INVESTIGATE THE FACTORS THAT AFFECT CHAGES IN STOCK PRICES Empirical study on listed companies in Indonesia stock exchange multi industrial Companies 2015- 2019

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Abstract

Changes in stock price and developments in the currents ratio (CR), total asset turnover (TATO), and net profit margin (NPM) in various industrial companies listed on the Indonesia stock exchange have fluctuated increases and depresses. Serval theories and studies say that changes in stock prices are influenced by the current ratio (CR), total assets turnover (TATO) variables and net profit margin (NPM). After the author Analysis and find that there are discrepancies and different form several research results and there are facts that contradict the existing theory. Therefore the authors make study that aims to analysis the effect of the currents ratio (CR), total asset turnover (TATO) and net profit margin (NPM) on changes in stock prices in various industrial companies listed on the Indonesian stock exchanges (IDX) period, 2015-2019. The research method used in this study is to use the historical methods the sampling methods used purposive sampling, so that there were 29 companies sampled in this study. The analytical method used is the panel data regression methods. Statistical analysis used t test for partial test which first tested the classical assumption test which consisted of normality, multicollinearity, heteroscedasticity and autocorrelation test. The results of the t test carried out are the currents ratio (CR) , total asset turnover (TATO) and net profit margin (NPM).

Keyword: *Current Ratio, Total Asset turnover, Net profit margin, stock price change.*

INTRODUCTION

Predicting and managing the risk of rising and falling stock prices is an important issue for portfolio managers, institutions, as well as investors in financial markets. [1] emphasize the importance of understanding risk in order to avoid things that are not in line with expectations. Because every decision in investment management is a matter of balancing risk and reward, investors must be able to minimize risk by identifying the relevant factors behind the price formation process [2]. In general, the capital market is a place where parties who need funds (companies) meet and those who have funds to invest (investors) both in the short and long term [3]. Thus, to avoid unexpected losses, investors must understand the determinants of stock price movements or changes. An investor is required

to have a lot of information related to changes in stock prices, so that having this information can be used as a reference in making decisions regarding shares. According to [4] One of the benchmarks in assessing a company is to look at changes in its share price. Changes in stock prices are largely determined by the supply and demand for the shares themselves [2, 5]. The more people who buy shares, the changes in stock prices tend to move up and conversely the more people who sell their shares, the changes in stock prices tend to move down. In addition, [3] states that there are several financial ratios that are often used in assessing a company's financial performance, namely the Current ratio (CR), Total Asset Turnover (TATO), Net Profit Margin (NPM) [6]. These factors are important for an investor to understand any changes in stock prices considering that the development of changes in stock prices often fluctuates. Figure 1, explains that changes in stock prices often occur every year, this is as recorded on the Indonesia Stock Exchange (IDX).

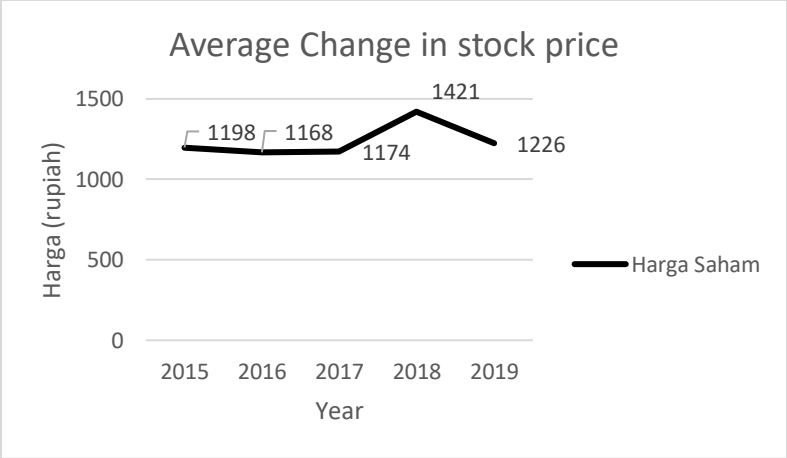


Figure 1. Stock price fluctuations
Source: Indonesia Stock Exchange 2021

Figure 1 provides an explanation that stock prices are not always stable, but can change according to the conditions and developments of the company. Research by Alpi & Nasution, (2019); Famiah & Handayani, (2018) mentions that studies on stock prices have been widely studied by academics by developing models in predicting stock prices, but very few researchers have studied the factors that can affect how stock prices change (Kurniawan, 2021). In addition, there are studies which state that some movements in stock price changes are caused by unexpected news that is impossible to predict. Thus, it is important for an investor to understand the factors that can provide information on changes in stock prices. Previous research stated that the current ratio could not explain changes in stock prices (Gultom et al., 2020; Kahfi et al., 2018), the same study was also mentioned by Paul & Mitra, (2018) that the total asset turnover that is often used by investors as an indicator assess a company does not have a significant influence on changes in stock prices. The opposite is different from research (Deimyen, 2021; Kurniawan, 2021; Yahya & Hidayat, 2020) that total assets, current ratio and net profit margin affect stock price changes. Given that there are inconsistent findings in the research results, this study is proposed to review the factors that influence stock price changes in different contexts both in terms of object and sample size. The purpose of this study is to investigate the factors that can affect changes in stock prices listed on the Indonesian stock exchange so that it can provide information for investors in making decisions.

THEORY STUDY AND HYPOTHESES DEVELOPMENT

Current Ratio

The current ratio or current ratio (CR), is a useful ratio to measure the company's ability to pay obligations, both short-term or debts that are due immediately when they are billed as a whole (Lubis et al., 2018). One of the analytical tools in assessing the company's shares is through the company's fundamental analysis through the financial ratios presented. Amanda, (2019) states that the current ratio is calculated by dividing current assets by current liabilities. This ratio shows how much cash a company has, and all assets that can be converted into cash in a year, compared to its total liabilities that will mature in the short term. Restianti & Agustina, (2018) stated that the higher current ratio of current assets compared to current liabilities refers to the company's better ability to pay off its short-term debt. Financial ratios as a comparison between one component with other components in one financial report or between components that exist between financial statements. Apan & slamoğlu's research, (2018) states that the use of financial ratios can be used as material to analyze changes in company stock prices by comparing the financial ratios of one company with similar companies.

Total Asset Turnover (TATO)

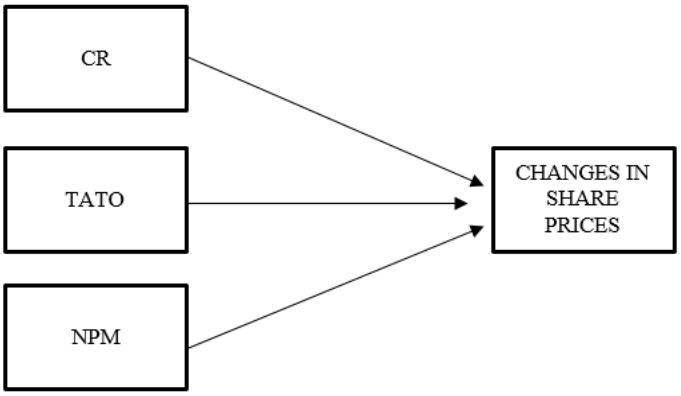
Total Asset Turnover (TATO) is one of the activity ratios to measure the total asset turnover rate to sales (Lubis et al., 2018). Firman & Salvia, (2021) Total Asset Turnover is also known as total asset turnover. This ratio can be used to see the extent to which the overall turnover of assets owned by the company. According to Setyaningsih & Yuliana, (2020) one of the goals of total asset turnover is to measure the turnover of funds invested in the working capital used. Nurlaela et al., (2019) stated that total asset turnover can be used as a measure of how the overall assets owned by the company are operationalized to support the company's sales. Previous research conducted by Amanda, (2019); Patin et al., (2020) show that total asset turnover has an influence in predicting changes in company prices so that it can be used as a measure of investment decision making.

Net Profit Margin

Net profit margin is the change in annual financial statements [7]. According to [8] net profit margin is the percentage increase in profit earned by the company. Profit will increase or decrease every year. This increase or decrease is called profit growth. Profit growth is the change generated by the company from period to period. This can be used as a basis by investors for decision making [9]. Profit growth is related to how the stability of the increase in retained earnings in the future. The calculation to determine profit growth is calculated by subtracting the current period's profit with the previous period's profit and then dividing by the previous period's profit. [10] stated that the net profit margin can be used by investors or stakeholders in predicting changes in stock prices. This is because

changes in the company's financial statements are important information for investors before making their investment.

conceptual framework



Sumber: (Bunea et al., 2019; Nugraha & Susyana, 2021; Shahnia & Endri, 2020)

Hypothesis Development

The relationship between current ratio and stock price changes

According to Amanda, (2019) the current ratio shows the company's ability to meet its obligations by using current assets that are expected to be converted. If the company is able to pay off debt on time or when it is due, it means that the company's financial condition is good and is experiencing a profit so that investors can receive returns from the company so that it can influence to invest their capital.

H_1. There is a current ratio to changes in stock prices

The relationship between tattoos and stock price changes

TATO is a ratio to determine the company's efficiency level in using all assets to generate sales (Restianti & Agustina, 2018). A high TATO indicates that the company's management can maximize its assets in order to earn a profit. Thus, information about TATO can attract investors to invest and be able to increase stock prices.

H_2. There is an influence between Tattoos on changes in stock prices

The relationship between NPM and stock price changes

Herawati & Putra, (2018) stated that NPM is a ratio used to measure operating profit. The relationship between net profit after tax minus sales shows management's ability to manage the company

H_3. There is an influence between NPM on changes in stock prices

RESEARCH METHODS

The object of this research contains the points of concern attached to the research subject. This point of concern can be assigned a value and the value will vary (different) from one individual to another. In this study, the author has an object of research by focusing on variables consisting of the current ratio, total asset turnover, net profit margin and

changes in company stock prices in various industries listed on the Indonesia Stock Exchange for the 2015-2019 period. In this study the author uses the historical method. The data used in this study is secondary data obtained from the official website of the Indonesia Stock Exchange (IDX) for the 2015-2019 period. The population in this study are various industrial companies listed on the Indonesia Stock Exchange during the 2015-2019 period with an updated population since January 18, 2020, around 51 companies. With the purposive sampling method, the samples in this study were companies in various industries that had financial information or reports available during the 2015-2019 period. So the number of samples obtained in this study amounted to 29 companies. Data analysis was carried out by means of descriptive statistics, classical assumption test consisting of normality test, multicollinearity test, heteroscedasticity test, autocorrelation test and multiple linear regression test consisting of hypothesis testing and coefficient of determination test.

RESULTS AND DISCUSSION

In the 2015 – 2019 period, stock prices experienced fluctuating increases and decreases. The peak of the increase in stock prices occurred in 2018 and decreased in 2019. Meanwhile, the current ratio (CR) variable in 2015-2016, 2017-2018 and 2018-2019 contradicted each other with changes in stock prices. The Total Assets Turnover (TATO) variable during the 2015 – 2019 period experienced fluctuations, the 2015 to 2018 period, the Total Assets Turnover value and stock prices in parallel increased. However, in 2018 - 2019 the Total Assets Turnover value increased in contrast to the declining share price changes. In 2015 – 2016 Net Profit Margin (NPM) increased in contrast to the decline in share price changes, while in 2018 – 2019 the NPM value and share price simultaneously decreased

Table 1

List of sample companies

Information	Amount
Companies listed on the IDX	51 companies
Companies that do not meet the criteria	22 companies
Number of companies used in the study	29 companies
Amount of the research data	145 data

Based on the table above, it can be seen that the number of various industrial companies listed on the IDX is 51 companies, however according to the criteria there are only 29 companies as samples

Table 2

Descriptive Statistics Test Results

	N	Minimum	Miximum	Mean	SD
Hargasaham-y	145	1.70	4.03	2.7310	.56585
CR-X1	145	.00	2.89	2.0576	.55605
TATO-X2	140	1.11	2.77	1.8971	.27628
NPM-X3	81	.00	1.30	.6407	.38865
Valid N (Listwise)	76				

Based on the descriptive statistical table, it can be seen:
a. Variable Stock price changesThe average value (mean) of stock price changes is 2.7310 and the standard deviation value is 0.56585. The comparison of the average (mean) changes in stock prices is greater than the standard deviation which indicates that the company value data has been well distributed. The lowest value in this study was 1.70 and the highest value of stock price changes in the study was 4.03.
b. Variable Current Ratio
The average value (mean) of the current ratio is 2.0576 and the standard deviation value is 0.55605 or the comparison of the average (mean) current ratio is greater than the standard deviation which indicates that the company value data is well distributed. The lowest (minimum) current ratio in this study was 0.00 and the highest (maximum) current ratio in this study was 2.89.
c. Variable Total Asset Trunover
The average value (mean) of total asset turnover is 1.8971 and the standard deviation is 0.27628. The comparison of the average (mean) of total asset turnover is greater than the standard deviation which shows that the company's data has been well distributed. The lowest (minimum) value of total asset turnover in this study was 1.11 or and the highest (maximum) value of total asset turnover in this study was 2.77.
d. Variable Net Profit Margin
The average (mean) net profit margin is 0.6407 and the standard deviation is 0.38865. Comparison of the average (mean) net profit margin is greater than the standard deviation which shows the company's data has been well distributed. The lowest (minimum) net profit margin in this study was 0.00 and the highest (maximum) debt to equity ratio in this study was 1.30.

Normality test

The normality test is carried out in testing whether a regression model, an independent variable (independent) and a dependent variable (dependent) or both have a normal distribution or not [11].

Table 3

Kolmogorov- Smirnov Normality test results

		Unstandardized resuidul
N		29
Normal parameter	mean	.0000000
	Std. Deviation	.49421731
Most extreme difference	Absolute	.084
	Positive	0.082
	Negative	-084
Kolmogorov simirnov Z		.734
Asymp.sig. (2- tailed)		.654

Based on the table with a significance value of 0.654, it can be concluded that the data has been normally distributed as indicated by significance valye of 5% or 0.05. Thus this results in a normally distributed data results

Multicollinearity Test

The multicollinearity test aims to determine whether the regression model has a correlation between the independent (independent) variables [11].

Table 4

Multicollinearity test results

Model	Unstandardized Coefficients		standardized Coefficients			Collinearity statistics	
	B	Std.Error	Beta	T	Sig.	Tolerance	VIF
Constant	2.539	.701		3.622	.001		
CR-X1	.434	.088	.163	2.821	.003	.927	1.078
Tota-X2	.301	.268	.039	3.377	.018	.976	1.024
NPM-X3	.575	.147	.408	3.924	.000	.981	1.019

The results of tolerance value on the variable currents ratio (SR), Total asset turnover TATO) and Net Profit margin (NPM) data respectively produce a tolerance value > 10.00 is which is 0.927: 0.976: and 0.981. the value of variance inflation factor (VIF) <10.00 is 1.078: 1.024 and 1.019. it means that the data of independents variable has no multicollinearity symptoms

Autocorrelation Test

The autocorrelation test is to test whether the linear regression model has a correlation between the confounding error in period t and the error in period t1 (previous) according to [11].

Table 5

Autocorrelation test Results using Durbin Watson

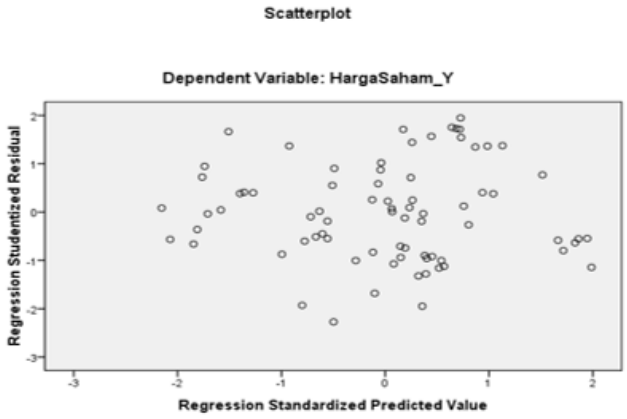
Model	R	R square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.815	.664	.657	3.274	2.143

Results The output in the table, Durbin Watson at = 5% or 0.05 ; n = 29; k = 3 is dL = 1.198 and dU = 1.650. The results of data processing showed dU (1.650) > Durbin Watson (2.143) < 4-dU (2.350). In other words, the Durbin Watson value is 2.143 and the value is between dU and (4 – dU) or 2.143 is greater than 1.650 and 2.143 is smaller than 2.350. Therefore, it can be concluded that in the linear regression model it can be said that there is no autocorrelation symptom or there is no correlation between the confounding errors.

Heteroscedasticity Test

Heteroscedasticity test is part of the classical assumption test in regression analysis which aims to test whether in the regression model there is an inequality of variation from one residual value to another observation (Ghozali, Imam, 2011).

Figure 1. Results of the "Scatterplot" Heteroscedasticity Test



Source: Data processed by the author, 2020.

From the output results in Figure 1, the scatterplot can be seen that the points spread randomly above and below the number 0 on the Y axis. The scattered points do not form a wavy pattern such as widening and then narrowing. So it can be concluded that in this study there were no symptoms of heteroscedasticity or there was no heteroscedasticity.

Table 6

Simultaneous hypothesis test

Model	Sum of Square	Df	Mean square	F	Sig.
regression	2058.169	3	1029.084	95.997	.000
residual	1039.831	25	10.720		
total	3098.000	28			

Based on the ANOVA test the calculated F value is 95.997 with a significant value of 0.000 from the calculating of F table namely the level of = 0.05, df1=k-1=4-1=3 and df2= n-=29-4=25 the f table is 2.99 so when comared , the calculated F>F table is 95.997> 2.99 so it can be concluded that the current ratio, total asset turnover and net profit margin affect change in stock prices

Hypothesis Test t

The t-test aims to determine whether or not there is a partial (own) effect given by the independent (free) variable on the dependent (bound) variable. According to (Ghozali, Imam, 2016) revealed that the t statistical test shows how far the influence of one independent variable (independent) on the dependent variable (dependent).

Tabel 7. Hasil Uji t

Table 7

Hasil Uji t

Model	Unstandardized Coefficients		standardized Coefficients			Collinearity statistics	
	B	Std.Error	Beta	T	Sig.	Tolerance	VIF
Constant	2.539	.701		3.622	.001		
CR-X1	.434	.088	.163	2.821	.003	.927	1.078
Tota-X2	.301	.268	.039	3.377	.018	.976	1.024
NPM-X3	.575	.147	.408	3.924	.000	.981	1.019

Test result

In the first hypothesis (H1) which states that the current ratio has a significant effect on changes in stock prices. The results of the observations from the processing of the t test stated that the first hypothesis (H1) was accepted. This is obtained from the magnitude of the significance level t (sig.t) of 0.003 where this significance is smaller than the significance level used 0.05 or 5%. In the second hypothesis (H2) which states that total asset turnover has a significant effect on changes in stock prices. The results of observations from the processing of the t test stated that the second hypothesis (H2) was accepted. This is obtained from the magnitude of the significance level t (sig.t) of 0.018 where this significance is smaller than the significance level used 0.05 or 5%. In the fourth hypothesis (H4) which states that the net profit margin has a significant effect on changes in stock prices. The observation results from the processing of the t test stated that the

second hypothesis (H3) was accepted. This is obtained from the magnitude of the significance level t (sig.t) of 0.000 where this significance is much smaller than the significance level used 0.05 or 5%.

Determination test

The R Square test is used to see how much influence (contribution) the independent variable free has on dependent variable (bound). According to Ghozali states that the coefficient of determination test can be used to measure the ability of the independent variable on dependent variable. The calculation results of this R2 determination test using SPSS can be seen in table below

Table 8

Determination Test results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.815	.664	.657	3.274

From the results of the table above the coefficients of determination is 0.664 which means that this figure show that variables of net profit margin(NPM) current Ratio (CR) total asset turnover (TATO) simultaneously (together) affect the variable shear price changes of 66.4% while the remaining 33.6% is influenced by other variables outside of this study.

DISCUSSION

Based on the results of partial hypothesis testing or the t-test that has been carried out, it can be concluded that H0 is rejected and H1 is accepted, meaning that the current ratio can affect changes in stock prices. Based on the results of partial hypothesis testing or the t-test that has been carried out, it can be concluded that H0 is rejected and H2 is accepted, meaning that Total Asset Turnover can affect changes in stock prices. Based on the results of partial hypothesis testing or the t-test that has been carried out, it can be concluded that H0 is rejected and H3 is accepted, meaning that Net Profit Margin can affect changes in stock prices. Based on the results of simultaneous hypothesis testing or the f-test that has been carried out, it can be concluded that the variables Current Ratio (CR), Total Asset Turnover (TATO) and Net Profit Margin (NPM) simultaneously affect changes in stock prices.

CONCLUSION

The results of this study reveal that companies in the Multi-Industrial Sector listed on the Indonesia Stock Exchange should pay attention to financial health conditions such as Current Ratio, Total Asset Turnover and Net Profit Margin to always be in good condition so that it can affect stock prices.

SUGGESTION

Based on the results of the study, Current Ratio, Total Asset Turnover and Net Profit Margin can be used as references and considerations for companies in assessing company performance so that they can be used to make decisions within the company's internal scope. Issuers and prospective issuers should publish financial statements as an integral part of financial statements, so that the information obtained by users of financial statements is wider. Simultaneously the information in the Current Ratio, Total Asset Turnover and Net Profit Margin have a significant effect on stock prices. Therefore, it is expected for investors to assess the company not only based on the income statement which provides information about the company's profit. However, investors should also assess how the company manages the company's cash funds through cash flow statements. Both of these information are expected to be used as a tool in making investment decisions.

REFERENCE

1. Kurniawan, A., *Analysis of the effect of return on asset, debt to equity ratio, and total asset turnover on share return.* Journal of Industrial Engineering & Management Research, 2021. **2**(1): p. 64-72.
2. Sagala, D.A.P.H. *Effect of Current Ratio, Debt To Equity Ratio, Net Profit Margin, and Total Asset Turnover on Earning Per Share*.
3. Juwita, R.W. and Y.N. Malau, *The Effect of Current Ratio, Total Asset Turnover, Net Profit Margin on Profit Changes in Service and Investment Trading Companies Listed on the Indonesia Stock Exchange for the 2014-2017 Period.* JIMEK: Scientific Journal of Economics Students, 2020. **3**(1): p. 12-26.DOI: https://doi.org/10.30737/jimek.v3i1.761.
4. Hasby, Y.N.S.S.A., M.Y. Anshori, and N.S. Primasari. *The impact of current ratio, receivable turnover and total assets turnover on ROA at telecommunication sub-sector companies registered in BEI year 2009-2017*. 2017.
5. Supardi, H., H.S.H. Suratno, and S. Suyanto, *Pengaruh Current Ratio, Debt to Asset Ratio, Total Asset Turnover dan Inflasi Terhadap Return on Asset.* JIAFE (Scientific Journal of Accounting, Faculty of Economics), 2018. **2**(2): p. 16-27.DOI: https://doi.org/10.34204/jiafe.v2i2.541.
6. Utami, P. and W. Welas, *Effect of current ratio, return on assets, total asset turnover and debt to equity ratio on firm value (Empirical Study on Property and Real Estate Sub-Sector Manufacturing Companies Listed on the Indonesia Stock Exchange 2015-2017 Period).* Journal of Accounting and Finance, 2019. **8**(1): p. 57-76.
7. Nugraha, N.M. and F.I. Susyana, *Effect of Net Profit Margin, Return On Assets, and Current Ratio on Profit Growth.* Jurnal Ekonomi Manajemen Perbankan (JEMPER), 2021. **3**(1): p. 56-69.

8. Herawati, A. and A.S. Putra, *The influence of fundamental analysis on stock prices: The case of food and beverage industries.* European Research Studies Journal, 2018. **21**(3): p. 316-326.DOI: https://doi.org/10.35808/ersj/1063.
9. Purba, J.H.V. and D. Bimantara. *The Influence of Asset Management on Financial Performance, with Panel Data Analysis*. 2009. Atlantis Press.
10. Susanto, H., et al., *The impacts of earnings volatility, net income and comprehensive income on share Price: Evidence from Indonesia Stock Exchange.* Accounting, 2021. **7**(5): p. 1009-1016.DOI: https://doi.org/10.5267/j.ac.2021.3.008.
11. Indarto, S.L. and I. Ghozali, *Fraud diamond: Detection analysis on the fraudulent financial reporting.* Risk governance & control: financial markets & institutions, 2016. **6**(4): p. 116-123.DOI: https://doi.org/10.22495/rcgv6i4c1art1.