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Effect of EPS (Earning Per Share) NPM (Net Profit Margin) and ROA (Return on Asset) on Share Prices (a Case Study of Banking and Cigarette Companies Listed in the LQ45 Index on the Indonesia Stock Exchange 2016-2019 Period)

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ABSTRACT

Fundamental analysis is an approach that is often used in predicting stock price movements. In this research, the problem taken is how the influence of EPS, NPM, and ROA on stock prices of banking and cigarette companies are included in the LQ45 index for the period 2016-2019. The population in this study are banking and cigarette companies that are members of the LQ45 index. Sampling in this study was carried out using purposive sampling, amounting to 7 companies. Data analysis was performed by multiple linear regression analysis. The type and source of data used are secondary data in the form of complete financial reports for the 2012-2014 period. Hypothesis testing in this study uses linear regression with the help of SPSS version 25 software. The results of multiple linear regression analysis with independent variables, namely stock prices and the dependent variable, namely EPS, NPM and ROA, show that EPS (X1) has a positive effect on stock prices (Y). while NPM (X2) and ROA (X3) do not affect stock prices (Y). Based on the results of the determination coefficient table, the adjusted R2 value is 0.828. This means that the influence given by the independent variable to the dependent variable partially or simultaneously is 82.8%. This means that only the Earning Per Share variable affects stock prices. Because the higher the EPS value, the more investors will buy shares, of course, this is a good contribution for cigarette and banking companies

Keywords: Earning Per Share (EPS), Net Profit Margin (NPM), Return on Asset (ROA), Stock Price.

Introduction
Research background

A company must have goals, be it long-term goals or short-term goals. Long-term goals are usually to maintain the survival of the company, while short-term goals are the efforts made by the company to obtain optimal profit. In the process of achieving their objectives, companies usually carry out investment activities, whether an investment in the form of real assets or investment in the form of financial assets (Rudiatno, 2012). The type of security that is currently in great demand by investors is stocks (Rahardjo, 2006).

Before investing, investors must consider how much profit they will get in the future. To see whether they can benefit from these investment activities, investors usually look at and assess the company's performance in a certain period from the company's financial statements. Financial reports are designed to help report users identify the related variables of financial statements. With financial reports, investors can get data on Earning Per Share (EPS) and Net Profit Margin (NPM). Which is useful for consideration in investment (Megawati & Roza Linda, 2013).

Because EPS can assess and measure the income enjoyed by previous shareholders in the company concerned. Also, NPM can calculate the extent to which the company's ability to generate net income at

a certain sales level. Meanwhile, ROA can measure the company's ability to generate profits in the period that has ended and then projected for the next period (Bodie & Marcus, 2014).

In this study, the objects chosen were companies that joined the LQ45 index in the Indonesia Stock Exchange. The LQ45 index is the market capitalization value of the 45 most liquid stocks and has a large capitalization value which is an indicator of liquidation. Having a high stock transaction value makes stocks listed on the LQ45 index an option for investment.

Therefore, the authors chose 7 companies that joined the LQ45 index, where 5 companies were banking companies and 2 were cigarettes. Banking companies namely Bank Central Asia Tbk, Bank Negara Indonesia (Persero) Tbk, Bank Rakyat Indonesia (Persero) Tbk, Bank Tabungan Negara (Persero) Tbk, and Bank Mandiri (Persero) Tbk. Meanwhile, cigarette companies, namely PT Gudang Garam Tbk and PT HM Sampoerna Tbk.

Identification of problems

Based on the background description, it can be seen that there are many factors on stock prices. In this way, the authors are interested in conducting research with the title: "The Effect of EPS (Earning Per Share), NPM (Net Profit Margin) and ROA (Return on Asset) on Share Prices (Case Study on Banking and Cigarette Companies Incorporated in the LQ45 Index in Indonesia Stock Exchange (IDX) 2016-2019 Period).

Formulation of the problem

Based on the background described above, the problems that will be discussed in this study are, how do EPS, NPM, and ROA (Earning Per Share) influence share prices in cigarette companies listed on the IDX for the 2016-2019 period.

Literature Review

Share price

Shares are securities that have evidence of ownership or participation instruments from individuals or institutions in a company. Whereas in general terms, shares are evidence of equity participation in a company's share ownership. This means that the owner of the shares is the owner of the company. The bigger the shares owned, the greater the power in the company.

The share price is the price on the real market and is the easiest price to determine because it is the price of a share in the current market or if the market is closed, the market price is the closing price (Rusdin, 2006). The value of stock prices always changes every time because it is influenced by the supply and demand that occurs between sellers and buyers of shares. Also, some factors affect stock prices such as EPS, NPM, and ROA (Darmadji & Fakhrudin, 2012).

The Earning Per Share (EPS) is a ratio that describes the company's ability to generate profits for each share outstanding. Earnings Per Share (EPS) is a company profitability level analysis tool that uses the concept of conventional earnings and is used to evaluate a common stock. With the formula:

$$\text{EPS} = \frac{Net\ Profit\ After\ Tax}{Number\ of\ Shares\ Outstanding}$$

Net Profit Margin is a ratio that calculates the extent to which the company's ability to generate net profit at the level of sales in a certain period is often referred to as the ratio of revenue to sales. With the formula:

$$\text{ROA} = \frac{Net\ Profit}{Net\ Sales}$$

Return on Asset (ROA) is the result of the return on assets with a ratio that describes how much the contribution of assets in creating net income (Hery, 2015: 228). The formula for calculating ROA is (Fahmi, 2012):

Hypothesis formulation

Based on the above framework, the following research hypothesis is drawn:

H1: Earning Per Share (EPS) affects stock prices in banking companies and cigarettes that are included in the LQ45 index on the Indonesia Stock Exchange (IDX) for the 2016-2019 period.

H2: Net Profit Margin (NPM) affects stock prices in banking and cigarette companies that are members of the LQ45 index on the Indonesia Stock Exchange (IDX) for the 2016-2019 period.

H3: Return on Asset (ROA) affects stock prices in banking and cigarette companies that are members of the LQ45 index on the Indonesia Stock Exchange (IDX) for the 2016-2019 period.

Framework

Based on the relationship between the independent variable and the dependent variable, there is a framework as follows:
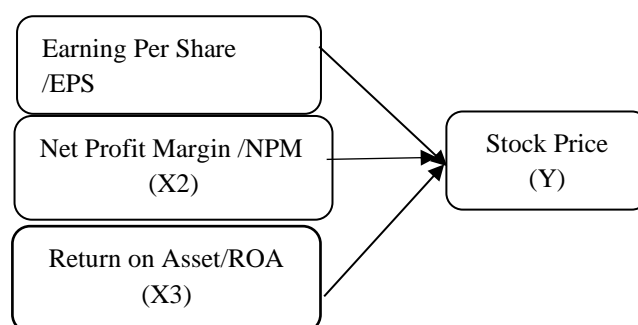

Figure 1. A framework

Restricting the problem

Based on the formulation of research problems and considering the wide field of business, the authors limit the problem in this study, namely the effect of EPS NPM and ROA on stock prices.

Research object

This research was conducted on banking and cigarette companies that are members of the LQ45 index on the Indonesia Stock Exchange for the period 2016-2019.

Research types

This type of research was descriptive quantitative research, namely research that uses data in the form of numbers and can be expressed in units of the count. The quantitative data used by the author is the financial statements of banking and cigarette companies that are included in the lq45 index on the Indonesia Stock Exchange for the period 2016-2019 (Santoso, 2007).

Population and sample

The population in this study are all banking and cigarette companies that are included in the LQ45 index on the Indonesia Stock Exchange for the period 2016-2019. The sample used in this study was taken based on purposive sampling criteria or technique. The criteria used are:

1. Banking and cigarette companies that are included in the LQ45 index on the Indonesia Stock Exchange during the study period, namely 2016-2019.

2. Banking and cigarette companies have published financial reports that present the required financial ratio data and closing stock prices for the 2016-2019 period.

3. Banking and cigarette companies that did not experience losses during the study period, namely 2016-2019.

The companies that are the samples in this study can be seen in the following table:

Table 1. The companies

No	Company Name	Code
1.	Bank Central Asia Tbk.	BBCA
2.	Bank Negara Indonesia (Persero) Tbk.	BBNI
3.	Bank Rakyat Indonesia (Persero) Tbk.	BBRI
4.	Bank Tabungan Negara (Persero) Tbk.	BBTN
5.	Bank Mandiri (Persero) Tbk.	BMRI
6.	Gudang Garam Tbk	GGRM
7.	Handjaya Mandala Sampoerna Tbk	HMSP

Data source: www.idx.co.id

Types and sources of data

The type of data used in this study is secondary data that has been processed and documented by the banking and cigarette companies themselves in the form of complete financial reports for the period 2016 - 2019 which will then be analyzed using financial ratios. The data source of this research is also the same, namely the secondary data source because this data is obtained through the role of a third party, namely through the official website of the Indonesia Stock Exchange www.idx.co.id.

Data collection and analysis techniques

The data collection technique uses documentation techniques which are carried out by downloading the financial reports of all banking and cigarette companies on the Indonesia Stock Exchange for the period 2016 - 2019 on the site www.idx.co.id. While the analysis technique in this study uses statistical techniques using financial ratios that are associated with each variable to see the value of each variable.

Results and Discussion
Data description

The independent variables used are EPS, NPM, and ROA while the dependent variable is the stock price. Data for the independent and dependent variables were obtained through computed calculations based on the financial statements of banking and cigarette companies for the period 2016-2019.

Dependent variable (Y) stock price

Table 2. Average closing share prices for Banking and Cigarette Companies for the 2016-2019 Period

No	Company	Year 2016 (Rp)	2017 (Rp)	2018 (Rp)	2019 (Rp)	Average (Rp)
1.	Bank Central Asia Tbk.	14,148	18,454	23,617	29,774	21,498
2.	Bank Negara Indonesia (Persero) Tbk.	5,235	7,146	8,217	8,404	7,251
3.	Bank Rakyat Indonesia (Persero) Tbk.	11,281	12,242	3,338	4,168	7,757
4.	Bank Tabungan Negara (Persero) Tbk.	2,787	2,667	2,907	2,341	2,676
5.	Bank Mandiri (Persero) Tbk.	10,310	10,573	7,254	7,398	8,884
6.	Gudang Garam Tbk	71,100	74,873	65,460	71,625	70,765
7.	Handjaya Mandala Sampoerna Tbk	3,923	3,938	44,472	3,006	13,835

Data source: www.idx.co.id

The table above briefly describes the average closing stock price of each company in the 2016-2019 period. The highest average share price is at Gudang Garam Tbk with a share price of Rp. 70,765. Meanwhile, for the lowest found in the State Savings Bank (Persero) Tbk, namely with a share price of Rp. 2,676

Independent variable (X1) EPS (Earning Per Share)

Table 3. EPS (Earning Per Share) Rate of Banking and Cigarette Companies for the 2016-2019 Period

No	Company	Year				Average (Rp)
		2016 (Rp)	2017 (Rp)	2018 (Rp)	2019 (Rp)	
1.	Bank Central Asia Tbk.	835.76	945.45	1,048.68	246	769
2.	Bank Negara Indonesia (Persero) Tbk.	608.02	730.16	805.16	825	742
3.	Bank Rakyat Indonesia (Persero) Tbk.	1,061.88	235.08	120.69	281,31	473
4.	Bank Tabungan Negara (Persero) Tbk.	247.3	285.88	265.15	20	205
5.	Bank Mandiri (Persero) Tbk.	591.71	442.28	536.04	588,9	523
6.	Gudang Garam Tbk	3,470.26	4,030.66	4,049.62	5,655	4,301
7.	Handjaya Mandala Sampoerna Tbk	109.72	108.93	116.39	118	113

Source: Processed Data

The table above shows the company's EPS in the 2016-2019 period with the highest average EPS value found in Gudang Garam Tbk, amounting to Rp.4,301. This shows that using 1 share that is owned will produce a maximum profit of Rp. 4.301, which means that the productivity of each share is owned in generating profit. While the lowest average EPS value at Handjaya Mandala Sampoerna Tbk is Rp. 113, which shows that using 1 share that is owned will generate a profit of only Rp. 113.

Independent variable (X2) NPM (Net Profit Margin)

Table 4. NPM (Net Profit Margin) Rate of Banking and Cigarette Companies for the 2016-2019 Period

No	Company	Year				Average (Rp)
		2016 (Rp)	2017 (Rp)	2018 (Rp)	2019 (Rp)	
1.	Bank Central Asia Tbk.	38.31	40.92	43.37	50.84	43
2.	Bank Negara Indonesia (Persero) Tbk.	26.07	28.58	27.88	46.22	32
3.	Bank Rakyat Indonesia (Persero) Tbk.	28.46	28.23	60.43	42.12	40
4.	Bank Tabungan Negara (Persero) Tbk.	15.28	15.71	12.29	2.64	11
5.	Bank Mandiri (Persero) Tbk.	29.55	19.1	26.97	47.87	31
6.	Gudang Garam Tbk	8.75	9.31	8.14	47.76	18
7.	Handjaya Mandala Sampoerna Tbk	13.37	12.79	12.68	52.53	23

Source: Processed Data

From the table above, it can be seen that the highest average NPM value is found at Bank Central Asia Tbk amounting to Rp. 43. And the lowest average NPM value is found in the State Savings Bank company, which is Rp. 11.

Independent variable (X2) NPM (Net Profit Margin)

Table 5. ROA (Return on Asset) rate of banking and cigarette companies for the 2016-2019 period

No	Company	Year				Average (Rp)
		2016 (Rp)	2017 (Rp)	2018 (Rp)	2019 (Rp)	

1.	Bank Central Asia Tbk.	3.05	3.11	3.13	3.11	3.1
2.	Bank Negara Indonesia (Persero) Tbk.	1.89	1.94	1.87	1.83	1.8825
3.	Bank Rakyat Indonesia (Persero) Tbk.	2.61	2.58	2.5	2.43	2.53
4.	Bank Tabungan Negara (Persero) Tbk.	1.22	1.16	0.92	0.07	0.8425
5.	Bank Mandiri (Persero) Tbk.	1.41	1.91	2.15	2.16	1.9075
6.	Gudang Garam Tbk	10.6	11.62	11.28	13.83	11.8325
7.	Handjaya Mandala Sampoerna Tbk	30.02	29.37	29.05	26.96	28.85

Source: Processed data

From the table above, it can be obtained that the highest average ROA value at Gudang Garam Tbk with a value of 11.8325, while the lowest is in Bank Tabungan Negara (Persero) Tbk with a value of 0.8425.

Classic assumption test

The independent variables used are EPS, NPM, and ROA while the dependent variable is the stock price. Data for the independent and dependent variables were obtained through computed calculations based on the financial statements of banking and cigarette companies for the period 2016-2019.

Hypothesis testing

F Test Results

The results of the regression analysis, the significance value is 0.000 <0.05 and the value of Fcount = 44,414 > Ftable = 2,99, it can be concluded that the variables EPS, NPM, and ROA together have a significant effect on stock prices.

Table 6. Test results

ANOVAᵃ

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12624476286.780	3	4208158762.260	44.414	.000ᵇ
	Residual	2273951501.077	24	94747979.212		
	Total	14898427787.857	27			

a. Dependent Variable: STOCK (Y)

b. Predictors: (Constant), ROA (X3), EPS (X1), NPM (X3)

Source: Output SPSS version 25.0 (Data Processed, 2020).

Table 7. T Test results

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1604.099	7648.039		-.210	.836		
	EPS (X1)	14.577	1.321	.886	11.034	.000	.987	1.013
	NPM (X3)	56.908	186.624	.027	.305	.763	.803	1.246
	ROA (X3)	395.728	216.519	.163	1.828	.080	.804	1.244

a. Dependent Variable: STOCK (Y)

Source: Output SPSS version 25.0 (Data Processed, 2020).

Y = -1604.099 + 14.577 X1 + 56.908 X2 + 395.728 X3 + e
Information:
Y = Independent Variable (Stock Price)
a = Constant
β = Regression Coefficient
X1 = Earning Per Share
X2 = Net Profit Margin
X3 = Return on Asset
e = Variables not researched

H1: Earning Per Share (EPS) has an effect on stock prices in banking and cigarette companies that are members of the LQ45 index on the Indonesia Stock Exchange (IDX) for the period 2016-2019.

Based on the results of the partial t-test based on the significance value, the variable Earning Per Share has a positive effect on stock prices. This can be seen from the t value of 11,034 which is greater than the t table of 2,064 and the significance value obtained is 0,000, which is smaller than 0,05. So H1 is accepted.

H2: Net Profit Margin (NPM) affects stock prices in banking and cigarette companies that are members of the LQ45 index on the Indonesia Stock Exchange (IDX) for the 2016-2019 period.

Based on the results of the partial significance test, the Nat Profit Margin variable has no effect on stock prices, seen from the t value of 0,305 which is smaller than the t table of 2,064 and the significance value obtained is 0,763 greater than 0,05. So H2 is rejected.

H3: Return on Asset (ROA) affects stock prices in banking and cigarette companies that are members of the LQ45 index on the Indonesia Stock Exchange (IDX) for the 2016-2019 period.

Based on the results of the partial significance test, the variable Return on Assets has no effect on stock prices, seen from the t value of 1,828 which is smaller than the t table of 2,064 and the significance value obtained is 0,080 which is greater than 0,05. So H3 is rejected.

Coefficient of determination

The independent variables used are EPS, NPM, and ROA while the dependent variable is the stock price. Data for the independent and dependent variables were obtained through computed calculations based on the financial statements of banking and cigarette companies for the period 2016-2019

Table 8. Determination coefficient results
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.921[a]	.847	.828	9733.857	2.065

a. Predictors: (Constant), ROA (X3), EPS (X1), NPM (X3)
b. Dependent Variable: SAHAM (Y)
Source: Output SPSS version 25.0 (Data Processed, 2020).

The results of the multiple linear regression statistical test, the adjusted R² value is 0,828. This means that the influence given by the independent variable to the dependent variable partially or simultaneously is 82,8%.

Discussion

Effect of Earning Per Share (EPS) on stock prices in banking and cigarette companies that are members of the LQ45 index on the Indonesia Stock Exchange (IDX) for the 2016-2019 period.

The Earning Per Share has a positive effect on stock prices earning per share describes the company's profitability which is directly reflected on each share. The higher the Earning Per Share, the higher the investor's interest in investing because of the large profits that will be obtained by investors and the possibility of an increase in the number of dividends.

Effect of Net Profit Margin (NPM) on stock prices in banking and cigarette companies that are members of the LQ45 index on the Indonesia Stock Exchange (IDX) 2016-2019 period.

Net profit margin consists of 2 elements, namely net profit after tax and net income or sales. Net Profit Margin has a negative and significant effect. This can be caused by the basic elements of the Net Profit Margin itself, where investors will usually pay more attention to the net sales figures or turnover of the company when deciding to invest. An increase in sales that is not followed by an increase in net income can reduce the percentage of Net Profit Margin. Net income itself is influenced by expenses and costs which continue to increase.

Effect of Return on Assets (ROA) on stock prices in banking and cigarette companies that are members of the LQ45 index on the Indonesia Stock Exchange (IDX) for the period 2016-2019.

In this study, it was found that Return on Assets does not affect the ups and downs of stock prices. This can be caused by investors not only paying attention to the ability of the internal company to generate profits but paying attention to external risks and market conditions. External risks or beyond the company's control can include inflation, tariff increases, changes in economic and political policies. The demand and supply in the capital market also influence investment decisions which can result in fluctuations in stock prices (Halim, 2015).

Conclusion

Conclusion Based on the results of the discussion, the following conclusions can be drawn:

1. Earning Per Share has a positive effect on stock prices listed in the LQ45 index. The implication is that when Earning Per Share increases, the share price will increase. With the value of tcount > ttable which is equal to 11,034 > 2,064. So, both simultaneously and partially EPS has a significant effect on stock prices.
2. Net Profit Margin does not affect stock prices listed in the LQ45 index. With the value of tcount < ttable which is equal to 0,305 < 2,064.
3. Return on Asset does not affect stock prices listed in the LQ45 index. The implication is Return on Assets does not affect stock price fluctuations. With the value of tcount < ttable which is equal to 1,828 < 2,064.

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