Investment Decisions on Indonesia Energy Sector Companies By Capital Asset Pricing Model Model

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ABSTRACT

This research was conducted to analyze the level of investment feasibility in IDX index stocks for the 2022 period using the Capital Asset Pricing Model (CAPM) method in determining investment decisions. This type of quantitative research is descriptive. The population of this study is Oil & Gas Storage, Distribution companies listed on the IDX-IC index for the period January - December 2022. The samples are 8 company shares that meet the criteria set by the researcher. This study uses SPSS linear regression analysis to determine the beta coefficient of the Capital Asset Pricing Modeling (CAPM) method and compares the expected return with the stock market rate of return during the observation period to further distinguish between efficient and inefficient stocks. The results of the observations show that 7 companies have efficient shares and 1 company that has inefficient shares which can be seen in the SML Security Market Line (SML) graph or the securities market line (GPS) of the CAPM model for efficient shares and inefficient shares.
Keywords: CAPM, investment decisions, stocks, IDX index.

INTRODUCTION

Investment Currently has become a trend among the public, which at this time is referred to as the era of investment without space and time limits. Investment is one of the people's choices in managing the sources of funds they have. Most of the investment at this time is by way of postponing consumption to obtain benefits that will be obtained in the future.

To make it easier to collect funds from people who want to invest, a forum for investment activities called the capital market is needed. The capital market is an alternative financing model besides banking that can provide financial support to a company that can provide prosperity to the wider community (Prakosa, 2012). Capital markets exist to bring together buyers and sellers of capital or securities. Securities sold in the capital market include stocks, bonds, and other securities. Securities that are often traded on the capital market are stocks. By issuing shares, entrepreneurs will get long-term funding by providing cash rewards (Indah Ayu Fajariyanti & Istanti, 2022; Iskamto, 2015, 2022; Rudianto et al., 2022; Sukmadewi, 2021).

The Covid-19 pandemic which started in February 2020 significantly impacted the world economy and Indonesia, especially in financial markets such as bonds, stocks, and commodity markets (Hongsakulvasu & Liammukda, 2020). The Covid-19 pandemic is a new threat with increasing risk and investor uncertainty. Media coverage influences people's emotions, generates worry and fear, and influences investor decisions, risk-averse behavior, and pessimism.

Moreover, currently for the Storage, Distribution of the Oil & Gas sector there is an increase in world oil prices due to global supply conditions which have long been underinvested and unable to meet the improved demand due to the improvement in the Covid pandemic conditions. Especially with the geopolitical conditions between Russia and Ukraine which also disrupted supply, so that world oil prices exceeded US$ 125 per barrel, which was the highest oil price in the last 10 years. Even though today it is back under US$ 100 per barrel. Prices will continue to fluctuate, but at high levels, *KONTAN.CO.ID – JAKARTA.*

Investing in the capital market has its charm for investors, especially in stock instruments. In 2017-2022 the JCI stock movement seemed to fluctuate, especially in 2020 during the peak of the Covid-19 pandemic there was a significant decrease in shares of -5.090%. The development of the JCI for 2017-2022 can be seen in the following table:

Table 1 JCI data for 2017-2022

Period	Composite Stock Price Index (IHSG)			
	Highest	Lowest	End	Year Growth end (%)
2017	6.368.32	5.228.29	6.355.65	19.99
2018	6,693,47	5.557.56	6.194.50	(2.54)
2019	6.636.33	5.767.40	6299.54	1.70
2020	6.348.53	3,911.72	5.979.07	(5,090)
2021	6.754.46	5.735.47	6.581.48	10.08
2022	7.377.50	6.509.88	7.012.07	6.54

Data processed from: www.investing.com

Based on the table 1 above, it can be concluded that the JCI growth over the last 6 years has fluctuated, where in 2018 and 2020 it experienced a significant decrease of -2.54% and -5.090%. However, in 2021 it started to increase again by 10.08%, and in 2022 it increased by 6.54%, this movement occurred after the Covid-19 pandemic had started to decline. This fluctuating capital market condition indicates that even though investing in the capital market promises benefits, it is still not free from uncertainty. This uncertainty means that it is related to the risks that investors may face. Return and risk are two things that need to be considered by investors in investing in the capital market. In addition, Yulianti (2014) said that return and risk are two inseparable things because the consideration of investment is a trade-off of these two factors. These two factors are opposites because, on the one hand, investors want high returns, but on the other hand, investors do not really like high risks

An investor must be able to estimate the return on individual security. To be able to estimate the return of security properly, we need a model of balance. The establishment of general balance models allows us to determine the relevant risk measurements and how the relationship between risks for each asset is if the capital market is in a state of balance (Husnan, 2015: 139). One of the methods used is to use the Capital Asset Pricing Model (CAPM) method. The main problem that investors face when investing is in determining which risky securities are the most appropriate to buy. This is in line with the principle of "high risk, high return" which can be used as a reference for investors in investing.

The Capital Asset Pricing Model (CAPM) is a set of predictions regarding the balance of estimated returns on risky assets (Bodie, et al 2014). The CAPM model is a model that relates the expected return rate of a risky asset to the risk of that asset in a balanced market condition (Tandelilin, 2010:187). According to the CAPM method, the level of risk and rate of return is stated

to have a positive and linear relationship. The risk measure which is an indicator of stock sensitivity in the CAPM is shown by the variable β (Beta).

Every investment opportunity requires some level of risk. Risk-Based Modeling considers systematic risk in addition to other variables. Systemic risk refers to the possibility that an investor will incur a loss as a result of variables that impact the overall performance of financial markets and is defined as follows: recession, political upheaval, changes in interest rates, natural disasters, and terrorist attacks are examples of risks that need to be considered. For individual securities, we use the security market line (SML) and its relationship to expected return and systematic risk, as indicated by the beta coefficient (Suraj et al., 2020).

In addition to risk and return, the market index is also one of the things that can be used as a reference and influence investment decisions. Stocks that join the index are usually preferred stocks because they are considered liquid from their transaction activity. The combined shares also have a large market capacity. An index is needed as an indicator to observe the price movements of securities (Hartono, 2014: 150). Various types of indexes have been listed on the Indonesia Stock Exchange (IDX), one of which is the IDX30 Index. The IDX30 index was officially announced to the public by the IDX on April 23, 2012. The companies in this index contain 30 companies whose constituents are taken from the LQ45 index.

At the start of its launch, many experts wondered why the index was formed because the IDX30 is not much different from the LQ45 index. However, the IDX explained that the IDX30 was formed because the stock indices on the market were still not specific enough to be used as a benchmark for market participants. So far, of the 45 blue chip companies included in the LQ45, only 30 stocks are actively trading. The reliability of the IDX30 was immediately proven at the time of its first launch which immediately strengthened to 14% to the position of 360.73 (www.investasi.kontan.co.id).

This research focused on 8 companies of all IDX30 lists, a number of companies in the energy sector, especially in oil and gas storage and distribution (A112). For reaching detail captured on the capability of companies to survive and gain the dividend which can influence investors to decide on their capital investment, especially in the storage and distribution oil and gas sector, so we need to analyze these companies. Previously, Putri (2020) analyzed IDX30 from 2014 to 2018 based on Capital Asset Pricing Model (CAPM). This research will continue to analyze IDX30 by the 2022 period also based on Capital Asset Pricing Model (CAPM).

Based on some of the descriptions above, the researcher is interested in conducting research with the title *Investment Decisions on Indonesia Energy Sector Companies by Capital Asset Pricing Model (CAPM) model based on IDX Stock 2022.*

LITERATURE REVIEW

Investment

Investment is a commitment to several funds or other resources made at this time, to obtain several benefits in the future. An investor buys several shares at this time with the hope of benefiting from an increase in share prices or some dividends in the future, in return for the time of risk associated with the investment (Tandelilin, 2010).

Stocks

Stocks are one of the most popular capital market instruments for investors because they provide an attractive rate of return. Shares can be defined as a sign of a person's or unilateral equity participation (business entity) in a company or limited liability company (Tandelilin, 2010).

Risk

Risk is the possible difference between the actual return received and the expected return. The greater the possible difference means the greater the risk of the investment (Tandelilin, 2010).

Return

The goal of investors in investing is to maximize returns, without forgetting the investment risk factors they must face. Return is one of the factors that motivates investors to invest and is also a

reward for investors' courage to bear the risks of their investments. Tandelilin (2010:9) explains, "Return is the level of profit on investment."

Betas

Beta is an appropriate measure of risk because beta is proportional to the risk of the securities contributed to the optimal risk portfolio" (Bodie et al, 2014:302).

Capital Asset Pricing Model (CAPM)

CAPM is a balance model whereby according to Tandelilin (2010) by using the balance model, we will be able to understand how investors behave as a whole, as well as how the mechanism for price formation and market returns is in a simpler form. The balance model can also help us to understand how to determine the relevant risk to an asset, as well as the relationship between risk and expected return for an asset when the market is in balance.

Based on the existing concept, namely the analysis of the Capital Asset Pricing Model (CAPM) in investment, the variables that need to be examined are:

a. Stock returns

Return is the rate of return or results obtained from a stock investment.

Formula $\quad Ri = \dfrac{Pt - Pt-1}{Pt-1}$

Information :

Ri	: Return on Shares i in period t
Pt	: Share Price i in period t
Pt-1	: Share price in period t-1

Systematic Risk (Beta)

A risk is a form of uncertainty about a situation that will occur later with the decisions taken, based on current considerations. In the CAPM, the risk is beta (β)

Formula $\qquad \beta = \dfrac{\sigma m}{\sigma^2 m}$

Information:

β	: Systematic risk
σm	: Covariance between stock returns and market returns
$\sigma^2 m$	: Market Covariance

Risk-Free Rate of Return (Rf)

Risk-Free is the level of profit generated from a risk-free asset or investment. The CAPM method is obtained from the Bank Indonesia Interest Rate (SBI) or monthly market return index with an average of 3.6875%, for December 2022 while the November 2022 SBI is still used, because the Government has not yet set the December 2022 SBI.

Table 3 Market Return Index (Rf)

Date	Rf
December 16, 2022	5.25 %
November 17, 2022	5.25 %
October 20, 2022	4.75 %
September 22, 2022	4.25 %
August 23, 2022	3.75 %
July 21, 2022	3.50 %
June 23, 2022	3.50 %
May 24, 2022	3.50 %

April 19, 2022	3.50 %
March 17, 2022	3.50 %
February 10, 2022	3.50 %
January 20, 2022	3.50 %
Amount	44.25 %
$Rf = \dfrac{\sum Rf}{N} = 12$	3.6875 %

Source www.bei,go.id

d. Return Market

Return Market is the expected rate of return from the stock market.

Formula $\qquad Rm = \dfrac{IHSGt - IHSGt - 1}{IHSGt - 1}$

Description :
Rm $\qquad$: The market profit rate
IHSGt $\qquad$: Composite stock price index t-time
JCI-1 : Composite stock price index before time t

Capital Market

The capital market (capital market) according to Martalena and Melinda (2011: 2) is a market for various long-term financial instruments that can be traded, both debt securities (bonds), equities (stocks), mutual funds, derivative instruments, and other instruments. The capital market is a means of funding for companies and other institutions (government) and as a means for investment activities.

Observation data

Company shares in IDX-IC's A112 (Oil & Gas Storage & Distribution) sector which are listed on the Indonesia Stock Exchange for the period January 2022 – December 2022 are the samples for this study. This quantitative study used a purposive sampling method, namely a random selection of samples whose information was obtained using certain considerations adapted to the research objectives.

Table 2 Company Observation Data

No.	Code	Company name	IPO date
1	AKRA	AKR Corporindo Tbk	03 October 1994
2	BULL	Buana Lintas Laut Tbk	May 23, 2011
3	GTSI	GTS International Tbk	September 08, 2021
4	HITS	Humpuss Intermodal Transportation	December 15, 1997
5	INPS	Indah Prakasa Sentosa Tbk	April 06, 2018
6	COFFEE	Mitra Energi Persada Tbk	April 23, 2001
7	LEAD	Logindo Samudramakmur Tbk	December 11, 2013
8	PGAS	State Gas Company Tbk	December 15, 2003

METHODS
Variable and Research Design

Research variables are certain traits or characteristics attached to the object under study. This study analyzes stock investment decision-making using the Capital Asset Pricing Model (CAPM) method on the IDX Index on the Indonesia Stock Exchange for the period January 2022 - December 2022.

In conducting research, a research design is needed that is useful for making series, descriptions, and explanations of research so that the data facilitates the implementation of research. This research is classified as quantitative descriptive research. A descriptive research design is used in this study because it aims to describe investment decision-making using the Capital Asset Pricing Model (CAPM) method on the IDX-IC Index on the Indonesia Stock Exchange.

Variable Operational Definition

Research variables are different (varied) attributes, characteristics, traits, abilities, and other measures that researchers can apply to study and analyze.

Population and Sample

The population in this study were companies listed on the IDX-IC index on the Indonesia Stock Exchange for the period January 2022-December 2022. Sampling was carried out using a purposive sampling method, namely selecting sample members based on certain criteria. The criteria used in determining the sample data are Storage, Oil & Gas Distribution Companies IDX-IC Shares in the A112 sector during the period January 2022 – December 2022. Based on these criteria, 8 samples were obtained to be used in this study.

Types and Data Collection Techniques

The type of data used is secondary data, namely the monthly closing price during the January-December 2022 period, the BI rate, and the IDX Market Index. Obtaining data in research was carried out using library research and research via the internet media. The *data sources were obtained from www.idx.co.id, www.bi.go.di, and www.investing.com,* www.yahoofinance.com*.* The data collection technique used in this study was carried out using library research and research via the internet media.

Data Analysis Techniques

Calculations were performed using the Linear Regression Analysis program in the SPSS Application. Exel, Analysis of the application of the CAPM method in determining investment is carried out by:

a. Collect data on stocks included in the IDX-IC A112 sector stock index in January December 2022, namely closing price data at the end of the month.
b. Calculating the level of profit of each stock (Ri).
c. Calculating the market profit rate (Rm)
d. Calculating Beta Stock β
e. Calculating Risk Free (Rf) through the annual SBI rate.
f. Calculating the level of expected profit according to the CAPM .5

$$E(R\,i) = R\,f + \beta\,[\,E(Rm) - R\,f\,]$$

g. Classification of Shares as Investment Decisions.

RESULTS AND DISCUSSION

Results of Individual Stock Return Rate Analysis (Ri)

The rate of return on individual stocks is one of the indicators in investing. The rate of return on individual stocks is the amount of profit received by investors in real terms when investing. The rate of return for individual shares (Ri) is calculated from the difference in the closing share price of the current period minus the previous period's share price and then dividing it by the previous period's share price. The results can be seen in the following table of these results:

Table 4 Calculation Results of Average Individual Return for Each Company (Ri) for the January – December 2022 period

No.	Code	Company name	Ri
1	AKRA	AKR Corporindo Tbk	0.7313

No.	Code	Company name	Ri
2	BULL	Buana Lintas Laut Tbk	0.3754
3	GTSI	GTS International Tbk	-1.2015
4	HITS	Humpuss Intermodal Transportation	0.9325
5	INPS	Indah Prakasa Sentosa Tbk	0.3586
6	COFFEE	Mitra Energi Persada Tbk	1.6358
7	LEAD	Logindo Samudramakmur Tbk	0.5925
8	PGAS	State Gas Company Tbk	0.3243
Average			0.4686
Highest Average			1.6358
Lowest Average			-1.2015

IDX source: processed data

Based on the table 4 above, the rate of return on individual shares of the 8 company shares that were the research sample in the period January - December 2022, shows that shares of the company Mitra Energi Persada Tbk (KOPI) had the highest overall average rate of return for individuals during the study period, namely 1.6358, while the stock with the lowest average overall rate of individual return during this period was GTS International Tbk (GTSI) of -1.2015. Based on the table above it can also be seen that 7 company shares have a positive average individual return value and 1 company stock which has a negative average return value.

Results of Market Rate of Return Analysis (Rm)
The market rate of return is a rate of return that is based on the development of the stock index. The stock index used in this study is the Jakarta Composite Index because the JCI represents all stock trading activities listed on the Indonesia Stock Exchange.

Table 5 Data is processed

Month	JCI	$Rm = \dfrac{IHSGt - IHSGt-1}{IHSGt-1}$	RM (%)
January	6631.150879	0.0000000	0.000
February	6888.170898	0.0387594	3,876
March	7071.441895	0.0266066	2,661
April	7228.914063	0.0222687	2,227
May	7148.970215	-0.0110589	-1,106
June	6911.582031	-0.0332059	-3,321
July	6951.123047	0.0057209	0.572
August	7178.589844	0.0327237	3,272
September	7040.797852	-0.0191948	-1,919
October	7098.890137	0.0082508	0.825
November	7081.312988	-0.0024760	-0.248
December	6751.859863	-0.0465243	-4,652
December 16th	6730.123047	-0.0032193	-0.322

The average value of Rm is 0.018651 or 1.8651%. The highest Rm value was in February 2022, which was 0.0387594 or 3.875%, which illustrates the trading conditions for IDX Index shares in that month were very active. Meanwhile, the lowest market rate of return occurred in November 2022 and December 16, 2022, namely -0.003219382 or -0.322%, which means that stock trading on the IDX Index on that date experienced sluggishness.

- **Risk-Free Rate of Return (Rf) Analysis Results**
  The risk-free rate of return or Risk-free is the rate of return on a risk-free investment using Bank Indonesia Interest Rate (SBI) data with an average risk-free value of 3.6875% as shown in Table 3.

Results of Systematic Risk Analysis of Each Individual Share (β)

The systematic risk or Beta (β) is a measure of market risk that affects the price of a stock. The beta value of a stock comes from the relationship between the rate of return of a stock and the market rate of return (Hartono, 2012). The CAPM method also explains that investors must consider the beta of a stock because it affects the price fluctuations of a stock and affects the size of the expected rate of return. A security that has a beta ($\beta < 1$) is said to be less risky than the market portfolio risk. Conversely, if it has a value ($\beta > 1$) it is said to have a systemic risk that is greater than the market risk. The beta calculation of Oil & Gas Storage, Distribution, and Distribution companies which are used as samples can be processed using SPSS as follows:

Coefficients [a]

Model		Unstandardized Coefficients B	std. Error	Standardized Coefficients Betas	t	Sig.
1	(Constant)	059	.033		1812	.100
	RMarket	1270	1,289	.297	.985	.348

Dependent Variable: RiAkra (AKR Korporindo Tbk)
From the SPSS Calculation of the table, we can get AKRA's Betavalue = 1270

Coefficients [a]

Model		Unstandardized Coefficients B	std. Error	Standardized Coefficients Betas	t	Sig.
1	(Constant)	.031	047		.668	.519
	RMarket	.068	1,847	012	.037	.971

Dependent Variable: RiBull (Buana Lintas Laut Tbk)
From the SPSS Calculation of the table, we can get BULL's beta value = 0.068

Coefficients [a]

Model		Unstandardized Coefficients B	std. Error	Standardized Coefficients Betas	T	Sig.
1	(Constant)	-.013	.030		-.420	.683
	RMarket	1,708	1,195	.412	1,430	.183

Dependent Variable: RiGtsi (GTS International Tbk)
From the SPSS Calculation of the table, we can get GTSI's Beta value = 1.709

Coefficients [a]

Model		Unstandardized Coefficients B	std. Error	Standardized Coefficients Betas	T	Sig.
1	(Constant)	.070	.097		.716	.490
	RMarket	5.149	3,854	.389	1,336	.211

Dependent Variable: RiHits (Humpuss Intermodal Transportion)
From the SPSS Calculation of the table, we can get HITS's Beta Value = 5.149

Coefficients ᵃ

Model		Unstandardized Coefficients B	std. Error	Standardized Coefficients Betas	T	Sig.
1	(Constant)	-.030	.031		-.951	.364
	RMarket	-.057	1,240	-.014	-.046	.964

Dependent Variable: RiInps (Indah Prakasa Sentosa Tbk)
From the SPSS Calculation of the table, we can get INPS Beta's Value = -0.057

Coefficients ᵃ

Model		Unstandardized Coefficients B	std. Error	Standardized Coefficients Betas	t	Sig.
1	(Constant)	013	.030		.445	.666
	RMarket	.157	1,191	042	.132	.898

Dependent Variable: RiKopi (Mitra Energi Persada Tbk)
From the SPSS Calculation of the table, we can COFFEE Beta's Value = 0.157

Coefficients ᵃ

Model		Unstandardized Coefficients B	std. Error	Standardized Coefficients Betas	t	Sig.
1	(Constant)	052	.066		.793	.446
	RMarket	-1,734	2,599	-.206	-.667	.520

Dependent Variable: RiLead (Logindo Samudramakmur Tbk)
From the SPSS Calculation of the table, we can LEAD Beta's Value = -1.734

Coefficients ᵃ

Model		Unstandardized Coefficients B	std. Error	Standardized Coefficients Betas	t	Sig.
1	(Constant)	.025	.027		.922	.378
	RMarket	1,267	1,076	.349	1.177	.266

Dependent Variable: RiPgas (State Gas Company Tbk)
From the SPSS Calculation of the table, we can get PGAS Beta's Value = 1.267

From the SPSS data above, all the company's beta value is in the following table:

Table 6. Systematic Risk Calculation Results for Each Company (β)

No.	Code	Company name	β
1	AKRA	AKR Corporindo Tbk	1270
2	BULL	Buana Lintas Laut Tbk	0.068
3	GTSI	GTS International Tbk	1,709
4	HITS	Humpuss Intermodal Transportation	5.149
5	INPS	Indah Prakasa Sentosa Tbk	-0.057
6	COFFEE	Mitra Energi Persada Tbk	0.157
7	LEAD	Logindo Samudramakmur Tbk	-1,734
8	PGAS	State Gas Company Tbk	1,267

Based on table 6 it can be seen that the calculation of systematic risk (beta) of the 8 sample companies studied shows that 6 sample companies have positive beta, and 2 companies have a negative beta. Thus there are only 2 samples of companies whose movements are in opposite directions. The highest systematic risk (beta) is owned by the Humpuss Intermoda Transportasi company, which is equal to 5,149 which indicates that the stock has a large risk, is very active and

sensitive to changes in market prices, meaning that if the market return (IHSG) increases, the stock will also increase. above the increase in the JCI and vice versa (Tandelilin, 2010). Meanwhile, the company stock that has the lowest beta is Logindo Samudramakmu Tbk, which is -1,734. A company that has a negative beta indicates that the stock tends to move in the opposite direction to the JCI. Beta with a negative value means that the direction of price movement is opposite to that of the market (if the market return goes up, the return on the security goes down, and vice versa).

Expected Rate of Return Analysis Results [E(Ri)]
Expected rate of return [E(Ri)] is the amount of profit expected by investors from stock investments made. The CAPM method is used to calculate the expected rate of return using the variables risk-free rate of return (Rf), market rate of return (Rm), and systematic risk (β). The results of calculating the expected rate of return from the 8 company shares can be seen in table 6 below :

**Table 7 Calculation Results of the Expected Rate of Return for Each Company [E(Ri)]**

code	Rf	Betas	Rom	Rm-Rf	Beta (Rm-Rf)	ER $_i$ = RF+ Beta (Rm-Rf)
AKRA	0.0368	1270	0.0187	-0.0181	-0.02299	0.01381
BULL	0.0368	0.068	0.0187	-0.0181	-0.00123	0.03557
GTSI	0.0368	1,709	0.0187	-0.0181	-0.03093	0.00587
HITS	0.0368	5.149	0.0187	-0.0181	-0.09320	-0.05640
INPS	0.0368	-0.057	0.0187	-0.0181	0.00103	0.03783
COFFEE	0.0368	0.157	0.0187	-0.0181	-0.00284	0.03396
LEAD	0.0368	-1,734	0.0187	-0.0181	0.03139	0.06819
PGAS	0.0368	1270	0.0187	-0.0181	-0.02299	0.01381
					Average	**0.01908**

Source: Processed data.

Based on table 7, it can be seen that the average rate of return expected from the 8 company shares studied is 0.01908 or 1.91%. Logindo Samudramakmur Tbk company has the highest expected rate of return, namely 0.06819 or 6.82%. While Humpuss Intermoda Transportasi has the lowest expected rate of return, namely -0.05640 or -0.564%. If the expected return value is negative, it means that the stock is experiencing capital loss, where an increase (decrease) in the stock price can provide losses to investors (Tandelilin, 2010: 102). The resulting negative value is also influenced by a negative beta value. So that in the expected return calculation process a negative value is obtained. This shows that the size of the expected return depends on the size of the risk of the stock which is indicated by the beta value.

- **Classification of Efficient Stocks and Investment Decisions**
  Efficient stocks are stocks with individual returns greater than the expected rate of return or [(Ri) > E(Ri)]. Meanwhile, inefficient stocks are stocks with individual returns that are smaller than the expected rate of return [(Ri) < E(Ri)]. Efficient and inefficient stocks can be seen from the SML chart below. Figure 1: data is processed
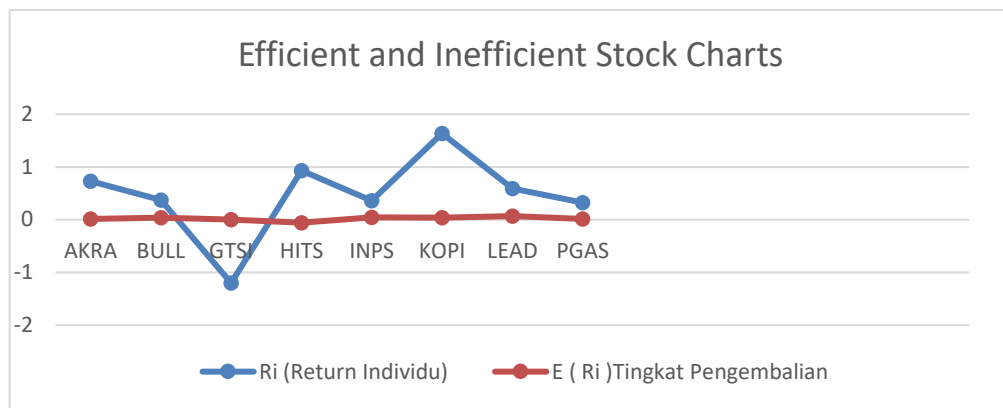
Based on the picture 1 above, it can be seen that the position of the average individual rate of return (Ri) for efficient stocks on the graph is above the point of expected return or E(Ri). Conversely, for inefficient stocks, the position of the average individual rate of return (Ri) is below the expected return point or E(Ri).

Table 8 Grouping of Shares

No.	Company name	Ri	E(Ri)	Share Grouping	Decision
1	AKR Corporindo Tbk	0.7313	0.01381	Efficient	Buy
2	Buana Lintas Laut Tbk	0.3754	0.03557	Efficient	Buy
3	GTS International Tbk	-1.2015	0.00587	Not efficient	Sell
4	Humpuss Intermodal Transportation	0.9325	-0.05640	Efficient	Buy
5	Indah Prakasa Sentosa Tbk	0.3586	0.03783	Efficient	Buy
6	Mitra Energi Persada Tbk	1.6358	0.03396	Efficient	Buy
7	Logindo Samudramakmur Tbk	0.5925	0.06819	Efficient	Buy
8	State Gas Company Tbk	0.3243	0.01381	Efficient	Buy

Based on the table 8 above, it can be seen that of the 8 company shares that became the research sample, there were 7 company shares included in the efficient group and 1 company share included in the inefficient stock group. The companies included in the efficient category are AKR Corporindo Tbk, Buana Lintas Lautan Tbk, Humpuss Intermoda Transportasi, Indah Prakasa Sentosa Tbk, Mitra Energi Persada Tbk, Logindo Samudramakmur Tbk, Perusahaan Gas Negara Tbk. Efficient stocks are stocks that have an individual rate of return that is greater than the expected rate of return or [Ri > E(Ri)]. An efficient stock investment decision is to consider buying the stock.

Meanwhile, 1 company share is included in the inefficient stock group, namely GTS International Tbk. Inefficient stocks are stocks that have an individual return value that is smaller than the expected rate of return or [Ri < E(Ri)]. The decision made on inefficient stocks is to consider selling these shares.

CONCLUSION

Based on the results of the research and discussion in this study, there are 4 conclusions. *First,* CAPM according to the author is still able to explain the relationship between risk and return because Beta can be used as a consideration for making optimal investment decisions. *Second,* not all company shares listed on IDX follow the ups and downs of share values on the market/IHSG on the Indonesian stock exchange. *Third,* there are 7 company shares included in the efficient group

and 1 company share included in the inefficient stock group. The companies included in the efficient category are AKR Corporindo Tbk, Buana Lintas Lautan Tbk, Humpus Intermoda Transportasi, Indah Prakasa Sentosa Tbk, Mitra Energi Persada Tbk, Logindo Samudramakmur Tbk, Perusahaan Gas Negara Tbk. Efficient stocks are stocks that have an individual rate of return that is greater than the expected rate of return or $[Ri > E(Ri)]$. An efficient stock investment decision is to consider buying the stock. *Fourth,* meanwhile, 1 company share is included in the inefficient stock group, namely GTS International Tbk. Inefficient stocks are stocks that have an individual return value that is smaller than the expected rate of return or $[Ri < E(Ri)]$. The decision made on inefficient stocks is to consider selling these shares. For companies whose shares are neutral, they have $Ri < E(Ri)$, meaning that the company's shares are included in the category of inefficient shares.

Suggestion

Based on the results of the research that has been done, the suggestions that can be given by researchers are as follows. First, For Investors and Potential Investors Before making an investment decision, investors and potential investors should first select which stocks are capable of providing a profit or rate of return that is greater than expected by investors. The CAPM method can be used as a basis for considering investments for investors and potential investors who will invest in stocks. However, to get an accurate estimate, it is better to use quite a long time with the latest data, not just look for sources of information based on the CAPM method which describes the risk and return relationship more simply because it only uses one variable (beta). The CAPM method also uses technical analysis, so if you are not sure about the results of this analysis, you can use another analysis that uses fundamental techniques. Second, Further research, research using the CAPM method is expected to be used as a reference for further research using different samples and research periods, so that developments regarding the capital market, especially stock investment, can always be known and add to theoretical studies regarding the CAPM method in making investment decisions.

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