

## Dividend policy as an intervening variable between return on asset and earning per share on stock prices

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### Abstract

**Purpose** - The aim of this study is to investigate how Return on Asset (ROA) and Earnings per Share (EPS) impact stock prices, while considering dividend policy as a mediating factor.

**Method** - This research uses 6 samples of pharmaceutical companies listed on ISSI during the period of 2017-2021 using purposive sampling technique. The data analysis used in this research is SEM-PLS with the help of WarpPLS software version 7.0.

**Result** - The findings indicate that dividend policy does not act as a mediator between ROA and share prices; however, it does serve as a mediator between EPS and share prices. The direct effects reveal that ROA has a non-significant positive impact on dividend policy, whereas EPS demonstrates a significant positive influence on dividend policy. Both ROA and dividend policy exhibit a significant negative impact on share prices, whereas EPS has a positive and significant influence on share prices. In addition, this research reveals that dividend policy is unable to mediate the relationship between ROA and share prices but is proven to mediate the relationship between EPS and stock prices.

**Implication** - The concept of signaling theory in general can still be used in carrying out financial analysis even when anomalies occur in economic conditions.

**Originality** - This research is research conducted on pharmaceutical companies which are different from other companies which have experienced negative impacts, but pharmaceutical companies have experienced an increase in share prices and profits during the pandemic.

**Keywords:** return on asset; earning per share; dividend policy; stock prices



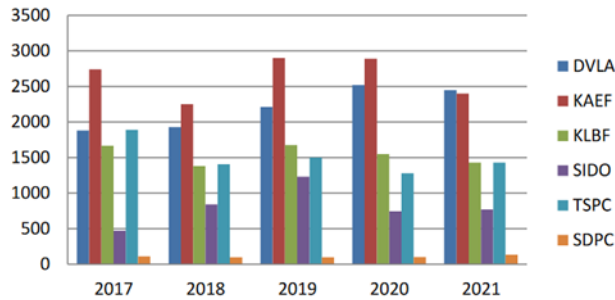
## Introduction

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Stock investment is a type of financial asset carried out in the financial sector. The aim of investment is to gain profits in the future from the results of purchasing securities in the form of shares traded on the Stock Exchange. However, investors must also pay attention to existing risks, because of the higher the risk, the higher the return (high risk, high return) (Adnyana, 2020). Therefore, a company's financial reports are very necessary for investors to understand financial performance before deciding to buy shares. The responsibility of company management towards internal and external parties is reflected in the financial reports.

One company that is considered important in the long term is the pharmaceutical industry. This company has an important role in distributing medicines and medical devices that are really needed by the community in managing health. Currently, the number of pharmaceutical companies in Indonesia continues to increase. In 2015, there were 198 pharmaceutical industries in the country and in 2019 the number increased to 230 industries. Apart from that, there was an increase in the medicinal raw materials industry by 8 industries. In the ASEAN region, Indonesia has the largest market share in the pharmaceutical industry with a percentage of 27.8% (Suhardi, 2024) Even though at the beginning of 2020 Indonesia felt the impact of the Covid-19 pandemic which caused the country's economy to decline, several pharmaceutical companies in Indonesia implemented various strategies to maintain the company's financial condition and to obtain increased profits. This is the reason researchers choose pharmaceutical companies, such as pharmaceutical companies listed on IDX, which show their shares at fantastic prices and soaring high (Chusna, 2022).

Figure 1 explains that stock prices can change up or down quickly over a certain period of time. This share price movement is caused by the law of supply and demand. If there is a lot of demand, the share price of a company will be higher. If there are a lot of offers, the share price will fall further.



**Figure 1. Pharmaceutical Company Share Prices 2017-2021**

Various factors contribute to fluctuations in share prices, categorized as internal and external influences. Internal factors originate within the company, such as asset expansion, financial decisions, and dividend strategies. On the other hand, external factors stem from outside the company, including economic indicators like inflation, interest rates, and governmental regulations (Azizah, 2016). Nonetheless, investors typically prioritize analyzing a company's internal dynamics before investing, as strong company performance often correlates with higher share values, a reflection of which can be gleaned from the company's financial statements. In this particular study, researchers have selected ROA, EPS, and Dividend Policy (Dividend Payout Ratio/DPR) as variables to ascertain a company's stock price.

ROA is a tool used to measure the ability of company assets to generate profits for the company. In other words, ROA allows a company to know how efficient the assets it owns are in generating profits. The higher the ROA of a company, the better the company's financial performance. So companies with high ROA will be more attractive to investors because they show good profitability and can attract investors to invest capital in the company (Al-Qori et al., 2019). Meanwhile, EPS is a tool used to find out how much profit a company earns per share that is received by shareholders. In other words,

EPS allows a company to know how much net profit generates per share owned. The higher the EPS of a company, the greater the profits earned and the amount of dividends distributed to shareholders is also expected to increase (Siregar, 2021).

In a prior study by (Al-Qori et al., 2019), it was asserted that ROA exerts a notable positive impact on dividend policy, indicating that enterprises generating substantial profits are capable of disbursing higher dividends to stakeholders. This assertion finds support in the research conducted by (Danu Bramaputra et al., 2022), which indicates that ROA partially influences the DPR significantly.

(Armereo, 2019) found that EPS has a notable positive impact on dividend policy, a conclusion echoed by (Remelko, 2021). Their studies suggest that dividend policy plays a pivotal role in affecting share prices, potentially serving as a mediating factor influencing Return on Assets and Earnings per Share variables on share prices. Nonetheless, previous research has shown disparities in the effects of Return on Assets and Earnings per Share on stock prices.

Based on the phenomena and research gaps above, there are still differences in the results of previous research regarding the influence of Return on Assets and Earnings per Share on stock prices. Therefore, the author is interested in conducting further research in the latest period and adding dividend policy as an intervening variable to influence stock prices. So, the author conducted research with the title: "The Effect of ROA and EPS on Stock Prices with Dividend Policy as an Intervening Variable: Study of Pharmaceutical Companies Registered on ISSI in 2017–2021".

## Literature Review

The grand theory in this study uses signaling theory. The signaling theory was first put forward by Spence (Spence, 1973) who explained that the sender (information owner) provides a signal in the form of information that reflects the condition of a company that is beneficial for the recipient (investor). The benefits of this signal theory are the accuracy and timeliness of

presenting financial reports to the public. Signals from the company provide useful information for decision making for its users, including investors.

### **Share Price**

The share price represents the market's valuation of a company's individual share at a given point in time. Typically, this valuation emerges from the interplay between the company's performance and the prevailing market conditions within the secondary market. According to Darmadji and Fakhrudin, share prices are "share prices occurring on the stock exchange at a certain time. Share prices can change up or down over time very quickly. Stock prices can change in minutes and can even change in seconds. This is possible because it depends on demand and supply between share buyers and share sellers." Thus, the share price is a price that is formed due to interactions between sellers and buyers of shares in the hope of making a profit for the company (Hermawan, 2017). Share prices always change every day, even share prices can change every second. Changes in share prices are the rise and fall of a company's share price which is caused by the latest information regarding share prices and then a comparison is made with the share value last year (Jogiyanto, 2010).

### **Return on Assets (ROA)**

ROA is a tool to measure a company's ability to generate profits after tax using all the assets it owns (Kasmir, 2016). ROA shows the level of asset efficiency. According to Mardiyanto, ROA is a ratio that represents profit from company activities; therefore this ratio is used to measure the company's ability to generate profits. Hery stated, the lower the return on assets, the lower the net profit generated. In contrast, as the return on assets increases, so does the amount of net profit generated for each unit of funds invested in total assets.

### **Earnings per Share (EPS)**

EPS is a measuring tool to find out how much profit a company will get for each share. EPS is a ratio that shows how much profit (return) investors or

shareholders get per share. In Simamora's opinion, EPS is the net profit per ordinary share outstanding during a certain period. During fundamental analysis, investors use EPS as a reference before buying shares. When the EPS value of a share is negative, it means the issuer is making a loss, and investors will not be interested in buying shares in that company. Conversely, when the company's EPS value is positive, investors will be interested in buying shares because the issuer makes a profit. The higher the EPS value, the higher the profits investors will get. In general, in a company, the EPS value is proportional to revenue. This is because EPS is a profitability ratio. When a company gets a high revenue value, the EPS value will automatically also be high. Vice versa, when the EPS value is low, the company's revenue value is also low (Suryaman & Hindriari, 2021).

### **Dividend Policy**

Dividends are payments made by a company to its shareholders, based on the amount of profit and the number of shareholders. A company's dividend policy is the decision about when and how much profit to distribute to shareholders. According to Sutrisno (Damayanti, 2017), dividend policy is a policy related to dividend payments by the company.

In this policy, it is determined how much dividend will be distributed and how much retained earnings will be retained for the benefit of the company's future. Distribution of profits in the form of dividends will reduce the company's internal funding sources, but saving profits will increase the company's internal funding sources.

There are several types of dividend policy. One of the dividend policies is a compromise policy. This dividend policy is a policy that is between a stable per share policy and a constant DPR policy which will allow the company to pay out a certain percentage of its annual net income every year, but still keep the payout ratio stable over time. This research uses the DPR as a measuring tool. DPR is the ratio of the total amount of dividends that will be distributed to company shareholders. In other words, the DPR is a tool to measure how much profit investors get. In Sari and Masdupi's opinion, the DPR is often

used by companies to measure dividend policy. When distributing dividends, a company must consider it properly so that it can provide optimal dividends to investors.

### Hypotheses Development

H1: ROA has a positive effect on dividend policy in pharmaceutical companies listed on Indonesian Sharia Stock Index.

H2: EPS has a positive effect on dividend policy in pharmaceutical companies listed on Indonesian Sharia Stock Index.

H3: ROA has a positive effect on stock prices in pharmaceutical companies listed on Indonesian Sharia Stock Index.

H4: EPS has a positive effect on stock prices in pharmaceutical companies listed on Indonesian Sharia Stock Index.

H5: Dividend policy has a positive effect on stock prices in pharmaceutical companies listed on Indonesian Sharia Stock Index.

H6: ROA has a positive effect on stock prices through dividend policy as an intervening variable in pharmaceutical companies listed on Indonesian Sharia Stock Index.

H7: EPS has a positive effect on stock prices through dividend policy as an intervening variable in pharmaceutical companies listed on Indonesian Sharia Stock Index.

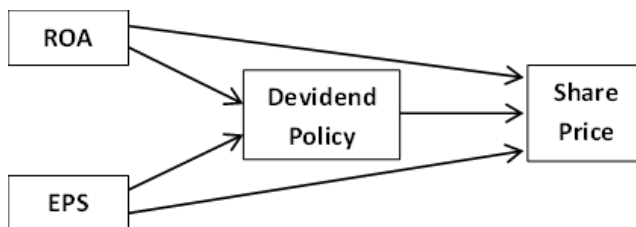


Figure 2. Theoretical framework

## Research Methods

This research is quantitative research. Quantitative research, grounded in the positivist philosophy, employs methodologies to study specific populations or samples. Random sampling techniques are typically employed, and data collection involves the use of research instruments. Quantitative data analysis is then conducted using statistical methods to test predefined hypotheses (Sugiyono, 2013). The population in this research is pharmaceutical companies listed on the Indonesian Sharia Stock Index (ISSI) for the period 2017 to 2021. There are 6 companies used as research samples from a population of 12 pharmaceutical companies listed on the Indonesian Sharia Stock Index, namely Darya Varia Laboratoria Tbk (DVLA), Kimia Farma (Persero) Tbk (KAEF), Kalbe Farma Tbk (KLBF), Industrial Jamu & Pharmacy Sido Muncul Tbk (SIDO), Tempo Scan Pacific Tbk (TSPC), and Millennium Pharmacon International Tbk (SDPC).

The sampling technique used was purposive sampling. Data collection in this research used the literature study or documentation method. There are three variables used in this research, namely independent, dependent and intervening variables. In this study the author used 2 independent variables, namely Return on Assets (ROA) as X1  $\left(ROA = \frac{Net\ Profit}{Total\ Asset}\right)$  and Earning per

Share (EPS) as X2  $\left(EPS = \frac{Net\ Profit}{Number\ of\ share\ circulating}\right)$ . The dependent

variable in this research is the share price Y  $\left(Y = \frac{\sum Rata-Rata\ Avarage\ Monthly\ Price}{12}\right)$ . Meanwhile, the intervening

variable in this research is dividend policy using DPR as a tool to measure it  $\left(DPR = \frac{Deviden\ per\ Share}{Earning\ per\ Share}\right)$ .

In this study, Partial Least Squares (PLS) analysis was employed for data analysis. PLS is a multivariate statistical method utilized to assess relationships between multiple independent and dependent variables. The



data processing technique in the research is assisted by the WarpPLS version 7.0 software program which can analyze variant-based SEM models or better known as Partial Least Square. There are two models in this test, namely the inner model and the outer model. To test the hypothesis that has been proposed, this research uses path analysis using the WarpPLS program.

## Results and Discussion

### Descriptive Statistical

Descriptive statistical tests are used to describe the data or values of the independent variables, namely ROA and EPS, and the dependent variable, namely the share price and the intervening variable, namely the dividend policy in the DPR.

From Table 1, 30 observation data were found from 6 pharmaceutical companies for 5 years (2017-2021). In the ROA variable, the Kimia Farma (Persero) Tbk (KAEF) company in 2020 has a minimum value of 0.210, while the Industrial Herbal & Pharmaceutical company Sido Muncul Tbk (SIDO) in 2021 has a maximum value of 23,710. The average value of the ROA variable is 7,513 with a standard deviation of 5,897, indicating that the data quality is quite good. In the EPS variable, the minimum value is -2,290 for the KAEF company and the maximum value is 198,000 for the Darya Varia Laboratoria Tbk (DVLA) company.

The average value of the EPS variable is 74,865 with a standard deviation of 60,895, indicating that the data quality is quite good. For the dividend policy variable, the minimum value is -6,540 for KAEF companies in 2019 and the maximum value is 1,830 for KAEF companies in 2020. The average value in this test is 0.286 with a standard deviation of 1,336, indicating poor data quality. In the stock price variable, the minimum value is 97,000 for the Millennium Pharmacon Internatinal Tbk (SDPC) company in 2018 and the maximum value is 2,900,000 for the KAEF company in 2019. The average value of the stock price variable is 1,475,733 with a standard deviation of 885,757, indicating data quality is quite good.

**Table 1. Descriptive Statistics**

	N	Min	Max	Mean	Median	Standar Deviasi
ROA	30	0.210	23.710	7.513	6.995	5.897
EPS	30	-2.290	198.000	74.865	54.360	60.895
Dividend Policy	30	-6.540	1.830	0.286	0.450	1.336
Share Price	30	97.000	2.900.000	1.475.733	1.465.000	885.757

Source: Research data processed by researchers, 2023

In testing this research data analysis used Partial Least Square (PLS) with the help of WarpPLS software version 7.0. Testing stages consist of measurement model evaluation tests (outer model), structural model evaluation tests (inner model), and hypothesis testing.

#### **Measurement Model Evaluation Test (Outer Model)**

Three stages must be examined when testing this outer model: convergent validity, discriminant validity, and composite reliability. Below are the outcomes of these assessments.

#### **Convergent Validity Test**

In this test, it can be seen from the factor loading values. The resulting loading value must be greater than 0.7 so it can be said to be ideal. From table 2, it can be seen that all variables, including ROA, EPS, Dividend Policy and Share Prices, produce a loading value > 0.7, namely number 1 (one) with a P-Value < 0.001 so it can be said to be ideal and meets the convergent validity requirements. From table 2, it can be seen that all variables, including ROA, EPS, Dividend Policy and Share Prices, produce a loading value > 0.7, namely number 1 (one) with a P-Value < 0.001 so it can be said to be ideal and meets the convergent validity requirements.

**Table 2. Convergent Validity Test**

Variable	ROA	EPS	Devidend_Policy	Share_Price	Type (as defined)	SE	P Value
ROA	(1.000)	0.000	0.000	0.000	Reflective	0.111	<0.001
EPS	0.000	(1.000)	0.000	0.000	Reflective	0.111	<0.001
Devidend Policy	0.000	0.000	(1.000)	0.000	Reflective	0.111	<0.001
Share Price	0.000	0.000	0.000	(1.000)	Reflective	0.111	<0.001

Source: Research data processed by researchers, 2023

**Table 3. Discriminant Validity Test**

Variabel	AVE	Square Root of AVE
ROA	1.000	1
EPS	1.000	1
Dividend Policy	1.000	1
Share Price	1.000	1

Source: Research data processed by researchers, 2023

### **Discriminant Validity Test**

The purpose of the discriminant validity test is to assess the extent to which a latent construct differs from other constructs. This validity is evaluated by comparing the square root of the Average Variance Extracted (AVE) with the correlation between the latent variables. If the square root of the AVE exceeds the correlation between the latent variables, it indicates satisfactory discriminant validity. Table 3 shows that the AVE value of all variables is 1 or greater than  $> 0.5$  so it can be interpreted that the discriminant validity criteria have been met for this variable. Table 4 above explains that the root of AVE, namely 1,000, is greater than the correlation of the variables concerned, this shows that the four indicators have met discriminant validity. Based on the two validity tests, both convergent validity and discriminant validity, it can be seen that they have passed the validity test.

**Table 4. Construct Correlations with EVE Value**

Correlations among l.vs.withsq.rts.of AVEs				
	ROA	EPS	Devidend_Policy	Share_Price
ROA	(1.000)	0.189	0.324	-0.085
EPS	0.189	(1.000)	0.216	0.378
Devidend_Policy	0.324	0.216	(1.000)	-0.230
Share_Price	-0.085	0.378	-0.230	(1.000)

Source: Research data processed by researchers, 2023

**Composite Reliability Test**

The method for testing reliability is by using composite reliability and Cronbach's alpha. It can be said that composite reliability is good if the value of both is more than 0.70. The method for testing reliability is by using composite reliability and Cronbach's alpha. It can be said that composite reliability is good if the value of both is more than 0.70.

Based on Table 5 and 6, it can be seen that in the composite reliability coefficients and Cronbach's alpha coefficients tests both obtained the number 1, which means more than 0.70, so in this test it can be said to have met the predetermined requirements and was declared reliable.

**Table 5. Composite Reliability Coefficients**

Composite Reliability Coefficients			
ROA	EPS	Devidend_Policy	Share_Price
1.000	1.000	1.000	1.000

Source: Research data processed by researchers, 2023

**Table 6. Cronbach's Alpha Coefficients**

cronbach's alpha coefficients			
ROA	EPS	Devidend_Policy	Share_Price
1.000	1.000	1.000	1.000

Source: Research data processed by researchers, 2023

**Structural Model Evaluation Test (Inner Model)**

Evaluation testing of the structural model (inner model) was carried out in order to test the Fit, R-Square and Q-Square Models.

**Fit Models**

Based on the results from the table above, if you look at the APC with an index of 0.382 and a p-value of 0.004. ARS with an index size of 0.390 and a p-value of 0.004. And AARS shows an index value of 0.377 with a p-value of 0.009. This means it is significant because the p value for APC, ARS and AARS is less than 0.05. Then for AVIF with an index of 2.160 it can be said to meet the criteria because it is <5 so it can be seen that there are no problems with multicollinearity between variables.

**Table 7. Model Fit and Quality Indices**

Model fit and quality indices
Average path coefficient (APC)=0.382, P=0.004
Average R-square (ARS)=0.390, P=0.004
Average adjusted R-square (AARS)=0.337, P=0.009
Average block VIF (AVIF)=2.160, acceptable if <=5, ideally<=3.3
Average full collinearity VIF (AFVIF)=1.274, acceptable if <=5, ideally<=3.3
Tenenhaus GoF (GoF)=0.625, small>=0.1, medium>=0.25, large>=0.36
Sympton’s paradox ratio (SPR)=1.000, acceptable if>=0.7, ideally=1
R-square contribution ratio (RSCR)=1.000, acceptable if>=0.9, ideally=1
Statistical suppression ratio (SSR)=0.800, acceptable if>=0.7
Nonlinearbivariatecausalitydirection ratio (NLBCDR)=0.500, acceptable if>=0.7,

Source: Research data processed by researchers, 2023

**R-Square (R2)**

R-square is a value that explains how much influence the independent variable has on the dependent variable. It can be said to be a good model if the R-square value is higher. The R-square value only exists for endogenous constructs (Sholihin, 2013).

**Table 8. Model Fit Indeks**

	Indeks	P-Value	Criteria	Information
APC	0,382	0,004	< 0,05	Accepted
ARS	0,390	0,004	< 0,05	Accepted
AARS	0,377	0,009	< 0,05	Accepted
AVIF	2,160		< 5	Accepted

Source: Research data processed by researchers, 2023

**Table 9. R-Square and Q-Square**

R-square coefficients				
Share_Price	Devidend_Policy		EPS	ROA
0.600		0.180		
Q-square coefficients				
Share_Price	Devidend_Policy		EPS	ROA
0.551		0.211		

Source: Research data processed by researchers, 2023

Based on Table 9, the R-squared values for dividend policy and share prices are as follows. Firstly, the R-squared value for the dividend policy variable is 0.180, indicating that 18% of the variance in the dividend policy variable is explained by the independent variables, while the remaining 82% is influenced by factors not included in this research model. Secondly, the R-squared value for the stock price variable is 0.600, suggesting that 60% of the variance in stock prices is accounted for by the independent variable, while the remaining 40% is influenced by factors not considered in this research model.

### Q-Square (Q2)

Q-square is used in this research for assessment of the predictive validity or relevance of a set of exogenous latent variables to endogenous variables. Q-square is different from R-square, this is because the value of Q-square can be

negative while R-square is always positive. The model can be said to have predictive validity on condition that it must have a Q-square value greater than zero.

Based on Table 10, it can be seen that the output result from this test is 0.211 for the dividend policy variable while for share prices it is 0.551. It can be concluded that the predictive validity of these two variables is stated to be good, because the resulting value is greater than zero.

### Hypothesis Testing

Based on the picture and table above, the value of the test results can be seen path coefficient and p-value are as follows:

- The value of the path coefficient test from ROA to dividend policy is 0.116 with a p-value of 0.252. For the ROA to share price variable, the value of the path coefficient is -0.285 with a p-value of 0.042.
- The value of the path coefficient test from EPS to dividend policy can be seen as 0.326 with a p-value of 0.022. Then for the EPS variable to share prices, the path coefficient value is 0.481 with a p-value of 0.001.
- The value of the path-coefficient test from dividend policy to share prices obtained a value of -0.702 with a p-value of <0.001.

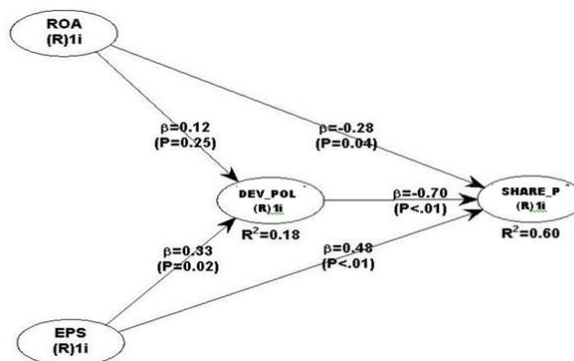


Figure 3. Hypothesis Testing

**Table 10. Effect Sizes for Path Coefficients**

	ROA	EPS	Devidend_Policy	Share_Price
ROA				
EPS				
Devidend_Policy	0.116	0.326		
Share_Price	-0.285	0.481	-0.702	

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Source: Research data processed by researchers, 2023

**Table 11. Indirect Effect**

Variables	B Coefficient	P-Value	Criteria	Hypothesis
ROA → DPR	0,116	0,252	P < 0,05	Not Significant
EPS → DPR	0,326	0,022	P < 0,05	Significant
ROA → Share Price	-0,285	0,042	P < 0,05	Significant
EPS → Share Price	0,326	0,001	P < 0,05	Significant
DPR → Share Price	-0,285	< 0,001	P < 0,05	Significant
ROA → DPR → Share Price	0,481	0,257	P < 0,05	Not Significant
EPS → DPR → Share Price	-0,702	0,028	P < 0,05	Significant

Source: Research data processed by researchers, 2023

Hypothesis test:

- Evaluating the initial hypothesis: As indicated in the provided table, it is apparent that the ROA variable does not exert a substantial influence on dividend policy (DPR) throughout the 2017-2021 research timeframe. This is evidenced by the p-value of 0.252, which surpasses the significance threshold of 0.05. The coefficient obtained during the testing of the first hypothesis was 0.12. Hence, it can be inferred that the initial hypothesis is refuted.
- Evaluation of the second hypothesis: Analysis of the second hypothesis reveals a significant correlation between the EPS variable and dividend policy (DPR) throughout the 2017-2021 research period. This is evident from the p-value of 0.022, which falls below



the established significance threshold of 0.05. Additionally, the beta coefficient obtained is 0.326, indicating a positive relationship between the EPS variable and dividend policy. Consequently, a one-unit increase in the EPS variable is associated with a corresponding increase of 0.326 in the dividend policy, while a decrease in the EPS value results in a decrease of 0.326 in the dividend policy. Thus, it can be concluded that the second hypothesis is upheld.

- Assessment of the third hypothesis: Upon scrutinizing the third hypothesis, it is evident that ROA significantly impacts the share prices of pharmaceutical companies listed on ISSI during the 2017-2021 period. This assertion is supported by the p-value of 0.042, which is below the predetermined significance threshold of 0.05. Furthermore, the beta coefficient obtained is -0.285, indicating a negative correlation between ROA and stock prices. This implies that an increase in the ROA value leads to a decline in share prices, whereas a decrease in the ROA value results in an increase in share prices. Thus, it can be inferred that the third hypothesis is refuted.
- Evaluation of the fourth hypothesis reveals a substantial positive relationship between the EPS variable and share prices. This assertion is supported by the p-value of 0.001 and a beta coefficient value of 0.481. This indicates that an increase in the EPS value corresponds to a rise in share prices, while a decrease in the EPS value leads to a decline in share prices. Consequently, it can be inferred that the fourth hypothesis is upheld.
- Evaluation of the fifth hypothesis indicates a notable negative impact of dividend policy (DPR) on share prices. This is supported by a p-value of less than 0.001 and a beta coefficient value of -0.702. This implies that an increase in dividend policy (DPR) results in a decrease in share prices, while a decrease in dividend policy (DPR) leads to an increase in share prices. Hence, it can be inferred that the fifth hypothesis is refuted.

- Evaluation of the sixth hypothesis suggests that dividend policy (DPR) as an intervening variable does not exert an indirect influence on the relationship between ROA and share prices. This is substantiated by a p-value of 0.257 and a beta coefficient of -0.082. Consequently, it can be inferred that the sixth hypothesis is refuted.
- Assessment of the seventh hypothesis reveals that dividend policy (DPR) has the capability to indirectly impact the EPS variable on share prices. This is supported by a p-value of 0.028 and a beta coefficient of -0.229. Thus, it indicates that as the EPS value increases, the share price declines, and conversely, a decrease in the EPS value leads to a decrease in share prices as well. Therefore, the seventh hypothesis is refuted.

#### **The Influence of Return on Assets (ROA) on Dividend Policy**

ROA is a profitability metric that gauges a company's efficiency in utilizing its assets to generate profits, providing insight into the effectiveness of capital invested by stakeholders in generating net earnings. A high ROA signifies robust profit generation, whereas a low ROA suggests relatively modest earnings. Consequently, companies exhibiting high profitability are presumed capable of disbursing substantial dividends to investors. Hence, a higher ROA value typically indicates an increased potential for the company to distribute sizable dividends to shareholders (Tauke et al., 2017). However, the findings of this study contradict the initial hypothesis, indicating that Return on Assets (ROA) possesses a positive yet insignificant influence on dividend policy.

The research findings reveal a p-value of 0.252, surpassing the predetermined significance threshold, alongside a beta coefficient value of 0.12. Consequently, the first hypothesis is refuted. These results align with the study conducted by (Sejati, 2020), indicating that ROA exhibits a positive yet insignificant impact on dividend policy. This suggests that the level of ROA does not exert influence on dividend policy. Therefore, high profits do not always guarantee large dividend distribution, because each company has its own policies. Some companies may choose to retain profits for future

investment, because the profits obtained each year vary. This is done to anticipate if the company's profits worsen. On the other hand, a mature company will not change the amount of dividend distribution, because the company has a lot of profit reserves, so this company does not depend on ROA in the company (Jalung et al., 2017).

### **The Influence of Earnings per Share (EPS) on Dividend Policy**

EPS is the result of company profits divided per share. A good Earning per Share value is one that tends to increase over time. The greater the EPS value, the better the company's performance. Conversely, when the Earning per Share value is small or negative, the company will be considered at a loss. The EPS value can show the level of profitability of a company by looking at the net profit generated by each share (Jalung et al., 2017). Companies with high EPS are considered capable of paying dividends, while those with low EPS may not be able to pay dividends for fear of not being able to predict whether they will generate profits in the future.

Investors rely on information from the EPS value to find out how much return they will get when buying shares in the company. Therefore, the EPS value is considered capable of influencing dividend policy (Diantini, 2016). The findings of this study confirm the second hypothesis, indicating that EPS has a positive and statistically significant impact on dividend policy. Judging from the research results, it shows that the p-value obtained is 0.022 or  $<0.05$ , the significant limit. Then the coefficient value is 0.326, which means it has a positive effect. So the second hypothesis is accepted.

### **The Effect of Return on Assets (ROA) on Share Prices**

ROA is a ratio used by investors as a benchmark to determine a company's ability to utilize all its assets to obtain the desired profit. This ratio is more often seen for the reason that it is able to measure the profits obtained by the company in the past and projected for the following year. A high ROA value shows that the company can utilize its assets well and efficiently, thereby achieving optimal profits.

According to signal theory, a high ROA value is the same as increased profitability, meaning the company has good financial performance. If the ROA value is high, it will be followed by a high share price, this is because there are many people interested in buying shares. Conversely, if the ROA value decreases, the share price of a company will also decrease. When a high ROA value can be maintained, the confidence of investors or potential investors in the company will also be higher. So that it gives a signal to other investors to invest in a company. However, the research results show something that is contrary to the third hypothesis, namely that ROA has a negative and significant effect on stock prices.

This can be seen from the obtained p-value of 0.042, which means it is small than the significant limit, namely 0.05, with the beta coefficient value obtained, namely -0.285 or it is said to have a negative effect. Therefore the third hypothesis is rejected. Research results that are in line are research conducted by Alifatussalimah and Atsari Sujud which states that Return On Assets has a negative and significant influence on share prices (Alifatussalimah and Atsari Sujud, 2020)

This means that when the company's ROA value is high, the share price will actually decrease. This is because the company is not able to manage its assets well, such as the company not investing enough profits into future assets that have the potential to increase company profits. This will reduce investors' interest in buying shares so that the company's share price will fall. Apart from that, not all investors pay attention to ROA when buying shares, most of them do not pay attention to the ROA value in making investment decisions but pay attention to other influences such as Earnings per share (Putra, 2021). It can be concluded that ROA is not the only factor that influences share prices.

Companies must ensure that they can manage their assets well and maintain investor confidence through consistent financial performance. So there will be no decline in share prices and provide a positive signal to investors.

### **Effect of Earnings per Share (EPS) on Share Prices**

EPS is a company's income in a year divided by the average total shares outstanding. The EPS value can be an indicator of a company's level of profitability by looking at the net profit generated per share. Investors usually use EPS to decide whether to buy shares (Indah, 2017).

Investors tend to be attracted to stocks with high EPS compared to stocks with low EPS. Shares with a high EPS value will be worth more, while shares with a low EPS value tend to make the share price fall. Therefore, share prices are greatly influenced by the EPS value. Signal theory will help companies that provide published information. The market will react if the company provides information that has positive value and vice versa. Companies with good EPS values will attract investors, so that a lot of interest will influence share prices (U. Dian. Pratiwi, 2017). This research supports the fourth hypothesis, namely that EPS has a positive and significant effect on stock prices.

This is evident from the p-value of 0.001, which is below the significance threshold of 0.05, coupled with a beta coefficient value of 0.481, indicating a positive influence. Hence, the fourth hypothesis can be affirmed. This finding aligns with prior research by Catur Nilasari, which asserts that Earning Per Share exerts a positive and significant impact on share prices (Nilasari, 2022). Essentially, this implies that when the EPS value is high, the corresponding share price tends to rise. This phenomenon underscores the company's adeptness in effectively managing investment funds, thereby yielding substantial profits.

Apart from that, the company is also able to provide welfare for investors and increase welfare with high returns, so many investors are interested in buying shares in the company. It can be concluded that the company is able to provide a good signal to investors through EPS compared to other companies, so that investors will be interested in the company (Wicaksono, 2015).

### **The Effect of Dividend Policy on Share Prices**

Dividend policy refers to a company's strategy concerning the allocation of profits to its shareholders or investors. The Dividend Payout Ratio serves as a metric for assessing dividend policy, calculated by dividing the dividend amount per share by the net profit per share. According to the signaling hypothesis, investors can glean insights into a company's future earnings trajectory from signals embedded within dividend announcements, encompassing both the stability and alterations in dividend distributions. A surge in the dividend payout ratio may be interpreted as a signal of robust future profitability, eliciting a positive response in the company's share price. Conversely, reductions or cuts in dividends may signal weakened future profitability, potentially resulting in a decline in share prices (Gumanti, 2013).

However, the findings of this study present a contradiction to the fifth hypothesis, indicating that dividend policy (DPR) has a negative and significant impact on stock prices. This is evident from the p-value  $<0.001$ , falling below the significance threshold of 0.05, alongside a beta coefficient value of -0.702, signifying a negative influence. Therefore, the fifth hypothesis is refuted. Previous research consistent with the outcomes of the fifth hypothesis was conducted by Pramita Riza Oktaviani and Sasi Agustin, who asserted that dividend policy (DPR) exhibited a negative and significant impact on stock prices (Oktaviani, 2017). If the dividend policy increases, share prices will fall and vice versa. This happens because some investors want small dividend distributions to avoid the amount of tax paid, because the amount of tax paid follows the amount of dividends received. Apart from that, investors who want to make a profit by selling their shares will not pay attention to the size of the dividends they receive (Praptoyo, 2022).

### **The Effect of Return on Assets (ROA) on Share Prices Through Dividend Policy as an Intervening Variable**

Using dividend policy as an intervening variable in this research aims to see whether dividend policy can mediate the effect of Return on Assets on stock prices. Dividend policy using DPR as a measuring tool is considered

capable of mediating this variable. A company with a high level of ROA can mean that the company is in good condition because it earns high profits. By obtaining high profits, it will be easier for the company to make decisions about whether to distribute dividends or withhold them. A high ROA value is considered capable of providing dividends to investors (Purnasari, 2020). Investors will feel happy with companies that distribute large dividends, so the higher the DPR in the company, the more interest there will be from potential investors. With so many enthusiasts, the company's share price will be higher. Signal theory (Vianti, 2018) also explains the same thing. However, the results of this research show something that is contrary to the sixth hypothesis, namely that dividend policy is unable to mediate Return on Assets on share prices so it does not have a significant effect. This is shown from the research results where the p-value of 0.257 is greater than the significance limit of 0.05 with a coefficient value of -0.082 so that the sixth hypothesis is rejected.

Previous research conducted by Gatot Kusjono and Fitri Aryanti stated that Return on Assets had a negative and insignificant effect on stock prices. This means that the negative influence here means that when Return on Assets rises, share prices fall (Kusjono, 2021). It can be said that even though the company's profits are high, it has nothing to do with large dividend distribution because the company will retain profits for future investment. Therefore, dividend policy (DPR) is unable to mediate between ROA and share prices. Meanwhile, it does not have a significant effect on share prices here, meaning that the company may experience losses that year, thereby making it have no effect.

Apart from that, investors do not always pay attention to ROA as a benchmark in investing, but pay attention to other fundamental factors that influence share prices (Sujadmiko, n.d.).

### **The Effect of Earnings per Share (EPS) on Share Prices Through Dividend Policy as an Intervening Variable**

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Earning per Share (EPS) or profit per share is the amount of income earned in a period for each share outstanding. EPS is used as consideration by potential investors when investing in the capital market. Information regarding earnings per share can be used by company leaders to determine the dividends to be distributed.

Apart from that, EPS is also useful for shareholders, because an increase in EPS will of course increase the income they will receive (Sutejo, 2010). Earning per Share is related to dividend policy and also share prices. The amount of EPS is used as information for investors to see the amount of dividends they will get if they invest in the company. If the dividends distributed are high, many investors will be interested, so with lots of demand, share prices will automatically rise (Fauza, 2016).

However, the results of this research show something that is contrary to the seventh hypothesis, namely that dividend policy (DPR) is able to mediate or indirectly influence the EPS variable on share prices with a negative influence. This is shown from the research results where the p-value is 0.028 or smaller than 0.05 with a beta coefficient value of -0.229. So the seventh hypothesis is rejected. This is in line with previous research conducted by Dewi Kurnia, et al which said that Earnings per Share had a negative and significant effect on share prices. This means that it has the opposite effect so that when EPS rises, the share price will fall. This means that the high EPS value obtained by the company has nothing to do with the dividends distributed because there is a tendency for companies to use their profits for company funding needs and to maintain liquidity to remain stable. That way, investor interest in the company will decrease and cause share prices to fall. Therefore, it can be said that dividend policy is unable to mediate the relationship between Earnings per Share and share prices. This happens because the profits obtained by the company do not always increase but fluctuate. In a situation where profits fluctuate but the shares in circulation



have a fixed value, investors do not really pay attention to the high and low levels of Earnings per Share when making decisions to buy shares (R. A. S. and B. H. S. Pratiwi, 2019).

## Conclusion

In summary, drawing from the analysis and discussion concerning the impact of Return on Assets (ROA) and Earnings per Share (EPS) on share prices, considering dividend policy as an intervening variable in pharmaceutical companies registered with ISSI from 2017 to 2021, the following conclusions can be drawn.

Firstly, the influence of ROA on dividend policy is positive, albeit not statistically significant. Secondly, EPS demonstrates a positive and significant impact on dividend policy. Thirdly, ROA negatively and significantly affects share prices. Fourthly, EPS positively and significantly influences share prices. Fifthly, dividend policy exhibits a negative and significant impact on share prices. Sixthly, while ROA negatively affects share prices through dividend policy as an intervening variable, this effect is not statistically significant. Seventhly, EPS negatively and significantly impacts share prices through dividend policy as an intervening variable.

In this research, there are several limitations such as only using one type of pharmaceutical company registered with ISSI, limited research time period, namely only 2017 to 2021, using only two independent variables, namely Return on Assets and Earnings per Share, and only using policy variables. dividend (DPR) as an intervening variable in research.

Based on the conclusions and limitations of this research, several suggestions can be given. They are adding the most recent research period and the number of samples used, adding different variables involving both factors simultaneously, and using other mediating variables, apart from dividend policy (DPR).

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