Analysis Of Capital Asset Pricing Model (Capm) In Investment Decisions In Technology Sector Stock In ASEAN Regional Stock Exchange

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Abstract: - Investment in the capital market has its own appeal for investors. The stock price of each company listed on the ASEAN Regional Stock Exchange, especially when ASEAN declares itself as the epicenter of growth including growth in the financial sector, sometimes always experiences changes, both increases and decreases in stock prices. Therefore, investors often have difficulty in choosing which stocks have a small risk but can generate large returns. This study aims to determine the expected rate of return of technology sector stocks on the ASEAN regional stock exchange based on the use of the Capital Asset Pricing Model (CAPM) method.

Key-Words: CAPM, Investment, Investor, Decisions

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1 Introduction

The Capital Market is a meeting between parties who have excess funds with parties who need funds by trading securities. The capital market in Indonesia was formed to connect investors as financiers with companies or government institutions. Investment in the capital market has its own appeal for investors, because investing in the capital market has a higher rate of return. Investing in the capital market can also be a solution in dealing with inflation. With the formation of the capital market, investors can diversify their investments by forming a portfolio according to the risk they are willing to bear with the expected level of profit. The capital market was established in order to bring together buyers and sellers of securities. Securities sold on the capital market include stocks, bonds, and other securities. While stocks are securities that are often traded on the capital market.

Investment can be said to be a commitment of money or other resources that are made now or at this time with the hope of getting benefits in the future. In practice, investment is usually associated with activities related to investing funds in various alternative assets, both those included as real assets, for example land, property, gold, or in the form of financial assets, for example various forms of securities such as mutual funds, bonds, stocks. Before making an investment, there is a basic thing in the investment decision process, namely a basic understanding of the relationship pattern between expected returns and risk in an investment. In general, the relationship between risk and expected return from an investment is a linear link, meaning that the greater the risk of an investment, the greater the level of return expected from the investment made, and vice versa. This relationship answers the question of why many investors diversify their assets, in addition to paying attention to high returns, investors also consider the level of risk that must be borne.

The basis for investment decisions consists of the level of expected return, the level of risk and the relationship between return and risk. In the discussion of investment management, the level of investment profit is called return. In the context of investment management, it is necessary to distinguish between expected return and return that occurs (realized return). Expected return or expected return is the level of return that investors anticipate in the future. While the actual return or return that occurs is the level of return that has actually been obtained or obtained by investors. Meanwhile, when discussing risk, there is an important thing that must always be considered, namely how high the risk that must be borne from choosing the investment. In general, the higher the risk, the higher the expected return.

Based on the background of the problems explained above, the capital market in its development also has an influence on public awareness when making investments. Along with the increasing cost of living and to combat inflation that occurs every year, people must be able to protect their wealth or assets in the hope that when making investments they will get greater profits in the future. The phenomenon of technology sector stocks where currently the technology sector after the Covid 19

epidemic is developing very rapidly and increasingly rapidly with the discovery of high-tech tools to facilitate human activities that are felt to be very much needed by humans. Therefore, every investor who has a rational view will decide to invest, which of course before buying shares will consider choosing shares that are considered efficient by first knowing the form of the optimal portfolio, so that investors can be able to minimize or avoid the risks that will be received when deciding to invest in the shares they choose.

2 Problem Formulation

From these problems, research questions are formulated, including the following:

1. How much is the return and risk of each technology sector company stock on the stock exchanges of ASEAN member countries?
2. How much is the expected rate of return of each technology sector company stock on the stock exchanges of ASEAN member countries?
3. How is the assessment and grouping of efficient and inefficient technology company stocks based on the application of the Capitas Asset Pricing Model (CAPM) method?

Basically, the desire of an investor when making an investment is to expect a high return with low risk. To determine in making a decision on a stock in a company, the best investment decision is needed. Calculation of estimates of the return to be obtained in the future and the risk obtained in the investment.

In the process of determining investment decisions based on the CAPM method, which is described through the Security Market Line (SML). SML shows the relationship between the magnitude of systematic risk and the expected or desired rate of return.

Based on SML, namely choosing efficient stocks in grouping their stocks. Efficient stocks, namely stocks that have an individual stock return rate greater than the expected or desired rate of return [Ri> E(Ri)] will appear to be above the SML line.

While eliminating inefficient stocks where the stock has an individual stock return rate smaller than the expected or desired rate of return [Ri <E(Ri)], the stock will appear to be below the SML line (Jogiyanto, 2015).

3 Problem Solution

The research method used is the Capital Asset Pricing Model (CAPM) to determine the estimated level of return or expected profit and to determine the relevant risk and return on each asset when the capital market is in a balanced condition. The population of the study is the shares of technology sector companies on the ASEAN Regional Stock Exchange during 2024. The research sample uses a purposive sample method and produces 5 issuers from the Indonesia Stock Exchange (IDX), 8 issuers from the Malaysia Stock Exchange (Bursa Malaysa), 5 issuers from the Singapore Stock Exchange (SGX), 26 issuers from the Stock Exchange of Thailand (SET), 8 issuers from the Philippine Stock Exchange (PSE), and 5 issuers from the Vietnam Stock Exchange (VSE) with the most active stock category in the technology exporter in each ASEAN member country. The total number of samples in this study is 37 technology sector stocks traded on the stock exchanges of each ASEAN member country. The author's purpose in conducting this research is to find out the results of the analysis carried out on the company's stock investment in the technology sector so that it can determine the optimal portfolio by utilizing the use of the Capital Asset Pricing Model method or commonly abbreviated as the CAPM method. Therefore, based on the theory and method used, this type of research is quantitative descriptive. Based on Sugiyono's opinion (2015:14) there are various types of research, including quantitative research which is research where the data is obtained in the form of numbers. Another type of research is qualitative research, which is research with data in the form of words, schemes and images. Based on that theory, this research is research that is included in quantitative descriptive research. Research that does not compare variables in other samples. Meanwhile, looking for the relationship with other variables is said to be descriptive research (Sugiyono, 2015:35). The data analysis technique used or utilized in this study is quantitative descriptive and uses the Capital Asset Pricing Model or CAPM research method, where in quantitative descriptive statistics it provides a description or shows the display of data frequency distribution in the form of a histogram and several basic statistical calculations, for example, average, maximum, minimum and others (Winarno, 2017). The research method used is the Capital Asset Pricing Model (CAPM), namely to see the relevant or appropriate returns and risks, and to find estimates or estimates of the level of profit expected by investors or expected returns on each asset if the capital market is in a balanced state (equilibrium). This research is a type of quantitative data, namely data that can be measured by utilizing the use of a numerical scale.

This study obtains the data needed to find the CAPM value which will later be used as the expected return for investors operating in the stock exchanges of ASEAN member countries, in this case the Indonesia

Stock Exchange, Malaysia Stock Exchange, Singapore Stock Exchange, Thailand Stock Exchange, Philippines Stock Exchange, and Vietnam Stock Exchange. From the data obtained by the author, technology sector issuers on the ASEAN Regional Stock Exchange can be seen below:

No.	Code	Ri	E(Ri)	Evaluation
1	BUKA	-43.52%	14.81%	Not efficient
2	GOTO	-21.84%	9.27%	Not efficient
3	IOTF	12.50%	18.03%	Not efficient
4	TOSK	-40%	5.62%	Not efficient
5	WIFI	50.28%	14.49%	Eficient
6	MYEG	10.62%	10.37%	Eficient
7	JCY	136.84%	22.52%	Eficient
8	INARI	1.05%	12.46%	Not efficient
9	DNEX	-22.99%	18.71%	Not efficient
10	SNS	133.96%	0.08%	Eficient
11	NOTION	198.51%	19.75%	Eficient
12	VS	1.98%	17.55%	Not efficient
13	VITROX	57.20%	10.14%	Eficient
14	AWX	-59.05%	8.56%	Not efficient
15	V03	8.91%	8.56%	Eficient
16	558	-15.50%	10.93%	Not efficient
17	I07	-21.33%	13.57%	Not efficient
18	MZH	-10.87%	3.99%	Not efficient
19	DELTA	4.29%	4.08%	Eficient
20	KCE	0.22%	3.63%	Not efficient
21	CCET	119.77%	3.00%	Eficient
22	HANA	-30.15%	4.23%	Not efficient
23	JMART	-31.74%	3.23%	Not efficient
24	SVI	-6.17%	2.86%	Not efficient
25	FORTH	-54.24%	2.59%	Not efficient
26	DITTO	-34.70%	2.20%	Not efficient
27	SYNEX	14.62%	3.78%	Eficient
28	SIS	14.81%	2.98%	Eficient
29	SAMART	17.65%	2.97%	Eficient
30	METCO	-15.58%	2.88%	Not efficient
31	ILINK	-15.33%	2.95%	Not efficient
32	LOXLE	-22.78%	2.72%	Not efficient
33	MSC	-8.89%	2.80%	Not efficient
34	TEAM	-24.40%	3.83%	Not efficient
35	NEX	-90.33%	2.36%	Not efficient
36	SMT	-60.39%	3.54%	Not efficient
37	PROEN	-18.40%	2.15%	Not efficient
38	ALT	-32.81%	2.97%	Not efficient
39	SECURE	-15.92%	2.77%	Not efficient
40	SIMAT	-3.78%	2.49%	Not efficient
41	SDC	-66.67%	3.18%	Not efficient
42	TWZ	0.00%	2.76%	Not efficient
43	APP	-19.40%	2.63%	Not efficient
44	PLANET	15.91%	2.76%	Eficient
45	CNVRG	-0.49%	1.65%	Not efficient
46	DITO	0.00%	0.42%	Not efficient
47	NOW	0.00%	1.12%	Not efficient
48	IS	8.73%	2.70%	Eficient
49	IPM	-11.36%	1.87%	Not efficient
50	DFNN	0.00%	9.00%	Not efficient
51	APL	-2.94%	3.54%	Not efficient
52	TBGI	1.57%	3.14%	Not efficient
53	GEX	1.18%	4.12%	Not efficient
54	DNC	-9.77%	2.70%	Not efficient
55	POT	8.09%	3.39%	Eficient
56	VBH	0.95%	1.82%	Not efficient
57	GEE	0.30%	2.60%	Not efficient

Judging from the data above, the stock exchanges in ASEAN member countries in the technology sector are active in trading. The most active and largest number of technology sector issuer stocks are technology companies in Thailand which are members of the Stock Exchange of Thailand (SET), followed by Malaysia (Bursa Malaysia) and the Philippines (PES) with 8 issuers, then Indonesia, Singapore and Vietnam as many as 5 issuers on the Indonesia Stock Exchange (BEI), Singapore Stock Exchange (SGX), and Vietnam Stock Exchange (VES). The level of return or return on investment is individually calculated based on the movement of the stock price that occurs in each stock above. In this case, the author takes the benchmark for the closing price or closing price which will later be sought for the movement of the stock price.

In the table we can see that the individual return rates of technology sector stocks on the ASEAN Regional Stock Exchange vary widely, but most of the returns are negative, so that in this research period the movement of technology sector stock prices has not been encouraging for technology stock investors.

Market returns are results based on the movement of the Composite Stock Price Index formed on the stock exchange. This result is a combined or composite result of stocks on the stock exchange in a certain time period. In this study, the market return rate is taken from the average value of the IHSG for each

exchange in ASEAN member countries listed on the ASEAN Regional Stock Exchange.

Systematic risk is the risk that exists in financial instruments that cannot be eliminated by diversifying assets. This risk exists and is difficult to eliminate, so for investors, systematic risk is a risk that must be accepted and managed as well as possible so that it does not impact their investment assets.

The results of the individual systematic risk data, obtained an average of 0.7, where this result is below 1 so that it can be concluded that in general from the 57 company stocks used as samples, this study has a moderate systematic risk and tends to be active. Efficient stocks are stocks whose individual return rate is greater than the expected return in this case represented by the CAPM value. (Ri> E (Ri). Conversely, if the individual return rate is smaller compared to the expected return rate, then the stock is in a position or called an inefficient stock (Ri < E (Ri).

4 Conclusion

This study shows that the analysis of the capital asset pricing model (CAPM) has the potential to help investors in making investment decisions. CAPM helps investors estimate expected returns by taking into account the level of systematic risk that may arise.

Each investor has their own characteristics, even investors try to choose a less risky investment when faced with two investment options that offer the same return but have different risks. This study explains that investors can use CAPM to evaluate the relationship between risk and return. In addition, beta is also used in the CAPM method as a measurement tool to measure the relationship between investment results and overall market performance.

Rational investors make investment decisions based on an analysis of the current situation, optimal portfolio design, investment policy formulation, investment strategy implementation, monitoring and supervision of specific financial manager activities.

The optimal portfolio can be determined using a single index model. Therefore, the first thing to do is to determine an effective investment portfolio. An efficient portfolio is defined as a portfolio that provides the greatest expected return for a given level of risk or the smallest risk for a given expected return.

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