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DECISIONS ON STOCK INVESTMENT IN AGRICULTURE SECTOR COMPANIES (CAPM METHOD APPROACH)

Menentukan Keputusan Investasi Saham Pada Perusahaan Sektor Pertanian (Pendekatan Metode Capital Asset Pricing Model (CAPM))

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ABSTRACT

The agriculture stock market appears to have a bright future. Since the COVID-19 outbreak started, share issuers with investments reliant on agricultural commodities have shown significantly improved performance, which may be evidence of this. The goals of this study were to estimate expected returns, assess risk and return on investment, and classify efficient and inefficient stocks in agricultural sector companies listed on the Indonesia Stock Exchange (IDX). Companies in the agricultural sector that underwent evaluation had comprehensive data that needed to be reviewed between January 2019 and December 2021, and they were listed on the IDX and main listing board. The Capital Asset Pricing Model (CAPM) is a method for evaluating and discouraging individuals from making risky stock market investments. There were 15 companies selected. According to the evaluation's conclusions, 10 companies had stocks that could be purchased because they were inexpensive and efficient, while 5 companies had stocks that could be sold because they were inexpensive and inefficient (overvalued).

Keywords: agricultural sector, capital asset pricing model (CAPM), investment decisions, stocks

ABSTRAK

Pasar saham pada perusahaan-perusahan yang bergerak pada Sektor Pertanian tampaknya memiliki masa depan yang cerah. Sejak wabah COVID-19 dimulai, emiten saham dengan investasi yang bergantung pada komoditas pertanian menunjukkan

peningkatan kinerja yang signifikan, Kajian ini bertujuan untuk mengetahui dan menentukan return dan risiko, tingkat pengembalian yang diharapkan (expected return), serta dapat menilai dan mengelompokkan saham-saham efisien dan tidak efisien pada saham sektor pertanian di Bursa Efek Indonesia (BEI). Kriteria saham yang dievaluasi adalah perusahaan sektor pertanian yang terdaftar di BEI selama periode Januari 2019 – Desember 2021, dan tercatat pada papan pencatatan utama, dan perusahaan tersebut memiliki data yang dibutuhkan. Untuk menghindari kesalahan dalam pengambilan keputusan investasi di pasar saham menggunakan metode Capital Asset Pricing Model (CAPM). Total saham yang terseleksi berdasarkan kriteria tersebut berjumlah 15 saham. Hasil evaluasi terdapat 10 perusahaan memiliki saham yang dapat dibeli karena murah dan efisien (undervalued), sedangkan 5 perusahaan memiliki saham yang dapat dijual karena murah dan tidak efisien (overvalued).

Kata Kunci: sektor pertanian, capital asset pricing model (CAPM), investasi, saham

INTRODUCTION

Numerous investors on the stock exchange have opted for stocks as one of their investment vehicles (Chen et al., 2003). According to Wijaya (2013), stock is a symbol of ownership or possession of a corporation by any person or organisation. If a corporation wishes to raise external capital, issuing shares is one way (Gregoriou, 2011). Companies engaged in primary industries, such as the agricultural industry, have recently become investors' preferred investment resource.

The agricultural sector in Indonesia is vital to the nation's economy, as it employs more than 40 percent of the people directly or indirectly. Contributors to the Gross Domestic Product by 13.26% (Kementerian Koordinator Bidang Perekonomian Republik Indonesia, 2022); foreign exchange earners; labor absorbers; suppliers of food and industrial raw materials; suppliers of feed ingredients and bioenergy; and the primary source of income for rural households; as well as initiatives to minimize greenhouse gas emissions, are among the significant functions of the agricultural sector (Artha et al., 2014). This is due to the driving forces of increased prospects for commodity markets and the availability of land by both large corporations and farmers (Asian Developmet Bank, 2019).

The COVID-19 pandemic, which has impacted many facets of the economy over the past two years, has damaged Indonesian stock prices. However, the outlook for the agricultural sector stock market is optimistic. During the pandemic, the performance of issuers of shares based on agricultural commodities has dramatically increased over the past two years.

Investment is the utilization of present-day capital to increase future returns (Titman et al., 2004; Anderson & Garcia, 2016; Kennedy & Yanis, 2019). Meanwhile, Inayah (2020) believes that investment is a commitment to save

funds or assets that are anticipated to produce future benefits. She further divided Investments into two categories: investments in real assets and investments in financial assets. Investing in real assets involves actual assets such as land, equipment, and factories. Investing in financial assets, meanwhile, entails written agreements such as stocks and bonds.

Investing in stock-based products has a large return potential, particularly over the long term. Obviously, the graph will continue to rise if the stock has solid fundamentals (Hidayati, 2018), but as gains increase, so does the associated risk. According to Nurhaliza (2021), the underlying nature of stock investment risk cannot be separated from stock investing activity. Therefore, when planning investments, you must consider both risks and rewards, as investments, particularly stock-based instruments, are motivated by a high-risk, high-return objective. Stock market panics happened in 1997‑1998 amid the economic crisis in Indonesia; the 2008 subprime mortgage crisis that originated in the United States and had repercussions in other nations; and crisis conditions or natural disasters such as the flood in DKI Jakarta in 2013. At the time of the global COVID-19 epidemic, economic conditions were unstable, which affected stock prices on the stock exchange (Saraswati, 2020; Thomas & Tambunan, 2021; Buszko et al., 2021).

The Composite Stock Price Index (JCI), the primary reference index on the Indonesia Stock Exchange (IDX), fell 26.44 percent on April 8, 2020, with a foreign net sell of IDR 15.01. trillion in the regular market and a net buy of IDR 2.94 trillion in the non-regular market (cash and negotiations) (Rifa'I & Sari, 2020). Consequently, investors must be aware of the dangers that might come from investing activities and make sound investment selections when selecting assets, as it cannot be denied that the risks associated with investments are proportional to the advantages acquired. When these poor conditions do occur, however, there is one sector that can survive and make a significant contribution to the economic recovery phase: the agriculture sector, one of the sectors with the highest economic growth achievements in 2020 (Abidin, 2021).

Investors require the capacity to estimate the return of a specific security, as it is crucial and necessary. To accurately and simply predict the return of a security, an estimating model is required. In the financial industry, the presence of the Capital Asset Pricing Model (CAPM), which may be used to estimate the return of a security stock, is seen crucial (Musodik et al., 2021; Demsey, 2013). Capital Asset Pricing Model (CAPM) is a model or method used to estimate the return value of a financial asset by comparing the risk-bearing variable to the return received (Sharpe, 1964; Alexandri & Nita, 2014). The CAPM is primarily used to calculate the expected return on risky investments (Michailidis et al., 2006; Azizah, 2007). In addition, the CAPM can aid investors in assessing the undiversified portfolio risk and comparing it to the expected rate of return (Perold, 2004; Dayaratne, 2010). Stock market the agricultural sector offers

numerous business prospects. Since the epidemic began two years ago, the performance of corporations that sell shares based on agricultural commodities has increased significantly (Ellidianti et al., 2021).

Using the previously mentioned phenomenon of thought, the author attempts to identify and examine matters related to stock selection with the goal of minimizing investment risk, namely by 1) analyzing stocks with the highest and lowest return (Ri) and risk (βi) values and stocks with positive or negative returns and positive or negative risks in agricultural sector companies on the Indonesia Stock Exchange (IDX); 2) assessing stocks with the best or lowest expected returns and positive or negative expected returns on the Indonesia Stock Exchange (IDX); and 3) assessing and classifying agriculture sector stocks that are efficient and inefficient using the Capital Asset Pricing Model (CAPM) method.

RESEARCH METHOD

This study's data was collected from the Indonesia Stock Exchange, Bank Indonesia, the Central Statistics Agency (CSA), and Yahoo Finance, which were accessed via www.idx.co.id, www.bi.go.id, www.bps.go.id, and www.yahoofinance.com.

The data was comprised of 15 shares of agricultural sector businesses listed on the Indonesia Stock Exchange (IDX) for the period of January 2019 to December 2021 for the purpose of making stock investment decisions using the Capital Asset Pricing Model (CAPM). In order to be included in this study, companies must satisfy the following criteria: (1) Agricultural sector companies listed on the Indonesia Stock Exchange from January 2019 through December 2022. (2) Agricultural companies that are listed on the main board of the Indonesia Stock Exchange. (3) The companies hold all necessary information for the period spanning January 2019 to December 2021.

The following businesses were being investigated: Astra Agro Lestari Tbk (AALI), Austindo Nusantara Jaya Tbk (ANJT), BISI International Tbk (BISI), Eagle High Plantations Tbk (BWPT), Dharma Samudera Fishing Industry Tbk (DSFI), Dharma Satia Nusantara Tbk (DSNG), Gozco Plantations Tbk (GZCO), Jaya Agra Wattie Tbk (JAVA) PP London Sumatra (LSIP), Mahkota Group Tbk (MGRO), Sampoerna Agro Tbk (SGRO), Salim Ivomas Pratama Tbk (SIMP), Sawit Sumbermas Sarana Tbk (SSMS), Tunas Baru Lampung Tbk (TBLA), and Bakrie Sumatera Plantations Tbk (UNSP).

These are a few equations:

Individual Return (Ri)

Individual returns, or the rate of return on individual stocks, is the income received in the form of price fluctuations from stock trading transactions over a period of months (Kennedy & Yanis, 2019). Utilizing the following formula (Hasan et al., 2019):

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

Where : Ri = Individual returns on stocks; P = Stock price for period t; P_{t-1}= Stock price for period t-1.

Market Return (Rm)

The Return Market is an index of stock prices based on the Composite Stock Price Index (CSPI) (Ratnaningtyas et al., 2016).

$$Rm = \frac{CSPI_t - CSPI_{t-1}}{CSPI_{t-1}}$$

Where : Rm = market rate of return; $CSPI_t$ = composite stock price index period t; $CSPI_{t-1}$ = composite stock price index period t-1

Risk Free Rate (Rf)

Risk Free Rate (Bank Indonesia interest standard).

$$Rf = \frac{\sum Rf}{N}$$

Where : Rf = Risk-free returns; ΣRf = Amount of risk free return; N = Number of data.

Systematic Risk or Beta (β)

$$\beta = \frac{\sigma m}{\sigma^2 m}$$

Where : β = Systematic Risk (Beta); σm = The covariance between stock returns and market returns; σ^2m = Market covariance

Individual Expected Return (E(Ri))

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

Where : E(Ri) = Expected rate of return on stock i; E(Rm) = Market average rate of return; Rf = Risk Free atau rata-rata return tingkat bunga bebas risiko; βi = Beta or systematic risk of stock I; [E(Rm) Rf] = Risk Premium or market risk premium.

RESULT AND DISCUSSION

Agricultural Sector Companies

Observed agricultural companies were those listed on the Indonesia Stock Exchange (IDX) during January 2019 to December 2021. This study includes numerous subsectors within the agricultural sector, including plantations, food crops, and fisheries. During the period of January 2019 to December 2021, there were 29 agriculture sector firms listed on the Indonesia Stock Exchange (IDN Financials, 2022). Fifteen of these companies satisfied the study's requirements. Following is a list of companies that are the subject of research, along with the business fields of each company (IDN Financials, 2022):

1. Astra Agro Lestari Tbk (AALI): The plantation sector in the oil palm plantation sector.
2. Austindo Nusantara Jaya Tbk (ANJT): The plantation sector in the areas of oil palm plantations, sago processing, and tobacco processing, as well as renewable energy.
3. BISI International Tbk (BISI): The food crop sector in the fields of seeds and trading of corn, vegetables, fruits, and rice seeds.
4. Eagle High Plantations Tbk (BWPT): The plantation sector in the area of oil palm plantations and products made from palm oil
5. Dharma Samudera Fishing Industry Tbk (DSFI): The fisheries sector, which includes catching, processing, selling, and trading fishery products, with fillets of tuna and octopus being the best.
6. Dharma Satya Nusantara Tbk (DSNG): The plantation sector is in the wood industry, agri industry and plantation industry.
7. Gozco Plantations Tbk (GZCO): The plantation sector is where palm oil and vegetable oil (crude palm oil) are grown, run, traded, and processed.
8. Jaya Agra Wattie Tbk (JAVA): The plantation sector is involved in the management and control of production and sales of rubber, coffee, tea, cocoa, palm oil, and other agricultural products.
9. PP London Sumatra (LSIP): Oil palm and rubber plantations in the plantation sector
10. Mahkota Group Tbk (MGRO): The plantation sector in the oil palm and other plantation sectors
11. Sampoerna Agro Tbk (SGRO): Plantation sector, which includes oil palm and rubber plantations, palm oil mills, kernel crushing factories, and production of germination seeds.
12. Salim Ivomas Pratama Tbk (SIMP): The plantation sector, which includes research and development, oil palm breeding and cultivation, crude palm oil milling and refining, and the marketing and distribution of cooking oil, margarine, shortening, and other derivative products.

13. Sawit Sumbermas Sarana Tbk (SSMS): The plantation sector is the field of oil palm plantations and palm oil mills that produce palm oil and palm kernel.
14. Tunas Baru Lampung Tbk (TBLA): Plantation sector in the production of palm cooking oil, sugar, palm oil, and soap, as well as oil palm, pineapple, and sugar cane plantations.
15. Bakrie Sumatera Plantations Tbk (UNSP): The plantation sector processes and sells agricultural and industrial products. Rubber, palm oil, and palm kernel are the main products in this sector.

Risk and Return on Agricultural Sector Stocks on the Indonesia Stock Exchange (IDX)

Individual Return Evaluation (Ri)

Individual stock returns, also known as individual returns, are earnings from stock trading resulting from changes in market prices and calculated monthly (Rahma et al., 2016).

Table 1. Individual Return (Ri) Agricultural Sector Stocks

Nr	Stocks code	Ri	% Ri
1	AALI	-0.008	-0.80
2	ANJT	0.0041	0.41
3	BISI	-0.0041	-0.41
4	BWPT	-0.0132	-1.32
5	DSFI	0.0081	0.81
6	DSNG	0.0108	1.08
7	GZCO	0.0075	0.75
8	JAWA	0.0349	3.49
9	LSIP	0.0004	0.04
10	MGRO	-0.0025	-0.25
11	SGRO	-0.0013	-0.13
12	SIMP	0.0049	0.49
13	SSMS	0.0047	0.47
14	TBLA	0.0004	0.04
15	UNSP	0.0026	0.26

Source: Primery Data Processed (2022)

The returns in Table 1. show that the performance of agricultural stocks during the 2019-2021 period was of poor value, so that the returns obtained were only able to be below 4 percent and some are even negative. A return of 4 percent in 3 years is an unfavorable achievement, but when compared to other sector stocks such as Bank BCA (BBCA) shares which only have a 0.91 percent return in 3 years, the performance of agricultural stocks is fairly high. better in unstable

economic conditions due to the Covid-19 pandemic. When faced with such conditions, an investor needs to know when to take profit and when to start investing again, this is done so that the shares held can be sold at a high enough price and can buy back when the shares fall to a fairly low price.

The stock with the highest return was Jaya Agra Wattie Tbk (JAVA), with a return of 0.0349 points, or 3.49 percent, while the stock with the highest negative return was Eagle High Plantations Tbk (BWPT), with a return of -0.0132 points, or 1.32 percent. After the 2020 pandemic, JAWA companies engaged in palm oil and rubber plantations have positive sentiments, which manifest in the form of rising prices for palm oil and rubber plantations as a result of the lockdown policy in Malaysia and vegetable oil-producing countries that asymmetrical the market. This will result in a reasonably constant price gain for JAWA stock throughout the year 2021. According to Mulia (2021), the price of crude palm oil (CPO) and rubber have achieved all-time highs, making 2021 the year of commodities performance (up).

This was not the case for BWPT companies, whose stock prices would continue to fall from 2019 through 2021. This was induced by the company's net profit, which would still be negative with values of -1.17 trillion (2019), -1.11 trillion (2020), and -1.42 trillion (2021) in the company's performance report, despite the fact that crude palm oil (CPO) prices increased throughout 2021. This could be due to the company's subpar performance, a problem, or a big debt to the company, all of which have a negative influence on earnings per share. This negative profit may dissuade investors from buying BWPT stocks, resulting in a decline in market capitalization and the number of shareholders, resulting in a downtrend or a declining trend graph for BWPT shares.

Evaluation of Market Return (Rm)

The market rate of return is the rate of return based on the growth of the stock market index (Ratnaningtyas et al., 2016), (Martin, 2017; Suhandak, 2019; Lakshmanasamy, 2021). The market rate of return or market return showed significant fluctuation throughout 2019–2021. This was owing to the global economic crisis brought on by the COVID-19 epidemic, which also damaged the economy and stock market of Indonesia. In January-March of 2020, the JCI (Jakarta Composite Index) began to experience a significant fall caused by the introduction of COVID-19 into Indonesia. January 2020 had a loss of 5.71 percent, February 2020 saw a decrease of 8.20 percent, and March 2020 saw a decrease of 16.76 percent.

Table 2. Market Return (Rm) of the Composite Stock Price Index

Nr	Month	CSPI	Rm	%Rm
1	Jan 2019	6.533	-	-
2	Feb 2019	6.443	-0.0137	-1.37
3	Mar 2019	6.469	0.0039	0.39
4	Apr 2019	6.455	-0.0021	-0.21
5	May 2019	6.209	-0.0381	-3.81
6	June 2019	6.359	0.0241	2.41
7	July 2019	6.391	0.0050	0.50
8	Aug 2019	6.328	-0.0097	-0.97
9	Sep 2019	6.169	-0.0252	-2.52
10	Oct 2019	6.228	0.0096	0.96
11	Nov 2019	6.012	-0.0348	-3.48
12	Dec 2019	6.300	0.0479	4.79
13	Jan 2020	5.940	-0.0571	-5.71
14	Feb 2020	5.453	-0.0820	-8.20
15	Mar 2020	4.539	-0.1676	-16.76
16	Apr 2020	4.716	0.0391	3.91
17	May 2020	4.754	0.0079	0.79
18	Jun 2020	4.905	0.0319	3.19
19	Jul 2020	5.150	0.0498	4.98
20	Aug 2020	5.238	0.0173	1.73
21	Sep 2020	4.870	-0.0703	-7.03
22	Oct 2020	5.128	0.0530	5.30
23	Nov 2020	5.612	0.0944	9.44
24	Dec 2020	5.979	0.0653	6.53
25	Jan 2021	5.862	-0.0195	-1.95
26	Feb 2021	6.242	0.0647	6.47
27	Mar 2021	5.986	-0.0411	-4.11
28	Apr 2021	5.996	0.0017	0.17
29	May2021	5.947	-0.0080	-0.80
30	Jun 2021	5.985	0.0064	0.64
31	Jul 2021	6.070	0.0141	1.41
32	Aug 2021	6.150	0.0132	1.32
33	Sep 2021	6.287	0.0222	2.22
34	Oct 2021	6.591	0.0484	4.84
35	Nov 2021	6.534	-0.0087	-0.87
36	Dec 2021	6.581	0.0073	0.73
Jumlah			0.0494	4.94
E(Rm)			0,0014	0,14

After that, economic stability occurred, and from the end of 2020 to the end of 2021, the JCI experienced a major recovery, as indicated by a stronger graph trend. According to Fendi Susiyanto, the chief executive officer of PT Elkoranvidi Indonesia Investama, there are two major factors that will affect the index in 2021: the development of the coronavirus, which would be beginning to improve, along with a relatively high vaccination rate, and the response of the government and the central bank in overcoming adversity (Maghiszha, 2022).

According to Table 2. the cumulative market returns for 2019–2021 have gained by 4.94 percent, with an average gain of 0.21 percent. The highest market return occurred in November 2020, with a growth of 9.44 percent, and the steepest depreciation occurred in March 2020, with a drop of 16.76 percent. According to Royal & O'shea (2022), historically based market returns are deemed satisfactory if they generate an average long-term return of 10 percent.

After experiencing a period of slowing economic growth in the prior year, an investor can enter the capital market in 2022 by purchasing shares in the agricultural sector that have positive performance and are resistant to economic shocks as a short-term action by referring to the stock's history over the following three years. However, for the long run, fundamental study of the firm's performance through its financial statements is essential in order to determine whether a company is solid and has promising future possibilities.

Risk Free Rate (Rf) Evaluation

The risk-free rate is the rate of return offered by non-risky or even risk-free financial products. The risk-free rate informs investors that they will not incur additional risk if the investment instrument does not generate a better return than the risk-free rate asset (Demodaran, 2010; Bianconi et al., 2015).

Based on Table 3. the BI rate continued to drop from January 2019 to December 2021, from 6 percent to 3.5 percent. In addition, it declined annually, from 5.63 percent in 2019 to 4.25 percent in 2020, and then to 3.52 percent in 2021. Thus, the average BI rate over three years was 4.47 percent. This was a positive factor for the stock market on the Indonesia Stock Exchange because it could encourage people to switch their investments from deposits or banking to stock market instruments. If the banking interest rate was low, investors would switch their investment instruments to stock market instruments. Alternatively, when bank interest rates were high, stock investors may have turned to banking, bonds, or other financial assets with stable incomes and guaranteed profits.

In contrast, interest rates always have an inverse or negative relationship with stock prices. Consequently, a rise in interest rates will reduce the volatility of stock prices. According to Haryono (2021), the Bank Indonesia's decision to cut or keep its interest rate was intended to ensure the stability of the rupiah exchange rate in the face of rising uncertainty on global financial markets and low inflation expectations.

In comparison to the risk-free or Bank Indonesia interest rate, the average return on stocks for the period 2019 to 2021 was less than the risk-free or Bank Indonesia interest rate, which was 0.33% versus 4.7%. However, the mid-2020 recovery phase was the optimal time to begin purchasing shares, so that if future economic uncertainty leads the JCI share price to fall, a savvy investor would be prepared to purchase shares at lower or red-hot prices, so increasing the potential for the growth.

Table 3. Bank Indonesia Interest Rate (Percent)

Nr	Month	2019	2020	2021
1	Jan	6.00	5.00	3.75
2	Feb	6.00	4.75	3.50
3	Mar	6.00	4.50	3.50
4	April	6.00	4.50	3.50
5	May	6.00	4.50	3.50
6	June	6.00	4.25	3.50
7	July	5.75	4.00	3.50
8	Aug	5.50	4.00	3.50
9	Sep	5.25	4.00	3.50
10	Oct	5.00	4.00	3.50
11	Nov	5.00	3.75	3.50
12	Dec	5.00	3.75	3.50
Averages		5.63	4.25	3.52
3 Years Averages			4.47	

Source: Bank Indonesia And The Central Statistics Agency Provide The Data Which Had Been Processed (2022)

Systematic Risk Evaluation, or Beta (βi)

Systematic risk is a risk that affects all investment instruments, such as inflation, economic recession, interest rate increases, etc (Widoatmodjo, 2007). The systematic risk, or beta, of agricultural stocks varied according to Table 4. Eagle High Plantations Tbk (BWPT) was the stock with the highest risk with a value of 2.5418 points. BWPT stocks were considered as aggressive because they exceed the risk tolerance or beta limit by more than one ($\beta > 1$), indicating that when the market or JCI rises, the increase may exceed the JCI height.

Consequently, when the JCI declines, BWPT stocks may face a more significant decline. Due to their high volatility, BWPT stocks were more appealing for short-term trading than for long-term investment. Consequently, they were more desirable for trading than for investment.

Then there were stocks with a beta of less than one ($\beta<1$) and a positive number, indicating that when the JCI climbed, so did the stock, even if the gain was smaller than the market or JCI growth, and vice versa. SGRO stock was an

example of a stock with a beta of 0.1162 that had a positive value and the lowest beta. In addition, β = 1 indicated that for every one percent increase in the market, the stock would grow by the same amount, and vice versa. However, there were no stocks with a value of β = 1 in this analysis. There were, however, stocks with negative beta values, such as GZCO stocks with a beta value of -0.0233. This indicates that the movement would be contrary to the market. For instance, when the market or the JCI grew, the GZCO stocks would decline, albeit by a smaller amount than the market's growth. In contrast, when the market decreases, GZCO's shares will climb, but at a lesser rate than the market decline. In contrast, if a stock's beta was less than negative one ((β<-1), as in the case of a stock with a beta of -1.3522, the movement would be opposite the market movement, and the gain and decline percentages would be more than the market percentage.

Tabel 4. Systematic Risk (βi) Agricultural Sector Stocks

Nr	Stock code	Cov (Ri. Rm)	Var (Rm)	Beta (β)
1	AALI	0.0045	0.0023	1.9578
2	ANJT	0.0029	0.0023	1.2773
3	BISI	0.0026	0.0023	1.1495
4	BWPT	0.0059	0.0023	2.5418
5	DSFI	0.0012	0.0023	0.5419
6	DSNG	0.0023	0.0023	0.9979
7	GZCO	-0.0001	0.0023	-0.0233
8	JAWA	0.0013	0.0023	0.5849
9	LSIP	0.0032	0.0023	1.3754
10	MGRO	0.0018	0.0023	0.7671
11	SGRO	0.0003	0.0023	0.1162
12	SIMP	0.0044	0.0023	1.9227
13	SSMS	0.0011	0.0023	0.4945
14	TBLA	0.0039	0.0023	1.6942
15	UNSP	0.0023	0.0023	1.3902

Source: Processed Data (2022)

Eight stocks, including AALI, ANJT, BISI, BWPT, LSIP, SIMP, TBLA, and UNSP, had stock risk that was higher than market risk (β > 1). DSFI, DSNG, JAVA, MGRO, SGRO, and SSMS were the six stocks with a lower stock risk than the market risk (β<1) and a positive value. And there was one stock whose stock risk was lower than the market risk (β<1) and had a negative value; that stock was GZCO. No participant in this study had the same stock risk as the market risk (β = 1).

Individual Expected Return (E(Ri)) Evaluation

The expected rate of return, or expected return, is a return that investors anticipate receiving in the future but has not yet been realized (Strong and Xinzhong, 1997), (Ziobrowski et.al. 2011) and (Suganda, 2018). Among the 15 stocks evaluated, DSFI, DSNG, GZCO, JAVA, MGRO, SGRO, and SSMS were among the seven with a positive potential gains (E(Ri)) (See Table 3). There were eight stocks with a negative projected return, including AALI, ANJT, BISI, BWPT, LSIP, SIMP, TBLA, and UNSP.

Table 5. Expected Return on Agricultural Sector Stocks

Nr	Stocks Code	E(Ri)	%E(Ri)
1	AALI	-0.0400	-4.00
2	ANJT	-0.0106	-1.06
3	BISI	-0.0051	-0.51
4	BWPT	-0.0653	-6.53
5	DSFI	0.0212	2.12
6	DSNG	0.0015	0.15
7	GZCO	0.0457	4.57
8	JAWA	0.0194	1.94
9	LSIP	-0.0148	-1.48
10	MGRO	0.0115	1.15
11	SGRO	0.0396	3.96
12	SIMP	-0.0385	-3.85
13	SSMS	0.0233	2.33
14	TBLA	-0.0286	-2.86
15	UNSP	-0.0155	-1.55

Source: Processed data (2022)

Gozco Plantations Tbk (GZCO) had the highest E(Ri) value among stocks with a positive E(Ri) value, with a 4.57 percent E(Ri) value. Eagle High Plantations Tbk (BWPT) shares had the highest negative E(Ri) value of -6.53 percent among stocks with a negative E(Ri) value. The value of expected return (expected return) was inversely proportional to systematic risk in this study (beta). Therefore, when the beta value was high, the expected return was low, and when it was low, the expected return was high. Therefore, it might be argued that beta levels and predicted returns for agricultural sector stocks were inversely or not directly proportional.

Predicated on the results of the study of agricultural stocks, an investor was ultimately highly lucrative. Even if the expected return value occurred,

which was inversely related to the beta value, it would still be advantageous for investors to invest because the risk obtained was so low and the expected reward was so high.

Utilization of the Capital Asset Pricing Model (CAPM)

Efficient And Inefficient Stocks, As Well As Investment Decisions

Both efficient (undervalued) and inefficient (overvalued) stock options exist for stocks. Efficient stocks are those with an individual rate of return (individual return) that exceeds the expected return, as expressed by Ri > E (Ri). Alternatively, if a stock's individual rate of return is lower than its expected rate of return, the stock is deemed inefficient, as represented by Ri<E (Ri).

According to Table 6. there were ten efficient stocks, which included AALI, ANJT, BISI, BWPT, DSNG, JAVA, LSIP, SIMP, TBLA, and UNSP. The stock with the greatest difference in value was Eagle High Plantations Tbk (BWPT), with a difference of 5.21 percent. This indicates that BWPT shares were able to provide a true profit that was 5.21 percent higher than the return investors expected, despite the fact that the actual return was still valuable. Other shares consisted of the shares of five inefficient corporations: DSFI, GZCO, MGRO, SGRO, and SSMS. Sampoerna Agro Tbk (SGRO) had the largest difference among the five stocks, with a difference of -4.09 percent. SGRO stock returns are lower than anticipated.

Table 6. List of Efficient (Undervalued) and Inefficient (Overvalued) Stocks

Nr	Stocks code	Ri %	E(Ri) %	Stock Evaluation
1	AALI	-0.80	-4.00	Undervalued
2	ANJT	0.41	-1.06	Undervalued
3	BISI	-0.41	-0.51	Undervalued
4	BWPT	-1.32	-6.53	Undervalued
5	DSFI	0.81	2.12	Overvalued
6	DSNG	1.08	0.15	Undervalued
7	GZCO	0.75	4.57	Overvalued
8	JAWA	3.49	1.94	Undervalued
9	LSIP	0.04	-1.48	Undervalued
10	MGRO	-0.25	1.15	Overvalued
11	SGRO	-0.13	3.96	Overvalued
12	SIMP	0.49	-3.85	Undervalued
13	SSMS	0.47	2.33	Overvalued
14	TBLA	0.04	-2.86	Undervalued
15	UNSP	0.26	-1.55	Undervalued

The appropriate investing selections can be made based on the stock evaluation gained by purchasing efficient (undervalued) equities. However, when investors own inefficient stocks, they can sell them immediately in order to move their assets to efficient stocks and prevent losses.

Graphing the Security Market Line (SML)

The Security Market Line (SML) or Securities Market Line (GPS) is a graphical representation of the Capital Asset Pricing Model (CAPM) technique (Hodnet & Hsieh, 2012; Rachmad & Sugiharto, 2021). The Security Market Line illustrates the correlation between systematic risk (beta) and expected return.

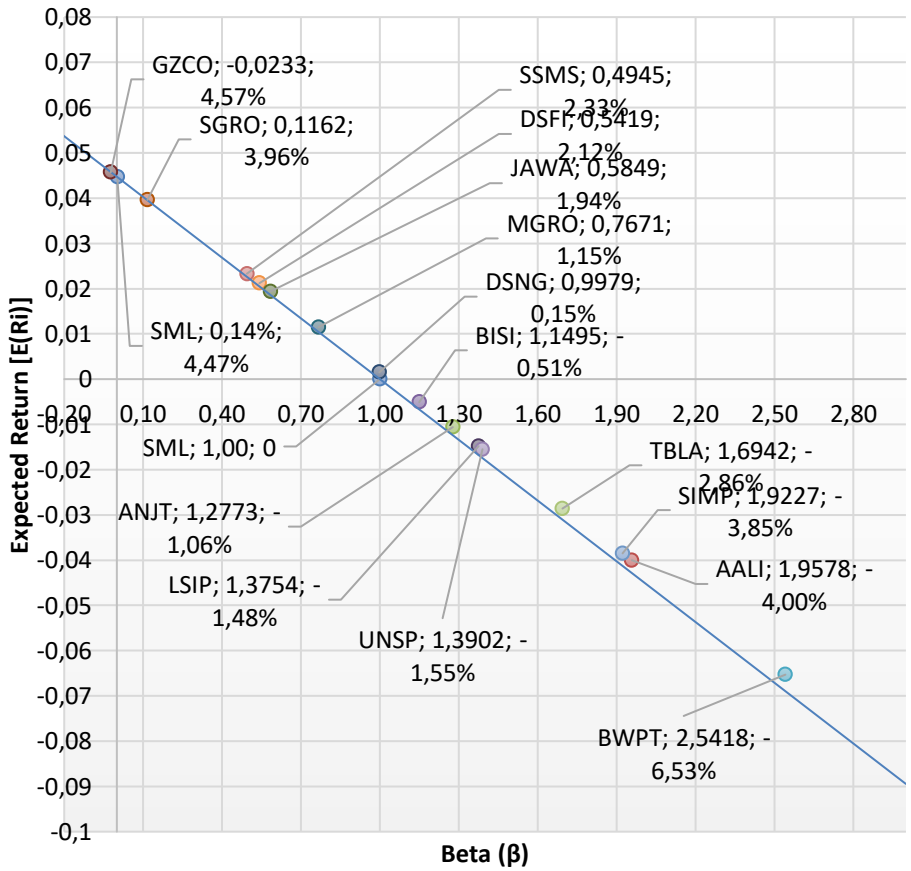

Figure 1.
Security Market Line (SML) on Research Object as a Graph

It is apparent from the graph that there is a fall, indicating that the systematic risk (beta) decrease the projected return. This indicates that the relationship between systematic risk (β) and the expected rate of return (E(Ri)) is unidirectional or nonlinear. There is a non-linear relationship due to negative

sentiment, primarily from the COVID-19 pandemic, but after that, several agricultural companies experienced rapid improvements, resulting in a rise in stock prices, which rise dramatically from their lowest point after the negative sentiment from the COVID-19 pandemic. However, there are also agricultural enterprises that have been significantly impacted by COVID-19, causing the company's performance to remain unstable and its share price to continue falling without a considerable gain. This finally results in a large systematic risk, although the expected return is lower than the risk. Consequently, low risk and big return situations arise because certain stocks are hardy but see a significant gain. Contrarily, the occurrence of high risk and low return is due to the existence of stocks that are not resilient, as a result of which they experience a substantial loss but are not followed by a sufficient increase and sometimes even move in a stationary manner.

On the Security Market Line, stocks classified as low risk/high return include GZCO, SGRO, SSMS, DSFI, JAVA, MGRO, and DSNG, which have a systematic risk of less than one ($\beta < 1$). On the other hand, BISI, ANJT, LSIP, UNSP, TBLA, SIMP, AALI, and BWP equities are classed as high risk-low return based on the Security Market Line since they possess several systematic risks ($\beta > 1$).

In fact, in relation to the stock analysis described previously, we must also take into account the CAPM method's underlying assumptions. According to Astawinetu and Handini (2020), the following assumptions must be taken into account:: (1) Investors can evaluate a portfolio based on the expected return, standard deviation, or beta for a single period.(2) Investors base their decisions on the anticipated profit or return, in addition to the standard deviation or portfolio beta. Each asset can be broken down into its smallest component, allowing investors to purchase assets at the price of their choosing. (4) There is a standard interest rate that all investors must pay on risk-free loans and savings. (5) There are no transaction or income taxes. (6) All investors have direct and unrestricted access to information. (7) Individual investor actions have no effect on stock prices; however, if all investors take the same actions, they may be able to influence the prices of securities on the capital market. (8) Investors' expectations are identical.

The CAPM's underlying assumptions are designed to simplify real-world issues. With the establishment of these assumptions, it is expected that investors will be able to comprehend and assess the relationship between returns and risks in a market that is actually more complex. The CAPM is still widely used to estimate the return on a stock or security, despite the fact that several of its assumptions are deemed unrealistic.

CONCLUSION AND SUGGESTION

Conclusion

Agricultural sector stock returns (Ri) ranged between -1.32% and 3.494%. Among the stocks with positive performance were ANJT, DSFI, DSNG, GZCO, JAVA, LSIP, SIMP, SSMS, TBLA, and UNSP. AALI, BISI, BWPT, MGRO, and SGRO all experienced negative returns throughout the same period. The only stock with a grade of $\beta<1$ was GZCO, while DSFI, DSNG, JAVA, MGRO, SGRO, and SSMS stocks earned positive levels. AALI, ANJT, BISI, BWPT, LSIP, SIMP, TBLA, and UNSP were among the stocks having a value B>1. Not detected Stock value B=1. The value of the shares of AALI, ANJT, BISI, BWPT, LSIP, SIMP, TBLA, and UNSP decreased when viewed from the standpoint of expected return. DSFI, DSNG, GZCO, JAVA, MGRO, SGRO, and SSMS stocks had positive projected returns, with GZCO stocks having the highest positive value at 4.57 percent. The following stocks were undervalued: AALI, ANJT, BISI, BWPT, DSNG, JAVA, LSIP, SIMP, TBLA, and UNSP; DSFI, GZCO, MGRO, SGRO, and SSMS were overvalued.

Suggestion

To compare efficient and inefficient stocks, this study uses CPAM. It is hoped that the value of a stock be strengthened by the use of additional methodological approaches.

Stocks in the agricultural sector that have a higher return than the anticipated return, are favorable and undervalued, and have high profit potential can be purchased by investors.

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