

# **The Impact of Capital Structure, Profitability, and Dividend Payment on Firm Value: Evidence from Indonesian Banking**

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## **Abstract**

This study examines the influence of capital structure, profitability, and dividend payout on the firm value of banking subsector firms. The focus of this study is the bank subsector companies listed on the Indonesia Stock Exchange between 2013 and 2021. The sample for this study consists of banks listed on the Indonesian Stock Exchange (IDX) between 2013 and 2021. Purposive sampling was used to select these institutions for sampling based on their compliance with the research requirements. The population as a whole consists of 34 businesses, while the subset of enterprises meeting the specified criteria consists of 8 samples with a research duration of 9 years, yielding a total of 72 data observations. The panel regression technique reveals that the capital structure has no statistically significant effect on the value of a company. Nevertheless, return on assets has a strong positive correlation with firm value. In contrast, earnings per share have a negative relationship with firm value. Furthermore, dividend payments have no statistically significant effect on the value of a company. This paper provides new empirical evidence regarding the influence of capital structure, profitability, and dividend distribution on the Indonesian banking sector.

## **Keywords**

Bank, Capital Structure, Dividend, Firm Value, Profitability

## **1. Introduction**

The Indonesian Government has outlined its objectives for the country's economic growth in the National Medium-Term Development Plan (RPJMN) 2020–2024. The plan intends to achieve a targeted economic growth rate ranging from 5.7% to 6%. Additionally, the financial services sector is expected to contribute to the Gross Domestic Product (GDP) within a range of 6.2% to 7.2%. In Indonesia, the banking industry holds a significant majority in the realm of financial services, comprising approximately 90% of the market. This statement underscores the strategic significance of banks in facilitating and bolstering a nation's economic expansion. The strategic function of banks encompasses the crucial task of facilitating the flow of capital from fund owners to entities requiring funds. This intermediary role plays a significant part in fostering the growth of sectors that possess the potential to drive economic expansion, while also enabling the establishment of fresh economic avenues. The assessment of a bank's corporate value serves as an indicator of its effectiveness in attaining its objectives and optimizing its function within the financial industry.

As widely acknowledged through diverse sources, the primary objective of a corporation is to optimize its financial gains, including through the utilization of banking services. Damodaran (2016) posits that the primary objective of a corporation is to optimize its value, and its financial theory is formulated and advanced in alignment with this objective. According to prevailing corporate financial theory, the primary objective of decision-making is to optimize the value of a firm or enterprise. Hence, the attainment of the highest possible value of the organization can be realized by means of the incorporation of financial management tasks. The core duties of financial management encompass the determination of investment decisions, capital structures, and dividend policies. Hence, choices pertaining to investments, capital structure, or dividends that enhance the overall worth of a corporation are seen as favorable, but actions that diminish its value are deemed unfavorable.

Investment decisions hold significant importance in directing enterprises towards achieving increased revenue and optimizing expenses, hence improving the overall return on investment. Fundamentally, investment decisions are motivated by the primary goal of optimizing the financial performance of the organization. Profitability involves both the current financial performance and the prospective future prospects of a corporation. Companies that demonstrate a heightened degree of profitability sometimes possess an increased inclination to recruit investors. As a result, the organization will have sufficient financial resources to support its expansion and business development initiatives, thereby enabling continuous growth and achieving its goal of enhancing the company's valuation. According to Sumani et al. (2022), it is anticipated that the increase in profitability will have a favorable effect on the company's valuation, as indicated by the concurrent upward trend of the stock price in the market.

The capital structure of a firm is a representation of its financial arrangements for funding operational activities, encompassing a blend of debt and equity sources. In the event that the company's funding source surpasses its debt, there is an elevated likelihood of failure to meet payment obligations, particularly if the company's business conditions are unfavorable. Simultaneously, when the ratio of debt surpasses the amount of capital, it will result in a reduction in the average cost of capital and subsequently impact the company's valuation. The firm manager engages in a capital structure choice while determining the funding source for the company to support its operational activities. The capital structure policy of a company holds significant importance as it has a direct impact on the company's cost of capital, hence influencing its overall performance and value. According to Almahadin and Oroud (2020), the achievement of an optimal capital structure has the potential to generate momentum in corporate development. Consequently, decisions pertaining to capital structure possess the ability to dynamically impact the overall value of the organization.

Dividends are monetary distributions made by a corporation to its shareholders, which are allocated based on the proportion of shares owned by each shareholder as a result of their investment. The determination of dividend payments is a financial choice employed by companies in pursuit of their principal objective of enhancing their worth. Two distinct groups of researchers were engaged in a scholarly discourse pertaining to the correlation between dividend payments and the overall valuation of a firm. According to Budagaga (2020), the initial group posited the notion of the irrelevance theory, asserting that there exists no correlation between dividend disbursements and the overall value of the company.

The determination of a company's value necessitates estimation rather than direct observation, so rendering it contingent upon the investor's viewpoint. The valuation of a firm might vary among investors based on the knowledge they acquire about the company and the fluctuations in economic circumstances. Numerous surveys have been undertaken to ascertain the valuation of the company and the factors influencing it. Nevertheless, the findings of the study exhibit a range of outcomes, with a limited number of researchers focusing on banks as their primary subject of investigation. Hence, there is a requirement for fresh data in order to examine the interplay between capital structure, profitability, and dividend payments by financial decision-makers, and their impact on the valuation of enterprises within the Indonesian banking sub-sector, both individually and collectively.

## **1.1 Objective**

Based on the description above, the purpose of the study is as follows:

- a. To find out the impact of the capital structure on the value of the company in the bank sub-sector listed on the Indonesian Stock Exchange in the years 2013–2021.
- b. To find out the impact of profitability on the value of the company in the bank sub-sector listed on the Indonesian Stock Exchange in the years 2013–2021.
- c. To find out the impact of dividend payments on the value of the company in the bank sub-sector listed on the Indonesian Stock Exchange in the years 2013–2021.
- d. To determine the impact of the capital structure, profitability, and simultaneous payment of dividends on the value of the company in the bank sub-sector listed on the Indonesian Stock Exchange in the years 2013–2021.

The anticipated outcomes of the aforementioned study are poised to make a valuable contribution to the existing body of financial literature. Specifically, they are expected to provide insights and guidance for formulating strategies aimed at enhancing the overall worth of banking institutions in Indonesia. Moreover, these findings will serve as a valuable resource for investors and potential investors, aiding them in making informed decisions regarding the optimal timing for investment in the Indonesian banking sector.

## **2. Literature Review**

### **2.1. Firm Value**

The idea of firm value pertains to the financial assessment of a company's worth during a specific timeframe. In a theoretical context, the term "enterprise value" refers to the monetary value that must be expended in order to acquire or assume control of a business entity. According to Jihadi et al. (2021), Rahayu et al. (2020) posit that the assessment of a company's success by investors is influenced by various elements, one of which is firm value. This metric is closely linked to the price of the company's shares. There exists a positive correlation between the share price and the worth of the firm, whereby an increase in the former leads to an increase in the latter. According to Damodaran (2016), the valuation of a firm is determined by aggregating the market values of both its debt and equity components.

Corporate theory is considered to be one of the fundamental theories that underpin the concept of corporate value. Jensen et al. (1976) claim that a firm can be conceptualized as a black box, which is managed in a manner that aligns with the pertinent marginal conditions pertaining to input and output. The primary objective of this operational approach is to optimize profit, or more accurately, the current value of the company. Similarly, the term "black box" is used to denote the output and input mechanisms, while disregarding a multitude of intricate and convoluted procedures. Within this conceptual framework, the outcome generated by an enterprise include tangible or intangible products that possess inherent economic worth. The principal objective of the organization is to optimize profitability or present value. Hirdinis (2019) posits that the theory of the firm postulates that the primary objective of a corporation is to optimize its wealth or firm value.

The determination of a firm's value is not directly observable, necessitating estimation. Consequently, the company's reliance on investor perception becomes crucial. The valuation of a firm can vary among investors based on their interpretation of the information acquired about the company and the prevailing economic conditions. Widniyana et al. (2020) argue that the valuation of a firm reflects the effectiveness of its asset management by the management team. Tobin's Q is a metric used to evaluate the performance of a company, specifically in relation to its value. It serves as an indicator of management effectiveness in effectively managing the firm's assets. The Tobin ratio is often regarded as a comprehensive measure in evaluating a company's financial performance, as it encompasses both debt-related factors and the entirety of corporate capital. According to Hendrawan (2017).

### **2.2. Capital Structure**

The concept of capital structure refers to the composition of several forms of corporate financing, encompassing equity, preferred shares, and debt. In essence, capital structure entails the utilization of a range of financial sources to support the operational activities of a corporation and accomplish its initial goals. According to Doorasamy (2021), According to Hirdinis (2019), the capital structure refers to the financial composition of a corporation, encompassing both its long-term debt and equity, which represents its own capital. Debt represents an external means of financing that necessitates repayment by the company in accordance with the predetermined terms established with the creditor. The fundamental characteristic of debt is to establish a financial liability that can be offset against the taxable income of a corporation. In adverse situations, should a firm fail to fulfill its commitments, it may result in bankruptcy and a relinquishment of managerial authority over the organization. According to Damodaran (2014),

According to Alghifari et al. (2022), Myers (1977) proposed the trade-off theory. According to this theory, it is posited that the determination of an optimal capital structure is feasible. According to this theoretical framework, corporations has the opportunity to utilize tax shields in order to offset loan interest expenses, but at the potential cost of encountering financial distress and ultimately facing bankruptcy as a consequence of excessive debt utilization. When the debt rate is at a lower level, the company stands to gain advantages from tax reductions, resulting in increased profitability. However, in instances where the level of debt is elevated, there exists a potential risk of encountering financial challenges in fulfilling its commitments. Hence, corporations have the option to select the most advantageous level of debt. The attainment of optimal debt levels occurs when the advantages derived from tax shields surpass the associated costs related to challenges, agency expenses, and bankruptcy. At this stage, the capital structure has the potential to generate the highest possible value for the company according to Mahajan (2020).

Previous studies undertaken by Ardini et al. (2022), Rahayu et al. (2020), and Alghifari et al. (2022) have demonstrated a favorable relationship between the capital structure and firm value. This differs from the impact exerted by Doorasamy (2021), Sumani et al. (2022), and Hung Ngoc Dang et al. (2019). Drawing upon the aforementioned theoretical framework and existing scholarly investigations, the subsequent hypothesis can be formulated:

## **H<sub>1</sub>: The Capital Structure Affects the Firm Value**

### **2.3. Profitability**

Rahayu et al. (2020) claim that profitability refers to a firm's capacity to make financial gains through effective management of assets and successful sales activities. Profitability is a metric that serves as an indicator of the effectiveness and efficiency of managers in executing various corporate management activities. According to Ardini et al. (2022), Profitability refers to the measure of effectiveness exhibited by managers in efficiently managing assets and sales, while also effectively regulating costs and mitigating risks. Ross et al. (2019) assert that the measurement of profitability serves as a means to evaluate a company's effectiveness in utilizing assets and effectively managing its operations.

Profitability, although not the sole determinant, holds significant importance in assessing a company's overall health and its capacity to attract investor attention. In accordance with the findings of Alghifari et al. (2022), the potential for corporate growth appears favorable, hence generating investor satisfaction due to their influence on the appreciable enhancement of the company's worth. The Return on Total Assets (ROA) is a financial metric employed to evaluate the overall efficiency of management in creating profits with the assets at their disposal. A greater return on assets (ROA) number indicates that management has effectively utilized its capital structure through efficient asset management practices. The metric known as earnings per share (EPS) is utilized as a profitability ratio in order to assess the net profit that is allocated to each individual share of stock that is in circulation. Investors generally find companies with higher earnings per share (EPS) more appealing due to their ability to capture a larger proportion of the company's profits.

The existing literature, as demonstrated by Sumani et al. (2022), Rahayu et al. (2022), and Jihadi et al. (2021), has established a strong correlation between profitability and the valuation of a firm, indicating a positive and substantial impact. The findings of Ardini et al. (2022), Hardini (2019), and Renly Sondakh (2019) collectively demonstrate that there is no substantial impact of profitability on the overall value of a company. Drawing upon existing theory and prior research, the subsequent hypothesis is formulated: H<sub>2a</sub>. Profitability with the ROA proxy has a significant impact on firm value

### **H<sub>2b</sub>. Profitability with an EPS proxy has a significant impact on firm value.**

### **2.4. Dividend Payments**

As per the findings of Ross et al. (2019), dividends refer to disbursements that are derived from a corporation's earnings and are distributed to its shareholders in the form of either cash or shares. As per Budagaga's (2020) findings, a dividend refers to a remittance rendered by a corporation to its shareholders, proportionate to the number of shares they possess, as a return on their investment. The dividend policy of each corporation may vary. The determination of dividend policy involves making a choice regarding the allocation of profits, whereby they can either be disbursed to shareholders as dividends or maintained to augment capital for future investment endeavors. A crucial element of the dividend policy entails establishing a systematic approach for allocating profits to shareholders in the form of dividend distributions. According to Triani and Tarmidi (2019), the dividend payout ratio (DPR) is defined as the proportion of dividend payments relative to the overall earnings of a company. According to Ross et al. (2019),

Dividends have the potential to mitigate agency conflicts, as argued by Brahmadev Pandan and Nm Lepsaa (2017) in their discussion on agency theory. The act of distributing dividends also serves as a market signal, indicating that companies that consistently pay dividends are likely to attract investment interest. This concept refers to the capacity of a corporation to generate financial returns for its owners. In the study conducted by Adiputra and Hermawan (2020), it is posited that the capacity of a firm to distribute dividends serves as an indicator of its overall worth. The magnitude of the dividend disbursed has an impact on the valuation of the stock in the market, thereby potentially garnering the attention of investors to allocate capital towards the company.

The impact of dividend payments on firm value has been substantiated in prior research conducted by Rama Seth and Sakthi Mahenthiran (2022), Nur Triani and Deden Tarmidi (2019), and Adiputra and Hermawan (2020). Sumani and Suryaningsig (2022) have demonstrated through empirical analysis that dividend payments do not exert a statistically significant influence on the valuation of a company. Adiputra et al. (2020) claim that the capacity of a firm to distribute dividends serves as an indicator of its overall worth. The magnitude of the dividend disbursed will have an impact on the valuation of the stock in the market, perhaps generating investor interest in allocating capital to the company.

Drawing upon existing theory and the findings of prior research, the present study formulates the following hypothesis:

**H<sub>3</sub> : Dividend payments have a significant effect on firm value**

### **3. Methods**

This study employed quantitative analytic techniques, namely panel data regression analysis methods, to examine the effects of capital structure, profitability, and dividend payment on the valuation of companies within the bank sub-sector listed on the Indonesian stock exchange (IDX) during the period spanning from 2013 to 2021. The utilization of instruments for the purpose of processing data analysis. Econometric Views (EViews) The number 12. Prior to doing panel data analysis, it is advisable to initially carry out a classical test and a panel data regression model selection test. The classical assumption test is employed to assess the lack of bias in the outcomes of regression analysis. The classical hypothesis test can be employed to ascertain the level of accuracy with which the results of the regression test can be predicted. The purpose of doing standardized model testing is to determine the most appropriate model for utilization in panel data regression studies.

#### **3.1. Normality Test**

The present study employs the Jarque Bera method to assess the normalcy of the data. If the p-value is less than 0.05, it indicates that the data distribution is non-normal. Conversely, if the p-value is greater than 0.05, it suggests that the distribution of the data is normal. Subsequently, the researchers employed the "central limit theorem," a principle that posits that data can be deemed to follow a normal distribution when the number of observations surpasses 30. According to Ghozali (2017),

#### **3.2. Heteroscedasticity Test**

The heteroscedasticity test aims to test whether, in a regression model, there is an inequality of variance from the residual of one observation to the other. (Ghozali 2017). Heteroskedasticity in a regression model will cause the measurement of regression coefficients to become inefficient. The evaluation result becomes less than necessary, so it does not meet the blue element (best linear unbiased estimation). In this study, testing the symptoms of heteroscedasticity using the Breusch-Pagan-Godfrey method, if  $p < 0.05$ , then there is a problem of heteroscedasticity. If  $p > 0.05$ , then there is no problem of heteroscedasticity.

#### **3.3. Auto Correlation**

The purpose of the autocorrelation test is to find out if there is a correlation between interference errors in the t-period and errors at the t-1 period in the regression model. A good regression model is one free of autocorrelation (Gujarati and Porter 2011). In this study, autocorrelation testing using the Durbin-Watson method (DW) based on decision-making is as follows :

- a. If  $0 < DW < DL$ , then there is a positive autocorrelation.
- b. If  $DL < DW < DU$ , then doubt-doubt autocorrelation occurred.
- c. If  $DU < DW < 4-DU$ , then there is no autocorrelation.
- d. If  $4-DU < DW < 4-DL$ , then doubtful autocorrelation occurred.
- e. If  $DW > 4-DL$ , then there is a negative autocorrelation.

Description:

DL = DW bottom

DU = DW, upper limit

When there is a problem with the regression model, one way to address it is to use the Cochrane-Orcutt method. This is one way to solve the problem of autocorrelation in OLS regression, especially when the structure of autocorrelation is unknown (Widarjono 2007). In this method, the error (e) is assumed to follow the autoregressive process of order 1, or AR (1).

#### **3.4. Multicollinearity Test**

In this study, the variance inflation factor (VIF) value is used to test whether or not there is a multicollinearity problem in a regression model. If the whole variable has a VIF value below 10, then it is known that there is no problem with multicollinearity in the regressive model, and if there are one or more variables that have VIF values above 10, then it is known that in regression models there are multicollinearity problems.

### 3.5. Panel Data Regression Analysis

According to Sugiyono (2017), panel data is characterized by the inclusion of both time series and cross-sectional data. The term "cross section" refers to a two-dimensional representation or slice of an object or phenomenon, typically taken perpendicular to a specified The analysis of panel data recovery is conducted by employing panel data and selecting the regression model that is most suitable for the investigation. The appropriate selection of panel data regression models is crucial in order to produce an accurate model that aligns with the objectives of the research. Widarjono (2017) identifies three tests that are commonly employed in the selection of panel data estimate techniques: the Chow test, the Hausman test, and the Lagrange multiplier test. (Widarjono 2017) is a citation indicating that the information or idea being discussed is sourced from a publication authoredThe Chow test is employed to ascertain if a panel data model is better suited for regression analysis using a common effect model or a fixed effect model. In order to evaluate whether to adopt the common effect model or fixed effect model, it is necessary to estimate the data by comparing the cross-sectional value of the Chi-square statistic with the corresponding probability value. If the probability value of the cross-session Chi-Square is less than 0.05, the selected regression model is the fixed effects model. Conversely, if the probability value of the cross-section Chi-Square is more than 0.05, the common effects model is pursued.

The Hashman test is employed to ascertain if the panel data model is best suited for regression analysis using a fixed effect model or a random effect model. If the p-value of the chi-square test for the cross-section is less than 0.05, the fixed-effect model is chosen for the regression. Conversely, if the p-value is more than 0.05, the random effect model is picked.

The Lagrange multiplier test is employed to ascertain whether a panel data model is best suited for regression analysis using a common effect model or a random effect model. If the p-value of the Breusch-Pagan test is less than 0.05, the regression model chosen is the fixed effect model. Conversely, if the p-value of the Breusch-Pagan test is more than 0.05, the common effect model is picked.

The factors examined in this study consist of the capital structure, measured by the debt-to-equity ratio (DER), profitability, measured by the return on assets (ROA) and earnings per share (EPS), and dividend payments, measured by the dividend payout ratio (DPR). The dependent variable in this study pertains to the valuation of a company, which is measured using a TobinsQ proxy ratio. Panel data analysis is conducted in order to ascertain the level of significance of the influence exerted by independent variables on dependent variables. The equation for the panel data regression is as follows:

$$\text{TobinsQ}_{it} = \alpha + \beta_1\text{DER}_{it} + \beta_2\text{ROA}_{it} + \beta_3\text{EPS}_{it} + \beta_4\text{DPR}_{it} + e_{it}$$

Description:

TobinsQ = Company Value

DER = Debt to Equity Ratio

ROA = Return on Asset

EPS = Earnings Per Share

DPR = Dividend Payout Ratio

$\alpha$  = number of constants

$\beta_1, \dots, 4$  = regression coefficient

$t$  = time series

$i$  = cross section

$e$  = error

### 3.6. Hypothesis Testing

The study employed panel data regression analysis to examine the impact of independent variables on both simultaneous and partially dependent variables. Concurrent examinations are conducted to assess whether an autonomous factor concurrently impacts a reliant variable with a 95% confidence level ( $\alpha = 0.05$ ). A t-test is conducted to examine the partial impact of an independent variable on a dependent variable, assuming that the other variable remains constant, with a 95% confidence level ( $\alpha = 0.05$ ).

## 4. Data Collection

The data utilized in this study is of a secondary nature. Secondary data refers to a source of information that indirectly supplies data to the individual or entity responsible for collecting data (Sugiyono, 2017). Secondary data refers to pre-existing data that does not require any further processing. Examples of secondary data include yearly reports, financial reports, publications, stock indexes, statistics, articles, books that serve as the foundation for theories, and other similar sources.

The research population comprises 34 banking businesses that were registered in the BEI (Indonesian Stock Exchange) during the years 2013 and 2021. Sampling is conducted via the purposive sampling method, which involves the deliberate selection of samples based on certain factors or criteria. The research criteria necessitates a total of eight samplings. The study was carried out for a duration of nine years, yielding a total of 72 observations.

## 5. Results and Discussion

### 5.1 Numerical Results

#### 5.1.1 Normality Test results

Based on the results of the normality test, it was found that the magnitude of the Jarque-Bera normality test statistic is 555.0453 with a probability value of 0.000000. Since the data is panel data, the normality of the data is assumed to be fulfilled because the data panel has more than 30 observations. This is in line with the central limit theorem, which states that if there are more than 30 observations, then the stated data has a normal distribution tendency.

#### 5.1.2 Heteroscedasticity Test Results

In this study, we tested the symptoms of heterocedastasis using the Breusch-Pagan-Godfrey method.

**Table 1. Result of Heteroscedasticity Test**

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
Null hypothesis: Homoskedasticity			
F-statistic	1.481991	Prob. F(4,67)	0.2175
Obs*R-squared	5.852536	Prob. Chi-Square(4)	0.2104
Scaled explained SS	37.00530	Prob. Chi-Square(4)	0.0000

Based on table 1 above, the probability of an Obs\*R-squared is 0.2104; this value is greater than 0.05 or 0.0104 > 0.05, indicating that there is no problem with heterocadasthesis.

#### 5.1.3 Autocorrelation Test Results

In this study, autocorrelation testing was done using Durbint Watson's d test, and the first result showed an autocorrelation problem. To solve the problem, correct the autocorrelation problem using the Cochrane-Orcutt procedure. As far as the procedure is concerned, it is possible to run a regression equation on model 1 with an AR(1) where the objective is to eliminate the correlation between errors. After the correction of the autocorrelation problem, the following autocorrelation test results are obtained.

**Table 2 . Result of Autocorrelation Test**

Root MSE	0.052225	R-squared	0.722354
Mean dependent var	0.994038	Adjusted R-squared	0.657026
S.D. dependent var	0.099897	S.E. of regression	0.058504
Akaike info criterion	-2.660261	Sum squared resid	0.174557
Schwarz criterion	-2.221738	Log likelihood	98.12835
Hannan-Quinn criter.	-2.487504	F-statistic	11.05727
Durbin-Watson stat	2.062984	Prob(F-statistic)	0.000000

From table 2, we obtain a Durbin-Watson d value of 2.062984. This value is then compared with the dL and dU values in the Durbin-Watson table. For  $\alpha = 0.05$ ,  $k = 4$ , and  $n = 72$ , we get a dL = 1.49897 and a dU = 1.69463

### 5.1.4 Multicollinearity Test Results

A multicollinearity test is performed to check whether a regression model has a correlation between independent variables. In this study, the variance inflation factor is used. (VIF). The test results are as follows:

**Table 3 . Multicollinearity Test Results**

Variabel	Centred VIF
C	NA
DER	1.192893
ROA	1.776728
EPS	1.598856
DPR	1.249868

In Table 3, it is seen that the whole variable has a centred VIF value below 10.00, so it can be concluded that in the model there is no problem of multicollinearity.

### 5.1.5 Data Panel Regression Analysis

#### a. Chow Test Results

**Table 4 . Chow Test Result**

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.661651	(7,60)	0.0000
Cross-section Chi-square	45.980402	7	0.0000

Table 4 shows that the prob. (p-value) cross-section F value is 0.0000. Because of the probability (p-value) cross-section  $F < 0.05$ ,  $H_0$  is rejected, so the fixed effect model is considered more accurate than the common effect model.

#### b. Hausman Test Results

**Tabel 5 . Hausman Test Result**

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	41.926398	4	0.0000

Table 5 shows the probability value (p-value) of a random cross-section of 0.000 smaller than 0.05. Based on this data, it can be determined that the fixed effect model is better than the random effect model. So there's no need to proceed with the lagrange multiplier test.

#### c. Fixed Effect Model Test Results

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

Dependent Variable: TOBINSQ  
Method: Panel Least Squares  
Date: 08/15/23 Time: 23:31  
Sample (adjusted): 2014 2021  
Periods included: 8  
Cross-sections included: 8  
Total panel (balanced) observations: 64  
Convergence achieved after 10 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.876926	0.081044	10.82035	0.0000
DER	0.009742	0.006730	1.447505	0.1539
ROA	7.906286	1.570423	5.034496	0.0000
EPS	-0.000392	4.78E-05	-8.188439	0.0000
DPR	0.152630	0.121022	1.261173	0.2130
AR(1)	0.706313	0.128935	5.478070	0.0000

  

Effects Specification			
Cross-section fixed (dummy variables)			
Root MSE	0.052225	R-squared	0.722354
Mean dependent var	0.994038	Adjusted R-squared	0.657026
S.D. dependent var	0.099897	S.E. of regression	0.058504
Akaike info criterion	-2.660261	Sum squared resid	0.174557
Schwarz criterion	-2.221738	Log likelihood	98.12835
Hannan-Quinn criter.	-2.487504	F-statistic	11.05727
Durbin-Watson stat	2.062984	Prob(F-statistic)	0.000000
Inverted AR Roots	.71		

Based on Table 6, the coefficient constant value can be known, so it can be formed in a regression equation before doing as follows:

$$\text{TobinsQ} = 0.876926 + 0.009742\text{DER} + 7.906286\text{ROA} - 0.000392\text{EPS} + 0.152630\text{DPR}$$

#### d. Hypothesis Test

Based on Table 6, the results of the hypothesis testing are as follows:

1. Hypothesis testing yields a prob (F-statistic) value of  $0.000000 < 0.05$ ; thus,  $H_0$  is rejected, indicating that simultaneously, capital structure (DER), profitability (ROA), profitability (EPS), and dividend payment (DPR) significantly influence firm value.
2. Hypothesis testing results in a p-value (sig.) of the capital structure variable equal to 0.1539 with a positive coefficient. Since the p-value ( $0.1539 > 0.05$  (5% significance level)),  $H_0$  is accepted, meaning that capital structure does not significantly affect firm value.
3. Hypothesis testing results in a p-value (sig.) of the profitability variable (ROA) equal to 0.0000 with a positive coefficient. Since the p-value ( $0.000 < 0.05$  (5% significance level)),  $H_0$  implies that profitability with the proxy of return on assets (ROA) significantly influences firm value with a positive correlation.
4. Hypothesis testing results in a p-value (sig.) of the profitability variable (EPS) equal to 0.0000 with a negative coefficient. Since the p-value ( $0.000 < 0.05$  (5% significance level)),  $H_0$  implies that profitability with the proxy of earnings per share (EPS) significantly influences firm value with a negative correlation.
5. Hypothesis testing results in a p-value (sig.) of the dividend payment variable equal to 0.2130 with a positive coefficient. Since the p-value ( $0.2130 > 0.05$  (5% significance level)),  $H_0$  is accepted, meaning that dividend payment does not significantly affect firm value.

### 5.1.6 Discussion

#### The Impact of Capital Structure on Firm Value

The findings derived from the regression analysis suggest that there is no statistically significant relationship between capital structure and business value. This implies that alterations in the capital structure of banking firms in the Indonesian subsector have minimal impact on their overall value. Thus, the research findings do not provide support for hypothesis H1, which posits a relationship between capital structure and business value.

Banks, functioning as middlemen, exhibit a greater proportion of debt relative to their equity. According to the findings from the descriptive study, the debt-to-equity ratio (DER) exhibits a maximum value of 16.07858 and a lowest value of 3.208929. The firm's value has not been influenced by its capital structure due to its significant debt burden.

The capital structure refers to the composition of debt and equity as shown in financial statements, encompassing common stock, preferred stock, and retained earnings (Rahayu et al., 2020). According to the trade-off theory,

organizations possess the ability to establish an optimal capital structure that can effectively increase the value of the firm by taking advantage of tax benefits. Nevertheless, the research findings indicate that corporations presently lack a capital structure capable of exerting an impact on firm value. Therefore, it may be concluded that the dividend exclusion rule (DER) does not exert a substantial influence on the valuation of a corporation. The findings of this study are in opposition to the research undertaken by Ardini et al. (2022), Jihadi et al. (2021), and Hirdis (2019), which provided evidence of a substantial beneficial impact of capital structure on business value..

### **The Impact of Profitability on Firm Value**

The regression analysis reveals that there is a statistically significant and positive relationship between business value and profitability, as indicated by the return on assets (ROA) measure. The coefficient associated with this relationship is positive, further supporting the notion that profitability has a beneficial effect on firm value. This implies that any upward or downward movement in Return on Assets (ROA) will have a considerable impact on the overall worth of the company, given that a notable ROA level can exert a huge and relevant influence on the optimization of firm value. Thus, the hypothesis (H2) pertaining to the influence of profitability, as measured by the proxy of return on assets (ROA), on business value can be deemed acceptable and substantiated within the context of this study. The Return on Total Assets (ROA) is a financial indicator utilized to assess a company's profitability in relation to its management of assets. A company's Return on Assets (ROA) is positively correlated with its ability to utilize its assets in an effective and efficient manner, resulting in increased profitability. Increased profitability can lead to further net cash inflows, which play a crucial role in assessing the overall worth of a company.

In contrast, the regression analysis reveals that the utilization of the earnings per share (EPS) proxy exhibits a statistically significant adverse effect on business value, as indicated by the negative coefficient. This observation suggests that a change in the EPS value is associated with a negative correlation in the firm's value. In other words, there is a substantial negative effect of EPS on firm value, hence supporting hypothesis H2b. Earnings per share (EPS) is a financial indicator utilized to assess a company's profitability by dividing its total earnings among the outstanding shares. A higher earnings per share (EPS) signifies a larger amount of earnings made for each individual investment or share owned by investors. This phenomenon has the potential to enhance investor confidence, exert an impact on the market, and result in appreciations in business value. Nevertheless, it is important to note that the association between earnings per share (EPS) and the valuation of a corporation does not consistently follow a linear pattern. The implementation of significant cost reduction strategies might provide higher profits, which may afterwards elicit unfavorable market perception, ultimately resulting in a decline in the overall worth of the company. Likewise, a rise in earnings per share (EPS) that lacks sustainable growth might yield comparable consequences.

### **The Impact of Dividen Payments On Firm Value**

The findings from the hypothesis testing indicate that the dividend payment variable has a positive coefficient, with a significance value of 0.2130. Given that the calculated value of 0.2130 above the predetermined significance level of 0.05, it may be concluded that the null hypothesis (H0) is accepted. This finding suggests that dividend payments have a limited effect on the overall valuation of the company. The influence of a high dividend payment rate on a company's worth is not considered significant, hence any changes in dividend payments, whether an increase or decrease, do not have a substantial effect on the company's value.

The present study's results provide support for Modigliani and Miller's irrelevance argument, which posits that dividends have no impact on a firm's valuation. Miller and Modigliani claim that the augmentation of a firm's worth is contingent upon the efficient allocation and utilization of its resources in order to generate profits. Nevertheless, this perspective contradicts the relevancy argument put forth by Gordon (1959), which posits that the distribution of dividends can have an impact on the overall value of a company. The fundamental premise of this theory posits that the distribution of dividends has the potential to enhance the financial prosperity of investors. Investors exhibit a preference for dividends over capital gains due to the relatively lower degree of risk connected with dividends in comparison to the risk inherent in capital gains.

### **5.3 Proposed Improvements**

The authors aspire that this research will contribute supplementary insights to the ongoing advancement of research pertaining to the valuation of enterprises within the banking sub-sector in Indonesia. Subsequently, researchers have the opportunity to incorporate other independent variables, alongside the inclusion of macroeconomic factors, into the analysis of inflation and interest rates. By employing distinct sample selection methods, researchers can generate a

larger pool of samples for analysis. By incorporating macroeconomic variables, it is anticipated that a more comprehensive framework will be established to guide investors in their investment decision-making process, as they get insights into favorable macroeconomic indicators.

## **6. Conclusion**

Based on the findings of the analysis, it can be concluded that: (1) the impact of capital structure on firm value is not statistically significant; (2a) profitability, as measured by the return on assets (ROA), has a statistically significant positive relationship with firm value; (2b) profitability, as measured by earnings per share (EPS), has a statistically significant negative relationship with firm value; and (3) dividend payments do not have a statistically significant impact on firm value.

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## **Biography**

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