The Effect of Return on Asset (ROA), Quick Ratio (QR), and Size on Stock Return of Metal and Material Companies in the 2014-2020 Period

John Henry Wijaya
Dea Nova Dwisandi
Giusti Rifan Wigelar
Ryandi Fahmi Lanteng
Moh Irsyad Abdurahman
Bintan Kamilah
Mohd Haizam Saudi

John Henry Wijaya, Universitas Widyatama, Bandung, Indonesia
john.henry@widyatama.ac.id

Dea Nova Dwisandi, Universitas Widyatama, Bandung, Indonesia
dea.1288@widyatama.ac.id

Giusti Rifan Wigelar, Universitas Widyatama, Bandung, Indonesia
giusti.wigelar@widatama.ac.id

Ryandi Fahmi Lanteng, Universitas Widyatama, Bandung, Indonesia
ryandi.fahmi@widyatama.ac.id

Moh Irsyad Abdurahman, Universitas Widyatama, Bandung, Indonesia
irsyad.abdurahman@widyatama.ac.id

Bintan Kamilah, Universitas Widyatama, Bandung, Indonesia
bintan.kamilah@widyatama.ac.id

Mohd Haizam Saudi, Universitas Widyatama, Bandung, Indonesia

Abstract

Return on investment depends on firm's permormance which is evaluated from its stock performance. This study aims to analyze the effect of Return on Assets (ROA), Quick Ratio (QR), and Firm Size on stock returns. The object chosen in this study is basic material manufacturing firms listed on the Indonesia Stock Exchange in the 2014-2020 period. 14 Metals and Materials sub-sector firms were selected as samples. The analysis technique used in this study is by using software program E-views 9. The results of the research from the data obtained indicate that Return On Assets (ROA), Quick Ratio (QR), and Firm Size have an effect on to stock returns. The Quick Ratio (QR) and Firm Size have positive correlation on stock returns. However, Return on Asset (ROA) variable has an anomaly effect on stock returns, when Return on Asset (ROA) decreases it will increases the value of stock returns.

Introduction

The company is an organization that is engaged in the economic sector. Company according to the Law of the Republic of Indonesia No. 13 of 2003 can be interpreted as a business that has a legal entity or not owned by an individual or entity, which is private or state-owned that is able to provide work to workers by providing wages as compensation. The purpose of a company is to make a profit to attract investors. Every company will maximize its profits in order to have good quality financial reports, because every company with good financial performance will attract investors to invest their capital.

However, in 2019, the whole world, including Indonesia, was hit by the Covid-19 or corona virus pandemic. This epidemic has an impact on human health and not only on health of course, but also on the world economy. One of those affected is the manufacturing sector in general, and the metals and similar sub-sector in general. Companies are forced to always show good financial performance even with bad conditions as has happened today. This is done so that investors are able to survive and can bring in and attract new investors. The following is attached the development of research variables in the sector in question.

Table 1

Development between variables

	ROA	Q_R	Size	R_S
mean	-0,00483	0,945465	13,20682	0,000845
min	-0,8133	0,00332	10,81338	-0,7074
max	0,1278	12,80377	15,40186	0,7529

Source: processed data

It can be seen that the company's rate of return only has an average value during the research period which is quite small, only 0.000845. This can be caused by the company's financial performance which is considered still less than optimal, the financial performance can be useful for investors as a reference for making investment decisions in related companies. To assess the less than optimal financial performance of a company, a benchmark is needed that can be analyzed and interpreted in order to produce relevant information.

There are results that contradict the existing theory, where the movement of ROA with stock returns is not in line, where a decrease in ROA can actually increase stock returns. While the Quick Ratio relationship with stock prices is that if the company's short-term obligations can be fulfilled properly and liquidity is high, investors will be interested and will make the stock price rise.

Based on the above introduction, the issues examined in this study are formulated as follows:

1. Is there an effect of ROA on Return Saham?
2. Is there an effect of QR on Return Saham?
3. Is there an effect of Size on Return Saham?

Refers to problems above, this study aims as follows:

1. To determine the effect of ROA on Return Saham.
2. This is to determine the effect of QR on Return Saham.
3. This is to determine the effect of Size on Return Saham.

Literature Review
Quick Ratio

This ratio is calculated by comparing current assets after deducting inventories with current liabilities. According to [1] the extent to which own capital guarantees all debt this ratio can also be read as a comparison between outside party funds and company owner

funds. The quick ratio is one of the best liquidity measures, more attractive than the current ratio. Basically, the quick ratio is similar to the current ratio, except that the quick ratio is calculated by subtracting the inventory value from current assets, inventory is not calculated in the quick ratio because inventory has a level of liquidity that is considered to be problematic. Inventories are part of the most illiquid current assets, and often decrease in value when the company is declared to stop operating.

[2]states that quick ratio is a ratio that can show the ability of a company to pay, fulfill obligations or current debt (short-term debt) using current assets without the need to take inventory (value of inventory) into account. The quick ratio has better accuracy than the current ratio, because the number used as a comparison is a component that is believed to be very smooth so that converting it into cash will run well[3].

Quick ratio has better accuracy than the current ratio, because the number used as a comparison is a component that is believed to be very smooth so that converting it into cash will run well. The higher the quick ratio value, the higher the level of financial liquidity. The value that is considered good for the quick ratio is 1:1. The calculation of quick ratio can be formulated as follows:

$$Quick\ Ratio = \frac{Current\ Assets - Inventory}{Current\ Liablities}$$

Firm Size

Firm size describes the size of a company, which is expressed by total assets, total sales, average sales, and average total assets. According to [4] size of the company can be seen from the amount of company's equity value, total sales or total asset. In this study, the size of the company is measured by using total sales. Larger companies's expected rate of return is greater than that of small companies because the growth rate of large companies is relatively faster than that of small companies. Therefore, investors will speculate more and choose large companies to get more returns. Companies with larger total sales will have advantages in the sources of funds obtained to finance their investments and in generating profits and are considered to have better prospects in the long term. Firm size can be calculated using the following formula:

Firm Size = ln (Total Sales)

Return on Asset (ROA)

This ratio measures the company's ability to generate profits, the company is considered successful if it has large profits, so profits become the main concern of investors. According to [5, 6] this ratio describes the results of a number of assets that have been used by the company to get profits. [5, 7]argues that "Return on Assets (ROA) shows the ability of a company by using all assets owned to generate profit after tax". Calculation of Return on Assets (ROA) according to [8] is:

$$Return\ on\ Asset\ (ROA) = \frac{Net\ Profit\ After\ Tax}{Total\ Assets}$$

Stock Return

Every investor wants to make as much money as possible. One of the ways investors get profits when interacting with stocks comes from dividends and another way that comes from the difference between buying and selling shares called capital gains. Where the selling price obtained by investors is higher than the purchase price in a certain period. According to [9, 10]return is one of the factors that motivate investors to interact and is also

a reward for the investor's courage in taking the risk on the investment he made. The calculation of stock return can be formulated as follows:

$$\text{Stock Return} = \frac{Pt - Pt-1}{Pt-1}$$

Methods

Data evaluation technique evaluation of the records used in this find out about is panel statistics regression the usage of the software program E-views 9. Before panel information regression analysis, the model selection and classical assumption assessments are carried out the use of heteroscedasticity and multicollinearity tests. The statistics evaluation panel is used to reply hypothesis trying out related to the effect of independent variables on the established variable[11] [12].

Results and Discussions

The first step taken by the author is to perform data processing descriptive statistics, to get an initial picture about the data, which obtained the following results: *Table 2*

Descriptive Statistics

	R_S	ROA	Q_R	SIZE
Mean	0.000845	-0.004829	0.945465	13.20682
Median	-0.002450	0.014000	0.421330	13.40011
Maximum	0.752900	0.127800	12.80377	15.40186
Minimum	-0.707400	-0.813300	0.003320	10.81338
Std. Dev.	0.146132	0.097606	1.667202	1.169719
Skewness	-0.078132	-5.996861	4.344908	-0.091442
Kurtosis	17.19392	49.45742	28.20258	2.048795
Jarque-Bera	822.7580	9400.411	2901.956	3.831138
Probability	0.000000	0.000000	0.000000	0.147258
Sum	0.082800	-0.473200	92.65561	1294.268
Sum Sq. Dev.	2.071401	0.924117	269.6177	132.7195
Observations	98	98	98	98

Source: processed data, Eviews 9

Based on the table above, it can be seen that the average for stock returns is 0.000845 with the highest value of 0.752900 and the lowest of -0.707400. The average value for return on assets is -0.004829 with the highest value of 0.127800 and the lowest of -0.813300. The average value for the quick ratio is 0.945465 with the highest value of 12.80377 and the lowest of 0.003320 and the average value for company size of 13.20682 with the highest value of 15.40186 and the lowest of 10.81338. After going through model testing to determine the best model, followed by a classic assumption test to ensure the data is fit for use, the best model is obtained as follows: *Table 3*

Random Effect Model Test

Variable	Probability	Decision
ROA	0.0024	Accepted
QR	0.0188	Accepted
Size	0.0301	Accepted
Adjusted R-squared	0.665757	

Source: processed data, Eviews 9

The stock return can be explained by the variable ROA, QR, and company size of 66.58% while the rest is explained by other variables that are not included in the variables studied by 33.42%. To answer the hypothesis that has been stated previously, it is known that all the variables studied affect stock returns with a probability criterion smaller than alpha (with a probability of 0.0024 < 0.05), namely for the ROA variable, the QR variable has a probability below alpha (with a probability of 0.0024 < 0.05). 0.0188 <0.05), and for the firm size variable has a probability below alpha (with a probability of 0.0301 <0.05), then the variable hypothesis is accepted. The results of this study are not in line with that carried out by [13-15] where the results of his research show that the ROA, CR, DAR and TATO variables have an effect on firm value.

Conclusion

The results of this study indicate that what is happening in the manufacturing sector in the metal sub-sector and the like is a natural thing to happen, where a good stock return will be the main attraction for investors. The relatively small average value is a significant impact from the COVID-19 pandemic which has caused the economy to stall. From some of the above ratio variables taken in this study, the variables or ratios of ROA, QR, and Size have an effect on stock returns. Only one variable or ratio has an effect on stock returns, namely ROA which has an anomaly movement, where when ROA decreases it will increase the value of stock returns, besides that from some of the companies above there are anomalies that should have the same value but in the opposite direction. for some companies, in other words there will be conformity with the existing theory. Maybe it will be a little note for both investors and companies, that there is a possibility that ROA, QR, and Size variables or ratios must remain a concern, because they can determine decisions for both companies and investors.

References

1. Warrad, L., *The impact of liquidity through quick ratio on share price: evidence from Jordanian banks.* European Journal of Accounting Auditing and Finance Research, 2014. **2**(8): p. 9-14.
2. Arkan, T., *The importance of financial ratios in predicting stock price trends: A case study in emerging markets.* Finanse, Rynki Finansowe, Ubezpieczenia, 2016(79): p. 13-26.DOI: https://doi.org/10.18276/frfu.2016.79-01.
3. Nguyen, K.D. and U.H.T. Nguyen, *Common Errors in Writing of EFL Sophomores in a Context of the Mekong Delta.* Eurasian Journal of Applied Linguistics, 2021. **7**(2): p. 46-57.DOI: https://doi.org/10.21744/ijllc.v7n2.1353.
4. Ferri, M.G. and W.H. Jones, *Determinants of financial structure: A new methodological approach.* The Journal of finance, 1979. **34**(3): p. 631-644.DOI: https://doi.org/10.1111/j.1540-6261.1979.tb02130.x.
5. Solihin, D., *The Effect of Current Ratio and Debt To Equity Ratio on Return On Assets (ROA) at PT Kalbe Farma, Tbk.* CREATIVE: Scientific Journal of Pamulang University Management Study Program, 2019. **7**(1): p. 115-122.DOI: https://doi.org/10.32493/jk.v7i1.y2019.p115-122.
6. Çağatay, S. and İ.H. Erten, *The relationship between ideal L2 self, achievement attributions and L2 achievement.* Eurasian Journal of Applied Linguistics, 2020. **6**(3): p. 337-359.DOI: https://doi.org/10.32601/ejal.834642.
7. Butt, B., et al., *Serial Verb Construction vs Complex Predicates in Punjabi: An Integrated Analysis of Event Structure.* Eurasian Journal of Applied Linguistics, 2021. **7**(2): p. 1-21.
8. Jewell, J.J. and J.A. Mankin, *What is your ROA? An investigation of the many formulas for calculating return on assets.* Academy of Educational Leadership Journal, 2011. **15**: p. 79-91.
9. Bekaert, G., R.J. Hodrick, and X. Zhang, *International stock return comovements.* The Journal of Finance, 2009. **64**(6): p. 2591-2626.DOI: https://doi.org/10.1111/j.1540-6261.2009.01512.x.
10. Kim, J.-R., *Using Markedness Principle for Abstraction of Dependency Relations of Natural Languages.* Eurasian Journal of Applied Linguistics, 2021. **7**(2): p. 58-67.
11. Xiu, X. and N.M.B. Ibrahim, *Role of Learner Autonomy and Students' Perception in Legitimizing China English as A Variety of English.* Eurasian Journal of Applied Linguistics, 2021. **7**(2): p. 31-45.
12. Ballinger, G.A., *Using generalized estimating equations for longitudinal data analysis.* Organizational research methods, 2004. **7**(2): p. 127-150.DOI: https://doi.org/10.1177/1094428104263672.
13. Shahnia, C., et al., *Determinant of profitability: Evidence from trading, service and investment companies in Indonesia.* Accounting, 2020. **6**(5): p. 787-794.DOI: https://doi.org/10.5267/j.ac.2020.6.004.

14. Peker, H., *Feared L2 self as an emerging component of the reconceptualized L2 motivational self system.* Eurasian Journal of Applied Linguistics, 2020. **6**(3): p. 361-386.DOI: https://doi.org/10.32601/ejal.834658.

15. Erdil-Moody, Z. and A.S. Thompson, *Exploring motivational strategies in higher education: Student and instructor perceptions.* Eurasian Journal of Applied Linguistics, 2020. **6**(3): p. 387-413.DOI: https://doi.org/10.32601/ejal.834670.