VALUE OF FIRM FOR BANKING IN INDONESIA

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Abstract

Research on capital structure and dividend policy is mostly done in non-financial industries. The biggest source of bank funds is public funds collected, so that the financial structure of banks is different from non-bank companies. This study aims to examine the relationship between funding decisions, dividend policy, and the value of banking firms. Dividend policy is also influenced by the need for funds and the availability of sources of funds, so that in this study dividend policy is also tested for its role as a mediating variable of capital structure with dividend policy. The research sample is commercial banks listed on the Indonesia Stock Exchange for the period 2014-2018. The research path model was analyzed by regression and Sobel Test. The test results show that both capital structure and dividend policy affect firm value and dividend policy is able to act as a mediating variable.

Keywords: firm value, banking industry, funding decisions

I. INTRODUCTION

The banking industry is a highly regulated industry. The financial sector in Indonesia is regulated and supervised by the Financial Services Authority (OJK). One of the banking regulations concerns the adequacy of own capital. The regulation regarding bank capital causes bank funding decisions to be not as flexible as non-financial companies because banks must increase their own capital when adding public funds collected by banks. Banks function as financial intermediaries, so that the largest source of funds for banks is from the general public, in contrast to non-financial companies whose main source of funds is debt or equity (Widnyana, Warmana and Suarjana, 2018). Capital adequacy is also an indicator of a bank's health. Investors certainly consider the health of the bank in terms of capital adequacy when investing in shares of banking companies.

Modigliani and Miller (1958) state that in a perfect market, firm value is not influenced by capital structure and dividend policy. However, in reality the management's decision in choosing to issue debt or equity instruments to finance their investment can have an impact on the assessment of investors in the capital market. Based on the trade-off theory, leverage can increase firm value to a point where additional leverage can reduce firm value. Previous research on the effect of capital structure on firm value found different results. Surasmi *et al.*

(2018) found that the debt to asset ratio had a positive effect on firm value, as well as Kontesa (2015) found that the debt to asset ratio had a positive impact on firm value. Other studies have found that capital structure actually has a negative effect on firm value (Vo and Ellis, 2017; Soewignyo, 2020).

Bird in the hand theory predicts the positive effect of dividend levels on firm value with the assumption that investors prefer dividends that are considered lower risk than capital gains. Likewise, signalling theory, because of the existence of information asymmetry causes investors to assume that dividends are a positive signal from management performance. On the other hand, the tax preference theory predicts the negative effect of dividends on firm value because the dividend tax is higher than the tax on capital gains. As with the relationship between capital structure and firm value, research on the effect of dividend policy on firm value also finds different results. Akhmadi and Robiyanto (2020)found that the pay-out ratio had a positive effect on firm value. Other studies have found that capital structure actually has a negative effect on firm value (Adiputra and Hermawan, 2020).

Profits that are not distributed as dividends are also a source of investment funding. Al-Hunnayan (2020) found that the bank's capital structure follows the pecking order theory, where bank management prefers to generate funds from operations rather than raising external funds. The use of funds from operating results can reduce dividends distributed to shareholders. Sources of funds have different costs, so the cost of funds affects funding decisions and firm value. Therefore, in this study, the dividend policy variable is positioned as a mediation between capital structure and firm value.

II. LITERATURE REVIEW AND HYPOTHESIS

Capital Structure and Firm Value

Capital structure irrelevance theory states that firm value is not influenced by the composition of the firm's capital, both with equity and debt (Modigliani and Miller, 1958). However, in reality the management's decision in choosing to issue debt or equity instruments to finance their investment can have an impact on the assessment of investors in the capital market. Based on the trade-off theory, the use of debt can increase the value of the company to a certain optimal point, if it passes that optimal point, additional leverage increases financial risk so that it can reduce the value of the company. In banking companies, the ability to pay all bank obligations is an important indicator of bank health. The higher the bank's liabilities relative to its capital, the higher the risk. Thus, in this study it is hypothesized that capital structure has a negative impact on firm value.

H1: Capital structure has a negative effect on the value of banking companies

Dividend Policy and Firm Value

Signalling theory predicts the positive effect of dividend rates on firm value. In banking companies, the ability to pay and maintain dividends after meeting capital adequacy can be seen as financial strength and good management performance. Investors also perceive that companies that pay dividends experience fewer agency problems (Jensen, 1986). Agyei and Marfo-yiadom (2011) found that dividend policy is positively related to bank financial performance.

H2: Dividend policy has a positive effect on the value of banking companies

Capital Structure and Dividend Policy

In non-financial companies, the use of debt becomes a means of monitoring management. Debt contracts usually limit the distribution of dividends from profits generated after the loan is granted. In banking companies, compliance with bank health requirements is prioritized over dividend payments. In this case the monitoring function of bank management through banking regulations.

The larger the share of the company's capital from liabilities, the higher the intensity of monitoring on management behavior, then this will also contribute to the greater control of agency problems between management and shareholders, and in turn, the company's dependence on dividends as a monitoring mechanism will be smaller. The negative effect of capital structure on dividend policy has been found in several previous studies (Jabbouri, 2016; Ali, Mohamad and Baharuddin, 2018).

H3: Capital structure has a negative effect on dividend policy

Dividend policy as a mediator of capital structure and firm value

The literature review in the development of hypotheses 1 and 3 states the relationship between capital structure and dividend policy, and both variables are hypothesized to have an effect on firm value. Based on this, it is hypothesized that dividend policy mediates the relationship between capital structure and dividend policy.

H4: dividend policy mediates the effect of capital structure on firm value

III. RESEARCH METHODS

The variables in this study are Debt to Equity Ratio (DER) as a proxy for capital structure, Price to Book Value (PBV) as a proxy for firm value and Dividend Payout Ratio (DPR) as a proxy for dividend policy. The research sample consists of all banks listed on the Indonesia Stock Exchange that provide data on the observed variables, in the 2014-2018 period.

The data analysis technique used in this study is path analysis to analyze the pattern of relationships between variables that have an indirect effect on the independent variable on the dependent variable mediated by the intervening variable. To test the direct effect between the variables of the structural equation as follows:

$DPR = \alpha_1 + \beta_1\ DER + \varepsilon_1$ . . . . (substructure equation 1)
$PBV = \alpha_2 + \beta_2\ DPR + \beta_3\ DER + \varepsilon_2$ . . . .(substructure equation 2)

Keterangan:

DER :Debt to Equity Ratio

DPR : Dividend Payout Ratio

PBV : Nilai Perusahaan (Price to Book Value)

α_1 : intercept equation 1

α_2 : intercept equation 2

β_1 : Path coefficient DPR and DER

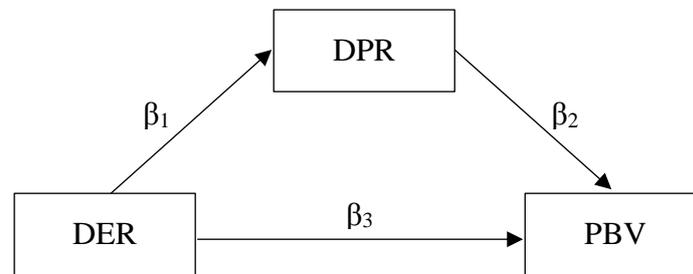β_2 : Path coefficient PBV and DPR

β_3 : Path coefficient PBV and DER

ε_1 : Residual equation 1

ε_2 : Residual equation 2

The depiction of the two substructure equations is shown in Figure 1.

Figure 1. Structural Model of Research

The Sobel test is used to test the indirect effect of the DER variable on the PBV variable through the DPR variable. Sobel Test's z-value formula is:

$$z - value = \frac{\beta_1\beta_2}{\sqrt{\beta_2^2 S\beta_1^2 + \beta_1^2 S\beta_2^2}}$$

Annotation:

$S\beta_1$= standard error of β_1

$S\beta_2$= standard error of β_2

The data to be processed first must be free from the classical assumption test. Classical assumption testing is carried out so that the parameter values of the estimator model used are valid. Classical assumption tests that must be met include the normality assumption test, auto correlation heteroscedasticity, and multicollinearity.

IV. RESULTS AND DISCUSSION
Descriptive statistics

The descriptions of the research variables are shown in Table 1. The observed average DER of banks is quite high according to the nature of the bank's business that collects public funds, so the liabilities are quite high. An average PBV greater than 1 indicates a market valuation that is higher than its book value.

Table 1. Descriptive statistics

variable	mean	max	min	std dev.
DER	6.16	11.85	3.51	2.18
DPR	0.33	0.62	0.18	0.12
PBV	1.90	4.23	0.36	1.06

Classic assumption test

The residual normality test used the Kolmogorov Smirnov test. The summary of the results of normality testing of residuals in Substructure Equation 1 and Substructure Equation 2 is shown in Table 2. Kolmogorov Smirnov's significance value which is not significant (Asymp. Sig. > 0.05) indicates that the residuals of both substructure equations 1 and 2 are normally distributed.

Table 2. Normality Test

Substructural equation	Asymp. Sig. (2-tailed)	description
Equation 1	0.125	Normal distribution
Equation 2	0.097	Normal distribution

Autocorrelation test using the Durbin Watson (DW) method. A summary of the results of the autocorrelation test on Substructure Equation 1 and Substructure Equation 2 is shown in Table 3. DW values are between du and 4 – du means there is no autocorrelation.

Tabel 3. Uji Autokorelasi

Substructural equation	k	du	4-du	DW	Description
Equation 1	1	1.4421	2.5579	1.871	No autocorrelation
Equation 2	2	1.3908	2.6092	1.461	No autocorrelation

Heteroscedasticity test using the Glejser method by regressing the independent variables with absolute residual regression. The summary of the results of the regression of the independent variables on the residuals in both equation 1 and equation 2 is shown in Table 4. These results show that there is no relationship between each independent variable and the residual.

Table 4. Heteroscedasticity Test

Dependent variable: absolute residual substructure equation 1		
Independent variable	t	sig	description

DER	-0.414	.927	No heteroscedasticity

Dependent variable: absolute residual substructure equation 1

Independent variable	t	sig	description
DPR	1.475	0.149	No heteroscedasticity
DER	-0.131	0.896	No heteroscedasticity

Multicollinearity test using tolerance and VIF methods. The summary of the multicollinearity test results is shown in Table 5. The tolerance value of the independent variable is greater than 0.1 and the VIF value is less than 10, so there is no multicollinearity in the regression model.

Table 5. Multicollinearity Test

Dependent variable: DPR			
Independent variable	Tolerance	VIF	description
DER	1	1	No multicollinearity

Independent variable: PBV			
Independent variable	Tolerance	VIF	description
DPR	0.919	1.088	No multicollinearity
DER	0.919	1.088	No multicollinearity

Structural Model Estimation Results

The results of the regression test on the substructure equations 1 and 2 are summarized in Table 6.

Table 6. Regression Results

Regression of substructure equation 1			
Dependent variable: DPR			
Independent variable	coefficient	Std Error	t	sig
DER	-0.022	0.008	-2.806	0,008

$R^2 = 0.172$
F = 7.873
Sig. F = 0.008

Substructure equation regression 2			
Dependent variable: PBV			
Independent variable	coefficient	Std Error	t	sig
DPR	2.250	0.464	4.849	0.000
DER	-0.014	0.006	-2.193	0.035

$R^2 = 0.098$
F = 7.873
Sig. F = 0.008

The calculation of the Sobel test statistics is as follows:

$$z - value = \frac{\beta_1\beta_2}{\sqrt{\beta_2^2 S\beta_1^2 + \beta_1^2 S\beta_2^2}}$$

$$z - value = \frac{-0.022 \times 2.250}{\sqrt{(2.250)^2(0.008)^2 + (-0.022)^2(0.464)^2}} = -2.3921$$

Discussion

Hypothesis test results Table 6 shows that the DER variable has a significant negative effect on PBV, so it is concluded that the H1 hypothesis is accepted. This is because liabilities increase financial risk. These risks relate to liquidity risk and interest payments to bank customers. The greater the debt, the higher the probability of bankruptcy because the company cannot pay its obligations. The size of the debt owned by the company will be shown by investors, because investors see how the company's management uses these funds effectively and efficiently to achieve added value for the company's value.

The DPR variable has a significant positive effect on PBV, so hypothesis H2 is accepted. The results show that the greater the number of dividends distributed to the company's shareholders, the greater the value of a company. Dividend distribution by the company is considered a positive signal by investors, because investors prefer a more certain return. Companies that distribute dividends will attract investors to invest their capital. With the number of investors who buy shares will increase the stock price thereby increasing the value of the company.

The DER variable has a significant negative effect on DPR. Thus, hypothesis H3 is accepted. The results show that the greater the bank's liabilities, the greater the amount of own capital that must be provided to maintain the capital adequacy ratio. If the additional capital comes from operations, it will reduce the cash available for dividends.

The Sobel test results show that the z-value -2.3921 exceeds the critical value (+/-1.96) meaning that the DPR variable is able to mediate the effect of DER on PBV, so it can be said that the H4 hypothesis is accepted. The negative sign of the z-value is due to the negative effect of DER on DPR. This is in accordance with the direct effect of DER on firm value which is also negative.

V. CONCLUSION

The findings of the test results show that the value of banking companies in Indonesia is influenced by funding decisions and dividend policy. In banking companies, financial risk has a major impact on the decline in firm value. The larger the funds raised by the bank, the greater the liabilities incurred, this needs to be balanced with additional capital to strengthen the bank's finances. The additional capital may be generated from the bank's operations, but it can reduce the cash available for dividend payments. So that only banks that have high performance are able to pay high dividends. Thus, dividends are a signal of the bank's performance.

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