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LETTER OF ACCEPTANCE FOR PUBLICATION

Dear, Mahirun Mahirun, Anggrainy Putri Ayuningrum, Andi Kushermanto, Titi Rahayu Prasetiani, Arih Jannati, Komala Ardiyani,

Congratulations! Your submission entitled; "THE EFFECT OF CAPITAL STRUCTURE ON FIRM VALUE OF LQ45 INDEX LISTED IN INDONESIA STOCK EXCHANGE" will be published in the 25(2001) June 2024 issue of CALITATEA QUALITY ACCESS TO SUCCESS (http://www.calitatea.ro/en).

Thank you for your submission to our journal.

Kind regards.

Prof. Dr. Semra MİRİCİ

Editor-in-Chief
CALITATEA QUALITY ACCESS TO SUCCESS
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THE EFFECT OF CAPITAL STRUCTURE ON FIRM VALUE OF LQ45 INDEX LISTED IN INDONESIA STOCK EXCHANGE

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JEL Classification: G1, G2, G3, F3

Abstract

This study aims to test and analyze the effect of investment opportunity set, capital structure, dividend policy, and profitability on firm value. Another objective to be achieved is the effect of capital structure and dividend policy on firm value mediated by profitability. Our research uses path analysis to determine and analyze the influence of exogenous variables on endogenous variables. The objects in this study are companies incorporated in LQ45 for the period 2012 - 2021. The results of the study found that the price earning ratio, capital structure with indicators of debt to asset ratio and debt to equity ratio, dividend payout ratio, and return on assets all have a positive and significant direction of influence on price to book value. Debt to equity ratio has a significant positive direction of influence on return on assets, while debt to asset ratio has the opposite direction, namely negative and significant to return on assets. What is different from the results of this test is that the dividend payout ratio, although the direction of influence is positive on return on assets, is not significant. Return on assets is not able to mediate the effect of debt asset ratio, debt to equity ratio, and dividend payout ratio in its effect on price to book value.

Keywords: investment opportunity set, capital structure, dividend policy, profitability, firm value, universitas pekalongan.

1. Introduction

Firm value is a reflection of performance and can affect investors' perceptions. Therefore, firm value is often called the market value of equity in the firm and added to the market value of debt. Thus, the addition of firm equity can better reflect the firm value. A high firm value indicates a high stock price for the firm. A high stock price reflects the high firm value, and is in accordance with the wishes of the firm owner because it can increase investor interest to invest their capital (Hidayat, 2019). Optimization of firm value can be achieved through the implementation of the financial management function, where one financial decision taken will affect other financial decisions and have an impact on firm value (Fama & French, 1998).

Modigliani & Miller (1963) explained the relevant capital structure theory by relaxing the assumption that there is no perfect capital market, thus adding tax element in the capital structure theory. The resulting conclusion is that funding decisions will affect firm value. Furthermore, DeAngelo & Masulis (1980) and Bradley et al. (1984) explained that the tax shield arising from the use of debt as a way of funding the company, will determine the amount of debt that will be used by the company. The amount of leverage will increase the share repurchase transaction, the change of debt and preferred stock from common stock, has resulted in a significant increase in the value of the company in this case the stock price (Jensen, 1986). Other studies emphasize that capital structure has a positive effect on firm value (Cuong & Canh, 2012; and Adeyemi & Oboh, 2011).

Profitability is one of the various important components that determine the sustainability of a company that is doing business (Pangestuti et al., 2022). Profitability is the company's ability to generate profits, where profit is a measure of company performance (Sucuahi & Cambarihan, 2016). Increased profits are a feature of good company performance, so that information is important for investors and creditors, because it can project the return on investment made. For a creditor, the size of profitability is an indicator of good performance (Sugosha & Artini, 2020). The company's inability to generate profits will be a problem for performance and can be a threat to company bankruptcy. Sofiatin (2020) explains that profitability is one measure of firm value. Profitability can affect company value because it indicates that the company is able to generate profits and company investment. Company performance is a representation of management policies and activities in running the company during a certain period, and can be measured by 2 indicators, namely Return on Assets (ROA) and Return on Equity (ROE). Therefore, the measurement of company performance is generally carried out using a financial ratio approach, which is taken from the financial statements, so it is often referred to as financial performance (Sudiyatno et al., 2021).

Dividend policy is one of the important decisions taken by the firm. Theoretical explanations to explain dividend policy behavior, such as the pecking order theory (Myers & Majluf, 1984) states that companies should prioritize internal sources of funding, including retained earnings. This prioritization convinces firms to choose a low dividend policy and to allocate another proportion for reinvestment. In other words, low dividend payments are associated with high information asymmetry. Managers hold cash to finance investment projects and to avoid high capital costs, such as funds from creditor loans with high interest rates or funds from new share offerings at low prices (Myers & Majluf, 1984; and Teplicka & Culkova, 2020). The dividend policy is also a positive signal for the firm in the future, when investors will be interested in buying shares in the firm. Because if the firm can pay high dividends, the share price will also be high and have an impact on increasing firm value. This is in accordance with the research that says that dividends have a positive effect on firm value (Pangaribuan et al., 2019). Meanwhile, there is also research that says that dividends have a negative effect on firm value (Wibowo & Aisjah, 2013).

The firm's ability to generate profits can also be seen from the PER (Price Earning Ratio). Companies with the same level of income, the same size and the same industry may have different PER (Price Earning Ratio) because market prices show investors' expectations of future earnings compared to current earnings (Devianasari & Suryantini, 2015). Research by (Rosana et al., 2019). states that PER has a positive and significant effect on firm value, and is different from the findings which state that PER has a negative effect on firm value (Frederik et al., 2015).

Literature Review and Hypothesis Development

2.1. Literature Review

2.1.1. Trade Off Theory

Trade-off theory is expressed by Myers (2001) "the firm will go into debt up to a certain level of debt, where the tax savings (tax shields) from additional debt are equal to the cost of financial distress". The trade-off theory determines the optimal capital structure which includes factors such as taxes, agency fees and financial distress costs by maintaining market efficiency assumptions and symmetrical information as a form of balance between the benefits and costs of using debt. The optimal interest rate is achieved when the tax shelter reaches the maximum amount against the cost of financial distress.

2.1.2. Firm Value

Firm value is very important because the high firm value will be followed by high shareholder prosperity (Brigham & Davies, 2007). The high share price will increase the firm value and this is the desire of the owner, because it can reflect the high level of shareholder prosperity. Firm value has a management performance system consisting of three perspectives, namely organizational output, internal processes and the ability or availability of resources. The division of the performance management system into 3 perspectives is based on experience in several companies in Indonesia, in terms of practicality and the firm value provides by the performance management system designed and the division of performance variables (Sofiatin, 2020). PBV is one of the indicators used by investors to see the financial condition/position of a firm. PBV is used to assess whether a firm has a bright future to invest in. This ratio measures the value that financial markets give to management and organizations as a firm that continues to grow (Brigham & Houston, 2012).

2.1.3. Capital Structure Theory

The capital structure shows the balance between the firm's debt and equity, and how the firm balances the two. The optimal capital structure is also defined as a capital structure that can provide maximum firm value with a certain level of risk or can minimize overall costs in managing the functions contained in the firm (Umdiana & Claudia, 2020). Kim et al. (2005) provides empirical evidence that funding has an influence on firm value, because the presence of debt can be used to control excessive use of free cash flow by management, thereby avoiding wasted investment, thereby increasing firm value..

2.1.4. Profitability

Profitability is the ability to generate profits from sales, total assets and also own capital (firm profits). The better the profitability ratio of a firm, the better the profit the firm gets (Pioh et al., 2018). The profitability ratio is also used in providing a measure of the effectiveness of a firm's management, then the various results of the profitability ratio will be an evaluation of the firm in the future. The profitability ratio also has objectives and benefits for parties with an interest in the firm.

2.1.5. Dividend Policy

Black & Scholes (1974) shows a firm whose dividend payout increases hopes that there will be an increase in its stock price. This is a response due to dividend payments, and it is hoped that the market will give confidence that this indicates that the firm has income in the future. Dividends can help provide good information about the firm's management to the capital market (Myers & Majluf, 1984), so it can be said that dividends can be viewed as a signal to the firm's prospects (Miller & Rock, 1985).

2.2. Hypothesis Development

2.2.1. Hypotheses for investment opportunity set and firm value

To maximize firm value, companies are required to manage finances in order to achieve the desired goals or objectives which in this case are firm profits. The growth of firm profits in the future is certainly one of the main considerations of potential investors before investing their capital. Companies with high growth rate opportunities usually have a high set of investment opportunities as well, and this indicates that the market expects future profit growth. Conversely, companies with low growth rates tend to have low investment opportunity sets as well (Fitri Prasetyorini, 2013). Research conducted Rosana et al. (2019) states that the set of investment opportunities has a positive and significant effect on firm value. In line with research Arifianto & Chabachib (2016) and Citra et al. (2020) which obtained positive and significant results between the set of investment opportunities on firm value. Based on this, the hypothesis proposed is as follows:

H1: Price earning ratio has a positive effect on price to book value

2.2.2. Hypotheses for capital structure and firm value

The capital structure shows the balance of investment costs using debt, so that the proportion between risk and return on investment can be known by investors by looking at the capital structure. The amount of debt in the firm's capital structure is very important in fulfilling the consideration between risk and profit. The use of debt in financing the firm's investment will lead to financial risk. Financial risk is a possibility that will occur if the firm cannot cover the costs incurred due to debt in the form of interest. Research conducted Rosana et al., (2019); Wibowo & Aisjah (2013); and (Haryati & Ayem, 2016) states that capital structure has a significant negative effect on firm value. Based on this, the hypothesis proposed is as follows:

H2: Debt to equity ratio negatively affects price to book value

H3: Debt to asset ratio has a negative effect on price to book value

2.2.3. Hypotheses for dividend policy and firm value

The amount of dividend distribution will be a major factor in attracting investor attention because dividends are preferred by investors where dividends are generally more certain than expected capital gains which have less certainty in obtaining them. With the attention of investors who make capital funds for the firm, it will cause an increase in the stock price and firm value. (Rai Prastuti & Merta Sudiartha, 2016) in his research said that good firm prospects are influenced by increased dividend payments, with good firm prospects investors will respond by buying shares so that the firm value increases. In line with research Citra et al. (2020); Rai Prastuti & Merta Sudiartha (2016); and Pangaribuan et al. (2019) state that dividend policy has a positive effect on firm value. Based on this, the hypothesis proposed is as follows:

H4: Dividend payout ratio has a positive effect on price to book value.

2.2.4. Hypotheses for capital structure and profitability

The use of high debt causes interest costs to increase so that the firm's profitability decreases. Companies that provide credit to outside parties will bear the risk of debt as a result of the loan. The more debt owned, the greater the risk faced by the firm's profitability.

Therefore, the firm must consider other alternatives to achieve the expected profit. The alternative that needs to be considered is how much debt is used as a source of the firm use to improve firm performance which is a measure of the success of firm performance. Despite the great potential benefits, the use of debt can cause financial problems or risks for the firm. This happens because the firm must bear the burden of loan interest and repay a series of borrowed debts, which can reduce firm profits. Not a few studies have found that capital structure has a negative effect on profitability (Tantono & Candradewi, 2019; Kartika Dewi & Abundanti, 2019; Sari & Jufrizen, 2019; Setiyowati et al., 2020; and Kalesaran et al., 2020). While other studies have found that the level of debt can increase profitability as long as the level of profit due to debt is higher than the cost of capital that arises (Pratama & Wiksuana, 2016 and Harsanto et al., 2022). Based on this, the hypothesis proposed is as follows:

H5: Debt to equity ratio has a negative effect on return on assets

H6: Debt to asset ratio has a negative effect on return on assets

2.2.5. Hypotheses for dividend policy and profitability

Firm can take dividend policy will become market information about the firm's future prospects. Dividend policy is a policy regarding whether the profits that have been obtained are distributed to shareholders in the form of dividends or used for investment and retained in the form of retained earnings. Research by Suhadak & Fauzi (2015) states that dividend policy has a positive effect on profitability. In line with research Tantono & Candradewi (2019); Thafani & Abdullah, (2014); and Abiola (2014) which resulted in dividend policy having a positive effect on profitability. Based on this, the hypothesis proposed is as follows:

H7: Dividend payout ratio has a positive effect on Return on assets

2.2.6. Hypotheses for profitability and firm value

The firm's ability to generate high profitability reflects high profits as well. This indicates that the firm can pay dividends and in the end can increase the firm value. A high profitability ratio owned by a firm will attract investors to invest in the firm (Sutama & Lisa, 2018). Research Pioh et al. (2018); Rutin et al. (2019); Suryaman & Khoirunnisa (2020); Sugosha & Artini (2020) and Pangestuti et al. (2022) stated that profitability has a positive effect on firm value. Based on this, the hypothesis proposed is as follows:

H8: Return on assets has a positive effect on price to book value

2. Research methodology

3.1. Data Collection and Sources

Our study uses secondary data, and data sourced from financial reportsof LQ45 for the period 2012 to 2021. The data in this study is panel data which is the type of data that is a combination of cross-sectional data and time series data, and therefore according to (Gujarati, 2003), the method of analysis is a combination of time series data analysis and cross-sectional data analysis. In this study to answer research questions used path analysis, and profitability is exogenous variable one (1), and firm value is exogenous variable two (2).

3.2. Empirical Model and Variable Measurement

The focus of the study is on empirical testing of variable integration related to the firm value involving investment opportunity cost, capital structure, dividend policy and profitability, mediated by profitability. The model of the empirical study is presented in figure 1.

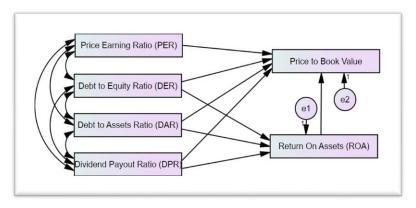


Figure 1. Empirical Model Research

Both sub-structures formed in figure 1 are; First, the sub-structure states the causal relationship of variables PER, DAR, DER, DPR, and ROE with PBV variable; Second, the sub-structure shows the causal relationship between variables DAR, DER, and DPR with ROA variable. In other words, based on both sub-structures, there are 2 structural equations formed:

$$PBV = \beta_{1PBV}PER + \beta_{2PBV}DER + \beta_{3PBV}DAR + \beta_{4PBV}DPR + \beta_{4PBV}ROA + \varepsilon_{1}$$

$$ROA = \beta_{1ROA}DER + \beta_{2ROA}DAR + \beta_{3ROA}DPR + \varepsilon_{1}$$

Where:

PBV = price to book value, PER = price earning ratio, DER = debt to equity ratio, DAR = debt to assets ratio, DPR = dividend payout ratio, ROA = return on assets

Firm value used proxy price to book value (Qureshi, 2020; Sugosha & Artini, 2020); R. Sari, 2021; Pangestuti et al., 2022; and Mahirun et al., 2023), the capital structure used proxy as debt to equity ratio and debt to asset ratio or / debt ratio (Drees & Eckwert, 2000; Handayani et al., 2015; Handayani et al., 2018; Mahirun, 2019; Gumanti et al., 2020). price earning ratio is often used as a proxy of investment opportunity set (Ruhani et al., 2018; and R. Sari, 2021). profitability use proxy as return on assets and return on equity (Handayani et al., 2015; Hadi & Nurhayati, 2018; Anwar & Rahmalia, 2019; Choiriya et al., 2020; Tarsono, 2021; and Novison et al., 2021), and dividend policy use proxy as dividend payout ratio (Hussainey et al., 2011; Handayani et al., 2015; and Ruhani et al., 2018).

On average, the PBV data in Indonesia reaches 2.22 x with the highest PBV value is 6.01 x and the lowest is 0.36 x While for ROA, the average is 6.66 % with the highest ROA is 18.54 % and the lowest is 0.64 % (table 1).

Table 1. Descriptive Statistics

Variable	Minimum Maximum		Mean	Std. Deviation				
Price earning ratio	5.12	40.01	16.7123	7.11637				
Debt to equity ratio	0.15	7.31	1.6238	1.79391				
Dividend payout ratio	2.91	88.36	33.5868	16.98932				
Debt to assets ratio	0.13	0.88	0.5047	0.18996				
Return on assets	0.64	18.54	6.6569	3.92184				
Price to book value	0.36	6.01	2.2155	1.32704				
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Source: Data processed from the results of SPSS

Table 2 shows the Pearson correlation matrix among the variables, obtain the results of all variables are not correlated. The highest correlation coefficient is 85.50% between DAR and DER and shows a positive correlation. while the lowest correlation is minus 75.10% between ROA and DAR which indicates a negative correlation.

Table 2. Pearson correlation matrix

Table 2.1 carson correlation matrix								
	Price	Debt to	Dividend	Debt to	Return on	Price to		
Variable	earning	equity ratio	payout ratio	assets ratio	assets	book value		
	ratio							
Price earning ratio	1.000							
			1					
Debt to equity ratio	-0.200	1.000						
Dividend payout ratio	0.248	-0.158	1.000					
Dividend payout ratio	0.240	0.130	1.000					
Debt to assets ratio	-0.234	0.855	-0.285	1.000				
Return on assets	0.231	-0.575	0.268	-0.751	1.000			
Price to book value	0.733	-0.049	0.298	-0.208	0.569	1.000		

Source: Data processed from the results of SPSS

3. Empirical Finding

4.1. Empirical Model Assumption Test Results

Table 3 shows the multivariate CR value of 0.824 < 2.58, it means the data distribution is normal. Thus the normality assumption has been met and the data used in this study is suitable for further estimation.

Table 3. Data Normality

Variable	min	max	skew	c.r. kurtosis		c.r.
Price earning ratio	5,120	40,010	0,766	4,163	0,102	0,276
Debt to equity ratio	0,150	7,310	1,913	10,389	2,440	6,626
Dividend payout ratio	2,910	88,360	0,065	0,351	-0,425	-1,153
Debt to assets ratio	0,130	0,880	0,259	1,406	-0,563	-1,530
Return on assets	0,640	18,540	0,703	3,816	-0,381	-1,033
Price to book value	0,360	6,010	1,040	5,647	0,358	0,972
Multivariate			•		1,214	0,824

Source: Data processed from the results of SEM

The chi-squared value in the distribution is used to calculate the mahalanobis distance table at a degree of freedom of 6 variables at a p < 0.001 level, which is X2 (6;0.001) = 22.457. Therefore, data that have a mahalanobis distance greater than 22.457 are considered multivariate outliers. The mahalanobis distance of the data can be seen in the appendix. The result of SEM calculation in the Observations farthest from the centroid (mahalanobis distance) section is that the farthest data is 16.478 and the closest is 4.668. The conclusion is that there is no mahalanobis distance greater than 22.457 so that this research data is not detected as multivariate outliers.

4.2. Empirical Model Feasibility Test Results

The empirical model feasibility results presented in table 4 show that all criteria in the feasibility test are met, so the data can be said to be free from outliers.

 Table 4. Summary of Evaluation Results Goodness of Fit Empirical Research Model

Goodness Of Fit Index	Cut-Off Value	Model	Description		
		Result			
Absolute Measures					
X^2 - Chi-Square	< x2,df,∝	1,091	X2 value with df 1 probability		
			0.05 as 3.841. Chi-Square balue		
			of 1.091 is smaller		
Probability	≥ 0,05	0,296	Very good		
Minimum Sample Discrepancy	≤ 2,00	1,091	Very good		
Function Divided with Degree of					
Freedom (CMIN/DF)					
Root Mean Square Error of	≤ 0.08	0,023	Very good		
Approximation (RMSEA)					
Goodness of fit Index (GFI)	≥ 0,90	0,998	Very good		
Incremental Fit Measures					
Adjusted Goodness of Fit Index	≥ 0,90	0,957	Very good		
(AGFI)					
Tucker Lewis Index (TLI)	≥ 0,95	0,998	Very good		
Comparative Fit Index (CFI)	≥ 0,95	1,000	Very good		
Normed Fit Index Fit Index (NFI)	≥ 0,90	0,999	Very good		

Source: Data processed from the results of SEM

4.3. Path Analysis Test Result

Initially, we estimate the path analysis using AMOS. The results are reported in Table 5.

Table 5. Path Analysis Test Result

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Variable			Estimate	S.E.	C.R.	P	Label
Return on assets	<	Debt to equity ratio	0,234	0,209	2,448	0,014	par_12
Return on assets	<	Debt to assets ratio	-0,940	2,030	-9,557	0,000	par_13
Return on assets	<	Dividend payout ratio	0,037	0,012	0,719	0,472	par_14
Price to book value	<	Return on assets	0,839	0,014	20,374	0,000	par_7
Price to book value	<	Price earning ratio	0,683	0,005	24,423	0,000	par_8
Price to book value	<	Debt to equity ratio	0,263	0,038	4,971	0,000	par_9
Price to book value	<	Debt to assets ratio	0,368	0,449	5,576	0,000	par_10
Price to book value	<	Dividend payout ratio	0,058	0,002	2,031	0,042	par_11

Source: Data processed from the results of SEM

The equation obtained from table 5 with the endogenous variables price to book value (PBV) and return on assets (ROA) is :

$$PBV = 0.683(PER) + 0.263(DER) + 0.368(DAR) + 0.058(DPR) + 0.839(ROA)$$

$$P = 0.000(PER) + 0.000(DER) + 0.000(DAR) + 0.042(DPR) + 0.000(ROA)$$

$$CR = 24,423(PER) + 4,971(DER) + 5,576(DAR) + 2,031(DPR) + 20,371(ROA)$$

ROA = 0.234(DER) - 0.940(DAR) + 0.37(DPR)

$$P = 0.014 (DER) + 0.000 (DAR) + 0.472 (DPR)$$

$$CR = 2.448(DER) - 9.557(DAR) + 0.719(DPR)$$

Where:

PBV = price to book value, PER = price earning ratio, DER = debt to equity ratio, DAR = debt to assets ratio, DPR = dividend payout ratio, ROA = return on assets

4.3.1. Testing the effect of investment opportunity set on firm value

The test results show that PER has a positive and significant effect on PBV. This finding supports the theory of market efficiency which states that an efficient market is one in which security prices quickly and fully reflect all available information (Anggraini, 2012). So, if PER increases, the market will capture the signal as good information for investors. With this good signal, there will be a change in stock trading volume which can increase firm value (PBV) in front of investors. PER becomes a ratio that is quite easy to use by potential investors and investors themselves. As a result of the price earning ratio for the firm will provide a good indicator in determining future stock returns, the high price per share of the firm will follow the PER value. This situation shows that the firm value is good, so it can be said that the firm's shares are blue chip in the capital market. Companies with high growth rate opportunities usually have a high PER as well, and this indicates that the market expects future profit growth. Conversely, companies with low growth rates tend to have low PERs as well (Fitri Prasetyorini, 2013). This explains that the firm's future prospects can be seen from the PER, where the magnitude of this ratio indicates that the performance of the firm in increasing earnings also tends to be good. Investors will also feel interested in companies that have a large PER by capitalizing funds for the firm. The results of this study are in line with the research of (Rosana et al., 2019; Citra et al., 2020; Sartini & Purbawangsa, 2014; and Arifianto & Chabachib, 2016).

4.3.2. Testing the effect of capital structure on firm value

The results showed that DER and DAR have a positive and significant effect on PBV. These results support the trade off theory where the increasing debt ratio in the capital structure will increase the firm value. Capital structure theory states that when the capital structure is above the optimal target, an increase in debt occurs, causing the firm value to decrease. In the trade off theory (assuming the target point of the capital structure is not optimal) The firm value increases along with the increased debt policy. companies can increase debt to a certain level, because agency costs can reduce the credibility of the firm.

The direction of the influence of DER on PBV is positive and significant. which means that if DER increases, the PBV value will also increase. This means that debt policy is not considered as something that is too worrying for the firm. In this case, the policy of increasing debt is seen as a signal of firm growth. Companies that are in growth will require large funding. This is unlikely to be met only from its own capital, so the firm decides to form new debt to third parties or creditors as long as the additional investment returns are greater than the additional cost of debt. The results of this study are in line with research conducted by Wahyu & Mahfud (2018); Pratama & Wiksuana (2016); and Rai Prastuti & Merta Sudiartha (2016). The firm's decision to choose to fund using debt will be more attractive to investors than companies that choose to issue new shares. Because the more shares outstanding, the lower the return that will be obtained by investors. Meanwhile, funding with debt will not make the share price fall if the burden incurred is smaller than the benefits of using debt. So that increasing the use of debt will be able to increase PBV.

4.3.3. Testing the effect of dividend policy on firm value

The test results found that there was a positive DPR influence on PBV and it was significant. The theory of dividend relevance which refers to the signaling theory of dividends considers the provision of dividends to shareholders to be a positive signal to the public that the firm has good future prospects. This theory agrees with the bird in the hand theory that

higher dividend distribution, and stability in dividend distribution each period can increase firm value. This is because dividends are a definite return (Baker & Weigand, 2015). Dividends are the distribution of profits to shareholders by the firm. Dividends given should be in accordance with the needs of shareholders. Reasonable dividend payments will increase investor confidence and can increase firm value. dividend payments and increase in firm value is what investors want.. Therefore, paying dividends to shareholders will increase the firm value (Azis, 2017). The results of this study are in line with research conducted by Citra et al. (2020); Sartini & Purbawangsa (2014); and Rai Prastuti & Merta Sudiartha (2016).

4.3.4. Testing the effect of capital structure on profitability

The test result of capital structure with DER indicator toward ROA has a significance value below 0.05, which means that DER has a significant influence. The direction value of 0.234 indicates that DER has a positive influence on ROA. Thus the hypothesis that debt to equity ratio has a negative effect on profit book value is rejected or proven because the test results show that debt to equity ratio has a positive and significant effect on return on equity. Trade off theory assumes that the capital structure is targeted to maximize market value and profit. This theory also shows the balance between the use of debt and profit. The optimal capital structure can be found by balancing the benefits of using debt with the costs of bankruptcy that may arise if it is unable to pay off debt and capital costs. So it can be concluded that DER can make ROA increase. The achievement of firm profits is strongly influenced by DER which reflects funding policy. External funding will be used by the firm to improve performance and expand so that it has an impact on the achievement of ROA. This is supported by the trade-off theory which assumes that profitability will increase with a higher DER. The increase in profitability is due to the proportion of the reduced tax burden due to the reduction in debt interest on taxable income resulting in an increase in net profit after tax (Ardhefani et al., 2021). This is in accordance with the research of Tantono & Candradewi, (2019); Pratama & Wiksuana (2016); and Harsanto et al. (2022) which resulted in DER having a positive effect on ROA.

Another result of capital structure with DAR indicator gives a significant influence on ROA with negative direction seen in the value of -0.940. Thus the hypothesis that debt to asset ratio has a negative effect on profit book value is proven and accepted. DAR shows that the assets owned by the firm are financed by debt. The debt owned by the firm has a negative influence because it is feared that it will pose a risk of bankruptcy if it cannot pay off the debt. the capital structure of the firm is an activity of balancing the benefits and sacrifices that arise as a result of using debt. If the firm has done a lot of debt, it is no longer allowed to do debt because it will reduce profits to pay interest costs, increasing debt on assets will reduce profitability so that DAR has a negative effect on ROA. Research that is in accordance with this statement is Tantono & Candradewi (2019) and (Wandasari et al., 2021).

4.3.5. Testing the effect of dividend policy on profitability

The results found that DPR had a positive but insignificant effect. This illustrates that the results of the research on DPR have no effect on ROA. This is not in accordance with the hypothesis which says that DPR has a positive and significant effect. The amount of total liabilities is smaller than the total capital owned by the LQ 45 companies sampled in this study, this shows that the firm uses a lot of its capital to cover its obligations. The results of the research that states DER has no effect on ROA belong to Dessi Herliana (2021).

4.3.6. Testing the effect of profitability on firm value

The results showed that ROA has a positive and significant effect on PBV, this positive direction means that the greater the Profitability, the greater the Firm value obtained. High profitability increases investor confidence, so that companies can easily obtain funds for performance improvement, so that firm value can also increase. The level of efficiency and effectiveness of firm management is measured using a ratio, so that the greater this ratio, the greater the firm's ability to generate profits from its assets. The results of this study are in line with (Haryati & Ayem, 2016); Pratama & Wiksuana (2016); Rutin et al. (2019), ioh et al. (2018); Suryaman & Khoirunnisa, (2020); Sugosha & Artini (2020) and Pangestuti et al. (2022). High profitability will provide a positive signal to investors that the firm is producing in a profitable condition. This is an attraction for investors to own firm shares. A high Return on Assets will provide a positive signal to investors that the firm is producing in a profitable condition. This is an attraction for investors to own the firm's shares. Based on the research opinion above, there is an effect of Return on Asset on Pricebook value.

4.4. Discussion

4.4.1. Testing profitability mediates the effect of capital structure on firm value

The coefficient value of the direct influence of the DER variable on the PBV variable is 0.263. Meanwhile, the indirect effect of the DER variable, through the mediation of the ROA variable, on the PBV variable is 0.196. Thus, the effect of DER on PBV is not mediated by ROA. Thus the hypothesis stating that return on assets mediates the debt to equity ratio on price to book value is rejected or unacceptable. These results are supported by the sobel test which produces a number of 1.119266 and is lower than the t table of 1.65356.

This testing is to determine whether the capital structure (DAR) directly affects the firm value (PBV), or through the profitability variable (ROA). The coefficient value of direct influence of DAR variable on PBV variable is 0.368. Meanwhile, the indirect effect of the DAR variable, through the mediation of the ROA variable, on the PBV variable is -0.789. Thus, the effect of DAR on PBV is not mediated by ROA. Thus the hypothesis stating that return on assets mediates the debt to asset ratio on pricebook value is rejected or unacceptable. These results are supported by the Sobel test which produces a number of -0.413231 and is lower than the t table of 1.65356.

4.4.2. Testing profitability mediates the effect of dividend policy on firm value

The coefficient value of the direct effect of DPR variable on PBV variable is 0.058. Meanwhile, the indirect effect of DPR variable, through the mediation of ROA variable, on PBV variable is 0.031. Thus, the effect of DPR on PBV is not mediated by ROA. Thus, the hypothesis stating that return on assets mediates the dividend payout ratio on pricebook value is rejected or unacceptable. These results are supported by the Sobel test which produces a figure of 3.078833 and although it is higher than the t table of 1.65356, the test proves that the effect of DPR on PBV is convincingly proven to be a direct effect.

4. Conclusion and Implications

5.1. Conclusion

The results of testing the influence of exogenous variables on endogenous can be concluded as follows Price earning ratio, capital structure with indicators of debt to asset ratio and debt to equity ratio, dividend payout ratio, and return on assets all have a positive and significant direction of influence on price to book value. Debt to equity ratio has a significant positive direction of influence on return on assets, while debt to asset ratio has the opposite direction, namely negative and significant to return on assets. What is different from the results of this test is that the dividend payout ratio, although the direction of influence is positive on return on assets, is not significant. Finally, we found that return on assets is not able to mediate

the effect of debt asset ratio, debt to equity ratio, and dividend payout ratio in its effect on price to book value.

5.2. Implication

The test results prove that all exogenous variables have a positive and significant effect on firm value (PBV), this indicates the importance of these variables to get more attention from the firm to increase firm value. Every corporate funding policy making must pay attention to the trade off between benefits and costs. This is evident from the test results that funding policies can increase the firm value if the benefits generated exceed the cost of capital issued by the firm. The test results also present that profitability is not able to mediate the effect of capital structure and dividend policy on firm value. Future research needs to review by replacing profitability with other variables or expanding the object of research and extending the observation period to get a clearer picture of the use of profitability variables as intervening variables in this study.

Disclosure statement

The author declares that there is no conflict of interest.

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