Determination of Efficient and Inefficient Stocks
with the Capital Asset Price Model (CAPM) Method

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ARTICLEDETAILS	ABSTRACTS
History *Received : February* *RevisedFormat : March* *Accepted : April* *Keywords :* capital asset pricing model, beta, efficient stock	Stock selection by an investor needs to be done with a variety of existing analysis for example the application of the Capital Asset Price Model. In the Composite Stock Index known as LQ45 shares. LQ45 shares have a unique characteristic that is their shares are liquid, meaning their shares are favored by investors because the average has very good fundamentals. For this reason, in this study the selected stocks, LQ45 shares, are used to determine which shares are worth buying and which shares are not worth buying. Because the names of companies incorporated in LQ45 continue to change from year to year, in this study using a sample of LQ45 company data, amounting to 30 companies where the company was chosen because from 2017 to 2019, the company remains in the LQ45 stock group. For research data sources sourced from Yahoo Finance and take a variety of reading sources both through journals and online media. As for determining efficient and inefficient stocks lies in the value of the individual Expected Return or often abbreviated as [E (Ri)]. If the Individual Expected Return is greater than the value of the Individual Return (Ri) then the shares are in the efficient stock.

INTRODUCTION

The Indonesian financial system is more and more affected by the Indonesian home market in very proper situation in sustaining the economy. Indonesia is a united states that has the fourth biggest population, the 1/3 largest democratic power, and for the degree of Southeast Asia the Indonesian economic system is at the 13th degree in the world so that this causes local and foreign traders to be involved in investing in Indonesia in the hope of getting a return on investment already implanted. A united states can be said to be advanced if the country's financial boom has developed rapidly. Owned shares will furnish benefits for shareholders who are regularly recognized through the charge return acquired in accordance with the stage of hazard that can be borne by way of traders (Susanti & Putra, 2019). In addition to being influenced via the domestic market, Indonesia's economic system is additionally affected with the aid of the stock market, recognised as the Composite Stock Price Index (CSPI). The percentage alternate in the IHSG has an evaluation in calculating the return cost of shares on the Indonesia Stock Exchange (Adisetiawan, 2017).

In inspecting the advantages and risks that will be confronted by investors, the CAPM can be used as an analysis to describe the relationship between returns and risks contained in a stock traded on the Indonesia Stock Exchange (Liani, 2017). When the market is in balance, the danger evaluation of stocks will be more influenced by means of the Beta indicator (β) with the capital price asset model (CPAM). CPAM consists of Risk market (Rm), Risk free (Rf), beta (β) and Expected Return [E (Ri)]. In addition, the CAPM evaluation is used to determine the forecasting of hazard correlations with expected returns and decide the price of company assets (Ditha Indah et al., 2019). The assumption contained

in the CAPM is that the capital market is efficient so that all belongings owned through agencies that are categorised into LQ45 on the Indonesia Stock Exchange will be perfectly divided and at the time of sale and purchase, the company's shares are sold. At CAPM, market portfolios are very influential the place traders will normally diversify and select an most useful portfolio based totally on know how of the risks and returns provided by way of these shares. A stock will have an overvalued and overrated state, where these two conditions provide a signal that the shares that are grouped in LQ45 are in an environment friendly or inefficient situation (Riska et al., 2014).

When the shares are overvalued, the shares are ready to be sold. On the opposite when the shares are undervalued, the shares are well worth buying. This is completed by traders by means of capacity of undervalued shares which are efficient shares and selling shares that are overvalued or inefficient. The shares on the Indonesia Stock Exchange are LQ45 kind shares and normal shares, for LQ45 shares amounting to 45 organizations that have high capital and liquidity. From the lookup of 45 corporations categorized as LQ45 shares, solely 30 companies had been selected to be sampled in this study. A pattern of 30 corporations used to be chosen because these shares continually fall into the LQ45 category from 2017-2019. The LQ45 team company facts protected in this study are:

Table 1. LQ45 Company Sample Data from 2017-2019

No.	Stock Code	Company Name
1.	ADRO	PT. Adaro Energy Tbk
2.	AKRA	PT. AKR Corporindo Tbk
3.	ANTM	PT. Aneka Tambang Tbk
4.	ASII	PT. Astra International Tbk
5.	BBCA	PT. Bank Central Asia Tbk
6.	BBNI	PT. Bank Negara Indonesia Tbk
7.	BBRI	PT. Bank Rakyat Indonesia Tbk
8.	BBTN	PT. Bank Tabungan Negara Tbk
9.	BMRI	PT. Bank Mandiri Tbk
10.	BRPT	PT. Barito Pacific Tbk
11.	BSDE	PT. Bumi Serpong Damai Tbk
12.	EXCL	PT. XL Axiata Tbk.
13.	GGRM	PT. Gudang Garam Tbk.
14.	HMSP	PT. Hanjaya Mandala Sampoerna Tbk
15.	ICBP	PT. Indofood CBP Sukses Makmur Tbk
16.	INCO	PT. Vale Indonesia Tbk
17.	INDF	PT. Indofood Sukses Makmur Tbk
18.	INTP	PT. Indocement Tunggal Prakarsa Tbk
19.	JSMR	PT. Jasa Marga (Persero) Tbk
20.	KLBF	PT. Kalbe Farma Tbk.
21.	LPPF	PT. Matahari Department Store Tbk
22.	MNCN	PT. Media Nusantara Citra Tbk
23.	PGAS	PT. Perusahaan Gas Negara Tbk
24.	PTBA	PT. Bukit Asam Tbk
25.	PTPP	PT. PP (Persero) Tbk
26.	SCMA	PT. Surya Citra Media Tbk
27.	SMGR	PT. Semen Indonesia (Persero) Tbk

28.	SRIL	PT. Sri Rejeki Isman Tbk
29.	TLKM	PT. Telekomunikasi Indonesia Tbk
30.	UNTR	PT. United Tractors Tbk

Source: Yahoo Finance, 2020

Furthermore, for the common closing of the stock price from 2017-2019 as follows:

Table 2. Closing Stock Price of LQ45 Company Stock Prices from 2017-2019

No.	Stock Code	Company Name	Average Stock Price	
1	ADRO	PT. Adaro Energy Tbk	Rp	1.634
2	AKRA	PT. AKR Corporindo Tbk	Rp	1.634
3	ANTM	PT. Aneka Tambang Tbk	Rp	1.634
4	ASII	PT. Astra International Tbk	Rp	7.679
5	BBCA	PT. Bank Central Asia Tbk	Rp	24.001
6	BBNI	PT. Bank Negara Indonesia Tbk	Rp	7.927
7	BBRI	PT. Bank Rakyat Indonesia Tbk	Rp	3.476
8	BBTN	PT. Bank Tabungan Negara Tbk	Rp	2.625
9	BMRI	PT. Bank Mandiri Tbk	Rp	7.067
10	BRPT	PT. Barito Pacific Tbk	Rp	856
11	BSDE	PT. Bumi Serpong Damai Tbk	Rp	1.551
12	EXCL	PT. XL Axiata Tbk.	Rp	2.928
13	GGRM	PT. Gudang Garam Tbk.	Rp	72.294
14	HMSP	PT. Hanjaya Mandala Sampoerna Tbk	Rp	3.609
15	ICBP	PT. Indofood CBP Sukses Makmur Tbk	Rp	9.434
16	INCO	PT. Vale Indonesia Tbk	Rp	3.117
17	INDF	PT. Indofood Sukses Makmur Tbk	Rp	7.447
18	INTP	PT. Indocement Tunggal Prakarsa Tbk	Rp	18.834
19	JSMR	PT. Jasa Marga (Persero) Tbk	Rp	5.189
20	KLBF	PT. Kalbe Farma Tbk.	Rp	1.532
21	LPPF	PT. Matahari Department Store Tbk	Rp	8.193
22	MNCN	PT. Media Nusantara Citra Tbk	Rp	1.284
23	PGAS	PT. Perusahaan Gas Negara Tbk	Rp	2.189
24	PTBA	PT. Bukit Asam Tbk	Rp	3.103
25	PTPP	PT. PP (Persero) Tbk	Rp	2.384
26	SCMA	PT. Surya Citra Media Tbk	Rp	2.092
27	SMGR	PT. Semen Indonesia (Persero) Tbk	Rp	10.655
28	SRIL	PT. Sri Rejeki Isman Tbk	Rp	335
29	TLKM	PT. Telekomunikasi Indonesia Tbk	Rp	4.029
30	UNTR	PT. United Tractors Tbk	Rp	9.332

Source : Data Processed, 2020

As for numerous studies conducted by means of Wildan Deny et al. (2015) related to the use of CPAM analysis in figuring out environment friendly or inefficient stocks, where the outcomes generated from three sample groups were 21 shares categorised as efficient and 16 shares classified as inefficient shares. In addition, the consequences of lookup conducted by means of Riska et al. (2014) states that there are six businesses that can be grouped

into environment friendly shares and one inefficient stock. Besides that, a find out about carried out via Susanti & Putra (2019) noted that there had been 10 LQ45 shares which had been categorised as environment friendly shares while the ultimate 10 company share of LQ45 had been categorized as inefficient shares.

RESEARCH METHOD

The records analysis approach uses descriptive quantitative analysis. The populace consists of the LQ45 Index from 2017-2019. For secondary data in this find out about obtained from quite a number parties such as Library Research and Online Research are additionally utilized in this study. While the sampling technique uses purposive sampling method. According to Susanti & Putra (2019) states the price of return of character shares or regularly abbreviated as Ri (Return Individual) is an analysis to calculate the price of return of a stock in a positive period. As for how to calculate the charge of return of character shares, namely:

$$\text{Ri} = \frac{P_t - (P_{t-1})}{P_{t-1}}$$

With Ri is Rate of return of man or woman shares, and Pt is duration share rate t and then Pt-1 is Share charge length t-1. For data evaluation of market returns used are sourced from the Composite Stock Price Index. The Composite Stock Price Index is one of the analyzes consisting of normal inventory rate data which has a very influential energy in monetary occasions that take place in Indonesia (Ni Wayan Sri & Masithah, 2016). According to Susanti & Putra (2019), the system used to calculate market returns is as follows:

$$\text{Rm} = \frac{\text{IHSG}_t - \text{IHSG}_{t-1}}{\text{IHSG}_{t-1}}$$

Where Rm is Market rate of return, and IHSG is duration for stock charge index t then IHSGt-1 is stock price index length t-1. Beside that in evaluation return of stock, ought to be calculate hazard free. Risk free is an analysis to calculate the safe fee of return. The information used in this Risk free calculation is Bank Indonesia Certification (Susanti & Putra, 2019). After analysis return market, the subsequent step for calculate anticipated return of persona is calculate sytematic risk. According to Siti & Yaya (2018) one way to calculate systematic threat is to use beta analysis. Beta comparison is a system of examining the movement of the price of returns in a protection or can also be said as an evaluation of the fee of market returns. According Susanti & Putra (2019), the components used in calculating the fee of the Stock Beta is :

$$\beta_i = \frac{\sigma im}{\sigma^2 m}$$

Where βI is stock beta and σim is covariance return market also $\sigma^2 m$ is variance market. After examining person returns, market returns, chance free and beta values on stocks, it is continued by means of examining expected returns. Expected return (expected return) is one of the analyzes aimed at making policies in investing.

The anticipated investment return evaluation has very essential function compared to different funding analyzes (Alifiani, 2017). According to Susanti & Putra (2019), this anticipated rate of return analysis can also make a calculation between hazard and predicted investment consist of predicted returns person [(Ri)], risk free (Rf), beta (β) and expected return market [E (Rm)] can be make system as under :

$$E(Ri) = Rf + \beta i \ [E(Rm) - Rf]$$

To illustrate the price of an individual's anticipated return, a Security Market Line plan is made the place this design illustrates the relationship between the cost of an individual's expected return and systematic chance (Beta). The analysis in the Security Market Line if the increased the beta fee of a stock, the expected return on funding will be even larger (JylhÄ, 2018).

RESULT AND DISCUSSION

Profit in shares which is regularly referred to as dividends as a form of income sharing for shareholders is one structure of individual stock returns. Monthly closing fee information on shares is used to analyze the person returns of each LQ45 enterprise stock. Based on an analysis of 30 company shares that are labeled into LQ45 produces statistics on individual stock returns as follows:

Table 3. Return Individual Company Stock Returns LQ45 from 2017-2019

No.	Stock Code	Company Name	Return Individual (Ri)
1.	ADRO	PT. Adaro Energy Tbk	0,30 %
2.	AKRA	PT. AKR Corporindo Tbk	0,29 %
3.	ANTM	PT. Aneka Tambang Tbk	-0,30 %
4.	ASII	PT. Astra International Tbk	-0,24 %
5.	BBCA	PT. Bank Central Asia Tbk	2,27 %
6.	BBNI	PT. Bank Negara Indonesia Tbk	1,19 %
7.	BBRI	PT. Bank Rakyat Indonesia Tbk	1,92 %
8.	BBTN	PT. Bank Tabungan Negara Tbk	0,86 %
9.	BMRI	PT. Bank Mandiri Tbk	1,06 %
10.	BRPT	PT. Barito Pacific Tbk	0,30 %
11.	BSDE	PT. Bumi Serpong Damai Tbk	0,29 %
12.	EXCL	PT. XL Axiata Tbk.	-0,30 %
13.	GGRM	PT. Gudang Garam Tbk.	-0,24 %
14.	HMSP	PT. Hanjaya Mandala Sampoerna Tbk	2,27 %
15.	ICBP	PT. Indofood CBP Sukses Makmur Tbk	1,19 %
16.	INCO	PT. Vale Indonesia Tbk	1,92 %
17.	INDF	PT. Indofood Sukses Makmur Tbk	0,86 %
18.	INTP	PT. Indocement Tunggal Prakarsa Tbk	1,06 %
19.	JSMR	PT. Jasa Marga (Persero) Tbk	2,12 %
20.	KLBF	PT. Kalbe Farma Tbk.	0,15 %
21.	LPPF	PT. Matahari Department Store Tbk	1,26 %
22.	MNCN	PT. Media Nusantara Citra Tbk	0,86 %
23.	PGAS	PT. Perusahaan Gas Negara Tbk	0,46 %
24.	PTBA	PT. Bukit Asam Tbk	-2,57 %
25.	PTPP	PT. PP (Persero) Tbk	0,80 %
26.	SCMA	PT. Surya Citra Media Tbk	0,00 %
27.	SMGR	PT. Semen Indonesia (Persero) Tbk	0,99 %
28.	SRIL	PT. Sri Rejeki Isman Tbk	0,70 %
29.	TLKM	PT. Telekomunikasi Indonesia Tbk	0,21 %
30.	UNTR	PT. United Tractors Tbk	0,25 %

Source : Data Processed, 2020

In Table 3, LQ45 Company's Individual Stock Returns in 2017-2019, it can be seen that the enterprise with the very best stock return is PT Barito Pacific Tbk (BRPT), with a Ri price of 23.99% and the lowest stock return is located at the Matahari Department Store (LPPF), which is -2.57%. The effects of this learn about differed performed by using Susanti & Putra (2019) where the consequences of LQ45 organization lookup from 2012-2016 bought had been the highest stock return value held via Indofood Sukses Makmur, Tbk (ICBP) with a Ri value of 3.18% and a value of The lowest stock return is held by using Semen Indonesia (Persero) Tbk (SMGR) of -1.1%. For the evaluation of calculations of market returns, the source of the statistics used is the Composite Stock Index (CSPI) data. The Composite Stock Index is used because it is capable to signify the whole trading things to do of shares contained in the Indonesia Stock Exchange (IDX).

Table 4. Market Returns (IHSG) for 2017-2019

No.	Month	IHSG	Return	No.	Month	IHSG	Return
1.	January 2017	6.299,54	36,50%	19.	July 2018	5.799,24	-2,31%
2.	February 2017	6.011,83	-4,57%	20.	Agust 2018	5.983,59	3,18%
3.	March 2017	6.228,32	3,60%	21.	September 2018	5.994,60	0,18%
4.	April 2017	6.169,10	-0,95%	22.	October 2018	6.188,99	3,24%
5.	May 2017	6.328,47	2,58%	23.	November 2018	6.597,22	6,60%
6.	June 2017	6.390,50	0,98%	24.	December 2018	6.605,63	0,13%
7.	July 2017	6.358,63	-0,50%	25.	January 2019	6.355,65	-3,78%
8.	August 2017	6.209,12	-2,35%	26.	February 2019	5.952,14	-6,35%
9.	September 2017	6.455,35	3,97%	27.	March 2019	6.005,78	0,90%
10.	October 2017	6.468,75	0,21%	28.	April 2019	5.900,85	-1,75%
11.	November 2017	6.443,35	-0,39%	29.	May 2019	5.864,06	-0,62%
12.	December 2017	6.532,97	1,39%	30.	June 2019	5.840,94	-0,39%
13.	January 2018	6.194,50	-5,18%	31.	July 2019	5.829,71	-0,19%
14.	February 2018	6.056,12	-2,23%	32.	Agust 2019	5.738,15	-1,57%
15.	March 2018	5.831,65	-3,71%	33.	September 2019	5.685,30	-0,92%
16.	April 2018	5.976,55	2,48%	34.	October 2019	5.568,11	-2,06%
17.	May 2018	6.018,46	0,70%	35.	November 2019	5.386,69	-3,26%
18.	June 2018	5.936,44	-1,36%	36.	December 2019	5.294,10	-1,72%
Total		20,47%				Maximum	36,50%
E(Rm)		-5,79%				Minimum	-6,35%

Source : Data Processed, 2020

Table 4 explains, the LQ45 Company's Market Return from 2017-2019 which can be analyzed that the average market return (Rm) is -5,79%. From the evaluation it can additionally be explained that in February 2019 it has the lowest market price of return of -6,35% so that it can be defined that in that month IHSG trading skilled an unfavourable state of affairs for investors. Different from January 2017 from the desk information above the very best market return is 36,50%, this ocurs because there is a very big soar from the CSPI where in December 2016, the CSPI used to be 4.615,16 whilst in January 2017 the CSPI was 6.299,54 so that in January 2017 the JCI return fee was 36,50%. This should imply JCI index skilled a favorable state of affairs for investors. The outcome acquired in desk 4 vary from results of research performed through Susanti & Putra (2019) the place the outcome of lookup on LQ45 corporations from 2012-2016 get a market return of 1%. For records sources from risk free returns sourced from Bank Indonesia hobby rates. The risk free (Rf) degree outcomes are as follows:

Table 5. Risk Free (Rf) level results from 2017-2019

No.	Month	In 2017	In 2018	In 2019
1.	January	4,75%	4,25%	6,00%
2.	February	4,75%	4,25%	6,00%
3.	March	4,75%	4,25%	6,00%
4.	April	4,75%	4,25%	6,00%
5.	May	4,75%	4,50%	6,00%
6.	June	4,75%	5,25%	6,00%
7.	July	4,75%	5,25%	5,75%
8.	Agust	4,50%	5,50%	5,50%
9.	September	4,25%	5,75%	5,25%
10.	October	4,25%	5,75%	5,00%
11.	November	4,25%	6,00%	5,00%
12.	December	4,25%	6,00%	5,00%
Average		4,56%	5,08%	5,63%
Average in 3 Years		5,09%		
Maxsimum		6,00%		
Minimum		4,25%		

Source : Data Processed, 2020

In table 5 above, the Rf calculation effects from 2017-2019 can be viewed that the average cost of risk free from 2017-2019 is 5,09% with the absolute best hazard free rate of 6,00% and the lowest of 4,25%. This result is distinctive from lookup conducted via Susanti & Putra (2019) the place for 2012-2016 the threat free value is 6,66%. Systematic chance is a chance held by using shares which is regularly referred to as Beta (βi). The relationship between the charge of return of a stock with the price of market return will be seen by calculating the inventory beta. The data on the systematic chance analysis of 30 organisation shares in this study is sourced from Yahoo Finance data, namely:

Table 6. Results of the calculation of Systematic Risk of Individual Stocks (βi)

No.	Code Stock	Company Name	Beta
1.	ADRO	PT. Adaro Energy Tbk	1,26
2.	AKRA	PT. AKR Corporindo Tbk	0,43
3.	ANTM	PT. Aneka Tambang Tbk	1,16
4.	ASII	PT. Astra International Tbk	0,44
5.	BBCA	PT. Bank Central Asia Tbk	0,34
6.	BBNI	PT. Bank Negara Indonesia Tbk	0,70
7.	BBRI	PT. Bank Rakyat Indonesia Tbk	0,57
8.	BBTN	PT. Bank Tabungan Negara Tbk	0,82
9.	BMRI	PT. Bank Mandiri Tbk	0,49
10.	BRPT	PT. Barito Pacific Tbk	1,16
11.	BSDE	PT. Bumi Serpong Damai Tbk	0,80
12.	EXCL	PT. XL Axiata Tbk.	0,28
13.	GGRM	PT. Gudang Garam Tbk.	0,20
14.	HMSP	PT. Hanjaya Mandala Sampoerna Tbk	0,20
15.	ICBP	PT. Indofood CBP Sukses Makmur Tbk	-0,08
16.	INCO	PT. Vale Indonesia Tbk	1,49

17.	INDF	PT. Indofood Sukses Makmur Tbk	0,30
18.	INTP	PT. Indocement Tunggal Prakarsa Tbk	0,56
19.	JSMR	PT. Jasa Marga (Persero) Tbk	0,39
20.	KLBF	PT. Kalbe Farma Tbk.	0,62
21.	LPPF	PT. Matahari Department Store Tbk	0,72
22.	MNCN	PT. Media Nusantara Citra Tbk	1,10
23.	PGAS	PT. Perusahaan Gas Negara Tbk	1,28
24.	PTBA	PT. Bukit Asam Tbk	1,39
25.	PTPP	PT. PP (Persero) Tbk	1,31
26.	SCMA	PT. Surya Citra Media Tbk	0,75
27.	SMGR	PT. Semen Indonesia (Persero) Tbk	0,79
28.	SRIL	PT. Sri Rejeki Isman Tbk	0,56
29.	TLKM	PT. Telekomunikasi Indonesia Tbk	-0,13
30.	UNTR	PT. United Tractors Tbk	0,63

Source : Data Processed, 2020

From the table in 6, it can be viewed the consequences of the systematic risk calculation of stocks which indicates an common cost of βi of 0,69 which potential that universal business enterprise shares that are grouped into LQ45 have little systematic danger and are no longer too sensitive in responding to changes in market costs. This is extra is extraordinary from lookup carried out by way of Susanti & Putra (2019) the place the consequences of the beta value of shares received amounted to 0,1410577. After evaluation of calculation of Systematic Risk of Individual Stocks, the subsequent step is calculate Expected Return of Individual [E(Ri)]. The degree of profits to be anticipated via buyers from stock investments made is regularly known with the aid of the identify of the anticipated rate of return [E(Ri)]. The outcomes of the [E(Ri)] calculation are as follows:

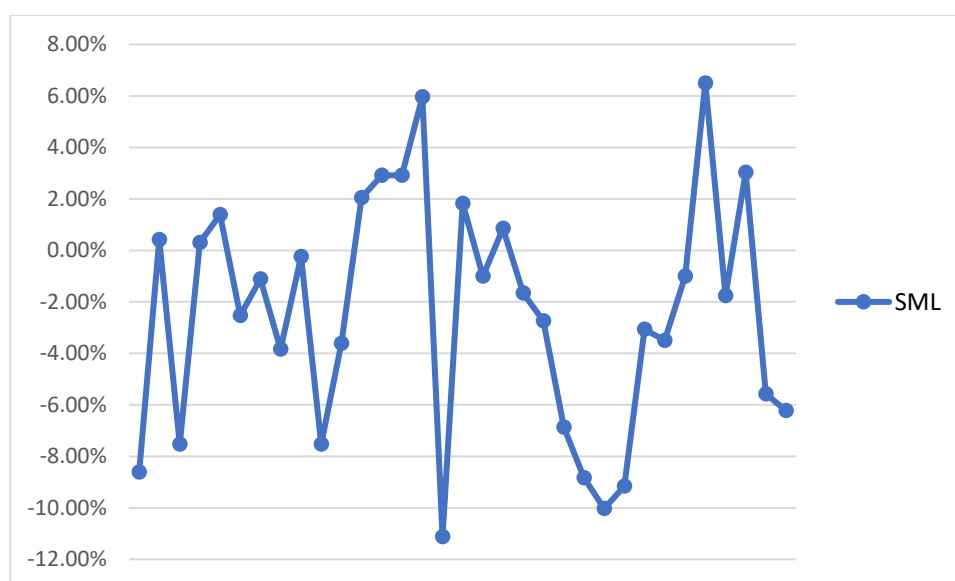Table 7. The calculation results [E(Ri)]

No.	Code Stock	E(Ri) CAPM	No.	Code Stock	E(Ri) CAPM
1.	ADRO	-8,62%	16.	INCO	-11,12%
2.	AKRA	0,41%	17.	INDF	1,83%
3.	ANTM	-7,53%	18.	INTP	-1,00%
4.	ASII	0,30%	19.	JSMR	0,85%
5.	BBCA	1,39%	20.	KLBF	-1,65%
6.	BBNI	-2,52%	21.	LPPF	-2,74%
7.	BBRI	-1,11%	22.	MNCN	-6,88%
8.	BBTN	-3,83%	23.	PGAS	-8,83%
9.	BMRI	-0,24%	24.	PTBA	-10,03%
10.	BRPT	-7,53%	25.	PTPP	-9,16%
11.	BSDE	-3,61%	26.	SCMA	-3,07%
12.	EXCL	2,04%	27.	SMGR	-3,50%
13.	GGRM	2,91%	28.	SRIL	-1,00%
14.	HMSP	2,91%	29.	TLKM	6,50%
15.	ICBP	5,96%	30.	UNTR	-1,76%

Source : Data Processed, 2020

From the records in table 5, it is defined that traders who assume the absolute best predicted return of [E(Ri)] are 6,50%, particularly TLKM and the business enterprise with the lowest expected return [E(Ri)] is INCO of -11,12%. The consequences of this study differed through Susanti & Putra (2019) on the [E (Ri)] fee of LQ45 companies from 2012-2016 the place the results received had been the easiest [E (Ri)] values, particularly the Alam Sutera Realty Tbk business enterprise with a cost of 1,16% and for businesses with the lowest [E (Ri)] value, namely Indofood CBP Sukses Makmur Tbk at 0,02%.

To illustrate the CAPM model, a Security Market Line chart or often recognised as SML was made. The relationship between systematic threat or beta (β) and expected return is illustrated graphically as follows:

Figure 1 : Security Market Line (SML) Graphic

Source : Data Processed, 2020

After analysis Expected Return of Individual and make Security Market Line Graphic, the next step for analysis is stock clasification. Stock classification can be devided come to be two is efficient stock and inefficient stock. From the evaluation described above, the shares classified as environment friendly and inefficient stocks are as follows:

Table 8. Classification Stock in Indeks LQ45

No.	Code Stock	Ri	E(Ri) CAPM	Category
1	ADRO	0,30%	-8,62%	Efficient
2	AKRA	0,29%	0,41%	Inefficient
3	ANTM	-0,30%	-7,53%	Efficient
4	ASII	-0,24%	0,30%	Inefficient
5	BBCA	2,27%	1,39%	Efficient
6	BBNI	1,19%	-2,52%	Efficient
7	BBRI	1,92%	-1,11%	Efficient
8	BBTN	0,86%	-3,83%	Efficient
9	BMRI	1,06%	-0,24%	Efficient
10	BRPT	23,99%	-7,53%	Efficient
11	BSDE	-0,81%	-3,61%	Efficient

12	EXCL	0,66%	2,04%	Inefficient
13	GGRM	-0,15%	2,91%	Inefficient
14	HMSP	-1,44%	2,91%	Inefficient
15	ICBP	0,89%	5,96%	Inefficient
16	INCO	2,12%	-11,12%	Efficient
17	INDF	0,15%	1,83%	Inefficient
18	INTP	1,26%	-1,00%	Efficient
19	JSMR	0,86%	0,85%	Efficient
20	KLBF	0,46%	-1,65%	Efficient
21	LPPF	-2,57%	-2,74%	Efficient
22	MNCN	0,80%	-6,88%	Efficient
23	PGAS	0,00%	-8,83%	Efficient
24	PTBA	0,99%	-10,03%	Efficient
25	PTPP	-1,26%	-9,16%	Efficient
26	SCMA	-1,50%	-3,07%	Efficient
27	SMGR	1,31%	-3,50%	Efficient
28	SRIL	0,70%	-1,00%	Efficient
29	TLKM	0,21%	6,50%	Inefficient
30	UNTR	0,25%	-1,76%	Efficient

Source : Data Processed, 2020

From the records in table 8, it can be explained that the outcomes of classifying LQ45 shares in which there are 22 LQ45 groups whose shares are labeled as environment friendly and the ultimate 8 businesses whose shares can be grouped into inefficient shares. As for numerous factors that decide grouping, through evaluating between Ri and E (Ri), if Ri> E (Ri) then the shares will be grouped into environment friendly shares, but conversely if Ri no longer efficient. And if the outcomes of the E (Ri) evaluation exhibit that the stock is efficient, then the stock ought to be offered and used as an investment portfolio. This is distinct from research carried out by Susanti & Putra (2019) where from the results of an analysis of 20 LQ45 groups from 2012-2016 classified as environment friendly shares by 10 agencies and the remaining 10 groups are grouped into inefficient shares.

CONCLUSION

The conclusions of this study include:
1. For individual returns in the LQ45 stock group from 2017 to 2019, it consists of shares with the highest return held by PT. Barito Pacific Tbk of 23.99%, while the lowest rate of return held by PT. Matahari Department Store Tbk by -2.57%.

2. The level of positive stock returns for the LQ45 stock group from 2017 to 2019, namely shares with the code ADRO, AKRA, BBCA, BBNI, BBRI, BBTN, BMRI, BRPT, EXCL, ICBP, INCO, INDF, INTP, JSMR, KLBF, MNCN, PGAS, PTBA, SMGR, SRIL, TLKM, UNTR, while stocks that have a negative return value for the LQ45 stock group from 2017 to 2019 include ANTM, ASII, BSDE, GGRM, HMSP, LPPF, PTPP and SCMA.

3. The highest Composite Stock Price Index (CSPI) from 2017 to 2019 is 6,605.63 and the lowest Composite Stock Price Index (CSPI) from 2017 to 2019 is 5,294.10. Whereas the highest rate of return on IHSG from 2017 to 2019 was 36.50% and the lowest return rate of IHSG from 2017 to 2019 was -6.35%.
4. The Risk Free (Rf) level is taken from the interest rate of Bank Indonesia Certificates from 2017 to 2019. The highest SBI interest rate occurs in January to June 2019 at 6% while the

lowest SBI interest rate occurs in September 2017 to month April 2018 amounted to 4.25%.

5. Beta value for each share in this study is taken from yahoo finance data where the highest beta value is held by the company PT. Vale Indonesia Tbk (INCO) with a value of 1.49 and the lowest beta value held by the company PT. Telecommunications Indonesia Indonesia. (TLKM) with a value of -0.13.

6. The highest level of E(Ri) value is held by the company PT. Telecommunications Indonesia Indonesia. (TLKM) of 6.50% and the lowest E(Ri) value held by the company PT. Vale Indonesia Tbk (INCO) of -11.12%.

7. Efficient shares are shares of companies that are worth buying into stock portfolios. The provisions of an efficient stock that is if the value of Ri> E (Ri). From this formula, efficient stocks are companies that have ADRO, ANTM, BBCA, BBNI, BBRI, BBTN, BMRI, BRPT, BSDE, INCO, INTP, JSMR, KLBF, LPPF, MNCN, PGAS, PTBA, PTPPP , SCMA, SMGR, SRIL, UNTR, WIKA, WSKT.

8. While inefficient shares are shares of companies that are not eligible to be purchased to be used as stock portfolios. The uncertainty of stock is that is if the value of Ri <E (Ri). From this formulation, the inefficient shares are company shares that have AKRA, ASII, EXCL, GGRM, HMSP, ICBP, INDF, TLKM and UNVR codes.

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