The Impacts Of Macroeconomics On The Price Of Stocks With Profitability As A Mediating Variable (A Study Of The Investment Properties And Estate Sector On The Indonesia Stock Exchange From 2020 To 2022)

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Abstract: The research objective is to determine the direct and indirect effects of macroeconomic variables used are Inflation, 7 Days Repo Rate, Kurs on the price of stocks with mediation profitability in the Investment properties and estate sector on the Indonesian stock exchange for the period 2020-2022 in quarters. The population in this study are property companies listed on the Indonesian stock exchange and included in the development sector using purposive sampling technique found the variety samples used as many as 21 companies. The results indicated that inflation has a negative influence on the price of stocks, but the 7 Days Repo Rate and the Kurs have no impact on the price of stocks. Profitability does not mediate Inflation, but it can mediate the 7 Days Repo Rate and the Kurs.

Keywords: Inflation, 7 Days Repo Rate, Kurs, The price of stocks, Profitability

1. Introduction

The Investment properties and estate sector is one of the subsidiaries of service companies listed as public companies on the Indonesia Stock Exchange. The public believes that this sector is important because it is used as an indicator to assess the good and bad condition of a country's economy.

The Investment properties and estate sector in Indonesia is recorded in Badan Pusat Statistik reported that in 2019 it increased by 5.76% and decreased in 2020 by 2.32%. The decline was due to the emergence of COVID-19 cases. The virus spread throughout the world until Indonesia reported the first case on March 02, 2020. The emergence of a pandemic has an impact on companies, especially on stocks. Factors that affect the price of stocks are external conditions such as exchange rates, interest rates, and inflation rates and are influenced by internal conditions such as management decisions, and company financial performance (Anbiya & Saryadi, 2018). The price of stocks, especially Investment properties and estate sector stocks, have fluctuated over the years.

The decrease in the price of stocks is affected by many factors, especially fundamentals. In addition to fundamental factors, the price of stocks are influenced by external factors characterized by macro conditions. Macro conditions are conditions from outside the company which include inflation. An increase in inflation in a country is a negative signal due to an increase in the price of raw materials, especially for investors in investing their funds in the stock market. When inflation increases, the price of stocks tends to decline. Based on Bank Indonesia data, since the period 2020-2022 inflation has increased, starting in the third quarter of 2021 at 1.60% until the peak of the third quarter of 2022 at 5.95%. According to Boediono (2016), the increase is still relatively mild below 10%.

7 Days Repo Rate is another macro factor that affects the price of stocks. The relationship between them is negative when the 7 Days Repo Rate increases, the the price of stock will decrease. This is because when interest rates rise, investors tend to choose safer risks by diverting from stocks to savings or deposits. Based on data from bps.go.id, the average interest rate from the first quarter of 2020 to the third quarter of 2022 was 3.50% and
tended to stagnate.

The Kurs is another macro element examined in this analysis. The dollar is exchanged for rupiah at the current rate. The strong correlation between the Kurs and the price of stocks can be attributed to the increased Rupiah Kurs versus the dollar, which allows developers to expand their property company. So that it can have an influence on the company's performance, which is improving, and investors are interested in investing in property sector shares. According to bps.go.id statistics, the average exchange rate fell in the first quarter of 2020, with US$ 1 issued at IDR 16,367, and the next period is expected to change.

One of the ways for companies to achieve their goals is by increasing profits or profitability. A high level of profitability makes shares attractive and the high demand for these shares will make the share price more expensive. Profitability, one of which can be measured by Return On Equity, is used to measure the company's ability to generate net income available to shareholders on common stock equity. Based on data from the financial statements of the Indonesian stock exchange, the average ROE of property companies in the development sector shows an unhealthy condition in managing return on own capital in 2020, which is below 1%.

Based on this introduction, The following is the study's aim:
1. To explore the direct impact of macroeconomics on the the price of stocks of investment properties
2. To comprehend the indirect impact of profitability on macroeconomics and Investment properties and estate stock values.

2. Theoretical Background

2.1 Signaling Theory

Signal Theory according to Scott (2012) is a theory that states the encouragement possessed by corporate managers regarding good news about the company, so that managers will be encouraged to be able to convey information about an enterprise to potential investors, which aims to create value within the company through signals in the reporting of the company's yearbook report (Yuniningsih et.al, 2020).

2.2 The price of stock

The price of stocks, in line with Jogiyanto (2022), is the price formed from the meeting of the purchase request price (bid price) and the sales offer price (offer price) that occurs due to transactions between selling investors and buying investors. The stock price of the company is always increase with a high rate of return, of course can attract many potential investors who intend to invest in the company (CG Fitri and I Wikartika, 2022). Factors that affect the price of stocks including are: internal company factors (financial statements) and external company factors (micro and macroeconomics).

2.3 Macroeconomics

According to Brigham and Houston (2001), inflation is the propensity for the overall price of things to rise. Inflationary pressures are linked to negative economic conditions (overheating). Based on the rate, there are four types of inflation: mild inflation (10% per year), moderate inflation (10-30%), severe inflation (30-100%), and extremely high inflation (>100% per year).

According to Sukirno (2016), the 7 Days Repo Rate is the amount that trading banks must pay for the loans they receive. The interest rate, also known as the BI-7 Day Reverse Repo Rate (BI7DRR), is a new benchmark interest rate with a tenor of seven days, according to Bank Indonesia Regulation No. 18/12/PBI/2016 concerning Monetary Operations. Factors influencing interest rate decision, such as: Fund requirements, time period, profit targets, quality of collateral, government policies, and company reputation.

Currency Exchange Rate The exchange rate between two foreign nations, according to Mankiw (2007), is the price levels agreed upon by the citizens of the two countries for transactions between them. The exchange rate is the amount of domestic money necessary to get one unit of foreign currency, i.e., the number of rupees required to
obtain one unit of foreign currency. Changes in people's tastes for commodities, changes in the cost of exported and imported goods, inflation and interest rates, and economic development are all factors influencing exchange rate movements.

2.4 Profitability

The profitability ratio based on Kasmir (2016) is a metric used to analyze a company's capacity to maximize profits. The Munthe and Harefa (2020) profitability ratio is one of the ratios that seeks to quantify the efficiency and effectiveness of a company's operations in generating profits. Return On Equity, also referred to as ROE, is one sort of profitability ratio. The ROE ratio assesses a company's potential to generate net income accessible to shareholders on its common stock equity. In other words, this ratio analyzes profitability from the perspective of shareholders (investors). ROE is calculated by dividing earnings after taxes by common stock equity.

3. Methodology

The research discussed here offers quantitative data. The variables used for this study include the dependent variable (Y), which is the price of stocks, the independent variable (X), which is inflation, the 7 Days Repo Rate, and the Kurs, and the mediating variable (Z), which is return on equity. Secondary data was gathered for this study from the websites idx.co.id, bps.go.id, and yahoo finance. To identify the direct and indirect impacts of the variables analyzed, the analytical approach employed SPSS version 26 software with route analysis calculations. The population utilized was 42 Investment properties and estate firms, including the development sector, which were then drawn into samples of 21 enterprises using purposive sampling approaches.

Hypothesis:

H1: Inflation has a negative effect on Investment properties and estate the price of stocks.
H2 : 7 Days Repo Rate has a negative effect on Investment properties and estate the price of stocks.
H3 : The Kurs has a positive effect on Investment properties and estate the price of stocks.
H4 : Profitability is able to mediate Inflation, 7 Days Repo Rate, and Kurs on Investment properties and estate the price of stocks.

4. Result and Discussion

4.1 Descriptive Statistical Analysis

The results of descriptive statistical analysis of inflation variables, 7 Days Repo Rate, Kurs and the price of stocks in property investing companies on the Indonesian stock exchange in 2020-2022, are presented in table 1 below:

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>infl</td>
<td>11</td>
<td>1.43</td>
<td>5.19</td>
<td>2.3318</td>
<td>1.20127</td>
</tr>
<tr>
<td>Sbunga</td>
<td>11</td>
<td>3.50</td>
<td>4.75</td>
<td>3.8100</td>
<td>.42732</td>
</tr>
<tr>
<td>kurs</td>
<td>11</td>
<td>14,269</td>
<td>15,026</td>
<td>14,533.27</td>
<td>245.047</td>
</tr>
<tr>
<td>hargasaham</td>
<td>11</td>
<td>1,719</td>
<td>2,193</td>
<td>1,942.36</td>
<td>157.842</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on table 1. SPSS results for descriptive statistical tests of Inflation variables show a sample (N) of 11, which is obtained from quarterly data for the period January 2020 - September 2022. In the descriptive statistic table of the 11 samples, it can be seen that the average inflation is 2.3318% and the minimum inflation is 1.43%, while the maximum inflation is 5.19%. The standard deviation is 1.20127, which means that the tendency of Inflation data each year during 2020-2022 has a deviation rate of 1.20127.
The next variable, namely the 7 Days Repo Rate (sbunga) has an average of 3.81% with a minimum value of 3.50% and a maximum value of 4.75%. Meanwhile, the standard deviation is 0.42732, which means that the 7 Days Repo Rate data trend has a deviation rate of 0.42732. The exchange rate variable (kurs) has an average of IDR 1,4533.27 in US dollars with a minimum value of IDR 14,269 and a maximum value of IDR 15,206. The standard deviation of this variable is 245.047.

The dependent variable (Y), namely the share price in the Investment properties and estate sector with the development sector board, has an average of Rp 1,942.36. The minimum value is Rp 1,719, the maximum value is 2,193 and the standard deviation is 157,842.

4.2 Classical Assumption Test

The classical assumption testing results include: normality test with Kolmogorov-smirnov obtained a statistical test value of 0.202 and Asymp. Sig. (2-tailed) of 0.200 where the value exceeded than the significance level, namely 0.05, it can be concluded that the data in this study are normally distributed. The test for multicollinearity The Tolerance value indicates that no independent variable has a Tolerance value of less than 0.1, and the Variance Inflation Factor (VIF) value indicates that no independent variable has a VIF value over than 10.00, indicating that there is no multicollinearity between variables in the regression model.

The points in the heteroscedasticity test findings are dispersed and do not create a distinct pattern. As a result, it can be argued that so it can be concluded that there is no heteroscedasticity problem in this study. The last test, namely the autocorrelation test using the runs test, proves that the significance value of the run test autocorrelation test results of 0.502 is over than 0.05. So it can be concluded, that there are no autocorrelation symptoms in the regression model.

4.3. Hypothesis Test

4.3.1 The first is the Affect of Inflation (X1), 7 Days Repo Rate (X2), Kurs (X3) and ROE (Z) on The price of stocks (Y).

<table>
<thead>
<tr>
<th>Coefficientsa</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>128.739</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>7.667</td>
<td>.038</td>
<td></td>
<td></td>
</tr>
<tr>
<td>infl</td>
<td>-1.30</td>
<td>.045</td>
<td>-0.696</td>
<td>-2.907</td>
</tr>
<tr>
<td>Sbunga</td>
<td>.243</td>
<td>.243</td>
<td>-0.317</td>
<td>1.001</td>
</tr>
<tr>
<td>kurs</td>
<td>1.640</td>
<td>2.036</td>
<td>.259</td>
<td>.805</td>
</tr>
<tr>
<td>profitROE</td>
<td>-0.019</td>
<td>.013</td>
<td>-0.415</td>
<td>-1.528</td>
</tr>
</tbody>
</table>

Dependent Variable: hargasaham

Source: Results SPSS 26

Table 3: ANOVA Uji F

<table>
<thead>
<tr>
<th>ANOVAa</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td>4</td>
<td>.015</td>
<td>11.870</td>
<td>.005b</td>
</tr>
<tr>
<td>1 Regression</td>
<td>.059</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residual</td>
<td>.007</td>
<td>6</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.067</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: hargasaham
According to Table 2, inflation has an extensive adverse effect on the price of stocks at the 5% level, 7 Days Repo Rate or interest rates and Kurss show a positive and insignificant impact, and ROE has resulted in a negative and insignificant impact. Table 3 anova shows that inflation, 7 Days Repo Rate, Kurs, and ROE all have a substantial influence on the price of stocks at the same time. According to table 4, the R Square value is 0.831, indicating that the degree of the impact of inflation, the Rupiah Kurs, and the interest rate on the price of stocks is 83.1%, with the remainder 100-83.1 = 16.9% influenced by factors not seen in this study.

The following is the substructure 1 multiple linear regression equation formed in this study:

\[ Y = \beta_{\text{Inflation}} + \beta_{\text{7 Days Repo Rate}} + \beta_{\text{Kurs}} + \beta_{\text{ROE}} + e_1 \]

\[ Y = -0.696 + 0.317 + 0.259 - 0.415 + 0.15735 \]

4.3.2 The second is the effect of Inflation (X1), 7 Days Repo Rate (X2), Kurs (X3) on Return On Equity (Z).

Table 5: Coefficients II

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-452.748</td>
<td>453.558</td>
<td>-.998</td>
</tr>
<tr>
<td>infl</td>
<td>.667</td>
<td>1.526</td>
<td>.166</td>
<td>.437</td>
</tr>
<tr>
<td>sbunga</td>
<td>-14.389</td>
<td>5.372</td>
<td>-1.672</td>
<td>-2.679</td>
</tr>
<tr>
<td>kurss</td>
<td>-65.774</td>
<td>39.346</td>
<td>-.487</td>
<td>-1.672</td>
</tr>
</tbody>
</table>

Dependent Variable: profitROE

Source: Results SPSS 26
Table 5 reveals that at the 5% level, inflation provides a positive and insignificant influence, 7 Days Repo Rate or interest rates exhibit a negative effect, and the Kurs has a negative and insignificant effect. The R Square value in table 6 is 0.555, indicating that the size of the effect of profitability proxied by Return On Equity on the price of stocks is 55.5%, with the remaining 100-55.5 = 44.5% influenced by other variables not seen in this study.

The following is the substructure 2 multiple linear regression equation formed in this study:

$$Z = \beta_{\text{Inflation}} + \beta_{\text{7 Days Repo Rate}} + \beta_{\text{Kurs}} + e$$

$$Z = 0.166 - 0.876 - 0.487 + 0.15735$$

### 4.3.3 Sobel Test

**Table 7. Sobel Test Result**

<table>
<thead>
<tr>
<th>Variable</th>
<th>t-hitung</th>
<th>t-table</th>
<th>Kesimpulan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation</td>
<td>-1.08055278</td>
<td>1.96</td>
<td>Not Significant</td>
</tr>
<tr>
<td>7 Days Repo Rate</td>
<td>2.42998878</td>
<td>1.96</td>
<td>Significant</td>
</tr>
<tr>
<td>Kurs</td>
<td>2.10088389</td>
<td>1.96</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Source: Calculation Results www.danielsoper.com

The results of the sobel test in table 7 through the calculator at www.danielsoper.com get a t-count value of -1.08055278 smaller than the standard set of 1.96 with a significance value of one-tailed probability 0.13994805. Because the p-value >α = 5%, it means that there is no mediating effect of ROE on inflation and the price of stocks.

The results of the second path sobel test get a t-count number of 2.42998878 smaller than the standard set of 1.96 with a significance value of one-tailed probability 0.00754965. Because the p-value <α = 5%, it can be concluded that the indirect effect of ROE in mediating the 7 Days Repo Rate and the price of stock is significant.

The results of the third path sobel test get a t-count number of 2.10088389 than the standard set of 1.96 with a significance value of one-tailed probability 0.01782558. Because the p-value <α = 5%, it can be concluded that the indirect effect of ROE in mediating the Kurs and the price of stocks is significant.
The Affect of Inflation's (X1) on The price of stocks

According to the findings of this analysis, inflation creates a negative and considerable impact on the operations of real estate enterprises. These results are compatible with the suggested hypothesis, hence hypothesis 1 is accepted, which indicates that increased inflation has a negative impact on security prices. This means that if inflation grows, so will the prices of products and services. This is because the constant growth in inflation will have an effect on the company's profitability since people on fixed incomes will cut their spending, reducing the company's revenues.

These results are in accordance with the signal theory put forward by Tandelilin (2017) This relative increase is a negative signal for investors. The signal means that if inflation rises it will reduce the price of stocks and vice versa if inflation falls it will increase the price of stocks. The research findings are in line with Saputra and Santoso (2017) which state inflation has a huge impact on the real estate sector's price of stock.

The Affect of 7 Days Repo Rate (X2) on The price of stocks

Based to the outcomes of this analysis, the 7 Days Repo Rate has a favorable influence on the share price of Investment properties and estate firms. This result contradicts the stated hypothesis, hence hypothesis 2, stating that the 7 Days Repo Rate has a negative influence on the price of stocks, is rejected. The positive effect in this study suggests that the 7 Days Repo Rate tends to fall and is static in the 2020-2022 quarter period, specifically the ratio is at the average level for multiple periods and the the price of stock has also decreased. This state makes individuals more cautious, since they continue to avoid investing even while interest rates are falling. This is attributed to a drop inpeople's purchasing power to keep their assets and reduce the risk of loss if the pandemic lasts a long time.

These results are the same as research by Wira (2020) which states that interest rates have a positive effect on the the price of stocks of property companies. And not in accordance with research conducted by Yuniningsih (2019) and Ahmad (2022) which states that interest rates have a negative effect on the price of stocks.

The Affect of Kurs (X3) on The price of stocks

According to the outcomes of this research, the Kurs has does not have an indication since it is not significant. on the share price of Investment properties and estate firms. This influence is not consistent with the stated hypothesis; hence, hypothesis 3, stating that the Kurs has a positive effect on the price of stocks, is not accepted. These findings indicate that the Rupiah Kurs tended to fall against the US dollar over the research period, implying that when the currency value falls, it strengthens against the US dollar. The positive association between the Kurs and the price of stocks can be attributed to the increased Rupiah Kurs versus the dollar, which allows developers to expand their property company sector. So that it can have an impact on the company's performance which is getting better and investors are interested in investing in shares in the property sector. Similar findings were made by Sitasari (2022) and Gampito (2022) who stated that the Kurs has a positive effect on the price of stocks.

The Affect of Return On Equity (Z) in Mediating Between Inflation (X1), 7 Days Repo Rate (X2), Kurs (X3) on The price of stock (Y)

Based to the outcomes of this profitability analysis of the analysis as a mediating variable show that it is unable to mediate inflation on the price of stocks in Investment properties and estate companies as evidenced by the t-count value being smaller than the t-table (sobel test). This condition indicates that when inflation conditions increase and the price of stocks decrease, Investment properties and estate companies are still able to manage their own capital and in terms of investors the rate of return received is high so that it will create an attraction for investors to keep buying shares. The purchase is not affected by inflationary conditions which are still at a reasonable stage.

The results of the profitability analysis as a mediating variable show that it is able to mediate the 7 Days Repo Rate and the Kurs on the price of stocks in Investment properties and estate companies as evidenced by the t-count
value over than the t-table (sobel test). This means that during the research period the 7 Days Repo Rate decreased and the Kurs strengthened followed by a decrease in the share price of Investment properties and estate companies which decreased the profitability of Investment properties and estate companies which increased due to the decrease in interest given, it will increase the demand for credit, one of which is mortgages and cause the rate of return on investors to increase.

5. Conclusions

Inflation has an inverse relationship with the price of stocks, which means that an increase in the inflation rate leads the share price of the Investment properties and estate development industry to fall because it affects business profitability. 7 Days Because of the consequences of the Covid 19 epidemic, which causes people's purchasing power for investment to decline even when interest rates given have also decreased, the Repo Rate cannot make a direct contribution. The Kurs cannot provide a clear involvement, which means that the uncertain participation of the Kurs on the price of stocks could be attributed to the over Rupiah Kurs versus the dollar, which encourages developers to expand their company in the property sector.

Based on the conclusion's findings, there are various consequences and suggestions for prospective investors; it is hoped that they will be more cautious and cautious in comprehending the elements that can affect stock values, both micro and macro. It is intended that corporations will consider macroeconomic factors while making strategic plan decisions in order to maintain stock values constant. It is hoped that future researchers would investigate other variables not included in this study and extend the research time to produce more diverse results.

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