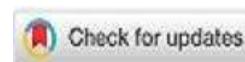


# THE EFFECT OF RETURN ON ASSETS AND DEBT TO EQUITY RATIO ON PRICE TO BOOK VALUE



Firiyal Luthfi Syihab<sup>1</sup> Taufik Sadikin<sup>2</sup>

<sup>1,2</sup>Fakultas Ekonomi dan Bisnis, Universitas Langlangbuana, Bandung, Indonesia

<sup>1</sup>Email: [firiayluthfis@gmail.com](mailto:firiayluthfis@gmail.com), <sup>2</sup>Email: [pixdanishridho@gmail.com](mailto:pixdanishridho@gmail.com)

---

## Article Info

---

**Received Date:**

10 May 2024

**Accepted Date:**

23 June 2024

---

---

### Keywords:

First keyword: Return on Asset  
Second keyword: Debt to Equity Ratio  
Third keyword: Price to Book Value

---

### JEL Classification:

L10, M41

---

### Corresponding Author:

Firiyal Luthfi Syihab,  
[firiayluthfis@gmail.com](mailto:firiayluthfis@gmail.com)

*This is an open access article under the [CC BY](#) license.*



---

### ABSTRACT

This study aims to measure how much Return On Asset (ROA) and Debt To Equity Ratio (DER) effect Price To Book Value (PBV) in property and real estate sub-sector companies listed on the Indonesia Stock Exchange for the 2019-2023 period. This Study Uses a quantitative approach using secondary data in the form of the company's annual financial statements. The population in this study amounted to 29 companies, using purposive sampling method obtained 19 companies. The data analysis technique used in this study is panel data regression, classical assumption testing. Coefficient of determination and hypothesis testing using the t-test and f-test using Eviews 13. Based on partial testing, it shows that Return On Asset (ROA) has a negative effect on Price To Book Value (PBV) and Debt To Equity Ratio (DER) has positive effect on Price To Book Value (PBV), then for simultaneous testing it shows that Return On Asset (ROA) and Debt To Equity Ratio (DER) together have an effect on Price To Book Value (PBV).

---

## 1. INTRODUCTION

Current economic conditions have created intense competition between companies in the industrial sector. Competition makes each company increasingly improve performance so that the company's main objectives can still be achieved. The company has a goal other than increasing company profits, namely maximizing company value. Every company generally has short-term and long-term goals. The company's short-term goal is to obtain the maximum possible profit by utilizing the resources owned by the company for one period of time, while the long-term goal is to maximize company value.

Increasing company value can be achieved if company management and owners are able to establish good cooperation with other parties in making financial decisions such as assessing asset management and profits made by company management based on financial reports which are used as the basis for making a decision (Febrian, (2022)). This value reflects the value of the assets owned by the company as commonly referred to as securities or company shares. According to Dwi Purnomo (2021:2) company value is the investor's perception of the manager's success rate in managing the company's resources entrusted to him which is often related to the stock price. Company value is often associated with stock prices, the higher the price, the higher the company value and vice versa.

Company value is measured using price to book value (PBV) one of the factors that can affect firm value is the profitability ratio and solvency ratio. Profitability ratios are ratios to assess a company's ability to earn profit or profit within a certain period of time. Profitability ratios are often used not only for operational management, but also for investor decision making. While solvency is a ratio used to measure the extent to which the company's assets are financed by the debt owned by the company. Solvency can also be said to be a ratio to show the company's ability to pay all debts owned.

In this study, profitability ratio is measured using Return On Asset and solvency is measured using Debt to Equity Ratio. Many studies have been conducted on ROA, DER, and PBV. Empirical evidence regarding the effect of Return On Asset, Debt to Equity Ratio on Price to Book Value in research conducted by (Aprilia Febrian, 2022) states that return on assets and debt to equity ratio have a positive and significant effect on price to book value.

## **2. LITERATURE REVIEW and HYPOTHESIS**

### **2.1. Literature Review**

Return on Assets (ROA) is a ratio used to measure how much net profit is obtained from the management of all assets owned by the company (Seto et al., 2023:51). Used to measure effectiveness and find out how capable a company is of managing assets to generate profits. This ratio calculates the return on investment that has been made by the company using all the funds, or assets, it has. This ratio calculates the return on investment that has been made by the company using all the funds, or assets, it has. Return On Asset (ROA) increase shows the better the company's ability to generate profits, the company will attract investors to buy the company's shares.

While the Debt To Equity Ratio (DER) is a financial ratio that describes the company's ability to pay existing debt with existing capital, the higher the value, the more financial risk the company has. The purpose and benefits of the debt to equity ratio (DER) to determine and analyze the importance of the debt to equity ratio in accordance with company ownership, namely the amount of capital available to the company, which means how much the company's capital is financed by debt which is a long-term liability for the company so that a solution can be found to reduce this ratio because this can affect the value of the company's assets.

Furthermore, the dependent variable, namely Price to Book Value (PBV), is one of the indicators used to evaluate the performance of a company. PBV provides a comparison of stock prices and book value per share. The higher the PBV value, the more the company is valued by investors in connection with their investment in the company (Anugrah & Syaichu, 2017). The higher the PBV value, the higher the stock market price. If the market price increases, the profit from the stock will also increase. When investment increases, the company's shares also increase. Price to Book Value (PBV) shows the amount of company value of things that have been or are being invested by company owners. The higher this ratio, the greater the additional wealth enjoyed by the company owners. If the market price is below its book value, investors perceive that the company is not potential enough. If an investor is pessimistic about the prospects of a stock, he will sell the stock at a price below its book value. Conversely, if the investor is optimistic, he will sell the stock at a price above its book value.

## 2.2. Hypothesis

H1: There is a positive effect of return on asset on price to book value

H2: There is a negative influence of debt to equity ratio on price to book value

H3: There is a simultaneous influence of the return on asset and debt to equity ratio on the price to book value

## 3. METHODS

Research Design is a framework of research methods and techniques designed to achieve scientific goals by obtaining and then managing the information or data needed to answer research problems. In this study, two analyses were used, namely descriptive and verification. descriptive research according to (Sugiyono, 2023) is research conducted to determine the existence of independent variables, either only on one or more variables (stand-alone variables) without making comparisons of these variables in other samples, and looking for the relationship of these variables with other variables. Descriptive research is used to find out how Return On Asset, Debt to Equity Ratio and Price To Book Value in the property and real estate sub-sectors listed on the Indonesia Stock Exchange for the 2019-2023 period.

Meanwhile, verification research according to (Sugiyono, 2023) is "Research that asks about the relationship between two or more variables". The purpose of this approach is to determine whether a variable has an influence on other variables. Verification research in this study is used to determine how much influence Return On Asset, Debt to Equity Ratio and Price to Book Value have on the property and real estate sub-sectors listed on the Indonesia Stock Exchange for the 2019-2023 period

The population in this study is a sub-sector of property and real estate companies listed in the Indonesia Stock Exchange period 2019-2023 as 89 companies, where to determine the sample used purposive sampling method, as many as 19 companies were obtained as samples of research. Data collection

techniques are done with online research and libraries. Data analysis is done using Double Regression panel data using Eviews

## 4. RESULTS

### Descriptive Research Results

**Table 1.**  
**Descriptive Test**

	X1	X2	Y
Mean	1.574400	0.721840	0.177200
Median	0.799000	0.708000	0.077000
Maximum	7.928000	1.809000	0.507000
Minimum	-4.884000	0.051000	0.025000
Std. Dev.	3.414390	0.591242	0.163778
Skewness	-0.019863	0.307952	0.832004
Kurtosis	2.038896	1.777697	2.213906
Jarque-Bera	0.963854	1.951418	3.527983
Probability	0.617592	0.376925	0.171360
Sum	39.36000	18.04600	4.430000
Sum Sq. Dev.	279.7935	8.389605	0.643758
Observations	25	25	25

Source: data that has been processed by the author (2024)

**Table 2.**  
**The condition of return on assets (ROA) in the property and real estate sub-sector listed on the Indonesia Stock Exchange for the period 2019-2023.**

No	Kode Emiten	Periode					Mean	Min	Max
		2019	2020	2021	2022	2023			
1	APLN	0,410	0,593	-1,639	7,928	4,111	2,748	-1,639	7,928
2	ASRI	4,627	-4,884	0,652	4,926	2,868	0,890	-4,884	4,926
3	BAPA	4,683	-2,609	-2,678	-2,741	-2,119	-2,537	-2,741	4,683
4	BSDE	5,739	0,799	2,503	4,088	3,381	2,693	0,799	5,739
5	CITY	3,450	6,926	0,246	-2,173	0,273	1,318	-2,173	6,926
6	DMAS	17,532	19,972	11,692	18,397	18,023	17,021	11,692	19,972
7	FMII	0,305	-0,170	0,985	1,899	2,219	1,233	-0,170	2,219
8	GMTD	-6,331	-10,731	-2,552	0,775	10,716	-0,448	-10,731	10,716
9	GPRA	3,237	2,533	2,814	4,286	4,937	3,642	2,533	4,937
10	GWSA	1,665	-0,758	0,264	0,394	0,781	0,170	-0,758	1,665
11	MKPI	8,448	3,032	4,061	8,599	10,066	6,440	3,032	10,066

No	Kode Emiten	Periode					Mean	Min	Max
		2019	2020	2021	2022	2023			
12	MMLP	4,053	-1,324	5,153	2,548	1,689	2,016	-1,324	5,153
13	MPRO	1,806	0,722	-0,793	-1,693	-2,278	-1,011	-2,278	1,806
14	MTLA	7,984	4,826	5,939	6,205	6,826	5,949	4,826	7,984
15	PPRO	2,015	0,684	0,100	0,111	-6,520	-1,406	-6,520	2,015
16	RISE	0,284	-1,657	1,548	1,322	0,461	0,418	-1,657	1,548
17	RODA	-7,058	-4,269	0,897	0,729	1,017	-0,407	-7,058	1,017
18	SATU	-5,927	-7,330	-6,555	-4,303	-2,181	-5,092	-7,330	-2,181
19	TARA	0,094	-1,155	1,975	-0,282	-0,243	0,074	-1,155	1,975

Source: data that has been processed by the author (2024)

Based on the results of Return On Asset (ROA) above, the company that has the highest mean value in the return on asset ratio is PT Puradelta Lestari Tbk of 17.021 with a maximum return on asset value of 19.972 in 2020 and a minimum value of 11.692 in 2021. Furthermore, the company that has the lowest mean value is the company PT Kota Satu Properti Tbk of -5.092 with a maximum return on asset value of -2.181 in 2023 and a minimum value of -7.330 in 2020. Changes in the value of return on assets in a company depend on effective and efficient asset management. A decrease in this ratio indicates that the company is ineffective in managing assets for profit, while an increase in the value of this ratio indicates that the company can effectively manage assets for profit.

**Table 3.**  
**The condition of the debt to equity ratio (DER) in the property and real estate sub-sector listed on the Indonesia Stock Exchange for the period 2019-2023.**

No	Kode Emiten	Periode					Mean	Min	Max
		2019	2020	2021	2022	2023			
1	APLN	1,295	1,676	1,809	1,295	1,676	1,551	1,295	1,809
2	ASRI	1,073	1,262	1,300	1,095	0,973	1,141	0,973	1,300
3	BAPA	0,382	0,053	0,061	0,051	0,072	0,124	0,051	0,382
4	BSDE	0,622	0,766	0,713	0,708	0,622	0,686	0,622	0,766
5	CITY	0,139	0,091	0,087	0,092	0,133	0,109	0,087	0,139
6	DMAS	0,173	0,221	0,143	0,157	0,143	0,167	0,143	0,221
7	FMII	0,421	0,393	0,367	0,155	0,169	0,301	0,155	0,421
8	GMTD	0,605	0,882	1,067	1,050	0,729	0,866	0,605	1,067
9	GPRA	0,506	0,640	0,592	0,512	0,541	0,558	0,506	0,640
10	GWSA	0,083	0,083	0,081	0,108	0,110	0,093	0,081	0,110
11	MKPI	0,322	0,359	0,370	0,268	0,224	0,309	0,224	0,370
12	MMLP	0,201	0,167	0,154	0,235	0,475	0,246	0,154	0,475
13	MPRO	0,291	0,294	0,301	0,302	0,329	0,303	0,291	0,329

No	Kode Emiten	Periode					Mean	Min	Max
		2019	2020	2021	2022	2023			
14	MTLA	0,370	0,491	0,421	0,417	0,402	0,420	0,370	0,491
15	PPRO	3,049	3,155	3,688	3,788	4,992	3,734	3,049	4,992
16	RISE	0,254	0,285	0,168	0,178	0,317	0,241	0,168	0,317
17	RODA	0,608	0,788	0,637	0,599	0,561	0,639	0,561	0,788
18	SATU	1,839	2,024	2,753	1,986	2,135	2,147	1,839	2,753
19	TARA	0,064	0,044	0,021	0,019	0,020	0,034	0,019	0,064

Source: data that has been processed by the author (2024)

Based on the results of the Debt To Equity Ratio (DER) above, the company that has the highest mean value in the debt to equity ratio is PT PP Properti Tbk of 3.049 with a maximum debt to equity ratio value of 4.992 in 2023 and a minimum value of 3.049 in 2019. Furthermore, the company that has the lowest mean value is the company PT Agung Semesta Sejahtera Tbk of 0.034 with a maximum debt to equity ratio value of 0.064 in 2019 and a minimum value of 0.019 in 2022. Changes in the value of debt to equity ratio in a company depend on the management of debt with its capital. A decrease in this ratio indicates that the debt of a company with the capital of a company is well managed to reduce the risk of bankruptcy, while an increase in the value of this ratio indicates that the debt of a company with the capital of a company is not well managed which will cause the risk of bankruptcy.

**Table 4.**  
**Price to book value (PBV) conditions in the property and real estate sub-sector listed on the Indonesia Stock Exchange for the period 2019-2023.**

No	Kode Emiten	Periode					Mean	Min	Max
		2019	2020	2021	2022	2023			
1	APLN	0,450	0,264	0,490	0,280	0,218	0,340	0,218	0,490
2	ASRI	0,443	0,507	0,334	0,295	0,286	0,373	0,286	0,507
3	BAPA	0,041	0,034	0,025	0,049	0,035	0,037	0,025	0,049
4	BSDE	0,072	0,075	0,060	0,051	0,055	0,063	0,051	0,075
5	CITY	0,077	0,054	0,107	0,089	0,039	0,073	0,039	0,107
6	DMAS	0,220	0,214	0,172	0,134	0,134	0,175	0,134	0,220
7	FMII	0,304	0,292	0,194	0,107	0,312	0,242	0,107	0,312
8	GMTD	0,037	0,043	0,046	0,045	0,004	0,035	0,004	0,046
9	GPRA	0,029	0,030	0,034	0,036	0,032	0,032	0,029	0,036
10	GWSA	0,017	0,015	0,020	0,017	0,017	0,017	0,015	0,020
11	MKPI	0,279	0,473	0,405	0,575	0,376	0,422	0,279	0,575
12	MMLP	0,024	0,036	0,062	0,053	0,045	0,044	0,024	0,062
13	MPRO	1,681	1,264	0,624	1,133	1,623	1,265	0,624	1,681
14	MTLA	0,727	0,807	0,799	0,621	0,601	0,711	0,601	0,807

No	Kode Emiten	Periode					Mean	Min	Max
		2019	2020	2021	2022	2023			
15	PPRO	0,095	0,130	0,080	0,068	0,094	0,093	0,068	0,130
16	RISE	0,301	0,239	0,185	0,480	0,447	0,330	0,185	0,480
17	RODA	0,028	0,031	0,054	0,035	0,031	0,036	0,028	0,054
18	SATU	0,109	0,076	0,197	0,148	0,229	0,152	0,076	0,229
19	TARA	0,376	0,048	0,047	0,048	0,007	0,105	0,007	0,376

Source: data that has been processed by the author (2024)

Based on the results of Price To Book Value (PBV) above, the company that has the highest mean value in the price to book value ratio is PT Maha Properti Indonesia Tbk of 1.265 with a maximum price to book value of 1.681 in 2019 and a minimum value of 0.624 in 2021. Furthermore, the company that has the lowest mean value is the company PT Perdana Gapuraprime Tbk of 0.032 with a maximum price to book value of 0.036 in 2022 and a minimum value of 0.029 in 2019. The increase and decrease in price to book value of a company is due to investors being optimistic about market conditions, so the stock price will increase, on the other hand, if investors are pessimistic, the stock price will tend to fall.

## PANEL DATA REGRESSION ESTIMATION METHOD

### Common Effect Model

Common Effect is the simplest method commonly called CEM or Pooled Least Square estimation. This model does not focus on one dimension or time, therefore individual behavior is assumed to be the same in each time period. (Prabowo, 2020:45).

**Table 5. Common Effect Model Test Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.025093	0.030769	0.815527	0.4235
X1	-0.010194	0.005765	-1.768199	0.0909
X2	0.232956	0.033294	6.996902	0.0000
R-squared	0.691431	Mean dependent var		0.177200
Adjusted R-squared	0.663379	S.D. dependent var		0.163778
S.E. of regression	0.095022	Akaike info criterion		-1.757240
Sum squared resid	0.198644	Schwarz criterion		-1.610975
Log likelihood	24.96550	Hannan-Quinn criter.		-1.716672
F-statistic	24.64839	Durbin-Watson stat		1.057960
Prob(F-statistic)	0.000002			

Source: data processed with Eviews 13

## Fixed Effect Model

The Fixed Effect model assumes that there are different influences between individuals. This difference can be overcome by using intercept differences.

**Table 6. Fixed Effect Model Test Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.184471	0.077968	2.365989	0.0294
X1	-0.010304	0.004406	-2.338427	0.0311
X2	0.012401	0.104142	0.119082	0.9065
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.881989	Mean dependent var		0.177200
Adjusted R-squared	0.842652	S.D. dependent var		0.163778
S.E. of regression	0.064966	Akaike info criterion		-2.398408
Sum squared resid	0.075971	Schwarz criterion		-2.057123
Log likelihood	36.98010	Hannan-Quinn criter.		-2.303750
F-statistic	22.42135	Durbin-Watson stat		1.982294
Prob(F-statistic)	0.000000			

Source: data processed with Eviews 13

## Random Effect Model

The random effect test differs from other models through errors. In addition, this method considers the possibility of correlation of errors, time series and cross section because the error component occurs more than one.

**Table 7. Random Effect Model Test Result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.075054	0.063061	1.190185	0.2467
X1	-0.008929	0.004280	-2.086217	0.0488
X2	0.160983	0.061725	2.608080	0.0161
Effects Specification				
				S.D.      Rho
Cross-section random				0.093234      0.6732
Idiosyncratic random				0.064966      0.3268
Weighted Statistics				
R-squared	0.338028	Mean dependent var		0.052719

Adjusted R-squared	0.277849	S.D. dependent var	0.078705
S.E. of regression	0.066883	Sum squared resid	0.098415
F-statistic	5.617021	Durbin-Watson stat	1.818154
Prob(F-statistic)	0.010696		
Unweighted Statistics			
R-squared	0.625565	Mean dependent var	0.177200
Sum squared resid	0.241046	Durbin-Watson stat	0.742321

Source: data processed with Eviews 13

## THE SELECTION OF PANEL DATA REGRESSION MODEL

### Chow Test

The Chow test is a test to choose between the common effect model, and the fixed effect model which is more appropriate to use. (Kusumaningtyas et al., 2022:21).

**Table 8. Chow Test Results**

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.266371	(4,18)	0.0011
Cross-section Chi-square	24.029205	4	0.0001

Based on the chow test results above that the probability on the cross-section F is  $0.001 < 0.05$ , it can be concluded that it is necessary to conduct a Hausman test to determine which model is better between the fixed effect model or the random effect model.

### Hausman Test

The Hausman test is a test to choose between the fixed effect model, and the random effect model that is most appropriate to use (Kusumaningtyas et al., 2022:21).

**Table 9. Hausman Test Result**

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	3.317799	2	0.1903

Based on the results of the Hausman test, the chi-square probability is 0.190 > 0.05. So it can be concluded that the random effect model is more suitable for use.

### Lagrange Multiplier Test

The Lagrange Multiplier test is a test to determine whether the random effect model is better than the common effect model used.

**Table 10. Lagrange Multiplier Test Result**

Lagrange Multiplier Tests for Random Effects  
 Null hypotheses: No effects  
 Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided  
 (all others) alternatives

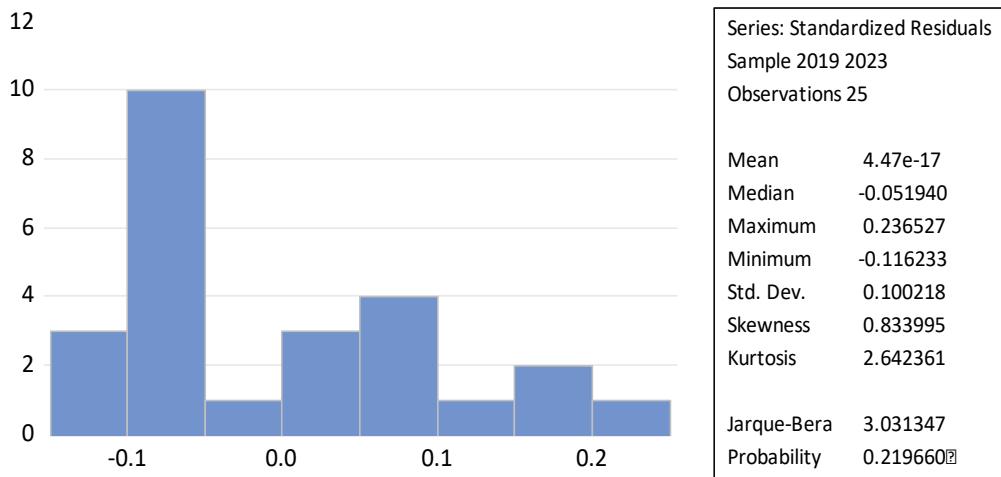
	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	7.932779 (0.0049)	0.088857 (0.7656)	8.021636 (0.0046)
Honda	2.816519 (0.0024)	-0.298089 (0.6172)	1.780799 (0.0375)
King-Wu	2.816519 (0.0024)	-0.298089 (0.6172)	1.780799 (0.0375)
Standardized Honda	4.103102 (0.0000)	-0.054177 (0.5216)	-0.146047 (0.5581)
Standardized King-Wu	4.103102 (0.0000)	-0.054177 (0.5216)	-0.146047 (0.5581)
Gourieroux, et al.	--	--	7.932779 (0.0072)

Source: data processed with Eviews 13

Based on the Lagrange Multiplier test results, the Breusch-Pagan probability of 0.004 < 0.05 is obtained. So it can be concluded that the random effect is more appropriate to use.

### Normality Test

The normality test is a test carried out with the aim of assessing the distribution of data in a data group or variable, whether the data distribution is normally distributed or not.



**Figure 1. Normality Test Result**  
Source: data processed with Eviews 13

Based on the results of the normality test above, it shows that the Jarque-Bera probability value is  $0.219660 > 0.05$ , it can be concluded that this study has normally distributed residuals.

### Multicollinearity Test

Multicollinearity is a situation that indicates a strong relationship or correlation between two or more independent variables in a regression model.

**Table 11. Multicollinearity Test Result**

	X1	X2
X1	1.000000	0.170579
X2	0.170579	1.000000

Source: data processed with Eviews 13

Based on the multicollinearity test results above, if the tolerance  $> 0.10$  or VIF  $< 10$  indicates that there is no multicollinearity in the study. it can be concluded that the correlation coefficient value of 0.170579 is between 0.10 and 10, indicating that there is no multicollinearity.

### Analysis of Panel Data Regression Results

That there are several types of data available for statistical analysis, including time series data, cross-section data and panel data, which is a combination of time series and cross section data (Ghozali & Ratmono, 2017:195).

**Table 12. Panel Data Regression Test Results**

Dependent Variable: Y  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 06/11/24 Time: 23:11  
 Sample: 2019 2023  
 Periods included: 5  
 Cross-sections included: 5  
 Total panel (balanced) observations: 25  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.075054	0.063061	1.190185	0.2467
X1	-0.008929	0.004280	-2.086217	0.0488
X2	0.160983	0.061725	2.608080	0.0161

Source: data processed with Eviews 13

The explanation is as follows: The constant value is 0.075. Indicates that if the variable return on assets and debt to equity ratio are considered constant, the company value variable obtained is 0.075.

The regression coefficient value of the return on asset variable is -0.008. Indicates that if other independent variables are constant, then if the return on assets increases, it will be followed by a decrease in price to book value of -0.008.

The regression coefficient value of the debt to equity ratio variable is 0.160. Indicates that if other independent variables are constant, then if return on assets increases, it will be followed by an increase in price to book value of 0.160.

Then the panel data regression equation can be formulated as follows:

$$\text{Price to Book Value} = 0,075 - 0,008\text{ROA} + 0,160\text{DER}$$

## Determination Coefficient Test

The coefficient of determination test aims to see how much influence the independent variable is able to explain its effect on the dependent variable. This test looks at the Adjusted R-Square coefficient of determination obtained from the estimated equation.

**Table 13. Partial Determination Coefficient Test Results Return On Asset**

R-squared	0.209001	Mean dependent var	0.027333
Adjusted R-squared	0.174610	S.D. dependent var	0.068774
S.E. of regression	0.062481	Sum squared resid	0.089790
F-statistic	6.077149	Durbin-Watson stat	1.671731
Prob(F-statistic)	0.021585		

Based on the results of the partial determination coefficient of return on assets above, the Adjusted R-Square value of return on assets is 0.174 or 17.4%. This shows that the return on asset variable is able to explain the price to book value variable by 17.4%, while the remaining 82.6% is explained by other variables.

**Table 14. Partial Determination Coefficient Test Results Debt To Equity Ratio**

R-squared	0.289712	Mean dependent var	0.064859
Adjusted R-squared	0.258830	S.D. dependent var	0.084990
S.E. of regression	0.073169	Sum squared resid	0.123136
F-statistic	9.381233	Durbin-Watson stat	1.762076
Prob(F-statistic)	0.005511		

Source: data processed with Eviews 13

Based on the results of the partial determination coefficient of Debt to equity Ratio above, the Adjusted R-Square debt to equity ratio value is 0.258 or 25.8%. This shows that the return on assets variable is able to explain the price to book value variable by 25.8%, while the remaining 74.2% is explained by other variables.

**Table 15. Simultaneous Determination Coefficient Test Results**

R-squared	0.338028	Mean dependent var	0.052719
Adjusted R-squared	0.277849	S.D. dependent var	0.078705
S.E. of regression	0.066883	Sum squared resid	0.098415
F-statistic	5.617021	Durbin-Watson stat	1.818154
Prob(F-statistic)	0.010696		

Source: data processed with Eviews 13

Based on the table of coefficient of determination test results above, the Adjusted R-Square value is 0.277 or 27.7%. This shows that the independent variables consisting of the return on assets and debt to equity ratio variables are able to explain the price to book value variable by 27.7%, while the remaining 72.3% is explained by other variables not in the regression model.

## Hypothesis Test Analysis

### Partial t Test

Partial test (t test) is essentially a hypothesis test that shows the extent to which the independent variable affects individually in explaining the variance of the dependent variable (Fariz, 2018:60). The criteria for acceptance and rejection of the hypothesis are if  $t \text{ count} > t \text{ table}$  indicates that it has a significant effect, while if  $t \text{ count} < t \text{ table}$  indicates that it does not have a significant effect. There are criteria based on the significance value if the significant value of  $t < 0.05$  means that the independent variable partially affects the dependent variable, while the significant value of  $t > 0.05$  means that the independent variable partially has no effect on the dependent variable.

**Table 16. t Test Result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.075054	0.063061	1.190185	0.2467
X1	-0.008929	0.004280	-2.086217	0.0488
X2	0.160983	0.061725	2.608080	0.0161

Source: data processed with Eviews 13

The effect of the independent variables on the dependent variable partially is as follows:

The t count of the return on asset variable is  $-2.086 > t$  table, which is 1.985 and the probability value of the return on asset variable is  $0.048 < 0.05$ . Therefore, it shows that partially the return on assets variable has a negative and significant effect on price to book value.

The t count of the debt to equity ratio variable is  $2.608 > t$  table, which is 1.985 and the probability value of the debt to equity ratio variable is  $0.061 < 0.05$ . Therefore, it shows that partially the debt to equity ratio variable has a positive and significant effect on price to book value.

### Simultaneous F Test

The simultaneous test (F test) basically shows whether all independent variables included in the model have a simultaneous influence or not on the dependent variable Sugiyono (2007:210) dalam (Roslia & Yahya, 2018:9).

**Table 17. F Test Result**

R-squared	0.338028	Mean dependent var	0.052719
Adjusted R-squared	0.277849	S.D. dependent var	0.078705
S.E. of regression	0.066883	Sum squared resid	0.098415
F-statistic	5.617021	Durbin-Watson stat	1.818154
Prob(F-statistic)	0.010696		

Source: data processed with Eviews 13

Based on Table 4.16 above, it is known that F count is  $5.617 > F$  table, which is 3.095 with a probability value of  $0.010 < 0.05$ , indicating that the variable return on assets and debt to equity ratio simultaneously affects price to book value.

## 5. DISCUSSION

### The Effect of Return On Asset on Price To Book Value

Based on the results of the research test, it shows that return on assets has a significant effect with a negative direction on price to book value. The results

showed that the higher the return on assets applied by property and real estate companies listed on the Indonesia Stock Exchange will reduce the price to book value. So that H1 which states that return on assets has a positive and significant effect can be rejected.

Return On Asset (ROA) is a ratio that measures the company's ability to generate profits using all assets owned by the company after adjusting for the cost of funding these assets. The higher the ROA value, the higher the profit earned. The high value of ROA will attract interest and increase investor confidence to invest. The results of this study indicate that the ROA value is inversely proportional to PBV. This is due to the management performance in using the company's assets that have not been able to be managed efficiently and effectively which causes asset productivity to have less influence on the profits earned because it is more influenced by other factors that are aligned with the company's PBV.

The results of this study are in line with research conducted by (Triagustina, Sukarmanto, & Helliana, 2015) which states that return on assets has a negative and significant effect on price to book value.

### **The Effect of Debt To Equity Ratio on Price To Book Value**

Based on the results of the study, it shows that the debt to equity ratio has a significant positive effect on price to book value. The results showed that the higher the debt to equity ratio applied by property and real estate companies listed on the Indonesia Stock Exchange will increase the price to book value. So that H2 which states that the debt to equity ratio has a positive and significant effect can be accepted.

This shows that the amount of debt is greater than the capital it has, meaning that debt cannot be managed properly which will cause the risk of bankruptcy, and vice versa. But the debt to equity ratio of each company has different business characters and the diversity of a company's cash flow which if the company manages its debt optimally, it can increase profits. Companies that have a higher debt to equity ratio than companies have stable cash flow (Setiawan, 2011).

The results of this study are in line with research conducted by (Salainti, 2019) which states that return on assets has a positive and significant effect on price to book value.

### **The Effect of Return On Asset and Debt To Equity Ratio on Price To Book Value**

Based on the results of the study simultaneously, it shows that return on assets and debt to equity ratio have a significant positive effect on price to book value. The results showed that the higher the return on assets and debt to equity ratio applied by property and real estate companies listed on the Indonesia Stock Exchange will increase the price to book value. This can be seen from the regression coefficient of 5.617, which means that any increase in return on assets and debt to equity ratio will increase the price to book value by 5.617, so H3 can be accepted.

Return on assets is caused by management's performance in using company assets that can be managed efficiently and effectively which causes the net profit generated to be large. While the debt to equity ratio shows that the amount of debt is greater than the capital it has, meaning that debt cannot be managed properly which will cause the risk of bankruptcy, and vice versa, but if the company can manage debt optimally it can increase profits.

The results of this study are in line with research conducted by (Haryati & Ayem, 2016) which states that return on assets has a positive and significant effect on price to book value.

## 6. CONCLUSION and LIMITATION

Based on the results of hypothesis testing, the research findings regarding the effect of return on assets and debt to equity ratio on price to book value in property and real estate sub-sector companies listed on the Indonesia Stock Exchange for the 2019-2023 period, it is concluded that return on assets has a negative effect on price to book value, while debt to equity ratio has a positive effect on price to book value, and together return on assets and debt to equity ratio have a positive effect on price to book value in these companies during the period studied

As the suggestion in this research is mainly for further research is by adding data so it is expected to provide more information and represent information overall

## REFERENCES

Anugrah, A., & Syaichu, M. (2017). Analisis Pengaruh Return On Equity, Debt To Equity Ratio, Current Ratio, dan Price To Book Value Terhadap Return Saham Syariah. *Ekonomi Dan Bisnis/Manajemen*, 6(1), 1–12.

Dwi Purnomo, A., Fatimah, I., & Nurhalimah, S. (2021). Pengaruh Kebijakan Dividen, Profitabilitas, Dan Ukuran Perusahaan Terhadap Nilai Perusahaan Pada Perusahaan Manufaktur Di Bursa Efek Indonesia. *Jurnal Studia Akuntansi Dan Bisnis (The Indonesian Journal of Management & Accounting)*, 9(2), 7823–7830. <https://doi.org/10.55171/jsab.v9i2.575>

Fariz, R. (2018). Pengaruh Brand Imag, Kualitas Produk, dan Lokasi Terhadap Proses Keputusan Nasabah Dalam Mengajukan Akad Mudharabah Pada Bank Syariah Mandiri, 1(1).

Febrian, L. A., Sunarto, A., & Elwardah, K. (2022a). Pengaruh Return on Assets (ROA) , Debt to Equity Ratio (DER) , dan Current Ratio (CR) terhadap Nilai Perusahaan pada Jakarta Islamic Index 70. *Ekombis Reviews: Jurnal Ilmiah Ekonomi dan Bisnis* (Vol. 10). <https://doi.org/10.37676/ekombis.v10i2.2218>

Febrian, L. A., Sunarto, A., & Elwardah, K. (2022b). Pengaruh Return on Assets (ROA) , Debt to Equity Ratio (DER) , dan Current Ratio (CR) terhadap Nilai Perusahaan pada Jakarta Islamic Index 70. *Ekombis Reviews: Jurnal Ilmiah Ekonomi Dan Bisnis*, 10(2), 991–1002. <https://doi.org/10.37676/ekombis.v10i2.2218>

Ghozali, I., & Ratmono, D. (2017). Analisis multivariat dan ekonometrika: teori, konsep, dan aplikasi dengan eview 10.

Haryati, W., & Ayem, S. (2016). Pengaruh Return On Asset, Debt To Equity Ratio, dan Earning Per Share Terhadap Nilai Perusahaan (Studi Kasus Pada Perusahaan Food and

Beverages Yang Terdaftar Di BEI Periode 2009-2011). *Jurnal Akuntansi*, 2(1), 43–55. <https://doi.org/10.24964/ja.v2i1.23>

Kusumaningtyas, E., Sugiyanto, Subagyo, E., Adinugroho, W. C., Jacob, J., Berry, Y., ... Syah, S. (2022). Konsep dan Praktik Ekonometrika Menggunakan Eviews. Academia Publication.

Prabowo, M. S. (2020). Pengaruh Faktor Makroekonomi Terhadap Return Saham Pada Indeks LQ45 Periode 2015-2019. *Journal of Physics A: Mathematical and Theoretical*, 44(8), 90–96. <https://doi.org/10.1088/1751-8113/44/8/085201>

Roslia, A. R., & Yahya, Y. (2018). Pengaruh CR , DER , ROE dan EPS Terhadap Return Saham Perusahaan Farmasi Di BEI. *Ilmu Dan Riset Manajemen*, 7(3), 1–19.

Salainti, M. L. I. (2019). Pengaruh Current Ratio, Total Asset Turnover Debt to Equity Ratio dan Return On Asset terhadap Nilai Perusahaan pada Perusahaan Property dan Real Estate yang terdaftar di BEI periode 2015-2018. *Jurnal Ilmu Dan Riset Manajemen*, 8(10), 1–23.

Setiawan, R. 2011. (2011). Pengaruh Return on Assets (Roa), Debt To Equity Ratio (Der), Dan Price To Book Value (Pbv) Terhadap Harga Saham Perusahaan Manufaktur Di BEI Periode 2007 - 2009.

Seto, A. A., Yulianti, M. L., Kusumastuti, R., Astuti, N., Febrianto, H. G., Sukma, P., ... Hakim, M. Z. (2023). Analisis Laporan Keuangan.

Sugiyono 2023. (2023). Metode Penelitian Kuantitatif, Kualitatif, dan R&D.

Triagustina, L., Sukarmanto, E., & Helliana. (2015). Pengaruh Return On Asset (ROA) Dan Return On Equity (ROE) Terhadap Nilai Perusahaan Pada Perusahaan Manufaktur Subsektor Makanan Dan Minuman Yang Terdaftar Di Bursa Efek Indonesia Periode 2010-2012. *Prosiding Akuntansi*, 28–34. Retrieved from <http://karyailmiah.unisba.ac.id/index.php/akuntansi/article/view/1549>