

DETERMINATION OF CAPITAL STRUCTURE CULTURE OF BANKING COMPANIES USING INDONESIA'S MACROECONOMIC CONTEXT

Rinaldy Saleh^{1*}, Isnurhadi², Shelfi Malinda³, Marlina Widiyanti⁴

^{1*,2,3,4}Fakultas Ekonomi, Manajemen, Manajemen Keuangan, Universitas Sriwijaya, Indonesia
Salehrinaldy@gmail.com^{1*}, Isnurhadi@unsri.ac.id², malinda@fe.unsri.ac.id³, marlinawidiyanti@fe.unsri.ac.id⁴

ABSTRACT

Capital structure is an important company funding decision, especially for companies in developing countries. Apart from that, capital structure shows the combination of various funding methods managed by the company, where the way a company finances is very relevant for investors, directors and all other stakeholders. Thus, funding decisions have a direct influence on company value. There is an argument about how mixing debt and assets in a capital structure impacts a company's value. Furthermore, the determining factors that can have an influence on a company's capital structure are still debated in financial studies. This study uses leverage as the dependent variable in the 2013-2022 period by examining 30 banking company objects in Indonesia listed on the Indonesia Stock Exchange using STATA V.17 to answer the panel data analysis of this research. The financial ratios reviewed are the liquidity ratio, The era of volatility, growth opportunities, bank size and external macroeconomic variables where inflation and Gross Domestic Product (GDP) are the basis of companies' problems in financing their capital structure. The results show that banks in Indonesia have high leverage, where each business company applies differences in its finances. Return on assets, growth opportunity, inflation show a positive and significant relationship with leverage on debt and assets. Profit volatility, tangibility, bank size and Gross Domestic Product show a negative and significant relationship. In terms of research, the research has limitations which are expected to include all banking companies in Indonesia and add external macroeconomic variables to further identify capital structure values such as exchange rates and interest rates.

Keywords: Capital Structure, Financial Macroeconomics, Indonesia, Banking Companies

This article is licensed under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/) 

INTRODUCTION

The capital structure shows a mix of different funding source methods managed by the company (Neves et al., 2022). Puspitasari (2022) states that the way a company is financed is highly relevant to investors, directors, and all other stakeholders. Thus, funding decisions have a direct influence on the value of the company. Previous evidence from the financial literature suggests that a company's capital structure can be influenced by a variety of factors. Capital structure is one of the most debated areas of corporate finance research. A central question has long been posed by Modigliani and Miller in 1958, which revolves around how the mix of debt and equity in a capital structure impacts a company's value (Talreja et al., 2023). More on before. In addition, financial institutions known as the banking sector play an important role in increasing economic growth and development through the distribution of funds needed by the economy (Ramadan, 2019). It is considered the lifeblood of modern trading and tremendous changes in some of these sectors have taken place throughout the world. This change accelerated due to increased competition in banking (Al-Ahdal et al., 2022). A large number of new markets have sprung up due to the strategic changes of financial institutions (Sheikh & Qureshi, 2017). Therefore, to survive in the market, a bank needs to have financial strength that shows the bank's performance that explains how much the bank is able to repay debt, how

profitable, asset quality and managerial efficiency (Khan et al., 2021). In this issue, a growing number of these studies are investigating different types of bank performance as indicators of financial strength by comparing financial ratios to individual aspects such as profitability (Adesina, 2021; Le & Ngo, 2020). In this empirical study, many studies were conducted focusing on bank financial ratios, e.g. profit (profit-asset ratio), income ratio, credit risk, liquidity risk (Afroj, 2022; Zedan, 2022), Net Interest Margin, *return on asset* (Gupta & Mahakud, 2020), loan growth (Karim et al., 2014) and capital adequacy where the Bank acts as a financial intermediary that distributes funds from households (*in the form of savings*) and distributes these funds to investors and borrowers.

Countries have focused a lot on improving the banking sector and financial intermediaries to develop the financial sector to achieve economic growth including Indonesia. Due to the development of the financial sector, individuals tend to save more and turn those savings into investments (Subekti et al., 2022; Zirek et al., 2016). Hoffman & Patton (1997) argues that in an efficient financial system, banks increase profitability while increasing the supply of funds from depositors to borrowers. This role becomes more significant in countries that have diversified and emerging economies, such as Indonesia. These empirical studies have explored banking performance in various dimensions. However, these results do not infer the strength of the bank as a whole and provide some conflicting comparisons. Like, Zedan (2022) concluded that the profitability performance of conventional banks is higher than that of Islamic banks, while Islamic banks have less liquidity risk and have greater financial strength than conventional banks. Al-Ahdal et al (2022) Explore that conventional banks and Islamic banks have higher loan growth while in equity growth, Islamic banks have better performance than conventional banks. These studies fail to compare the overall performance of these banks because they cannot compare whether the financial strength of one group of banks as a whole is better than that of another group of banks or not. Therefore, due to gaps in the existing literature, this study attempts to evaluate the combined financial strength of banks in Indonesia. The size of the banking sector in Indonesia is relatively larger than many other countries with almost the same level of per capita income and development.

The theory of capital structure about optimal capital structure has received much attention from academics and practitioners since important research conducted by Modigliani and Miller in 1958 and 1963 (Talreja et al., 2023). Extensive research has been conducted to understand the factors that affect a company's capital structure. Empirical studies have reaffirmed that firm characteristics, institutional arrangements and macroeconomic uncertainty are strong influences on different capital structures and *leverage* and risks. Empirical studies show that external macroeconomic or financial uncertainty will affect a company's capital structure in a variety of ways (Khan et al., 2021; Al-Ahdal et al., 2022). In general, during any crisis, expected profits will weaken as risks and uncertainties increase. Borrowers and lenders become hesitant to advance funds for long-term projects. Given the higher likelihood of default during a crisis, lenders will demand higher term premiums on their loans, which these high-cost long-term loans make them less attractive compared to short-term loans. The authors have considered achieving the following research objectives: To investigate the overall financial strength of different bank groups in Indonesia. As well as to examine the determinants of a bank's financial strength in estimating financial strength, this study uses the additive value function which is a multi-criteria approach by utilizing the

interpretation of macroeconomic variables such as inflation and *gross domestic product*, and involves determinants that can have an influence on the company's capital structure is still debated in financial studies such as *liquidity, eraning volatility, grwoth opportunity, bank size*.

The banking system in Indonesia is very unique, with banks providing Islamic and conventional banking services, The fulfillment of funds needed by this company can come from internal sources which include share capital and retained earnings and external sources which include short-term debt and long-term debt (Aldubhani et al, 2022). Under certain conditions, companies can meet their funding needs by prioritizing sources of funds that come from within (Wikartika & Fitriyah, 2018), However, due to the growth of the company, it resulted in a greater need for funds, so that in meeting the needs of these funds, the company can use sources of funds from outside the company, namely debt (Himmah & Dianty, 2021). The company can carry out *a leverage policy* in order to pay interest on the use of debt and can return the return on the proceeds of the sale of shares (Sujana, 2017). The condition of debt and availability of capital owned by 8 bank companies, where the highest average debt condition is owned by Bank Mandiri of Rp. 1,465 trillion with capital generated only Rp. 222.70 billion and followed by BRI bank, this is based on the fact that banks need large funding for financing distribution that cannot be fulfilled entirely through internal capital sources derived from equity growth, Therefore, banks need external financing (debt) to maintain and improve the quality of finance companies in order to gain the trust of their *stakeholders*. But the opposite happened to BTN, MEGA and OCB banks which have smaller debts. However, if viewed for 3 years (2013-20222), these 8 banks tend to have the same potential, which is to cause *financial leverage* or a risk faced by the company will be even greater because of the debt. *Financial leverage* is considered detrimental if the profit obtained is less than the fixed expense costs incurred due to the use of debt. *Financial leverage* is the use of a source of funds that has a fixed load with the expectation that it will provide additional profits that are greater than the fixed load so that it will increase the profits available to shareholders (Syafira & Zainul, 2021).

The debt-to-asset ratio indicator is calculated by dividing the debt of a financial company by the total number of shares and other liabilities of assets of the same sector. Debt is a commonly used concept, defined specifically as part of obligations. All debt instruments are liabilities, but some liabilities such as stocks, assets and financial derivatives are not debts. Debt is mostly acquired as an amount of the following categories of liabilities: currency and deposits, securities other than shares (except financial derivatives), loans, technical reserve insurance and miscellaneous debt. On the denominator side, shares and other assetas correspond to a part of the company's own financial resources that, by convention, are reported on the corporate liability side.

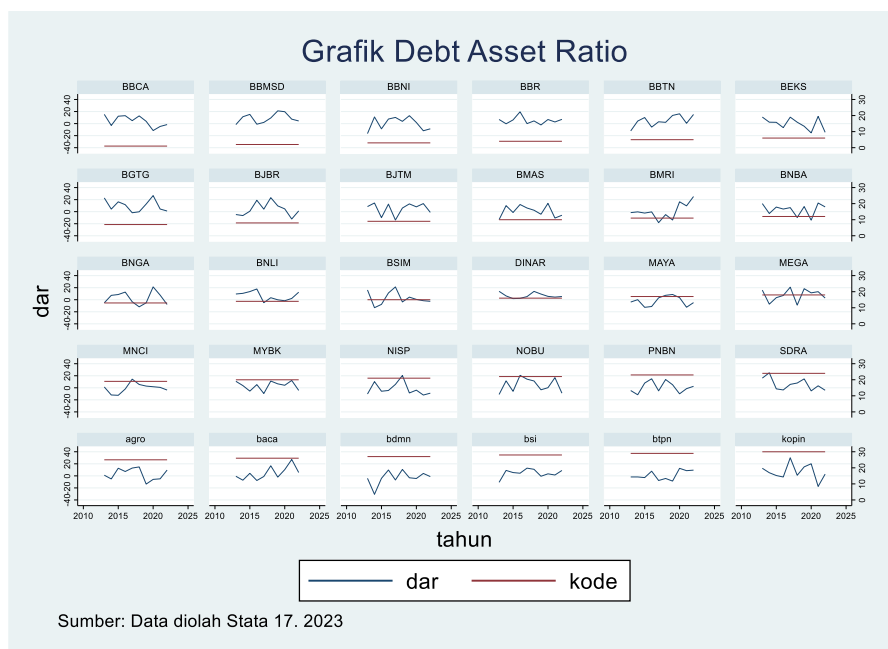


Figure 1. Debt Equity Ratio of 30 Indonesian Banking Companies

From the graph above, it is explained that 22 companies have DAR ratios that tend to form irregular or fluctuating, meaning that banking companies have debt on assets that are not fixed. A company can finance its operations through debt or assets. The debt-to-asset ratio is a measure of financial leverage, or the extent to which financial firms finance their activities beyond their assets. The more debt financing a company uses, the higher its financial leverage will therefore have a high risk impact on creditors and corporate investors; Therefore, high corporate leverage increases the vulnerability of financial firms to shocks and can disrupt their repayment capacity. A higher ratio of total debt to assets indicates that the sector has increased the relative portion of debt outside financing, while a lower debt-to-assets ratio indicates that the sector finances a small portion of its activities through debt compared to funding through their assets (retained earnings and net issuance of new shares). Fluctuations in the market value of assets can also cause changes in ratios. The ratio is the number of times the debt is for asset. Therefore, if the ratio of financial companies is 2.5 it means that the debt owed is 2.5 times greater than their assets. Higher debt can result in fluctuating revenues due to additional interest expense and increased vulnerability to business downturns. However, in this case debt can have a positive impact where if a corporation has an asset so that net profit can be generated, this debt can be utilized appropriately.

Initiated by Modigliani and Miller (MM) in 1958, the current framework for understanding the factors affecting debt levels is determined by pioneering research conducted by numerous studies (Brusov & Filatova, 2023). Popularly called MM theory, early theories postulated that if the effects of taxes, information asymmetry, and transaction costs were excluded, then the capital structure did not affect the value of the firm. Miller concluded that the value of a company under these conditions remains the same whether it has no *leverage* or has *leverage*. The absence of taxes made early models unrealistic. In later studies, the researchers introduced modified MM models including tax impacts disclosed by Modigliani and Miller in 1963. The tax-based model recommends profitable companies to raise more debt

because the presence of debt is found to increase the value of the company. The MM model became popular due to its optimal capital structure where funding costs were lowest. The theories that explain capital structure can be grouped into two major approaches, namely *trade-off theory* and *pecking order theory*.

Each theory explains the decision between debt and equity by understanding its effect on a company's value from a different point of view. The *trade-off* theory states that the optimal capital structure will depend on balancing the company's costs and debt benefits. For example, classical *trade-off* theory weighs tax protection on debt with bankruptcy costs to determine optimal debt levels (Akabayashi & Psacharopoulos, 1999). According to this theory, the optimal level of debt is when the tax benefits of debt neutralize the cost of bankruptcy. Frank & Goyal (2007) It also argues that the cost of bankruptcy can be used to explain differences in capital structure. Another variation of the *trade-off* theory postulates that agency structure and associated costs will have a significant influence on capital structure (Jensen & Meckling, 1976). This theory identifies the possibility of a dispute between a shareholder and his agent. Jensen (1976) proposed that agency costs could be reduced by issuing equity to managers or increasing the volume of debt in the capital structure. Another approach to explaining capital structure is based on differences in information between different stakeholders. In Myers and Majluf, 1984 *pecking order theory* utilizes the concept of information asymmetry to explain capital structure (Shyam-Sunder & C. Myers, 1999).

Capital structure can be viewed as an indication that managers give to investors or as a way to reduce inefficiencies due to information asymmetry. According to this theory, companies prefer internal sources, debt and equity in order to minimize the cost of information asymmetry. The expansion of information asymmetry suggests that debt acts as a disciplinary tool for managers. The assumption of this theory is that managers are reluctant to publish information that is detrimental to their position. In the event of a debt default, the company is forced to liquidate so that information is available to the public, thereby reducing asymmetry. Information asymmetry has also been used by researchers (Hirshleifer & Thakor, 1992), to explain debt or equity preferences for a particular project. Management typically prefers debt to finance high-risk projects, rather than equity financing. As companies mature, their credit ratings improve thereby lowering the cost of debt. Therefore, the researchers argue that younger companies will have lower debt compared to older companies. Although there have been many theoretical and analytical studies that examine these theories in a variety of geographies and contexts, no agreement has yet been reached as to their relevance. The results are inconclusive and suggest that the relevance of these theories is highly contextual (Graham, 2000; Leary & Roberts, 2010).

Debt ratio or *debt asset ratio* can provide an indication of the corporate capital structure. If this *ratio* is high, it indicates that *the corporation* uses more debt than equity for financing. On the other hand, a low ratio suggests that corporates are more dependent on equities. Therefore, *debt asset ratios* can help determine whether *a corporate* has a capital structure that is more skewed towards debt or equity. Furthermore, from a *financial* perspective, a balanced capital structure is essential for *the long-term* financial health of *the corporate*. Using excessive debt can lead to high interest payments and reduce *financial corporate* flexibility. On the other hand, over-reliance on equities can limit growth potential because there is no leverage. DER helps *corporates* and investors understand whether their debt-to-

equity ratio is in the right range (Kartika et al., 2023). *Profitability* defines *Return on Assets* as a *ratio* that measures a *corporate* ability to generate net profit based on a certain level of activity (Puspitasari, 2022). Sangadah (2022) The relationship between *return on assets* and capital structure is very important when analyzing corporate performance and *finance*, for example, in terms of *cost of capital*. Different capital structures can affect the *cost of corporate capital*. While *corporate size* is an indicator to measure *the size of the bank*. A bank with a higher amount of assets indicates that the bank is larger and vice versa. Banks with larger amounts of assets will increase their loan collection to maximize profits.

The greater the amount of credit issued, the greater the likelihood of potential non-performing loans (Krisnando and Novitasari, 2021). Deep *opportunity growth* Khan et al (2021) Explaining the stability of a corporation's income can affect the number of loans that can be obtained by the *corporate* and the better the level of *corporate sales* so that the higher the number of loans you will receive. *Earnings volatility* is an indicator that measures the stability of *corporate profits* each year, according to Khan et al (2021) The relationship between income fluctuations and corporate liabilities is important in the context of risk management and *financial analysis*. Income volatility refers to fluctuations in *corporate profits* from one period to another, while liabilities are obligations or debts owned by *corporations*. The relationship between the two can have a significant impact on *financial health* and corporate risk management strategies. *Tangible* comparison between fixed assets and total assets. The larger the fixed assets, the more assets can be used as debt collateral and therefore the easier it is for *the corporate* to recover debt and refer to *fiscal* assets that have significant and quantifiable forms of finance, such as running property and inventory. '*liability*' is a *financial obligation* or debt that must be paid by *CORPORATE*. The relationship between tangible assets and liabilities is particularly relevant in *financial analysis* as it may affect *the ability of a corporation* to meet its financial obligations.

METHOD

The study examines the financing options of Indonesian banks and explores the most significant factors of their capital structure. A total of 46 domestic banks are listed on the stock market of the Indonesia Stock Exchange. This study used data from the 30 banks after selection on the basis of incompleteness in the financial statements, based on the availability of complete data for the period 2013-2022. This sample roughly covers most of Indonesia's banking sector, based on the size of the domestic market share. Follow Khan et al (2021) data are taken from the audited annual financial statements of the banks concerned to estimate the relationship between leverage on the basis of debt-to-asset ratios and bank-specific variables Data for growth proxies (*price to book ratio*) and macroeconomic indicator data are taken *Gross Domestic Product (GDP)* and *Inflation* from Indonesia's annual economic report. The final sample consisted of data from a panel of 30 banks over 10 years, resulting in 300 bank year observations.

This study adopts variable definitions from the existing literature to obtain a meaningful comparison of the results of this study with previous studies. Like Khan et al (2021) and Neves et al (2022) *leverage* It is used as a dependent variable and proxy for a bank's capital structure and suggests the use of *leverage* since most regulations on banks are based on book value. The explanatory variables used in this study are *profitability*, *profit volatility*, *tangibility*, growth and bank size. The control variables are annual GDP or *Gross Domestic Product* growth and inflation rate.

The methodology of this study to test the stationarity of the data, used the root panel unit. Sample data is panel data, i.e. data that includes banks over time. Therefore, panel data techniques [*pooled OLS (ordinary least squares), fixed effect and random effect*] are used to estimate the relationship between *leverage* as a proxy for capital structure and explanatory variables. *Fixed effect (Generalized Least Squares)* is suitable for combined cases where there are bank and time specific effects. Fixed effect estimation allows intercept for each bank differently but limits the slope parameter to constant for all banks and time periods. Instead. In analyzing this study using STATA V.17.

RESULTS AND DISCUSSION

A. Root Panel Unit Root Test Results

To check if the data series is stationary at a level, we use the *summary of the unit root test* as given by Levin et al (2002). The results are presented in Table 1. All five explanatory variables and two control variables are stationary at their level at a significance level of 5%. These variables have no unit root. Thus, all dependent and independent variables are stationary. While the calculation that measures short-term and long-term interpretation is tested with the *pedroni cointegration test* in Table 2, where from the results of the integration test using the pedroni test approach where it is obtained that in the *Modified Phillips-Perron* (0.0000), *Phillips-Perron* (0.000) and *Augmented Dickey-Fuller* models (0.0000) which all show has a p-value of < 0.05 so that it can be interpreted that this research is cointegrated. Furthermore, to see the long-term relationship between variables using the approach of determining *Lag Optimum*, which is the time period of influence of one variable on other variables that provide optimal results and in convergence testing or a gap each company has a difference in financing its company by 3.36%, here the company will face a gap which will cause the cost of equity capital from shares, The net return on assets is greater than the cost of debt capital because from the investor's point of view, share capital is seen as riskier than debt (with this the gap will be reduced by 60%).

B. Descriptive Statistics

Descriptive statistics are presented in Table 3. *The bank's mean leverage* is 3.35%, which shows the proportion of Indonesian banks' assets financed by non-deposit and deposit obligations. The average value of *leverage* in Indonesian banks is higher compared to the proportion of *leverage* in previous studies on non-financial companies in other countries, such as Neves et al (2022) and Al-Ahdal et al (2022). However, this value is lower than the average of banks in other countries in the country (Sheikh & Qureshi, 2017). The higher leverage value for banks compared to *the leverage of non-financial companies reflects the deposit-taking nature of commercial banks' business*. Average profitability was 1.64%, much lower compared to banks in the east and Europe reported by Sheikh & Qureshi (2017), however, it is higher compared to the profitability of Pakistani Islamic banks and non-financial banks.

Table 1. Unit Root Test Summary

Variable	Method	Hipotesis	Probability at levels
<i>To give</i>	<i>Levin-Lin-Chu</i>	Common unit roots	0.0000***
<i>TWO PEOPLE</i>	<i>Levin-Lin-Chu</i>	Common unit roots	0.0000***
<i>HOME</i>	<i>Levin-Lin-Chu</i>	Common unit roots	0.0000***
<i>TG</i>	<i>Levin-Lin-Chu</i>	Common unit roots	0.0000***

<i>PBV</i>	<i>Levin-Lin-Chu</i>	Common unit roots	0.0000***
<i>BZ</i>	<i>Levin-Lin-Chu</i>	Common unit roots	0.0000***
<i>INF</i>	<i>Levin-Lin-Chu</i>	Common unit roots	0.0000***
<i>GDP</i>	<i>Levin-Lin-Chu</i>	Common unit roots	0.0000***

Source: Appendix stata.17, secondary data processed (2023)

Note: 1***, 5**, 10* Determination of significance at fault tolerance (alpha) levels of 1%, 5%, and 10% respectively.

Table 2. Cointegration Test

Pedroni Cointegration		
<i>Modified Phillips-Perron t</i>	11.3445	0.0000
<i>Phillips-Perron t</i>	-18.1303	0.0000
<i>Augmented Dickey-Fuller t</i>	-8.5815	0.0000

Source: Appendix stata.17, secondary data processed (2023)

Table 3. Descriptive Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
<i>DAR</i>	300	3.35	9.73	-30.62501	30.01067
<i>ROA</i>	300	1.64	9.77	-31.81565	27.31762
<i>EV</i>	300	1.65	9.77	-31.81129	27.31937
<i>TG</i>	300	.866	9.76	-27.61867	26.73991
<i>PBV</i>	300	1.77	11.00	-27.32098	28.62557
<i>BZ</i>	300	31.47	11.30	-10.08174	61.58947
<i>INF</i>	300	5.42	10.27	-24.89	32.34
<i>GDP</i>	300	6.27	10.22	-22.59198	32.72403

Source: Appendix stata.17, secondary data processed (2023)

From the results in the table above shows an overview of 30 companies each value owned. Where it can be seen the value of std.deviation which has a different value for each variable as well as the mean value. If compared between the 2 values, then std.deviation has a value greater than the mean value, meaning that it shows the distribution of large data variables or the absence of large enough gaps. The greater the standard deviation value, the more diverse the values on the item or the more inaccurate with the mean, conversely, the smaller the standard deviation, the more similar the values on the item or the more accurate the mean.

Table 4. Model Selection Results

<i>Variabel</i>	<i>Common Effect</i>	<i>Fixed Effect</i>	<i>Random Effect</i>
<i>DAR (c)</i>	-1.629698 [0.358]	5.101761 [0.000]***	1.085735 [0.410]
<i>ROA</i>	-.0059662 [0.619]	.0235991 [0.019]**	.0234843 [0.797]
<i>EV</i>	.0012238 [0.487]	-.0124819 [0.000]***	.0050774 [0.058]*
<i>TG</i>	.002974 [0.518]	-.0487837 [0.000]***	-.0820016 [0.135]
<i>PBV</i>	-.1113981 [0.069]*	.0113358 [0.005]**	.0223073 [0.407]
<i>BZ</i>	.270479 [0.000]***	-.101632 [0.000]***	.0174378 [0.771]
<i>INF</i>	.0117261 [0.877]	.0380549 [0.000]***	.0131372 [0.587]
<i>GDP</i>	-.0949893 [0.246]	-.1624813 [0.000]***	.1170868 [0.142]
<i>n</i>	300	300	300
<i>r2</i>	0.0801	0.0908	0.0472
<i>r2_a</i>	0.0580	0.0491	0.0395
<i>F</i>	3.36	28.87	10.86 (wald chi2)
<i>Prob > F</i>	0.00009	0.0000	0.1448
<i>Rho</i>	-	0.83227996	0.57451593

Legend: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Source: Appendix stata.17, secondary data processed (2023)

To explore the effect of explanatory variables on leverage on debt and asset ratios, this study used pooled OLS regression, fixed effect and random effect. Table 4 presents the results of these three estimates. The relationship of all explanatory variables with the dependent variable shows consistency in all three regression models. Based on the results of the chow test (F, 11.20, p-value: 0.000) and the Hausman test (1978) (Chi square: 60.66, p-value: 0.000) and the Breusch and Pagan Lagrangian multiplier test (chibar; 211.66, p-value: 0.000) the fixed-effects estimate was found suitable for discussion.

Based on the results of the t test, the debt-to-asset ratio has a significance level smaller than 0.05 ($0.000 < 0.05$), meaning that return on assets partially has a significant effect on the debt to asset ratio. Moreover, the results of the regression analysis of the data panel show that the ratio of debt to assets has a β value of 0.0235. This means that return on assets has a positive effect on the Debt to Asset Ratio. ROA results with a significantly positive der mean that the net profit generated by the company is less than the assets so that it can provide debt reduction to the company or in other words the achievement of ROA cannot be used to finance the company and means accepting the trade-off theory which according to the Proposition of Modigliani and Miller's (MM) theorem (Modigliani and Miller, 1958), which is based on the perfect capital market hypothesis, suggests indifference between debt and equity. Trade-off theory supports the use of debt as a financing option by considering its costs and benefits (Kraus and Litzenberger, 1973). Trade-off theory supports the use of debt as a financing option (Kraus and Litzenberger, 1973). This theory postulates that companies can achieve optimal capital structures through an assessment of the costs and benefits of each additional dollar of debt. Earning Evolity Based on the results of the t-test, the ratio of debt to assets has a significance level smaller than 0.05 ($0.019 < 0.05$), the ratio of operating profit on assets to debt has a β value of -0.0124. This means that evolity negatively affects the Debt to Asset Ratio, so in the sense that the resulting operating profit can reduce the company's debt burden in improving the company's performance in capital structure rules This is also supported by the trade-off theory where the relationship that shows the negative direction of the trade-off theory shows a negative relationship between profit volatility and company leverage.

It is expected that the company's unstable income may reduce its borrowing capacity, which happens because, with the issuance of debt, the company contractually obliges itself to make debt-related payments. If the company's earnings are unstable, these payments can lead to financial difficulties. In addition, in times of negative earnings, indebted companies may not benefit much from tax protection. However, empirical evidence provides mixed results. For example, Titman and Wessels (1988) found no effect of variable earnings on debt ratios. Similarly, Chen (2004) reported an insignificant impact of earnings volatility on debt. However, the findings of Fama and French (2002) and De Jong et al. (2008) are in line with the hypothesis of the trade-off theory. In addition, it was found that profit volatility is negatively related to leverage, but the relationship is not significant.

Based on the results of the t test, the ratio of debt to assets has a level of significance smaller than 0.05 ($0.000 < 0.05$), meaning that tangibility partially has a significant effect

on the debt to asset ratio, while here the results of the regression analysis of the data panel show that the ratio of fixed assets to total assets to debt has a β value of -0.048. This means that tangibility negatively affects the Debt to Asset Ratio, so this result is contrary to the trade-off theory which is the trade-off theory, which assumes that physical assets can be used as collateral to borrow more. However, this does not apply to financial companies, especially banks. The trade-off theory postulates that companies with more tangible assets tend to borrow more compared to companies with fewer assets. Pecking order theory predicts that there will be low information asymmetry when assets are used as collateral.

Similarly, Jensen and Meckling (1976) proposed underpricing equity due to the presence of asymmetric information and suggested that issuing collateralized debt could reduce agency costs. In addition, Long et al. (1992) stated that pledging assets as collateral can reduce several agency problems such as adverse selection and moral hazard. Growth Opportunity (PBV) significance is smaller than 0.05 ($0.005 < 0.05$) and has a β value of 0.0113, meaning that Growth Opportunity (PBV) has a positive effect on the Debt to Asset Ratio, the company can overcome a risk in the short or long term with the presence of stocks and stock values that grow well. Growth potential is considered another important factor influencing a company's financing choices. According to the assumptions of trade-off theory, companies with future opportunities tend to borrow less compared to companies with tangible assets. Both pecking order theory and agency theory predict a negative relationship between growth opportunities and leverage. Bank Size 0.05 ($0.0000 < 0.05$) partially has a significant effect on the debt to asset ratio, while here the results of the regression analysis of the data panel show that the achievement of total assets to debt has a β value of -0.1016, meaning that bank size) has a negative effect on the Debt to Asset Ratio, so that in the sense that bank size can be a proxy for information to outside investors, which can increase equity preference over debt. In addition, Bashir et al. (2020) stated that banks with large asset bases have various alternative sources of external financing other than leverage.

The existing literature connects. According to the trade-off theory, large companies typically have more borrowing power and, thus, high debt ratios. A larger size means they are more diversified and less prone to financial difficulties. Therefore, the literature highlights size as a proxy for bankruptcy. The pecking order theory assumes that larger firms with adequate internal resources primarily rely on these resources for their financing. Therefore, this theory predicts a negative relationship between company size and leverage. In addition to the internal factors above, several studies have used macroeconomic determinants as external factors in research on banks and capital structure, where inflation is significantly positive and Gross domestic product has a positive effect on the Debt to Asset Ratio, so that in the sense that inflation increases the burden on debt owned by the company, the emphasis on capital and assets owned by the company must decrease to keep the company bankrupt, That's why here inflation greatly influences.

In addition, a significant positive relationship was identified that the increase in the inflation rate although it creates uncertainty that can increase disability, but here the company can pay back its obligations, so that there is a positive relationship between leverage and inflation. significant negative. inflation has a positive effect on the Debt to Asset Ratio. Gross domestic product that has a negative effect can also be interpreted as an

increase in the level of inflation creates certainty that increases the company's ability to pay its twin obligations, so that there is a negative relationship between leverage and inflation. This finding is in line with the findings of Gungoraydinoglu and Öztekin (2011). The relationship of trade-off theory with economic growth where a decline in negative economic growth has caused rapid economic turmoil to increase, to help trade-off economic growth with the growth period of the company must pay more attention to the capital structure of assets, stocks, current accounts, credit and others so that economic growth can play a positive role in reducing debt in company financing.

CONCLUSION

This study explores the most significant factors influencing the choice of capital structure of banks in Indonesia. This study examines the choice of bank financing mix using data from 30 banks. In the next research is expected to add macroeconomic control variables such as interest rates and exchange rates, besides that it is expected to use more supportive analytical techniques so that it can explain an indicator that becomes a control variable or it can be said to be a moderation variable and The number of observations and responses observed is too large so that it has an abnormal resulting value And classical assumptions must be cured, so that models of adding or calculating randomization value modifiers encoded with original values are needed and need to be allowed so as to pass the problem of classical assumptions. Indonesia listed on the Indonesia Stock Exchange (IDX) in the period 2013-2022. Where the entire theory used, namely theory agency, the theory of trade-offs can support the results of this study.

In addition, this study provides suggestions where further research is expected to add macroeconomic control variables such as interest rates and exchange rates, besides that it is expected to use more supportive analytical techniques so that it can explain an indicator that becomes a control variable or it can be said to be a moderation variable and The number of observations and responses observed is too large so that it has an abnormal resulting value and must be cured Classical assumptions, so that models of adding or calculating randomization value modifiers encoded with original values are needed and need to be allowed so that they can pass the problem of classical assumptions.

REFERENCES

- Adesina, K. S. (2021). How diversification affects bank performance: The role of human capital. *Economic Modelling*, 94, 303–319. <https://doi.org/https://doi.org/10.1016/j.econmod.2020.10.016>
- Afroj, F. (2022). Financial strength of banking sector in Bangladesh: a CAMEL framework analysis. *Asian Journal of Economics and Banking*, 6(3), 353–372. <https://doi.org/10.1108/AJEB-12-2021-0135>
- Akabayashi, H., & Psacharopoulos, G. (1999). The trade-off between child labour and human capital formation: A Tanzanian case study. *Journal of Development Studies*, 35(5), 120–140. <https://doi.org/10.1080/00220389908422594>
- Al-Ahdal, W. M., Almaqtari, F. A., Zaid, D. A., Al-Homaidi, E. A., & Farhan, N. H. (2022). Corporate characteristics and leverage: evidence from Gulf countries. *PSU Research Review*, 6(2), 120–140. <https://doi.org/10.1108/PRR-01-2020-0001>
- Aldubhani, M. A. Q., Wang, J., Gong, T., & Maudhah, R. A. (2022). Impact of working capital

- management on profitability: evidence from listed companies in Qatar. *Journal of Money and Business*, 2(1), 70–81. <https://doi.org/10.1108/jmb-08-2021-0032>
- Brusov, P., & Filatova, T. (2023). Capital Structure Theory: Past, Present, Future the Modigliani. *Mathematics*, 11(616), 1–30. <https://doi.org/https://doi.org/10.3390/math11030616>
- Frank, M. Z., & Goyal, V. K. (2007). Trade-Off and Pecking Order Theories of Debt. *Handbook of Empirical Corporate Finance SET*, 1(1), 135–202. <https://doi.org/10.1016/B978-0-444-53265-7.50004-4>
- Graham, J. R. (2000). How Big Are the Tax Benefits of Debt? *The Journal of Finance*, 55(5), 1901–1941. <https://doi.org/https://doi.org/10.1111/0022-1082.00277>
- Gupta, N., & Mahakud, J. (2020). Ownership, bank size, capitalization and bank performance: Evidence from India. *Cogent Economics & Finance*, 8(1), 1808282. <https://doi.org/10.1080/23322039.2020.1808282>
- Himmah, E. F., & Dianty, A. (2021). Analysis of Capital Structure on Multinational Corporation: Trade off Theory and Pecking Theory Perspective. *Proceedings of the First International Conference on Science, Technology, Engineering and Industrial Revolution (ICSTEIR 2020)*, 536(Icsteir 2020), 70–77. <https://doi.org/10.2991/assehr.k.210312.012>
- Hirshleifer, D., & Thakor, A. V. (1992). Managerial Conservatism, Project Choice, and Debt. *The Review of Financial Studies*, 5(3), 437–470.
- Hoffman, V. B., & Patton, J. M. (1997). Accountability, the Dilution Effect, and Conservatism in Auditors' Fraud Judgments. *Journal of Accounting Research*, 35(2), 227–237. <https://doi.org/10.2307/2491362>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Kartika, A., Irsad, M., Setiawan, M., & Sudiyatno, B. (2023). The relationship between capital structure, firm performance and a firm's market competitiveness: Evidence from Indonesia. *Investment Management and Financial Innovations*, 20(1), 88–98. [https://doi.org/10.21511/imfi.20\(1\).2023.09](https://doi.org/10.21511/imfi.20(1).2023.09)
- Khan, S., Bashir, U., & Islam, M. S. (2021). Determinants of capital structure of banks: evidence from the Kingdom of Saudi Arabia. *International Journal of Islamic and Middle Eastern Finance and Management*, 14(2), 268–285. <https://doi.org/10.1108/IMEFM-04-2019-0135>
- Krisnando, K., & Novitasari, R. (2021). Pengaruh Struktur Modal, Pertumbuhan Perusahaan, dan Firm Size terhadap Nilai Perusahaan Pada Perusahaan Consumer Goods yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2017-2020. *Jurnal Akuntansi Dan Manajemen*, 18(02), 71–81. <https://doi.org/10.36406/jam.v18i02.436>
- Le, T. D. Q., & Ngo, T. (2020). The determinants of bank profitability: A cross-country analysis. *Central Bank Review*, 20(2), 65–73. <https://doi.org/https://doi.org/10.1016/j.cbrev.2020.04.001>
- Leary, M. T., & Roberts, M. (2010). The pecking order, debt capacity, and information asymmetry. *Journal of Financial Economics*, 95(3), 332–355.
- Levin, A., Lin, C.-F., & James Chu, C.-S. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of Econometrics*, 108(1), 1–24.
- Neves, M. E., Almeida, D., & Vieira, E. S. (2022). The cultural dimension in companies' leverage. New evidence using panel data for a European macroeconomic context. *Cross Cultural & Strategic Management*, 29(3), 589–617. <https://doi.org/10.1108/CCSM-10-2021-0180>
- Puspitasari, W. A. (2022). Pengaruh likuiditas, struktur aktiva, dan profitabilitas terhadap struktur modal. *Jurnal Cendekia Keuangan*, 1(1), 42.

- <https://doi.org/10.32503/jck.v1i1.2258>
- Ramadan, A. (2019). *Pengaruh rasio profabilitas dan pertumbuhan aset terhadap retrun saham dengan struktur modal sebagai variabel intervening: Studi pada perusahaan makanan dan minuman yang terdaftar di BEI periode 2014-2017*.
- Sangadah, D. (2022). Fundamental Factors and Capital Behavior of Banking in Indonesia. *Jurnal Ekonomi Dan Bisnis Jagaditha*, 9(2), 154–164.
- Sheikh, D. N., & Qureshi, M. A. (2017). Determinants of capital structure of Islamic and conventional commercial banks: Evidence from Pakistan. *International Journal of Islamic and Middle Eastern Finance and Management*, 10, 24–41. <https://doi.org/10.1108/IMEFM-10-2015-0119>
- Shyam-Sunder, L., & C. Myers, S. (1999). Testing static tradeoff against pecking order models of capital structure. This paper has benefited from comments by seminar participants at Boston College, Boston University, Dartmouth College, Massachusetts Institute of Technology, University of Massach. *Journal of Financial Economics*, 51(2), 219–244. [https://doi.org/https://doi.org/10.1016/S0304-405X\(98\)00051-8](https://doi.org/https://doi.org/10.1016/S0304-405X(98)00051-8)
- Subekti, R., & Rosadi, D. (2022). Toward the Black–Litterman with Shariah-compliant asset pricing model: a case study on the Indonesian stock market during the COVID-19 pandemic. *International Journal of Islamic and Middle Eastern Finance and Management*, 15(6), 1150–1164. <https://doi.org/10.1108/IMEFM-12-2020-0633>
- Sujana, I. N. (2017). Pasar Modal yang Efisien. *Ekuitas: Jurnal Pendidikan Ekonomi*, 5(2), 33–40. <https://doi.org/10.23887/ekuitas.v5i2.12753>
- Syafira, D. M., & Zainul, Z. R. (2021). *Pengaruh operating leverage dan financial leverage terhadap risiko sistematis pada perusahaan infrastruktur , utilitas , dan transportasi yang go public di bursa efek indonesia Effect of operating leverage and financial leverage on systematic risk in infr*. 17(3), 539–548.
- Talreja, K., Memon, M. F., Jatoi, A., & Bhutto, S. A. (2023). Multicultural Education The Effects of Capital Structure (CS) and Growth of Firm (GOF) on Firm's value (FV): A Mediation Analysis. *Multicultural Education*, 9(1), 35–41. <https://doi.org/10.5281/zenodo.7521558>
- Wikartika, I., & Fitriyah, Z. (2018). Pengujian Trade Off Theory dan Pecking Order Theory di Jakarta Islamic Index. *BISMA (Bisnis Dan Manajemen)*, 10(2), 90. <https://doi.org/10.26740/bisma.v10n2.p90-101>
- Zedan, K. (2022). Comparative Analysis of Financial Performance of Islamic vs. Conventional Banks Using CAMEL Model: Evidence from Palestine. *International Journal of Economics, Finance and Management Sciences*, 10(3), 114–121. <https://doi.org/10.11648/j.ijefm.20221003.14>
- Zirek, D., Boz, F. C., & Hassan, M. K. (2016). *The islamic banking and economic growth nexus: A panel VAR analysis for organization of islamic cooperation (OIC) countries*. 37, 69–100.