Research Paper

CAPM Method in Determining Investment Decisions in the Tourism Sector in Covid-19 Pandemic

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ABSTRACT

Using the Capital Asset Pricing Model (CAPM) technique, this study attempts to identify and evaluate stock investment decision-making in the tourist industry listed on the Indonesia Stock Exchange. The data for this study were collected between 2018 and 2021. The findings acquired are stock investment decisions in the tourist industry listed on the Indonesia Stock Exchange using the Capital Asset Pricing Model (CAPM) approach. Stock investment decisions cannot be made because they have inefficient shares. since the Ci calculation's result does not exceed the cutoff threshold value This is reflected in the stock's projected return ($0.00264561 < 0.00288417$), which is lower than the market's expected return.

Keywords: Capital Asset Pricing Model, Investment decision

INTRODUCTION

A portfolio of securities owned by people or corporations as a means of investing or investment is referred to as an investment portfolio. A collection of investments owned by institutions or people is referred to as a portfolio. The portfolio is designed as a strategy for maximizing projected profits while minimizing risks. The goal of investing is to make the most money with the least amount of risk.

An effective portfolio has a comparable risk level, can create a high level of profit, or can provide the same level of profit but with a higher level of risk. The optimal portfolio is one that an investor selects from a variety of options in a portfolio collection that is efficient (Tandelilin, 2010). Investors can utilize an optimal portfolio to reduce risk while maintaining a specified rate of return. Before investing, investors should consider the development of the company's total assets, revenue growth, net income, EPS, stock price, rate of return, and degree of risk, all of which can be found in the financial statements.

Pandemic Covid-19 has a significant influence on the Indonesian economy. When the first COVID-19 case in Indonesia was reported, the Indonesian capital market led the IHSG to the lowest drop, reaching 3,900. Various commercial and trade operations have been affected as a result of the epidemic. Pandemic Covid-19, on the other hand, is an unanticipated risk for investment since it has affected the whole globe, including Indonesia, has had an influence on the health sector, and has spread to the economy, community, education, and other sectors.

According to Chasanah et al., 2020, this has an impact on investment decisions, thus investors must build an ideal portfolio during the Covid-19 pandemic time to provide them a notion of stock possibilities to invest in. When it comes to creating the finest portfolio, there are various options. To begin, we can employ a single index

model (Oktaviani and Wijayanto, 2016; Arnaya and Purbawangsa, 2020; Mary and Rathika, 2015). The Capital Asset Pricing Model (CAPM) is another method that may be employed (Al-Aefeef, 2017; Hidayati et al., 2014; Wijaya and Ferrari, 2020).

Capital Asset Pricing Model (CAPM) is a balance sheet model that can identify the link between the expected return on risk assets and the risk of assets in a balanced market condition, according to Tandelilin (2010). According to Putra et al. (2013), CAPM is a model or method for estimating the return value of a financial asset by comparing the risk variable borne with the return obtained. CAPM, according to Pradipta (2017), is a balanced model in which the expected level of profit (return) of securities investment (stock) is decided by the size of systematic risk (beta) multiplied by a risk premium (excess return) plus the level of risk-free profit.

The risk level is positive and proportional to the rate of return. In CAPM, the risk measure is an indication of stock sensitivity expressed by variables (beta). The higher the value of a stock, the more the risk it entails. The average rate of return on investment possibilities in the capital market is utilized as the rate of return market (market index). According to Jogiyanto (2013), beta is a measure of the volatility of a security's return or the portfolio market's return. Said to Tandelilin (2010) Beta, there is a correlation between security and market returns, as well as the return of the standardized market divided by stock returns variance. The purpose of this research is to examine the CAPM technique on the stock of the tourist sector listed on the IDX from 2018 to 2021.

LITERATURE REVIEW
Investment
Investment may be defined as a current commitment to several finances or other resources to receive several advantages in the future (Tandelilin, 2010). Investment is the act of deferring consumption to put money into efficient production over a set period (Jogiyanto, 2015). According to Fahmi (2015), there are two types of investment activities: 1. Real Investment is a type of real investment that involves tangible assets such as land, machinery, or factories. 2. A financial investment involves the assets of the contract, such as common stocks and bonds.

According to Tandelilin (2010), there are various reasons why someone should invest, including 1. a better future life. 2. Investing in firm ownership or other things to reduce inflationary pressure. 3. Tax incentives that support the expansion of community investment by providing tax incentives to those who engage in business industries.

According to Tandelilin (2010), investment risk is classified into three categories: 1. Systematic risk, also known as market risk or general risk, is a risk tied to market movements as a whole. 2. A risk that is not tied to broad market movements is known as a non-systematic risk, often known as a unique risk. 3. Total risk is comprised of both systematic and non-systematic risks.

Capital Asset Pricing Model (CAPM)
The Capital Asset Pricing Model (CAPM) was first proposed by (Sharpe, 1964), who stated that the model provides a return measurement to evaluate the possibility of alternative investments, predict the balance of expectations of a risk asset, and gives the possibility of returns not traded in the market. The CAPM model, according to Tandelilin (2010), is a balancing model that depicts a more straightforward risk and returns relationship and only employs one variable (also known as a beta variable) to characterize risk.

According to the CAPM model, the greater the beta coefficient gained from stock, the higher the rate of return and risks that investors will receive. The rate of return of a market may be used to represent the degree of expected return, risk-free return, and regular or beta hazards in the CAPM model (Kholishoh, et al 2018). The CAPM model may be used with the following assumptions: a. Transaction fees are

abolished. b. There is no income tax for investors. c. The investment can be split (fully divisible). d. Short selling is an option for investors. e. Neither purchasing nor selling shares have any effect on stock price movements.

MATERIALS & METHODS

The population in this study is the tourist industry listed on the Indonesia Stock Exchange for the year 2018-2021, and the technique utilized in this study is a quantitative method employing descriptive analysis to describe how the capital asset pricing model (CAPM) works. The sample consists of 28 different types of tourism-related stocks listed on the Indonesia Stock Exchange (IDX). According to (Sugiyono, 2019), secondary data is a "data source that indirectly delivers data to data collectors,

because the data in this study is derived from financial statements of foreign corporations, which researchers will study." The formula is used to analyze the CAPM method's use in determining investment.

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

RESULT

The Tourism Sector's CAPM Calculation

The CAPM model is a tool for determining and explaining the risks in a market balance. The processes for creating a portfolio using the CAPM approach are outlined below. Efficient stock appraisal and inefficient stock investing choices in a sample of enterprises.

Tabel 4.1 Efficient shares evaluation and inefficient shares of the tourism sector 2018-2021

EMITEN	α	β	σ_{ei}^2	ERB	Ci	C*	Decision
PANR	0,01571632	3,09922824	0,11328679	0,57269763	84,78672	162,184902	Not optimal
NASA	-0,0431308	-0,2713054	0,02415615	0,53499641	3,047116	162,184902	Not optimal
MABA	-0,0287495	-0,1004823	0,01432128	0,229856	0,70501296	162,184902	Not optimal
HOME	-0,0164281	-0,1044072	0,0115591	0,18471686	0,94305374	162,184902	Not optimal
SHID	-0,032992	-0,1051157	0,02280968	0,17058515	0,48441351	162,184902	Not optimal
ARTA	0,05229269	0,23822883	0,09764471	0,12017904	0,58121918	162,184902	Not optimal
PGLI	0,04859144	0,10209317	0,08898878	0,05181576	0,11712731	162,184902	Not optimal
PTSP	0,00871081	0,12816374	0,02417834	0,02840885	0,67936595	162,184902	Not optimal
HOTL	-0,0091249	-0,0320606	0,01988389	0,02086188	0,0516943	162,184902	Not optimal
DFAM	0,00467985	0,4311465	0,07244519	0,01310653	2,5659027	162,184902	Not optimal
BLTZ	0,00429957	-0,4283795	0,02795237	0,01006887	6,56506045	162,184902	Not optimal
SOTS	0,00533861	-0,6624799	0,03319502	0,00585056	13,2212459	162,184902	Not optimal
RISE	-0,0050428	0,06048108	0,0059018	-0,0880236	0,61980417	162,184902	Not optimal
JSPT	-0,0043171	0,15335317	0,00586067	-0,2007087	4,01271658	162,184902	Not optimal
BUVA	-0,0235401	0,1896815	0,02322834	-0,2181462	1,54893019	162,184902	Not optimal
PNSE	0,04947561	-0,7187968	0,13053974	-0,2405249	3,95794312	162,184902	Not optimal
JIHD	-0,0018043	0,18272247	0,00376648	-0,2424848	8,86437839	162,184902	Not optimal
MAMI	0,0249048	-0,9437162	0,06547408	-0,2661022	13,6023328	162,184902	Not optimal
MAPB	-0,0015542	0,29196335	0,00467685	-0,2767506	18,2264841	162,184902	Not optimal
PZZA	-0,0042668	1,49730976	0,01827732	-0,3006019	122,662207	162,184902	Not optimal
BAYU	-0,0088239	0,3925386	0,01384731	-0,3235269	11,1275457	162,184902	Not optimal
MINA	-0,0336379	0,72041021	0,06104218	-0,4163833	8,50216817	162,184902	Not optimal
FAST	-0,0083259	1,03433764	0,01771357	-0,5292558	60,3974591	162,184902	Not optimal
KPIG	-0,0075629	0,71071289	0,0122417	-0,5361061	41,2616528	162,184902	Not optimal
NUSA	-0,0152253	0,3034324	0,00835588	-0,6562326	11,0187396	162,184902	Not optimal
IKAI	-0,0287564	0,31024465	0,00929088	-1,0546216	10,3598044	162,184902	Not optimal
PJAA	-0,0197666	1,84685847	0,02103085	-1,5948416	162,184902	162,184902	Not optimal
DUCK	-0,0397603	2,48633729	0,05255971	-1,7176594	117,616189	162,184902	Not optimal

Comparing the ERB and CI values of each stock is the criterion for choosing the best portfolio. The equities become the best portfolio contender if the ERB value is greater than or equal to CI. However, if the ERB value is less than the CI, the stocks are

excluded from the best portfolio candidate. The benefit of utilizing CI and ERB to determine the best portfolio is that it takes into account the systematic risk of shares as assessed by beta. Risks, both systematic and non-systematic, are always present while

investing in stocks. Systematic risks are unavoidable, but investors may reduce their exposure by choosing stocks with a high excess return to beta values, which can be used to assess alternative investments and improve portfolio preparation. Unsystematic risks can be mitigated through diversification, i.e., by constructing an optimum portfolio. Investors will logically select high-yielding stocks.

DISCUSSION
Stocks having a single return greater than the anticipated return (ERB>Ci) make up the best portfolio. The portfolio is not optimum when a stock's return is less than the anticipated return (ERB<Ci). Overall, the tourism sector listed on the Indonesia Stock Exchange was not recommended for stock investment decisions, based on the findings of the 2018 to 2021 CAPM study, because individual shares had a lower return than predicted (ERB<Ci). This is because stock investing selections are not suggested for all tourism industries, as the risks are greater than the dividends (the portfolio is not optimal).

The examination of the capital asset pricing model (CAPM) can help investors make better investment decisions, according to this study. CAPM assists investors in estimating expected returns by evaluating the magnitude of potential systematic risks. As a result, Covid 19 has a particularly negative impact on the tourism industry, as all tourism sectors utilized as examples have shares that are not ideal, causing investors to become less willing to participate in the tourism sector. This is consistent with investor behavior theory, which states that investors will make rational investment decisions based on available information.

When the results show that the stock is inefficient, investors should sell the stock since it is likely to generate low returns in the future for both the investor and the company. Furthermore, this situation can also emerge as a result of global pandemics, which have a negative impact on the tourist

business. This situation will not last indefinitely, since the tourist sector is beginning to shift more positively. This research backs up Putra (2016)'s findings that there are 15 undervalued firms with higher individual share returns than the predicted return rate.

CONCLUSION
The Capital Asset Pricing Methodology (CAPM) model was used to analyze the tourist sector business in this portfolio throughout the Covid 19 era. CAPM is a model that shows how to strike a balance between systematic risk levels and the profit margins necessary for portfolio assets. The basic goal of CAPM is to figure out what degree of profit is necessary from a hazardous asset investment.

The results of the CI calculation do not surpass the cut-off point value, thus shares from the tourist sector firm are included in the not optimal group, according to this portfolio research. This is also seen by the Expected Return (0.00264561 0,00288417), which is lower than the Expected Return Market.

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