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What Are The Differentiating Factors Between Investor and Shareholder Investment?

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A B S T R A C T	**I N F O A R T I K E L**
This research aims to find out the factors whether the investors and the shareholders use the same factors to form an investment allocation. This research uses an exploratory factor analysis model to determine variables that can explain the relationship or correlation between various independent indicators that are observed. Findings, theres five factors that investors consider when allocating their investment, and two factors that are used by shareholders. The single index model is the most important factor for investors to determine capital allocation, and Earnings per shareis for shareholders. This research is expected to assist investors in determining investment valuation methods by considering five factors in order to achieve the highest rate of return and because shareholders are concerned with the ultimate goal of increasing the value per share, they should consider the growth of earnings per shares and the value of beta stock.	

1.INTRODUCTION

The economic development of a nation depends heavily on investment. The capitalization value on the capital market represents the size of the economy or the amount of money available for economic expansion. A gauge of economic expansion is the large number of investors who make investments both domestically and internationally. The coronavirus outbreak caused a global economic downturn at the start of 2020. From the start of the year to the first semester, there was a noticeable decline in the Stock Exchange Index's (IHSG) condition on the Indonesia Stock Exchange. Conditions have not improved as a result of several COVID-19-related government policies in Indonesia. Due to their pessimistic outlook on future economic conditions, many investors either sell their portfolios or don't maintain their investments. 92 percent of investors altered their portfolios during the choppy stock market conditions of February and March 2020. Nevertheless, most investors were unconcerned about a decline in short-term investments. Investors conduct more frequent reviews of their investments. Furthermore, to deal with the current economic uncertainties, investors desire a medium or higher level of financial knowledge. In this scenario, asset allocation becomes crucial for investors to meet their investment goals. The most crucial element of an investment that affects return on investment is asset allocation. Investors are advised to spread their risk across a variety of risky assets with low risk to reduce losses and increase portfolio stability because if one asset experiences a loss, other assets may make up the difference
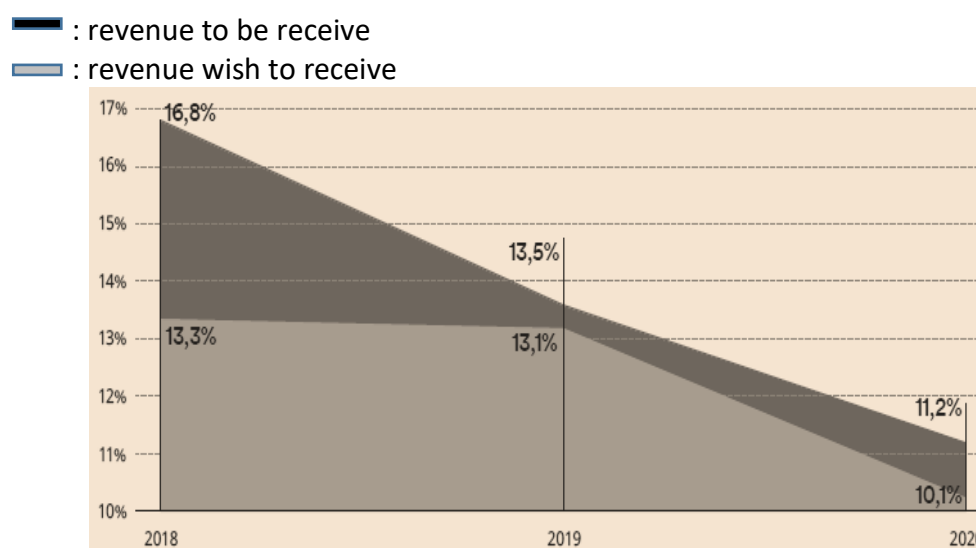

Figure 1. Investor Expectations on the Covid 19 Pandemic

According to research from Kluwe-Schiavon et al. (2021), people's failure to adjust to government policies regarding the coronavirus will have an adverse effect on the investment climate as well as the economy. Risk-averse investors will be hesitant to contribute to the portfolio in the event of an uncertain or deteriorating economic situation. Results from Paulsen et al. (2012) demonstrated how the variability of risky returns affects the degree to which profits from investing in risky assets can be guaranteed. The best portfolio is one that is constructed from a variety of options found in a group of effective portfolios. Instead of putting all of their money into one or a few assets, investors hold well-diversified portfolios.

(Singh & Gautam, 2014). There are lots of concepts to measure this portfolio's performance. One concept of performance measurement used is a combination of a portfolio's return divided by the risk of its portfolio. Therefore, specifically, the optimal portfolio gives optimal returns with minimized risk. (Rolanda, 2015)**.** A portfolio with a high standard deviation will provide a high rate of return; a portfolio with a low standard deviation will provide a low rate of return. (Prabowo, 2013). The optimal portfolio obtained shows that the factors that influence the optimal portfolio are a risk-free investment advantage, the risk aversion index, and loan interest rates. (Devi et al., 2013).

Modeling and analytics tools are preferred for understanding the environment prior to allocating capital. Having capabilities and tools within financial analytics can help them better consider alternatives, and understand the impact of decisions on the portfolio to validate their capital allocation strategies. In essence, the idea of portfolio investment explains that there is a positive correlation between risk and return. The level of return obtained increases with a security's level of risk. In contrast, the level of return obtained decreases as a security's risk increases. (Elvira, 2014). The impact of macroeconomic and microeconomic conditions cannot be separated from the analysis of returns and risks. When the portfolio meets assumptions with the lowest risk level and a specific level of return, the results of the best portfolio-forming shares produce the best return and risk level. (Oktaviani & Wijayanto, 2016). Additionally, because many investors are risk averse, investments in risky assets, such as portfolios, must be readjusted by increasing the expected rate of return relative to risk-free assets. (O'Donoghue & Somerville, 2018). Investors must reevaluate and readjust the level of investment risk due to abnormalities on the Indonesia Stock Exchange, which result in an abnormal rate of return on investment. This is undoubtedly difficult because even a small error could harm investors. Investors should therefore create a strategic asset allocation before choosing so that it can serve as the foundation for their decision. Investors will benefit from allocation to different investment assets or diversification, including lower risk and higher returns.

When deciding whether to make a long-term investment, an investor may want to know whether the formula or composition of the invested portfolio can produce a positive rate of return. then a portfolio analysis model such as the Capital Allocation Line (CAL) can be employed. The correlation between portfolio returns, market risk, and the slope of the CAL is visualized using the capital allocation line (CAL). According to research from Wijaya & Kristian (2017) on stock performance for the years 2012–2016, it was discovered that portfolios with a balanced allocation of funds performed better than those formed by capital allocation lines, though they frequently had lower returns. a portfolio created by lines of capital allocation. Investors must conduct a thorough risk analysis and take alternative investment strategies into account when dealing with uncertain risks, in addition to considering the composition of their asset allocation. For a country, the ability to maintain investors investments will be crucial. On the other hand, it will be crucial for investors (shareholders) to be able to think about and reevaluate the factors that can enhance their investment performance. Market risk and beta stock, which can affect how well investment assets perform on the capital market, must be taken into account in addition to the other factors taken into account when choosing the portfolio allocation method. Earnings per share is another fundamental variable that can be used as a benchmark to assess the performance of an investment asset. The performance of EPS can be used as a benchmark to determine whether investment assets will produce the anticipated rate of return. (Erel et al., 2017) The success of the company's management is

demonstrated by the rising EPS. (Hikmah et al., 2022). The contribution of the effect of earnings per share to the increase in stock prices is proven by research on the share price of the banking sector, which shows how earnings per share value will affect stock prices in the capital market. (Amiputra et al., 2021).

Because determining the optimal allocation of investment assets is very important, it would be better if we could find out the factors that could be considered in making investment asset allocations. CAPM model makes use of historical data to help predict an asset's future return. The CAPM model, which uses beta stock that depend on future risk estimates, has been used because historical data may not be sufficient to predict the future. (Tlemsani et al., 2020). In general, these two models use beta elements in the formula; some studies state that a large stock return will always be followed by an increased risk or beta, so that the measurement of the good and poor shares is approached by a comparative approach to return and risk or beta. (Mahadwartha & Yandi Gunawan, 2017). According result from Sunarya (2020), investors used risk market, risk-free, beta, and expected return components of the Capital Asset Pricing Model (CAPM) for determining portfolio alllocation. Research fom Tu & He (2020), shows that investors consider risk and and portfolio rate return calculation formula, which contains risk market indicators and standard deviation, with the aim of obtaining maximum profit. The results from Gusni & Nugraha (2021), indicate investors behavior changes to passive behavior by reducing risk asset allocation when the market declines. The paradigm shift in asset allocation assumes that investors are always rational, becomes irrational due to a lack of knowledge and competency in allocating assets, as well as personal values that guide investors' financial behavior. According to Brijesh Singh & Thimmaiah (2017) research, 40 percent of investors have made short-term investments, while 38 percent have made long-term investments to build wealth. Investors have considered factors like high returns and liquidity while making an investment, and they are influenced by risk and return on investment decisions. There are two types of investors who have an interest in making investment allocations: the first are investors with the aim of obtaining capital gains from a portfolio, and the second are investors (shareholders) with long-term investment goals or dividends. We try to answer what factors are most considered by the shareholder group (shareholder) and the external investor group in determining the allocation of investment assets on the abnormal capital market. We try to group factors such as the single index model, CAPM model, risk market, beta stock, standard deviation, and earnings per share.

2.RESEARCH METHODS

This study employs quantitative methods, and the research makes extensive use of quantitative data sources, from data collection to interpretation. The development research approach is chosen based on the objectives to investigate the pattern and inquiry of growth and/or change factors that influence the development of the variables and how these factors are interconnected. Developmental research focuses on the development of the variables during the study period, which will be called longitudinal research. We took 13 samples of dual listings companies that were listed on the Indonesia Stock Exchange. Observations were made on the coronavirus pandemic, which was observed from late 2020 until the end of 2021. This research uses a factor analysis statistical model to determine factors that can be used for capital allocation decisions. The function of factor analysis is to identify the structure or matrix of the relationship between variables by looking at the correlation between variables. In this research, we use exploratory factor analysis (EFA). Commonly, EFA is used for reselecting and

reducing original variables or factors into new variables or factors which has number is smaller than the initial variables. The analysis process tries to find new relationships between variables, so that one or several sets variables can be made. Factor analysis requires normal distribution and strong correlation rate, which must be above 50 percent, so it is necessary to use the Kolmogorov Smirnov test and Bartlett Test of Sphericity. If you get a significant correlation result, then the Measure of Sampling Adequacy (MSA) must be done using the Kaiser-Meyer-Okin (KMO) test to see appropriateness from variables or whether the can be used for factor analysis. In this research, we use six variables to be analyzed:

Definition of Variables

In the first variable, we strive to provide the development of each portfolio in the dual listing for each period. In the first step, we strive to calculate the expected return using the Capital Assets Pricing Model for each portfolio sample. The equation as 1

$$E(r) = rf + ß(E(rm) - rf) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (1)$$

E(r)   : Portfolio retun
Rf   : Risk free
ß   : Beta stock
E(rm)   : Stock return

In the second variable, the single index model is the most familiar expression of the capital asset pricing model for practitioners to calculate the expected return for each portfolio.; equation 2

$$Re = \alpha + ß.Rm + e \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (2)$$

Re   : Portfolio return
α : Alpha
ß   : Beta stock
Rm   : Risk premium
e   : error

The third variable is standard deviation, we use single data model. The equation as 3,

$$S = \sqrt{\frac{\Sigma(xi-x)^2}{n}} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (3)$$

S   : Standard deviation
$x1$: value 1,2,3,....
$\bar{x}$: means
n   : periods

The fourth variable is the market risk. The market risk is the probability of losses due to factors that affect the performance of an investments. Market risk, also called systematic risk, cannot be eliminated through diversification, though it can be hedged in other ways.

Sources of market risk include recessions, political turmoil, and changes in interest rates. For measuring market risk, use the value-at-risk method. We used market risk premium data from 2020 until 2022. Beta stock is the fifth variable. Beta is a tool for measuring the volatility of a security or portfolio compared to the market. Stocks with betas higher than 1.0 can be interpreted as more volatile. Beta stock is used in the CAPM model, which describes the relationship between systematic risk and the expected return of stocks. In this research, we use beta stock provided by PEFINDO. Earnings per share is the last variable. Earnings per share are a measure of whether a company is profitable or not. The EPS formula can be described as net income divided by the number of outstanding stock shares. EPS becomes an investor's consideration when making investment decisions because a higher EPS indicates growth and stock price increases.

Normality Test

The Kolmogorov-Smirnov test is used with the aim of knowing a sample comes from a population that has a normal distribution of data.
Kolmogorov-Smirnov Test Formula,

$$Z\_i = \frac{Xi - \ddot{X}}{s} , \quad i=1,2,3,...,k \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 4$$
$$D\_i = |F(Z\_i) - F(X\_i)|, i = 1,2,3, \dots , k \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 5$$

s is the number of random samples
X1, X2,......Xk is the value of the random sample
Zi is the standardized normal (sample) value of the transformation results Xi
F(Xi) represents the cumulative probability of the value , where i = 1,2,3, … , k
F(Zi) denotes the cumulative probability of the standardized normal value.

if the sig. Value > 0.05, then H_o is accepted and H_1 is rejected
if the sig. value < 0.05, then H_o is rejected and H_1 is accepted

Hotelling's T2 Control Chart

Hottling's T Test is a control diagram that is used to determine the mean value and variability of two or more variables that are homogeneous and have a normal distribution. The control limits of this diagram are shown by finding the lower (LCL) and upper limits (UCL). A variable is said to be controlled if the vector or sample distribution is between the UCLvalue and LCL value

$$UCL = x + \left(k x \frac{MR}{d2} \right) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 6$$

$$LCL = x - \left(k x \frac{MR}{d2} \right) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 7$$

x = mean
MR = moving range
d2 = unbiased constant

Kaiser-Meyer-Olkin and Bartlett's Test

The MSA value of the KMO test must be above 0.50.

$$KMO = \frac{\sum_i \sum_{i/j} r_{ij}^2}{\sum_i \sum_{i/j} r_{ij}^2 + \sum_i \sum_{i/j} \alpha_{ij}^2} \; ; i= 1,2,......p;1,2]p \; ....8$$

rij = simple correlation coefficient between variables i and j
alphaij = partial correlation coefficient between variables i and j

$$X_{obs}^2 = -\left[(N-1) - \frac{(2p+5)}{6}\right]In]R\} \; ....,,9$$

N = number of observations
p = number of variables
|R| = determination of the correlation matrix

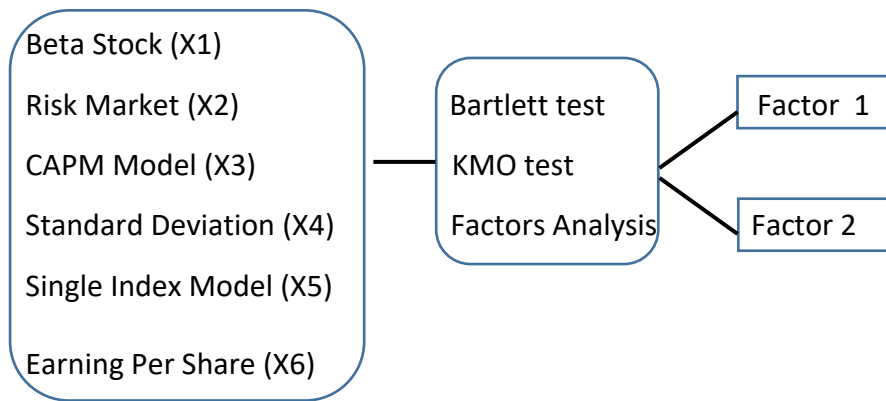The analytical path of this research is shown in Figure 2.

Figure 2. Analysis Factor Path

3.RESULTS

The results of the calculation of the rate of return of the portfolio using the CAPM model, single index methods, and standard deviation are shown below:

Table 1. Portofolios Rate Return and Standard Deviation Result

Portfolio Sample	CAPM Model	Single Index Model	Standard Deviation
1	0,0359	0,0380	,0961
2	0,2920	0,3115	,3598
3	0,0317	0,0371	,1689
4	0,1771	0,1917	,2291
5	0,0684	0,0164	,2099
6	-0,0496	-0,0707	,0750

7	0,1142	0,1846	,1973
8	-0,0542	-0,1067	,1157
9	0,1070	0,0816	,1298
10	-0,0667	-0,0680	,1158
11	0,1302	0,1438	,2670
12	0,3024	0,3259	,4181
13	0,0111	-0,0036	,0250

Source : Procced Data, 2023

From the thirteen portfolio samples, there were six portfolios with a single index model that had a higher rate of return compared to the CAPM, which had only three samples. But if the CAPM is examined, it has a smaller risk compared to the single index model. At the time that the rate of return got negative, the Capital Asset Pricing Model (CAPM) produced a smaller value (risk) than the single index model. For long-term investment (CAPM), investors should consider allocating to less risky assets. When investors demand a higher expected return, they should perform new asset allocation on risky assets with a higher rate of return. (Akbar, 2018)

Normality Test

Table 2. Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Rm	,143	13	,200*	,933	13	,368
Beta	,144	13	,200*	,916	13	,224
ST.Deviasi	,150	13	,200*	,944	13	,516
EPS	,151	13	,200*	,961	13	,766
CAPM	,121	13	,200*	,926	13	,303
Single Index	,165	13	,200*	,938	13	,434

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction
Source : SPSS, 2023

From Kolmogorv-Smirnov test show that all variables has significant more than 0,05, or H_o is accepted and H_1 is rejected. It means all data has normal distribution, and all data can be use for next analysis step.

Kaiser-Meyer-Olkin and Bartlett's Test

In the initial stages, all variables, namely beta stock, risk market, CAPM, standard deviation, single index model, and earnings per share, will be tested using a Bartlett test to find out whether the whole variable can be used for further testing. The results of the Bartlett Test are shown below.

Table 3. Kaiser-Meyer-Olkin and Bartlett's Result

Kaiser-Meyer-Olkin Measure.		,706
Bartlett's Test	Approx. Chi-Square	102,371
	df	15

Sig.			,000

Source : SPSS, 2023

All variables that will be thoroughly declared can be continued for the next stage. Kaiser Meyer Olkin test results have met the requirements, which are 0.706 > 0.5. Whereas in Bartlett's test, a significant level of 0.00 or less than 0.05 meets the requirements to proceed to the next stage. Variable Beta Stock, Risk Market, CAPM Model, Standard Deviation, Single Index Model, and Earnings Per Share will be tested on the Anti-Image Matrice.

Table 4. Anti-image Matrices

		Beta Stock	Risk Market	CAPM Model	ST .Deviasi	Single Index Model	EPS
Anti-image Covariance	Beta Stock	,281	-,005	,024	-,043	-,032	-,155
	Risk Market	-,005	,031	-,005	,013	-,008	,032
	CAPM Model	,024	-,005	,006	-,011	-,005	-,005
	ST.Deviation	-,043	,013	-,011	,024	,006	,011
	Single Index Model	-,032	-,008	-,005	,006	,012	-,005
	EPS	-,155	,032	-,005	,011	-,005	,761
Anti-image Correlation	Beta Stock	,629ᵃ	-,056	,591	-,517	-,566	-,336
	Risk Market	-,056	,833ᵃ	-,354	,491	-,427	,207
	CAPM Model	,591	-,354	,652ᵃ	-,897	-,651	-,075
	ST.Deviation	-,517	,491	-,897	,672ᵃ	,354	,083
	Single Index Model	-,566	-,427	-,651	,354	,755ᵃ	-,051
	EPS	-,336	,207	-,075	,083	-,051	,623ᵃ

Source : SPSS, 2023

On the Anti-Image Matrice results above, all variable values are greater than 0.5. Beta stock is 0.629, risk market is 0.833, CAPM model is 0.652, standard deviation is 0.672, single index model 0.755, and earnings per share is 0.623. From these result, all variables has pass KMO test which > 0,50. These results indicate that the whole variable can be used for further analysis.

Table 5. Communalities

	Initial	Extraction
Beta Stock	1,000	,728
Risk Market	1,000	,936
CAPM Model	1,000	,979
ST.Deviation	1,000	,911
Single index model	1,000	,981
EPS	1,000	,925

Source : SPSS, 2023

Table 5. Explain the amount of value and whether the variable used can explain the factors that will be formed. If the extraction value is greater than 0.50, it can proceed to the next stage. The single index model has the largest variant with 0.981, the CAPM model is in second, the risk market is in third, earnings per share is in fourth, the standard deviation is in fifth place, and beta stock is in last place with a variant of 0.728. Conclusion: All variables can be used to explain the factors that will be formed.

Table 6. Total Variance of Components

	Eigenvalues			Extraction		
Component	Total	Variance	Cumulative	Total	Variance	Cumulative
1	4,372	72,861	72,861	4,372	72,861	72,861
2	1,089	18,142	91,003	1,089	18,142	91,003
3	,377	6,281	97,284			
4	,146	2,428	99,712			
5	,013	,219	99,932			
6	,004	,068	100,000			

The eigenvalue value shows the relative importance of each factor in calculating the variance of the six variables analyzed. The results in the Total Variance Explained table above show that there are two factors formed from the six variables used. If we pay attention to the results of eigenvalue > 1, two factors meet these criteria. The first factor produced an eigenvalue of 4.372 with a variance of 73.861 percent, and the second factor produced an eigenvalue of 1,089 with a variance of 18.142 percent The total variance of the six variables extracted into two groups. First group is 72.861 percent, which means the variance that can be explained by first factor is 72.861 percent, and second's group explanation from factors is 18.142 percent, while the remaining 8.997 percent is explained by other factors that are not examined.

Table 7. Component Matrix

	Component	
	1	2
Beta Stock	,759	,389
Risk Market	,947	-,197
CAPM Model	,977	-,158
ST.Deviation	,950	-,092
Single Index Model	,983	-,122
EPS	,275	,922

Source : SPSS, 2023

Table 7 indicates that five variables have a value of more than 0.50. Singel Index Model with 0.983, Capital Asset Pricing Model (CAPM) Model with 0.977, standard deviation with 0.950, risk market with 0.947, and beta stock with 0.759 This means that the five variables become a group on the first factor, and then we give it the name capital allocation for Investors. From the results above, it can be seen that the single index model variable has the highest value, which means it is the most important factor for investors to determine capital

allocation. A single index model can become an input for portfolio analysis or can be used directly for portfolio analysis. (Margana et al., 2017). A portfolio formed by a single index model gives a high return with low risk, depending on the composition. (Partono & Widiyanto, 2017). The results of other studies state that the single index portfolio return is significantly different from the portfolio return of the naive diversification method. The portfolio risk of a single index model differs significantly from the risk of a traditional (naive) diversification portfolio. (Witiastuti, 2013). While the CAPM model has the second highest value and is not much different from the value produced by the single index model, The CAPM model could not be justified as a good model for pricing international assets when heteroscedasticity and incomplete market integration were considered. There is some inconsistency concerning the applicability of the CAPM to international asset pricing. (Setiawan, 2014). This is strengthened by the results from Uno & Syarif (2021), the single index model portfolio has a different rate of return compared to the CAPM model portfolio, and has no different on portfolio risk.

Table 8. Rotate Component Matrix

	Component	
	1	**2**
Beta Stock	,627	,579
Risk Market	,965	,064
CAPM Model	,983	,110
ST.Deviasi	,940	,166
Single Index Model	,980	,146
EPS	,017	,962

Source : SPSS, 2023

Table 8. shows that two variables have a value of more than 0.50. The beta stock variable is 0.579, and the EPS variable is 0.962. This means that the two variables become groups on second factor, and then we give the name Capital Allocation to the Shareholder.

Robustness Test

Hotelling's T2

Table 9. Hotteling Test Result

	LCL	UCL	Outlier
Market risk	0,394	0,517	no
Beta stock	0,051	2,416	no
CAPM	0,407	0,576	no
Standar deviation	0,1686	0,5390	no
Single Index model	0,487	0,653	no
EPS	1095	1275	no

All vectors or variations in the sample distribution of variables are between the LCL value and the LCL value, as can be seen from the hotteling test results. This shows that there aren't any outliers and that each variable's mean is within controlled ranges, as the table 3 illustrates.

Discussion

There are six factors used by investors to determine their investment allocation, and considertaion of using the factors split into 2 groups. In the first group, single index model, CAPM, market risk, and standard deviation are the main considerations, while the beta stock is last. This indicates that investors make investment allocations with the aim of obtaining maximum profits. In the second group, the earning per share and beta stock is the most important factor as a consideration for share holders to determine their investment allocation. This shows that the share holders aim to make long-term investments and avoid taking risks. As previously revealed, the beta stock is a measure of the volatility of a stock, and this indicates that the greater the beta stock, the greater the expectations of the risks and return. This result is in accordance with the research from Susanti et al. (2020), which beta stock has a positive relationship. The greater Beta makes the rate of return of the portfolio greater, and the opposite is true. The investment made by the company is to increase working capital to increase the scale of operations and profit growth. The success of a company in producing profits from its operating scale can be known by calculating its ROE. If ROE exceeds the level of stock returns, it can be said that the company is growing and its shares in the market are optimistic. Conversely, if the ROE is smaller than the level of stock returns, it can be assumed that the company cannot provide an increase in the value of shares for its shareholders. On the other hand, increased productivity will result in rising dividends. Dividend Discount Model: assuming dividends are at a constant level and contain elements of rigging, dividends will continue to accumulate to increase the price of a stock. And if the stock price continues to rise due to the accumulation of dividends, then this will increase earnings per share (EPS) for shareholders.

The Earnings per share, which has the highest value, can be interpreted as indicating that the main purpose of the shareholders in carrying out capital allocation is to focus on increasing the value per long-term share. Capital allocation plays a central role in value creation because it describes how a company manages money. Capital allocation creates lasting value for all stakeholders and can achieve other goals as well. Creating value ought to be imperative for at least two reasons; the first is competition, and the second is the rate of return they could earn on the best alternative. (Erel et al., 2017).

4.CONCLUSION

Not all factors of the single index model, CAPM model, risk market, earnings per share, standard deviation, and beta stock are considered by investors when investing in a portfolio. Capital allocation decisions between investors with maximum return goals are different from those between investors (shareholders) with long-term investment goals. In the first group, five variables are use for conderation making portfolio, namely beta stock, risk market, CAPM, standard deviation, singel index model, which shows that the capital allocation decision for investors is focused on the short term with the ultimate goal of achieving the maximum rate return. In the second group, we name the capital allocation for shareholders, which shows that there are two variables that use for conderation making portfolio, namely beta stock and earnings per share. which shows that the capital allocation decision for the shareholder is focused on the long run with the final goal of increasing the value per share.

Finally, this study is expected to help investors decide how to allocate their investments. Investors should be able to consider portfolio valuation methods, standard deviation, beta

stock, and market risk, especially in abnormal capital market conditions, to help achieve the final goal of a maximum rate of return. For the shareholder's capital allocation decision, because it is focused on the long run and has the final goal of increasing the value per share, they should consider the growth of EPS and the value of beta stock.

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