

Determinant of profitability: Evidence from trading, service and investment companies in Indonesia

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CHRONICLE

Article history:

Received March 10 2020

Received in revised format March 15 2020

Accepted May 30 2020

Available online

June 6 2020

Keywords:

Profitability

Return on Assets

Current Ratio

Debt to Assets Ratio

Net Profit Margin

Return on Equity

Total Asset Turnover

ABSTRACT

This study aims to determine and analyze the effect of Current Ratio (CR), Debt to Assets Ratio (DAR), Net Profit Margin (NPM), Return On Equity (ROE) and Total Asset Turnover (TATO) on Profitability (ROA) in the trading, service and investment sub-sector companies on the Indonesia Stock Exchange (IDX) over the period 2014- 2018. The data used is panel data with 6 companies for 5 years obtained from the Annual Report published on the IDX website. The results of this study indicate that CR and DAR partially negatively affected ROA, and ROE had a positive effect on ROA, while NPM and TATO had no effect on ROA. Overall testing shows that all financial factors had a significant effect and contribute to explain changes in profitability of 89.6 percent.

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1. Introduction

In Indonesia, there are currently a growing number of companies that are growing rapidly, both engaged in industry, services and trade. Every company from large scale to small scale has the same goal that is looking for profit. Good company conditions have the power for a company to survive and develop for the achievement of company goals. Companies in running their business must be able to run the company's performance well in order to survive in competitive competition in the current era. Information related to the achievement of financial achievements of the previous period can be used as a reference to predict the financial position of the coming period. The company is obliged to maximize the welfare of the owner. Companies compete with each other to survive and become the best. One factor that strongly supports the course of the company's operational activities is if the availability of initial funds as venture capital is to realize the goal of getting maximum profit. Therefore, investors always increase capital in companies that have an impact on increasing corporate profits and the value of their shares (Endri, 2019). Trade, Services and Investment are important sectors listed on the Indonesia Stock Exchange (IDX) and they are classified as actively influencing stock price index movements. Companies are also facing challenges to improve profitability performance. Profitability is a ratio to calculate the overall management proposed by the size of the level of profit obtained in combination with sales and investment. Profitability is often accepted as a reference in evaluating company performance.

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Through profitability, investors will determine their choice to invest in a company since the higher profitability will reflect the better status of the company, so the company becomes healthier or not in accordance with the company (Sari & Endri, 2019).

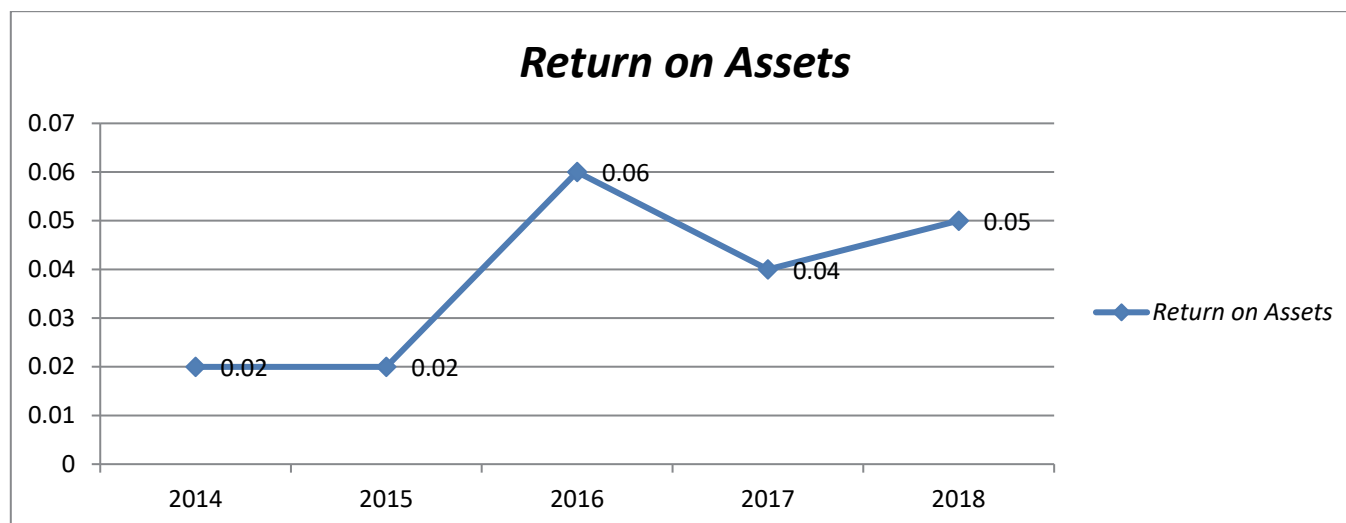


Fig. 1. Return on Assets (ROA) in the Trade, Services and Investment Sub Sector from 2014-2018

Sources: www.idx.co.id, 2020

In the graph above it can be seen that the growth of the company's profitability has increased from 0.02 in 2014-2015 to 0.05 in 2018. Some of the trading, service and investment companies that experienced an increase include PT. Kresna Graha Investama Tbk, which showed a value of ROA of 0.08 in 2014 and rose to 0.20 in 2018. PT. ABM Investama Tbk showed a value of ROA -0.10 in 2014 and rose to 0.07 in 2018. With increased profitability, it showed that trading, service and investment companies from 2014-2018 showed that the company was efficient in managing its assets to generate profits in 2014- 2018. Moreover, with the increase in the value of profitability which is hereby calculated using ROA we may see a better performance of the company.

2. Literature Review

Profitability ratios are ratios that show a company's ability to generate profits, including gross profit margin, basic earning power, operating profit margin, net profit margin, return on equity, return on assets, net income (loss) growth ratio and net sales growth ratio (Batchimeg, 2017). The relationship between profitability and returns is not clearly stated. There is research that shows a positive relationship between ROE and annual returns in many emerging markets, more specifically returns justice (Al-Qudah, 2016). Current ratio (CR) is the most common measure used to determine the ability of a company to meet its short-term obligations. CR can show the extent to which current assets are able to pay obligations or current debt. Liquidity variable was used as control variable in order to make its effect on profitability neutral (Endri et al., 2020). CR was used as liquidity criterion (Omesa et al., 2013). Debt to Assets Ratio (DAR) is a ratio related to outstanding debt to a total asset that is used as a measure of corporate financial leverage (Shahnia & Endri, 2020). Return on Equity is the ratio of net income after taxes to common equity measures the return earned on the common stockholder's investment (Endri et al., 2019). Total Asset Turnover is the ratio used to measure the effectiveness of the total assets of a company in terms of sales, or in other words to measure how many sales can be generated from each rupiah of funds embedded in total assets (Haryanto et al., 2018).

Research that discusses the influence of financial ratios on profitability has been widely studied by several people, including research conducted by Irman et al., (2020) examined the effect of financial performance on ROA in Automotive companies and its components concluded that CR and total assets have a positive effect on ROA, on the contrary DER has no effect. Study of Kridasusila and Rachmawati (2016) examined automotive companies and component products for the period 2010-2013 results that CR has a significant effect on ROA. Research conducted by Supardi and Suyanto (2016), which examined the effect of CR, DAR and TATO on ROA results that CR had no effect on ROA, DAR and TATO effect on ROA. Study of Utami (2017), which examined the manufacturing companies in the consumer goods industry sector in the 2015- 2017 results that the variable current ratio (CR) and total asset turnover (TATO) have a positive and significant effect on profitability (ROA). Khidmat and Rehman (2014) conducted a study of 10 chemical sector companies in Pakistan for 9 years proving that the solvency ratio had a negative

and very significant impact on ROA and ROE. This means that the ratio of debt to capital increases then performance decreases. It also concluded that liquidity has a high positive effect on ROA.

Research conducted by Hantono (2015), which examined the manufacturing companies in the metal sector and over the period 2009-2013 produced a CR effect on ROA. Study of Efendi and Wibowo (2017), which examined the financial sector listed on the Indonesia Stock Exchange in the 2013-2015 period resulted in a DAR affecting ROA. Nageswararao et al., (2019) using a sample of companies listed on the S&P BSE Sensex index, the results of the study indicate that profitability is positively influenced by liquidity. Size, inventory turnover ratio, debt equity ratio, asset turnover ratio, retained earnings ratio and asset return are found to be negative effects on profitability. Research conducted by Gunde et al. (2017), which examined the manufacturing companies of the sun food industry and beverages for the 2012-2015 period resulted in a DAR effect on ROA. Study of Zulvia (2019), which examined manufacturing companies listed on the Indonesia Stock Exchange in the 2014-2017 period resulted in a DAR affecting ROA.

Research conducted by Pranata et al., (2014), which examined foreign exchange private bank companies listed on the Indonesia Stock Exchange in the 2010-2012 period resulted in TATO and NPM that affected the ROA. Study of Barus & Leliani (2013), who examined the manufacturing companies for the period 2008-2011 explained that the TATO variable significantly affected profitability (ROA) while the CR variable did not significantly influence ROA. Research conducted by Putri & Erawati (2013) shows that the CR, TATO, and NPM variables are proven to have an effect on ROA. While partially the TATO and NPM variables influence ROA, while the CR variable does not show a significant effect on ROA results. Sari & Endri (2019) using the Fixed Effect Model, based on the F test shows that the CAR, LDR, NPL, NIM and OEOI variables simultaneously have a significant effect on ROA. Partially the positive relationship between NIM and ROA, and LDR has no impact on ROA. While CAR, NPL and OEOI have a negative impact on ROA. Research conducted by Romli et al., (2017), which examined the plantation sector companies in the 2011-2016 period resulted that NPM, CR and TATO effect on ROA. Study of Fitriyani (2019), which examined transportation companies listed on the Indonesia Stock Exchange in the 2013-2015 period resulted in a NPM affecting ROA.

3. Research Methodology

Based on previous research, that the profitability indicator that is projected with ROA has been used by several previous researchers. In this study, profitability can be influenced by several factors namely Current Ratio (CR), Debt to Assets Ratio (DAR), Net Profit Margin (NPM), Return On Equity (ROE) and Total Asset Turnover (TATO), the research model used is as follows:

$$ROA_{it} = a + b_1CR_{it} + b_2DAR_{it} + b_3NPM_{it} + b_4ROE_{it} + b_5TATO_{it} + e_{it}$$

Table 2

Variable used in the research model

Variables	Variable Measure	Previous
Dependent Variables		
Profitability (ROA)	Net profit / Total assets	Patni & Darma (2017); Hasanah & Enggariyanto (2018); Barus & Leliani.(2013). Thoyib et al., (2018); Sholihah & Suzan (2019); Suwandi et al., (2019); Sari & Endri (2019); Firdaus & Endri (2020)
Independent Variables		
Current Ratio (CR)	Short-term assets / Short-term debt	Hasanah& Enggariyanto (2018); Barus & Leliani.(2013); Thoyib et al., (2015); Sholihah & Suzan (2019); Suwandi et al., (2019); Endri et al., (2019)
Debt to Assets Ratio (DAR)	Total liabilities / Total assets	Barus & Leliani.(2013); Thoyib et al., (2018); Iswanto et al., (2020)
Net Profit Margin (NPM)	Net profit / Net sales	Hasanah& Enggariyanto (2018); Endri et al., (2020); Shahniah & Endri (2020)
Return On Equity (ROE)	Net profit / Equity	Patni & Darma (2017); Iswanto et al.m (2020); Rinaldo & Endri (2020)
Total Asset Turnover (TATO)	Sales / Total assets	Barus & Leliani.(2013); Hasanah& Enggariyanto (2018); Thoyib et al., (2018); Sholihah & Suzan (2019); Suwandi et al., (2019).

Source: Compiled by the author, 2020

This study uses data sourced from financial reports published by the Indonesia Stock Exchange (IDX) in the Trade, Services and Investment sub-sector of the 2014-2018 period from 6 companies namely PT Kresna Graha Investama Tbk, PT Polaris Investama, PT ABM Investama Tbk, PT Alakasa Industrindo Tbk, PT Global Mediacom Tbk and PT Saratoga Investama Sedaya Tbk. The method used in this study is a quantitative method using panel data analysis with panel data regression techniques to examine the impact of independent variables on the dependent variable. The sample of this research is companies from the Trade, Services and Investment sub-sector of the 2014-2018 period using 6 companies that have been listed on the Indonesia Stock Exchange.

4. Result and Discussion

4.1. Result

Descriptive Statistical Analysis

Table 2
Descriptive Statistics Analysis Results

	ROA	CR	DAR	TATO	NPM	ROE
Mean	0.035667	1.809333	0.487667	1.359333	0.226667	0.050333
Median	0.030000	1.425000	0.445000	0.395000	0.115000	0.070000
Maximum	0.220000	4.840000	0.850000	8.420000	0.990000	0.290000
Minimum	-0.100000	0.190000	0.180000	-0.060000	-0.520000	-0.570000
Std. Dev.	0.070058	1.184818	0.215017	2.247115	0.372858	0.190145
Obs.	30	30	30	30	30	30

Source: Data processed using the program Eviews 9, 2020

Based on the results of the research presented in Table 2, it can be seen the description of the dependent variable and each independent variable is as follows: Observations or N is 30, meaning the amount of data processed in this study is 30 samples, consisting of 6 companies that are sampled for 5 years consisting of ROA, CR, DAR, TATO, ROE and variable data NPM profitability proxied by ROA has an average firm value of 0.035667, a median of 0.030000, the highest value of 0.220000 achieved by PT. Saratoga Investama Sedaya Tbk (SRTG) in 2016, the lowest company value of -0.100000 was achieved by PT. Alakasa Industrindo Tbk (ALKA) in 2015, and a standard deviation of 0.070058, which is greater than the average value of profitability (ROA), with the large amount of data deviation, shows high fluctuations in profitability data. Liquidity which is proxied by Current Ratio (CR) has an average CR value of 1.809333, a median of 1.425000, the highest value of 4.840000 achieved by PT. Saratoga Investama Sedaya Tbk (SRTG) in 2018, while the lowest CR value of 0.190000 was achieved by PT Saratoga Investama Sedaya Tbk (SRTG) in 2016, and the standard deviation of 1.184818, which is smaller when compared to the average value, with a small data deviation, showing low CR fluctuations during the observation period.

Leverage proxied by Debt to Asset Ratio (DAR) has an average DAR value of 0.487667. This states that the average sample company is able to show the relationship between the amount of long-term debt with the amount of capital owned by the company of 0.487667, the median of 0.445000, the highest value of 0.850000 achieved by PT. ABM Investama Tbk (ABMM) in 2015 and 2016, while the lowest DAR value of 0.180000 was achieved by PT. Polaris Investama Tbk (PLAS) in 2018, and a standard deviation of 0.215017, which is smaller than the average value, with the small data deviation, showing low DAR fluctuations during the observation period. Activities that are proxied by total assets turnover (TATO) have an average value of TATO of 1,359333. This states that the average sample company is able to use the total assets owned effectively to generate sales of 1,359333, the median of 0.395000 the highest value of 8.420000 achieved by PT. PT. Alakasa Industrindo Tbk (ALKA) in 2016, while the lowest TATO value of -0.060000 was achieved by PT. Saratoga Investama Sedaya Tbk (SRTG) in 2018, and a standard deviation of 2.247115, which is greater than the average value, with the large amount of data deviation, showing high TATO fluctuations during the observation period. Profitability proxied by Net Profit Margin (NPM) has an average NPM value of 0.226667, a median of 0.115000, the highest value of 0.990000 achieved by PT. ABM Investama Tbk (ABMM) in 2015, while the lowest NPM value of -0.520000 was achieved by PT. Polaris Investama Tbk (PLAS) in 2016, and a standard deviation of 0.372858, which is greater than the average value, with the amount of data deviation, showing the high fluctuation of NPM data during the observation period. Profitability which is proxied by ratio on equity (ROE), has an average ROE value of 0.050333. This means that the average sample company is able to get a net profit using its own capital and get a net profit from the owner or investor of 0.50333, a median of 0.070000, the highest value of 0.290000 achieved by PT. Saratoga Investama Sedaya Tbk (SRTG) in 2016, while the lowest ROE value of -0.570000 was achieved by PT. ABM Investama Tbk (ABMM) in 2014, and a standard deviation of 0.190145, which is greater than the average value, with the large data deviation, showing high fluctuations in ROE data during the observation period.

4.2 Results of the Panel Data Regression Model Selection

For the selection of the most appropriate model used in managing panel data, there are several tests that can be done, namely:

Chow Test

Chow Test is a test to determine whether the common effect (CE) or fixed effect (FE) model is the most appropriate to be used in estimating panel data.

The hypothesis in the chow test is as follows:

H₀: Select PLS (Common Effect Model)

H₁: Select FE (Fixed Effect Model)

Table 3

The results of Chow Test
 Redundant Fixed Effects Tests
 Equation: Untitled
 Test cross-section fixed effect

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.360406	(5,19)	0.0242
Cross-section Chi-square	19.006969	5	0.0019

Source: Data processed using the program Eviews 9, 2020

Table 3 shows that the cross section F probability value is less than α (5%), that is $0.0242 < 0.05$, so H1 is accepted, meaning that the method suitable for that model is the fixed effect model. Because the H1 chow test results are accepted, then it is necessary to perform a thirst test to determine the best model between fixed effects or random effects.

Hausman Test

Hausman test is a statistical test to choose whether the fixed effect or random effect model is the most appropriate. If the results:

H_0 : Select RE (Random effect)

H_1 : Select FE (Fixed Effect)

Table 4

Hausman Test
 Correlated Random Effects - Hausman Test
 Equation: Untitled
 Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.802030	5	0.0049

Source: Data processed using the program Eviews 9, 2020

Table 4 shows that the value of the random cross section probability is less than α (5%), that is $0.0049 < 0.05$, so H1 is accepted, meaning that the method suitable for the model is the fixed effect model. Because the H1 Hausman test results are accepted, there is no need to do a Lagrange Multipler (LM) test to compare random effects or common effects.

Testing the Fixed Effect Model Data Regression Hypothesis Panel

Table 5

Results of the Fixed Effect Model Data Panel Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.10055	0.040702	2.470405	0.0231
CR	-0.01316	0.006232	-2.111514	0.0482
DAR	-0.133062	0.058188	-2.286776	0.0339
NPM	0.01853	0.024655	0.751577	0.4615
ROE	0.216416	0.036899	5.86504	0
TATO	0.006472	0.009756	0.663347	0.5151

Effects Specification

Cross-section fixed (dummy variables)				
R-squared	0.896696	Mean dependent var		0.035733
Adjusted R-squared	0.842325	S.D. dependent var		0.070004
S.E. of regression	0.027797	Akaike info criterion		-4.051178
Sum squared resid	0.014681	Schwarz criterion		-3.537406
Log likelihood	71.76767	Hannan-Quinn criter.		-3.886818
F-statistic	16.4923	Durbin-Watson stat		2.096981
Prob(F-statistic)	0			

Source: Data processed using the program Eviews 9, 2020

From the above results, the fixed effect equation is obtained as follows:

$$ROA = 0.100550 - 0.013160 CR - 0.133062 DAR + 0.018530 NPM + 0.216416 ROE + 0.006472 TATO$$

Based on the results of the output in Table 5 it can be concluded that the CR, DAR and ROE variables affect profitability (ROA). This can be seen from the CR probability value of $0.0482 < 0.05$, the DAR probability value of $0.0339 < 0.05$ and the ROE probability value of $0.0000 < 0.05$. While the NPM and TATO variables do not affect profitability (ROA). This can be seen from the NPM probability value of $0.4615 > 0.05$ and the TATO probability value of $0.51511 > 0.05$. Then the f-statistic probability value is 0.000000 , R-square coefficient is 0.896696 or 89.66696% and Adjusted R-squared is 0.842325 .

Hypothesis Test Results

Simultaneous Test (F Test)

Based on Table 5 in the previous discussion, we understand that the value of the F statistical test is 0.000000 which means that the value is smaller than the value of the significance level of 0.05 or 5% so it can be concluded that H_0 is rejected. So from these values it can be said that the variable Current Ratio, Debt to Assets Ratio, Net Profit Margin, Return On Equity and Total Asset Turnover simultaneously or jointly have an influence on profitability (ROA).

Coefficient of Determination (R2)

The coefficient of determination (R^2) is used to measure how much the model's ability to explain variations of the dependent variable. This study has a Determination Coefficient (R^2) value of 0.896 or 89.6% in Table 5. This means that this value explains that the Current Ratio, Debt to Assets Ratio, Net Profit Margin, Return On Equity and Total Asset Turnover variables affect 89.6% of the variables profitability (ROA) and the rest are influenced by other variables not explained in this study.

5. Discussion

Empirical findings prove that the CR ratio has a negative effect on ROA, which means that an increase in company liquidity has an impact on decreasing company profitability. In contrast to research conducted by Irman et al. (2020), Pandey and Diaz (2019), Sholihah and Suzan (2019), Khidmat and Rehman (2014) which prove otherwise that CR has a positive effect on ROA. Study of Suwandi et al., (2019); Supardi & Suratno (2016); Thoyib et al., (2015); has proven that CR has no effect on ROA. The difference in these results can be caused by the supply of raw materials and inventory of goods in the process that are not ready to be sold which are entered into current assets, so as to increase current assets but not yet generate company profits because they have to incur costs to process these goods into finished goods that are ready to sell to consumers.

Based on empirical findings, it shows that the capital structure which is proxied by the DAR ratio has a negative effect on ROA, which means that an increase in the amount of corporate debt can result in a decline in corporate profits. This result is in line with research conducted by Zulvia (2019), Thoyib et al. (2018), Supardi and Suratno (2016), Khidmat and Rehman (2014), Barus & Leliani.(2013). The higher the debt held by the company in meeting the needs for company funds, the greater the costs to be incurred by the company for funding in the company's operations. The higher DAR will cause ROA to be smaller, but companies that have relatively high debt tend to reduce company profitability. This is because the company must pay interest on the loans made by the company. Different results revealed by Niar et al., (2018) that the capital structure has a positive effect on profitability, while Irmam et al., (2020), Sholihah and Suzan (2019) and Gunde et al., (2019) state that the capital structure has no effect. The results showed the NPM ratio had no effect on ROA, which meant that changes in NPM had no impact on company profitability. Empirical findings differ from Pranata et al., (2014) which proves that NPM has a positive effect on ROA.

Empirical evidence shows that ROE has a positive effect on ROA, which means that an increase in ROE causes the company's profitability to increase. The results of the study contradict the findings of Pandey & Diaz (2019), which proves otherwise that ROE has a negative effect on ROA. Empirical findings prove that the TATO ratio has no effect on ROA, which means that changes in TATO do not provide an impact on company profitability. The company uses its assets to get total net sales where asset turnover is quickly followed by increased sales so that it can generate corporate profits. This can show that the better performance achieved by a company. The results are different from the findings of Sholihah and Suzan (2019), Suwandi et al., (2019), Supardi and Suratno (2016), Thoyib et al. (2018), Pranata et al., (2014) which prove otherwise that the TATO ratio has a positive effect on profitability.

5. Conclusion

Based on the research results described, the conclusion of this study is that the simultaneous variables of CR, DAR, NPM, ROE and TATO significantly influence the probability variable of the Trading, Services sub-sector companies and Investment Listed on the Indonesia Stock Exchange for the 2014-2018 Period. Determination Coefficient (R^2) value of 0.896696 which means

that the CR, DAR, NPM, ROE and TATO variables affect the probability variable and the rest is influenced by other variables not explained in this research. Partially explained that the independent variable CR has a negative and significant effect on the independent variable ROA. This shows that the higher the value of a company's CR, the level of profitability will be lower as well as the independent variable DAR has a negative and significant effect on the independent variable ROA. This shows that the higher the value of a company's DAR, the lower the level of profitability and the independent variable ROE has a positive and significant effect on the independent variable ROA. This shows that the higher the ROE value of a company, the higher the level of profitability, and the independent variable NPM and TATO has a positive and not significant effect on the independent variable ROA. Suggestions for further researchers to be able to develop this research by extending the time period used in research or can add other independent variables that are still based in financial statements, and can also examine companies in other sub-sectors not examined in this study.

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