Investigating the Islamic and Conventional Mutual Fund Performance: Evidence from Malaysia Equity Market

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The phenomena of financial crisis (2007-2008) shows a significant breakdown of US$16 trillion in conventional financial industry. This provides an opportunity for Islamic capital market to drive the global asset growth investments to investors. Previous studies signal mixture results on Islamic mutual fund (IMF) and conventional mutual fund (CMF) performance. This study aims to analyze the performance of 200 IMFs and CMFs from 2007 to 2015. The sub-sample period of 2007 to 2015 will be compared to the era of financial crisis from 2007-2008. Findings show that all types of mutual funds performed throughout 2007 until 2015. The results provide information that would benefit the investors and market players in asset funds selection.

Keywords: Islamic Mutual Fund (IMF), Conventional Mutual Fund (CMF), Dow Jones Islamic Market Index (DJM1), FTSE Global Islamic Index Series, Bursa Malaysia

1. Introduction

1.1 Overview

Mutual fund is used as an investment tool to gather a pool of investment from investors and the mutual fund companies to invest in securities market to create wealth for the investors. The aims of investors are towards portfolio diversifications, liquidity, lower risks and abnormal return. The original studies on mutual fund performance was based on the theory of the pricing of capital assets under conditions of risks (Sharpe, 1964; Litner, 1965a; Treynor, 1965). The argument on the predictive ability of portfolio fund’s manager to select particularly the mutual fund performance became the main issue in investment activity. In the era of 1960s, the phenomenon studies mostly focus on the method of ranking portfolio of mutual fund performance (Farrar, 1962; Friend and Vickers, 1965; Horowitz, 1965; Treynor, 1965; Sharpe, 1966; Cohen and Pogue, 1967). Hence, it is very important to identify the outperformance of the mutual fund and the significant risk in comparisons with other types of mutual fund (i.e. Islamic mutual fund versus Conventional mutual fund).

1.2 Equity Fund

An equity fund is an open or closed-end fund that invests primarily in stocks, allowing investors to buy into the fund and thus buy a basket of stocks less stressful than they could purchase the individual securities. One of the greatest advantages of equity funds is instant diversification. It can pursue income and capital gain or both incomes as well. Furthermore, it is usually easier and less expensive to invest in equity funds than to buy individual stocks in a fund's portfolio. The main advantage of equity funds is instant diversification. Equity funds are also cheaper in such a way to avoid the often higher transaction costs and lower liquidity linked with trading individual stocks. It is frequently easier to sell fund shares than to sell specific stocks, particularly if that stock has unusual characteristics; such as the issuer has a low credit rating, or the issuer is facing other turmoil. Equity funds also offer the services of a professional who watches and acts on the market on behalf of the investor, handles the trading decisions, and determines the asset. There are a few broad categories of equity funds, which are general equity funds include:

- **Aggressive growth funds**, which seek maximum capital appreciation and may use speculative strategies.
- **Small-company funds**, which invest in companies with relatively small market capitalizations.
- **Growth funds**, which invest in larger, established but growing companies. They generally emphasize capital appreciation.
- **Growth and income funds**, which invest in larger, established companies that offer the potential for capital appreciation but also pay regular dividends.
• *Equity-income funds*, which primarily invest in dividend-paying stocks other equity funds include:
• *Hybrid funds*, which generally invest in equities but also invest in bonds.
• *Specialty funds*, which invest in stocks meeting certain criteria (such as geographic region, industry sector, social causes, etc.).
• *Sector funds*, which invest in specific stock groups, often within one industry.
• *Index funds*, which invest in the same or similar stocks as equity market indices like the S&P 500.
• *International funds*, which invest in foreign stocks.

1.3 Islamic Mutual Funds
The prevalent acceptance of equity investments by shari’ah scholars in the early 1990s fortified the way to promote mutual funds that operate in compliance with the ethical guidelines of the Islamic Law. As a result, the Islamic finance industry has administered worldwide recognition in its effectiveness as a financing facility, even in non-Muslim countries (World Bank, 2017), and this is reflected from the industry’s rapid expansion over the past decade – with assets that have doubled in value over the years. The main disparity between conventional mutual fund (CMF) and Islamic mutual fund (IMF) is that IMF has to be shari’ah compliance. It has to obey Islamic laws. Shari’ah provides guidelines for many aspects of Muslim life, including religion, politics, economics, banking, business and law (Silva, 2006). El-Gamal (2000) pointed out that shari’ah promotes the utilization of partnership strategy & profit sharing, but *gharar* (uncertainties) *may sir* (gambling) and *riba* (interest) are strictly prohibited. The Islamic unit trusts provide investors with access to professional management of funds to maximize returns on different risk profiles. The comprehensiveness of the Islamic financial system creates significant investment opportunities for both Islamic and conventional investors in managing their portfolios to meet financial needs.

1.4 The Phenomenon of Islamic Equity Funds
The primary Islamic Equity Fund offered the public in 1993 when the National Commercial Bank in Saudi Arabia decided, with the help of the Wellington Management Company of Boston, Massachusetts, to launch a global equity fund that follows the Shari’ah restrictions on investing in shares. Through the joint venture effort of these parties, the first ever Islamic equity fund was launched in January 1995.

1.5 The Market Trends
The development of the Islamic financial industry is certainly assisted by the rapid growth of Islamic mutual funds across the globe and therefore, it is crucial to realize the dynamics of its performance consequences and continued progress in the Islamic market. This study aims to address two areas of concern, with the use of empirical evidence; the downside risks associated with adverse economic climate and its impact on Islamic mutual funds. This includes the costs – if any, associated with investing in Islamic mutual funds the opening of reliable equity benchmarks by the Dow Jones Islamic Market Index (DJMI) and FTSE Global Islamic Index Series, followed by the Malaysian Kuala Lumpur Shariah Index, has been a turning point for the industry, giving both Islamic and conventional investors something with which to compare.

The Dow Jones Islamic Market Index, for example, started with 600 companies in 30 countries, down from 3000 before the religious screening process. The Dow Jones performed more than 50 Islamic indices that track industries, which are compliant with Islamic laws (Hussein & Omran, 2005). This is also due to the sha’r’iah principles allow IMF to be more resilient than CMF during economic crisis where the independence of Islamic capital market has act as a cushion to protect from financial crisis (Alrashidi, 2013). Other researchers (Ismail & Shakerani, 2003) argued that IMF exposes to a lower degree of risk than CMF at the whole period by using the Capital Asset Pricing Model (CAPM) as a benchmarking in return performance.

Moreover, Islamic fund’s portfolio similarly developed from both of the security categories; equity, bonds balances or money market. The Islamic equity funds takes after the shari’ah standards and helps investors that does not possess a huge amount of funds to do diversification. Many researchers (Abdullah, et al., 2007; Alhenawi, Hassan & Merdad, 2010; Kräussl & Hayat, 2011) claimed that shari’ah compliant mutual funds tend to outperform the CMFs amid financial crisis, due to its nature which is relatively less risky and more secured than CMFs during overall bullish periods. CMFs tend to perform better than IMFs. Even though, there is widely-spread global acceptance of IMFs today, there is still remains inconclusive which financial instruments have better performance.

1.6 The Research Objectives
Over the years, the number of IMFs has increased from eight in 1991 to 250 mutual funds which is equivalent to USD$3 trillion dollars around the globe today. The IMFs are expected to continuously increase up to USD$4 trillion in the year 2020s. Whilst the shari’ah financial industry is gaining momentum, the global conventional financial industry on the contrary is facing a significant breakdown of value by USD$16 trillion during the crisis.
period (2007-2008)- providing opportunities for Islamic capital market to play a crucial role in driving global asset growth (SCM, 2009). This will be an alternative approach for investors, who are interested to invest and gain return from shari‘ah compliant investments (Yuzi, Samsuddin, Shair & Hazny 2012).

The study of IMFs in Malaysia is very important for two main reasons: the 1997 Asian Financial Crisis and the liquidity problem resulting from surplus funds from the Islamic finance industry (IOSCO, 2004). In particular, the study of IMFs performance in Malaysia is significant considering that it accounts for over 29% of the global Islamic funds (Mansor, Bhatt & Ariff, 2015). Several studies (Kothari & Warner, 2001; Elfakhani & Hassan, 2005; Abdullah & Mohammad, 2007; Aberrezaek, 2008) have shown that the IMFs outperform CMFs in bearish market. However, the performance of IMFs in relative to CMFs is still questionable in Malaysia with a mixture results from researchers (Albaity & Ahmad, 2008; Low, 2008; Abdullah & Abdullah, 2009; Hassan, Khan, & Ngow, 2010).

The main objective of this study is to investigate the comparative performance between IMFs and CMFs during the whole period (2007-2015) and the financial crisis (2007-2009), mainly in Malaysia. The sample includes the monthly data from 200 mutual funds (100 IMFs and 100CMFs) covering all categories of equity funds. The performance will be measured over a 9-year period (2007-2015) and compared during the financial crisis (2007-2009). The data will be evaluated based on two standard performance measures, namely Sharpe ratio and Jensen’s Alpha. The study also will create some avenue to the investors of the performance measures in different investment goals return, risk tolerance, liquidity needs and reasons why investors choose IMFs for their resources (Rao, Tauni, & Iqbal, 2015).

2. Review of Previous Studies

The study of mutual fund performance between the IMFs and CMFs is investigated from different analysis which are risk and return analysis, performance persistency within stock market towards the performance of mutual funds and performance measurement against market benchmark. However, research on Islamic mutual funds is limited despite of the growing interest on Islamic mutual funds in this global phenomenon (Alhenawi, Hassan, & Merdad, 2010; Table 1 summaries the previous studies on conventional mutual funds and Islamic mutual funds inclusive of the data used, research methodology and findings extracted in the various studies.

| Study | Data | Research Methodology | Findings |
|-------|------|----------------------|----------|
| Previous Studies on Conventional Mutual Funds |
| McDonald, 1974 | 123 mutual funds, American monthly data extracted from 1960 to1979. | Sharpe Ratio, Treynor Ratio, Jensen’s Alpha | Mutual funds studied typically did not outperform market index. (NYSE) |
| Kon & Jen, 1979 | 49 mutual funds, monthly data extracted from1960 to1971. | Standard Regression | Multiple levels of beta indicated; exhibiting market timing’s impression. |
| Kon, 1983 | 49 mutual funds, monthly data extracted from 1960 to1971. | Standard Regression | Stock selection generally indicated statistically significant findings; timing performance generally exhibited insignificant positive results. |
| Chen, Cheng, Rahman, & Chan 1992 | 93 mutual funds, data extracted from1977 to 1984. | Quadratic Market Model | The trade-off between market timing and security selection skills; the inability of skills by managers in market timing. |
| Annuar, Shamsher & Ngu 1997 | 31 mutual funds, Malaysian – data extracted from 1990 to 1995. | Treynor Ratio, Mazuy Model | Traces of positive selectivity performance and inverse timing performance indicated, as well as direct indication of the link between selectivity and timing performance. |
| Shamsher, Annuar, & Taufiq 2000 | 41 mutual funds, active and passively managed in Malaysia from1995to1999. | Sharpe Ratio, Treynor Ratio, Jensen’s Alpha | Results indicate no difference in the link with actively and passively managed funds; and that funds underperformed the market portfolio as well as lower levels of diversification. |
| Previous Studies on Islamic Mutual Funds |
| Hassan (2001) | DJIM, Dow Jones Islamic Market Index 1996-2000 | Correlation, variance ratio, and Dickey Fuller tests GARCH | Serial framework DJIM returns are normally distributed and efficient. Significant positive relationship between conditional volatility and DJIM equity index returns. |
| Hakim & Rashad, 2002 | Sample data of DJ, Wilshire 5000 index – monthly data extracted from 1999-2002. | Test for Causality; Co-integration Analysis | Islamic funds exhibit unique risk-return characteristics bar any influence from broad equity market; no correlation detected. |
| Hakim & Rashad, 2004 | Shariah-compliant index (DJIM), Dow Jones World Index (DJW) and Dow Jones Sustainability World Index (DJS) | Capital asset pricing model (CAPM) | DJIM has done relatively well compared to the DJW, but has underperformed the DJS. |
| Hussein 2005 | DJIM returns 1996-2003 (2005) | A comprehensive study capturing the | Islamic indexes provide investors with... |
| Author(s) | Year | Description | Statement |
|---|---|---|---|
| Elfahani, Hassan, & Sidani | 2005 | 46 Islamic mutual funds, monthly data extracted from 1997-2002. | Effects of industry, size, and economic conditions |
| Abdullah, Hassan, & Mohamad | 2007 | 65 equity-based funds – 14 IMF and 51 CMF, monthly data extracted from 1992 to 2001. | Sharpe Ratio, Treynor Ratio, Jensen’s Alpha, one-way ANOVA test |
| Abderrazak | 2008 | 46 Islamic mutual funds, data extracted from 1997 to 2002. | Sharpe Ratio, One Factor Model, Fama measure of Diversification |
| Merdad et al. | 2010 | 28 mutual funds, monthly net asset values; Saudi Arabia – data extracted from 2003 to 2010. | Sharpe Ratio, Treynor Ratio, Jensen’s Alpha |
| Hoepner, Rammal, & Rezec | 2011 | Sample of 262 Islamic equity funds from 20 countries and 4 regions from 1990 to 2009 | One factor model, Fama and French(1993), Three factor model, Carhart (1997) models. |
| Mansor & Bhatti | 2011 | Monthly returns for 129 Malaysian IMFs of various categories from 1990 to 2009 | Comparative analysis of returns, panel Ordinary Least squares(OLS), CAPM |
| Hayat & Kraeussl | 2011 | 145 Islamic mutual funds, data extracted from 2000 to 2009. | Sharpe Ratio, Treynor Ratio, CAPM Analysis, Modigliani measure |
| Dewi & Ferdian | 2012 | 14 and 10 Islamic mutual funds, Malaysia and Indonesia respectively - data extracted from 2006 to 2009. | Sharpe Ratio, Treynor Ratio, Jensen’s Alpha |
| Razaq et al. | 2012 | 9 Pakistan 2009-2010 | Sharpe Ratio |
| Merdad & Hassan | 2013 | 143 Islamic mutual funds; Saudi Arabia - data extracted from 2004 to 2010. | Sharpe Ratio, Treynor Ratio, Net Asset Value measure, Modigliani measure |
| Karim, Datip, & Shukri | 2014 | daily closing of Malaysia Dow Jones Islamic Index (DJIM) and FSTE Bursa Malaysia Index (KLCI) from January 2000 to December 2011 to represent both the Islamic and conventional stock markets | Sharpe ratio, Treynor ratio, Adjusted Jensen’s Alpha Index Performance and Modified Sharpe Ratio |

- IMF: Islamic Mutual Funds
- CMF: Conventional Mutual Funds
- ANOVA: Analysis of Variance
- OLS: Ordinary Least Squares
- CAPM: Capital Asset Pricing Model
- DJIM: Dow Jones Islamic Index
- KLCI: Kuala Lumpur Composite Index

**Notes:**
- Positive abnormal returns throughout the entire bull period, but they under-perform their non-Islamic index counterparts during the bear market period. Concludes that abnormal returns are driven by investing in small size, basic material, consumer cyclical, industrial and telecommunication firms.
- No indication of difference in behavior of IMF than that of CMF, with indications of stronger performance of IMF during the economical bust period.
- IMF typically illustrate better performance during bearish climate; and vice versa in bullish climates. Stock selection and timing performance indicate poor results for both cases.
- Results indicate low correlation between IMF returns and market returns, translated by low beta, and low diversification indicated by IMF with regard for firm size and growth.
- IMF typically illustrate better performance during bearish climate; and vice versa in bullish climates; exhibiting hedging opportunities supported by Shari’ah allowances during economic downturn.
- Islamic funds display superior learning in more developed Islamic Financial markets. Islamic funds are competitive to international equity benchmarks.
- Risk-return relationship of debt IMFs is relatively stable in comparison to asset allocation and equity IMFs. Statistically insignificant difference in return performance of IMFs to single and multiple benchmarks.(i.e. returns are comparable to the market benchmark)
- General underperformance of IMF relative to both benchmarks; with enhanced effects during recessionary period. Indication of poor market timing and selection in IMF.
- Malaysian IMF performance illustrates better results than Indonesian IMF; in both recessionary and normal conditions. Market timing does not appear to have a substantial impact on overall returns.
- Pakistan Islamic funds are growing and investors are attracted by these funds. The return of mutual funds are according to their level of risk.
- Results indicate sensitivity to varying demographics; IMF typically illustrate better performance during bearish climate; and vice versa in bullish climates – domestic funds are less sensitive to recessionary pressure than foreign counterparts.
- Islamic stock market versus conventional stock market: International Journal of Economics, Commerce and Management, 2(11), 1-9.
Based on Table 1, most of the previous studies primarily apply three models to measure the performance of portfolio. Those methods are similar, with McDonald (1974) indicate that majority of the mutual fund did not outperform the New York stock exchange (NYSE) index. McDonald used Sharpe ratio (Sharpe, 1966), Treynor ratio (Treynor, Jack, Mazuy & Kay, 1966) and Jensen’s Alpha (Jensen, 1968) to measure the performance of 123 mutual funds using monthly data from 1960 to 1969.

The classic theory by Jensen (1969) showed an absolute measure of performance based upon the Capital Asset Pricing Model and reported that mutual funds did not appear to achieve abnormal performance when transaction costs were taken into account. The concept of Islamic mutual funds was initiated in 1990s and the initial studies on Islamic mutual funds was conducted to assess 31 Malaysian mutual funds by using Treynor and Mazuy model (1966) for the period 1990-1995 (Annuar, Mohamed & Ngu, 1997). The study concluded that Malaysian mutual fund outperforms their benchmark but the market timing was poor. Researchers found on Islamic stock investment under Kuala Lumpur Shariah Index (KLSI) marginally underperformed Kuala Lumpur Composite Index (KLCI). The risk-adjusted returns and beta for KLCI were higher relative to KLSI which has lower risk-adjusted returns and beta in the short run (Mansor & Bhatti, 2011). Other researchers (i.e. Bauer, Otten & Rad, 2006; Hassan and Girard, 2011) applying the Sharpe, Treynor and Jensen methods to measure the return performance, found no significant difference in performance between Islamic and conventional indices and that both groups are poorly integrated. Similar reward to risk and diversification benefits also exist for both set of indices.

### 3. Performance Measurement

#### 3.1 Data Analysis

This section comprises the descriptive statistics and performance measurements of the chosen 100 IMFs and 100 CMFs in relative to their respective benchmarks which are Shariah Index and KLCI Index. The analysis was conducted based on the monthly returns data during two sample periods which is the whole period (2007 to 2015) and the financial crisis period (2007 to 2009) and the three-month Malaysian Treasury bill served as the risk-free rate benchmark. This would allow for the comparison of the performance of the Islamic unit trusts against the equity market and risk-free rate performances. All data information were obtained from Bloomberg, Kuala Lumpur Composite Index, FTSE Bursa Malaysia EMAS Shariah Index.

#### 3.2 Sharpe ratio

Sharpe (1966) first developed, the Sharpe Ratio to measure the relationship between the standard deviation of return and the average excess return (risk premium). Modigliani & Modigliani (1997) stressed that Sharpe ratio is one of the most accurate measurement that widely employed for determining the return and risk-adjustment performance of the portfolio If the value results in positive or exceeding zero, meaning that the investment is worthy whereas the negative Sharpe Ratio stipulates that the return of investment is lower then it’s risk-free rate. The following measurements were used to evaluate the Islamic and conventional mutual fund.

#### 3.3 Jensen’s Alpha

Jensen Alpha is used to measure the returns of the portfolio on a basis of risk-adjusted by taking the market performance as the benchmark. Originally from Jensen (1968) derived a risk-adjusted measuring the performance of portfolio that evaluates the predictive ability of fund managers in returns of the funds. Jensen Alpha assesses the systematic risks relative to the values of expected returns. It is also used to determine the excess return of a portfolio over the portfolio’s theoretical expected return or risk adjusted return, predicted by the capital asset pricing model (CAPM). A positive alpha indicates the fund managers of portfolio have superior skills on selectivity and management (Alhenawi, Hassan & Merdad, 2010). Overall, the two standard methods namely the Sharpe’s index, and Jensen's Alpha index are employed to evaluate the performance of IMFs and CMFs as market benchmarks.
3.4 Selected Mutual Funds by Financial Institutions

On Bursa Malaysia, nearly 90 percent of the listed securities are shari’ah compliance. These stocks account for two-thirds of the stock market capitalization and 70 percent of the broad equity index known as FTSE Bursa Malaysia EMAS Index (Krasicka & Nowak, 2012). This study used 100 IMFs and 100 CMFs from three categories by financial institutions which are Mutual Unit Trust Corporation (MUTC), Investment Banks and Insurance companies. Overall percentages by categories are almost equal for both mutual funds. Figure 1 illustrates the CMFs and Figure 2 illustrates the IMFs by financial institutions.

![Figure 1 Conventional Mutual Funds by Financial Institutions](image1)

![Figure 2 Islamic Mutual Funds by Financial Institutions](image2)

4. Results and Discussions

4.1 Descriptive Statistics

|                  | Average mean returns of IMFs and CMFs with Market Benchmark |                      |
|------------------|-------------------------------------------------------------|----------------------|
|                  | Average mean returns                                        | Market Benchmark     |
|                  | 2007-2015          | 2007-2009           | 2007-2015          | 2007-2009           |
| CMFs             | 0.20              | 0.12               | -0.0341           | -0.0339           |
| IMFs             | 0.57              | 0.18               | -0.0351           | -0.0373           |

Average standard deviation of IMFs and CMFs with Market benchmark

|                  |                      |
|------------------|----------------------|
| CMFs             | 1.93                 |
| IMFs             | 2.20                 |

Average Sharpe Ratio of IMFs and CMFs with Market Benchmark

|                  |                      |
|------------------|----------------------|
| CMFs             | -0.41                |
| IMFs             | -0.42                |

Average Jensen Alpha of IMFs and CMFs with Market Benchmark

|                  |                      |
|------------------|----------------------|
| CMFs             | -0.18                |
| IMFs             | -0.39                |

4.2 Mean

Table 2 shows the average performance of selected IMFs and CMFs from 2007 to 2015 (the whole period) and from 2007 to 2009 (during crisis period). The average mean returns of both IMFs and CMFs performed above the respective benchmarks (i.e. Shariah Index and KLCI Index) by entire sample period (2007-2015) by around
93% and 32% respectively. During the crisis period (2007-2009), the mean returns for CMFs are 15% which lower than IMFs. The return of both funds is lower implying that the portfolios affected by the economic crisis. Literally, the average returns from the selected CMFs were both negative in the entire sample periods (both periods). Unlike the selected IMFs showed negative return for the whole period (2007-2015). This phenomenon indicates that the investors’ capitals from CMFs could not earn a minimum return of risk-free return, yet their capitals averagely shrunk over the both periods. However, the mean returns of average CMFs for the whole period (2007-2015) were still higher (less negative) than IMFs average means return.

4.3 Standard Deviation
Standard deviation is an absolute risk measure which is use to indicate the total risk portfolio (Haber & Braunstein, 2016). Overall, the data shows significantly higher standard deviation during the crisis for both CMFs and IMFs which implies a greater risk during that particular period in relative to the whole sample period. In relation to the dispersion risk, the data shows that the average standard deviation of IMFs for was higher than the CMFs and market benchmark for both periods which is 22.0% (2007-2015) and 25.1% (2007-2009) respectively. This shows the volatility of average return of the IMFs was higher than the volatility of average return of the market. Similarly condition with the CMFs, the average standard deviation of CMFs was higher than the market benchmark which pointing 19.3% (2007-2015) and 21.8% (2007-2015). This could be explained that IMFs average return was more volatile than the market. Based on the study, the authors noticed the presence of outlier of certain funds which contributed to the higher standard deviation value of the average IMFs in both periods. Furthermore, IMFs were observed to be significantly much more volatile than CMFs while their standard deviations in both periods were 1.14 to 1.15 times higher than CMFs. It could be inferred that IMFs had greater volatility than CMFs. The different risk profile between IMFs and CMFs explains the different return performance. The highest standard deviation means that it encourages the inflow of short-term capital, which is highly volatile. In other words, in terms of smallness and openness of the stock market and vulnerability to global shocks (Majdouba & Mansour, 2014).

4.4 Jensen Alpha
Jensen Alpha is performed to measure the portfolio’s total return and the amount of risk involved in achieving the return, using Capital Asset Pricing Model (Jensen, 1968). Jensen alpha is a measure of risk adjusted return compared to the market index based on the Capital Asset Pricing model. The investors will opt for portfolio with positive alphas as a signal of higher return with minimum level of risk. Jensen Alpha is also a tool to measure how much the portfolio signal outperformed the market return as a benchmark. The higher the value of Jensen Alpha indicates that the more superior selectivity skills of investment managers against the benchmark (Kim, 2013). In this study, Jensen alpha of IMFs shows slightly higher (-0.07) than CMFs (-0.10) during crisis period. This scenario reflected that the average Islamic funds have outperformed their respective market index from 2007-2015. This is also because of Islamic funds during crisis were buffered from the effects of the crisis due to their resilience making them able to outperform their benchmark index strongly (Abdullah, Mohamad and Hassan, 2007). The results of this study does indicates most of the investors following the Islamic indices, would be better protected in times of economic crisis originating from financial sector, as well as being in line with Shariah compliance and Halal investments.

4.5 Sharpe Ratio
A negative Sharpe ratio implies that the fund average returns were lesser than the risk free rate and fund managers were not able to tolerate risk over each unit of risk spread while managing those funds to yield returns. The average Sharpe ratio of IMFs is -0.22 which is less than in CMFs funds -0.23 during the crisis period. This scenario signaled that IMFs were riskier during that period but investors of the fund were greatly compensated for bearing the risk than the Islamic funds holders. In addition, the performance of both mutual funds can be summarized in the Table 3.

| Measurement | IMFs          | CMFs          | Findings               |
|-------------|---------------|---------------|------------------------|
| W.Period    | Crisis        | W.Period      | Crisis                 |
| Mean        | 0.57          | 0.18          | 0.20                   | 0.12                    | Whole Period IMFs|
| Std deviation | 2.20          | 2.51          | 1.93                   | 2.18                    | Whole Period IMFs|
| Sharp ratio | -0.42         | -0.22         | -0.41                  | -0.23                   | Crisis Period IMFs|
| Jensen Alpha | -0.39         | -0.07         | -0.18                  | -0.10                   | Crisis Period IMFs|

Table 3: Summary of Results
This study shows that most of IMFs perform less negative and better performance by using Sharpe ratio and Jensen Alpha. The result from Table 3 implies that IMFs were less affected by the market movement during crisis period. The diversification of IMFs with variety types of funds show positive results regardless of different market conditions. Israelsen (2010) stated that negative excess return will result in negative Sharpe ratio, which somehow can be stand intuitive higher Sharpe ratio measures better performance of mutual funds (Mansor, 2012).

However, the discrepancy in results may also be attributed to external factor such as interest rate. The rise of interest rate can reduce capital invested due to the increase of borrowings. During crisis period, Malaysia interest rates faced a sharp decline by 1.5%. Interestingly, this will encourage enterprises to increase their investment due to lower borrowing cost and thus, lead to higher investment. However, even though the interest rate declined, there is no effect on IMFs due to the fragile Riba system. Researchers (Fauziah & Isa, 2007) did explain that IMFs performed better than CMFs during crisis period. IMFs had limited exposure to the banking sectors which are greatly impacted by the economic downturn. This study also parallel to the literatures of Abdullah et al., 2007; Eslakhani et al., 2007; Ferdian & Dewi, 2007; Mansor & Bhalti, 2011) mentioned that IMFs had higher tendency to outperform than CMFs due to its defensive nature which is less risky and more secured than CMFs.

Overall performance has shown that the IMFs performed better than CMFs during the crisis period. There are several reasons why the IMFs show better performance during the crisis period. According to CIMB (2013), during world financial crisis, many investors were looking for fixed income securities with high rate of return and this made sukuk (Islamic Bonds) securities were more preferable than the bonds in US Treasuries because the rate of return of US Dollar was higher than the US Treasuries.

The results performance of IMFs can also be compared with MSCI Malaysia Islamic Index reflects Sharia investment principles and is designed to measure the performance of the large and midcap segments of the Malaysian market that are relevant for Islamic investors. From year 2007 to 2015, the MSCI Malaysia Islamic Index performed average annual return performance 13.27% (MSCI Malaysia Islamic Index). By comparing with IMFs average return with the MSCI Malaysia Islamic Index, IMFs outperformed the MSCI Malaysia Islamic Index.

5. Inference

5.1 Conclusions

Overall performance for both IMFs and CMFs shows slightly difference in terms of average return, standard deviation, Sharpe ratio and Jensen Alpha. Even though both IMFs and CMFs outperform higher than market benchmark, IMFs performed slightly better performance than CMFs for both periods.

5.2 Limitations and Direction for Future Research

The authors are certain that the study has limitations and need some adjustments for further research. Thus, the following limitations exist in our study:

1. The duration of the study spans 9 years, and is divided into two sub samples period of 2007-2015 and crisis period of 2007 to 2009. The study should encompass previous decades as it would make the study more robust.
2. The data selection could be bias due to the random selection. Future research should include panel data analysis for better results.
3. The selection of data should be expanded by focusing on industries and selected financial institutions.
4. Our research has taken a sample of 200 (100 IMFs and 100 CMFs) from Malaysian equity market. In addition, for further research, more data selection should be included from other regions and countries specific indices using similar methodology.

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