

CHAPTER I

INTRODUCTION

1.1. Research Background

More companies value international diversification after the 2007 – 2009 global crisis since such practice may give both financing and investing advantages (Kuppuswamy & Villalonga, 2010). Even though there have been long debates about whether international portfolio is optimum or not, investors who deem long horizon investments are still proven to have significant advantages from having diversified portfolio (Asness et al., 2010). Asset selection process is also a crucial part of overcoming domestic portfolio selection through international diversification (De Santis & Sarno, 2008). Such a diversification do not only look for advantages in developed countries, but also in developing countries that are commonly called as emerging economic countries which have been profitable if investors can combine their investments between these two types of global financial markets (Davis et al., 2010). Since Indonesia has been listed and deemed attractive as one of emerging economies country at least from more than 1 decade ago (Hoskisson et al., 2000), looking for further attractiveness in this country as one of international diversification options is wise for investing (Ho & Mauro, 2014).

In further academic and practical concerns, mutual funds have been found to be important forces in financial research for last four decades regarding international diversifications due to their characteristics, attractiveness, and market risk reduction among many financial instruments (Chen & Lin, 2006) and

in Indonesia, mutual funds are the most favorable retail financial instruments where around 320,000 retail investors own them individually, along with more than 21,152 licensed agents (Kadomae, 2012). However, mutual funds industry growth in Indonesia is still facing incredible challenge to expand its use, especially among domestic people. Compared to Indonesia, Australian fund industry is on the world's top three fund industry, where Japan and China are among the top 10. However, Indonesian fund industry is still too small compared to its market size and its relations to the nation's GDP (Le & Volguard, 2014), with around 2% of GDP, compared to 12% from Thailand and 20% of Malaysia even though in 2009-2010 Indonesia had a market boom of equity and fixed income products (Thompson, 2011). Therefore, unlocking potential of Indonesian mutual funds is necessary for both domestic and foreign market.

Table 1.1
Indonesian Mutual Funds Composition (June 2015)

Mutual Funds		Net Asset Value	%
ETF-Index	Rp	739,069,329,381.61	0.48936
ETF-Stocks	Rp	422,891,754,900.46	0.28001
Fixed Income	Rp	22,918,496,565,096.80	15.1751
Index	Rp	433,331,062,216.41	0.28692
Mixed	Rp	11,023,814,766,551.90	7.29925
Money Market	Rp	23,565,898,671,903.70	15.6038
Equity	Rp	50,581,561,496,080.80	33.4918
Protected	Rp	41,341,659,787,841.60	27.3737
CONSERVATIVE MUTUAL FUNDS	Rp	151,026,723,433,973.00	100
Syariah-Fixed Income	Rp	258,159,458,663.71	4.17613
Syariah-Mixed	Rp	1,432,999,088,991.46	23.181
Syariah-Money Market	Rp	549,491,256,153.71	8.88887
Syariah-Equity	Rp	2,858,246,394,278.42	46.2365
Syariah-Protected	Rp	1,082,895,693,910.05	17.5175
SYARIAH MUTUAL FUNDS	Rp	6,181,791,891,997.35	100

(Source: BAPEPAMLK, 2015)

Regarding a concern about covering a good balance of Indonesian financial market in general, we may find that managed funds have a unique essence that combine several balanced compositions of a certain country's financial instruments (Mankiw, 2009) and this study specifies to approach Indonesia's attractiveness in a scope of its national managed funds. Table 1.1.1 describes that in the country, conservative and syariah mutual funds are available retail with still around total of more than 157 trillions rupiah net asset value. It shows that 96% of the total NAV is still operating in conservative mutual funds, while only 4% of it is in syariah mutual funds. However, up to this date, many researches only discussed comprehensively about US managed funds, while limited studies are available concerning emerging economies countries (Chen & Lin, 2006). The coverage of the topic is discussed in moments of global economic recovery since the beginning of 2011 after the redeeming period from the global crisis, when at the end of 2008, major Asian indexes started to recover and kept on recovered through the time up until the end of 2010 (Guillen, 2011). Therefore, observing the efficiency of Indonesian mutual funds since the time is informative when since the time; Indonesia has encouraged the mutual funds investment (Kadomae, 2012).

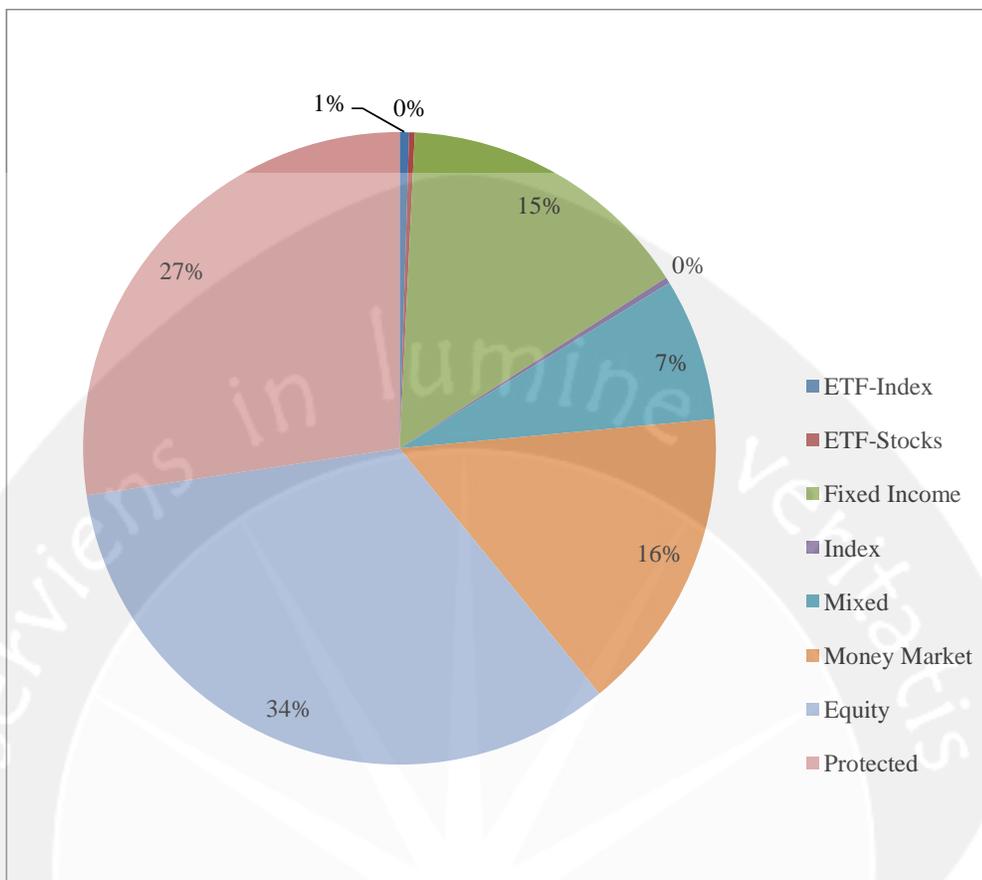


Figure 1.1
Indonesian Conservative Mutual Funds Composition (June 2015)
 (Source: BAPEPAMLK, 2015)

In a comprehension about managed funds (BAPEPAM used the term mixed mutual funds), it has 7% composition of total conservative mutual funds and 23% from total syariah mutual funds (as shown in figure 1.1 and 1.2). Compared to a developed mutual funds industry in the USA, managed funds are the most attractive funds for its low expense ratio, low trading activity, and low front-end loads (Haslem et al., 2008). Even in that country, only index funds are bigger than actively managed funds, where almost 2,000 actively managed funds can have average net asset value of \$393 millions each (Plantier et al., 2013), compared to around combined Rp12.5 trillions (or around only \$900 millions with

Rp13250,00/US\$) of conservative and syariah managed funds. Therefore, being revealed about the performance of Indonesian managed funds is still critical for people to know about since Indonesian huge market size is still penetrable (Kadomae, 2012).

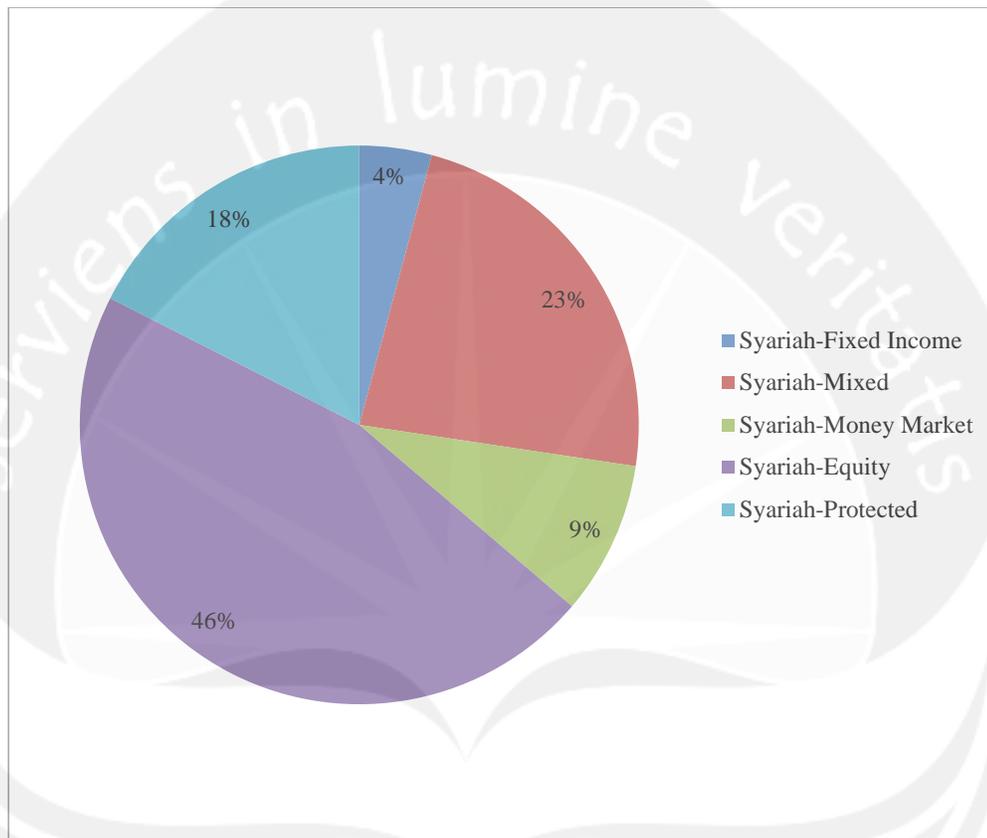


Figure 1.2
Indonesian Syariah Mutual Funds Composition (June 2015)
(Source: BAPEPAMLK, 2015)

Besides basic risk-return statistical description, the Treynor index (Treynor, 1965) that describes excess return in exchange of unit of systematic risk, the Sharpe index (Sharpe, 1966) that values per unit return for exchanged total risk, and the Jensen α (Jensen, 1968), are still used as the very early performance measures. These earliest measurement uses two-dimension valuation of risk and return by relying on the Capital Asset Pricing Model (CAPM). These

measurements might provide a whole description of a portfolio return along with the measured risks. However, main criticism concerning the CAPM model is on the validity of its underlying assumptions (Chen & Lin, 2006), where many more circumstances occur in statistical analysis.

Hence, in performance measurement, we underwent use of more terms and methods. They were those like higher moments [like being used in (Stephens & Proffitt, 1991), (Pendaraki, 2012), and so on], downside deviation (Sortino & Price, 1994), and reward-to-half-variance index (Ang & Chua, 1979). Nonlinearities are also considered to be included in modified β (Ferson & Schadt, 1996) to vary the risk premium, result a use of conditional CAPM framework. Other applied science also influenced to add into multi-index models [like being used in (Schneeweis & Spurgin, 1998), and others] as additional proxies to the fund risk. More discussions also arose concerning the model of skewness in portfolio return distribution and the time-varying risk, as famously described as “fat tails” phenomenon, which is fresh in risk management literatures. The previous discussion concerning the global crisis also showed that fund managers are more aware to extreme losses. Therefore, a model has always been searched to include sophisticated risk-return measures and consider the extreme returns (losses). Unfortunately, in fact, the dominant above models are using regression analysis in basic which assume that all portfolios fulfill exactly equal functional relationship among different measures (where these assumptions are usually unknown and thus need to be estimated) and may riskily create unreliable estimation. Hence, modern risk measures must be able to be adopted (Chen & Lin, 2006). Fatherly, in spite of the need, the multitude of methods is also desired to

include more than one measure of risk in order to more precisely analyze the performance. In this case, we also see the inability of traditional measurements to include transaction costs which are essential to be with mutual funds. Subscription and redemption costs, along with other following costs on behalf of the investors are also critical to be included.

In the last decade, data envelopment analysis (DEA) technique has been frequently used in order to evaluate performance, in a concern to include the various models (Chen & Lin, 2006), especially in a given context of mutual funds (Cooper et al., 2000). Such an approach enables researchers to include many complex factors regarding mutual funds performance evaluation. It means that the DEA model does not only use the calculation of each measure, even more it comprehends the combination of the measures in a context of rewarding certain outcomes, in addition to portfolio returns as always being conducted in financial researches. The DEA model was firstly brought into the stream in a term of DEA portfolio efficiency index that used transaction costs rather than benchmarking in performance evaluation (Murthi et al., 1997). The index of I_{DEA-1} was further developed to combine various risk measures (Basso & Funari, 2001). However, it was also deeply improved by the authors into the most comprehensive index of I_{DEA-g} that is able to use the generalized model of performance evaluation for some certain circumstances by linking the risk-return relationship (Basso & Funari, 2002). In a contextual practice under special circumstances, there are also those that practice mutual funds performance over different lengths of time periods (McMullen & Strong, 1998), multiple time horizons (Morey & Morey, 1999), and others.

In academic and practical contexts, the DEA model is well suited because it uses non-parametric analysis technique and it may have no theoretical framework at all (unlike the estimation models) (Chen & Lin, 2006). Furtherly, the DEA model may create the best set of output created from various resources because of its nature as a fractional linear programming without recourse to a priori weighs (as being practiced in index number approaches) and without having functional statement relationship (as being practiced in regression analysis), by computing a scalar efficiency performance and efficient amount of resources and outputs (Bowlin, 1998). Such linear programming methods are proven long ago to be more powerful than alternative productivity management tool (Sherman & Zhu, 2006). Chen and Lin (2006) also emphasized that using DEA will give the greatest advantage to reveal the reason why a certain fund may be inefficient and shows how to restore it back to the optimum level of efficiency. The input-oriented BCC model solution as used in Chen and Lin (2006) when they evaluate the Chinese managed funds due to the assumption of taking into accounts all inputs which are possible to be reduced while retaining the same level of output, not necessarily to be applied conversedly, while on the other hand, analyzing slacks among variables is additionally important and meaningful (Banker et al., 2004) to objective and sensitivity analysis of DEA model by Chen and Lin (2006).

Obviously, traditional measures are still worthy to be included in the model, such as the standard deviation of fund returns (σ), the root of the lower semi-variance (\sqrt{HV}), or the β coefficient. Even more than those, distribution of many financial return series has already been revealed. They are often asymmetric and skewed, “fat-tailed”, and thus pervasive. Based on these “common” circumstances

in real statistical data (Chen & Lin, 2006), new model is expected to cover the description of the distribution characteristics, as for current actively managed funds, their time-varying risks and asymmetric return distribution with obvious leptokurtotic disease are inevitable to be a challenge for today's performance measurement. Therefore, concerning a need to overcome these situations, Chen and Lin (2006) proposes their new risk measures for this research.

One more additional topic regarding risk measures for the new risk model is a discussion about value-at-risk (VaR) and conditional value-at-risk (CVaR). The value-at-risk measurement was introduced by Morgan (1996) by applying quantile-based measures to suit asymmetric return distributions with skewness and/or fat tails. However, recent research showed that it lacks subadditivity that deemed VaR for being incoherent risk measure (Artzner et al., 1999). It is unable to react to the size of sudden losses below the threshold it identifies. Thus, a capable risk measure was discussed as the conditional value-at-risk by Rockafellar and Uryasev (2000). It may define conditional expectation of losses exceeding VaR in a certain time period with its α . The CVaR is also easy to be computed and deemed as the most promising risk measures (Chen & Lin, 2006).

This new risk measures that includes traditional and existing models along with VaR and CVaR are expected to be conducted in Indonesia managed funds. Therefore, the model will comprise from those variables to certain outcomes of efficient managed funds. The input-output variables are going to be both challenging and informative to comprehend the nature of Indonesian managed funds (as what BAPEPAMLK states as mixed funds), as little known to the people. Hence, efficient funds will be generated from the model as the benchmark

to others and how inefficiency happens in Indonesian managed funds will be revealed on next chapters.

1.2. Problem Statements

Since the background has been comprehensively presented, a complication may arise to be discussed through the research: “How do we assess the attractiveness of Indonesian efficient managed funds? Which funds have performed efficiently after the global economic recovery?”

1.3. Scope of the Research

Limiting discussions on the issues regarding the research about managed funds, some boundaries are assessed on the following points:

- a. Selected Indonesian managed funds that have been active since 2011.
- b. Daily data of NAV (Net Asset Value) of funds are used from 2011.
- c. Mutual funds which are dominated by foreign currency are excluded.
- d. Selected mutual funds are still operating up to this research is written.
- e. Full accessible variables of the new risk measures by Chen and Lin (2006) for this research are inputs (standard deviation, the root of semi lower variance, betha, skewness, kurtosis, VaR, and CVaR) and outputs (Sharpe, Treynor, Jensen Alpha, and return).
- f. In order to execute the statistical measurement, financial spreadsheet in Microsoft Excel and OSDEA-GUI (Open Source Data Envelopment Analysis) is used thoroughly.

- g. Analysis of objective and slacks solutions with proper understanding of all variables from the DEA model are two of main final assessments results to be comprehended.

1.4. Originality of Writing

This research is originally constructed by the author himself. There are no duplicated works outside the citations contained on the paper. All writings, assessment, analysis, figures, conclusions, and recommendations are thoroughly explored and studied by the author.

1.5. Research Objectives

On this paper, research is conducted to assess the attractiveness and efficiency of Indonesian managed funds and to underline outperformed and underperformed Indonesian managed funds after global economic recovery.

1.6. Potential Research Contributions

After being analyzed further, we believe that this paper might be useful to:

- a. Add more investment preferences to especially Indonesian local investors.
- b. Enable both bird's eye view and comprehensive knowledge of Indonesian managed funds condition.
- c. Help the Indonesian increasing middle income people managing their money in order to maximize the national economic development.
- d. Decrease Indonesian people's financial illiterates by providing simpler terms, analysis, and conclusions.

- e. Increase the attractiveness and/or awareness of potential Indonesian mutual funds, especially managed funds.
- f. Be able to educate people to criticize stocks, mutual funds, and many other investments' performance report.
- g. Be able to aware Indonesian financial managers to be more critical in managing people's money.
- h. Increase people's wealth management ability to improve Indonesians' living standard.

1.7. Writing Systematic Order

CHAPTER I INTRODUCTION

Research background, problem statement, scope of the research, research originality, research objectives, and potential research contributions are discussed in the chapter.

CHAPTER II LITERATURE REVIEW

In this chapter, comprehensions extensively consist of theoretical background and previous researches.

CHAPTER III RESEARCH METHODOLOGY

The chapter depicts and explains sampling approach, data and data gathering, variables and variables measurement, and methods of analysis.

CHAPTER IV DATA COLLECTION AND ANALYSIS

This chapter emphasizes on the presentation of researched data, its assessment and analysis, including the report of observation results.

CHAPTER V CONCLUSION AND RECOMMENDATION

Conclusions, implications, limitations, and recommendations are both concisely and comprehensively pointed out in this chapter.

