European Journal of Business and Management
ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)
Vol.9, No.24, 2017

THE ANALYSIS OF OPTIMAL PORTFOLIO ESTABLISHMENT USING THE SINGLE INDEX MODEL TO DECIDE TO INVEST IN SHARE JAKARTA ISLAMIC INDEX PERIOD OF 2012-2015

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Abstract

This research aims to find out the shares of companies listed in the Jakarta Islamic Index (JII) in the Indonesia Stock Exchange selected in the formation of an optimal portfolio period January 2012 - December 2014 and the proportion of each share in the optimal portfolio. This research is quantitative descriptive research. The population of this study is all shares included in the calculation of Jakarta Islamic Index (JII) published six months, amounting to 30 shares. The technique of selecting the sample of this study uses purposive sampling method and obtained 19 shares as sample research. The variables in this research are stock return, market return, stock risk, and market risk. The method of data analysis uses Single Index model.

The results of this study indicate that: (1) there are 4 stocks that meet the criteria of optimal portfolio formation ie UNVR shares (Unilever Indonesia Tbk), ICBP (Indofood CBP Sukses Makmur, Tbk) and INTP Indocement Tunggal Prakarsa Tbk). (2) The proportion of funds worth investing in the shares is 28.28% or 0.28277 for the shares of UNVR (Unilever Indonesia Tbk), 29.94% or 0.29944 for PGAS (Perusahaan Gas Negara (Persero) Tbk) , 41.03% or 0.041033 for ICBP shares (Indofood CBP Sukses Makmur Tbk) and 0.75% or 0.00746 for INTP Indocement Tunggal Prakarsa Tbk shares).
Keywords: Optimal Portfolio, Single Index Model, Jakarta Islamic Index

1. INTRODUCTION

Investing to get a return must also have risks. Investing in stocks contains elements of uncertainty or high risk. There are two kinds of risks in investing, ie systematic risk and non-systematic risk. Systematic risk is a risk that occurs because of factors outside the company, such as inflation, while non-systematic risk is the risks that occur due to bad factors that occur within the company. To reduce the level of risk to be borne by investors, we can spread the risk to some assets or so-called diversification, one example of diversification is to form a portfolio.

A portfolio is a set of investments. By forming a portfolio, we can reduce losses because when the value of one stock is down, there are still other shares which rise. The difficulty to form an optimal portfolio becomes one of the obstacles that investors often face so it is necessary to use some data as input in the calculation to form the portfolio. For that reason, it is required a calculation model to facilitate to form a portfolio. One of the portfolio calculation models is the Single Index Method. The Single Index model is developed by Sharpe, which is used to simplify calculations in the Markowitz model.

This research uses Jakarta Islamic Index (JII) because JII benchmark of syariah stock in Indonesia consists of 30 shares selected by National Sharia Council (DSN) per semester, exactly every January and June. In particular, stocks listed in the JII criteria are those whose operations do not contain ribawi, the company's capital is also not the majority of the debt. So these JII shares generally have a healthy capital structure and are not burdened with excessive debt interest, in other words the debt-to equity ratio is still proportional so it is very promising for long-term investment. Its management is also considered transparent and credible as well as respecting its shareholders.

Based on the above description, the authors are interested to conduct research by taking the title “The Analysis of Optimal Portfolio Establishment Using the Single Index Model to Decide to Invest in Shares Jakarta Islamic Index Period of 2012-2014".

2. REVIEW OF LITERATURE

1. Investment

Jogiyanto (2013) defines as a delay in current consumption to be put into productive assets over a certain period of time. Investment into productive assets may take the form of real assets such as houses, land and gold or in the form of financial assets such as securities traded between investors (investors).

Investments into financial assets can be both direct and indirect investments. Direct investment is made by purchasing financial assets directly from the company either through intermediaries or by other means. While indirect investment is done by buying shares from investment companies that have a portfolio of

financial assets from other companies.

2. Capital Market

Capital Market Law No.8 of 1995 provides a more specific understanding of the capital market, ie activities related to the Public Offering and Securities Trading, Public Companies relating to the securities it publishes, as well as institutions and professions relating to securities.

Capital market benefits by Tjiptono Darmadji and Hendy M. Fakhruddin (2006) include:

1) Providing a source of financing (long term) for the business world as well as allowing optimal allocation of funding resources
2) Providing investment vehicles for investors as well as enabling diversification efforts
3) Provide a leading indicator for the economic trend of the State. Distribution of company ownership to the whole community.
4) Allowing the spread of ownership, openness and professionalism, as well as creating a healthy climate.
5) Creating an exciting job or profession.
6) Providing an opportunity to have a healthy and prospective company.
7) Investment alternatives that provide potential benefits with calculated risks through disclosure, liquidity, and investment diversification.
8) Fostering a climate of openness to the business world, providing access to social control.
9) Managing a company with a climate of openness, encouraging the utilization of professional management.
10) Long-term funding sources for the issuer.

3. Shares

According to Darmadji and Fakhrudin (2006), the stock (stock) is defined as a sign of participation or possession of a person or entity within a company or limited liability company. The types of shares are common stocks and preferred stocks.

4. Portofolio

Modern portfolio theory was first introduced by Harry Markowitz in early 1956. In this theory, it is stated that some things about the calculation of returns, risks, and how to form a portfolio. Jogiyanto (2013) Portfolio is a combination of various stocks to gain maximum profit.

5. Single Index Model

Sharpe developed a model called the single index model. This model can be used to simplify calculations in the Markowitz model by providing the input parameters required in the Markowitz model calculations.

According Zubir (2013) Single index model is a technique to measure the return and risk of a stock or portfolio. The model assumes that the movement of stock returns is only related to market movements. If the market moves up, in the sense that demand for stocks increases, then the stock price in the market will rise as well. Conversely, if the market moves down, then the stock price will go down as well. Thus, stock returns correlate with market returns.

The optimal portfolio will contain those assets that initiate high ERB risks. Low ERB assets will not be incorporated into the optimal portfolio with C * (cut-off point) delimiters as optimal portfolio determinants.

6. Jakarta Islamic Index

On July 3, 2000, the Indonesia Stock Exchange (IDX) in cooperation with PT Danareksa Investment Management (DIM) launched a stock index based on Islamic syariah, the Jakarta Islamic Index (JII). This index is expected to be a benchmark for the performance of sharia-based stocks and to further develop the syariah capital market.

To determine the shares included in the calculation of the Jakarta Islamic Index, the selection process is as follows:

a. Shares to be selected based on List of Sharia Securities (DES) issued by Bapepam - LK.

b. Selects 60 shares from the list of sharia securities based on the order of the largest market capitalization in the past 1 year.

c. Of the 60 companies selected 30 companies based on liquidity, the value of transactions in the regular market in the last 1 year

3. RESEARCH METHODS

A. Research Design

The method of this research is descriptive by using quantitative approach The research is a research that emphasizes its analysis on numerical data (numbers) processed by using this research method will be obtained a significant relationship between the variables studied by using MS Office Excel.

B. Definition and opersionalization of variables

The data examined as follows::

1. Stock price data
2. JCI data
3. Data Indicator Risk free rate

The operational variables in this research are:

1) Return of Share Realization

$$R_{it} = \frac{P_t - P_{t-1}}{P_{t-1}}$$ (Jogiyanto, 2013)

2) *Return IHSG*

$$R_m = \frac{IHSG_t - IHSG_{t-1}}{IHSG_{t-1}}$$ (Jogiyanto, 2013)

3) *Expected Return* (R_i)

$$E(R_i) = \Sigma \frac{Rt(A)}{n}$$ (Jogiyanto, 2013)

4) *Standard deviation*

$$SD = \sqrt{\sum_{i=1}^{n} \frac{(Xi - \overline{X})}{n-1}}$$ (Halim, 2005)

5) Beta Shares

$$\beta = \frac{n(\Sigma XY) - (\Sigma X)(\Sigma Y)}{n(\Sigma X^2) - (\Sigma X)^2}$$ (Halim, 2005)

6) Alpha Share

$$Y = a + \beta X$$ (Halim, 2005)

$a = Y - \beta X$ ⇨ average Y atau average X

7) *Residual variance*

$$\sigma_{ei}^2 = R_i - \{\sigma_i + \beta_i (R_{mi})\}$$ (Halim, 2005)

8) The correlation coefficient

$$\rho_{(Am)} = \frac{n(\Sigma XY) - (\Sigma X)(\Sigma Y)}{\sqrt{\{n(\Sigma X^2) - (\Sigma X)^2\}\{n(\Sigma Y^2) - (\Sigma Y)^2\}}}$$ (Halim, 2005)

9) *Excess return to beta ratio*

$$ERB_i = \frac{E(R_i) - R_{BR}}{\beta_i}$$ (Jogiyanto, 2013)

10) nilai Ai dan Bi untuk masing-masing sekuritas ke-i

$$A_i = \frac{[E(R_i) - R_{BR}]\beta_i}{\sigma_{ei}^2} \text{ dan } B_i = \frac{\beta_i^2}{\sigma_{ei}^2}$$

(Jogiyanto, 2013)

11) Cut off point

$$C_i = \frac{\sum_{i=1}^{n} A_i . R_{BR}}{1 + R_{BR} . \sum_{i=1}^{n} B_i}$$ (Jogiyanto, 2013)

12) Share Proportion

$$W_i = \frac{X_i}{\sum_{j=1}^{k} X_i}$$ (Jogiyanto, 2013)

13) Return Portofolio

$$E(R_p) = \sum_{i=1}^{n} \{W_i . E(R_i)\}$$ (Jogiyanto, 2013)

14) Resiko Portofolio

$$\sigma p^2 = \left(\sum_{i=1}^{n} Wi . \beta i \right)^2 . \sigma_m^2 + \left(\sum_{i=1}^{n} Wi . \sigma_{ei} \right)^2$$

(Jogiyanto, 2013)

C. Analysis Method

The method of data analysis used in this study is quantitative descriptive analysis, which describes the data collected for the establishment of an optimal portfolio formed from the company's shares consistently listed in JII. The stages of data analysis are:

1. The collection of data from JII monthly closing share price for the period 2012-2014.
2. The calculation of stock return & risk
3. The calculation of ERBi and Cut off Point
4. The calculation of portfolio return & risk
5. The calculation of the weight of each share in the portfolio

4. RESULT AND DISCUSSION

A. Results Data Processing

1. Return and Stock Risk

Stocks categorized in the optimal portfolio candidates can be known from the expected returns earned on each stock. If the stock has a negative expected return, then the stock is not included in the calculation of optimal portfolio category. On the other hand, if the stock has a positive expected return, then caterorized optimal portfolio.

From the calculation results there are 14 stocks that have positive rates of return with the highest average individual stock returns owned by ICBC with the value of 0.02587, while 5 shares have the negative

average stock return, with the lowest individual stock returns owned by ASII with a value of -0.02848, so only 14 stocks can be categorized in the optimal portfolio candidates ICBP, LPKR, CPIN, PGAS, UNVR, INTP, SMGR, ASRI, AKRA, INDF, AALI, KLBF, LSIP, TLKM.

Tabel 4.2. Nilai Expected Return 19 Saham JII

No	Stock Data	Expected return
1	ICBP	0,02587
2	LPKR	0,02202
3	CPIN	0,01970
4	PGAS	0,01876
5	UNVR	0,01571
6	INTP	0,01491
7	SMGR	0,01383
8	ASRI	0,01265
9	AKRA	0,01136
10	INDF	0,01061
11	AALI	0,00803
12	KLBF	0,00517
13	LSIP	0,00423
14	TLKM	0,00254
15	PTBA	-0,00720
16	ADRO	-0,00875
17	UNTR	-0,00972
18	ITMG	-0,01396
19	ASII	-0,02848

Source: Appendice 2 and 3 (Data processed)

Table 4.3. Value of Standard deviation and Variant

No	Stock Data	Standard Deviation	Variant
1	ASII	0.16209	0.02627
2	TLKM	0.15709	0.02468
3	KLBF	0.15509	0.02405
4	LSIP	0.15004	0.02251
5	ASRI	0.13579	0.01844
6	ADRO	0.11731	0.01376
7	LPKR	0.11672	0.01362
8	ITMG	0.10854	0.01178
9	CPIN	0.10547	0.01112
10	AALI	0.10123	0.01025
11	AKRA	0.09948	0.00990
12	PTBA	0.09934	0.00987
13	INTP	0.08308	0.00690
14	UNTR	0.08070	0.00651
15	ICBP	0.07457	0.00556

16	SMGR	0.07366	0.00543
17	PGAS	0.07200	0.00518
18	UNVR	0.06654	0.00443
19	INDF	0.05423	0.00294

Source: Appendix 3 (processed data)

From table 4.3 above, it shows that stocks that have the largest stock risk is ASII stock with the value of 0.02627 variant and standard deviation 0.16209. While stocks that have the smallest stock risk is INDF shares with a value of variant 0.00294 and 0.05423 standard deviation.

2. Market Return (Rm)

Table 4.4. JCI data January 2012 - November 2015

Bulan	2012	2013	2014
Jan	3.941,69	4.453,70	4.418,76
Feb	3.985,21	4.795,79	4.620,22
Mar	4.121,55	4.940,99	4.768,28
Apr	4.180,73	5.034,07	4.840,15
Mei	3.832,82	5.068,63	4.893,91
Jun	3.955,58	4.818,90	4.878,58
Jul	4.142,34	4.610,38	5.088,80
Agu	4.060,33	4.195,09	5.136,86
Sep	4.262,56	4.316,18	5.137,58
Okt	4.350,29	4.510,63	5.089,55
Nov	4.276,14	4.256,44	5.149,89
Des	4.316,69	4.274,18	5.164,29

Source: INDX (processed data)

Result of calculation from market return (Rm) obtained result equal to 0,008423 and Deviation Standard equal to 0,03693. The market return is positive which can be interpreted that the investment in stock can provide profit.

3. **Risk-free returns**

In this research, because stock price used is stock data per month, hence risk free rate which is used to determine optimal portfolio in monthly unit. Namely the risk free rate per year is divided by 38 months; value of 0.00552 per month. The following is a table of monthly BI rate rates in January 2012 - December 2015

4. Covariance

5. Calculating stock covariates with this market reflects the relationship between individual stock returns and market returns. The result of covariance calculation between individual stock return and market return can be seen in Table 4.6.

Table 4.6. Covariance Calculation

No	Stock Data	Covariance
1	TLKM	0.00334
2	ASRI	0.00330
3	AKRA	0.00229
4	CPIN	0.00226
5	SMGR	0.00219
6	LPKR	0.00217
7	ICBP	0.00130
8	INTP	0.00120
9	INDF	0.00096
10	UNTR	0.00094
11	KLBF	0.00093
12	ASII	0.00071
13	PGAS	0.00060
14	PTBA	0.00051
15	LSIP	0.00044
16	UNVR	0.00039
17	ADRO	-0.00002
18	ITMG	-0.00010
19	AALI	-0.00049

Source: Appendix 3. (processed data)

A negative value of covariant means that the return of two stocks tends to move in the opposite direction, this indicates if the stock returns up, the market return will decrease and vice versa. While the value of a zero-value covariance indicates that the movement of two stocks is independent of each other which shows the stock return and the market return does not move in the same direction or opposite (Tandelilin, 2007).

6. Portfolio Risk

Table 4.7. Beta (β) Each Share

No	Stock Data	Beta
1	TLKM	2,44880
2	ASRI	2,41805
3	AKRA	1,68262
4	CPIN	1,65853
5	SMGR	1,60501
6	LPKR	1,59489
7	ICBP	0,95176
8	INTP	0,88237
9	INDF	0,70321
10	UNTR	0,68869
11	KLBF	0,68066
12	ASII	0,52397
13	PGAS	0,43691

14	PTBA	0,37401
15	LSIP	0,32630
16	UNVR	0,28714
17	ADRO	-0,01777
18	ITMG	-0,07508
19	AALI	-0,36283

Source: Appendix 3. (processed data)

For systematic risk based on table 4.7 above, it can be seen that from 19 stocks into the sample research there are 3 stocks that have beta () negative. Beta is a return sensitivity of a stock to the return of the market (Jogiyanto, 2013) The highest beta is owned by TLKM with a value of 2.44880, and the lowest beta is owned by AALI with a value of -0.36283. This can be interpreted if the market return increases one unit, then there will be an increase of TLKM stock return of 2.44880 units.

While for the highest non systematic risk is owned by AALI company with the value equal to 0,010258 while the lowest non systematic risk is owned by company of UNVR with value 0,004434. The result of calculation from non systematic risk can be seen in table 4.8.

Table 4.8. Non-Systematic Risk

No	Data Saham	Uniq Risk	Market Risk	Total Risk
1	TLKM	0,01650	0,00866	0,02517
2	ASRI	0,01047	0,00845	0,01892
3	AKRA	0,00604	0,00409	0,01013
4	CPIN	0,00737	0,00397	0,01135
5	SMGR	0,00191	0,00372	0,00563
6	LPKR	0,01016	0,00368	0,01383
7	ICBP	0,00433	0,00131	0,00563
8	INTP	0,00584	0,00112	0,00697
9	INDF	0,00227	0,00071	0,00298
10	UNTR	0,00587	0,00069	0,00655
11	KLBF	0,02342	0,00067	0,02409
12	ASII	0,02590	0,00040	0,02630
13	PGAS	0,00492	0,00028	0,00520
14	PTBA	0,00968	0,00020	0,00988
15	LSIP	0,02237	0,00015	0,02252
16	UNVR	0,00432	0,00012	0,00443
17	ADRO	0,01376	0,00000	0,01376
18	ITMG	0,01177	0,00001	0,01178
19	AALI	0,01007	0,00019	0,01026

Source: Appendix 3. (processed data)

7. Alpha Stock

The calculation of alpha is the difference of expected return of stock with beta multiplication and expected market return. The highest alpha is the ICBP with 0.01786 and the lowest ASII is -0.03289

Table 4.9. Alpha Shares

No	Stock Data	Alpha
1	ICBP	0,01786
2	PGAS	0,01509
3	UNVR	0,01329
4	AALI	0,01108
5	LPKR	0,00858
6	INTP	0,00748
7	CPIN	0,00573
8	INDF	0,00469
9	LSIP	0,00148
10	SMGR	0,00031
11	KLBF	-0,00056
12	AKRA	-0,00281
13	ASRI	-0,00772
14	ADRO	-0,00860
15	PTBA	-0,01035
16	ITMG	-0,01333
17	UNTR	-0,01552
18	TLKM	-0,01809
19	ASII	-0,03289

Source: Appendix 3. (processed data)

8. Optimal Portfolio

The steps to determine the optimal portfolio is, first calculate the ERB. Shares that have the largest value of ERB are the stocks that become the optimal portfolio candidates. In table 4.10 below, it can be seen stocks that have the largest ERB value until the smallest ERB value. The largest ERB is owned by UNVR company with ERB value 0.03550 and the smallest ERB value is owned by ALII company with value ERB -0.00692.

Table 4.10. ERB Value of each Share

No	Stock Data	ERBi
1	UNVR	0,03550
2	PGAS	0,03033
3	ICBP	0,02139
4	INTP	0,01065
5	LPKR	0,01035
6	CPIN	0,00855
7	INDF	0,00725
8	SMGR	0,00518
9	AKRA	0,00348
10	ASRI	0,00295
11	KLBF	-0,00051
12	TLKM	-0,00122
13	LSIP	-0,00393
14	AALI	-0,00692

Source: Appendix 3 (processed data)

Second, determine the value of Ai, Bi, Aj, Bj from each share. Third, determine the value of Ci. Fourth, determine the value of Cut Off Point (C *). The value of C * is the value of Ci where the last ERB value is still greater than the value of Ci. According Jogiyanto (2013) The bounding point (Ci) is the value of C for the i-th shares calculated from the cumulative values of A1 to Ai and values B1 to Bi. In table 4.11 below can be seen the calculation of Cut Off Point (C *)..

Table 4.11. Calculation of Value Ai, Bi, Aj, Bj, and Ci

No	Stock Data	Aj	Bj	Ci
1	UNVR	0,678303	3,064273	0,000921
2	PGAS	1,175552	3,588221	0,002505
3	ICBP	4,479418	3,848505	0,008514
4	INTP	1,419461	4,776619	0,010355
5	LPKR	2,591787	9,428541	0,013645
6	CPIN	3,190644	7,698617	0,017675
7	INDF	1,581457	2,035602	0,019687
8	SMGR	6,976036	3,754637	0,028633
9	AKRA	1,630062	6,849621	0,030475
10	ASRI	1,647918	12,761837	0,032066
11	KLBF	-0,010074	16,647272	0,031393
12	TLKM	-0,441965	17,079565	0,030207
13	LSIP	-0,018706	15,580681	0,029625
14	AALI	-0,090488	7,092023	0,029270

Source: Appendix 4 (processed data)

Next form the optimal portfolio. Shares having ERB values greater than or equal to the ERB value at the Ci point are listed into the optimum portfolio candidate, while the smallest ERB value of the ERB value at the Ci point is not incorporated into the optimal portfolio candidate. In table 4.12 below, it can be seen stocks that become candidates optimal portfolio.

The amount of cut-off point (C *) is the value of Ci where the last ERB value is still greater than the value of Ci (Jogiyanto, 2013). The value of C * is used to determine which stock point delimiters categorized as optimal portfolio candidates. Optimal portfolio formed from stocks that have ERB greater than or equal to cut-off rate. The result of calculation of C * value in this research is 0,010355.

From the results table 4:12 can be seen that there are 4 stocks that have value excess return to beta greater or equal to the value of cut-off point. The shares are UNVR, PGAS, ICBP, and INTP.

Table 4.12. Optimum Portfolio Candidate

No	Stock Data	ERBi	Ci	Ket
1	UNVR	0,03550	0,000921	Optimal
2	PGAS	0,03033	0,002505	Optimal
3	ICBP	0,02139	0,008514	Optimal
4	INTP	0,01065	0,010355	Optimal

	Cutt - Off Point	**0,01065**	**0,010355**	
5	LPKR	0,01035	0,013645	Not Optimal
6	CPIN	0,00855	0,017675	Not Optimal
7	INDF	0,00725	0,019687	Not Optimal
8	SMGR	0,00518	0,028633	Not Optimal
9	AKRA	0,00348	0,030475	Not Optimal
10	ASRI	0,00295	0,032066	Not Optimal
11	KLBF	-0,00051	0,031393	Tidak Optimal
12	TLKM	-0,00122	0,030207	Not Optimal
13	LSIP	-0,00393	0,029625	Not Optimal
14	AALI	-0,00692	0,029270	Not Optimal

Source: Appendix 4 (processed data)

9. Share Proportion

Calculating the amount of proportion of funds (Wi) is done by calculating the weighted scale (Zi) first. The calculation results can be seen in Table 4.13.

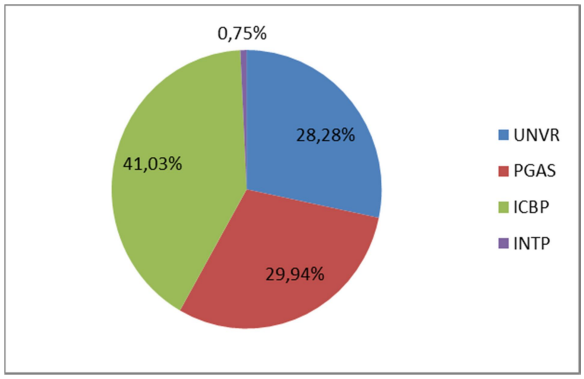
Table 4.13. Proportion of Preferred Shares

No	Stock Data	Zi	Wi	Percentage
1	UNVR	1,67319	0,28277	28,28%
2	PGAS	1,77187	0,29944	29,94%
3	ICBP	2,42802	0,41033	41,03%
4	INTP	0,04416	0,00746	0,75%
			1,00000	100%

Source: Appendix 5 (processed data)

Based on the above table, the highest optimum portfolio proportion is owned by ICBP shares with a share proportion of 0.41033 or 41.03% and for the lowest portfolio proportion is owned by INTP shares with a share proportion of 0.00746 or 0.75%.

4.1 Image: JII Stocks Composition Charts The period 2012-2014 which can form the Optimal Portfolio



Source: Appendix 5 (processed data)

10. Calculation of portfolio return and risk

Determining the Expected Return and the Risk of the portfolio is how much the return will be obtained risk that will be experienced by the investor every increase in the rate of return. The higher the risk the higher the rate of return. The calculation of return and portfolio risk can be seen in Table 4.14.

Table 4.14 Optimal Portfolio Calculation

NO	Optimum Portofolio	Value
1	Alpha	0,01566
2	Beta	0,60914
3	Risiko sistematik	0,00051
4	Risiko unik	0,00152
5	Total Risiko	0,00202
6	Expected Return	0,02079

Source: Appendix 6 (processed data)

B. Interpretation of Results and Discussion

The first step is to determine the expected return to choose which company stock will be included in the next calculation and enter the candidate for the optimal portfolio formation. If the stock has a negative expected return, then the stock is not included in the calculation of optimal portfolio determination. Conversely, if the stock has a positive expected return, then the stock entered in the calculation of optimal portfolio determination.

From the results of the calculation of 19 stocks, there are 5 stocks that have a negative expected return value of ADRO (Adaro Energy Tbk), ASII (Astra International Tbk), ITMG (Indo Tambangraya Megah Tbk), PTBA (Bukit Asam Coal Mine Tbk), and UNTR (United Tractors Tbk), so there are only 14 stocks that are included in the optimal portfolio.

The criteria in determining the optimal portfolio is ERB ≥ Ci, from the calculation of 14 stocks by comparing ERB with Ci, then only 4 shares are eligible to enter in the optimal portfolio candidates. Ci calculations are used to determine the value of cut-off point (C *) performed by observing the maximum Ci value of a Ci series of shares. The value of C * is used to determine which stock point delimiters are categorized as optimal portfolio candidates.

The calculation result shows C * value of 0.010355 and is in INTP (Indocement Tunggal Prakarsa Tbk) shares. The conclusion of the data is the shares that are categorized as the optimal portfolio are the shares of UNVR (Unilever Indonesia Tbk), PGAS (Perusahaan Gas Negara (Persero) Tbk), ICBP (Indofood CBP Sukses Makmur Tbk) and INTP (Indocement Tunggal PrakarsaTbk).

The composition of the proportion (Wi) to form an optimal portfolio is 0.28277 (28.28%) for the shares of UNVR (Unilever Indonesia Tbk), 0.29944 (29.94%) for PGAS (Perusahaan Gas Negara (Persero) Tbk) ,

0.041033 (41.03%) for ICBP (Indofood CBP Sukses Makmur Tbk) and 0.00746 (0.75%) shares for INTP Indocement Tunggal Prakarsa Tbk shares.

Based on the results of portfolio calculation in JII period January 2012 - December 2014 investors can invest in the four stocks above and the composition of this portfolio can be a reference for investors in the following years if no other stocks have a higher return on the risk or in other words the four shares must have a higher return on risk than other shares in the Jakarta Islamic Index.

5. CONCLUSION

Conclusion

Based on the analysis with the calculation using Single Index model method on stocks that are listed in Jakarta Islamic Index (JII) in Indonesia Stock Exchange period of January 2012-December 2014 and it can be drawn conclusion as follows:

1. There are 4 stocks that meet the criteria for the establishment of an optimum portfolio of shares of UNVR (Unilever Indonesia Tbk), PGAS (Perusahaan Gas Negara Tbk), ICBP (Indofood CBP Sukses Makmur Tbk) and INTP Indocement Tunggal Prakarsa Tbk).
2. The amount of the proportion of funds worth investing in the five stocks is as follows:
    a. 28.28% or 0.28277 for the shares of UNVR (Unilever Indonesia Tbk)
    b. 29.94% or 0.29944 for shares of PGAS (Perusahaan Gas Negara (Persero) Tbk),
    c. 41.03% or 0.041033 for ICBP shares (Indofood CBP Sukses Makmur Tbk)
    d. 0.75% or 0.00746 for INTP Indocement Tunggal Prakarsa Tbk shares).
3. The expected Return generated by the portfolio is 0.02079 (2.079%) with the risk level of 0.00202 (0.202%)

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