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The effect of fundamental factors and technical factors on shares of companies listed in Indonesia Stock Exchange: Study on IDX30 2016-2019 period

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Abstract
This study aims to analyze the influence of fundamental and technical factors on stock prices. This type of research is explanatory research with a quantitative approach to test the effect of the independent variables on the dependent variable. The dependent variable in this study is stock prices, while the independent variables are Return on Assets (ROA), Debt to Equity Ratio (DER), and Past Stock Prices. The population in this study were all companies listed in IDX 30 with documentation data collection techniques. The data used in this research is secondary data. Data analysis in this study using multiple linear regression. The results of this study provide information that 1) Return on Asset, Current Ratio, Debt to Equity Ratio, and Past Stock Prices simultaneously have an influence on stock price variables, 2) technical factors Past Stock Prices have a positive and significant effect on stock prices.

1. Introduction
One of the most important factors in a country's economic growth is investment, especially in the current era of globalization. Investment is divided into two parts, namely financial investment and real investment. In investing in the capital market, investors need to look at how a company is performing. The performance of companies that have gone public is usually reflected in the development of stock prices in the capital market. Companies with good performance will be followed by an increase in demand for their share price. Share price is the price per share that applies in the capital market. The most important factor that investors should pay attention to in investing is the company's stock price.

Every investor in investing in the capital market certainly has goals and desires that are achieved through the investment decisions taken. Investors always want a high return with a low level of risk. To be able to get high returns does not only rely on instinct in conducting stock transactions but needs to first assess the stock price. There are two approaches used in carrying out stock price analysis, namely fundamental analysis and technical analysis that help investors in the investment decision-making process.

Fundamental analysis is an analysis related to the state or condition of a company which is shown in the financial statements and is a measure of company performance. In this study, the fundamental factors used are Return On Asset (ROA), Current Ratio (CR) and Debt To Equity Ratio (DER).

While technical analysis is an analysis that provides information or an overview to investors to determine when a share purchase will be made or when it will be sold and exchanged for other shares. Technical analysis is an analysis of historical stock price data. Through historical data, it is expected to predict the direction of stock price movements in the future. This approach uses published market data such as: stock price, sales volume, composite and individual stock price index as well as technical factors (Siswoyo, 2013) [13].

There have been many studies on the factors that influence stock prices. Some of these studies include research conducted by Dwi Eva. DKK (2014) which examines the effect of fundamental factors on stock prices shows that the Debt To Equity Ratio variable has no effect on stock prices. In contrast to the results of research conducted by Suhadak (2015) [1], it shows that the fundamental indicators of DER and ROA have an effect on stock prices. Research conducted by Abidin et.al (2016) [1] which examined the effect of technical factors on stock prices gave the result that the Past Stock Price variable had an effect on stock prices.

This research will be carried out on the IDX, especially on stocks listed in the IDX30 research period from 2016-2019.

IDX30 is a stock market index on the Indonesia Stock Exchange which consists of 30 companies that have been selected after passing the selection criteria, so that stocks with high liquidity, large market capitalization will be selected and supported by good company fundamentals. IDX30 can be said to be an index that is quite sensitive to market information.

2. Research Hypothesis development
a. The greater the value of Return On Asset (ROA) of a company shows that the more efficient the company's performance is in utilizing assets to generate profits so that the company's stock price will increase. The results of research conducted by (Suhadak, 2015) [1] show that ROA has an effect on stock prices. Based on the explanation above, the researcher proposes the first hypothesis.
**H1:** Fundamental factors, Return On Asset, have a positive effect on the stock price of the company IDX30.

b. Debt to equity ratio is the ratio of debt to equity reflecting the ability of a company to fulfill all of its obligations. The higher the DER value, the lower the company's stock price. Research on DER has been conducted by (Tenriola and Akramunas, 2017) and shows the results that DER has an influence on stock prices. Based on the description above, the researcher proposes a second hypothesis.
H2: The fundamental factor Debt to Equity Ratio has a negative effect on the stock price of the company IDX30.

c. Past stock prices affect current stock prices because they follow certain and repetitive patterns that psychologically affect investors in conducting trading transactions. Research conducted by (Abidin *et.al* 2016) [1] provides results that past stock prices have an effect on stock prices. Based on the description above, the researcher proposes a third hypothesis.
H3: Past technical factors have a positive effect on the stock price of the company IDX30.
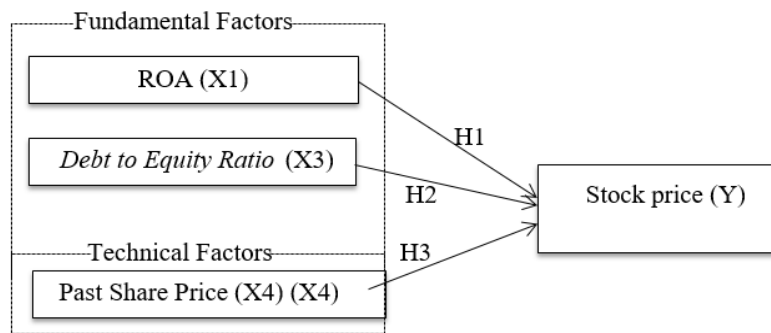
3. Research methods
The type of data used in this research is time series data. Based on the form or characteristics of the data, this study uses quantitative data. Based on data collection sources, the data used in this study are secondary data obtained from the official website www.idx.com and to obtain share price data by accessing the website www.yahoo.finance.

The population in this study were 30 stocks listed on IDX30 starting from 2016-2019. The sampling technique in this study was purposive sampling method with the criteria of 1) IDX30 companies listed on the Indonesia Stock Exchange in 2016-2019, 2) companies that published or issued financial reports for 2016-2019.

Table 1: Sample Selection Criteria

Sample Selection Criteria
Description of the number of companies
IDX30 companies listed on the IDX until the end of 2018 30
Companies included in the sample: -
Total companies in the sample 30
Number of observations: 4 years × 30 companies = 120 observations

Source: Researcher, 2020

3.1 Operational definition and Variable measurement
a. **Stock Price (Y)**
Stock price data in this study is the closing price using monthly stock price data.

b. **Return on Asset (X1)**
Return on Asset which is proxied by ROA is measured or calculated using the following formula

$$ROA = \frac{\text{Net profit after tax}}{\text{Total asset}} \times 100$$

c. **Debt to Equity Ratio (X2)**

$$DER = \frac{\text{Total Liabilities}}{\text{Shareholders'Equity}} \times 100$$

d. **Past Share Prices (X3)**
Stock price data at the closing (Closing Price) of the previous year in rupiah scale using a moving average.

3.2 Data analysis technique
a. **Statistical Descriptive Test**
The objective is to test and explain the characteristics of the observed sample.

b. **Classic assumption test**
Classical Assumption Testing is carried out to test whether the regression model really shows a significant and representative relationship. The classical assumption test consists of four tests, namely: data normality test, autocorrelation, multicollinearity and heteroscedasticity.

c. Multiple regression analysis

Multiple linear regression analysis differs from simple analysis, especially in the number of independent variables formulated in statistical models (Chandrarin, 2017: 139) [7]. The following is the regression equation used in this study.

$$Y = \beta 1(X1) + \beta 2(X2) + \beta 3(X3) +$$

Information
Y　　=　　Price Stock
A　　=　　Constant

$\beta 1$-$\beta 3$　=　　Coefficient, Regression
X1　　=　　Return On Asset
X2　　=　　Debt to Equity Ratio
X3　　=　　Past Share Price

4. Research results
a. Descriptive statistics

The following will be presented a statistical analysis table describing the minimum, maximum, mean and standard deviation values.

Table 2: Statistical Descriptive Test Results

Variable	Mean	Standard Deviation	Maximum	Minimum
ROA	8.2408	8.43126	46.66	-.70
Debt to Equity Ratio	47.4135	134.09806	939.00	.00
Past Share Prices	2003.1042	6601.65553	58208.00	80.50

b. Classic assumption test
1. Normality

The next test is testing the normality of whether the data is normally distributed or not. The following is a picture for normality testing.
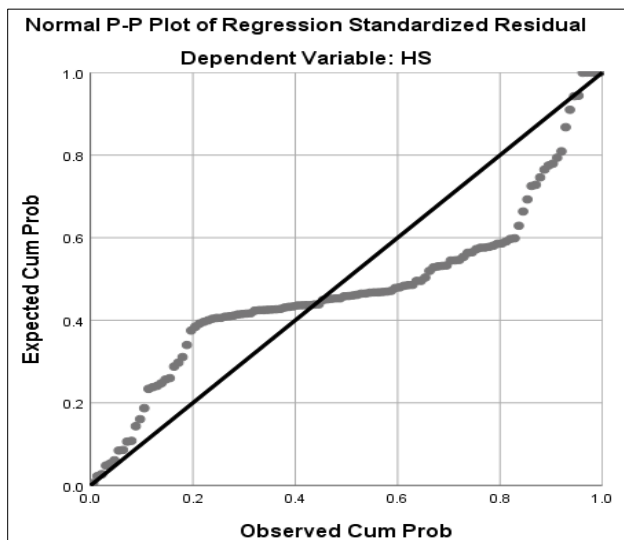
Source: Data processed, 2020

Fig 1: Normality Test Results

The picture above shows that the data is declared to meet the normality test because the points are scattered on the diagonal source and follow the direction of the diagonal line.

2. Autocorrelation Test

Based on the results of statistical testing, it is known that the Durbin Watson value has a value of 1,290 which means there is no autocorrelation.

3. Multicollinearity Test

The following table will present the results of multicollinearity testing.

**Table 3:** Multicollinearity Classical Assumption Test Results

Variable	Multicollinearity VIF	Autocorrelation (Durbin-Watson)
Profitability	1,040	1,290
Debt to Equity Ratio	1,186	
Past share prices	1,025	

Source: Data processed, 2020

The table above provides information that in the study there was no correlation.

4. Heteroscedacticity Test

The following is a graphic image of the heterocedacticity test plot.
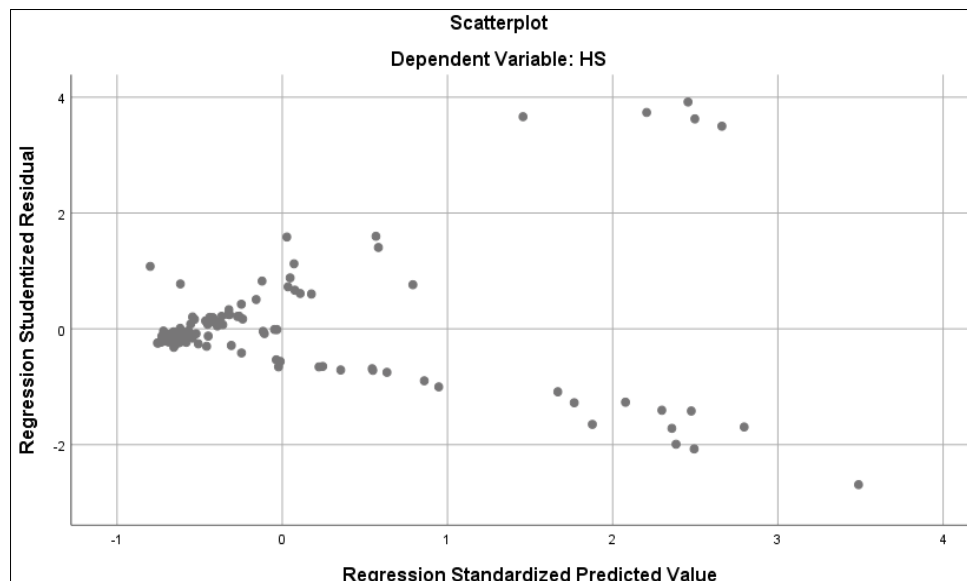
Source: processed data, 2020

Fig 2: Heterocedasticity Classical Assumption Test Results

Based on the test results image above, it can be seen that the existing points form a distribution pattern above and below the number 0 on the Y axis, it can be concluded that there is no heteroscedacticity.

5. Accuracy / Significance Test, Model (Test F)

Table 4: Result of Model Accuracy Test (Test F)

F	Sig
8.973	0.000

Source: Processed data, 2020

The test results table above shows an F value of 8.973 and a p value of 0.000, which means that the model in this study is fit.

6. Determination Coefficient Test (R2 Test)

The following table will present the results of the determination coefficient test (R2 test).

Table 5: Result of Determination Coefficient Test (R2)

R	R Square
0.238	0.211

Source: Data processed, 2020

The test results of the coefficient of determination (R2) provide information that the Adjusted R Square value is 0.211, which means that 21.1 dependent variable share prices are influenced by Profitability, Debt to Equity Ratio and Past stock prices, while the remaining 78.9% is predicted to be influenced by variables, others who are not included in this research model.

7. Variable Significance Test (t test)

The t test is conducted to test how the effect of each independent variable on the dependent variable. The following t test table will be presented.

Table 6: Results of Significance Test of Multiple Linear Regression Variables

Variable	Regression Coefficient	Standard Error	t	p
ROA	10,244	142,373	0.072	0.943
Debt to equity Ratio	4,645	9,559	0.486	0.628
Past Share Prices	0.319	0.054	5,944	0.000

Source: Data processed, 2020

Based on the table of significance test results above, the regression equation model in this study is as follows.

$$Y = 3392,672 + 10,244X1 + 4,645X2 + 0.319X3 + 1952,783$$

4. Discussion

a. The ROA regression coefficient was 10,244 and the t value was 0.072 (p = 0.943). These results indicate that the fundamental factors proxied by Return On Asset (ROA) have no effect on the stock price of the company IDX30 which is listed on the Indonesia Stock Exchange. The first hypothesis which states that Return on Assets has an effect on stock prices is not proven.

The implication of Return On Asset as an indicator of the company's effectiveness in utilizing assets owned by the company to obtain profit is less of a concern for investors in making stock investment decisions.

b. Debt to Equity Ratio regression coefficient (DER) has value 4,645 with the value of t 0.486 (p = 0.628). These results indicate that the fundamental factors are proxied by the Debt to Equity Ratio (DER) has no effect on the stock price of the company IDX30 which is listed on the Indonesia Stock Exchange. The second hypothesis which states that the Debt to Equity Ratio has an effect on stock prices is not proven.

This is because some investors consider the Debt to Equity Ratio to be the responsibility of third parties or commonly referred to as creditors who provide loans to companies or issuers. The amount of the debt value of a company shows that the company's poor performance will cause a high risk to be borne by investors.

c. Past Stock Price Regression Coefficients have a value 0.319 with a t value of 5,944 (p = 0.000). These results indicate that the technical factors that are proxied by the Past Stock Price have an effect on the stock price of the company IDX30 which is listed on the Indonesia Stock Exchange. The third hypothesis which states that past stock prices have an effect on stock prices is proven. The results of this research are related to Erina's statement in Abdilah (2011: 4) which states that past stock prices will affect current stock prices because they follow certain and recurring trend patterns so that they psychologically affect investors in making trade transactions or in the process of making investment decisions.

5. Conclusions, limitations and suggestions

This research examines or analyzes how the influence of fundamental factors and technical factors on the stock price of the company IDX30 which is listed on the Indonesian Stock Exchange. to equity Ratio) has no effect on stock prices, this is because investors pay more attention or consider past stock prices as an accurate benchmark in the process of making investment decisions in the stock market. Limitations in this study include 1) the research period was only 4 years from 2016-2019 with a number of observations of 120. 2) The variables used in this study were limited. The next researcher is expected to increase the number of samples, change companies and research variables to get better results.

6. References

1. Abidin S, Suhadak dan Hidayat Raden R. Pengaruh faktor-faktor Teknikal Terhadap Harga Saham (Studi Pada Harga Saham IDX30 di Bursa Efek Indonesia Periode Tahun 2012-2015). Jurnal Administrasi Bisnis (JAB). 2016; 37(1):21-27.
2. Adwiyah. Pengaruh Variabel-Variabel Fundamental dan Teknikal terhadap Harga Saham Industri Perbankan di BEI,hal, 2014, 27.
3. Alam, Satria. Pengaruh rasio keuangan (likuiditas,solvabilitas,aktivitas, profitabilitas dan pasar) terhadap harga saham industri manufaktur di bursa efek Indonesia. Skripsi; Sumatera Utara: Program Sarjana Ekonomi Universitas Sumatera Utara, 2007.
4. Astutik ED, Surachman S, Djazuli A. The effect of fundamental and technical variabels on stock price

(Study on Manufacturing Companies Listed in Indonesia Stock Exchange). Journal of Economics, Business, & Accountancy Ventura. 2015; 17(3):345-352.

5. Artha Danika R, Achsani Noer A, Dan Sasongko H. Analisis Fundamental, Teknikal Dan Makroekonomi Harga Saham Sektor Pertanian. Jurnal Manajemen Dan Kewirausahaan. 2014; 16(2):175-184.

6. Budi, Harsono. Efektif bermain saham. Cetakan Pertama, PT Elex Media Komputindo. Kompas Gramedia,Jakarta, 2013.

7. Chandrarin G. Metode Riset Akuntansi: Pendekatan kuantitatif. Jakarta. Salemba Empat, 2017.

8. Egam GE, Ilat V, Pangerapan S. Pengaruh Return on Asset (ROA), Return on Equity (ROE), Net Profit Margin (NPM), dan Earning Per Share (EPS) terhadap Harga Saham Perusahaan yang Tergabung dalam Indeks LQ45 di Bursa Efek Indonesia Periode Tahun 2013-2015. Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi. 2017; *5*(1).

9. Husnan, suad. Dasar-dasar teori portofolio dan analisis sekuritas. Edisi 5. Yogyakarta.Upp.STIM YKPN, 2015.

10. Kodrat DS, Indonanjaya K. Manajemen Investasi Pendekatan Teknikal dan Fundamental *untuk* Analisis Saham. Yogyakarta (ID): Graha Ilmu, 2010.

11. Samsuar T, Akramunnas A. Pengaruh Faktor Fundamental dan Teknikal terhadap Harga Saham Industri Perhotelan yang Terdaftar di Bursa Efek Indonesia. Al-Mashrafiyah: Jurnal Ekonomi, Keuangan, dan Perbankan Syariah. 2017; 1(1).

12. Sappar B. Analisis Pengaruh Faktor-Faktor Fundamental dan Teknikal terhadap Nilai Perusahaan (Studi pada Perusahaan Consumer Goods Industry di Bursa Efek Indonesia Periode 2011-2013). Jurnal Administrasi Bisnis. 2015; 24(1).

13. Sony Siswoyo. Analisis fundamental dan teknikal untuk profit lebih optomal. Gramedia pustaka utama. Jakarta, 2013.

14. Suryawan I, Wirajaya IGA. Pengaruh Current Ratio, Debt To Equity Ratio dan Return On Assets pada Harga Saham. E-Jurnal Akuntansi Universitas Udayana. 2017; 21(2):1317-1345.

15. Syamsurijal Tan, Agus Syarif, dan Delfira Ariza. Analisis Faktor-Faktor yang Mempengaruhi Harga Saham Pada Industri Trasnportation Services Di Bursa Efek Indonesia Tahun 2009-2012. 2014; 2(2):116-129.

16. Wulandari AI, Badjra IB. Pengaruh Profitabilitas Terhadap Harga Saham Pada Perusahaan Lq-45 Di Bursa Efek Indonesia (Bei). E-Jurnal Manajemen Universitas Udayana. (2019; 8(9):5722-5740.