



THE EFFECT OF FINANCIAL RATIOS ON STOCK RETURNS IN TELECOMMUNICATIONS COMPANIES

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Abstract

The purpose of this study was to analyze and investigate the effect of liquidity, solvency, and profitability on stock returns in telecommunications companies listed on the Indonesia Stock Exchange in 2010 - 2018. In this study, the measurement of liquidity ratio used the current ratio; the solvency ratio was measured using DAR (Debt to Asset Ratio) and DER (Debt to Equity Ratio), while the profitability ratio used ROA (Return on Asset Ratio) and ROE (Return on Equity Ratio). The results of this study indicate that liquidity which measured using current ratio had a negative but insignificant effect on stock returns, while solvency measured using DAR and DER, as well as profitability measured using ROA and ROE had a positive but insignificant effect on stock returns of telecommunications companies, respectively.

Keywords: stock return; liquidity; solvency; profitability; telecommunications company

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INTRODUCTION

There are diversified option that available for investors to invest their assets. In practice, investment is commonly associated with various activities of investing money in numerous alternative assets, which classified into two types: real assets such as land, gold, and property; financial assets, such as bonds, mutual funds, or various forms of securities such as stocks (Tandelilin, 2012). An investor expects returns for investment in shares. To predict stock returns, there are several factors that can be used as parameters. Tandelilin (2017:341) argued that there are three factors to perceive the prospect of a company's shares, namely macroeconomic factors that affect company performance, industry analysis, and company internal factors. The company's internal factors are obtained through company's financial ratios, include liquidity, solvency, and profitability.

To maximize returns and minimize risk in selecting stocks, investors should identify which sectors that have the potential to strengthen. One of potential stock market sectors is shares in telecommunications industry. The telecommunications industry in Indonesia has experienced rapid growth in recent years. This is indicated by the rapid growth of internet access. According to Central Statistics Agency (BPS) data, the percentage of household in Indonesia that had accessed the internet within the last 3 months was recorded at 66.22% in 2018. This figure is much increased when compared to conditions in 2010 which only reached 22.40%. On the other hand, telecommunications companies considerably required investors to invest their funds to ensure the company's continuity in achieving goals.

The stock returns of telecommunications companies in 2010 to 2018 were not always shows a positive value even though the financial performance as measured by the company's financial ratios had a positive increase. EXCL shares in 2014 had the highest current ratio in the 1st and 4th quarters compared to other periods, but the stock return was negative. Likewise, ISAT shares in the second quarter of 2015, had a high liquidity ratio compared to other periods, but the stock return in that year was negative. This is in accordance with the research conducted by Sugiarti et al. (2015) in manufacturing companies which concluded that liquidity measured using the current ratio had a negative and significant effect on stock returns.

Based on the background mentioned above which includes the phenomena that happened and the diversity of arguments from previous research on telecommunications companies, therefore this study aims to analyze and assess the effect of liquidity, solvency, and profitability simultaneously and partially on stock returns in telecommunications companies on the Indonesia Stock Exchange.

METHOD

This study applied quantitative research by using secondary data. This type of research was selected by researcher, since the relation of variables that need to be reviewed as well as its purpose to present a structured, factual, and accurate description of the facts and the relationship between variables namely the influence of financial ratios, liquidity, solvency, and profitability on stock returns.

The population in this study was telecommunications companies that have issued their stocks and are listed on the Indonesia Stock Exchange. The sampling criteria are as follows: (1) Companies were periodically published annual financial reports in 2010 to 2018; (2) Companies had been listed as an issuer in 2010 to 2018 consecutively; (3) Companies had never been removed from the list, (4) Their shares were actively traded and transaction was listed in the stock trading report issued by the Indonesia Stock Exchange. Based on the list of issuers issued by the Indonesia Stock Exchange, there were 4 telecommunication companies that were consecutively listed in that period and published financial reports, including PT XL Axiata Tbk., PT Smartfren Telecom Tbk., PT Indosat Tbk., and PT Telekomunikasi Indonesia Tbk. Based on these data, the four companies were used as research samples.

The data analysis method used in this study was panel data regression analysis with 1 dependent variable, namely stock returns, and 5 independent variables, namely Current Ratio, Debt to Asset Ratio, Debt to Equity Ratio, Return on Assets, and Return on Equity. The operationalization of the dependent variable and the independent variable shown in Table 1.

Table 1. Variable Operations

No	Variable	Operational Definition	Formula	Measuring Scale
1	Stock returns, Y	comparison between the difference of current value of stocks with previous value of stocks divided by price shares of the previous period.	$(P_1 - P_0) / P_0$	Ratio
2	Current Ratio, X ₁	comparison between current assets with current liabilities.	$(\text{Current Assets}) / (\text{Current Liabilities})$	Ratio
3	Debt to Asset Ratio (DAR), X ₂	comparison between total debt with total assets.	$(\text{Total Debt}) / (\text{Total Assets})$	Ratio
4	Debt to Equity Ratio (DER), X ₃	comparison between debt with equity.	$(\text{Total Debt}) / \text{Equity}$	Ratio
5	Return on Asset (ROA), X ₄	comparison between net profit after tax with total assets.	$(\text{Net profit after tax}) / (\text{Total Asset})$	Ratio
6	Return on Equity (ROE), X ₅	comparison between net profit after tax with equity.	$(\text{Net profit after tax}) / (\text{Equity})$	Ratio

In this study, each independent variable was tested towards the stock return variable, using multiple regression analysis, with the framework of thinking presented in Figure 1. This research used the classical assumption test includes residual normality, residual homoscedasticity, No multicollinearity, and No Autocorrelation to provide certainty that the regression equation obtained had accuracy in estimation, unbiased, and consistent (Gujarati, 2010:203).

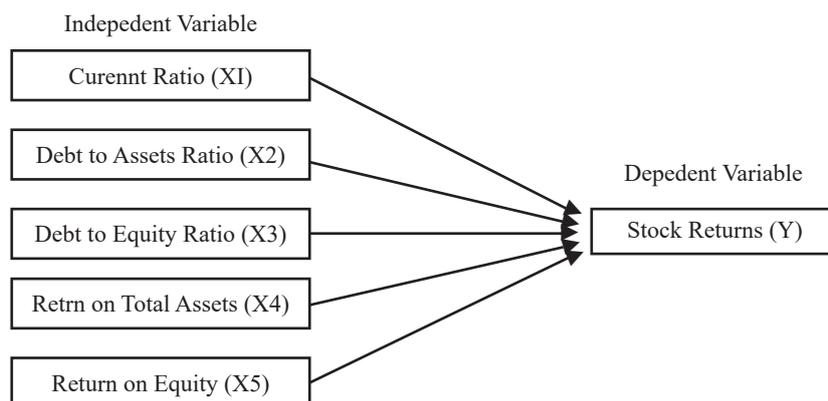


Figure 1. Thinking Framework

RESULTS

The regression model in this study fulfil all the classical assumptions of multiple linear regression it means has Best Linear Unbiased Estimator (BLUE), therefore it can be used as regression modeling. Detail of classical regression assumption test is described in Table 2.

Table 2. Classic Assumption Test Conclusion Summary

No	Assumption	Result	Conclusion
1	Residual normality	The chart of Regression Standardized Residual follow a normal distribution.	fulfilled
2	Residual homoscedasticity	P-value on the White Test was 0.1171, the regression model did not contain heteroscedasticity.	fulfilled
3	No multicollinearity	All independent variables had tolerance value more than 0.1 and VIF value less than 1	fulfilled
4	No autocorelation	Value of Durbin Watson was at Range of $d_u < d < 4 - d_u$	fulfilled

Based on panel data regression testing using the Common Effect / Pooled Least Square model which results presented in Table 3, it is known that value of each independent variable was $t_{count} < t_{tablee}$ (1.65589) or $P\text{-Value} > (0.05)$, then H_0 is accepted, which means that there was no significant effect of each independent variable on stock returns in telecommunications company on the Indonesia Stock Exchange.

Table 3. Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.257447	0.184406	-1.396088	0.1649
X1CR	-0.049365	0.085298	-0.578732	0.5637
X2DAR	0.319181	0.211178	1.511428	0.1330
X3DER	0.133792	0.104967	1.274614	0.2046
X4ROA	0.028430	0.543121	0.052345	0.9583
X5ROE	0.061751	0.128571	0.480286	0.6318

DISCUSSION

According to Horne and Wachowicz (2007), the current ratio indicates the ability of company to pay its short-term obligations using current assets. The results of this study indicate that the ability to settle the company's short-term debt was not major issues related to stock returns of telecommunication companies. According to (Purnama,2019), a company that has a very high value current ratio does not guarantee the ability to fulfil current liabilities on time if the composition of current assets in the balance sheet is dominated by company receivables and inventories that unable to be sold in the near future. In telecommunications companies based on published balance sheets tend to have high third party receivables, thus supporting this theory. The results of this study aligned with research conducted by Prasetyo (2018) who mentioned that the current ratio has a negative but not significant effect on stock returns.

Based on hypothesis testing, it was obtained that value of $t_{count} (1.511) < t_{table} (1.65589)$ or $P \text{ Value} (0.133) > (0.05)$ then H_0 was accepted, which means that Debt to Asset Ratio had no significant effect on stock returns. The beta value of Debt to Asset ratio variable was 0.319181, where this value indicates that a rise of 1% of Debt to Asset ratio will cause an increase in the stock return value of 31.9% assuming the other independent variables are in constant condition. Thus, the Debt to Asset ratio variable has a positive relationship but does not significantly affect stock returns.

A high Debt to Asset ratio value indicates that company has a high proportion of debt to its assets. There are several reasons that cause companies need to owe, includes the reduction of tax obligations due to the use of debt which might increase company profits then it will ultimately increase dividends for investors and the utilization of company debt to acquire assets to maintain the growth of company (Brigham and Houston: 2010b). This is in accordance with telecommunications companies, the reason telecommunications companies have high debts based on published financial statements is to obtain company assets which expected to increase company profits in the future. Purchase of company assets of telecommunication companies in this study based on the construction of Base Transceiver Station (BTS). Sulistyarso (2013) argued that telecommunication companies have a tendency to compete in carry out the construction of BTS to improve the quality of network services. This is reflected in the addition of BTS number in each year which is shown in Figure 2.

PT Telekomunikasi Indonesia Tbk. (TLKM) possess the highest quantity of BTS among the other four operators, which was 189 thousand units in 2018. The competitor, PT XL Axiata Tbk. (EXCL) was in second place with 119 thousand BTS units in 2018. Meanwhile, PT Indosat Tbk. (ISAT) and Smartfren Telecom Tbk. (FREN), own 74 thousand BTS and 19 thousand units in 2018, respectively. Total number of BTS in four operators was 401 thousand units, showed an increment of 18.8% compared to 2017 which was 337 thousand units.

This study is not in accordance with research conducted by Din (2017) which shown the Debt to Asset ratio had a positive and significant effect on stock returns. The results of this study generated a positive influence on the Debt to Asset ratio variable on stock returns. This is in accordance with risk and return trade off that the higher the Debt to Asset ratio influenced the higher the risk level, the higher the stock returns. Research from Din (2017) significant at the error rate $\alpha=5\%$ in companies listed on the PSX-100 index. The increasing and decreasing in the debt to asset ratio which has no effect on stock returns is in accordance with the trade off theory (Myers, 2001) that company owe up to a certain level of debt in order to increase the value of company. As long as the benefits are greater, then additional debt is still allowed. In telecommunications companies, the purpose of debt is to purchase assets that are used to improve network quality, in order to increase the company's value. Based on this theory, the decreasing or increasing in Debt to Assets ratio does not have a significant effect on stock returns.

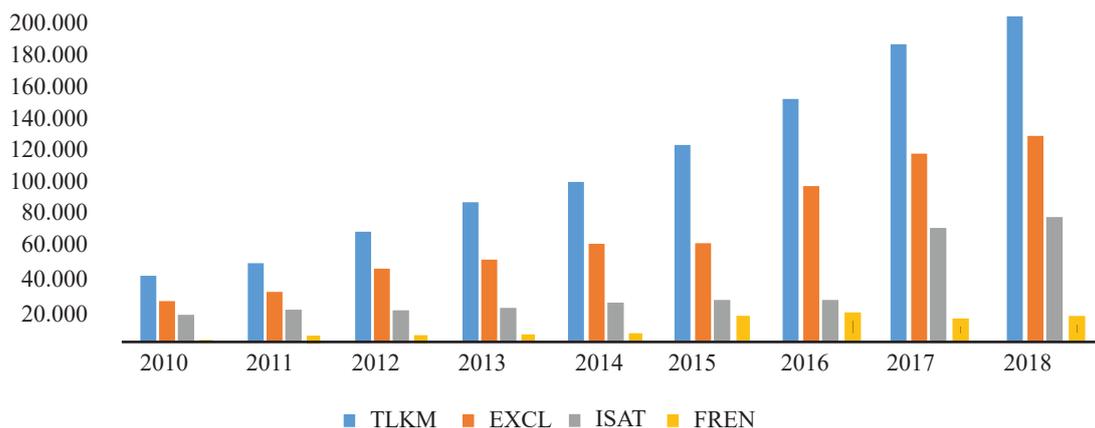


Figure 2. Number of Base Transceiver Stations (BTS) for Each Operator

Based on hypothesis testing, it was obtained the value of $t_{count} (1.275) < t_{table} (1.65589)$ or $P \text{ Value} (0.205) > (0.05)$, then H_0 was accepted, which means that debt to equity ratio had no significant effect on stock returns. The beta value of the debt to equity ratio variable was 0.133792, where this value indicates that a rise of 1% of debt to equity ratio will cause an increase in the stock return value of 13.38% assuming the other independent variables in constant conditions. Thus, the debt to equity ratio variable had a positive relationship but does not significantly affect stock returns.

A high debt to equity ratio (DER) indicates that the company has a high proportion of debt compared to its capital (Kadir, 2017). This is in accordance with the theory from Harahap (2007) who mentioned that DER is measured by comparing debt to capital in a financial ratio. A company required capital in order to improve its business. This aligned with the static trade off theory stated by Bradley et al. (1984) that companies select the quantity of financing through debt and the quantity of equity funds to use by balancing the costs and benefits. Telecommunications companies conduct financing through third party funds due to insufficient internal funds. The necessity on additional capital provides benefits for telecommunications companies in generating higher profits.

Based on descriptive statistics for the DER variable, the average value of DER in telecommunications companies was 67.50% therefore the debts of telecommunications companies tend to be high compared to the company's capital. Brigham and Houston (2010) stated that DER can be influenced by the utilization of company assets in relation to the use of debt, the number of assets used as collateral for debt, company growth, and company profitability. The testing results of hypothesis which mentioned that DER had no significant effect on this stock return, can be interpreted that a high DER in telecommunications companies indicates that the company used debt aggressively to support long-term growth of company.

This aggressive use of debt is reflected in the debt-to-capital structure in the balance sheet reports published by telecommunications companies, which averages 67.5%, which means that the composition of debt is more than half of the company's capital. The high debt to telecommunications companies does not affect investors in deciding to invest in telecommunications companies. This is reflected in the absence of a significant effect of debt to equity ratio on stock returns. This is supported with research conducted by Allozi and Obeidat (2016) mentioned that there is no significant effect of DER on stock returns. This study is in line with research conducted by Prasetyo (2018) which results showed investors assumed that companies with high confident used large debt as the company's capital structure even though the stock returns are not optimal, therefore debt to equity ratio had a positive but not significant effect on returns. stock.

This results is different with research conducted by Nalurita (2015) which showed that the Debt to Equity Ratio had a positive and significant effect on stock returns. In Narulita research (2015) was significant at an error rate of $\alpha = 5\%$ in property, real estate, and construction sector companies. The similarity with research conducted by Nalurita (2015) both had a positive effect on the Debt to Equity ratio variable on stock returns. The telecommunications company had a high level of debt. In accordance with the risk and return trade off, the higher the level of debt measured using the Debt to Equity ratio the higher the level of risk, which impact to high stock return. Based on hypothesis testing, it is known that the value of $t_{count} (0.052) < t_{table} (1.65589)$ or $P \text{ Value} (0.958) > (0.05)$ then H_0 is accepted, which means that the return on asset ratio had no significant effect on stock returns. The beta value of the return on asset ratio variable was 0.02843 where this value indicates that a rise of 1% of debt to equity ratio will cause an increase in the stock return value of 2.84% assuming the other independent variables are in constant conditions. Thus, the return on asset ratio variable had a positive relationship but does not significantly affect stock returns.

Telecommunications companies prioritize company growth (growth) compared to profits derived from asset management. Thus, ROA is not a major factor that affect the return on shares of telecommunications companies. Return on asset ratio is one of the financial ratios to measure the profitability of company. ROA describes the extent to which the company's assets can generate profits (Tandelilin, 2012). Based on the financial statements and the results of testing the research hypothesis, it is found that ROA does not significantly affect stock returns. Mande and Rate (2017) strengthen the results of this study that there are indications regarding lack of attention from investors to use ROA as a measure of profitability in predicting stock returns that will be generated. Bergen (2013) revealed that there were 3 main option in investing, which is safety, income, and growth. Wardhani, et al (2015) stated that less effective asset management might reduce the level of investment in company, which has an impact on the reduction in company's stock price.

The results of this study are was different with the research conducted by Purnama (2019), Prasetyo (2018), and Allozi and Obeidat (2016), which produced a positive and negative significant effect on Return on Assets to stock returns at a significance level of $\alpha = 5\%$. The similarity between the results of this study and research conducted by Purnama (2019), Prasetyo (2018), and Allozi and Obeidat (2016), was a positive effect on the Return on Asset Ratio variable on stock returns. Based on the theory proposed by Schipper (1989) and DeAngelo (1990) that from an information perspective, company income is one of signals that are often used as a reference to generate important decisions, for example in the context of investing in the capital market and takeovers (acquisitions) or business merger. This theory supports the results of research that in telecommunications companies investors tend to find companies with a high level of corporate earnings in the form of profitability, which eventually is expected to increase stock returns.

Based on hypothesis testing, it was obtained that the value of $t_{count} (0.480) < t_{tabel} (1.65589)$ or $P \text{ Value} (0.6322) > (0.05)$ then H_0 is accepted, which means that the return on equity ratio had no significant effect on stock returns. The beta value of the return on equity ratio variable was 0.061751, where this value indicates that a rise of 1% in the return on equity ratio will cause an increase in the value of stock returns by 6.18% with the assumption that the other independent variables are in constant conditions. Thus, the return on equity ratio had a positive relationship but does not had a significant effect on stock returns. The return on equity ratio showed the power to generate return on investment based on book value of shareholders. The higher the ROE value indicates that the company can generate profits from the company's own capital (Brigham and Houston, 2010a).

Asnawi (2017) revealed that there were 3 ways to improve ROE: increase margins, increase asset turnover, and increase debt. The results of this study indicate that telecommunication companies were less efficient in spending money invested by shareholders to gain margin growth. Investments in capital made by telecommunications companies have not been able to generate optimal profits. This can be seen from the descriptive value of ROE statistics sourced from published financial reports of -3.39% which means that the majority of telecommunications companies have not been able to generate corporate profits.

This study is in line with research conducted by Sijabat (2017) mentioned that companies listed on the Indonesian stock exchange, invested less efficient in capital even though it provides stock returns which cause ROE in this study had a positive but not significant effect on stock returns. Thus, investment in a company does not only aim to increase stock returns, but also to increase capital on the liability side.

The results of this study was different with research conducted by Allozi and Obeidat (2016), Rahmawati (2017), and Afinindy and Budiyanto (2017) which got positive and significant effect of Return on Equity on stock returns at a significance level of $\alpha=5\%$. The similarity between the results of this study and the research conducted by Allozi and Obeidat (2016), Rahmawati (2017), and Afinindy and Budiyanto (2017) was a positive influence on the Return on Equity Ratio variable on stock returns. Based on the theory proposed by Schipper (1989) and DeAngelo (1990) that based on information perspective, company revenue is one of many signals that are often used as a reference for an important decision making, for example in the context of investing in the capital market and takeovers (acquisitions) or business mergers. This theory supports this study results which showed that investors in telecommunications companies tend to select companies with a high level of profitability in the form of company revenue, therefore it is expected to increase stock returns.

CONCLUSION

Liquidity that was measured using the current ratio had a negative relationship but insignificant effect on stock returns. A high current ratio in telecommunications companies did not guarantee that the company can fulfil its current debts on time. Solvency that was measured using the Debt to Asset Ratio had a positive relationship but insignificant effect stock returns. Telecommunications companies tend to have large DAR due to the high level of debt in an effort to build Base Transceiver Stations (BTS) as a competitive strategy in network services. However, if company use debt excessively it concerned to has a risk in financial difficulties in paying off its obligations. Solvency that measured using the Debt to Equity Ratio had a positive relationship but insignificantly affect stock returns. The high debt to capital in telecommunications companies did not affect investors in making decisions to invest in telecommunications companies. Profitability which measured using Return on Asset Ratio had a positive relationship but insignificant effect stock returns. Investors tend not to make ROA the main determinant in considering investing in a telecommunications company. Profitability which measured by Return on Equity had a positive relationship but did insignificant effect stock returns. The objective of investment in a company is not only to increase stock returns but it also has other purpose to increase capital on the liability side.

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