticated investors, the institutional disadvantaged investors and the tax disadvantaged investors. The unsophisticated investors direct their money in investment based on the advice from the agent or advertising. It is concluded that, perhaps, the disadvantaged clientele make up the largest proportion of new money flows into and out of unit trust funds in Malaysia. Or, in other words, the majority of unit trust investors in Malaysia are the unsophisticated investors or the disadvantaged clientele. Additionally, as supported by Huij (2007), unsophisticated investors have less ability to utilize performance persistence, while sophisticated investors with large financial capacity can exploit the foreseeable patterns in fund returns. However, it is worth noting that the long run star identity do attract capital flows into the superior fund itself and also into the superior performing family as reported in the finding of significant relationship between the new money growth and the three-year Lipper star dummy.

Some prior research provides evidence that the principal-agent problem, in the form of conflict of interest between fund companies and some individual investors, possibly exists in the asset management industry. Due to the lack of strong evidence of the star phenomenon and spillover effects in the unit trust industry in Malaysia, this study concludes that the findings of Gasper, Massa and Matos (2006), that fund families favour certain funds in a family and resources shift from other funds within a family to those funds, do not exist in Malaysia, since the top ranked funds do not attract capital flows into the fund family. Furthermore, as shown by Guedj and Papaskuodi (2005), and Kempf and Ruenzi (2008), cross-fund subsidization is more apparent in large fund families. The lack of strong evidence of the star fund effect in Malaysia may be due to the number of funds offered by companies in Malaysia being considerably fewer than those in the U.S. As such, the fund companies in Malaysia are not big enough to engage in family strategies, such as cross-subsidisation where performance is transferred among funds within the family. Consequently, it is concluded that the delegated asset management industry can be assumed to fulfil its fiduciary duty in Malaysia.

6.6.4 The Overall Conclusion

This study examines the impact of the Malaysian unit trust family membership on investors risk and return and answers three main questions. The first research question examines the impact of the Malaysian unit trust family membership on investors risk or whether common management structure exists in unit trust family in Malaysia. Our results indicate that funds with the same objective are more closely correlated within the fund family than across other fund families even after taking into consideration the combination of the Islamic and conventional funds. We also find that the common stockholding is twice that in the across different families. In a nutshell, we find evidence of high commonality of funds in fund family in Malaysia. We conclude that common management structure exists in unit trust family in Malaysia and that restricting investment of unit trusts to one fund company limits the diversification benefits. This finding is worth investors' attention. When investors choose to invest all their monies in funds in one fund company, they should be aware of the additional portfolio risk, which arises from the higher fund correlation and commonality of funds within the company.

Investors are further advised to diversify their portfolio by integrating their investment of conventional funds with Islamic funds. It is also noted that Money Market funds stand out as good diversification due to their low correlation with the other funds.

The second research question in this study explored the extent to which the Efficient Capital Market Theory holds in the case of unit trust management company returns by examining the performance persistence in unit trust fund companies in Malaysia. The findings also answered the question of whether the evidence of the Malaysian unit trusts common management structure has any effect on fund family performance persistence. The study finds evidence of the hot-hand phenomenon in one month and three months family performance. However, the persistence disappeared when a longer rolling period of six months and one year are considered. Hence, tracking recent past superior performances of fund companies is effective in fund selection decisions. However, we document no evidence of the icy-hand effect. Hence, it is not advisable no good for the inferior fund family performance prediction to use past information. It is concluded that the evidence of common management structure has very limited effect on fund family performance persistence. This however in contravention to the argument made by Brown and Goetzmann (1995) who claimed that common management has an impact on short term performance persistence of fund family. In addition, our findings suggest the existence of a weak form of Efficient Market Hypothesis (Fama, 1965) in the Malaysian unit trust market. This is due to the fact that the Malaysian unit trust market comprises less-informed and less sophisticated investors and this contributed to this contradictory evidence of short-term superior performance persistence against the Efficient Market Hypothesis. Therefore, fund family in Malaysia that performs well in a certain period continues to do well in the near future, but this persistence does not exceed a quarter.

The third research question in this study investigates the extent to which the behavioural theory of finance is able to explain the behaviour of unit trust investors in the emerging markets such as Malaysia. The findings lead us to answer the question of whether unit trust investors in Malaysia are attracted to the so-called common management structure, the fund family in our study. The results of our analysis show that all the included fund family's attributes are significantly related to the family flow growth while most of the fund attributes are insignificantly related to the fund flow growth. We found significant investors response, measured in the new money growth to the family's past returns and the number of funds managed by the fund family. The larger the amount of funds managed by the fund family, the larger the money flow growth is detected in the study. Furthermore, money flow growth which follows past family returns show that Malaysian investors are rational. This finding is explained by the existence of high search cost in the developing market such as Malaysia. It is concluded that investors in Malaysia chase past performance of fund families rather than individual funds. Investment decisions in Malaysia are made base on fund family attributes rather than individual fund attributes. This implies that the investors in Malaysia are attracted to the common management structure.

Our findings show evidence of negative spillover effect - the existence of star fund lead to money outflows from the non-star funds in star family. Negative star phenomenon is documented in the star fund. But no evidence of star phenomenon is detected in the star family and there is no evidence of dog phenomenon in the inferior performing fund and the inferior performing family. Fund flow provides information about investors' sentiment. It represents the way most investors participate in the market.

From the evidence of negative star phenomenon derived, we can infer that the unsophisticated investors in Malaysia exhibit disposition effect, as in the Prospect Theory (Shefrin and Statman, 1998; and Odean, 1998), and they are eager to sell off their winning funds while keeping the losing funds. However, positive spillover effect and positive star phenomenon are found in the three-year Lipper star family and the three-year Lipper star fund respectively. We also find that the three-year Lipper rated star performing funds attracted investment into the Lipper rated star performing fund itself as well as non-star funds in Lipper rated star family. Therefore, fund family may advertise its long-term star rating status to attract investment because having a three-year Lipper star have the ability to attract investment into the star fund, the non-star fund and into the family as a whole.

On the whole, we conclude this thesis with four general guidelines, which might be useful for future investment in Malaysian unit trusts. First, investors should diversify investment of funds in different fund management companies to reduce correlations in the portfolio and thus the risks. Second, portfolio risk can further be reduced by diversifying across the Islamic and conventional objective funds. Third, past superior fund returns can be used as a guide to predict future performance of fund companies, up to one-quarter but not longer. Fourth, there is a lack of strong evidence of star phenomenon in the Malaysian unit trust industry. The finding suggests that the strategy of star-creation is not a viable approach to attract market share in this industry in Malaysia. This implies that fund family favouritism towards certain funds in a family and resources transferred from other funds within a family to the favoured funds may not exist in Malaysia.