CHAPTER I

INTRODUCTION

1.1. Research Background

Markowitch Modern Portfolio theory is undeniably the most famous portfolio approach to diversify risks that investors face in investing their money. Implementation of Markowitch Modern Portfolio Theory may be quite dependable to reduce our investments' risks. But, one thing that Markowitch modern portfolio theory lacks is that Markowitch Modern portfolio theory only considers about how to diversify business and financial risk (unsystematic risk) (Hewitt EnnisKnupp, 2012). Markowitch Modern Portfolio theory tends to ignore systematic risks such as inflation rate, recession, exchange rate, interest rate and political risk. Second, Markowitch modern portfolio theory has a basic assumption that inflation will have a linear trend, but in real world, that is not the case.

Although in the past, the Markowitch modern portfolio theory was considered as an effective way to ensure investment well being, but in recent days, when globalization takes place, Markowitch modern portfolio theory does not guarantee a success in investment anymore. This is due to the fact that global economy nowadays is facing a great depression. Economic condition becomes uncertain than ever. Big economy like U.S or E.U that was considered as "too big to be failed" surprisingly failed. These conditions made many investors fear to have a turmoil in their investment in the near future because of the high uncertainty level in investment environment.

One of the biggest risks that threaten the well-being of investment is inflation (Bekaert & Wang, 2010). Based on Ang, Brière, & Signori (2012), inflation erodes money's value and increase the cost of investment that resulted in the decrease of the investment return. Furthermore, majority types of financial assets are more vulnerable to the inflation compared to the real asset (Ruff & Vince, 2011). Several researcher such as Sing & Low (2000), Gunasekarage, Power, & Zhou (2008) have proven the previous notion. They found that in general financial assets more vulnerable against inflation.

Since Fama and Schwert (1977) researched about co variation between inflation and assets return, it has commonly known that return and inflation are negatively correlated. Furthermore, some researcher such as Gunasekarage, Power, & Zhou (2008) and Bruno & Chincarini (2011) also supported Fama and Schwert notion. They found that in general, equity has a poor inflation hedging ability which make it vulnarable to the inflation.

Beside its devastated effect on the individual asset, inflation also greatly affect well diversified portfolio. Research from John Ruff and Vince Childers (2011) about inflation hedging (protected) portfolio found that Modern Portfolio approach could have a big crash if inflation booming (unexpected inflation) happened. This condition created a devastating loss to the investors. According to their research in 2011, in the U.S at the early 1980s, when the 10-year rate of inflation reached 9%, a 60/40 portfolio would have experienced a real return only 3.5% on an annualized basis where the cost of portfolio is 4% a year.

Based on that fact, it can be concluded that Markowitch Modern Portfolio Theory is not enough to ensure the well-being of our investments anymore.

Markowitch Modern Portfolio does not provide proper protection against inflation and new approach in constructing financial portfolio need to be explored. The new approach should provide more protection again risks especially inflation risk.

Several researchers such as John Ruff and Vince Childers (2011), Andrew Ang, Marie Brière, and Ombretta Signori (2012) explored inflation hedging approach in assets and portfolio construction. Ruff and Vince (2011) found that while many different assets could potentially hedge against inflation, their effectiveness vary, as does their reliability and their cost-effectiveness. This notion supported by Ang, Brière, & Signori research (2012) which found majority of equities in S&P 500 had poor inflation hedging ability. Nevertheless, although a non-negligible subset of equities had co varied positively with inflation, some equities had good inflation hedging ability.

Some same root researches such as research by Michael T Bond (2009), Gunasekarage et al research (2008),Tien-Foo Sing et al research (2010), and research by Martin Hoesli, Colini Lizier and Bryan McGregor (2011) found that constructing inflation hedging portfolio based only on equities was not an easy task. Based on the researches, equities in general had poor inflation hedging ability, which make constructing inflation hedging portfolio with only equities was nearly impossible. In contrast with other research findings, Jacob Boudoukh & Matthew Ricardson research (1992) found a positive relation between equities and inflation. This notion was supported by Lothian and Mc Charty (2001) and Spierdijk & Umar (2011) which also found positive relation beween inflation and equity.

Based on what have been explained above, there is an incongruity in the research finding of inflation hedging on equity and equity portfolio. Some of which found that equities in general were poor inflation hedges. In other hand, some of them stated that equities were good inflation hedges. This incongruity suggests that further research in this topic need to be held. Furthermore, previous research about inflation hedging was only concerned about individual asset and equity market as a whole but tends to ignore portfolio as a inflation hedges.

Beside the need of further research, there are two specifics reasons that make this research interesting enough to be conducted in Indonesia. First, since Indonesia achieved its independence, inflation has become one of the major problems in Indonesia. According to the historical record, the highest inflation in Indonesia was 635% (Nugroho, 2013). In the modern era, although as not serious as in the past, inflation still becomes major problem in Indonesia. Based on the BPS data from 2007 until end 2014 as presented in figure 1.1, inflation in Indonesia is quite volatile. This means probability of sudden rise in inflation (inflation boom) in Indonesia also considered as high. Based on the figure 1.1, the highest inflation happened in 2008. It happened because of the Global Crisis effect which made inflation crawled up from 6.59% became 11.06%.

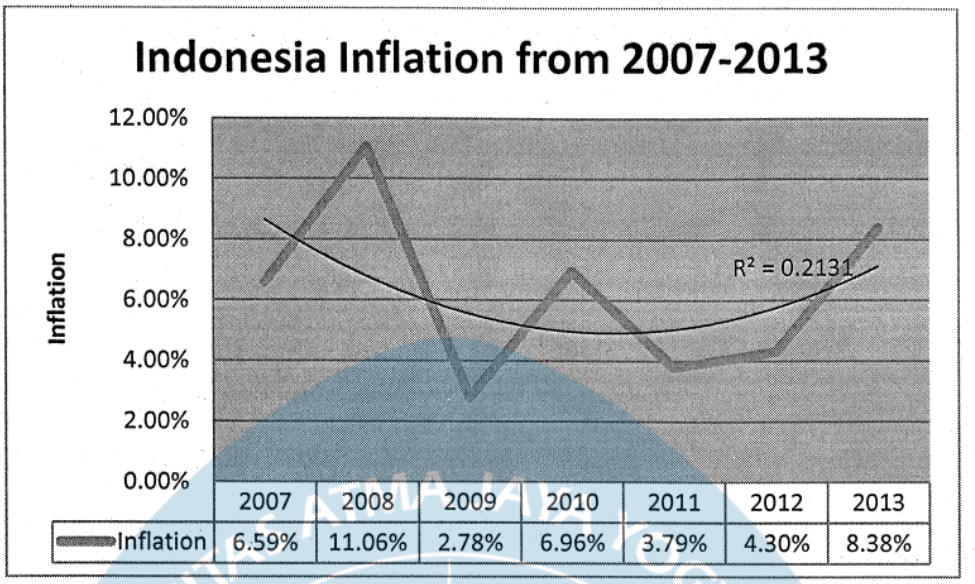

Figure 1.1: Indonesia Historical Inflation Rate 2007-2013

Source: Biro Pusat Statistik (BPS)

In 2009, inflation in Indonesia decreased to 2.78%, this was the lowest inflation in Indonesia economy history (Viva News, 2010). This condition was happened because of the after effect of the 2008 global financial crisis. 2008 global financial crisis made global economy activities slowed down, commodities demand from U.S, and Europe decreased significantly (Yustika in Lavinda, 2011). According to Ahmad Erani Yustika in Lavinda (2011), the decrease of those commodities demand diminished the inflation. However, the low inflation rate in 2009 was only ephemeral.

Inflation escalated to 6.96% in 2010 because the sharp increase of several commodities' price such as rice and pepper (Bambang, 2011). Inflation dropped once again in 2011 until reached 3.79%. The inflation rate in 2011 was smaller than government prediction (Hida, 2012). This was caused by price of food commodities was stable through 2011 and government capability to control core inflation (Investor Daily Indonesia, 2012). Furthermore, global economy at that

time had not recovered yet. Commodities demand from US and EU was still low which decreased inflation in certain country in South East Asia including Indonesia (Yustika in Lavinda, 2011). Started from 2012, inflation started to crawl up. The inflation increased into 4.30% in 2012. The increase of inflation in 2012 is triggered by seasonality factor in several commodities especially in rice (Parlindungan, 2013). 4.08% increase in inflation happened in 2013 which made 2013 inflation became 8.38%. The increase of gasoline price (BBM) was the main cause. Future more, in the future, inflation will likely to increase. This is based on the trend line in figure 1.1. In Figure 1.1, trend line there was slight tendency that inflation rate will increase even more in the future. Although the explanation power of the trend coefficient was meager because of the low R-square value in trend regression.

Second, based on the risk and return perspectives, Indonesia Capital Market is considered as one of the promising capital market in the world. In 2011, Indonesia Capital Market was the second best capital market in Asia-Pacific by achieving positive return when other big capital market such as Hanseng and Nikkei had negative return (Suprapto & Sukirno, 2011). In 2012, Indonesia must have moved down to the fourth position but in spite of that, Indonesia was still in big ten capital market in Asia (Ciputra News, 2012). Thus, there is a possibility that Indonesia equities (stocks) may be can become good inflation hedge to the portfolio. Based on those two reasons, this inflation-hedging topic is interesting enough to be discussed.

2007 until 2013 was chosen as the period of the study. This based on fact that those range of periods inflation movement was very volatile like what have

been stated previously. There was also an indication that inflation will increase in the near future. This is based on the trend of inflation movement presented in figure 1.1. Furthermore financial crisis such as subprime mortgage crisis and European crisis also happened between this period which made economy condition within the period uncertain than ever. All of those facts make 2007-2013 an interesting period to be used as the period of this study.

1.2. Research Problem

1. How well inflation hedging ability of equities (stocks) in Indonesia?
2. How does inclusion of inflation beta in portfolio construction affect risk in the portfolio?
3. How does inclusion of inflation beta in portfolio construction affect performance of a portfolio?
4. Does construction of portfolio with inflation beta approach guarantee protection against future inflation and good portfolio performance?

1.3. Research Scope

In order to keep this research relevant, focus and in line with the research purpose, several limitations were placed. The limitations of this research are presented in below:

1. The research sample was equities (stocks) that continuously listed in LQ45 for at least two years in rows in 2007-2013 period. Author chose 2007-2013 to become period of this study based on facts that volatility of

inflation between that period was quite high. Second, several big event happened between 2007-2013, such as subprime mortgage crisis and European crisis like what have been explained on the research background.

2. The measurement of equity performance in the market was based on the adjusted closing price (monthly) of each company's equity (stock). All data for adjusted closing price for each company used that were used as sample are available in yahoo finance web site.
3. Other data such as inflation rate and SBI rate, and other data that were used in this research are from 2007-2013 periods.

1.4. Research Objectives

The main objective of the research is to explore whether Inflation hedging portfolio can be constructed based on Indonesia equity instruments to reduce inflation risk. In order to test this notion, some objectives were placed; they are:

1. To analyze inflation hedging ability of Indonesia equity instruments using inflation beta approach.
2. To examine effect of inflation beta approach on risk and return of portfolios
3. To investigate effect of inflation beta approach on portfolios' performance.
4. To explore future representativeness of inflation beta approach with the construction of ex- ante portfolio.

1.5 Research Contribution

1.4.1. Contribution for Readers

This research can give a new approach for building financial portfolio by using inflation hedging ability approach. Author hopes that this research will become an insight how financial theories have changed and will keep change and develop in the future.

1.4.2. Contribution for Investors

This research provides a new insight in constructing portfolio. Furthermore, author hopes that this research also may give a big picture of inflation hedging ability of Indonesia financial assets especially equities.

1.4.3. Contribution for Financial Theory & Other Researchers

Author hopes that this research may contribute to the development of investment and portfolio theory. Moreover, author really hopes that this research finding will become a milestone in the development of construction of inflation hedging portfolio

1.5. Originality of Study

This research is a partial replication of research conducted by Andrew Ang, Maria Briere and Ombreta Signori in 2012 entitled "Inflation and Individual Equities" published by Journal of Financial Analyst in 2012 page 36-55. Some

researches related to this topic also used as references to broaden and deepen knowledge about this research topic.

1.6. Research Report Online

CHAPTER I: INTRODUCTION

This chapter provides the introduction about the research that consists of research background, problem statement, scope of the research, objective and benefits of the research, and research report outline.

CHAPTER II: LITERATURE REVIEW

This chapter contains the related theoretical background of the research and several previous researches.

CHAPTER III: RESEARCH METHODOLOGY

This chapter provides information about the sample used in this research, data gathering methods, and analysis tools.

CHAPTER IV: DATA ANALYSIS

This chapter presents the data analysis and explanation about the result obtained in this study.

CHAPTER V: CONCLUSION

The last chapter of this writing addresses conclusion and limitation of the research as well as suggestion for further research.