OPTIMAL PORTFOLIO SELECTION BY USING MULTIPLE INDEX MODEL: THE EVIDENCE OF JAKARTA ISLAMIC INDEX 2013-2015

THESIS

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UNIVERSITY OF MALANG
2017

OPTIMAL PORTFOLIO SELECTION BY USING MULTIPLE INDEX MODEL: THE EVIDENCE OF JAKARTA ISLAMIC INDEX 2013-3015

THESIS

Presented to:
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SURAT PERNYATAAN

Yang bertanda tangan di bawah ini:

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OPTIMAL PORTFOLIO SELECTION BY USING MULTIPLE INDEX MODEL: THE EVIDENCE OF JAKARTA ISLAMIC INDEX 2013-2015

adalah hasil karya saya sendiri, bukan "**duplikasi**" dari karya orang lain.

Selanjutnya apabila di kemudian hari ada "**klaim**" dari pihak lain, bukan menjadi tanggung jawab Dosen Pembimbing dan atau pihak Fakultas Ekonomi, tetapi menjadi tanggung jawab saya sendiri.

Demikian surat pernyataan ini saya buat dengan sebenarnya tanpa paksaan dari siapapun.

Malang, 10 Januari 2016
Hormat saya,

Zainul Zuli Abidin
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PAGE OF OFFERING

بِسْمِ اللَّهِ الرَّحْمَٰنِ الرَّحِيمِ

Adoration and gratitude to Allah SWT.
Abundance of Your mercy and compassion has given me strength,
and equip with knowledge. The grace and ease that You give
finally this simple thesis can be resolved.
Shalawat and salam always drawn to the Prophet Muhammad SAW.

I dedicate this simple paper to the
my beloved and very admired.
Beloved father Suharno and beloved mother Rahayu
and sister Siti Eli Kurniawati and the all of my big family.

As proof of respect and gratitude immeasurable
I dedicate this little work to the father and mother who have given
support, spirit, motivation, patience, sincerity, affection
immeasurable that can not repay.
My father and mother will always be of encouragement, motivation and
pride for me that always pray for me, advised me, supported me, who
Always forgive any mistakes of me.
Thank you.....

MOTTO

بِسْمِ اللَّهِ الرَّحْمَٰنِ الرَّحِيمِ

"An optimistic will see the opportunity in every calamity,
while the pessimistic will see the calamity in every opportunity"
(Prophet Muhammad SAW)

"Better to feel how hard education is at this time
rather than fell the bitterness of stupidity later"

Science wants to put into practice.
When people practice it, then science is still there.
On the contrary, if it is not practiced,
then science will disappear by itself (Sufyan ats-Tsauri)

وَمَنْ جَاهَدَ فَإِنَّمَا يُجَاهِدُ لِنَفْسِهِ إِنَّ اللهَ لَغَنِيٌّ عَنِ العَالَمِينَ

"Barang siapa bersungguh-sungguh. Sesungguhnya kesungguhan itu
adalah untuk dirinya sendiri (Q.S Al-Ankabut 29:6)

" ***Just Do It*** "

THE PREFACE

بِسْمِ اللَّهِ الرَّحْمَٰنِ الرَّحِيمِ

All thanks to Allah SWT, because of His mercy and guidance is this research can be resolved with the title "Optimal Selection by Using Multiple Index Model: The Evidence of Jakarta Islamic Index 2013-2015".

Shalawat and greeting may remain we give to our great Prophet Mohammad SAW who has lead us from darkness to the good way, i.e. Din al-Islam.

The authors recognize that in the formulation of the final task of this thesis will not succeed without the guidance and thought contributions from various parties. On this occasion the author conveys the infinite gratitude to:

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Finally, with all humility the authors recognize that the writing of the theses is still far from the perfect, therefore the author expects the constructive criticism and suggestions for the completeness of this writing. Authors hope this simple work can be useful with good for all parties. Amin ya Robbal 'Alamin...

Malang, 7 January 2017

Author

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ABSTRAK

Abidin, Zainul Zuli. 2016. SKRIPSI. Judul: Pemilihan Portofolio Optimal dengan Menggunakan Model Indeks Ganda: Pada Saham yang Terdaftar di *Jakarta Islamic Index* Periode 2013-2015
Pembimbing : Dr.Basir. S., S.E., M.M
Kata Kunci : Investasi, Portfolio Optimal, Model Indeks Ganda.

Tujuan dari penelitian ini adalah Untuk mengetahui pengaruh variabel *Return on Equity*, *Return on Investment*, Inflasi dan Sertifikat Bank Indonesia terhadap harga saham perusahaan sehingga dapat membentuk portofolio optimal dan Untuk mengetahui saham yang dapat membentuk portofolio optimal berdasarkan model indeks ganda pada saham *Jakarta Islamic Index.*

Jenis penelitian ini adalah penelitian deskriptif kuantitatif yang didasarkan atas survey terhadap objek penelitian dengan pendekatan kuantitaif. Penelitian ini sesuai dengan tujuan penelitian, yaitu untuk melihat pengaruh *Return on Equity*, *Return on Investment*, Inflasi dan Sertifikat Bank Indonesia serta menjelaskan bagaimana membentuk portofolio yang optimal agar dapat meminimalisir resiko investasi pada tingkat *return* tertentu bagi investor. Populasi dalam penelitian ini adalah seluruh saham yang masuk dalam *Jakarta Islamic Index* (JII) mulai periode 2013 sampai 2015. Pada setiap periode yang berjangka 12 bulan terhadap 30 saham perusahaan yang masuk dalam indeks JII.

Berdasarkan analisis data dan pengujian hipotesis yang telah dilakukan dalam penelitian ini, ditemukan bahwa variabel-variabel bebas (ROE, ROI, Inflasi dan SBI) secara simultan atau bersama-sama berpengaruh positif dan signifikan terhadap variabel terikat (Harga saham) dan hipotesis yang menyatakan bahwa ROE, ROI, Inflasi dan SBI berpengaruh secara simultan terhadap harga saham diterima. Berdasarkan hasil penelitian menunjukkan bahwa perhitungan return ekspektasi menggunakan model indeks ganda pada saham JII ternyata menghasilkan 10 saham pembentuk portofolio optimal yaitu ADRO, ASII, ICBP, INDF, ITMG, KLBF, PGAS, TLKM, UNTR, UNVR.

ABSTRACT

Abidin, Zainul Zuli. 2016. THESIS. Title : Optimal Portfolio Selection by Using Multiple Index Model: The Evidence of Jakarta Islamic Index 2013-2015
Advisor : Dr. Basir. S., S.E., M.M
Keyword : Investment, Optimal Portfolio, Multiple Index Model.

The objective in this research are to know the influence of variable Return on Equity, Return on Investment, inflation and Certificates of Bank Indonesia against the company's stock price so that it can establish the optimal portfolio and to find out the stocks that can form optimal portfolio model based on binary index on the Jakarta Islamic Index stocks.

Type of this research is quantitative descriptive research based on survey research with object against a quantitative approach. This research in accordance with the research objectives, i.e., to see the influence of Return on Equity, Return on Investment, Inflation and Certificates of Bank Indonesia as well as explaining how to form the optimal portfolio in order to minimize investment risks on the level of a certain return to investors. The population in this research are all stocks included in the Jakarta Islamic Index (JII) began the period of 2013 and 2015. In each period with a maturity of 12 months against the 30 companies included in the index JII.

Based on data analysis and hypothesis testing that has been done in this research, it was found that the independent variables (ROE, ROI, Inflation and Certificate of Bank Indonesia) simultaneously or together have a positive and significant effect on the stock price as dependent variable and the hypothesis that ROE, ROI, Inflation and CBI simultaneous effect on stock prices is received. Based on the results of the research showed that the expected return calculations using a double index model at stocks of JII turned out to generate 10 stocks forming the optimal portfolio they are ADRO, ASII, ICBP, INDF, ITMG, KLBF, PGAS, TLKM, UNTR, UNVR.

المستخلص

عابدين, زينول زولي. ٢٠١٦. أطروحة. موضوع: اختيار المحفظة المثلى باستخدام مؤشر مزدوجة: الأسهم كانت مدرجة فى مؤشر الإسلامية جاكرتا فترة ٢٠١٣-٢٠١٥

المشرف : الدكتور بصير. س

الكلمات الرئيسية : الإستثمار, المحفظة المثلى, مؤشر مزدوجة

الغرض من هذا البحث هو لمعرفة تأثير متغير العائد على رأس المال, عائد الاستثمار, التضخم و بنك إندونيسيا شهادة ضد سعر سهم الشركة حتى أنه يمكنك تأسيس المحفظة المثلى و معرفة الأرصدة التى يمكن أن تشكل المحفظة المثلى استناداً إلى نموذج القم القياسى فى الأسهم مؤشر الإسلامية جلكرتا.

هذا النوع من البحوث هي البحوث الكمية الصفية استناداً إلى الدراسة الاستقصائية ضد الكائن للبحوث مع النهج الكمى. هذا البحث وفقا لأهداف البحث, لرؤية تأثير عودة على الإنصاف, عائد الاستثمار, التضخم و بنك إندونيسيا شهادة فضلا عن شرح كيفية تشكيل المحفظة المثلى بغية التقليل إلى أدنى حد من مخاطر الاستثمار فى مستويات معنية من العودة للمستثمرين. السكان فى هذا البحث هو جميع الأسهم فى مؤشر الإسلامية جاكرتا بدء الفترة ٢٠١٣ إلى ٢٠١٥.

استناداً إلى تحليل البيانات و اختيار الفرضيات التى أنجزت فى هذا البحث, قد وجدت أن المتغيرات الحرة (قواعد الاشتباك, العائد على الاستثمار, التضخم و بنك إندونيسيا شهادة) تأثير إيجابي و كبير فى نفس الوقت أو معاضد اامتغيرات منضمة (سعر السهم) والفرضية التى تفيد بأن النفوذ قواعد الاشتباك, العائد على الاستثمار, التضخم و بنك إندونيسيا شهادة فى نفس الوقت ضد أسعار الأسهم مقبول. استناداً إلى إظهار نتائج البحوث أن الحسابات تعود التوقعات باستخدام نموذج مؤشر مزدوجة فى الأسهم مؤشر الإسلامية جاكرتا اتضح لإنتاج ١٠ المشتركة للأرصدة المحفوظة المثلى هي *ADRO, ASII, ICBP, INDF, ITMG, KLBF, PGAS, TLKM, UNTR, UNVR*

CHAPTER I
INTRODUCTION

1.1 Backround of Research

A large number of companies that listing on the Indonesia Stock Exchange (IDX), make confusion among investors to determine the right choice, which stock is safe, best and deserves for bought. Therefore IDX tried to help the investors to determine the choices by creating an index known as JII (Jakarta Islamic Index). This index consists of stocks that have large market capitalization and liquidity. The existence of this index are certainly very helpful to investors choose which stocks the right, but not the means don't have to do the analysis again.

Investors faced with several alternatives to securities that few of them can be chosen. What is needed is the ability of financiers to compose the options of each combination of satisfaction at least until the highest satisfaction. Rational investors only interested with the optimal portfolio which has a good stock performance. Although investment in capital markets promising higher rates of return, but we need to remember that the bigger the return, then the level of risk will be even greater. For that reason as a rational investor, the most important thing to note is how the investment can yield optimal return on minimal risk levels, maximize return and minimize risk, an investor can diversify.

Diversification can be realized by means of combining a wide selection of stocks in his investment (forming the optimal portfolio of stocks). Through this portfolio investors can maximize the profits expected from an investment with a particular level of risk or trying to minimize the risk to the target level of certain

profits. All investors certainly have the goal to profit from investment capital into the company. To achieve these goals, the investor should undertake an analysis of the shares will be purchased. The results of the analysis can be used for the establishment of an investment portfolio. Analysis of the stock must be done carefully, especially regarding the level of return and risk. With the analysis, expected to be relied upon in making decisions. The right decision will be able to give you optimal results.

There are two model index that can be used to compute the optimal portfolio are with the single index model and the double index model. Single index model is a simplification of the model Markowitz. Single index model used to calculate the return expectations and risk of a portfolio. Single index model based on the observation that the prices of securities fluctuate in line with an index of market prices, due to the return of an index and the return of the securities market. This model assumes that the rate of return between two or more effects will be correlated i.e. will move together and had the same reaction to one single factor or index entered in the model. A factor or index is the composite stock price index (CSPI).

The analysis used in this research is using a double index model because it is considered more potent in an effort to mengestimasi your expected return, standard deviation and covariance effect accurately than a single index model. Returns the actual effect is not only sensitive to changes, meaning there are CSPI possibility of more than one of the factors that can be influenced. Double index model assume that there are other factors besides CSPI that can affect the onset of correlations between effects, such as interest rate risk-free. The double-Index model

can be divided into two categories, Macroeconomic Based Risk Factor models and Microeconomic Based Risk Factor models (Darmajdi, 2008).

Macro economic models considering the macro risk factor found in nature. Furthermore, the microeconomic based risk factor risk capture by the size of the company, and reflects the difference in the risks associated with growth and value. Free variables used in this study are the risk factors associated with rate of return (return) of securities made up of Return on Equity (ROE), Return on Investment (ROI), inflation, and Certificate of Bank Indonesia (CBI). Before making an investment of an investor must know which source of funding will be financed, to describe how big a profit generating ability of the company available for ordinary shareholders baga with equity capital owned extensive variable ROE (Husnan, 2005:331). While to shows a comparison between the capabilities of obtaining profit from each sale with how far the company is able to create sales assets then the unambiguous ROI (Husnan, 2005:331).

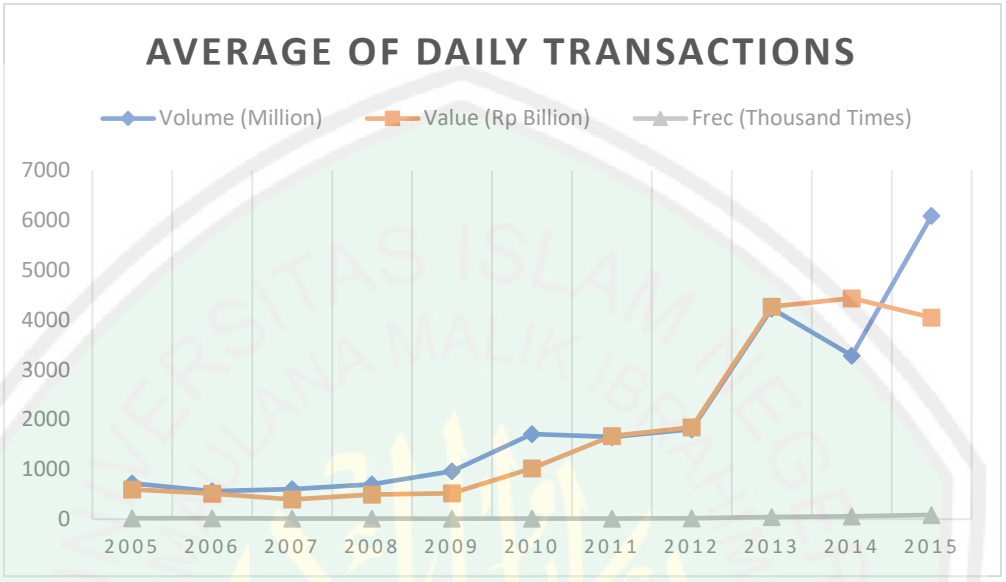
On the real findings indicate that investment managers generally have a bad performance in security analysis and time the market, but they are quite good in maintaining a diversified portfolio that can attract more individuals to want to run the risk of investors to use the unit trust as investment vehicles. The findings indicate that the choice of a benchmark is not a big problem but double index model can be considered to made guidelines model that serve better proxy for valuation of investments assessment especially on security analysis. The capital market is one of the proponents of the economy. Many companies make these institutions as a medium to reach investors in order to strengthen its financial position. The capital

markets have a role as one of the financial investment in the world economy. In addition the capital markets is also a place to bring together parties that the excess funds (lenders) and parties who need funds (borrower's).

Indonesia stock exchange (IDX) is a combination of the stock exchange or stock market, namely the Jakarta Stock Exchange (Jakarta Stock Exchange) and the Surabaya stock exchange (Surabaya Stock Exchange). IDX used to be one of the best exchanges in Southeast Asia in 1996. Capital market growth prospects in Indonesia are so rapidly it turned out to be driven by foreign investor interest in Indonesia capital market. With the stock market, investors can make investments in many investment options, in accordance with the courage to risk where investors will always maximize return combined with a certain risk in any investment decision.

Along his journey, the Stock Exchange is growing from year to year. The graphs below show the development of the Indonesian stock exchange.

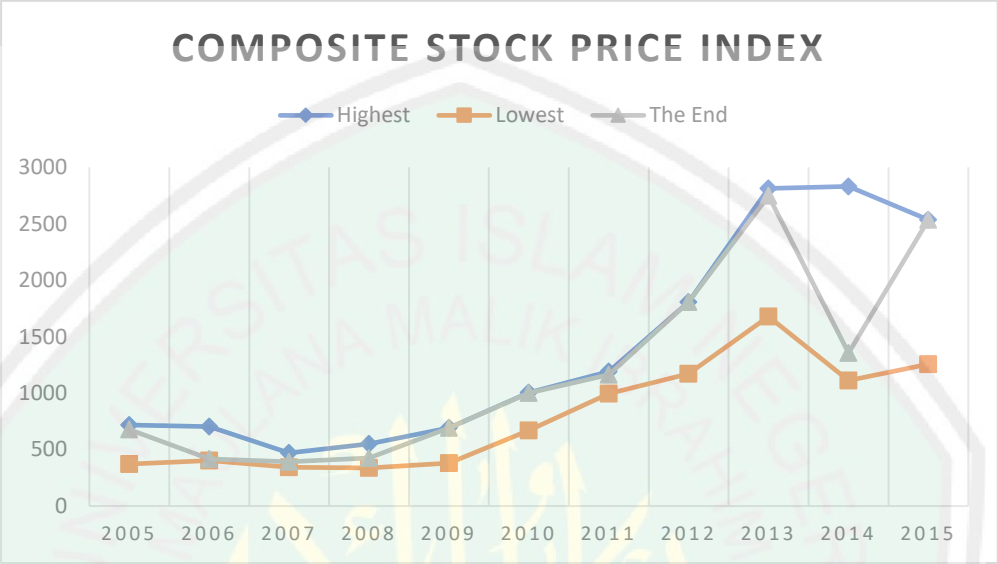
Figure 1.1
Average Daily Transactions Indonesia Stock Exchange
2005-2015



Source: Handbook of Stock Exchanges by 2015

Based on the above figure it can be seen that the average daily transactions in the capital markets that are listed on the Indonesia Stock Exchange has increased significantly in the period of one decade started from 2005 until 2015.

Figure 1.2
Composite Stock Price Index (CSPI) Indonesia Stock Exchange
2005-2015



Source: Handbook of Stock Exchanges by 2015

Based on the above figure it can be seen that the composite stock price index Indonesia stock exchange experienced a significant increase in every year for the past decade started from 2005 to 2015. In the era of the 2000s is the Composite Stock Price Index (CSPI) experience tremendous growth. On January 5, 2014, the CSPI achieve highest level throughout the history of Indonesia capital market that is closed at the level 2,830.263 or increased by 502.65% compared to closure in 2008. In 2013 the CSPI achieve the highest level of return closed on 4,132.777 level rises 45683 points (1.12%) with the transaction amounted of 6.2 trillion.

Figure 1.3
The Number of Indonesia Stock Exchange Issuers
2005-2015

Source: Handbook of Stock Exchanges by 2015

In addition to increased transaction activity and an increased number of JCI, issuers were listed on the Indonesia Stock Exchange also gained any experience increased during 2000 until the end of 2014. issuers listed reached 400 issuers. It is these things that became the background of researchers to take the title "the Optimal Portfolio Selection by Using Multiple Index Model: The Evidence of Jakarta Islamic Index 2013-2015".

1.2 Problem of Research

Based on the description of the background, then the outline of the problem in this research are:

1. is there a variable influence on Return on Equity, Return on Investment, inflation and Certificates of Bank Indonesia against the stock price?

2. What are the Stocks that can form the optimal portfolio model based on binary index on the Jakarta Islamic Index stocks?

1.3 Objectives of Research

The purpose of this research is:

1. To know the influence of variable Return on Equity, Return on Investment, inflation and Certificates of Bank Indonesia against the company's stock price so that it can establish the optimal portfolio?
2. To find out the stocks that can form optimal portfolio model based on binary index on the Jakarta Islamic Index stocks?

1.4 Benefits of Research

The benefits of this research are:

1. For investors

The results of this research are expected to be input and consideration in the formation of optimal portfolio to take investment decisions on stocks Jakarta Islamic Index in the capital markets.

2. For Next Researchers

The results of this research are expected to be used as a research, references, materials development and consideration for the next researcher especially with regard to the optimal portfolio.

1.5 Limitations of Research

Restriction of the problem need to be done with the goal of keeping the subject matter problems examined are not too divergent from that already specified. The researchers in this case limits the problem as follows:

1. Research period is the period 2013 to 2015
2. Stock Jakarta Islamic Index used is the filtering of stocks that are always included in the period 2013 to 2015.
3. Return risk-free assets (RBR) using the Bank Indonesia Certificate (SBI).
4. The variables included in the individual stock consists of the Return on Equity, Return on Investment, inflation and Bank Indonesia Certificate (SBI).

CHAPTER II
LITERATURE REVIEW

2.1 Previous Research Results

The research result of Erik Andayani (2006) entitled "The application of the Double Index Model in determining the priority of the Stock portfolio on Lq-45 Are listed on the Jakarta Stock Exchange (JSX)" that the results of his research is the results of calculation by using double index method produces six stocks that generate a priority portfolio include: TSPC, TINS, RALS, ASII, AALI, and PNBN. Of the six stocks that only one stock that goes up as the optimal portfolio of the stock i.e. TSPC with return of 155939.353 with the level of risk of 150528 and beta by 163.221.

The research result of Lindya Widyasari (2007) entitled "Portfolio Formation Optimal Use Double Index Model (The evidence of Corporate Property and Real Estate on the JSE)", which results i.e the stocks that formed in the share portfolio is optimal shares of the independent variables affect the dependent variable and have the expected return is positive. Based on these criteria the stocks that formed are DUTI, KARK, and SMRA with return of 560.1129721 and portfolio risk of 0.05508927.

The research result of Sri Endah Wahyuni (2007) entitled "Analysis the Application of Single Index Model And Double Index For Establish the Optimal Portfolio (The evidence of Stock LQ-45 listed on the Jakarta Stock Exchange" that the results of her research that shows the difference of portfolio return. The results of calculations using a single index, there are two periods of the research with the

return of portfolio amounted to 0.603372 and risk portfolio 0.00259466. In the following period the portfolio rate of return amounted to 0.483293 and risk portfolio to 0.021444911 while the calculation method using a Double Index yield return each portfolio shares amounted to 273.13033 and risk of a portfolio of all shares LQ-45 that form the portfolio of 189717.8565.

The research result of Endayani dan Nora Amelda Rizal (2012). entitled "The formation of Optimal Portfolio of LQ-45 Stocks using Doule Index Model period of 2007-2011" the results of research from the calculation against 15 members of the Stock sample, the results showed only six stocks that had the value of the excess return to beta is greater than the value of the cut-of-rate (Ci) and a candidate for the portfolio. Optimal portfolio formed by selecting stocks that have excess return to beta (ERBi), ERBi is larger than the Cut of point (C *) = 0.0239485 with base the calculation of the period of February 2007-July 2011, optimal portfolio formed of stock UNTR, PTBA, ASII, INDF, PGAS, and BMRI.

The research result of Mulat Arja'i & Mohammad Farhan Qudratullah (2013). entitled "Analysis the Optimal portfolio of Shariah Stocks Using Doubke Index Model (period: 04 January 2010 – 1 July 2013)" that the results of research i.e. optimum portfolio that formed was formed based on a portfolio of stocks that had the highest positive return value, obtained four (4) stocks, they are UNVR 41,40%, SMGR 40.66%, KLBF 11.01% and LPKR 6,93%. Expected return value of optimum portfolio that formed is of 2.55% with great risks of 0,29%.

The following below are the result of previous research mapping:

NO	RESEARCHER	TITLE	ANALYSIS TOOL	VARIABLE	RESULT
1	Erik Andayani (2006)	The application of the Double Index Model in determining the priority of the Stock portfolio on Lq-45 Are listed on the Jakarta Stock Exchange (JSX)	Double Index Model	EPS, PBV, DER, OPM, ROE	The results of calculation by using double index method produces six stocks that generate a priority portfolio include: TSPC, TINS, RALS, ASII, AALI, and PNBN. Of the six stocks that only one stock that goes up as the optimal portfolio of the stock i.e. TSPC with return of 155939.353 with the level of risk of 150528 and beta by 163.221.
2	Linda Widyasari (2007)	Portfolio Formation Optimal Use Double Index Model (The evidence of Corporate Property and Real Estate on the JSE)	Double Index Model	Inflation, PER, PBV, DER	The stocks that formed in the share portfolio is optimal shares of the independent variables affect the dependent variable and have the expected return is positive. Based on these criteria the stocks that formed are DUTI, KARK, and SMRA with return of 560.1129721 and portfolio risk of 0.05508927.
3	Sri Endah Wahyuni (2007)	Analysis the Application of Single Index Model And Double Index For Establish the Optimal Portfolio (The evidence	Single Index and Double Index Model	EPS, PER, PBV, Certificate of Bank Indonesia	The results of calculations using a single index, there are two periods of the research with the return of portfolio amounted to 0.603372 and risk portfolio 0.00259466. In the following period the portfolio rate of return amounted to 0.483293 and risk

		of Stock LQ-45 listed on the Jakarta Stock Exchange			portfolio to 0.021444911 while the calculation method using a Double Index yield return each portfolio shares amounted to 273.13033 and risk of a portfolio of all shares LQ-45 that form the portfolio of 189717.8565.
4	Endayani & Nora Amelda Rizal (2012)	The formation of Optimal Portfolio of LQ-45 Stocks using Doule Index Model period of 2007-2011	Double Index Model	Inflation, DER, EPS, ROE	The results showed only six stocks that had the value of the excess return to beta is greater than the value of the cut-of-rate (Ci) and a candidate for the portfolio. Optimal portfolio formed by selecting stocks that have excess return to beta (ERBi), ERBi is larger than the Cut of point (C *) = 0.0239485 with base the calculation of the period of February 2007-July 2011, optimal portfolio formed of stock UNTR, PTBA, ASII, INDF, PGAS, and BMRI.
5	Mulat Arja'i & Mohammad Farhan Qudratullah (2013)	Analysis the Optimal portfolio of Shariah Stocks Using Doubke Index Model (period: 04 January 2010 – 1 July 2013)	Double Index Model	Stock Price, ICI, Certificate of Bank Indonesia	optimum portfolio that formed was formed based on a portfolio of stocks that had the highest positive return value, obtained four (4) stocks, they are UNVR 41,40%, SMGR 40.66%, KLBF 11.01% and LPKR 6,93%. Expected return value of optimum portfolio that formed is of 2.55% with great risks of 0,29%.

2.1.1 Similarities and Differences

The equation of this research with previous studies or previous research that has been done is:

1. both examine the optimal portfolio in stocks.
2. both use the same analytical tools i.e. Double Index Model for optimal portofoio stock review.

The difference of this research with previous studies or previous research that has been done is:

1. studies that used to use stock index JII whereas most other research using the LQ-45 index of the stock or the JSX (Jakarta Stock Exchange).
2. The analyzed Period i.e. the period 2013-2015.
3. Using some of the same variables such as Inflation, ROI, ROE, and Certificate of Bank Indonesia.

2.2 Literature Review

2.2.1 Investment

Investment is the use of capital to create some money, either by means og generating income or through that is more oriented to risk, which are designed to obtain the capital gains (Warsono, 2007:1). While according to (Halim, 2005:4) investment is the placement of the amount at this time with the hope to gain an advantage in the future. There are several reasons why someone doing investment, among other things: (1) to get a more decent life in the future, (2) reduce the inflationary pressure, (3) the urge to save on taxes (Tandelilin, 2010:5).

Investment are generally differentiated into two, i.e the first investment on financial assets in the money market in the form of certificates of deposits, commercial paper, other securities market of money and investments made in the stock market, for example in the form of stocks, bonds, warrants, and others. Second, investment in real assets in the form of a productive asset purchases, the establishment of factories, opening mines, plantations and other (Halim, 2005:4).

Investors should be rational in the face of the market share purchase. Investors must have the sharpness of thought the future of the company whose shares will be bought or sold. Investors who do not have the skills to make an investment can be through securities traders (dealers), or the securities intermediary (brokers) for advice in order to make investment (Halim, 2005:2). Investors are basically very much like investments that produce high returns but don't like the existence of a risk because the purpose of the investment is to increase the welfare of investors (Tandelilin, 2010:4). Rate of return and risk requires investment management in order to balance it, so that way it will be a rational investment obtained in a sense with risks every detail to get the highest possible rate of return (Warsono, 2007:3).

According to Tandelilin (2010:5), there are several reasons why someone doing investments, include:

1. To get a more decent life in the future. A wise person will think how to improve his life from time to time or at least trying to maintain the level of income so as not decrease in the future.

2. Reduce the pressure of inflation. By investing in the possession of company or other object, one can prevent themselves from the risk of a decline in the value of the property as a result of inflation.
3. Encouragement to save on taxes. Several countries in the world are doing a lot of policies that encourage the growth of investment in the community through the provision of tax facilities to the people who invest in certain business areas.

Islamic investment not only talk about worldly. Islam combines the dimension of the world and the hereafter. Islam teaches that all human action is vertical (human relationship with God) or horizontal (the relationship of humans with humans) is an investment that will be enjoyed in the world and the hereafter. Because of human action is seen as an investment then the results will be lucky and some are losers. That's called risk. Islam commands his people to achieve success and improve the result of investment. Islam commands his people to leave an unfavorable investment as the oracle of the Prophet (Nafik, 2009: 68-69):

> *"Be the first person, don't become the second, let alone a third. Whoever today better than yesterday so he was lucky. Whoever today same day yesterday then he would losers. And he who today is worse than yesterday so he wretched ". (HR. Thabrani)*

Allah says in Q.S Al-Tawbah verse 105

وَقُلِ اعْمَلُواْ فَسَيَرَى اللّهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ وَسَتُرَدُّونَ إِلَى عَالِمِ الْغَيْبِ وَالشَّهَادَةِ فَيُنَبِّئُكُم بِمَا كُنتُمْ تَعْمَلُونَ

Say, "Work you then Allah and his Messenger and those who are believers will see the work that all of you, and you will be returned to (Allah knows

who will be invisible and real, and then preached unto you what have you used to do."

In interpreting the At-Tawbah verse 105 of this, Quraish Shihab explains in his Tafsir Al-Misbah: "Work you, in order for Allah alone with various deeds of righteousness and useful, both for yourselves and for the general public then Allah will see the judge and give the reward of the good dees you", the interpretation of the notice in the description above is the judge and give rewards against that charities. The term other than the rewards are rewards or wages or compensation.

Allah SWT also teaches guidance to people to achieve prosperity and happiness, because man or people is the manager in the face of the Earth, and God is the owner. As stated in Q. S Al-Jumu'ah verse 10, Allah almighty said:

فَإِذَا قُضِيَتِ الصَّلَاةُ فَانتَشِرُوا فِي الْأَرْضِ وَابْتَغُوا مِن فَضْلِ اللَّهِ وَاذْكُرُوا اللَّهَ كَثِيرًا لَّعَلَّكُمْ تُفْلِحُونَ

"if it had ended the prayer, then scatter you on Earth; and seek the grace of Allah and remember Allah much-a lot that you're lucky "

In interpreting Al-Jumu'ah verse 10 of this, Quraish Shihab explains in his Tafsir Al-Misbah: If you have been doing the prayer, then scatter you for various purposes. Look for the grace of God and dhikr to him a lot, both in the liver and by speech. Hopefully you gain luck of the world and the hereafter.

Islam teaches a balance between individual interests and the interests of the community, either in the present or in the foreseeable future. Islam also instructs his people to pursue secular interests and balancing with the interests of the hereafter. Allah almighty said in Q. S Al-Qashas v. 77 (Nafik, 2009:21):

وَابْتَغِ فِيمَا آتَاكَ اللَّهُ الدَّارَ الْآخِرَةَ وَلَا تَنسَ نَصِيبَكَ مِنَ الدُّنْيَا وَأَحْسِن كَمَا أَحْسَنَ اللَّهُ إِلَيْكَ وَلَا تَبْغِ الْفَسَادَ فِي الْأَرْضِ إِنَّ اللَّهَ لَا يُحِبُّ الْمُفْسِدِينَ

"and look at what has been granted by Allah to thee (happiness) country hereafter and do not forget your happiness (pleasure) of earthly and done well (to others) as Allah has been doing good unto you, and you must not do damage (face) of the Earth. Verily, Allah does not love those who do damage ".

In interpreting Al-Qashas verse 77 of this, Quraish Shihab explains in his Tafsir Al-Misbah: And therefore most of the wealth and the gifts that God gave thee in the way of God and practice for the life hereafter. You shall not prevent yourselves to enjoy something that is lawful in the world. Do well to the servants of God as God to do good unto you with his favor granted. And ye shall not make mischief on Earth, beyond the limits of God. Verily, God does not meridai people who spoil their bad deeds with it. "

The social life of Islamic economy, including investment, cannot be released from the syariah principles. Islamic investment is an investment that is based on the principles of Sharia, both investments in the real sector or the financial sector. Islam teaches investment that benefits all parties and prohibit human invest zero sum game or win loss or speculation. Al-Qur'an forbids humans seeking sustenance with speculation or other way to the detriment of the parties. Islam also prohibits investments that contain elements of riba, gharar, maysir (gambling), sell something that is not owned, and various other transactions to the detriment one of the parties. Islam also proscribe all acts which undermine and harm themselves or others. Islam

requires the activity of an economy that is based on the principle of mutual benefit (Nafik, 2009:23).

Islam looked all human action in daily life, including its economic activity as an investment that will get the results (return). Investment that violate Sharia will get the replies accordingly, as well as the investment in accordance with Sharia (Nafik, 2009:69).

Investment decision process is a process of continuous decision (on going process). The investment process shows how investors should make investments in securities. The decision to take the necessary steps as follows: determining the investment policy, securities analysis, creation of portfolio, perform revisions portfolio, portfolio performance evaluation (Husnan, 2005:48).

Based on the above it can be concluded that the notion of investing in shares is distribution of existing funding sources now by expecting a profit in the future by way of earning money or funds in the purchase of the effects in the form of stock in the hopes of getting additional or certain advantages over funds that invested in these stocks trade on the stock exchange.

2.2.1.1 Form of Investment

As explained above, the investments are distinguished into two (Halim, 2005:4):

1. Real asset i.e. investments made of assets such as real substantial: purchase such as productive, the establishment of factories, opening mines, plantations and other.

2. Financial assets i.e. investments made in financial sectors, such as deposits, stocks, bonds and mutual funds.

Investing in financial assets can be done in two ways, namely direct and indirect (Jogiyanto, 1995:7).

a. direct investment is investment made direct financial assets with the purchase of a company that bought and sold dollars. Financial assets the bias in the form of savings and deposits.
b. indirect Investment is an investment made through the purchase of an investment company in which the investment firm is a company that manages investment funds have assets-financial assets from other companies.

In the management of the portfolio there are two approaches that is passive and active strategies (Tandelilin, 2010:176).

a. Form of investment is active (active investment style), is based on the assumption that the capital markets do mistakes in pricing (mispriced).
b. The form of passive investment (passive investment style), is based on the assumption that the prices of securities in the market already determined exactly in accordance with the intrinsic value or capital market does not make a mistake in pricing.

2.2.1.2 Process of Investment

The investment process shows how should an investor make investment decisions on the effects that can be marketed, and when done. It is required for the following stages (Halim, 2005:4):

a. Determine Investment Goals

There are three things that need to be considered by an investor in this stage, i.e the expected rate of return, the level of risk, and the availability of the amount of funding that will be invested. When sufficient funds available, then the investors want maximum returns with certain risks. Generally the relationship between risks and the expected rate of return is linear, it means that the higher level of risk, then the expected rate of return is higher.

b. Perform Analysis

At this stage the investor doing analysis of an effect or a group of effects. One of the goals of this research is to identify the effects of a wrong price (mispriced), whether the price is too high or too low. For that there are two approaches that can be used, i.e the fundamental approach and technical approach.

1. Fundamental approach. This approach is based on the informations published by the issuer or by the administrator of the stock exchange. Because the performance of the issuers affected by the condition of the industrial sector in which the company is located in the economy as a macro, then for prospect meperkirakan its stock price in the future must be associated with every detail of the fundamental factors which affected it.
2. Technical approach. This approach is based on the data (change) the share price in the past as an attempt to predict future stock prices. This

analysis assumes that fundamental analysis is too complicated and too much base on financial reporting issuers. Therefore, the technical analysis based on the premise that a stock's price depends on supply and demand of the stock it self.

c. Forming a Portfolio

At this stage the identification of the effects of which will be selected and what proportion of the funds will be invested in each of these effects. The effects have been selected in order of formation of a portfolio is the effects have a negative coefficient (has the opposite relationship). This is because it can reduce the risk.

d. Evaluating Portfolio Performance

At this stage is carried out portfolio performance over the evaluation that has been formed, both against the expected rate of return as well as the level of risk. As a benchmark used in two ways: first, the measurement of portfolio performance assessment is on the basis of the asset that have been invested in portfolio, for example using a rate of return. Second, a comparison that is based on the comparison of two asset portfolio with the same level of risk.

e. Revising The Portfolio Performance

This phase is a follow up from the stage of portfolio performance evaluation. From the results of this evaluation further revisions (changes) are performed against the effects of forming the portfolio if it is felt that the composition of the portfolio which already formed not in accordance with

the investment objectives. The revisions may be made in total, that carried out the liquidation of the portfolio over there then formed a new portfolio or done to a limited extent, i.e. changes to the proportion of funds allocated in each of the effects that make up the portfolio.

2.2.2 Theory of Portfolio

The portfolio is defined as a series of combination of some assets invested and owned by financiers, both individuals and institutions, (Jogiyanto, 2013:194). The establishment of the portfolio is the stage of portfolio management. Portfolio management is the process undertaken by the investors to set up his money invested in the form of portfolio.

Markowitz developed a theory in the 1950s called with Markowitz's portfolio theory. Markowitz theory use some basic statistical measurements to develop a portfolio plan, and a correlation beteen return. This theory was formulated the existance of the elements of the return and risk in an investnment, where the element of risk can be minimised through diversification and combine various investment instruments into portfolios.

The theory of Markowitz's approach is based on the mean (average) and variance, where the mean is a measurement of the rate of return and its variance is the measurement the level of risk. This Markowitz's portfolio theory is, also known as mean the variance of the model, which emphasized efforts to maximize return expectations (mean) and minimising their uncertainties or risks (variance) to select and compile the optimal portofoilo. Markowitz developed the index as a model simplification of mean the variant model, which seeks to address issues in the

preparation of the portfolio, that there are so many combinations of risky assets that can be selected and organized into a portfolio. Of the many combinations may be selected, rational investors will surely choose 10 optimal portfolio using the index model, especially needed is determination of the efficient portfolio, because basically all the efficient portfolio is the optimal portfolio (Musdalifah, 2013:24).

On the development of the next one, in 1963 Sharpe developed the Single Index Model which is a simplification of the index of the previous model which has been developed by Markowitz. Single index model describes the relationship between the return of any individual securities market index return. This model provides an alternative method for calculating the variance of a portfolio that is simpler and more easily calculated when compared with count method Markowitz. This alternative approach can be used to complete the basics of the problem in the preparation of the portfolio. As it has been formulated by Markowitz, who determine the efficient set of a portfolio, then in single index models requires fewer calculations (Musdalifah, 2013:30).

Single index model or model assumes that one factor returns between two or more effects will be correlated i.e. will move together and had the same reaction against one factor or single index model, i.e., the composite stock price index (CSPI). However, in an effort to estimated expected return, standard deviation and covariance effect accurately, double index model more potent because it returns of the actual effect is not only sensitive to the stock price composite index, meaning that there is a possibility that there is more than one factor that affected it. Therefore, the double index models assume that there are other factors besides stock price

composite index (CSPI) that can affect the correlations between effects, for example a factor of risk-free interest rate (Halim, 2005:86).

Empirical evidence shows that more and more types of stocks that are collected in the basket of a portfolio, then the risk of a loss of shares that one can be neutralized by gains in other stocks.

2.2.2.1 Return of Portfolio

Return according to Halim (2005:34) is in return from investments. According to Fahmi (2012) return is one of the factors that motivate investors to invest and also give in return for the courage of investors bear the risk on investment done. Return or refund is differentiated into two, namely the returns that have taken place (the actual return) are calculated based on historical data and the expected return (expected return) will accrue to investors in the future (Halim, 2005:34).

The components of the return on investment (Halim, 2005:34) include:

1. Profit/loss of capital (capital gains/loss) is profit (loss) for investors gained from the excess of the selling price (buying price) on top of the purchase price (selling price) both of which occur in the secondary market.
2. The yield (yield) is income or cash flow of funds the investor is admitted in periodic, e.g. in the form of dividends or interest. Yield is expressed as a percentage of capital invested themselves.

The difference between the expected return with the return that really happened is the risk that should always be considered in the process of investment activities. Return as a result of the investment can be either return

the realization as well as the expected return. Realized return is the return that has happened, is calculated based on historical. Return is important because it is used as one measure of a company's performance. While the expected return is the expected return obtained investors in the future. The measurements realized return can be done using the total return, return, return or return cumulative adjusted. Expected return is calculated based on the average of that comes from a distribution return, is a measurement of the average or central tendency of distribution of return.

Return on investment in Islam in accordance with the amount of resources that were sacrificed. The return will be obtained from its investments in the world could more than double. Allah almighty said in Q. S Ali ' Imran, verse 145 (Nafik, 2009:21):

وَمَا كَانَ لِنَفْسٍ أَنْ تَمُوتَ إِلاَّ بِإِذْنِ اللهِ كِتَابًا مُؤَجَّلاً وَمَن يُرِدْ ثَوَابَ الدُّنْيَا نُؤْتِهِ مِنْهَا وَمَن يُرِدْ ثَوَابَ الآخِرَةِ نُؤْتِهِ مِنْهَا وَسَنَجْزِي الشَّاكِرِينَ

> *"something lifeless will not die unless with the permission of Allah, an ordinance that has been determined time, anyone who wants the reward of the world, we shall give him the reward of that world, and anyone who wants the reward of the hereafter, we gave him the reward of the hereafter. And we will give a reply to those who are grateful."*

In interpreting Ali ' imran verse 145 of this, Quraish Shihab explains in his Tafsir Al-Misbah: Someone will not be possible to die except by Allah's permission. Because, it really has been noted by Allah in the book containing all his man. Whoever wish pleasure will be given, and he who hope the reward of the hereafter will be given as well. Allah will give rewards to those who

thanks to the favour and obey all his commands, including the commands of jihad.

2.2.2.2 Risk of Portfolio

Risk is the possibility of the results deviate from expectations. The magnitude of the expected benefits from any securities are not the same, depending on the magnitude of the risk should be borne by the investors. However, the investor can do is minimize risk by considering the magnitude of the influence of each of these factors. (Husnan, 2005:43).

The risk of a portfolio of assets that are in contrast with the risk of the assets in a stand alone. The magnitude of the risk portfolio is determined by the magnitude of the risk of each of the assets that make up the portfolio and covariance or correlation between assets-assets that compose the portfolio-portfolio.

When risk is expressed as how far the results obtained can deviate from the expected results, then used the size of the deployment. Statistical tools are used as a great value, it means the larger deviation (mean higher risk). When associated with preferences of investors against risks, then the risk is differentiated into three, there are (Halim, 2005:42):

1. Investors who like against the risk (risk seeker).

   The investors when faced with two choices of investments that provide a rate of return similar to that of a different risk, then that person will prefer to take the investment with greater risk. The characteristics of this type of investors be aggressive and speculative in taking investment decisions

2. Investors who are neutral towards risk (risk neutrality).

   It is the investors who will ask for the same rate of return increases to any increase in risk. This type of investment is generally quite flexible and being cautious (prudent) in taking investment decisions.

3. An Investor who does not like against the risk (risk averter).

   The investors when faced with two choices of investments that provide a rate of return similar to that of the risks are different, then it would rather take the risk investment with the smaller ones. This type of investor usually tend to always consider in mature and well-planned over investment decisions.

Measuring the risks relevant to the financiers can be expressed in standard deviation of portfolio gains levels (called the total risk), or beta portfolio (called systematic risk). Thus, the context of the portfolio risk differenciated into two:

1) Systematic risk.

   A risk that cannot be eliminated or reduced by means of the incorporation of various risks. These risks are general and apply to all shares in the stock market is concerned. (Halim, 2005:43).

2) Non systematic risk

   A risk can be eliminated with the diversification, because of the risk of this magnitude varies between one stock with shares of the other. Because the distinction that then each stock have different levels of sensitivity to changes

in the market. For example, a factor of capital structure, the structure of assets, liquidity, profitability, and other.

All forms of investment contain elements of uncertainty of results. However, the investor can do is to minimize risk by considering the magnitude of the influence of each of these factors. The risk in investments arising because the uncertainty of the timing and magnitude of return the investor will be accepted. Do not deny the phenomenon, an aberration that results was not included in the category of maysir (gambling) and gharar (fraud). Gharar is the transaction containing the uncertainty for both parties that conduct transactions as a result of implementing the conditions of uncertainly in a contract that naturally supposed to contain the assurance (Nafik, 2009:71).

Gharar, translated as the risk contained in the hadiths which can be used as a reference:

> *The Prophet SAW forbade selling with hasah and sales gharar (Narrated by Muslim).*
>
> *From Abdullah ibn Umar said: the Messenger of ra, s.a. w said: "do not sell the fruits until real results, and do not sell the dates with dried dates" (Narrated by Bukhari).*

2.2.3 Efficient Portfolio

The efficient portfolio is defined as a portfolio that gives the greatest expectations of return with risks that already specific or give the smallest risk with return expectations that are already certain (Jogiyanto, 2013:90). The portfolio is categorized as efficient when it have the same risk level, capable of delivering higher profit level, or is capable of producing the same level of profit, but with

lower risk (Sharpe, Alexander, and Baley, 2005:47). Meanwhile, according to Halim (2005) efficient portfolio is a combination of investments that provides the same value of return with minimal risk level or with the same level of risk will provide the maximum return. Efficient portfolio it is assumed that the investors in making investment decisions to behave as people who avoid risk, from some of the efficient portfolio selection, then investors will choose the most optimal portfolio (Fabozi, 2001:63).

Efficient portfolio can be specified by selecting a certain level of return expectations and then minimised the risks or determine a certain level of risk and then maximise the return expectations. A rational investor will choose it because it is an efficient portfolio formed by optimizing one of two dimensions, i.e return expectations or risk portfolio. Investors can choose a combination of assets to form the portfolio. The entire set that gives the possibility of a portfolio can be formed from a combination of assets that are available is called with the opportunity set or the attainable set. All points on the attainable sets provide all possible good portfolio of efficient or inefficient to choose by investors. However, a rational investor would not choose a portfolio which is not efficient. Collection set of efficient portfolio is called efficient set or the efficient frontier (Jogiyanto, 2013:286).

Theoretically, the existing portfolio in the area of efficient or efficient frontier, will be able to generate the highest returns, though with the same level of risk. The determination of an alternative from the efficient portfolio, where investors can choose one optimal portfolio. In position of the optimal portfolio,

investors will get the highest rate of return from the risks that received, and with the investment will get the highest level of satisfaction (Warsono, 2007:110).

2.2.4 Optimal Portfolio

Optimal portfolio is a portfolio of selected an investor from the many options that exist in the portfolio which efficiently. A selected portfolio of course in accordance with the preferences of the investor in question against the return or the risk of passing on a willing (Tandelilin, 2010:75).

From the above statement, then the optimal portfolio is a portfolio of selected an investor from the many options that exist on the set of efficient portfolio compliance with investor preferences relating to the return and the risk of the portfolio and provide the highest rate of return among existing portfolio with the same level of risk. To establish an efficient portfolio, there are some assumptions that must be considered. That assumption among others (Husnan, 2005:59).

1. Investor Behavior

   That all investors do not like risk (risk owner). Investors are faced with two options, namely investment that offers benefits (return) the same with different risk would choose investments that have a lower risk.

2. The concept of utility function in indifference curves

   The function of utility is defined as a mathematical function that shows the value of all the alternative options that exist. The higher of the value alternative, the higher an alternative utility. While in the portfolio, the utility function is shown by an investor's preferred against a wide range of investment choices from each of the profit and risk.

Optimal portfolio is a portfolio with a combination of risk and return expectations. All optimal portfolio is an efficient portfolio. Investors who prefer the risk would choose portfolio with a high return by paying the risk is also higher compared to less investor love risk (Jogiyanto, 2013:339).

2.2.5 Index Model

The model index or model factor assumes that the rate of return an effect is sensitive to changes in a wide range of factors or index. As the process of calculation the rate of return, a model index attempt to include the major economic force that programmatically move the stock price for all effects. Implicitly, in the construction of model index there is the assumption that the rate of return between two or more effects will be correlated (Halim, 2005:82).

There are two model index that can be used to compute optimal portfolios:

2.2.5.1 Single index model

William Sharpe developed a model that is called with a single index model. This model can be used to simplify the calculation in Markowitz model to provide input parameters needed in the calculation of the Markowitz model. Besides, the single index model can also be used to calculate the return expectations and the risk of a portfolio (jogiyanto, 2013:339).

This model assumes that the rate of return between two or more effects will be correlated i.e. will move together and had the same reaction to one single factor or index entered in the model. A factor or index is the stock price composite index (IHSG) (Halim, 2005:82).

The purpose of the use of single index model is to simplify the calculation of the Markowitz portfolio model. On the Markowits portfolio model required input parameters in the form:

1) The expected profit rate of each stock.
2) Variance of each stock.
3) Covariance between stocks.

Optimal portfolio calculation would be greatly facilitated if it is based only on a number that can determine whether a securities can be incorporated into the optimal portfolio. The figure is the ratio between the excses return with beta. Excses return can be defined as the difference between return expectations with return of risk-free assets. Excess return to beta means a measure of the excess return relative to the risk that a single unit can not be diversified as measured by beta. The ratio of this ERB also shows the relationship between two factors, i.e return and risk. (Jogiyanto, 2013:362).

2.2.5.2 Double index model

Model index or factor model assumes that the return of securities to changes in a wide range of indices. Market model assumes that there is one factor, the return on the market index. However, in an attempt to estimate the expected return, variance and covariance of securities accurately, double index model are more potential for use than the market model. Double index model is more potential for real return securities is not only sensitive to changes in market index. This means that there is a possibility that more than one perpasive factor in the economy that affect return securities (Jogiyanto, 2013: 298).

Double index models was a financial model employs some factor in calculations to explain the phenomenon of market and/or equilibrium asset prices. This model is used to build a portfolio with certain characteristics, such as risk or to track the index. When building a double index, it is too difficult to determine how many of the factors that will be taken as a variable because this model is relatively limited. This model compiled will depend on the type of free variables are selected. The difference of the explanatory variables will cause different results obtained. Thus superiotas and inferiotas models of this index will be strongly influenced by the explanatory variables that exist in the model (Elton, 2011:21).

Double index models more potentially in an effort to mengestimasi your expected return, standard deviation and covariance effect accurately than any single index models. Because the actual refund effect not only sensitive to changes, its means there are stock price composite index (*IHSG*) possibility of more than one of the factors that can be influenced. Multi index models assume that there are other factors besides *IHSG* that can affect the onset of correlations between effects, such as the risk-free interest rate (Halim; 2005:86).

The model is actually a multiple linear regression model, where the effect of rate of return i will be influenced by many independent variables are i.e. F1 to Fn. effects return level *i* can not be explained by the indpendent variables are declared with αi and ei. In this case it is the average of the rate of return that is not influenced by the independent variables in the model. While ei represents a unique rate of return are assumed random and average value 0.

In this research the variables used is ROE, ROI, Certificate of Bank Indonesia and Inlation. This is based on the Halim (2005:87).

a. Return on Equity

This ratio indicates the power to produce a return on investment based on the book value of the shareholders, and are often used to compare two or more companies in a similar industry. High ROE companies often reflect acceptance on good investment opportunities and effective cost management. However, if the company has chosen to implement high debt levels based on industry standards, high ROE is simply the result of excessive financial risk assumption (Harahap, 2007).

$$ROE = \frac{net\ profit}{equity}\ or\ ROE = ROA \times Laverage\ (Total\ Assets)$$

b. Return on Investment

A comparison between the capabilities of the profit from each sale with how far the company is able to create the sale of assets that belonged.

$$ROI = \frac{Net\ Income\ Margin}{Total\ Asset/\ Investment}$$

c. Certificate of Bank Indonesia

Return of risk-free assets (RBR) using Certificates of Bank Indonesia. SBI is a certificate issued by Bank Indonesia as proof of short-term fund deposits (one week to one month).

d. Inflation

Is the tendency of rising prices up in general and continuously. The unit used is (%).

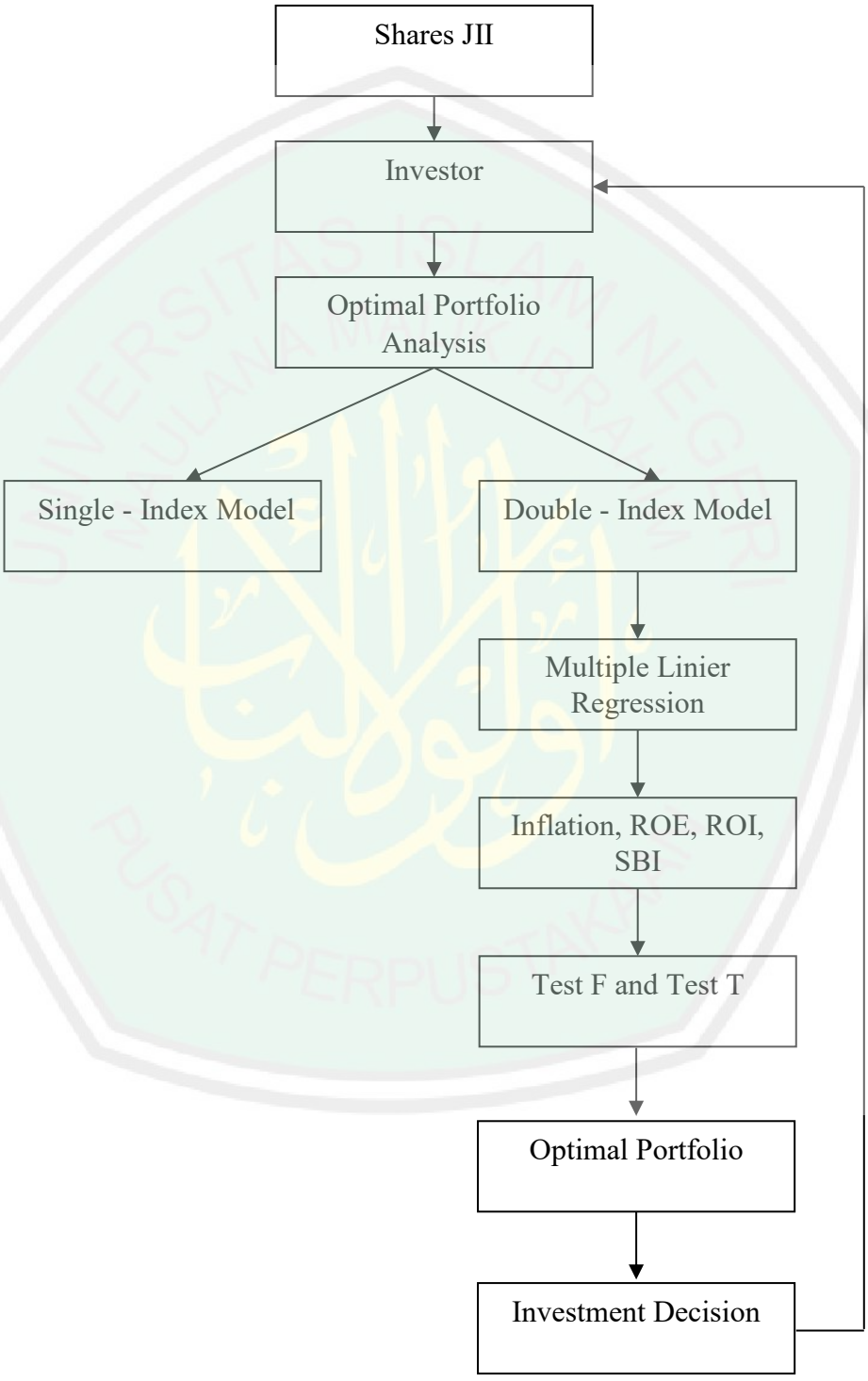
2.2.6 Framework of Mind

Framework of mind is about how the theory relates to the various factors which have been identified as an important issue. A framework of thought will provide an explanation while against the symptoms of the problem research.

In this research reveals how the process, logic or rationalism possibility of optimal shares portfolio in stocks JII. A rational investor in determining investment decisions will certainly choose the optimal portfolio invested in stocks because stocks have a low level of risk with a certain rate of return. To establish a portfolio of optimal stock an investor can use the index model do estimation against expected return, standard deviation, and covariance to accurately the double index model more potent because it sees that there are several factors that can affect your actual returns effects.

The results of the calculations are obtained by using a double index model would produce the optimal portfolio of stocks that can be used later as a consideration of whether the investors will invest in the stock or not.

Figure 2.1
Optimal Portfolio Formation Procedure

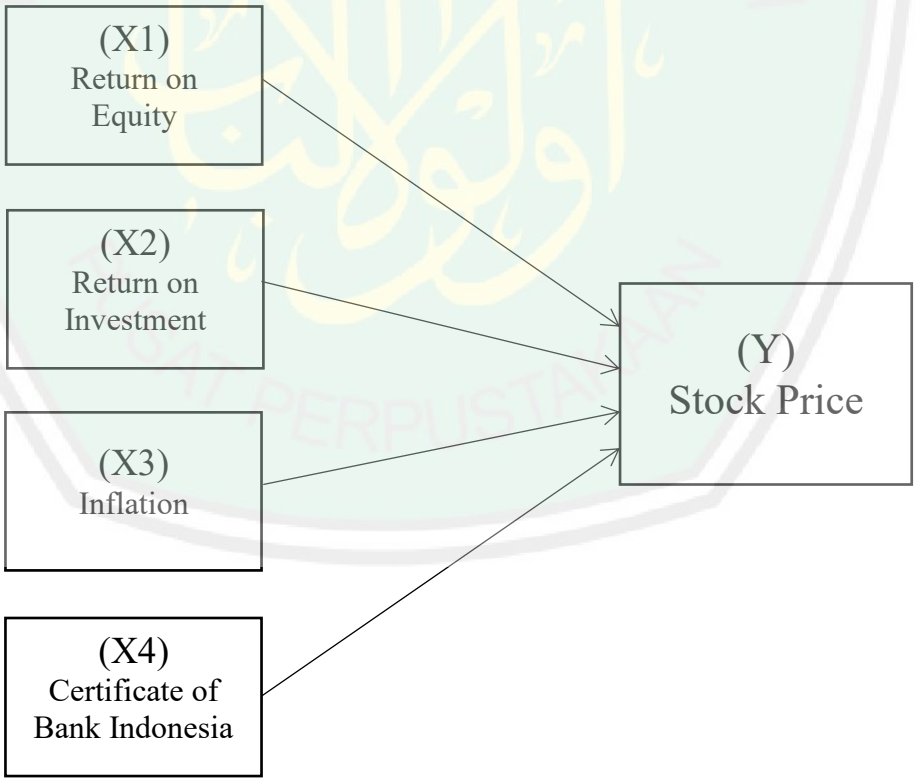


2.2.7 Conceptual Framework

In connection with this research titles, and selection of the optimal portfolio by using a double index model, which in the portfolio selection by using several variable factors used to determine its effect so as to create an optimal portfolio. The dependent variable used the stock price of companies listed in the Jakarta Islamic Index as well as the independent variables i.e Return on Equity, Return on Investment, Inflation, and Certificates of Bank Indonesia.

So that the conceptual framework of this research are as follows:

Figure 2.2
Concept Framework Research



2.2.8 Hypothesis

A rational investor according to Jogiyanto will make investments not only on one type of investment, but to diversify at a variety of investment with the hope to be able to minimize risk and maximize return. A rational investor will consider the size of the economy by buying stocks that are included in the candidate optimal portfolio.

Research conducted by Halim in 2005 with independent variables EPS, ROE, ROI, inflation and Certificate of Bank Indonesia against stock price concluding that free variables are influential significantly to dependent varaible. Similarly, research conducted by Wahyuni (2007) with variable free EPS, PER, PBV, CBI has a significant positive relationship towards the dependent variable is stock price.

Research is also conducted by Widyasari (2007) with independent variables inflation, PER, PBV, DER has a significant positive relationship against dependent variable is stock price. Then other research done by Andayani (2006) with the results of the same independent variable i.e. EPS, PBV, DER, OPM, ROE has a significant positive relations towards the dependent variable i.e. stock price.

As well as research carried out by Arja'i Mulat & Mohammad Farhan Qudratullah (2013) under the title "The Optimal Portfolio of Syariah Stocks Analysis Using Multi Index Models (period: 04 January 2010 – 1 July 2013)" that the results of his research i.e. optimal portfolio formed was formed based on a portfolio of stocks that had the highest positive return value, obtained four stocks, are UNVR 41,40%, SMGR 40.66%,KLBF 11.01%, and LPKR 6,93%. Expected

return value of optimum portfolio that is formed of 2.55% with great risks of 0,29%.

Based on the results of previous research and the relationship between research objectives as well as theoretical thinking framework towards the formulation of research problem, then the hypothesis in this research are:

H1.1 : Up and down of return on equity significantly affect stock prices

H1.2 : Up and down on Investment Retun significantly affect stock prices

H1.3 : Up and down on inflation significantly affect stock prices

H1.4 : Up and down on Certificates of Bank Indonesia significantly affect stock prices

H2 : ADRO, ASII, ICBP, INDF, ITMG, KLBF, PGAS, TLKM, UNTR, and UNVR stocks can form the optimal portfolio based on a double index model on the Jakarta Islamic Index

CHAPTER III
RESEARCH METHODS

3.1 Types of Research

Type of this research is quantitative descriptive research based on survey research with object against a quantitative approach. Quantitative descriptive research is the research which aims to draw up a picture on the phenomenon of a detailed and systematic problems. This research in accordance with the research objectives, i.e. to see the influence of Return on Equity, Return on Investment, inflation and Certificates of Bank Indonesia as well as explaining how to form the optimal portfolio in order to minimize investment risks on the level of a certain return to investors (Sarwono, 2006:28).

3.2 Location of Research

The location of this research is done in the Indonesia Stock Exchange (IDX) in shares traded. Data for the study was taken from the website of www.idx.co.id, www.finance.yahoo.com and Investment Gallery of Maulana Malik Ibrahim State Islamic University of Malang. The reasons for selecting this location due to the scope of the research is in the field of stock portfolio, where data about the object of research can be obtained at the Indonesia Stock Exchange (IDX) easily and quickly.

3.3 Population and Sample

Population is the generalization region consisting of the objects/subjects that have certain qualities and characteristics defined by the researchers to learn and

then drawn conclusions. So the population is not only people but also objects and natural objects in other realsm. The population is not just the number that exist on the object/subject being the research, but it covers all the characteristics/properties owned by the subject or object (Sugiyono, 2014:115).

The population in this research are all stocks included in the Jakarta Islamic Index (JII) began the period of 2013 to 2015. In each period with a maturity of 12 months against the 30 companies included in the index JII. Members of JII each period changes in accordance with the assessment of the Danareksa Investment Management (DIM).

The sample is part of the population to be observed. In this research the sampling criteria is a company whose stocks are registered continuously during the research period in Jakarta Islamic Index.

3.4 Techniques of Sample Collection

The sampling technique is using purposive sampling, that the sampling of a population based on specific criteria in accordance with the research (Jogiyanto, 2013:142). Sampling criteria in this research are:

1. Companies whose shares are listed continuously (consistent) during the research period, i.e. in 2013 and 2015 were included in the JII members.
2. Stocks that have a complete financial ratios period 2013 to 2015.

Samples contained during the research period by 30 with 6 times interviewed every 6 months every year. After selection by the first criterion, a company with shares listed continuously (consistent) during the research period of 2013 to 2015, there were 19 companies.

Table 3.1
Sample Stocks JII with Purposive Sampling

No	Company Code	Company Name
1	AALI	Astra Agro Lestari, Tbk.
2	ADRO	Adaro Energy, Tbk.
3	AKRA	AKR Corporindo, Tbk.
4	ASII	Astra International, Tbk.
5	ASRI	Alam Sutera Realty, Tbk.
6	BSDE	Bumi Serpong Damai, Tbk.
7	CPIN	Charoen Pokhpand, Tbk.
8	ICBP	Indofood CBP Sukses Makmur, tbk.
9	INDF	Indofood Sukses Makmur, Tbk.
10	INTP	Indocement Tunggal Prakarsa, Tbk.
11	ITMG	Indo Tambangraya Megah, Tbk.
12	KLBF	Kalbe Farma, Tbk.
13	LPKR	Lippo Karawaci, Tbk.
14	LSIP	PP London Sumatera Plantation, Tbk.
15	PGAS	Perusahaan Gas Negara (Persero), Tbk.
16	SMGR	Semen Indonesia (Persero), Tbk.
17	TLKM	Telekomunikasi Indonesia (Persero), tbk.
18	UNTR	United Tractors, Tbk.
19	UNVR	Unilever Indonesia, Tbk.

Source: Data is Processed

The corresponding samples based on two criteria, i.e. those companies that have a complete financial ratios during the research period a total of 18 companies, which are listed in the table below:

Table 3.2
Sample Stocks JII with Complete Financial Ratios

No	Company Code	Company Name
1	AALI	Astra Agro Lestari, Tbk.
2	ADRO	Adaro Energy, Tbk.
3	ASII	Astra International, Tbk.
4	ASRI	Alam Sutera Realty, Tbk.
5	BSDE	Bumi Serpong Damai, Tbk.
6	CPIN	Charoen Pokhpand, Tbk.
7	ICBP	Indofood CBP Sukses Makmur, Tbk.
8	INDF	Indofood Sukses Makmur, Tbk.
9	INTP	Indocement Tunggal Prakarsa, Tbk.
10	ITMG	Indo Tambangraya Megah, Tbk.
11	KLBF	Kalbe Farma, Tbk.
12	LPKR	Lippo Karawaci, Tbk.
13	LSIP	PP London Sumatera Plantation, Tbk.
14	PGAS	Perusahaan Gas Negara (Persero), Tbk.
15	SMGR	Semen Indonesia (Persero), Tbk.
16	TLKM	Telekomunikasi Indonesia (Persero), tbk.
17	UNTR	United Tractors, Tbk.
18	UNVR	Unilever Indonesia, Tbk.

Source: Data is Processed

3.5 Data dan Data Source

The data used in this research is secondary data. Secondary data is data that has been collected by researchers without going through the subject first responders. Data taken indirectly from others who have primary data processing. Secondary data sources used in the study came from the Indonesia Stock Exchange (IDX) and the Investment Galleries of Maulana Malik Ibrahim State Islamic University of Malang, the data used in the form of:

1. List of stocks of companies listed on the Stock Exchange and included in the group JII stocks during the period January 2013 to December 2015.

2. JII index value, the value of individual stocks closing stocks included in the JII, and monthly SBI.

3.6 Techniques of Data Collection

Techniques used in data collection technique is documentation, which is seeking data on things or variables such as notes, books, newspapers, magazines, or data relating to the object of research (Arikunto, 2013:19).

Data collection techniques used in this research is the documentation techniques or using documentary method of data collection is done by studying records or documents that already exist. This data is in the form of JII index value, the price of shares included in JII and Certificate of Bank Indonesia (CBI) monthly.

3.7 Operational Definition of Variables

Operational definitions of variables are explanatory sentence about how the operations or activities that must be performed to obtain the data in question. Variables as everything that will be the object of research and the factors that play a role in the events that will be examined by the administration and the symbol size (Indriantoro and Bambang Supomo, 2009:61).

Variables in double index to determine that the variable is significant influence, include:

1. Variable Y (dependent variable)

   The dependent variable in this research is to use monthly stock price.

2. Variables X (independent variable)

   The independent variables in this study are:

a. Return on Equity (ROE) or return on equity ratio (Husnan, 2005: 331). This ratio shows how much the company's ability to generate profits available to common shareholders with equity capital owned. The unit used is (%).

$$ROE = \frac{net\ profit}{equity}\ or\ ROE = ROA \times Laverage\ (Total\ Assets)$$

b. Return on Investment (ROI) or return on investment (Husnan, 2005: 331).

A comparison between the ability to profit from each sale by how much the company is able to make the sale of its assets.

$$ROI = \frac{Net\ Income\ Margin}{Total\ Asset/\ Investment}$$

c. The inflation rate is the tendency of rising prices up in general and continuously. The unit used is (%).

d. Return of risk-free assets (RBR) using Bank Indonesia Certificates (SBI).

3.8 Data Analysis

Data analysis techniques in this research using a double index model. According to Halim (2005: 86), said earlier that the single index model assumes that the return between two effects or more will be correlated, i.e. moving together and have the same reaction to a single factor or a single index that is included in the model, namely Composite Stock Price Index (CSPI). While the double index model assumes that there are factors other than CSPI that may affect the correlation between securities, such as risk-free interest rate. Therefore, in the double index

model calculations through a single index method later in regresikan with the variables that influence the correlation between effect.

The method used to test the hypothesis in this research is using multiple linear regression analysis, using SPSS for windows. Model analysis of the data used in this research is to use numbers, formulas or mathematical models to determine whether there is significant influence and dominant ROE, ROI, inflation, and the Certificate of Bank Indonesia (CBI) on stock prices of companies members of JII forming a portfolio listing in IDX period 2013 to 2015.

To determine the rate of return and portfolio risk, using the stages of analysis as follows (Halim, 2005: 82):

a) Determines the value of Beta (β)

$$\beta = \frac{n(\sum XY) - (\sum X)(\sum Y)}{n(\sum X^2) - (\sum X)^2}$$

b) Determines the value of Alpha (α)

$$Y = \alpha + \beta X$$

$\alpha = Y - \beta X$ → average Y or average X

c) Calculating the level of market return

$$Rm = \frac{JII_t - JII_{t-1}}{JII_{t-1}}$$

Where:

Rm = Return market

JII_t = JII t period

JII_{t-1} = JII t-1 period

d) Calculating risk-free interest rate

$$r = Rf + \beta(Rm - Rf)$$

Where:

r = risk-free interest rate

Rf = Risk free

Rm = return market

β = Systematic risk

e) Calculate rate of return risk

$$R_{br} = \frac{\sum SBI}{N}$$

Where:

R_{br} = rate of return risk

CBI = CBI monthly

N = period

f) Calculate return on investment (ROI)

$$ROI = \frac{Net\ Income\ Margin}{total\ asset/investment}$$

g) Calculate return on equity (ROE)

$$ROE = \frac{Net\ Profit}{Equity}\ or\ ROE = ROA \times Laverage\ (Total\ Assets)$$

h) Calculate the expected return of individual stocks

$$E(Ri) = \alpha_1 + \beta_i 1(F1) + \beta_i 2(F2) + \beta_i 3(F3) + \beta_i 4(F4) + +ei$$

Where:

E(Ri) = ekspected return effect *i*

α_i = ekspected return effect *i* if each factor equal to zero (constant)

$\beta_i 1 \ldots \beta_i 4$ = sensitivity to the effects of factors (regression coefficient)

F1 = return on investment (ROI)

F2 = return on equity (ROE)

F3 = interest rate of deposit (CBI)

F4 = level of inflation

ei = other factors not included in the model

i) Calculate the variance and standard deviation of each stock

1. Variance

$$\sigma_t^2 = \beta_1^2(F1)^2 + \beta_2^2(F2)^2 + \beta_3^2(F3)^2 + \beta_4^2(F4)^2 + \sigma ei^2$$

Where:

σ_t^2 = risk (variance securities) number *i*

$\beta_1^2 \ldots \beta_4^2$ = sensitivity effects i against factor (regression coefficient)

F1 = return on investment (ROI)

F2 = return on equity (ROE)

F3 = certificate of Bank Indonesia (CBI)

F4 = level of inflation

σei^2 = non systematic risk

2. Covariance

$$\sigma_i = \sqrt{\beta_1^2(F1)^2 + \beta_2^2(F2)^2 + \beta_3^2(F3)^2 + \beta_4^2(F4)^2 + \sigma ei^2}$$

Where:

σ_i = standard deviation to securities *i*

$\beta_1^2 \ldots \beta_4^2$ = securities sensitivity *i* againts the factors (regression coefficient)

F1 = return on investment (ROI)

F2 = return on equity (ROE)

F3 = interest rate of deposit (SBI)

F4 = leve of inflation

σei^2 = non systematic risk

j) Calculate optimal portfolio

1) *Excess return to beta ratio*

$$ERBi = \frac{E(Ri) - R_{BR}}{\beta i}$$

Where:

ERBi = excess return to beta ratio securities *i*

E(Ri) = the expected return based on the multi index model for the securities *i*

R_{BR} = return of risk-free asset

Bi = beta of securities *i*

2) Amount cut off point (C*)

$$Ai = \frac{[E(Ri) - R_{BR}]\beta i}{\sigma_{ei}^2}$$

Where:

E(Ri) = the expected return based on the multi index model for the securities *i*

R_{BR} = return on risk-free asset

βi = beta of securities *i*

σ_{ei}^2 = the variance of residual error

$$Bi = \frac{\beta_1^2}{\sigma_{ei}^2}$$

βi = beta of securities *i*

σ_{ei}^2 = the variance of residual error

$$Ci = \frac{\sum_{i=1}^{n} Ai.R_{BR}}{1 + R_{BR}\sum_{i=1}^{n} Bi}$$

3) The Portfolio Rate of Return

$$E(Rp) = \alpha_p + \beta_p 1(F1) + \beta_p 2(F2) + \beta_p 3(F3) + \beta_p 4(F4) + +ei$$

In double index model to determine the optimal portfolio, this model uses a significant level of each variable to prove that the four variables are significant. The regression equation to prove by Sugiyono (2013: 277), i.e.:

$$Y = a + b_1X_1 + b_2X_2 + \ldots\ldots\ldots + b_nX_n$$

The regression equation in this research is:

$$Y = b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

Where:

Y = stock price

X_1 = ROE

X_2 = ROI

X_3 = inflation

X_4 = certificate of Bank Indonesia (CBI)

Analytical techniques used in hypothesis testing, i.e.:

1. To test the hypothesis, then testing techniques performed the analysis as follows:

   a) simultaneous regression test (Test F)

   This test is performed to determine whether all of the independent variables (simultaneously) have a significant influence on the dependent variable.

   The steps for F test or simultaneous test is (Suharyadi and Purwanto, 2011: 225):

   1) Formulation of hypothesis

      $H_0 = B_1 = B_2 = 0$

      $Ha = B_1 \neq B_2 \neq 0$

   2) Determine the area of decision

      Determination of the area decision by finding the F value

   3) Determine the value of F-count

      According to Suharyadi and Purwanto (2011: 226) to determine the value of F calculated then by:

$$F = \frac{R^2/(k-1)}{1 - R^2/(n-k)}$$

      Where:

      R = coefficient of determination

      k = number of independent variables

n = the sample size

4) Determine area decision

Determining H_o dan H_a region and compared with the value of F-count whether to accept H_o or accept H_a

5) Decide on hypothesis

Ho : accepted if $F_{count} < F_{table}$

Ha : accepted if $F_{count} > F_{table}$

b) Partial regression test (t test)

Partial significance test (t test) or an individual is used to test whether the independent variables have affect or not againts the dependent variable.

The steps to the t test or partial test is (Suharyadi and Purwanto, 2011: 228):

1) Formation of hypothesis

$H_0 = B_1 = 0$ $\quad$ Ha = $B_1 \neq 0$

$H_0 = B_2 = 0$ $\quad$ $H_0 = B_2 \neq 0$

2) Determine the critical region

Critical region is determined by the value of the t-table with degrees of freedom n-k, and real level α

3) Determine value of t-count

According to Suharyadi and Purwanto (2011: 229) to determine the value t count by ways of:

$$t - count = \frac{b - B}{Sb}$$

Where:

t-count = the amount of t-count

b = regression coefficient

Sb = standart error

6) Determine area decision

Decission region to accept H_o or accept H_a.

4) Decide on hypothesis

Ho : accepted if $t_{count} < t_{table}$

2. Next to the technique of analysis as follows:

a) Dominant Test

By looking at the independent variables that have a beta value (regression coefficient) greatest merupakam dominant variables affect the dependent variable. The greater the value of the regression coefficient, the greater the influence on Y (the dependent variable).

b) Classical Assumption Test

Multiple linear regression model can be termed as a good model if it meets the assumptions of normality of data and free of classical assumptions. Classic assumption test consists of:

1) Normality Test

Sujianto (2006:44) explains that the normal distribution test is a test to measure whether we have a normal distribution of data so that it can be used in parametric statistics. The objectives of the normality test to determine whether a variable is normal or not. Normal here in the

sense of having a normal distribution of data. Data that have a normal distribution is one of the requirements to do parametric test. For data that does not have the normal distribution of course analysis should use a non-parametric test. Ridwan and Sunarto (2007), data normality test is commonly performed before a statistical method is applied.

To determine whether the normal distribution of data or not can be ascertained from the following points:

a. Nugroho (2008:26), the normality of the data can be seen from the value of skewness and P-P Plots.
b. Sarwono (2006:14), the normal distribution curve is a curve that has symmetry, continuous and bell-shaped.
c. Ridwan (2007:38), the normality of the data can be detected from the ratio of skewness, kurtosis ratio, histogram, Kolmogorov-Smirnov and Shapiro-Wilk.
d. Nugroho (200829), Kolmogorov-Smirnov statistical test is conducted to determine the distribution of a minimum of data to the data type ordinal. While Chi Square for data with nominal scale.

2) Test Multicollinearity

Multicollinearity arise as a result of the causal relationships between two or more independent variables or the fact that two or more explanatory variables together influenced by three variables outside the model. To detect the presence of multicollinearity, if the value of

Variance Inflation Factor (VIF) of not more than 10 then the model is free from multicollinearity.

VIF is an estimate of how much multicollinearity increase in a coefficient variance estimate an explanatory variable. VIF high indicates that multicollinearity has increased a slight variant on the estimated coefficients, consequently lowering the value of t. Several alternatives for their improvement multicollinearity i.e.: (1) let alone; (2) remove excessive variables; (3) multicollinearity variable transformation and (4) increase the sample size.

3) Test Heteroscedasticity

Heteroscedasticity, generally common in models that use cross section data. But that does not mean models using time series data free from heteroscedasticity. As for detecting the presence or absence of heteroskedasticity in a model can be seen from the image pattern Scatterplot models. There is no heteroscedasticity if: (1) dissemination of data points should not patterned; (2) The data points spread above and below or around the 0 number and (3) of the data points do not gather just above or below it.

4) Test Autocorrelation

Autocorrelation is used to test whether a correlation exists between the regression model bully error in period t with an error in period t-1 (previous). A good regression model is a regression that is free from autocorrelation. Guidance regarding this test can be assessed

in the amount of the value of Durbin Watson or D-W (Sarwono, 2006).

The test guidelines are:

1. Number of D-W below -2 means there is positive autocorrelation
2. Number of D-W between -2 and +2 means no autocorrelation
3. Number of D-W above +2 means there is negative autocorrelation.

CHAPTER IV
DISCUSSION

4.1 Overview Object of Research

Jakarta Islamic Index (JII) is a market capitalization of the 30 stocks most liquid and has a large capitalization value that is liquidated indicator. JII using 30 stocks chosen based on liquidity of stock trading and adjusted every six months (beginning of each February and August). Thus the stock contained in the index will always change.

Several criteria for selection to determine an issuer can be included in the calculation of JII are:

a) The first Criteria are:
   1. Are in the TOP 95% of the total annual average value of stock transactions in the regular market.
   2. Are in the TOP 90% of the annual average market capitalization.

b) The second Criteria are:
   1. Is the highest order that represents his sector of the industry classification in the Indonesia stock exchange (IDX) in accordance with the market capitalization value.
   2. Is the highest order based on the frequency of transactions (Tjiptono, 2001).

The index JII only consists of the 30 stocks that has been selected through a variety of selection criteria, so it will be consist of stocks with high liquidity and

market capitalization. Stocks on JII must meet the criteria and pass the main selection as follows:

1) Entered in the ranks of the 60 of the total stock transactions in the regular market (the average value of transactions during the last 12 months).
2) Ranking based on market capitalization (the average market capitalization during the last 12 months)
3) Have been recorded in IDX a minimum of 3 months
4) Financial circumstances of the company and the prospect of growth, the frequency and the number of trading days in the regular market transaction.

The stocks included in the JII is constantly monitored and every six months will be held review (early February, and August). When there are shares has not entered criteria will then be replaced by other stocks that qualify. The selection of JII stocks should be reasonable, therefore BEI have advisory committee consisting of experts in BAPEPAM, University, and professional in the field of capital market (Halim, 2005)

The factors that play a role in the movement of the index JII, i.e.:

1. The Certificate of Bank Indonesia (CBI) interest rate as a benchmark portfolio investment in Indonesia financial markets,
2. The investor against the risk tolerance level, and
3. Index mover stocks that in fact is a large market capitalization stocks in IDX.

The factors that influence on the rise in the index of JII are:

1) Strengthening global and regional exchange following the decline in the price of world crude oil, and
2) The strengthening of rupiah exchange rate that is able to lift the index JII into the positive zone.

The purpose of the index JII is as complementary Composite Stock Price Index (CSPI) and especially to provide objective and reliable means for financial analysis, investment managers, investors and other capital market observers in monitoring the price movements of stocks that are actively traded.

4.2 Exposure Data and Statistical Analysis

4.2.1 Exposure Data

Companies that actively at each listed in the JII during the period of research with a complete financial ratio are:

Table 4.1
Data for Issuers Listed on JII with Complete Financial Ratio

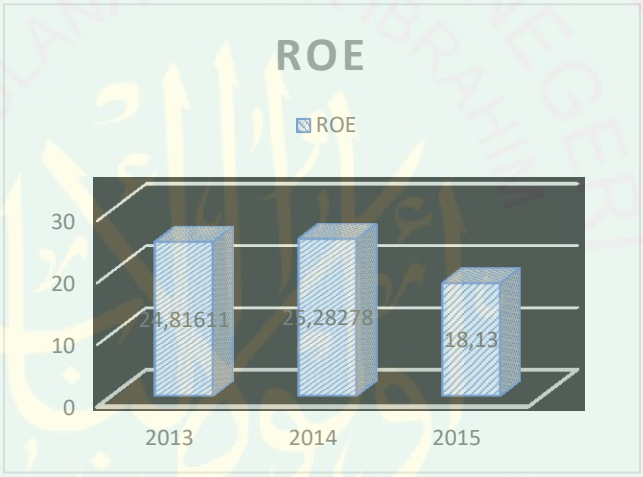
No	Company Code	Company Name
1	AALI	Astra Agro Lestari, Tbk.
2	ADRO	Adaro Energy, Tbk.
3	ASII	Astra International, Tbk.
4	ASRI	Alam Sutra Reality, Tbk.
5	BSDE	Bumi Serpong Damai, Tbk.
6	CPIN	Charoen Pokhpand, Tbk.
7	ICBP	Indofood CBP Sukses Makmur, Tbk.
8	INDF	Indofood Sukses Makmur, Tbk.
9	INTP	Indocement Tunggal Prakarsa, Tbk.
10	ITMG	Indo Tambangraya Megah, Tbk.
11	KLBF	Kalbe Farma, Tbk.
12	LPKR	Lippo Karawaci, Tbk.
13	LSIP	PP London Sumatera Plantation, Tbk.

14	PGAS	Perusahaan Gas Negara (Persero), Tbk.
15	SMGR	Semen Indonesia (Persero), Tbk.
16	TLKM	Telekomunikasi Indonesia (Persero), Tbk.
17	UNTR	United Tractors, Tbk.
18	UNVR	Unilever Indonesia, Tbk.

Source: Data is Processed

4.2.1.1 Return on Equity

Figure 4.1
The Average of ROE (*Return on Equity*)



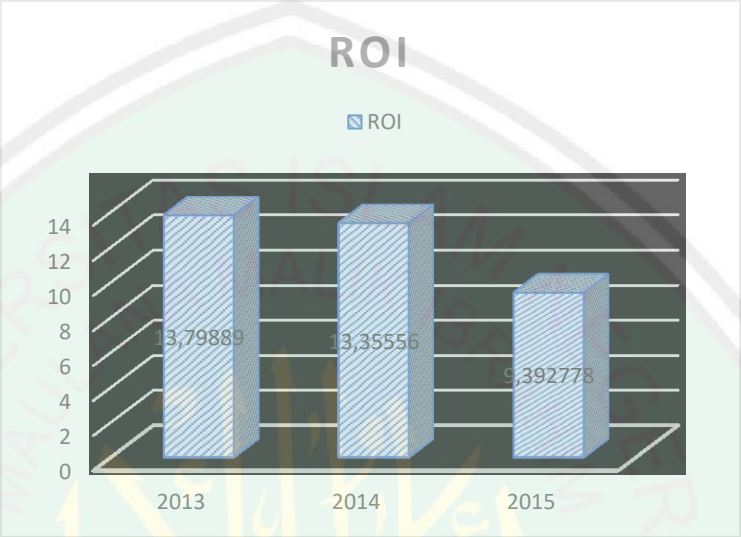
Source: Data is Processed

This ratio indicates the extent of the ability of a company in generate profit which is available for ordinary shareholders with capital equity owned, unit%. This ratio compares between total net profit with the equity that owned by the company. The data was made the research is data starting in 2013 to 2015.

The average Return on Equity (ROE) over the last 3 years has decreased despite a rise slightly in 2014. The highest average ROE was occured in 2014 as indicated by a value of 25.28278, and the lowest average occurred in 2015 is shown with a value of 18.13.

4.2.1.2 Return on Investment

Figure 4.2
The avarage of ROI (*Return on Investment*)



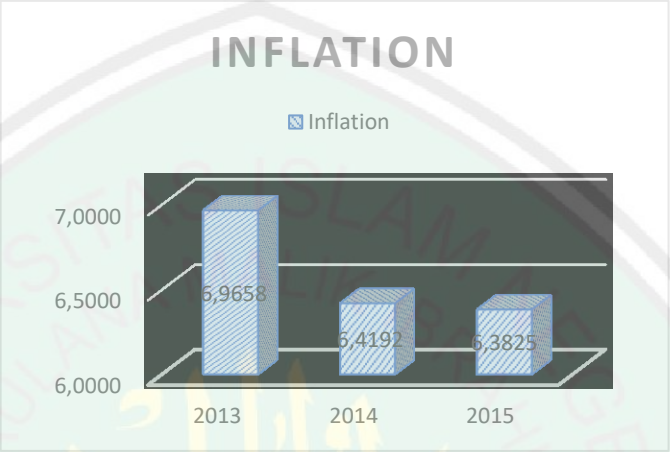
Source: Data is Processed

A comparison between the capabilities of obtaining profit from each sale with how far companies capable of creating sales of assets. The data was made the research data is data starting in 2013 to 2015.

An average Return on Investment (ROI) over the last 3 years has decreased. The highest average ROI was occured in 2013, which is indicated by a value of 13.79889, and the lowest average occurred in 2015, which is indicated by a value of 9.392778.

4.2.1.3 Inflation

Figure 4.3
The Average of Inflation



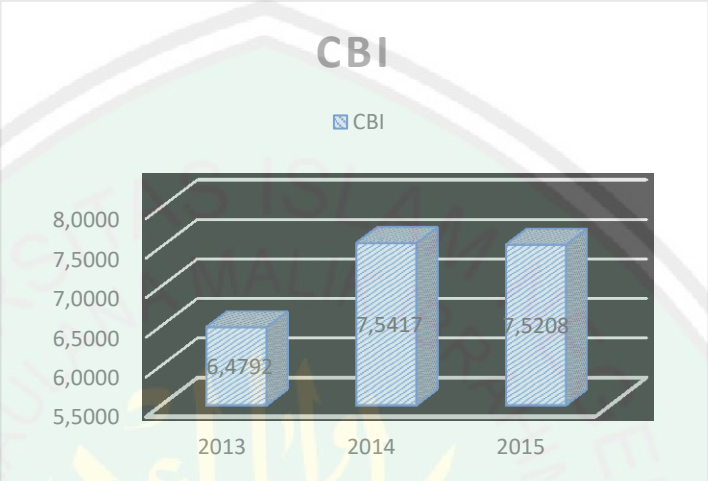
Source: Data is Processed

Inflation is the tendency of rising prices generally rise and constantly. The unit used is (%). The data was made the research is data starting in 2013 to 2015.

An average inflation over the last 3 years has decreased. The highest average inflation was ocurred in 2013, which is indicated by a value of 6.9658 and an average of the lowest inflation occurred in 2015, which is indicated by a value of 6.3825.

4.1.2.4 Certificate of Bank Indonesia (CBI)

Figure 4.4
The Average of CBI



Source: Data is Processed

SBI is securities issued by Bank Indonesia in recognition of the debt short timed. SBI is one mechanism used Bank Indonesia to control the stability of the value of the rupiah. The data was made the research is data starting in 2013 to 2015.

An average SBI over the last 3 years has fluctuated. The highest average occurred in 2014, which is indicated by a value of 7.5417, and the average lowest CBI occurred in 2013 as indicated by a value of 6.4792.

4.2.2 Classical Assumption Test Result

Portfolio formation by using a double index model is done to simplify the calculation. Before determining which stocks are included in the portfolio in advance using simultaneous test. To know the pattern of influence of the independet variables in this research, then composed the multiple linear regression equation. Before performing both analysis of the first development in classic assumption test. Once it's known through significant portfolio of shares forming between variables.

Testing in data analysis aims to find out how big the influence of ROE, ROI, inflation and Certificate of Bank Indonesia (CBI) against stock price so it can be used to determine the optimal portfolio. The data used are ROE, ROI, inflation, CBI and the stock prices of companies that consistently recorded on over a period of research i.e. 2013 to 2015. In this research data analysis performed with the SPSS 21 for windows and Microsoft Excel.

A classical assumption test was conducted to test whether the regression model to meet the classical assumptions or not. A classic assumption test with:

4.2.2.1 Normality

Data normality Test is used to determine whether the data is normally distributed or not. Testing normality of the data using one sample Kolmogorov-Smirnov Z, provided if Asymp Sig. (2-tailed)> 0.05 then the distribution of data is normal. Otherwise, once the Asymp Sig. (2-tailed) <0.05 then the distribution of data is not normal.

Table 4.2
Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		144
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	42.33215995
Most Extreme Differences	Absolute	.112
	Positive	.108
	Negative	-.112
Kolmogorov-Smirnov Z		.551
Asymp. Sig. (2-tailed)		.922

Source: Data is Processed

From the above test results, obtained significance value of 0.922> 0.05, then the normality assumption is met. This indicates that the data distribution is a normal distribution so that it can be used multiple linear regression analysis.

4.2.2.2 Multicolinierity

Multicollinearity test aimed at testing whether the regression model used found the existence of a correlation between variables. To detect the presence of multicollinearity can be done by viewing the VIF. If the VIF < 0.1 or VIF > 10 then multicollinearity, otherwise if 0.1 < 10 then < VIF test results did not happen to multicollinearity.

Table 4.3
Multicollinearity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2540.669	404.131		6.287	.000		
	ROE	-564.658	1263.561	-.169	-.447	.660	.149	6.710
	ROI	-2106.828	3255.289	-.220	-.647	.525	.186	5.388
	Inflasi	-1972.905	864.987	-.402	-2.281	.034	.688	1.454
	SBI	-22290.443	5821.306	-.670	-3.829	.001	.699	1.431

Source: Data is Processed

In the table above it can be seen that the coefficient part, no VIF coefficient exceeding 10. Thus it can be concluded on the regression model did not happen multicollinearity.

4.2.2.3 Heteroscedasticity

Heteroscedasticity test aims to test whether the regression occurred inequality residual variance from one observation to another observation.

Table 4.4
Heteroscedasticity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-53.052	233.127		-.228	.822		
	ROE	-718.813	728.897	-.551	-.986	.336	.149	6.710
	ROI	836.267	1877.845	.223	.445	.661	.186	5.388
	Inflasi	-32.231	498.976	-.017	-.065	.949	.688	1.454
	SBI	1352.075	3358.077	.104	.403	.692	.699	1.431

a. Dependent Variable: abs
Source: Data is Processed

The above table shows that the variables tested did not contain heteroscedasticity. It is shown from the t value of each variable is smaller than t table, because the significant value of each variable over 5%. It means the correlation does not occur between the magnitude of the residual data so that when the data is enlarged will not cause residual (errors) getting bigger, so the multiple linear regression model is qualified to use.

4.2.2.4 Autocorrelation

Autocorrelation is the correlation between a series of observations that are arranged in a series of time and space between the data that one data with other data in one variable. Research carried out by statistical test Durbin Watson.

Table 4.5
Durbin Watson Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.770[a]	.593	.508	46.57550	1.117

a. Predictors: (Constant), SBI, ROI, Inflasi, ROE

b. Dependent Variable: HargaSaham

Source: Data is Processed

According to the table above, it can be concluded does not autocorrelation in the independent variable indicated by du <dw <four-du. Durbin Watson statistical value by 5%. The number of independent variables (k) = 4, and the number of observations (n) 144, the obtained dl = 1,7753 and du = 1,0131 so that the value of Durbin Watson is 1,117.

4.2.3 Regression Testing Individual Stocks

Table 4.6
Assumption Individual Test Result

No	Code	F	P Value F Test	R2	T Test				P Value T Test			
					Inflation	SBI	ROI	ROE	Inflation	SBI	ROI	ROE
1	AALI	3,826	0,012	0,330	-1,595	2,817	-0,326	1,710	0,121	0,008	0,747	0,097
2	ADRO	4,505	0,016	0,487	1,250	1,515	-2,395	1,427	0,243	0,014	0,027	0,170
3	ASII	10,316	0,000	0,571	-0,974	-3,281	3,132	-2,622	0,338	0,003	0,004	0,013
4	ASRI	3,942	0,011	0,337	-1,591	2,865	-0,424	1,811	0,122	0,007	0,674	0,080
5	BSDE	3,478	0,007	0,423	-0,851	1,586	-2,346	0,832	0,327	0,129	0,030	0,416
6	CPIN	3,899	0,011	0,335	1,698	-2,654	-1,389	1,359	0,100	0,012	0,175	0,184
7	ICBP	7,246	0,000	0,483	-2,543	4,367	0,325	0,487	0,016	0,000	0,747	0,630
8	INDF	13,331	0,000	0,632	-5,660	4,382	1,865	-2,008	0,000	0,000	0,072	0,053
9	INTP	5,003	0,003	0,392	2,675	-3,906	-1,552	-1,599	0,012	0,000	0,138	0,120
10	ITMG	8,897	0,000	0,534	-5,598	4,252	-0,371	0,161	0,000	0,000	0,714	0,873
11	KLBF	9,238	0,000	0,544	4,435	-3,391	-1,658	1,788	0,000	0,002	0,107	0,084
12	LPKR	4,588	0,005	0,372	1,702	-2,021	-1,506	1,701	0,099	0,052	-0,142	0,099
13	LSIP	6,009	0,001	0,437	-2,926	0,651	-0,376	0,391	0,006	0,520	0,710	0,699
14	PGAS	7,034	0,000	0,473	-1,021	1,953	-0,779	0,972	0,006	0,066	0,445	0,343
15	SMGR	5,448	0,002	0,413	2,751	-3,342	-1,608	1,692	0,010	0,002	0,118	0,101
16	TLKM	13,449	0,000	0,634	5,406	-4,469	0,958	-0,327	0,000	0,000	0,345	0,746
17	UNTR	8,078	0,000	0,510	-4,552	1,961	-2,107	1,010	0,000	0,059	0,043	0,053
18	UNVR	17,262	0,000	0,690	6,992	-6,550	0,960	0,100	0,000	0,000	0,340	0,921

Source: Appendix

From the regression results in table 4.6 above it can be concluded that partial of each company, UNVR is the highest position with the independent variables are able to explain the stock price as the dependent variable of 69%, the remaining 31% is explained by other variables not examined in this research , While in the lowest position there AALI with independent variables are able to explain the stock price as the dependent variable by 33%, the remaining 67% is explained by other variables not examined in this research.

4.2.3.1 The Coefficient of Determination (R^2)

Coefficient value or R^2 of 0.593, its mean that stock prices can be explained by the ROE, ROI, Inflation and SBI by 59,3% and the balance of 40,7% is explained by other variables not examined in this research. Coefficient values can be seen in the table below:

Table 4.7
Coefficient of Determination

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.770[a]	.593	.508	46.57550	1.117

a. Predictors: (Constant), SBI, ROI, Inflasi, ROE
b. Dependent Variable: HargaSaham
Source: Data is Processed

4.2.3.2 Regression Analysis

Based on the testing that was done it turned out the influence of independent variables (ROE, ROI, Inflation, and SBI) on stock prices can be obtained by multiple linear regression model equation as follows:

$$Y = 9{,}815 + 0{,}058X1 + (-0{,}0121X2) + (-0{,}012X3) + 0{,}0243X4$$

Table 4.8
Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	9.815	.163		60.338	.000		
	ROE	.058	.031	.379	1.830	.077	.516	1.940
	ROI	-.012	.031	-.077	-.383	.705	.545	1.833
	Inflasi	-.121	.092	-.320	-1.323	.195	.378	2.643
	SBI	.243	.113	.495	2.146	.040	.415	2.410

Source: Data is Processed

The constant of 9.815 states that if there is no ROE, ROI, Inflation and SBI, a share price of Rp9.815 regression coefficient of ROE 0.058 stated that if ROE rose by 1%, it will cause the stock price went up by Rp 0.058. coefficient of ROI -0.012 stated that if the ROI rose by 1%, it will cause the stock price went up by Rp (-0.012). coefficient of Inflation -0.121 stated that if inflation rose by 1%, it will cause the stock price went up by Rp (-0.121). So is the coefficient value of Certificate of Bank Indonesia (CBI) 0,243 stated that if CBI rose by 1%, it will cause the stock price went up by Rp 0,243.

4.2.4 Hypothesis Testing

a) ROE, ROI, Inflation dan Certificate of Bank Indonesia (CBI) Significantly Affect The Company's Stock Price Forming The Optimal Portfolio

This test was conducted to prove the influence of independent variables (ROE, ROI, Inflation and CBI) simultaneously or together against the dependent variable (stock price).

Ho : No Influence ROE, ROI, Inflation and CBI on Stock Price

H1 : There is Influence ROE, ROI, Inflation and CBI on Stock Price

a. Comparing F count with F table

Based on the calculation results show that the value of F count (3.942) is greater than F table (2.69), it can be concluded that Ho is rejected. That is variable ROE, ROI, Inflation and CBI together significantly influence stock prices.

b. Comparing the significance of value with the real level

Based on the calculation results show that the value sig. (P value) (0,011) less than sig. (P value) (0.05), it can be concluded that ho rejected. That is variable ROE, ROI, Inflation and SBI together significantly influence stock prices.

b) Significant F Test < 0,001 and R Square > 0,45 Entry Candidate Optimal Portfolio Stock Shares of JII

In the double index model to determine the optimal portfolio using a significance level at each respective securities. Significant each of the securities can be found through multiple regression analysis as described above.

a. The market return (Rm)

Market rate of return is calculated by subtracting the closing price of the stock index JII with the previous day's closing index and the index divided by the closing price the previous day. Measurement of market returns systematically written by the equation:

$$Rm = \frac{JII_t - JII_{t-1}}{JII_{t-1}}$$

Measurement of market returns results from the refund value of 0.148. And the average of 0.004. The return value is quite high, indicates that investments in stocks are included in the JII will provide significant benefits and has a promising investment prospects.

b. Rate of Return Risk (RBR)

The rate of return of risk derived from the SBI or Bank Indonesia Certificates. From the analysis it can be concluded that the risk rate of return earned by 7.181% or 0.07181.

c. Individual Stocks Expected Return (R_i)

Values expected return of individual double index model is calculated using the formula:

$$E(Ri) = \alpha_1 + \beta_i 1(F1) + \beta_i 2(F2) + \beta_i 3(F3) + \beta_i 4(F4) + +ei$$

Calculation of the expected return of each security can be seen in the table below. From the table it can be seen that the return expectations of any securities not always be positive. With the highest return expectations are owned by UNVR or PT. Unilever Indonesia, Tbk amounted to 0.040019. While the lowest expectations eturn owned by ITMG, PT. Indo Tambangraya Megah Tbk with a value of -0.02195.

Table 4.9
Individual Stocks Expected Return

No	Company Code	E(Ri)
1	AALI	0.007892
2	ADRO	0.039526
3	ASII	0.010834
4	ASRI	0.039526
5	BSDE	0.021637
6	CPIN	0.030577
7	ICBP	0.024202
8	INDF	-0.00766
9	INTP	0.014049
10	ITMG	-0.02195
11	KLBF	0.02471
12	LPKR	0.020302
13	LSIP	0.01589
14	PGAS	-0.01275
15	SMGR	0.020268
16	TLKM	0.012177
17	UNTR	0.002667
18	UNVR	0.040019

Source: Appendix

d. Variants and Individual Values Covariance

Variance and covariance using a double index model can be calculated using the formula:

$$\sigma_t^2 = \beta_1^2(F1)^2 + \beta_2^2(F2)^2 + \beta_3^2(F3)^2 + \beta_4^2(F4)^2 + \sigma ei^2$$

$$\sigma_i = \sqrt{\beta_1^2(F1)^2 + \beta_2^2(F2)^2 + \beta_3^2(F3)^2 + \beta_4^2(F4)^2 + \sigma ei^2}$$

The calculation of variance and covariance was used to calculate the risk. It aims to find out how likely we will get a value that deviates from the expected value expressed in variance and covariance. The result of the calculation of variance and covariance of individual stocks can be seen in Table 4.10. From the table it can be concluded that the biggest risk is LSIP

or PT. London Sumatra Indonesia, Tbk amount to 0.045684, while the smallest risk TLKM or owned by PT. Telekomunikasi Indonesia, Tbk with a value of 0.004102.

Table 4.10
Individual Stock Risk

No	Company Name	σi2	σi
1	AALI	0,00849	0,092141
2	ADRO	0,02154	0,146765
3	ASII	0,004305	0,065612
4	ASRI	0,077799	0,278924
5	BSDE	0,05289	0,229978
6	CPIN	0,018508	0,136043
7	ICBP	0,006849	0,082759
8	INDF	0,013945	0,118089
9	INTP	0,00723	0,085031
10	ITMG	0,01175	0,108399
11	KLBF	0,00581	0,076222
12	LPKR	0,015868	0,12597
13	LSIP	0,045684	0,213738
14	PGAS	0,007692	0,087706
15	SMGR	0,00723	0,085029
16	TLKM	0,004102	0,064049
17	UNTR	0,008236	0,090752
18	UNVR	0,005775	0.075996

Source: Appendix

e. Excess return to beta ratio (ERBi)

To determine the value limits of ERBi how high said then required a point to border or cut off point. The first one by calculate the value of ERBi for each of the securities in accordance with the formula:

$$ERBi = \frac{E(Ri) - R_{BR}}{\beta i}$$

Table 4.11
Excess Return to Beta

No	Company Code	ERBi
1	AALI	0,016485
2	ADRO	0,019467
3	ASII	0,031634
4	ASRI	-0,037283
5	BSDE	0,028460
6	CPIN	0,017384
7	ICBP	0,012639
8	INDF	0,017836
9	INTP	0,016357
10	ITMG	-2,037625
11	KLBF	0,027364
12	LPKR	-0,127383
13	LSIP	0,045372
14	PGAS	0,017234
15	SMGR	-0,042618
16	TLKM	-2,037625
17	UNTR	0,026342
18	UNVR	2,836215

Source: Appendix

The calculation result of ERBi can be seen in table 4.11. In the table above can be seen that there are 13 stocks with a positive value and 5 shares worth negative. The highest ERBi value is UNVR or PT. Unilever Indonesia, Tbk with a value of 2.836215. While the lowest value is owned by ITMG or PT. Indo Tambangraya Megah Tbk with a value of -2.037625. Comparison ERBi and Ci can be seen in Table 4.12 below.

Table 4.12
Comparison between ERBi and Ci

No	Company Code	ERBi	Ci
1	AALI	0.016485	0.000063
2	ADRO	0.019467	0.000874
3	ASII	0.031634	0.000026
4	ASRI	-0.037283	0.000073
5	BSDE	0.028460	0.000092
6	CPIN	0.017384	0.000048
7	ICBP	0.012639	0.000062
8	INDF	0.017836	0.000079
9	INTP	0.016357	0.000051
10	ITMG	-2.037625	0.000035
11	KLBF	0.027364	0.000283
12	LPKR	-0.127383	0.000076
13	LSIP	0.045372	0.000371
14	PGAS	0.017234	0.000040
15	SMGR	-0.042618	0.000068
16	TLKM	-2.037625	0.000035
17	UNTR	0.026342	0.000184
18	UNVR	2.836215	0.000046

Source: Appendix

Stocks in category of the optimal portfolio is stocks of the independent variables significantly influence the dependent variable. From this statement refers to research conducted by Widyasari (2007). According Widyasari establishment of optimal portfolio is the stock that the independent variables affect the dependent variable. Stocks in that category are ADRO, ASII, ICBP, INDF, ITMG, KLBF, PGAS, SMGR, UNTR, UNVR.

f. Rate of Return Portfolio E(Rp)

The value of the portfolio rate of return in double index model can be calculated with the following formula:

$$E(Rp) = \alpha_p + \beta_p 1(F1) + \beta_p 2(F2) + \beta_p 3(F3) + \beta_p 4(F4) + +ei$$

Table 4.13
Expected Rturn of Portfolio

No	Company Code	E(Ri)
1	ADRO	0.039526
2	ASII	0.010834
3	ICBP	0.024202
4	INDF	-0.00766
5	ITMG	-0.02195
6	KLBF	0.02471
7	PGAS	-0.01275
8	TLKM	0.012177
9	UNTR	0.002667
10	UNVR	0.040019
∑		0.111775

Source: Appendix

The highest expected return value is owned by UNVR or PT. Unilever Indonesia, Tbk amounted to 0.040019 and the lowest expected return value is owned by ITMG or PT. Indo Tambangraya Megah Tbk with a value of -0.02195.

g. Variance and Covariance Value Portfolio

Variance and covariance value in the portfolio using a double index model can be calculated using the formula described.

Table 4.14
Variance and Covariance of Portfolio

No	Company Code	σi2	σi
1	ADRO	0.02154	0.146765
2	ASII	0.004305	0.065612
3	ICBP	0.006849	0.082759
4	INDF	0.013945	0.118089
5	ITMG	0.01175	0.108399
6	KLBF	0.00581	0.076222
7	PGAS	0.007692	0.087706
8	TLKM	0.004102	0.064049
9	UNTR	0.008236	0.090752
10	UNVR	0.005775	0.075996
∑		0.090004	0.916349

Source: Appendix

The result of the calculation of variance and covariance portfolio of stocks included in the optimal portfolio from table 4.14 above can be seen that the stock that have the greatest variance is INDF or PT. Indofood Sukses Makmur, Tbk with a value of 0.013945 and covariance of 0.118089, while the lowest value is owned by TLKM or PT. Telekomunikasi Indonesia, Tbk with a value of 0.004102 and covariance of 0.064049.

h. Market Risk (Beta)

Table 4.15
Beta of Portfolio

No	Company Code	∑RM	∑Rp	B
1	ADRO	0.006	0.011	0.6
2	ASII	0.006	0.038	
3	ICBP	0.006	-0.002	
4	INDF	0.006	0.025	
5	ITMG	0.006	-0.008	
6	KLBF	0.006	0.025	
7	PGAS	0.006	-0.013	
8	SMGR	0.006	0.012	
9	UNTR	0.006	0.002	
10	UNVR	0.006	0.018	

Source: Appendix

The result of the calculation of beta portfolio included in the portfolio of stocks with results that can indicate market risk on table 4.15 above can be seen that the portfolio beta of 0.6 means that the market risk of the portfolio owned by 6%.

4.3 Discussion of Research

a. The influence of ROE, ROI, Inflation and Certificate of Bank Indonesia (CBI) againts the company stock price so that it can establish the optimal portfolio

Based on data analysis and hypothesis testing that has been done in this research, it was found that the independent variables (ROE, ROI, Inflation and CBI) simultaneously or together have a positive and significant effect on the dependent variable (stock price) and the hypothesis that ROE, ROI, Inflation and SBI simultaneous effect on stock prices is received.

Based on the tests performed, to obtain a figure that ROE, ROI, Inflation and Certificate of Bak Indonesia have a positive relation againts the stock price. These results are consistent with research conducted by Halim in the book Investment Analysis written by Halim in 2005, which in the study stated that the EPS ROE, ROI, Inflation and CBI proven positive effect on the stock price to show the influence of R Square of 0.824, which means growth rates can be explained by the independent variable at 82.4%, while the rest is explained by other factors not examined in the research.

Based on the results of research, R Square generated at 0.593. This explains the significant influence of ROE, ROI, Inflation and CBI by 59,3% and the remaining 40,7% is explained by other varibael not examined in this research.

In this research, ROE and ROI is how the effectiveness of the company to manage the assets, equity and investments in order to obtain maximum profit rate, while inflation and CBI is a policy that has been set by Bank of Indonesia.

b. Forming The Optimal Portfolio Based on a double Index Model at stocks of Jakarta Islamic Index

Based on the results of the research showed that the expected return calculations using a double index model at stocks of JII turned out to generate 10 stocks forming the optimal portfolio ADRO, ASII, ICBP, INDF, ITMG, KLBF, PGAS, TLKM, UNTR, UNVR. The Selection of stocks in the category of optimal portfolio are stocks that have a significant level of independent variables on the dependent variable and stocks that have the R Square above 0.45 based on results of multiple linear regression. Stocks that included in the optimal portfolio then calculated return expectations and risk stock. Then the stocks combined, from a combination of the portfolio that consists of 10 stocks knowable return and risk level of the portfolio.

Table 4.16
Stocks Calculation Result

No	Code	F	P Value F Test	R^2	ERBi	E(Ri)	Ci	σi2	σi
1	AALI	3,826	0,012	0,330	0,016485	0.007892	0.000063	0,00849	0,092141
2	ADRO	4,505	0,016	0,487	0,019467	0.039526	0.000874	0,02154	0,146765
3	ASII	10,316	0,000	0,571	0,031634	0.010834	0.000026	0,004305	0,065612
4	ASRI	3,942	0,011	0,337	-0,037283	0.039526	0.000073	0,077799	0,278924
5	BSDE	3,478	0,007	0,423	0,02846	0.021637	0.000092	0,05289	0,229978
6	CPIN	3,899	0,011	0,335	0,017384	0.030577	0.000048	0,018508	0,136043
7	ICBP	7,246	0,000	0,483	0,012639	0.024202	0.000062	0,006849	0,082759
8	INDF	13,331	0,000	0,632	0,017836	-0.00766	0.000079	0,013945	0,118089
9	INTP	5,003	0,003	0,392	0,016357	0.014049	0.000051	0,00723	0,085031
10	ITMG	8,897	0,000	0,534	-2,037625	-0.02195	0.000035	0,01175	0,108399
11	KLBF	9,238	0,000	0,544	0,027364	0.02471	0.000283	0,00581	0,076222
12	LPKR	4,588	0,005	0,372	-0,127383	0.020302	0.000076	0,015868	0,12597
13	LSIP	6,009	0,001	0,437	0,045372	0.01589	0.000371	0,045684	0,213738
14	PGAS	7,034	0,000	0,473	0,017234	-0.01275	0.000040	0,007692	0,087706
15	SMGR	5,448	0,002	0,413	-0,042618	0.020268	0.000068	0,00723	0,085029
16	TLKM	13,449	0,000	0,634	-2,037625	0.012177	0.000035	0,004102	0,064049
17	UNTR	8,078	0,000	0,510	0,026342	0.002667	0.000184	0,008236	0,090752
18	UNVR	17,262	0,000	0,690	2,836215	0.040019	0.000046	0,005775	0.075996

Source: Appendix

From the above table it can be seen ERBi comparison with Ci and R Square with a significant of F test level. In a research of Widyasari (2007) says that the stocks forming the optimal portfolio are stocks that the independent variables have a significant effect on the dependent variable. That research supports this research in taking a stock in the formation of the portfolio using the influence of significant levels with the dependent variable is stock price. Comparison ERBi and Ci is shown for comparison when using a single index model that is not measured in that research.

Table 4.17
Calculation of Portfolio

No	Company Code	P Value F Test	R Square	ERBi	Ci	E(Rp)	σi2	σi
1	ADRO	0.000	0.607	34.532	166639.28	0.010834	0.008339	0.09131813
2	ASII	0.000	0.547	-9.472	-1558384.60	0.012684	0.05964	0.24413111
3	ICBP	0.000	0.544	15.706	2409777.13	0.015374	0.013945	0.11808895
4	INDF	0.000	0.599	-6.874	-301465.02	-0.017484	0.004305	0.0656125
5	ITMG	0.000	0.508	23.753	3989439.12	0.037389	0.08529	0.29204452
6	KLBF	0.000	0.536	25.410	2276995.56	-0.037485	0.01175	0.10839742
7	PGAS	0.000	0.529	25.103	1275982.39	0.026179	0.00489	0.06992853
8	SMGR	0.000	0.622	-24.972	-309218.00	0.002736	0.015868	0.12596825
9	UNTR	0.000	0.619	-29.383	-951718.11	-0.026475	0.006849	0.08275869
10	UNVR	0.000	0.723	-31.712	-2955557.27	0.026482	0.007692	0.08770405
						0.098384	0.230866	1.44075141

Source: Attachment

Table 4.17 shows the calculation results of the portfolio after the screening of stocks included in the index of JII. From these calculations there are 10 stocks forming the portfolio with portfolio returns can be known of 0.098384 or 9.84% and the level of risk that belongs to portofolio of 0.230866, or 23.1%. These results were obtained after the testing of the sample using a double index model with the formula contained in chapter III (data analysis). From these results show that the greater level of profit achieved, then the greater level of risk that will be faced by investors.

The results of this research illustrate that by using a double index model can produce the stocks that have profit or positive rate of return. The results also support previous research by Andayani which stated that the optimal portfolio by using a double index model can be used as one of analysis tools of decision to invest in the stock exchange.

In the view of Islam, human action is seen as an investment then the results will be lucky and some are losers. Islam commands his people to achieve success and improve the result of investment. Islam commands his people to leave an unfavorable investment as the oracle of the Prophet (Nafik, 2009:68-69):

> *"Be the first person, don't become the second, let alone a third. Whoever today better than yesterday so he was lucky. Whoever today same day yesterday then he would losers. And he who today is worse than yesterday so he wretched ". (HR. Thabrani)*

Allah says in Q.S Al-Tawbah verse 105

وَقُلِ اعْمَلُواْ فَسَيَرَى اللّهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ وَسَتُرَدُّونَ إِلَى عَالِمِ الْغَيْبِ وَالشَّهَادَةِ فَيُنَبِّئُكُم بِمَا كُنتُمْ تَعْمَلُونَ

> *Say, "Work you then Allah and his Messenger and those who are believers will see the work that all of you, and you will be returned to (Allah knows who will be invisible and real, and then preached unto you what have you used to do."*

Islam teaches a balance between individual interests and the interests of the community, either in the present or in the foreseeable future. Islam also instructs his people to pursue secular interests and balancing with the interests of the hereafter.

The social life of Islamic economy, including investment, cannot be released from the syariah principles. Islamic investment is an investment that is based on the principles of Sharia, both investments in the real sector or the financial sector. Islam teaches investment that benefits all parties and prohibit human invest zero sum game or win loss or speculation. Al-Qur'an forbids humans seeking sustenance with speculation or other way to the detriment of the parties.

The results of this research can serve as a reference point in considering an investment decision against stocks from various alternative investment offered when an investor wants his wealth invested.

CHAPTER V
CONCLUSIONS AND RECOMMMENDATIONS

5.1 Conclusions

1. Establishment of a portfolio using a double index, the first step to determine the effect of independent variables on the dependent variable of ROE, ROI, inflation, and Certificate of Bank Indonesia (CBI) on stock prices using multiple linear regression has a positive influence amounted to 0,593. This suggests that the independent variables are able to explain the dependent variable is the stock price of 59,3%, while the remaining 40,7% is explained by other variables not examined in this research.
2. From the results of research using multiple linear regression can be used as selectors in the process of formation an optimal portfolio. By looking at significant F test level of each the companies sampled in this research. The level of significance below 0.001, entered in the portfolio. Besides looking at the R Square above 0.45, entered in the portfolio. Of the 18 issuers that become a sample portfolio there are 10 companies formed a portfolio based on the results of testing using multiple linear regression using SPSS 21 for Windows and Microsoft Excel, of 10 issuers are ADRO, ASII, ICBP, INDF, ITMG, KLBF, PGAS, TLKM, UNTR, and UNVR. The return on a portfolio of 0.098384 or 9.84% and the level of risk of the portfolio of 0.230866 or 23.1% with a beta of 0.6 or 6%. From this test it can be concluded that the greater rate of return then the greater risk that it will be received.

5.2 Recommendations

5.2.1 For The Next Researcher

1) Stock price data, index in JII (Jakarta Islamic Index), interest rates and inflation used is the monthly price. So less reflect the situation on the day of observation. The next researchers preferably using daily stock price thus enabling to deliver results much better.
2) Expansion the use of the sample with respect to the industry sector in order to know the influence of the industrial sector toward research result.
3) The variables used in this research was limited to the four variables, so need for additional variables and variations of these variables in order to research performed better.
4) The research observation period short enough for only three years, from the year 2013 to 2015. Therefore it is necessary to extend the time of observation that research results more accurate.

5.2.2 For Companies

1) for companies which stocks have not been eligible to enter in the optimal portfolio, can improve the business peformance, so that the performance of the stocks are increased.
2) As the party that requires funds may publish a stock and sell it in capital markets to utilize these funds in developing its projects without having to pay interest charges, but remains as if the borrowed funds to the bank.

5.2.3 For Investors

1) This research can serve as reference materials and consideration in investment decisions from various investment alternatives offered when investors wants his wealth invested.

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Appendix 1. Data Active Issuer Listed on JII

No	Company Code	Company Name
1	ADRO	Adaro Energy, Tbk.
2	AKRA	AKR Corporindo, Tbk.
3	ASII	Astra International, Tbk.
4	ASRI	Alam Sutra Reality, Tbk.
5	BBCA	Bank Central Asia, Tbk.
6	BBNI	Bank Negara Indonesia, Tbk.
7	BBRI	Bank Rakyat Indonesia (Persero), Tbk
8	BMRI	Bank Mandiri (Persero), Tbk.
9	BMTR	Global Mediacom, Tbk.
10	BSDE	Bumi Serpong Damai, Tbk.
11	CPIN	Charoen Pokphand Indonesia, Tbk.
12	EXCL	XL Axiata, Tbk.
13	GGRM	Gudang Garam, Tbk.
14	INDF	Indofood Sukses Makmur, Tbk.
15	INTP	Indocement Tunggal Prakarsa, Tbk.
16	ITMG	Indo Tambangraya Megah, Tbk.
17	JSMR	Jasa Marga, Tbk.
18	KLBF	Kalbe Farma, Tbk.
19	PGAS	Perusahaan Gas Negara (Persero), Tbk.
20	PTBA	Tambang Batubara Bukit Asam, Tbk.
21	SMGR	Semen Gresik Persero, Tbk.
22	TLKM	Telekomunikasi Indonesia, Tbk.
23	UNTR	United Tractors, Tbk.
24	UNVR	Unilever Indonesia, Tbk.

Appendix 2. Classical Assumption Test All Companies

Durbin Watson Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.770[a]	.593	.508	46.57550	1.117

a. Predictors: (Constant), SBI, ROI, Inflasi, ROE

b. Dependent Variable: HargaSaham

Heteroscedasticity Test

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.041E7	4	1.260E7	3.942	.011[a]
	Residual	9.911E7	607	3197145.656		
	Total	1.495E8	611			

a. Predictors: (Constant), SBI, ROI, ROE, INFLASI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-53.052	233.127		-.228	.822		
	ROE	-718.813	728.897	-.551	-.986	.336	.149	6.710
	ROI	836.267	1877.845	.223	.445	.661	.186	5.388
	Inflasi	-32.231	498.976	-.017	-.065	.949	.688	1.454
	SBI	1352.075	3358.077	.104	.403	.692	.699	1.431

a. Dependent Variable: abs

Multicolinearity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2540.669	404.131		6.287	.000		
	ROE	-564.658	1263.561	-.169	-.447	.660	.149	6.710
	ROI	-2106.828	3255.289	-.220	-.647	.525	.186	5.388
	Inflasi	-1972.905	864.987	-.402	-2.281	.034	.688	1.454
	SBI	-22290.443	5821.306	-.670	-3.829	.001	.699	1.431

Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		648
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	42.33215995
Most Extreme Differences	Absolute	.112
	Positive	.108
	Negative	-.112
Kolmogorov-Smirnov Z		.551
Asymp. Sig. (2-tailed)		.922

Appendix 3. Assumption Test Individual Company

AALI

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.575[a]	.330	.244	1797.029

a. Predictors: (Constant), SBI, ROI, ROE, INFLASI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.942E7	4	1.235E7	3.826	.012[a]
	Residual	1.001E8	31	3229313.564		
	Total	1.495E8	35			

a. Predictors: (Constant), SBI, ROI, ROE, INFLASI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16774.071	1860.132		9.018	.000
	ROE	56.718	33.173	.311	1.710	.097
	ROI	-18.767	57.544	-.059	-.326	.747
	INFLASI	-489.718	307.126	-.376	-1.595	.121
	SBI	1084.882	385.109	.605	2.817	.008

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	18978.19	23476.99	20940.28	1200.150	36
Residual	-3428.193	3768.119	.000	1682.783	36
Std. Predicted Value	-1.635	2.114	.000	1.000	36
Std. Residual	-1.917	2.107	.000	.941	36

a. Dependent Variable: HARGA SAHAM

ADRO

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.581[a]	.487	.252	1788.056

a. Predictors: (Constant), SBI, ROI, ROE, INFLASI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.041E7	4	1.260E7	4.505	.016[a]
	Residual	9.911E7	31	3197145.656		
	Total	1.495E8	35			

a. Predictors: (Constant), SBI, ROI, ROE, INFLASI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16668.349	1862.997		8.947	.000
	ROE	6055.263	3344.151	.328	1.427	.170
	ROI	-2417.620	5696.701	-.077	-2.395	.027
	INFLASI	-489.053	307.426	-.375	1.250	.243
	SBI	1101.373	384.364	.615	1.515	.014

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	18978.19	23476.99	20940.28	1200.150	36
Residual	-3428.193	3768.119	.000	1682.783	36
Std. Predicted Value	-1.635	2.114	.000	1.000	36
Std. Residual	-1.917	2.107	.000	.941	36

a. Dependent Variable: HARGA SAHAM

ASII

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.756[a]	.571	.516	520.753

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.119E7	4	2797505.015	10.316	.000[a]
	Residual	8406679.942	31	271183.224		
	Total	1.960E7	35			

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8348.393	493.129		16.929	.000
	ROE	-11707.114	4464.302	-1.156	-2.622	.013
	ROI	32669.199	10431.188	1.381	3.132	.004
	INFLASI	-72.315	74.233	-.153	-.974	.338
	SBI	-336.111	102.443	-.518	-3.281	.003

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	5994.17	7730.81	6810.00	565.433	36
Residual	-1321.425	1132.118	.000	490.093	36
Std. Predicted Value	-1.443	1.629	.000	1.000	36
Std. Residual	-2.538	2.174	.000	.941	36

a. Dependent Variable: HARGA SAHAM

ASRI

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.581[a]	.337	.252	1788.056

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.041E7	4	1.260E7	3.942	.011[a]
	Residual	9.911E7	31	319745.656		
	Total	1.495E8	35			

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16668.349	1862.997		8.947	.000
	ROE	6065.263	3344.151	.328	1.811	.080
	ROI	-2417.620	5696.701	-.077	-.424	.674
	INFLASI	-489.053	307.426	-.375	-1.591	.122
	SBI	1101.373	384.364	.615	2.865	.007

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	18978.19	23476.99	20940.28	1200.150	36
Residual	-3428.193	3768.119	.000	1682.783	36
Std. Predicted Value	-1.635	2.114	.000	1.000	36
Std. Residual	-1.917	2.107	.000	.941	36

a. Dependent Variable: HARGA SAHAM

BSDE

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.647[a]	.423	.252	1788.056

c. Predictors: (Constant), SBI, ROI, INFLASI, ROE

d. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.041E7	4	1.260E7	3.478	.007[a]
	Residual	9.911E7	31	319745.656		
	Total	1.495E8	35			

c. Predictors: (Constant), SBI, ROI, INFLASI, ROE

d. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16668.349	1862.997		8.947	.000
	ROE	6065.263	3344.151	.328	.832	.416
	ROI	-2417.620	5696.701	-.077	-2.346	.030
	INFLASI	-489.053	307.426	-.375	-.851	.327
	SBI	1101.373	384.364	.615	1.586	.129

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	18978.19	23476.99	20940.28	1200.150	36
Residual	-3428.193	3768.119	.000	1682.783	36
Std. Predicted Value	-1.635	2.114	.000	1.000	36
Std. Residual	-1.917	2.107	.000	.941	36

a. Dependent Variable: HARGA SAHAM

CPIN

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.579[a]	.335	.249	858.223

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.149E7	4	2871711.746	3.899	.011[a]
	Residual	2.283E7	31	736546.871		
	Total	3.432E7	35			

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4494.928	798.423		5.630	.000
	ROE	21447.783	15776.903	2.205	1.359	.184
	ROI	-32178.936	23173.657	-2.300	-1.389	.175
	INFLASI	247.864	145.988	.397	1.698	.100
	SBI	-473.137	178.280	-.551	-2.654	.012

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1485.48	3940.66	3110.00	572.884	36
Residual	-1652.719	1593.232	.000	807.694	36
Std. Predicted Value	-2.836	1.450	.000	1.000	36
Std. Residual	-1.926	1.856	.000	.941	36

a. Dependent Variable: HARGA SAHAM

ICBP

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695[a]	.483	.417	1696.808

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.345E7	4	2.086E7	7.246	.000[a]
	Residual	8.925E7	31	2879157.874		
	Total	1.727E8	35			

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4221.555	1615.400		2.613	.014
	ROE	-34833.286	71519.472	-.776	-.487	.630
	ROI	34463.901	106066.752	.523	.325	.747
	INFLASI	-898.343	353.315	-.641	-2.543	.016
	SBI	1576.501	361.040	.819	4.367	.000

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3309.80	9907.85	6554.86	1544.156	36
Residual	-3060.729	4362.233	.000	1596.907	36
Std. Predicted Value	-2.102	2.171	.000	1.000	36
Std. Residual	-1.804	2.571	.000	.941	36

a. Dependent Variable: HARGA SAHAM

INDF

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.795[a]	.632	.585	1407.537

c. Predictors: (Constant), SBI, ROI, INFLASI, ROE

d. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.056E7	4	2.641E7	13.331	.000[a]
	Residual	6.142E7	31	1981161.398		
	Total	1.671E8	35			

c. Predictors: (Constant), SBI, ROI, INFLASI, ROE

d. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7201.053	1349.015		5.338	.000
	ROE	-31935.137	15903.542	-2.192	-2.008	.053
	ROI	40460.440	21691.983	2.056	1.865	.072
	INFLASI	-1443.076	254.953	-1.047	-5.660	.000
	SBI	1349.447	307.964	.712	4.382	.000

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2265.59	9658.87	6161.81	1737.370	36
Residual	-2471.176	2861.967	.000	1324.667	36
Std. Predicted Value	-2.243	2.013	.000	1.000	36
Std. Residual	-1.756	2.033	.000	.941	36

a. Dependent Variable: HARGA SAHAM

INTP

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.626[a]	.392	.314	2621.652

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.376E8	4	3.439E7	5.003	.003[a]
	Residual	2.131E8	31	6873061.367		
	Total	3.506E8	35			

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22808.926	2341.365		9.742	.000
	ROE	177758.888	111186.755	4.194	1.599	.120
	ROI	-195991.041	128777.113	-3.999	-1.522	.138
	INFLASI	980.995	366.726	.491	2.675	.012
	SBI	-1929.790	494.027	-.703	-3.906	.000

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	13677.56	22194.88	19012.50	1982.437	36
Residual	-4884.456	5245.600	.000	2467.300	36
Std. Predicted Value	-2.691	1.605	.000	1.000	36
Std. Residual	-1.863	2.001	.000	.941	36

a. Dependent Variable: HARGA SAHAM

ITMG

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.731[a]	.534	.474	4812.589

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.243E8	4	2.061E8	8.897	.000[a]
	Residual	7.180E8	31	2.316E7		
	Total	1.542E9	35			

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	40535.009	4235.785		9.570	.000
	ROE	6792.285	42307.931	.151	.161	.873
	ROI	-23929.545	64580.747	-.345	-.371	.714
	INFLASI	-4204.102	750.976	-1.004	-5.598	.000
	SBI	4190.716	985.691	.728	4.252	.000

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	25784.64	48629.61	38422.22	4852.895	36
Residual	-8509.293	10872.950	.000	4529.243	36
Std. Predicted Value	-2.604	2.103	.000	1.000	36
Std. Residual	-1.768	2.259	.000	.941	36

a. Dependent Variable: HARGA SAHAM

KLBF

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737[a]	.544	.485	207.868

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1596639.596	4	399159.899	9.238	.000[a]
	Residual	1339479.154	31	43209.005		
	Total	2936118.750	35			

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	783.436	180.388		4.343	.000
	ROE	10917.347	6104.809	2.436	1.788	.084
	ROI	-12915.593	7789.615	-2.266	-1.658	.107
	INFLASI	139.374	31.425	.763	4.435	.000
	SBI	-140.163	41.335	-.558	-3.391	.002

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	498.49	1411.29	935.42	213.584	36
Residual	-392.519	408.731	.000	195.629	36
Std. Predicted Value	-2.046	2.228	.000	1.000	36
Std. Residual	-1.888	1.966	.000	.941	36

a. Dependent Variable: HARGA SAHAM

LPKR

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.610[a]	.372	.291	244.914

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1100692.193	4	275173.048	4.588	.005[a]
	Residual	1859471.696	31	59982.958		
	Total	2960163.889	35			

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1131.580	213.774		5.293	.000
	ROE	13824.851	8129.841	1.355	1.701	.099
	ROI	-30165.127	20027.956	-1.179	-1.506	.142
	INFLASI	71.310	41.907	.389	1.702	.099
	SBI	-108.944	53.918	-.432	-2.021	.052

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	534.36	1189.25	916.94	177.337	36
Residual	-360.705	817.870	.000	230.495	36
Std. Predicted Value	-2.157	1.536	.000	1.000	36
Std. Residual	-1.473	3.339	.000	.941	36

a. Dependent Variable: HARGA SAHAM

LSIP

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.661[a]	.437	.364	367.280

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3242558.520	4	810639.630	6.009	.001[a]
	Residual	4181722.035	31	134894.259		
	Total	7424280.556	35			

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2932.871	316.666		9.262	.000
	ROE	2091.156	5353.795	.385	.391	.699
	ROI	-2157.085	5743.396	-.350	-.376	.710
	INFLASI	-204.432	69.877	-.704	-2.926	.006
	SBI	57.850	88.819	.145	.651	.520

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1493.85	2516.68	2146.39	304.376	36
Residual	-1058.963	655.536	.000	345.656	36
Std. Predicted Value	-2.144	1.217	.000	1.000	36
Std. Residual	-2.883	1.785	.000	.941	36

a. Dependent Variable: HARGA SAHAM

PGAS

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.829[a]	.687	.647	2043.912

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.846E8	4	7.116E7	17.034	.000[a]
	Residual	1.295E8	31	4177577.853		
	Total	4.141E8	35			

a. Predictors: (Constant), SBI, ROI, INFLASI, ROE

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19738.875	1923.442		10.262	.000
	ROE	-363.094	7825.311	-.010	-.046	.963
	ROI	-22894.567	10918.832	-.468	-2.097	.044
	INFLASI	-2446.639	303.809	-1.128	-8.053	.000
	SBI	2487.728	413.667	.834	6.014	.000

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	9798.14	21413.03	16422.22	2851.778	36
Residual	-4231.271	3603.464	.000	1923.575	36
Std. Predicted Value	-2.323	1.750	.000	1.000	36
Std. Residual	-2.070	1.763	.000	.941	36

a. Dependent Variable: HARGA SAHAM

SMGR

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.643[a]	.413	.337	2491.285

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.353E8	4	3.382E7	5.448	.002[a]
	Residual	1.924E8	31	6206502.003		
	Total	3.277E8	35			

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16168.008	2253.930		7.173	.000
	ROE	85395.397	50484.084	2.121	1.692	.101
	ROI	-115478.266	71809.214	-2.036	-1.608	.118
	INFLASI	962.689	349.945	.499	2.751	.010
	SBI	-1719.804	514.653	-.648	-3.342	.002

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	7639.47	15532.26	12563.89	1965.862	36
Residual	-4841.176	4582.727	.000	2344.608	36
Std. Predicted Value	-2.505	1.510	.000	1.000	36
Std. Residual	-1.943	1.840	.000	.941	36

a. Dependent Variable: HARGA SAHAM

TLKM

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.797[a]	.634	.587	215.769

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2504563.582	4	626140.896	13.449	.000[a]
	Residual	1443244.057	31	46556.260		
	Total	3947807.639	35			

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1544.053	193.693		7.972	.000
	ROE	-676.304	2068.719	-.141	-.327	.746
	ROI	3805.143	3970.176	.428	.958	.345
	INFLASI	181.566	33.584	.857	5.406	.000
	SBI	-181.154	40.540	-.622	-4.469	.000

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1376.07	2452.64	1790.69	267.505	36
Residual	-309.039	433.688	.000	203.065	36
Std. Predicted Value	-1.550	2.475	.000	1.000	36
Std. Residual	-1.432	2.010	.000	.941	36

a. Dependent Variable: HARGA SAHAM

UNTR

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.714[a]	.510	.447	3093.548

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.092E8	4	7.731E7	8.078	.000[a]
	Residual	2.967E8	31	9570040.643		
	Total	6.059E8	35			

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	28359.645	2767.493		10.247	.000
	ROE	224276.422	111559.789	3.475	2.010	.053
	ROI	-399123.851	189417.435	-3.630	-2.107	.043
	INFLASI	-2081.375	457.224	-.793	-4.552	.000
	SBI	1191.742	607.670	.330	1.961	.059

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	15271.58	25696.59	21619.42	2972.423	36
Residual	-5022.819	9229.122	.000	2911.412	36
Std. Predicted Value	-2.136	1.372	.000	1.000	36
Std. Residual	-1.624	2.983	.000	.941	36

a. Dependent Variable: HARGA SAHAM

UNVR

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831[a]	.690	.650	3258.811

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.333E8	4	1.833E8	17.262	.000[a]
	Residual	3.292E8	31	1.062E7		
	Total	1.062E9	35			

a. Predictors: (Constant), SBI, ROE, INFLASI, ROI

b. Dependent Variable: HARGA SAHAM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23045.478	2813.781		8.190	.000
	ROE	550.241	5514.304	.035	.100	.921
	ROI	16219.912	16899.875	.340	.960	.345
	INFLASI	3095.749	442.777	.891	6.992	.000
	SBI	-4030.292	615.349	-.844	-6.550	.000

a. Dependent Variable: HARGA SAHAM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	13037.98	32836.43	22134.72	4577.145	36
Residual	-6901.711	7171.257	.000	3066.945	36
Std. Predicted Value	-1.987	2.338	.000	1.000	36
Std. Residual	-2.118	2.201	.000	.941	36

a. Dependent Variable: HARGA SAHAM

Appendix 4. Index Value of JII

Month	Value of JII	Rm
Des-12	532,901	
Jan-13	477,514	-0,104
Feb-13	496,870	0,041
Mar-13	514,921	0,036
Apr-13	528,763	0,027
Mei-13	531,377	0,005
Jun-13	536,036	0,009
Jul-13	567,119	0,058
Agu-13	529,157	-0,067
Sep-13	492,298	-0,070
Okt-13	530,192	0,077
Nov-13	520,493	-0,018
Des-13	537,031	0,032
Jan-14	562,535	0,047
Feb-14	566,754	0,007
Mar-14	584,060	0,031
Apr-14	575,088	-0,015
Mei-14	525,052	-0,087
Jun-14	544,190	0,036
Jul-14	573,731	0,054
Agu-14	569,935	-0,007
Sep-14	600,840	0,054
Okt-14	619,270	0,031
Nov-14	588,776	-0,049
Des-14	594,789	0,010
Jan-15	604,610	0,017
Feb-15	645,219	0,067
Mar-15	660,337	0,023
Apr-15	682,691	0,034
Mei-15	676,583	-0,009
Jun-15	660,165	-0,024
Jul-15	623,747	-0,055
Agu-15	592,002	-0,051
Sep-15	687,619	0,113
Okt-15	615,706	-0,105
Nov-15	579,868	-0,058
Des-15	585,110	0,009
∑	**20780,448**	**0,148**
Average	**577,235**	**0,004**

Appendix 5. Value of Inflation and CBI

Month	Inflation	CBI
Des-12		
Jan-13	4,57	5,75
Feb-13	5,31	5,75
Mar-13	5,90	5,75
Apr-13	5,57	5,75
Mei-13	5,47	5,75
Jun-13	5,90	6,00
Jul-13	8,61	6,50
Agu-13	8,79	7,00
Sep-13	8,40	7,25
Okt-13	8,32	7,25
Nov-13	8,37	7,50
Des-13	8,38	7,50
Jan-14	8,22	7,50
Feb-14	7,75	7,50
Mar-14	7,32	7,50
Apr-14	7,25	7,50
Mei-14	7,32	7,50
Jun-14	6,70	7,50
Jul-14	4,53	7,50
Agu-14	3,99	7,50
Sep-14	4,53	7,50
Okt-14	4,83	7,50
Nov-14	6,23	7,75
Des-14	8,36	7,75
Jan-15	6,96	7,75
Feb-15	6,29	7,50
Mar-15	6,38	7,50
Apr-15	6,79	7,50
Mei-15	7,15	7,50
Jun-15	7,26	7,50
Jul-15	7,26	7,50
Agu-15	7,18	7,50
Sep-15	6,83	7,50
Okt-15	6,25	7,50
Nov-15	4,89	7,50
Des-15	3,35	7,50
∑	**237,210**	**258,500**
Average	**6,589**	**7,181**

Appendix 6. SPSS Output is Processed

No	Code	Sig. F	R Square	a	σri2	Sig. T			
						Inflation	CBI	ROI	ROE
1	AALI	0,012	0,330	0,007	0,008	0,121	0,008	0,747	0,097
2	ADRO	0,016	0,487	0,039	0,021	0,243	0,014	0,027	0,170
3	ASII	0,000	0,571	0,010	0,004	0,338	0,003	0,004	0,013
4	ASRI	0,011	0,337	0,039	0,077	0,122	0,007	0,674	0,080
5	BSDE	0,007	0,423	0,021	0,052	0,327	0,129	0,030	0,416
6	CPIN	0,011	0,335	0,030	0,018	0,100	0,012	0,175	0,184
7	ICBP	0,000	0,483	0,024	0,006	0,016	0,000	0,747	0,630
8	INDF	0,000	0,632	-0,007	0,013	0,000	0,000	0,072	0,053
9	INTP	0,003	0,392	0,014	0,007	0,012	0,000	0,138	0,120
10	ITMG	0,000	0,534	-0,021	0,011	0,000	0,000	0,714	0,873
11	KLBF	0,000	0,544	0,024	0,005	0,000	0,002	0,107	0,084
12	LPKR	0,005	0,372	0,020	0,015	0,099	0,052	-0,142	0,099
13	LSIP	0,001	0,437	0,015	0,045	0,006	0,520	0,710	0,699
14	PGAS	0,000	0,473	-0,012	0,007	0,006	0,066	0,445	0,343
15	SMGR	0,002	0,413	0,020	0,007	0,010	0,002	0,118	0,101
16	TLKM	0,000	0,634	0,012	0,004	0,000	0,000	0,345	0,746
17	UNTR	0,000	0,510	0,002	0,008	0,000	0,059	0,043	0,053
18	UNVR	0,000	0,690	0,040	0,005	0,000	0,000	0,340	0,921

Appendix 7. SPSS Output is Processed

No	Code	F	P Value F Test	R2	T Test				P Value T Test			
					Inflation	CBI	ROI	ROE	Inflation	CBI	ROI	ROE
1	AALI	3,826	0,012	0,330	-1,595	2,817	-0,326	1,710	0,121	0,008	0,747	0,097
2	ADRO	4,505	0,016	0,487	1,250	1,515	-2,395	1,427	0,243	0,014	0,027	0,170
3	ASII	10,316	0,000	0,571	-0,974	-3,281	3,132	-2,622	0,338	0,003	0,004	0,013
4	ASRI	3,942	0,011	0,337	-1,591	2,865	-0,424	1,811	0,122	0,007	0,674	0,080
5	BSDE	3,478	0,007	0,423	-0,851	1,586	-2,346	0,832	0,327	0,129	0,030	0,416
6	CPIN	3,899	0,011	0,335	1,698	-2,654	-1,389	1,359	0,100	0,012	0,175	0,184
7	ICBP	7,246	0,000	0,483	-2,543	4,367	0,325	0,487	0,016	0,000	0,747	0,630
8	INDF	13,331	0,000	0,632	-5,660	4,382	1,865	-2,008	0,000	0,000	0,072	0,053
9	INTP	5,003	0,003	0,392	2,675	-3,906	-1,552	-1,599	0,012	0,000	0,138	0,120
10	ITMG	8,897	0,000	0,534	-5,598	4,252	-0,371	0,161	0,000	0,000	0,714	0,873
11	KLBF	9,238	0,000	0,544	4,435	-3,391	-1,658	1,788	0,000	0,002	0,107	0,084
12	LPKR	4,588	0,005	0,372	1,702	-2,021	-1,506	1,701	0,099	0,052	-0,142	0,099
13	LSIP	6,009	0,001	0,437	-2,926	0,651	-0,376	0,391	0,006	0,520	0,710	0,699
14	PGAS	7,034	0,000	0,473	-1,021	1,953	-0,779	0,972	0,006	0,066	0,445	0,343
15	SMGR	5,448	0,002	0,413	2,751	-3,342	-1,608	1,692	0,010	0,002	0,118	0,101
16	TLKM	13,449	0,000	0,634	5,406	-4,469	0,958	-0,327	0,000	0,000	0,345	0,746
17	UNTR	8,078	0,000	0,510	-4,552	1,961	-2,107	1,010	0,000	0,059	0,043	0,053
18	UNVR	17,262	0,000	0,690	6,992	-6,550	0,960	0,100	0,000	0,000	0,340	0,921

Appendix 8. Stock Calculation Result

No	Code	F	P Value F Test	R2	ERBi	E(Ri)	Ci	$\sigma i2$	σi
1	AALI	3,826	0,012	0,330	0,016485	0.007892	0.000063	0,00849	0,092141
2	ADRO	4,505	0,016	0,487	0,019467	0.039526	0.000874	0,02154	0,146765
3	ASII	10,316	0,000	0,571	0,031634	0.010834	0.000026	0,004305	0,065612
4	ASRI	3,942	0,011	0,337	-0,037283	0.039526	0.000073	0,077799	0,278924
5	BSDE	3,478	0,007	0,423	0,02846	0.021637	0.000092	0,05289	0,229978
6	CPIN	3,899	0,011	0,335	0,017384	0.030577	0.000048	0,018508	0,136043
7	ICBP	7,246	0,000	0,483	0,012639	0.024202	0.000062	0,006849	0,082759
8	INDF	13,331	0,000	0,632	0,017836	-0.00766	0.000079	0,013945	0,118089
9	INTP	5,003	0,003	0,392	0,016357	0.014049	0.000051	0,00723	0,085031
10	ITMG	8,897	0,000	0,534	-2,037625	-0.02195	0.000035	0,01175	0,108399
11	KLBF	9,238	0,000	0,544	0,027364	0.02471	0.000283	0,00581	0,076222
12	LPKR	4,588	0,005	0,372	-0,127383	0.020302	0.000076	0,015868	0,12597
13	LSIP	6,009	0,001	0,437	0,045372	0.01589	0.000371	0,045684	0,213738
14	PGAS	7,034	0,000	0,473	0,017234	-0.01275	0.000040	0,007692	0,087706
15	SMGR	5,448	0,002	0,413	-0,042618	0.020268	0.000068	0,00723	0,085029
16	TLKM	13,449	0,000	0,634	-2,037625	0.012177	0.000035	0,004102	0,064049
17	UNTR	8,078	0,000	0,510	0,026342	0.002667	0.000184	0,008236	0,090752
18	UNVR	17,262	0,000	0,690	2,836215	0.040019	0.000046	0,005775	0,075996

Appendix 9. Calculation of Portfolio

No	Company Code	P Value F Test	R Square	ERBi	Ci	E(Rp)	σi2	σi
1	ADRO	0.000	0,42153	34.532	166639.28	0.010834	0.008339	0.09131813
2	ASII	0.000	0,37986	-9.472	-1558384.60	0.012684	0.05964	0.24413111
3	ICBP	0.000	0,37778	15.706	2409777.13	0.015374	0.013945	0.11808895
4	INDF	0.000	0,41597	-6.874	-301465.02	-0.017484	0.004305	0.0656125
5	ITMG	0.000	0,35278	23.753	3989439.12	0.037389	0.08529	0.29204452
6	KLBF	0.000	0,37222	25.410	2276995.56	-0.037485	0.01175	0.10839742
7	PGAS	0.000	0,36736	25.103	1275982.39	0.026179	0.00489	0.06992853
8	SMGR	0.000	0,43194	-24.972	-309218.00	0.002736	0.015868	0.12596825
9	UNTR	0.000	0,42986	-29.383	-951718.11	-0.026475	0.006849	0.08275869
10	UNVR	0.000	0,50208	-31.712	-2955557.27	0.026482	0.007692	0.08770405
						0.098384	0.230866	144.075.141

Appendix 10. Beta of Portfolio

No	Code	∑RM	∑Rp	B
1	ASII	0.006	0.011	0.6
2	ASRI	0.006	0.038	
3	EXCL	0.006	-0.002	
4	GGRM	0.006	0.025	
5	ITMG	0.006	-0.008	
6	KLBF	0.006	0.025	
7	PTBA	0.006	-0.013	
8	TKLM	0.006	0.012	
9	UNTR	0.006	0.002	
10	UNVR	0.006	0.018	

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2. Pondok Modern Darussalam Gontor Lulus Tahun 2011
3. UIN Maliki Malang (Manajemen) Lulus Tahun 2017

Pendidikan Non Formal

1. Teknisi Yunior Akuntansi Lembaga pendidikan dan pelatihan Bina Mandiri 2013
2. Basic Training Persatuan Mahasiswa Darussalam Malang

Pengalaman Organisasi

1. Pengurus Organisasi Pelajar Pondok Modern Darussalam gontor periode 2009-2010
2. Pengurus Coordinator Pramuka Pondok Modern Darussalam gontor periode 2010-2011
3. Pengurus Persatuan Mahasiswa Darussalam periode 2014-2015

Motto hidup : Just do it.... !!!

Malang 4 Januari 2017

Zainul Zuli Abidin

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No	Tanggal	Materi Konsultasi	TTD Pembimbing
1.	15 Sep 2016	Pengajuan Outline	
2.	20 Sep 2016	Proposal	
3.	10 Nov 2016	Revisi & Acc Proposal	
4.	15 Nov 2016	Seminar Proposal	
5.	30 Nov 2016	Acc Proposal	
6.	10 Des 2016	Skripsi Bab 1 - V	
7.	22 Des 2016	Revisi & Acc Skripsi	
8.	27 Des 2016	Acc Keseluruhan	

Malang, 28 Desember 2016
Mengetahui
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