

DETERMINANTS OF STOCK RETURNS IN THE ENERGY SECTOR PERIOD 2017-2022

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ABSTRACT

This study aims to analyze the influence of the variables Net Profit, Rupiah Exchange Rate, and Operational Cash Flow on stock returns in the energy sector. This research was conducted using time series data for the period 2017 - 2022. The data analysis method in this research involves the use of a multiple linear regression model to identify the influence of Net Profit, Rupiah Exchange Rate and Operational Cash Flow on stock returns in the energy sector during the period 2017 - 2022. Results This research shows that Net Profit has a significant effect on stock returns in the energy sector, the Rupiah Exchange Rate has a significant effect on stock returns in the energy sector. Apart from that, Operational Cash Flow does not have a significant effect on stock returns in the energy sector.

Keywords: *Net Income, Rupiah Exchange Rate, Cashflow from Operational, Stock Return*

ABSTRAK

Studi ini bertujuan untuk menganalisis pengaruh variabel *Laba Bersih, Nilai Tukar Rupiah*, dan *Arus Kas Operasional* terhadap return saham di sektor energi. Penelitian ini dilakukan dengan menggunakan data time series selama periode 2017 - 2022. Metode analisis data dalam penelitian ini melibatkan penggunaan model regresi linear berganda untuk mengidentifikasi pengaruh *Laba Bersih, Nilai Tukar Rupiah* dan *Arus Kas Operasional* terhadap return saham di sektor energi selama periode 2017 - 2022. Hasil penelitian ini menunjukkan bahwa *Laba Bersih* berpengaruh signifikan terhadap return saham di sektor energi, *Nilai Tukar Rupiah* berpengaruh signifikan terhadap return saham di sektor energi. Selain itu, *Arus Kas Operasional* tidak berpengaruh signifikan terhadap return saham di sektor energi.

Kata Kunci: *Laba Bersih, Nilai Tukar Rupiah, Arus Kas Operasional, Return Saham*

Introduction

Investment in the capital market is one of the most common and popular forms of investment worldwide. Investors often look for information that can help them make wise investment decisions. One of the most critical factors in making investment decisions is stock returns. Stock returns are an investment performance indicator that provides an idea of how good or bad the performance of a stock or stock portfolio is in a certain period. However, stock returns are not only influenced by internal company factors, such as net profit and operational cash flow but also by external factors, such as currency exchange rates. Therefore, this research aims to investigate net profit, operational cash flow, and exchange rates on stock returns (Paresh Kumar Narayan, 2020). Net income is one of the company's leading financial indicators, reflecting how well it is generating profits from its operations. Net profit is usually measured after considering all costs and expenses incurred by the company. For investors, net profit is essential in assessing company performance because high profits can indicate company growth and stability. Therefore, net profit can be a factor that influences stock returns. Suppose a company produces consistent and increasing net profits from year to year. In that case, investors tend to be more interested in investing in that company's shares, which can result in increased stock returns. In addition, operational cash flow is also an important financial indicator. Operational cash flow reflects how well a company generates cash flow from its operational activities (Shelly Singhal, 2019). Positive operational cash flow shows that the company can generate money from its operations, without relying on external sources of funds. This can give investor confidence that the company can survive long-term. As a result, companies with strong operational cash flow can attract more investors, which in turn can increase stock returns. However, the influence of net income and operational cash flow on stock returns is only sometimes positive. Factors such as overall market and economic risks can influence this relationship. Apart from that, the influence of currency exchange rates can also play an important role in determining stock returns. Currency exchange is the exchange rate between one country's and another country's currencies. Currency exchange rate fluctuations can affect the performance of shares of companies operating in international markets. For example, suppose the currency exchange rate in the company's home country experiences depreciation. In that case, the company's net profit expressed in foreign currency may increase, which can positively impact stock returns. Conversely, the company's stock return could be negatively affected if the currency exchange rate strengthens. This research will examine the influence of net income, operational cash flow, and exchange rates on stock returns to provide a more in-depth understanding of the factors that influence stock performance. The data used in this research will be collected from

companies listed on the relevant stock markets (Isaac Koomson, 2021). Statistical analysis will be used to identify the relationship between these variables and stock returns. Apart from providing a better understanding of the factors influencing stock returns, this research can also guide investors in making investment decisions. By understanding how net income, operational cash flow, and exchange rates influence stock returns, investors can make more informed investment decisions and increase their chances of getting profitable returns. This research also has practical relevance for companies and financial management (Mahdi Salehi, 2018). By understanding the influence of net income and operational cash flow on stock returns, companies can focus on strategies to improve their financial performance and increase their attractiveness to investors. In addition, risk management of currency exchange rate fluctuations can also be an important factor in decision-making for companies operating in international markets.

Literature Review

Efficient Market Hypothesis/EMH

(Gili Yen, 2008) Efficient Market Hypothesis (EMH) is a fundamental financial concept introduced by Eugene Fama in 1965. EMH states that stock prices in financial markets reflect all currently available information, so creating consistent "arbitrage opportunities" over the long term is impossible. The EMH classifies financial markets into three different forms of efficiency:

1. **Efficient Market in Weak Form (Weak Form Efficiency):** In weak form, EMH states that all historical information, such as previous stock price data or trading volume, is already reflected in current stock prices. In other words, technical analysis that attempts to predict price movements based on historical data should not produce consistent profits.
2. **Efficient Market in Semi-Strong Form Efficiency:** In semi-strong form, EMH claims that all public information, including news, financial reports and other information available to all investors, is reflected in stock prices. Therefore, fundamental analysis that seeks to analyze a company's performance (such as income statements and balance sheets) should also not produce consistent profits.
3. **Efficient Market in Strong Form:** In solid form, EMH states that all information, both public and non-public (insider information), is reflected in share prices. In this context, insiders cannot generate consistent profits by trading their company's shares based on internal information.

Some important points about EMH:

1. This theory has significant implications for investors and investment managers. Suppose the market is efficient in a solid or semi-strong form, in that case, trying to beat the market or gain profits beyond the market through stock analysis becomes a very difficult or even impossible task.
2. Even though the EMH is a fundamental concept in finance, there is still criticism and controversy surrounding it. Some financial academics and practitioners argue that there are moments when markets are not always efficient, especially in the short term.

That said, many investors follow passive approaches, such as index investing, believing that picking individual stocks or beating the market is an unproductive endeavour in the long run if the EMH is correct.

Investment Decision Theory

(Chen-Miao Lin, 2008) Investment Decision Theory includes various frameworks and concepts to understand how companies and investors make investment decisions. The main goal of this theory is to understand how different factors, such as risk, investment returns, and the goals of the company or investor. Some critical concepts related to investment decision theory include:

1. **Financial Management Theory:** This theory is concerned with how companies manage their finances and make investment decisions. In this framework, companies seek to maximize shareholder value by selecting investment projects expected to generate sufficiently high rates of return.
2. **Portfolio Theory:** Portfolio theory, first introduced by Harry Markowitz, emphasizes the importance of diversification in making investment decisions. This theory suggests that investors should create a balanced portfolio of various assets to reduce risk and increase returns.
3. **Market Sentiment Theory:** This theory recognizes that investment decisions are often influenced by non-financial factors, such as market sentiment and investor behaviour. Market perceptions and expectations can majorly impact on stock prices and investment decisions.
4. **Teori Real Options:** This theory states that investment decisions are often options that can be changed, not fixed decisions. Companies can flexibility in changing or stop investment projects depending on market and environmental conditions.
5. **Teori Capital Budgeting:** This theory relates to how companies evaluate and select investment projects. Different approaches are used to measure these projects returns, risks, and financial impacts.

6. Ethical Investment Theory: Some investors choose to follow ethical or social responsibility principles in making investment decisions. They may avoid companies or projects that are considered environmentally or socially detrimental.
7. Teori Behavioral Finance: This theory examines the way psychology and human behaviour influence investment decisions. Factors such as cognitive biases, irrationality, and investors' emotional reactions to price changes can play an important role in investment decisions.
8. Risk Assessment Theory: This theory relates to the way companies and investors assess and manage risk in investment decisions. Risk analysis includes assessing the likelihood of loss and its impact on investment results.

Investment Decision Theory provides a necessary conceptual foundation for financial practitioners to understand how investment decisions are made and how various factors influence the process. Various analytical tools and methods are used to measure and model investment projects, so that companies and investors can make decisions that suit their goals and strategies.

Operating Cash Flow

Operating cash flow, an important financial measure, evaluates a company's ability to generate positive cash flow from its core business operations (Kanellos Toudas, 2022). This depends on the balance between operating revenues and expenses, including factors such as amortization, depreciation, tax payments, changes in working capital, and investment in operational activities (Wisn, 2023). Accurate measurement of operational cash flow is critical for stakeholders, providing insight into a company's financial health and guiding strategic decision-making in finance and business.

The effect of operational cash flow on stock returns

Based on research (Yoon, 2003) who researches by title "*The Functional Relationships Among Earnings, Cash Flows and Stock Returns in Korea*". States that operational cash flow and stock returns have a significant positive influence. Operational cash flow can provide more reliable information because it avoids the accrual accounting method which focuses on when income and expenses occur making it difficult to manipulate. Apart from that, the operational cash flow indicator shows the performance of the company's main activities in contrast to net profit which does not always reflect this. Investors can also measure the company's performance in the short term more accurately. This is also in line with the statement from (Puspitasari, 2010) titled "*The Analysis of Operational Cash Flow in Achieving Company's Optimal Value*". Consistently increasing operational cash flow can increase company value optimally and be sought after by the market. In this case, it occurred at PT. Semen Gresik Tbk due to an increase in revenue accounts from customers which had an impact on increasing net cash flow from operations. The first hypothesis is:

H1: Operational cash flow has a significant effect on stock returns

Net Income

Net income is the main measure in financial statements that shows a company's final profit after expenses are deducted. This influences financial decisions such as dividend payments, tax obligations, and investment capabilities (Choiriyah Choiriyah, 2020). The research examines factors influencing net income, including earnings policy and its impact on stock prices. Understanding net income is important for investors, analysts and policymakers in making appropriate financial decisions.

The effect of net profit on stock returns

Study by (Konan Chan, 2006) with the title "*Earnings Quality and Stock Returns*" states that net profit is often associated with profitability ratios such as: price to earnings ratio (P/E), which compares the share price with the net profit that the company can generate. This is done to help investors in assess the company to find out how expensive or cheap a stock is; if the price has reached a certain point, which is considered cheap then investors will invest. This indirectly indicates that there is a significant influence between net profit and stock returns due to stock performance which investors see as positive. The second hypothesis is:

H2: net profit has a significant effect on stock returns

Rupiah Exchange Rate

The link between exchange rates and stock returns has been the subject of in-depth research, revealing the complex relationship and its impact on financial markets. Exchange rate movements, primarily currency depreciation, correlate with increases in stock returns (Fahlevi, 2019), especially for export-oriented companies. Research has also explored the influence of strategies such as currency hedging on stock returns and the asymmetric impact of currency exchange rate fluctuations. This relationship highlights the importance of considering currency exchange rates in investment decisions

and risk management in the global economy, making it an essential consideration for investors, financial analysts, and policymakers.

The effect of the rupiah exchange rate on stock returns

Research by (Wong, 2022) with the title “*The impact of real exchange rates on real stock prices*”. It was found that currency exchange rates significantly influence on stock price movements across Asian and European countries, especially in two different time periods when the economic crisis peaked, namely: 1997 - 1998 and 2008 - 2009. Indonesia experienced a long-term decline in stock prices when the exchange rate weakened, but an increase in the exchange rate will have an impact on decreasing share prices in the short term. The third hypothesis is:

H3: The rupiah exchange rate has a significant effect on stock returns

Methodology

This study is a form of quantitative research which aims to identify the relationship between significant economic and financial variables in the context of capital markets and investment. This research will use the multiple regression analysis method to measure the influence of variables such as net income, operational cash flow, and currency exchange rates on stock returns (Mulyadi, 2011). The population in this study were 55 stocks, which were the subject of analysis of the relationship between net income, operational cash flow, currency exchange rates, and stock returns. This population consists of companies in the energy sector listed on the Indonesian stock exchange. However, due to data limitations, completeness of financial report data, and the use of USD currency values in financial reports, the research sample consists of 6 stocks carefully selected from a larger population (Nasution, 2017). Secondary data sources for this research will be obtained from two primary sources: Investing.com and the Indonesian Stock Exchange (BEI). Below is a brief description of the two data sources. Investing.com: Investing.com is a website that provides various data and information related to global financial markets. From Investing.com, researchers can collect historical stock data, currency exchange data, and information about global stock indices. Indonesian Stock Exchange (BEI) Website: The BEI website is a relevant data source for obtaining financial reports for companies listed on the Indonesian Stock Exchange. This website provides annual financial reports, quarterly financial reports, and various other company information. Apart from that, related company websites and other sources are also used as additional data sources that are not available or incomplete on the IDX website. The data analysis technique that will be used in this research is multiple linear regression and this analysis uses SPSS software (janie, 2012).

Results & Discussion

Descriptive Statistic

Researchers used descriptive statistical analysis using the mean (calculated average), max, min and standard deviation methods. Mean is used as a method to explain groups of data by using the average value of the group. Max to find the highest score from the group. Min to find the smallest value from the group. Standard deviation is used to measure the extent to which data is spread out. Thus, the mean, max, min, and standard deviation methods provide an overview of the middle, highest, and lowest values and the spread of the observed data.

Table 1. Statistical Descriptive

	Mean	Std. Deviation	Max	Min	N
Y/STOCK RETURN (%)	.027520138888889	.199592349090252	1.25	-0.35	144
X3/KURS	.0000698	.00000324	.00007510	.00006130	144
X2/NI	230585236.95	430759174.682	2831123000.00	-103447774	144
X1/CFO	307330679.78	512205957.152	3864254000.00	-8869016.00	144

Source 1. Data Processing Results via SPSS

Table. 1 above shows descriptive statistical data with stock returns as the dependent variable, operational cash flow, net profit, and the rupiah exchange rate as independent variables. The frequency of all variables is quarterly. The period is from 2017 - 2022 with a total of 6 companies from the energy sector and a total of 144 observations on each variable. The mean stock return value in the energy sector is 0.0275. The average of the company's operational cash flow is 307,330,679.78. The average value of the company's net profit is 230,585,236.95. The average rupiah exchange rate is 0000698. The minimum stock return value is -0.35 and the maximum is 1.25, while the standard deviation value is 0.199.

The minimum value of operational cash flow is -8,869,016 and the maximum is 3,864,254 and the standard deviation is 512,205,957,152. The minimum value of net profit is -103,447,774 while the maximum is 2,831,123,000 and the standard deviation is 430,759,174,682. The minimum exchange rate for the rupiah is .00006130 and the maximum is .00007510 and the standard deviation is .00000324. The standard deviation value indicates that the value of the company's net operational cash flow is more volatile than its net profit.

Multiple Linear Regression

Linear regression analysis is a statistical method used to understand the relationship between one or more independent variables (predictor variables) and one dependent variable (response variable) in a way that allows us to make predictions or estimates.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Information:

Y = Dependent Variable (Stock Return)

X₁ = Net Income Variable

X₂ = Operational Cash Flow Variable

X₃ = Rupiah Exchange Rate Variable

β₀ = Regression Coefficient that describes the expected change in Y when X changes by one unit

ε = Error

Table 2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.383 ^a	.147	.128	.186344705696596

a. Predictors: (Constant), X1/CFO, X2/NI, X3/KURS

Source 2. Data Processing Results via SPSS

Table. 2 Shows that the R Square value is .147 which shows that stock returns are only 14.7% influenced by research variables while the remainder or 85.3% are influenced by external factors outside the variables studied in this research.

Table 3. Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.835	3	.278	8.018	.000 ^b
	Residual	4.861	140	.035		
	Total	5.697	143			

a. Dependent Variable: Y/STOCK RETURN

b. Predictors: (Constant), X1/CFO, X2/NI, X3/CFO

Source 3. Data Processing Results via SPSS

Table. 3 shows that the sig value. of 0.000, which means that overall, this regression model significantly influences the dependent variable or stock return movements with the independent variables being operational cash flow, net income, and the rupiah exchange rate in the last six years (2017 - 2022).

Table 4. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.867	.355		-2.445	.016
	X3/KURS	12299.677	5039.175	.199	2.441	.016
	X2/NI	2.796E-10	.000	.604	2.720	.007
	X1/CFO	-9.266E-11	.000	-.238	-1.082	.281

a. Dependent Variable: Y/STOCK RETURN

Source 4. Data Processing Results via SPSS

Table. 4 contains the value of the significance test results of each independent variable on the dependent variable in this study, namely:

1. The operational cash flow variable has sig. The value of 0.281 is greater than the p value of 0.05, so the operational cash flow variable is negative and has no significant effect on stock returns or rejects H1.
2. The net income variable has sig. The value of 0.007 is smaller than the p value of 0.05, so the net profit variable significantly affects on stock returns or accepts H2.
3. The rupiah exchange rate variable has sig. The value of 0.016 is smaller than the p value of 0.05, so the rupiah exchange rate variable significantly affects on stock returns or accepts H3.

Discussion

The Effect of Operational Cash Flow on Stock Return

Based on the previous test results, shows that the cash flow has no significant effect on stock returns in energy sector stocks listed on the Indonesian stock exchange in the 2017 - 2022 period with a sig test value of $.281 > 0.05$. Investors do not consider company operational cash flow information as a reference in determining investment decisions because the standard deviation is greater than net profit, which means there is higher volatility, making it less relevant for investors to buy or sell shares based on information that is too volatile. This is in accordance with research (Khaira Amalia Fachrudin, 2021) which states that there is no significant relationship between the company's operational cash flow and stock returns.

The Effect of Operational cash Flow on Stock Return

Based on the previous test results, net profit has a significant effect on stock returns in energy sector stocks listed on the Indonesian stock exchange in the 2017 - 2022 period with a sig test value of $.007 < 0.05$. This can happen because in the process of valuing a company, investors tend to use ratios related to profitability, such as: P/E ratio (price to earnings) to see whether the company is considered cheap, expensive or even the same as market conditions. Consistent net profit growth every year will further encourage company management to distribute dividends to shareholders so that investor confidence in the company's performance will increase while increasing demand for these shares, which, of course, has an impact on stock returns. This research is also in line with (Novy-Marx, 2013) which states that there is significance between profitability and stock returns.

The Influence of the Rupiah Exchange Rate on Stock Returns

Based on previous test results, the rupiah exchange rate has a significant effect on stock returns in energy sector stocks listed on the Indonesian stock exchange in the 2017 - 2022 period with a test value of $.016 < 0.05$. The dominant proportion of exports to total company revenues in the energy sector can be seen from the use of the USD currency in financial reports, thereby causing fluctuations in the value of IDR/USD to influence the movement of stock returns because the more the value of IDR/USD appreciates, the higher the potential profits that companies can reap. Investors certainly see this as an opportunity to buy related shares so that they can increase demand for these shares, causing higher returns. According to research (Wong, 2022) which states that there is an influence of the exchange rate on stock returns in Asian countries, especially Indonesia.

Conclusion

This research aims to test the influence of operational cash flow, net income and the rupiah exchange rate on stock returns in the energy sector traded on the Indonesian stock exchange in the period 2017 - 2022. Based on test results and data analysis carried out using descriptive statistics and multiple linear regression, it can be said that:

1. The company's operational cash flow does not significantly affect on stock returns in the energy sector listed on the Indonesian stock exchange for the 2017 - 2022 period.
2. The company's net income has a significant effect on stock returns in the energy sector listed on the Indonesian stock exchange for the period 2017 - 2022.
3. The rupiah exchange rate has a significantly affects on stock returns in the energy sector listed on the Indonesian stock exchange for the 2017 - 2022 period.

Suggestion

There is a lack of research variables, such as: financial ratios, investor behaviour and biases in the investment world that can explain the factors behind stock price movements in the 2017 - 2022 period. The limited sample also needs to be expanded further in future research to increase the validity of future research results; comparisons between sectors are also needed, considering that each sector has certain cycles that can influence the results of later analysis.

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