

# INTI INTERNATIONAL UNIVERSITY

## MASTER OF BUSINESS ADMINISTRATION

Portfolio Diversification: Is there a Syariah and Market Phase Effect?

Evidence from the Malaysian Stock Market

FOR REFERENCE ONLY

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3<sup>rd</sup> December 2013

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## ABSTRACT

This study compares the effect of diversification between the Syariah compliant and non-Syariah compliant stocks listed on Bursa Malaysia during the period from January 2002 to January 2012. The standard deviation of stocks portfolio were calculated for the entire and two sub-periods, bull and bear. Independent samples T-test was used to test on the significant difference of the standard deviation between Syariah and non-Syariah which had revealed to be significantly different. On the other hand, during the period of first bull and bear period, standard deviation of both stocks had also resulted differences. However, there is no significant difference in the standard deviation after the bear in 2009. Therefore, it can be concluded that portfolio diversification applies in both Syariah and non-Syariah compliant stocks of the Malaysian stock market. In addition, Syariah compliant stocks were proven to be less risky and require a smaller number of stocks in a portfolio to reduce specific amount of risk over the different market phase periods.

## CHAPTER 1

### 1.0 INTRODUCTION

Investing in stock market may sound simple, whereby, most people might think that stocks are the response to instant wealth, however it is not. The investment in stocks and expected return always believed to come along with risk. As a matter of fact, after the financial meltdown in 2008, investors today tend to become more cautious of risks when deciding how to allocate their money in today's turbulent financial markets especially during the bear market period.

Risk can be simply defined as the probability that an actual return on investment may be different than what is expected (Sutton, 2009). One of the most risky examples would be putting all eggs into one basket. Generally, there are two types of risk which are systematic and unsystematic risk that have to be solved in order to achieve a good expected return in an investment (Markowitz, 1952). Systematic risk is also known as non-diversifiable risk whereby the risks are ordinary to all assets, and as a consequence it cannot be diversified (Sutton, 2009; Bodie, Kane and Marcus, 2011).

On the other hand, unsystematic risk is also known as the firm-specific risk and it is diversifiable. In other words, risks can be eliminated through diversification. For instance, it occurs due to a firm-specific event such as lawsuit which leads to a fall in pricing of the company (Suqaier and Ziyud, 2011). It is mainly contributed by issues and possibility involved in a company.

Theoretically, the present value of the expected future cash flow of a firm mainly influences by macroeconomic factors including interest rate, inflation rate and economic growth. There is an uncertainty of future investment's return and risk that exists and cannot be avoidable due to the changes in the economy (Ahuja, 2011). According to Albaity and Ahmad (2011), it does not matter whether it is Islamic or non-Islamic stock market indices, majority of the stock market indices are responsive to the changes of microeconomic and macroeconomic factors.



Again, a rational investor would prefer the highest possible return for a given risks in order to maximize his utility. Therefore, it can be achieved by designing a well-diversified portfolio which allows minimizing the uncertainty of future investment's return (Zulkifli, 2008, cited in Zulkifli et al., 2010) and eventually applies to both Syariah and non-Syariah investments (Albaity and Ahmad, 2011). However, there are arguments whereby Syariah investment is different from non-Syariah investment in terms of risk and return under three sample periods, namely, entire, bull and bear periods (e.g. Ahmad and Ibrahim, 2002; Kassab and Morocco, 2013). Hence, are the Syariah-compliant and non-Syariah performing differently? This research paper will further discuss on the diversifications of both Syariah and non-Syariah portfolios investments under two scenarios, in particular, when market phases are not considered and when market phases are taken into consideration.

## **1.1 BACKGROUND OF THE STUDY**

### **1.1.1 DIVERSIFICATION**

Diversification defined as a portfolio strategy aimed to minimize the exposure of risk through the combination of variety stocks in a portfolio. The underlying principle of this technique assert that different stocks in a portfolio investment tend to yield higher returns with a lower risk as compared to any individual investment found in a portfolio (Hight, 2010; Bodie, Kane and Marcus, 2011). Diversification is the imperfect correlation of returns which gives an effect to stocks. In a low correlated return, it has been proven that risk can be significantly reduced (Hight, 2009; Alekneviciene et al., 2012). On the other hand, the Modern Portfolio theory developed by Harry Markowitz also mentioned that investors are able to reduce their portfolio investment risk through diversification while achieving greater profits. It is possible to design an "efficient frontier" of optimal portfolios in such that the expected returns can be maximized for a given level of risk (Hight, 2010; Ahuja, 2011).

Nonetheless, there are criticisms in contra to the theory principles between the theories by Markowitz (1952), in specific, efficient portfolio theory and modern portfolio theory in the Islamic investment. Efficient portfolio is explained in maximizing the expected returns for the given level of risk or it can be defined as the portfolio with the lowest risk at a given amount of expected returns. Rationally, this theory concept mainly focuses in maximizing the wealth of rational investors. However, it is argued that rational investors would prefer the highest possible return and lowest risk in the maximizing of his utility. Hence, portfolio risk can be dealt with by investing different number of assets in a single portfolio. This grouping process of stocks in a portfolio is eventually known as diversification. Diversification effect had proved that the performance of the portfolio using different assets and it is mostly managed by impromptu restraint like lower limits on the amount of stocks contained in a portfolio (Frahm and Wiechers, 2011).

#### 1.1.2 TYPES OF DIVERSIFICATION

There are various types of portfolio diversification such as diversification in bond, stocks and mutual fund, however, this research focuses only on stock diversification. Stock diversification can be understood by investing in different companies of different correlation in return. Based on the research by Fama and French (1992), many accepted as true that a portfolio risk and return are mainly contributed by one factor which is Beta ( $\beta$ ). It is mentioned that if an asset's Beta ( $\beta$ ) is more than one, it has higher equity-type of risk as compared to the overall market. On the other hand, Fama and French research also indicated that it is better for investors to include different type of risk from stocks of different industries instead of taking the same risk from stocks of the same industries, capital size and other factors in order to achieve a more effective diversification. According to Mohamad, Hassan and Sori (2006), they had proven that there is a weak correlation of expected return between the different industries. Nonetheless, to achieve risk benefit reduction, investors should hold their diversified portfolio for a longer period. International portfolio diversification had proven to contribute more benefits as compared to domestic portfolio



diversification based on the integrated world market (Giorgio and Bruno, 1997). In contrast, a research study based on Malaysian perspective, has proved that domestic portfolio diversification tend to perform better than international portfolio diversification especially in the long run and during the bear period (Abidin et al., 2004).

### **1.1.3 FACTORS AFFECTING PORTFOLIO DIVERSIFICATION**

#### **a. Number of assets in a portfolio**

Theoretically, the increase in the number of assets will tend to reduce the volatility of a portfolio. Portfolio variance is proven as a concept of diversification whereby the variance can be minimized by increasing number of assets in a portfolio (Goetzmann and Kumar, 2001; Barber, Heath and Odean, 2003). Prior to research by Goetzmann, Massa and Simonov (2004), the volatility of portfolio has proven to have been reduced as the portfolio size increases. In other words, portfolio risk can be effectively reduced through the increase of asset held in a portfolio.

#### **b. Correlation of the assets**

Stocks held in a portfolio must not be highly correlated in order to achieve effective diversification. According to Markowitz (1952) and Perold (2004), indicated that there is an inverse relationship between correlation and risk of a portfolio. In other words, the higher the correlation, the lower the diversification effect. On the other hand, the low-correlated stocks with high expected of returns contribute to a lower portfolio risk (Perold, 2004; Hight, 2009). The greater the variance would drive to a lower correlation of risk.

#### **c. Asymmetric Information**

First hand information is significant for investors in order to manage their portfolio. Asymmetric information simply means that different information would be received by different people. In order to achieve an effective diversification, first hand information is important to be available for investors (Nieuwerburgh

and Veldkamp, 2005, 2009). As a matter of fact, investors can hold different stocks in a portfolio together with dissimilar information received which is the basis of a naïve strategy.

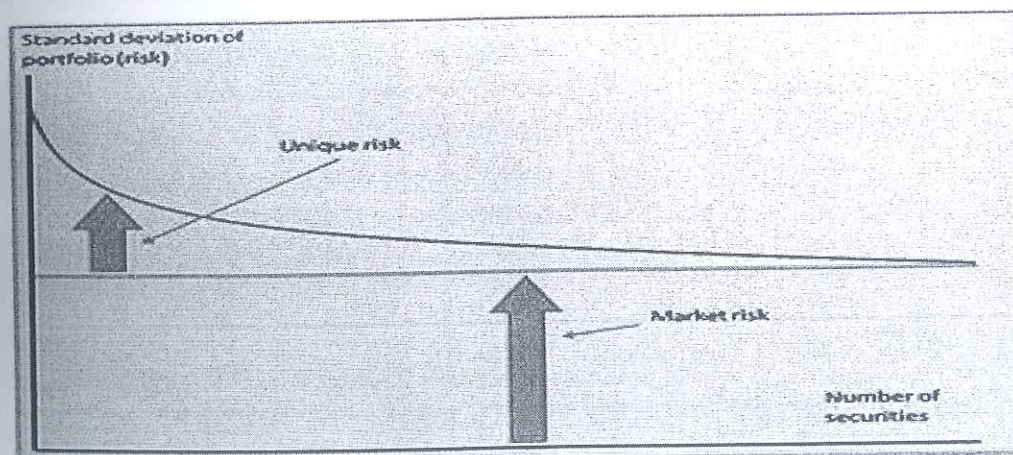
#### d. Standard Deviation (SD) (Unique risk + Market risk)

The general idea of Capital Asset Pricing Model (CAPM) includes the two main components of total risk which includes systematic (market risk) and unsystematic (unique risk). The CAPM is presented as:

$$\text{Total Risk} = (\text{Beta} \times \text{Systematic Risk}) + \text{Unsystematic risk}$$

As discussed earlier, unique risk of a firm or industry can be fully diversified through the raise of stocks in a portfolio. In contrast, market risk cannot be diversified as the investment value would be affected directly by the market movement.

**Figure 1.1 The relationship between the portfolio risk and number of securities**



Source: *Global Equity Strategy, Dresdner Kleinwort Macro (2007)*

The figure above (Figure 1.1) explained the relationship between standard deviation (portfolio risk) and the number of assets. The risk in a portfolio represented as standard deviation. It is proven that there is an inverse relationship between the number of securities and the total risk of portfolio, standard deviation (Bodie, Kane and Marcus, 2011). In view of the fact that unique risk can be eliminated, hence, the market risk would be the only main



concern for most investors. The number of securities has no effect on the market risk; however, it is mainly affected by the portfolio Beta ( $\beta$ ).

#### **1.1.4 BURSA MALAYSIA**

Bursa Malaysia was formerly known as Kuala Lumpur Stock Exchange (KLSE). It is a trading holding company developed in 1973 and was listed in 2005, approved under Section 15 of the Capital Markets and Services Act 2007. Bursa Malaysia offers a wide spread of products such as equities, bonds, derivatives, offshore listings and services as well as Islamic offerings ([www.bursamalaysia.com](http://www.bursamalaysia.com)).

#### **1.1.5 KUALA LUMPUR COMPOSITE INDEX (KLCI)**

Kuala Lumpur Composite Index (KLCI) effectively transitioned to FTSE KLCI on 6<sup>th</sup> July 2009. It is the market benchmark for the Malaysian market. KLCI provides a wider range platform for investment and engaging opportunities. Besides, the move to a 30 stock tradable index, implements an internationally accepted index calculation methodology in order to provide domestic and international investors with a tradable, investable and transparently managed index ([www.ftse.com](http://www.ftse.com)).

#### **1.1.6 SYARIAH-COMPLIANT INDEX**

The Bursa Malaysia Kuala Lumpur Syariah Index signifies the average price of Islamic-compliant stocks whereas the Kuala Lumpur Composite Index (KLCI) represents the average price of 100 Islamic and non-Islamic compliant stocks. KLSI was officially launched on 17 April 1999 with the objective to fulfill and increase the demands of local as well as foreign investors who are interested in the investment of stocks that are in line with the Islamic laws ([www.bursamalaysia.com](http://www.bursamalaysia.com)). KLSI was initially consisting of 279 companies (17 April 1999), however, it has grown up to 825 companies in May 2012. ([www.sc.com.my](http://www.sc.com.my)).