The Effect of Return on Asset, Return on Equity and Debt to Equity Ratio on the Value of the Manufacturing Firm Listed on Stock Exchange 2015-2019

Desmon[1], Armalia Reny WA[2], Meirinaldi[3], Yudhinanto C Nugroho[4]
{desmon@umitra.ac.id[1], armalia.reni@umitra.ac.id[2], meirinaldi@borobudur.ac.id[3], yudhi@umitra.ac.id[4]}

Faculty of Business, University of Mitra Indonesia, Jl. Zainal Abidin Pagar Alam No. 7, Bandar Lampung, Lampung, Indonesia

Abstract. The motivation behind this examination is to see the impact of return on resources (ROA), return on value (ROE), and obligation to value proportion (DER) on an organization's worth (PBV). Optional information was utilized in this review, which was gained by implication by scientists through middle person media. The example for this review comprised of seven food and drink producing organizations with firm qualities recorded on the Indonesia Stock Exchange. Return on resources essentially affects firm worth, while return on value has a generally negative and minor effect and obligation to value proportion has a somewhat certain and critical effect. From 2015 to 2019, a total of 35 observations were made The monetary proportion is utilized as an autonomous variable. Firm worth is the autonomous variable, though return on resources, return on value, and obligation to value proportion are the ward factors (PBV). In view of the review's discoveries, the scientific strategy utilized in this review was a different direct relapse condition, which produced the condition Y=1.860+1.303X1- 0.037X2+0.410X3+. The profit from resources, return on value, and obligation to value proportions all essentially affect firm worth, as indicated by the review's discoveries. Return on resources advantageously affects firm worth, while return on value has a somewhat negative and minor effect, and obligation to value proportion hugely affects firm worth.

Keywords: Return on Assets; Return on Equity; Debt to Equity Ratio; Firm Value

1 Introduction

Today, a company is established not only to get the maximum profit, but also to increase the welfare to the benefit of the company's owners or shareholders, and to improve the company's performance worth. Firm value, according to Indriani (2019:2), is an investor's assessment of a manager's success in managing company resources entrusted to someone who is frequently associated with stock prices [1]. A high firm value encourages the market to

MIC 2021, October 30, Jakarta, Indonesia

DOI 10.4108/eai.30-10-2021.2315839

accept not just in the organization's past achievements, but also in its future potential. The greater the value of a company's stock, the more prosperous its shareholders are. The performance of the company's operations determines the firm's value management based on the company's financial ratio analysis. Financial Ratios can be divided into Liquidity Ratios, Solvency Ratios, Leverage Ratios, and Activity Ratios. The goal of financial ratio analysis is to help the firm discover its financial strengths and weaknesses, as well as the financial statement performance, so that all available resources can be used to meet the company's goals.

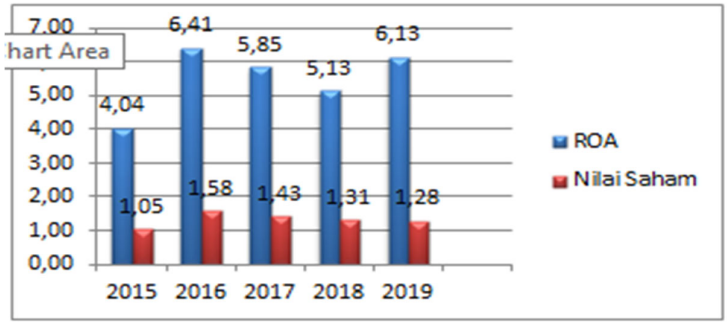

Fig. 1. The Comparative of Return on Assets and Stock Value PT. Indofood Sukses Makmur Tbk Period 2015-2019.

Based on the picture above shows that the ROA at PT. Indofood Sukses Makmur Tbk fluctuated from 2015-2019. The lowest fluctuation decrease occurred in 2015 which reached 4.04% and the highest fluctuation increase occurred in 2016 which reached 6.41%. Based on existing data, the higher the Return on Assets (ROA) ratio, the more efficient the business is utilizing assets to generate profits, and thus the better the company's performance.[2] As may be seen in the image above, the ROE at PT. Indofood Sukses Makmur Tbk fluctuated from 2015-2019. The lowest fluctuation decrease occurred in 2015 which reached 8.60% and the highest fluctuation increase occurred in 2016 which reached 11.99%. The decrease in fluctuations shows that the company's capability has decreased in managing profits. If the ROE results increase, It demonstrates the company's effectiveness and efficiency in earning income. The larger the value of the ratio, the greater the funds that can be returned from equity into profit. Therefore, the greater the net profit obtained from capital.

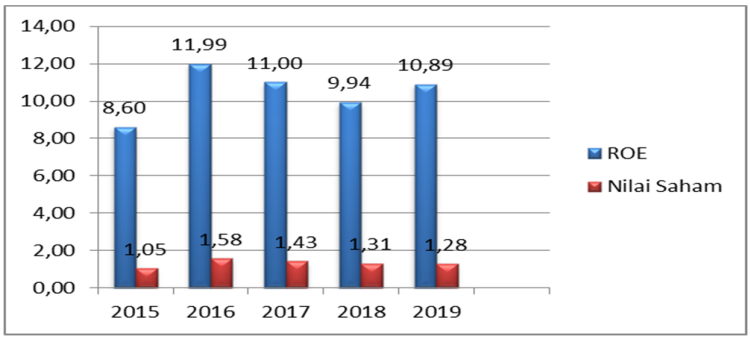

Fig. 2. The Comparative of *Return on Equity* and Stock Value PT. Indofood Sukses Makmur Tbk Period 2015-2019

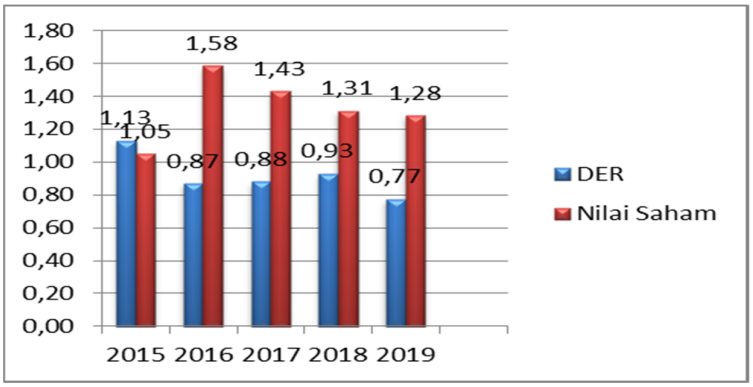

Fig. 3. The Comparative of *Dept to Equity Ratio* and Stock Value PT. Indofood Sukses Makmur Tbk Period 2015-2019

As may be seen in the image above, the Debt-to-Equity Ratio at PT. Indofood Sukses Makmur Tbk fluctuated in 2019 which reached 0,77% and the highest fluctuation increase occurred in 2015 which reached 1.13%. DER is an examination between complete obligation (long haul obligation and momentary obligation) with absolute resources. This implies that the higher the worth of the proportion, the bigger the danger for investors, as well as the other way around. Be that as it may, to arrive at an undeniable degree of benefit, the organization requires a considerable DER esteem needs obligation to develop and create. In view of the clarification the title "The Effect of Return on Asset, Return on Equity, and Debt to Equity Ratio on the Value of Manufacturing Firms Listed on Stock Exchange" has excited the researchers' interest 2015-2019.

1.1 Problem Identification

In view of the foundation, the plan of the issue in this review is as per the following:

a. Do Return on Assets, Return on Equity and Debt to Equity Ratio Simultaneously Affect Company Value?
b. Does Return on Assets Partially Affect Company Value?
c. Does Return on Equity Partially Affect Company Value?
d. Does Debt to Equity Ratio Partially Affect Company Value?

1.2 Research Objective

The objectives in this research are :

a. To find Return on Assets, Return on Equity, and Debt to Equity Ratio all impact the very same thing at the same time firm value.
b. To find out the Return on Assets, it partially has an impact on the company's value.
c. To find out the Return on Equity smallly affects the organization's worth.
d. To find out The Debt to Equity Ratio limitedly affects the company's worth.

2 Literature Review

2.1 Financial Performance

According to Hutabarat (2020:2) financial performance is an analysis conducted to determine a company has implemented financial rules properly and correctly. Analyzing financial performance is done by evaluating past performance [3]. Furthermore, predict the prospect of the company future and re-evaluate what has been happened in the past, so that it can increase the financial performance of corporations in the future.

2.2 Financial Ratio Analysis

As per Sujarweni (2019:109) monetary proportion examination is a strategy for breaking down budget reports by contrasting one record with different records in the assertion [4]. The goal of financial ratio analysis is to help the firm discover its financial strengths and weaknesses, as well as examine the performance of the company's financial statements, in order to empower all employee resources to meet the company's goals. Leverage and profitability ratios were the financial ratios employed in this study.

2.3 Leverage Ratio

As indicated by Kasmir (2018:150), Leverage Ratio The influence proportion is utilized to evaluate an organization's capacity to meet its quick and long haul commitments as a whole, regardless of whether it is dissolved [2]. Because it might exhibit the measure of assets given by the borrower (leaser) to the organization's proprietor, the Debt to Equity Ratio (DER) was picked as the influence proportion in this review. The equation for ascertaining the Debt to Equity Ratio is as per the following. (DER) as follows:

$$Debt\ to\ Equity\ Ratio = \frac{Total\ Debt\ (Debt)}{Equity\ (Equity)}\ \text{x}\ 10 \quad (1)$$

2.4 Profitability Ratio

As shown by Kasmir (2018:196) The usefulness extent is a metric that is used to overview an association's capacity to make a benefit [2]. The proportion's motivation is to watch the organization through time, either as far as reduction or increment, and to sort out what's causing it. This examination is effectively utilized. Return on Assets (ROA) and Return on Equity (ROE) are two interesting kinds of benefits (ROE) are two particular sorts of benefits. Coming up next is the formula for finding the advantage extent as follows:

$$Returnon\ Asset = \frac{Earning\ After\ Interst\ TEX}{\text{Total Asset}}\text{x}100\% \quad (2)$$

$$ReturnonEquity = \frac{Earning\ Equity}{Equity}\ X\ 100\ \% \quad (3)$$

2.5 Firm Value

According to Indrariani (2019:2) An investor's opinion of a manager's competence to manage corporate resources is called firm value [1]. For a manager, firm value is evidence of successful work performance. The ascent in firm worth shows that the organization's exhibition is improving. The following formula is used by researchers to find the value of the company as follows:

$$\textit{Price to Book Value}\ (\text{PBV}) = \frac{\textit{Market Price Per Share}}{\textit{Book Value Per Share}} \tag{4}$$

3 Methodology

3.1 Research Design

This is a quantitative descriptive study. According to Suyoto (2015:17), quantitative research methods are systematic, planned, and structured research [5].

3.2 Framework

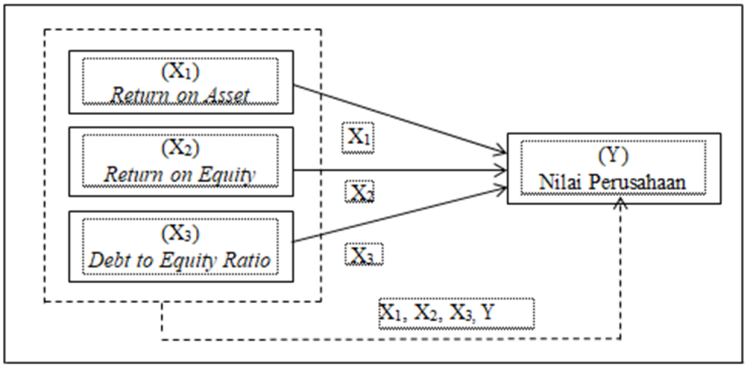

Fig. 5. Framework

3.3 Hypothesis

According to Sugiyono (2018), the hypothesis is a temporary answer to the research problem's formulation the hypothesis for this study can be established based on the background [6]:

a) Hipotesis 1
   H_O: It is suspected that there is no effect of Simultaneously to Firm Value (X1), Return on Assets (X2), Return on Equity (X2), Debt to Equity Ratio (X3) (Y).
   Ha: It is suspected Return on Assets (X1), Return on Equity (X2), and Debt to Equity Ratio all have an effect (X3), Simultaneously to Firm Value (Y).
b) Hipotesis 2
   H_O: It is suspected that there is no partial Return on Assets (X1) has an impact on the value of a company(Y).

Ha: There is a risk that Return on Assets has an effect (X1), Partially on Firm Value (Y).

c) Hipotesis 3

H_O: It is suspected that Return on Investment has no partial effect Equity (X2) on Company Value (Y)

Ha: It is suspected that Return on Investment has a partial effect Equity (X2) on Firm Value (Y).

d) Hipotesis 4

H_O: It is suspected that there is no partial Debt-to-Equity Ratio (X3) Effect on Firm Value (Y).

Ha: It is suspected that there is a partial influence of Debt-to-Equity Ratio (X3) on Firm Value (Y).

3.4 Data Collection Technique

Documentation and a literature review were used to acquire data. Documentation includes notes, transcripts, books, newspapers, magazines, agendas, and other sources of information about objects or variables. Studying books, periodicals, and papers relating to the subject of study is known as literature study. research to obtain appropriate data [5].

3.5 Research Population and Sample

The Thirty food and reward firms recorded on the Indonesia Stock Exchange were the subjects of this survey. A non-likelihood inspecting approach with purposive examining method was utilized to get the example for this review. Purposive sampling, according to Sugiyono is a sample technique that takes into account specific factors [6].

3.6 Regression Analysis

The regression equation formula for various direct relapse investigation, which is utilized to decide the impact of free factors on the reliant variable, is as per the following:

$$Y = \alpha + \beta_1 X_1 - \beta_2 X_2 + \beta_3 X_{3+} \varepsilon \quad (5)$$

Explanation:

Y = Firm Value

α = Constant

$\beta_1, \beta_2, \beta_2$ = Regression Coefficient

X_1 = *Return on Investment (ROI)*

X_2 = *Return on Investment (ROI)*

X_3 = *Ratio of Debt to Equity*

ε = Standard Error

4 Discussion

4.1 Normality Test Result

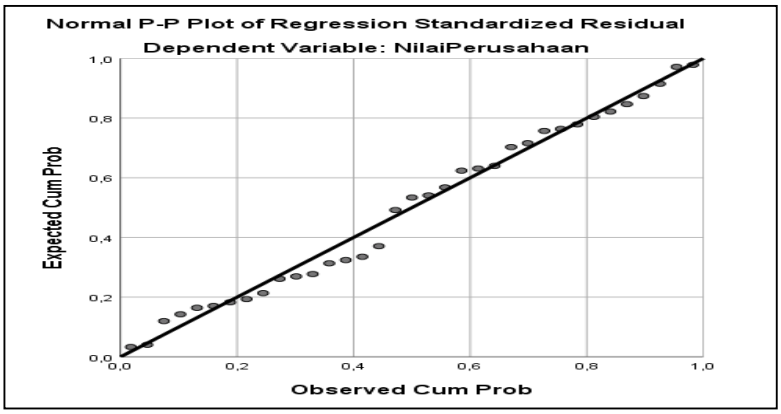

Fig. 6. P-Plot Normal Results

Based on the picture above, the normal P-plot residual graph shows that the points follow and because the data is spread out over a diagonal line, it can be assumed that the data is regularly distributed.

Table 1. Kolmogorov-Smirnov Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		35
Normal Parameters[a,b]	Mean	0
	Std. Deviation	0,17007813
Most Extreme Differences	Absolute	0,101
	Positive	0,101
	Negative	-0,058
Test Statistic		0,101
Asymp. Sig. (2-tailed)		,200[c,d]

The Kolmogorov-Smirnov test above shows that the residual data collected in the Kolmogorov-Smirnov Test is normally distributed, as seen in the table above. The Kolmogorov-Smirnov test depends on the result results esteem is critical at 0.200> 0.05, which implies the information is typically conveyed.

4.2 Heteroscedasticity Test Results

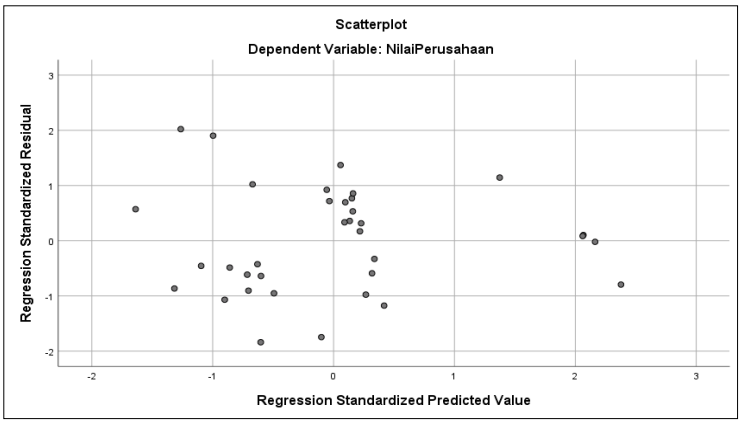

Fig. 7. Heteroscedasticity Test

The scatterplot graph in the image above demonstrates that the heteroscedasticity test results show that the points do not have a specific pattern, such as waves or similar, and that the points are scattered over the y-axis, both above and underneath the number 0. The relapse model, it very well may be closed, is compelling has no heteroscedasticity.

4.3 Multicollinearities Test Result

Table 2. Multicollinearities Test Result

Coefficients[a]								
Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Eror	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1,860	0,107		17,367	0,000		
	ROA	1,303	0,244	1,017	5,349	0,000	0,124	8,060
	ROE	-0,037	0,262	-0,025	-0,140	0,889	0,143	7,017
	DER	0,410	0,127	0,306	3,232	0,003	0,500	1,999
a. Dependent Variable: NilaiPerusahaan								

Based on table 3.4 on the Multicollinearity Test, it can be concluded that:

a. The VIF value of the ROA (Return on Assets) variable is 8,060 < 10 and *tolerance value* is 0,124 > 0, 10 so that the Return on Assets (X1) variable does not occur multicollinearity.
b. The VIF value of the ROE (*Return on Equity*) variable is 7,017 < 10 and *tolerance value* 0,143 > 0, 10 so that variable *Return on Equity* (X_2), there is no multicollinearity.
c. The VIF value of the DER (Debt to Equity Ratio) variable is 1,999 < 10 and the tolerance value is 0,500 > 0, 10 so that the Debt-to-Equity Ratio (X3) is insufficient occur multicollinearity.

4.4 Autocorrelation Test Result

Table 3. Autocorrelation Test Result

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,928[a]	0,861	0,847	0,17812	2,257
a. Predictors: (Constant), DER, ROE, ROA					
b. Dependent Variable: NilaiPerusahaan					

The autocorrelation test resulted in a Durbin-Watson score of 2.257, as shown in table 3.2. The purpose of this exercise is to determine the values of DL and DU in the table DW =5% with the number of independent variables. being 3 (K=3) with a total of 35 samples with the following values: DL = 1.283, DU = 1.652, DW = 2.257, and 4 - DU = 4 - 1.652 = 2.348. Therefore, the value of DU < DW < 4 – DU is 1.652 < 2.257 < 2.348. It very well may be finished up there is no certain or negative autocorrelation in this dataset research.

4.5 Multiple Regression Test Results

Table 4. Multiple Regression Test Results

Coefficients[a]						
Model	Unstandardized Coefficients		Standardized Coefficients			
		B	Std. Eror	Beta	t	Sig.
1	(Constant)	1,860	0,107		17,367	0,000
	ROA	1,303	0,244	1,017	5,349	0,000
	ROE	-0,037	0,262	-0,025	-0,140	0,889
	DER	0,410	0,127	0,306	3,232	0,003
a. Dependent Variable: NilaiPerusahaan						

Based on table 3.3 above, the results of the Multiple Regression Test are:

$Y = 1{,}860 + 1{,}303\ X_1 - 0{,}037\ X_2 + 0{,}410\ X_3 + \varepsilon$

This means that:

a. The value of a = 1,860 means that the variable X_1,X_2,X_3 If the (Return on Asset, Return on Equity, and Debt to Equity Ratio) are all 0, the company's variable value is 1,860.
b. The value of b1 = 1,303 means that the Return on Assets has increased 1% and other variables remain constant, then the level of firm value has increased 1,303%.
c. The value of b2 = -0,03 means that Return on Equity is negative, which means that the other independent values are fixed and Return on Equity has increased 1%, the firm value has decreased -0,037%.
d. The value of b3 = 0,410 means that the variable Debt to Equity Ratio has increased 1 % and other variables remain constant, the firm value has increased 0,410%.

4.6 R^2 Test Results (Coefficient of Determination)

Table 5. R^2 Test Results (Coefficient of Determination)

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,928[a]	0,861	0,847	0,17812
a. Predictors: (Constant), DER, ROE, ROA				
b. Dependent Variable: NilaiPerusahaan				

Based on The R2 Test (Coefficient of Determination) results in an R2 Square value of 0.861, which means Return on Assets, Return on Equity, and Debt to Equity Ratio are largely factors to consider can clarify 86.1 percent of the firm worth, while the leftover 13.9 percent is impacted by factors outside the examination factors.

4.7 Simultaneous Test (F-Test)

Table 6. F-Test Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6,090	3	2,030	63,982	,000[b]
	Residual	0,984	31	0,032		
	Total	7,073	34			
a. Dependent Variable: NilaiPerusahaan						
b. Predictors: (Constant), DER, ROE, ROA						

The result of the df of the numerator (3-1) = 2 df of the denominator = 2 df of the numerator = 2 df of the denominator = 2 df of the denominator = 2 df of the denominator = 2 df of (35 - 3- 1). The result of df of numerator and denominator = (2: 31), resulting in a value of 3.30 for Ftable with a value of 5%. According to the F-test results and Fcount value, Fcount > Ftable (63,982 > 3,30) at a significant level (0.000 0.005). Assuming Ho is dismissed however Ha is acknowledged, it implies Return on Assets, Return on Equity, and Debt to Equity Ratio affect an exhibition of the organization worth.

4.8 Partial Test (t-test)

Table 7. t-Test Result

Coefficients[a]						
Model	Unstandardized Coefficients		Standardized Coefficients			
		B	Std. Eror	Beta	t	Sig.
1	(Constant)	1,860	0,107		17,367	0,000
	ROA	1,303	0,244	1,017	5,349	0,000
	ROE	-0,037	0,262	-0,025	-0,140	0,889
	DER	0,410	0,127	0,306	3,232	0,003
a. Dependent Variable: NilaiPerusahaan						

Based on Table 3.6 above, The determined t value with a significant value when compared to the t table value is = 5%. t table = (/2; n-k-1) then t table = (0.05/2; 35-3-1) is the formula for t table and the result is t table = (0.025; 31). The result of t table with = 0.025 is 2.039. Based on the above calculation:

a. The results of the t-test of the Return on Assets variable obtained that the t-count value was 5.349 with the result of α = 5%, it was obtained t-table of 2.039, which means that t-count> t table (5.349> 2.039) or the result of significant 0.000 <0.05. Return on Assets, it may be inferred, has a substantial impact on business value
b. The t-test of the Return on Equity variable yielded a t count of -0.140 and a t table of 2.039 with a result of = 5%, meaning that the t count t table (-0.140 2.039) or the significant 0.889 > 0.05 It is clear that Return on Equity has no influence on the value of the company a company.
c. The results of the t-test of the Debt-to-Equity Ratio variable obtained a t count value of 3.232 with the result of α = 5% obtained t table of 2.039 which means that t count > t table (3.232 > 2.039) or the result of significant 0.003 < 0, 05. The Debt-to-Equity Ratio, it may be inferred, has a substantial impact on firm value.

4.9 Hypothesis Testing of the Effect of Return on Assets on Firm Value

The Return on Assets is determined using the partial test or t-test analysis (X1) variable on Firm Value (Y) that was collected partially. The value of the t-table is 2.039, and the value of the t-count is 5.349. The result of the statistic is a t count > t table (5.349 > 2.039) with a 0.000 0.05 significance level. Return on Assets is said to essentially affect firm worth. The higher the Return on Assets, the better the organization's capacity to benefit from its resources[2]. The stock price and the company's value will rise as a result of this situation. The findings of this study corroborate those of Stryarini (2016) and Ainur (2016). (2016). (2014) discovered that the Return on Assets variable has a favorable and large impact on the economy impact on business value [7], [8].

4.10 Hypothesis Testing of the Effect of Return on Equity on Firm Value

The impact of the Return on Equity (X2) variable on Firm Value is based on t-test results (Y) The t-table value is -0.140, and the t-count value is -0.140 value is 2.039, which is only

partially acquired. The significant level is 0.889 > 0.05, and the statistical results of the t count t table (-0.140 2.039). The Return on Equity variable has no substantial effect on business value, it can be concluded. The advantages of having a high Return on Equity value indicate that the company is effective and efficient in managing its own capital and provides an overview for investors regarding the level of return on capital that has been invested in the company. Return on Equity has a negative regression coefficient with firm value, It means that the Return on Equity has risen and has no bearing on the firm's worth This research supports the findings of Cahyani (2015) and Maryati (2018), who found that Return on Equity had no substantial impact on the value of a company [9];[10].

4.11 Hypothesis Testing of the Effect of Debt to Equity on Firm Value

According to the results of the t-test investigation, the variable Debt to Equity Ratio (X3) to Firm Value (Y) partially obtained the t-count value of 3.232. The value of the -table is 2.039. The statistical results are based on the t count> t table (3.232 > 2.039) value, with a 0.003 0.05 significant threshold. This outlines that the Debt to Equity Ratio altogether affects the firm's financial performance worth. This study supports the theoretical foundation of [2] which indicates that enterprises with a high solvency ratio face a higher risk of loss, but there is a greater chance for profit. Companies with high DER outcomes will be able to handle loans to help them grow. The benefits of the proprietor or financial backer will ascend as the organization develops. This arouses the curiosity of financial backers in buying the organization's stock with the goal that the stock cost rises and the organization's worth ascents too. This current review's discoveries are predictable with those of Stryarini (2016), Yuliana (2015), and Arengga (2020), who observed that the Debt-to-Equity Ratio affects business esteem. Benefits will ascend in the event that high obligation is joined with great handling [7].

5 Conclusion

a. The factors Return on Assets, Return on Equity, and Debt to Equity Ratio all essentially affect the obligation to-value proportion firm worth at the same time.
b. Return on Assets variable fundamentally affects firm worth fairly.
c. The Return on Equity variable has no impact and isn't critical on the firm worth somewhat.
d. The variable partially the obligation to-value proportion altogether affects the worth of a business.

The food and beverage company are one of the companies that survives and grows better during COVID-19 pandemic. This is because the company carries out various good strategies, carries out activities that have a direct impact on the company's achievements, makes changes to the company's financial arrangements, carries out various innovations, and makes efficiency (cost savings) of the company's operational activities. In light of the examination's discoveries, the association ought to hold or further develop its resource the executives capacities to procure income benefits, increment the organization's ability in overseeing business capital that can be gotten back from value into benefit and the organization can expand the capacity to exploit the expenses of obligation and acquire benefits.

References

[1] Indrarini, Silvia. *Nilai Perusahaan Melalui Kualitas Laba.* Penerbit Scopindo Media Pustaka, (2019)

[2] Kasmir. *Analisis Laporan Keuangan*. Depok PT. Raja Grafindo Persada, 2018.

[3] Hutabarat, Francis. *Analisis Kinerja Keuangan Perusahaan*. Penerbit Desanta Muliavisitama, 2020.

[4] Sujarweni, Wiratna. *Manajemen Keuangan.* Penerbit Pustaka Baru Press, 2019.

[5] Suyoto Sandu, Sodik Ali. *Dasar Metodologi Penelitian*. Penerbit Literasi Media Publhising, 2015.

[6] Sugiyono. *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*. Penerbit Alfabeta Cv, 2016.

[7] Striyarini. *Pengaruh Profitabilitas, Ukuran Perusahaan, Dan Leverage Terhadap Nilai Perusahaan, Studi Pada Perusahaan Transportasi Yang Terdaftar Di Bursa Efek Indonesia Periode 2013-2017.* Jurnal Publikasi Sekolah Tinggi Ilmu Ekonomi Indonesia (Stiesia) Surabaya, 2017. Error! Hyperlink reference not valid. jam 19:15

[8] Ainur, Siti dan Astri. *Pengaruh Kinerja Keuangan Terhadap Nilai Perusahaan Kebijakan Dividen Sebagai Variabel Moderating.* Jurnal Publikasi Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya (2017).Error! Hyperlink reference not valid. Jam 18:55.

[9] Agustina, Cahyani, dan Anindya. *Pengaruh Faktor Ekonomi Makro Dan Kinerja Keuangan Terhadap Nilai Perusahaan Management Universitas Negeri Semarang.* Semarang, Indonesia (2015). Derived from *https://journal. unnes.ac.id/sju/index.php/maj* Accessed on June, 26, 2021

[10] Maryati Rahayu dan Bida Sari. *Faktor-faktor dalam kinerja keuangan yang mempengaruhi nilai perusahaan tahun 2013-2016*. Universitas Persada Indonesia, Jakarta (2018). Derived from *https://repository.upiyai.ac.id/1776/ /Ikraith %20Bida2017_new.pdf*