THE EFFECT OF PROFITABILITY AND SOLVENCY ON STOCK RETURNS MODERATED BY MACROECONOMIC

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Abstract

The purpose of this study was to examine the effect of profitability and solvency on stock returns moderated by macroeconomic. The population of this study are companies listed on the Sri Kehati index with purposive sampling technique. The analysis used is PLS-SEM using SmartPLS 3.0 software. The analysis in this study was carried out by testing the outer model and inner model. This study shows that profitability has an insignificant positive effect on stock returns, solvency has a significant positive effect on stock returns, macroeconomic weakens the effect of profitability on stock returns, and macroeconomic strengthens the effect of solvency on stock returns.

Keywords: profitability, solvency, stock returns, macroeconomic

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INTRODUCTION

The company needs sufficient capital so that the company can continue to compete in the market. One of the efforts made by the company to achieve this goal is to increase capital through the capital market or in other terms is to go public. One of the instruments traded in the capital market is shares. For companies, issuing shares is a way to raise funds to develop the company and attract investors to invest in the company, while for investors, shares are a way to grow their funds over time beyond inflation (Ratih & Candradewi, 2020). By investing, investors can make a profit (Sari & Hermuningsih, 2020).

In a survey conducted by Zigi.id with the Katadata Insight Center (KIC) in September 2021, a majority of 66.7% of respondents considered it important to have an investment. The result of the survey is that the type of capital market or stock investment occupies the 6th position out of 16 types of investment. A total of 14.5% of people are interested in investing in the stock market.

Indonesia has several stock indices that can help investors in making investment decisions, one of them is Sri Kehati index or Sustainable and Responsible Investment. Over the past few years, Sri Kehati’s stock returns have fluctuated and tended to decline.

According to Millenia (2022), factors that can influence the return on an investment are internal factors and external factors. Internal factors focus more on financial ratio analysis. Financial ratio analysis can help investors in assessing the fundamental analysis of a company (Istiqomah & Mardiana, 2020). According to research conducted by Millenia (2022), financial ratios that influence stock returns include profitability ratios, solvency ratios, and liquidity ratios. The financial ratios used in this research are profitability ratios which are proxied by ROA and ROI and solvency ratios which are proxied by DAR and DER. Meanwhile, one of the external factors that influence stock returns is macroeconomic (Iqmal & Putra, 2020).

LITERATURE REVIEW

Signal Theory

This theory focuses on the company's published financial information. If the company wants to send positive signals to investors, the company must publish financial reports properly, clearly, and inform the steps of management to realize profits for investors (Millenia, 2022). Complete, accurate, relevant, and timely information is what investors really need to make investment decisions (Ningrum & Hermuningsih, 2020). If the company provides good news or signals about its financial performance, it is expected that investors will give a positive reaction so that investors are interested in investing in the company (Chusnah et al., 2023).

Stock Returns

Brigham & Houston (2019) state that the return or rate of return is the difference
between the amount invested, divided by the amount invested. According to Hisar et al. (2021), stock returns are the rate of return on stock investments in the form of profits or loss from buying and selling shares. Return is the return on investment in the form of realizable returns or returns (Lovian et al., 2022).

**Profitability**

Profitability is a guarantee for investors to use their share ownership as savings and attract them to invest in the company. High and low profitability can affect stock returns. If the company's profitability is low, this results in low stock returns (Suparjo et al., 2022). The ratios used are return on assets (ROA) and return on investment (ROI).

Return on assets is used to determine the company's ability to generate profits using all assets owned (Hanafi & Halim, 2016). The higher the ROA, the more efficiently the company manages its assets, so that the profit earned will be greater (Kasmir, 2018). The ROA formula used is as follows:

\[
ROA = \frac{Net\ Profit}{Total\ assets}
\]

Return on investment is used to measure the effectiveness of the company's overall operations, as well as to determine the extent to which investments provide benefits in line with the expectations of investors (Rofalina et al., 2022). If the company performs well, profits will increase by maximizing investment, this will provide a positive signal for investors regarding the stock return that will be obtained (Kharismiati & Susanti, 2021). The ROI formula used is as follows:

\[
ROI = \frac{Sales - Investment}{Investment}
\]

High corporate profits increase the demand for shares so that the share price will increase, which results in the return earned by investors also increasing. Of course, this makes investors believe in companies that have high profits to invest (Tresnasih et al., 2019). Profitability can provide signals for investors. High profitability will be a positive signal for investors, while when the company's profitability is low it can be a negative signal for investors. This is the same as research conducted by (Anggraini & Wijayanto, 2021; Rachdian & Achadiyah, 2019; Tresnasih et al., 2019) that profitability has a significant positive effect on stock returns. Based on theory and previous research, the hypothesis proposed is as follows:

**H1: Profitability has a significant positive effect on stock returns**

**Solvency**

The solvency ratio shows the company's ability to meet its obligations both in the short and long term or measures the extent to which the company is financed with debt (Chusnah et al., 2023). The ratios used are debt to equity ratio (DER) and debt to asset ratio (DAR).

Debt to equity ratio (DER) is a ratio used to assess debt with equity by comparing all company debt (Kasmir, 2018)). The DER formula used is as follows:

\[
DER = \frac{Total\ debt}{Total\ Equity}
\]

Debt to asset ratio (DAR) shows the ratio of total debt to total assets. The greater the debt asset ratio, the more assets are financed with debt (Apriyani et al., 2021). Debt to asset ratio shows the company's
ability to meet its long-term obligations, where the company uses loans (debt) to make a profit. The DAR formula used is as follows:

\[ \text{DAR} = \frac{\text{Total debt}}{\text{Total assets}} \]

High debt indicates high risk, which is in line with the term “high risk high return” where high risk is directly proportional to high return (Chusnah et al., 2023). Investors see high solvency as a sign that the company has bright future prospects so that interest in the company increases, and is accompanied by an increase in stock returns. Conversely, low solvency accompanied by a small risk of loss also indicates that the company is passive so that it has no plans to develop the business so that the profit generated is the same or lower (Listyarini et al., 2021). Based on theory and previous research, the hypothesis proposed is as follows:

**H2: Solvency has a significant positive effect on stock returns**

**Macroeconomic**

Macroeconomic is an economic discipline that deals with human actions and choices in relation to the economy as a whole (Asir, 2022). A good investor should be able to know, understand, and forecast the macroeconomic conditions of the country that is the investment destination in order to make the right investment decisions. When investors can make the right decisions, this can help investors in getting the expected profits. Macroeconomic indicators include interest rates, inflation, and exchange rates (Nugroho & Hermuningsih, 2020). Macroeconomic in this study is proxied by exchange rates.

Exchange rates have an important role in spending decisions because exchange rates can help us translate prices from various countries into one common language (Istiqomah & Mardiana, 2020). The determination of the rupiah exchange rate can affect not only the costs incurred by the company but also the income received by the company from stock transactions and securities that can be sold in the capital market (Fatihudin et al., 2018).

The increase in the rupiah exchange rate allows companies to benefit more from the appreciation of the currency. This will have an impact on increasing company profits (Anggraini & Wijayanto, 2021). High profits will certainly affect stock returns. In accordance with research conducted by Anggraini & Wijayanto (2021) that macroeconomic is able to strengthen the effect of profitability on stock returns.

Macroeconomic, in this case the exchange rate, can affect stock returns. According to Listriono and Nuraina (2015) in Anggraini & Wijayanto (2021), exchange rate appreciation can attract investors to invest in foreign exchange dollars, while when there is depreciation investors will invest in the capital market or stocks. Following research conducted by Anggraini & Wijayanto (2021), macroeconomic is able to strengthen the effect of solvency on stock returns. Based on theory and previous research, the hypothesis proposed is as follows:

**H3: Macroeconomic strengthens the effect of profitability on stock returns**

**H4: Macroeconomic strengthens the effect of solvency on stock returns**

The framework for this research is as follows:
METHOD

This type of research is quantitative research. The subjects in this study were companies indexed by Sri Kehati. The sample was selected using purposive sampling technique. The criteria used in the sample selection are companies indexed by Sri Kehati during the 2019-2023 period in a row and have financial information related to profitability, solvency, and stock returns.

The data used is secondary data where for profitability, solvency, and stock return variables obtained through the financial statements of each company at https://idx.co.id while for macroeconomic obtained through the official website of Bank Indonesia, namely www.bi.go.id. The analysis technique used is PLS-SEM using SmartPls 3.0 software. Data testing is done by conducting outer model and inner model.

RESULT AND DISCUSSION

The first test carried out is the outer model to test whether the construct is valid and reliable. Then the inner model is carried out for hypothesis testing. The outer model can be seen in the tables below:

Validity test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Outer Loading</th>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>0.989</td>
<td>&gt; 0.7</td>
<td>Valid</td>
</tr>
<tr>
<td>ROI</td>
<td>0.989</td>
<td>&gt; 0.7</td>
<td>Valid</td>
</tr>
<tr>
<td>DER</td>
<td>0.993</td>
<td>&gt; 0.7</td>
<td>Valid</td>
</tr>
<tr>
<td>DAR</td>
<td>0.951</td>
<td>&gt; 0.7</td>
<td>Valid</td>
</tr>
<tr>
<td>Stock Returns</td>
<td>1.000</td>
<td>&gt; 0.7</td>
<td>Valid</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>0.908</td>
<td>&gt; 0.7</td>
<td>Valid</td>
</tr>
</tbody>
</table>
The outer loading value of each proxy used exceeds the criteria > 0.7. Therefore, it can be said that the proxies used in this study are valid.

Table 2. Cross Loading

<table>
<thead>
<tr>
<th></th>
<th>Macroeconomic</th>
<th>Profitability</th>
<th>Stock Returns</th>
<th>Solvency</th>
<th>Profitability x Macroeconomic</th>
<th>Profitability x Macroeconomic</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>0.011</td>
<td>0.989</td>
<td>0.016</td>
<td>-0.331</td>
<td>-0.154</td>
<td>-0.010</td>
</tr>
<tr>
<td>ROI</td>
<td>0.016</td>
<td>0.989</td>
<td>0.016</td>
<td>-0.351</td>
<td>-0.232</td>
<td>0.019</td>
</tr>
<tr>
<td>DAR</td>
<td>-0.039</td>
<td>-0.334</td>
<td>0.080</td>
<td>0.951</td>
<td>0.013</td>
<td>0.102</td>
</tr>
<tr>
<td>DER</td>
<td>0.029</td>
<td>-0.341</td>
<td>0.205</td>
<td>0.993</td>
<td>0.001</td>
<td>0.100</td>
</tr>
<tr>
<td>Stock Returns</td>
<td>0.160</td>
<td>0.016</td>
<td>1.000</td>
<td>0.173</td>
<td>-0.147</td>
<td>0.314</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>1.000</td>
<td>-0.003</td>
<td>0.160</td>
<td>0.010</td>
<td>0.022</td>
<td>-0.009</td>
</tr>
<tr>
<td>Profitability x</td>
<td>0.022</td>
<td>-0.195</td>
<td>-0.147</td>
<td>0.005</td>
<td>1.000</td>
<td>-0.314</td>
</tr>
<tr>
<td>Macroeconomic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solvency x Macroeconomic</td>
<td>-0.009</td>
<td>0.004</td>
<td>0.314</td>
<td>0.102</td>
<td>-0.314</td>
<td>1.000</td>
</tr>
</tbody>
</table>

The cross loading value of each proxy is greater for the measured construct than for other constructs. Therefore, it can be said that the proxies used in this study are valid.

Table 3. AVE

<table>
<thead>
<tr>
<th>Variable</th>
<th>AVE</th>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>0.978</td>
<td>&gt; 0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>Solvency</td>
<td>0.945</td>
<td>&gt; 0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>Stock Returns</td>
<td>1.000</td>
<td>&gt; 0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>Macroeconomic</td>
<td>1.000</td>
<td>&gt; 0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>Profitability x</td>
<td>1.000</td>
<td>&gt; 0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>Macroeconomic</td>
<td>1.000</td>
<td>&gt; 0.5</td>
<td>Valid</td>
</tr>
</tbody>
</table>

The AVE value of each variable used exceeds the criteria > 0.5. Therefore, it can be said that the variables used in this research are valid.
Reliability test

Table 4. Composite Reliability and Cronbach's Alpha

<table>
<thead>
<tr>
<th></th>
<th>Composite Reliability</th>
<th>Cronbach’s Alpha</th>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>0.679</td>
<td>0.932</td>
<td>&gt; 0.7</td>
<td>Reliable</td>
</tr>
<tr>
<td>Solvency</td>
<td>0.972</td>
<td>0.952</td>
<td>&gt; 0.7</td>
<td>Reliable</td>
</tr>
<tr>
<td>Stock Returns</td>
<td>1.000</td>
<td>1.000</td>
<td>&gt; 0.7</td>
<td>Reliable</td>
</tr>
<tr>
<td>Macroeconomic</td>
<td>1.000</td>
<td>1.000</td>
<td>&gt; 0.7</td>
<td>Reliable</td>
</tr>
<tr>
<td>Profitability x Macroeconomic</td>
<td>1.000</td>
<td>1.000</td>
<td>&gt; 0.7</td>
<td>Reliable</td>
</tr>
<tr>
<td>Solvency x Macroeconomic</td>
<td>1.000</td>
<td>1.000</td>
<td>&gt; 0.7</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

Source: data processed with SmartPLS, 2024

The composite reliability and cronbach's alpha values of each variable used exceed the criteria > 0.7, so it can be said that the variables used in this study are reliable.

Inner Model

Table 5. R Square

<table>
<thead>
<tr>
<th>R Square</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock Returns</td>
<td>0.151</td>
</tr>
</tbody>
</table>

Source: data processed with SmartPLS, 2024

The R-Square value of the stock return variable is 0.151 or 15.1%. This means that the profitability and solvency variables can explain the stock return variable by 15.1% and the remaining 85.9% is explained by other factors outside this study.

Table 6. Goodness of Fit

<table>
<thead>
<tr>
<th>Saturated Model</th>
<th>Estimated Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRSM</td>
<td>0.026</td>
</tr>
<tr>
<td></td>
<td>0.026</td>
</tr>
</tbody>
</table>

Source: data processed with SmartPLS, 2024

Goodness of fit in this study is seen from the SRSM value. The SRSM value in this study is 0.026 < 0.1, which means that the model in this study is fit.

Hypothesis Test

Testing is carried out using a significance level of 0.10 or $\alpha = 10\%$. If the significant value $\leq 0.10$ then the hypothesis is accepted. However, if the significance value is $> 0.10$ then the hypothesis is rejected.
The Effect of Profitability on Stock Returns

Based on the test conducted, the original sample value is 0.064, which means that the direction of the relationship between profitability and stock returns is positive. The p value is 0.334 > 0.10. This indicates that profitability has a positive and insignificant effect on stock returns. Therefore, hypothesis 1 is rejected.

In making an investment, investors do not only see profitability indicators from ROA or ROE ratios, but can also see other profitability ratios.

This is not in line with research conducted by (Anggraini & Wijayanto, 2021; Rachdian & Achadiyah, 2019; Tresnasih et al., 2019) which found that profitability has a significant positive effect on stock returns.

The Effect of Solvency on Stock Returns

Based on the tests conducted, the original sample value is 0.164, which means that the direction of the solvency relationship on stock returns is positive. The p value is 0.092 < 0.10. This indicates that solvency has a significant positive effect on stock returns. Therefore, hypothesis 2 is accepted.

The higher the solvency, the higher the stock returns. High solvency is considered by investors as a form of the company developing its business. So that this makes investors interested in investing.

This is in line with research conducted by (Listyarini et al., 2021; Putro, 2020) which shows that solvency has a significant positive effect on stock returns.

The Effect of Profitability on Stock Returns Moderated by Macroeconomic

Based on the tests carried out, the original sample value is -0.045, which means that macroeconomic weakens the effect of profitability on stock returns. The p value is 0.393 > 0.10 which indicates an insignificant relationship. This indicates that macroeconomic insignificantly weakens the effect of profitability on stock returns. Therefore, hypothesis 3 is rejected.

In the company's operational activities, macroeconomic, in this case the exchange rate, has an important role in seeing the exchange rate of foreign currencies against the rupiah. Fluctuations

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Table 7. Path Coefficient

<table>
<thead>
<tr>
<th></th>
<th>Original Sample</th>
<th>Sample Mean</th>
<th>Standard Deviation</th>
<th>T statistic</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability → Stock Returns</td>
<td>0.064</td>
<td>0.069</td>
<td>0.148</td>
<td>0.430</td>
<td>0.334</td>
</tr>
<tr>
<td>Solvency → Stock Returns</td>
<td>0.164</td>
<td>0.195</td>
<td>0.122</td>
<td>1.341</td>
<td>0.092</td>
</tr>
<tr>
<td>Macroeconomic X Profitability → Stock Returns</td>
<td>-0.045</td>
<td>-0.062</td>
<td>0.164</td>
<td>0.273</td>
<td>0.393</td>
</tr>
<tr>
<td>Macroeconomic X Solvency → Stock Returns</td>
<td>0.284</td>
<td>0.267</td>
<td>0.142</td>
<td>2.001</td>
<td>0.025</td>
</tr>
</tbody>
</table>

Source: data processed with SmartPLS, 2024
in exchange rates that occur can affect stock returns. When depreciation occurs, it can affect inflation. Inflation that is too high can reduce purchasing power and reduce the level of real income earned by investors from their investments (Chusnah et al., 2023). From the company's side, when inflation occurs, operating costs will increase and will be followed by a decrease in company profits. The decline in company profits will certainly result in reduced dividends distributed to investors (Sugito et al., 2018).

This is not in line with research conducted by (Anggraini & Wijayanto, 2021).

The Effect of Solvency on Stock Returns Moderated By Macroeconomic

Based on the tests carried out, the original sample value is 0.284, which means that macroeconomic strengthens the effect of solvency on stock returns. The p value is 0.025 < 0.10 indicating a significant relationship. This indicates that macroeconomic significantly strengthens the effect of solvency on stock returns.

Therefore, hypothesis 4 is accepted.

Companies that have high debt are considered to have good prospects because investors assume the debt is used to expand their business. This can increase stock returns due to interested investors. Companies that have debt, especially debt in foreign currencies, are certainly strongly influenced by exchange rates. The existence of exchange rate fluctuations certainly affects the company in paying its debts.

This is in line with research conducted by (Anggraini & Wijayanto, 2021).

CONCLUSION AND SUGGESTION

The conclusion that can be drawn based on the research results is that profitability has a positive and insignificant effect on stock returns, solvency has a significant positive effect on stock returns, macroeconomic weakens the effect of profitability on stock returns, and macroeconomic strengthens the effect of solvency on stock returns.

This research certainly has limitations. The suggestion that can be given for further research is to add variables or research proxies. For profitability variables, it can be added with other proxies such as NPM, and so on. Macroeconomic variables can be added with other proxies such as interest rates, inflation, GDP, and so on. In addition, further research can expand the research population.

REFERENCES

Manajemen Laba dan Nilai Perusahaan terhadap Return Saham. 06(02), 1–25.


