

THE INFLUENCE OF ASSET STRUCTURE, EARNING VOLATILITY AND FINANCIAL FLEXIBILITY ON CAPITAL STRUCTURE IN MANUFACTURING SECTOR COMPANIES LISTED ON THE INDONESIAN STOCK EXCHANGE (IDX)

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Abstract: This study aims to examine the influence of asset structure, earning volatility, and financial flexibility on capital structure in manufacturing companies listed on the Indonesia Stock Exchange (IDX) from the period 2019–2023. This research employs a quantitative approach with purposive sampling as the sampling technique, resulting in a sample of 64 manufacturing companies. The data analysis is conducted using the random effect model estimation approach. The findings reveal that asset structure does not have a significant effect on capital structure, while earning volatility has a significant positive effect, and financial flexibility has a significant negative effect on capital structure.

Keywords: Capital Structure, Assets Structure, Earning volatility, Financial flexibility, Manufacturing Sector Companies

1. Introduction

In an increasingly competitive business environment, strategic corporate decisions play a decisive role in determining success or failure, making effective financial management an urgent necessity. Efficient financial management enables companies to make the right decisions in resource allocation, risk management, and investment to support long-term growth. With proper allocation, companies can maintain operations while responding to expansion opportunities.

One of the objectives of financial management is to maximize company value, minimize company costs, and provide maximum returns to shareholders as measured by share price. In addition, financial management also aims to prepare capital structure, increase efficiency, and reduce company operational risks (Juairia et al., 2022).

Capital structure is a long-term balance that shows the ratio between long-term debt and equity used by a company (Sukendri et al., 2023). Karimah et al., (2021) capital structure is divided into two parts, namely equity and debt. Equity is a source of financing that comes from internal sources or company owners, while debt is a source of external financing used by companies to meet their funding needs. The measurement of capital structure has various calculation ratios, depending on the objectives set. The mix between debt and company equity is the result of a decision.

Based on financial report data published through the Indonesia Stock Exchange (IDX), manufacturing companies such as Unilever Indonesia Tbk. and Indofood CBP Sukses Makmur Tbk. showed very different trends during the 2019–2023 period. Unilever Indonesia faced critical geopolitical pressures and local competition that impacted its brands, resulting in a decline in sales and net profit of around 10% to IDR 4.8 trillion in 2023. Indofood CBP, on the other hand, recorded excellent performance with significant increases in sales and profits, with net profit rising by more than 50% to Rp 6.99 trillion.

The first factor that influences capital structure is asset structure. Asset structure reflects the value of each type of asset as company ownership in its total assets (Serghiescu & Văidean,

2014). Large asset structure ownership, especially fixed asset collateral, sends a positive signal to external parties because of the ability to fulfill obligations through asset guarantees. In addition, given the signal of high collateralization, the amount of debt from creditors becomes high (Denziana & Yunggo, 2017). The large proportion of fixed assets as collateral makes creditors more confident in the event of payment default (Gunadhi & Putra, 2019). However, if the company is unable to pay off the debt, the assets may be seized.

Research by Fahmansyah & Wahyuni (2024); and Putri & Willim (2024) shows that asset structure has a significant positive effect on capital structure because fixed assets that are collateralized send a positive signal to creditors, thereby encouraging increased use of debt. This is in line with the findings of Denziana & Yunggo (2017); and Gunadhi & Putra (2019), which explain that a high proportion of fixed assets increases creditors' confidence in the company's ability to meet its obligations. However, Cahyani & Isbanah (2018) found an insignificant negative effect, arguing that the use of fixed assets to support internal operations can reduce dependence on external funding.

Research by Moradi & Paulet (2019); and Khan et al. (2021) shows that earnings volatility has a significant positive effect on capital structure, because low earnings fluctuations are considered low risk, thereby encouraging increased external funding. However, different results were found by Saif-Alyousfi et al. (2020); and Ghasemzadeh et al. (2021), who revealed that earnings volatility has a significant negative effect on capital structure, because high earnings fluctuations signal high risk to creditors, thereby reducing companies' access to debt.

Meanwhile, financial flexibility refers to a company's capacity to adapt to economic changes through efficient management of funding sources (Yasa & Khairunnisah, 2024). This flexibility allows companies to choose the best financing structure without being tied to a single type of funding source (Alifian & Susilo, 2024). In times of economic uncertainty, financial flexibility becomes a strategic asset in maintaining business continuity.

Research conducted by Jaya et al. (2021); and Pane (2023) states that financial flexibility has a non-significant negative effect on capital structure, which explains that the more flexible a company is in managing its finances, the less it will need external financial resources. However, according to Putri & Willim (2024), financial flexibility has a positive impact on capital structure. Companies with high financial flexibility are better able to cope with difficult situations and take advantage of investment opportunities, making it easier for them to access debt as a source of funding.

Based on this description, it appears that previous research findings on the influence of asset structure, earnings volatility, and financial flexibility on capital structure still show inconsistencies. Some studies show a significant effect, while others find contradictory or insignificant results. The discrepancy between existing theory and empirical findings indicates a research gap that has not been comprehensively explained, particularly in the context of manufacturing companies in Indonesia. Furthermore, studies that explicitly highlight this phenomenon in the context of the 2019–2023 period, which reflects the economic dynamics resulting from the pandemic crisis and the recovery phase, are still limited. Therefore, this study aims to fill this gap by reevaluating the influence of asset structure, profit volatility, and financial flexibility on capital structure in Indonesian manufacturing companies during this period.

2. Literature Review

2.1 Pecking Order Theory

Pecking order theory is a capital structure model that assumes that companies determine the optimal capital structure based on financing decisions consisting of internal sources of funds, namely retained earnings, and external sources of funds, namely debt and equity. Profitable companies generally use less external financing than companies that use large amounts of external financing (Efendi & Wijayanti, 2021). According to Rozet & Kelen (2022), pecking order theory explains that companies with large profits tend to have less debt.

2.2 Signaling Theory

Signaling theory is a theory that presents how a company's condition should provide signals in the form of information to users of financial statements used in decision making (Muharromi et al., 2021). Based on signal theory, companies with good quality will deliberately send signals to the market, thereby enabling the market to distinguish between good and bad companies. Even though a company has a high level of debt, there is a good relationship between the company and its debt holders, and the company is able to increase its value.

2.3 Capital Structure

According to Viandy & Elizabeth (2020), capital structure is a mix of funds derived from equity and debt, which is an important aspect for companies because it involves the selection of profitable sources of funds. According to Dewi & Ramli (2017), capital structure refers to the proportion of a company's funding sources in the form of equity and debt, whereby companies must determine the combination of capital structures that can optimize company value.

$$\text{DAR (Debt to Assets Ratio)} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

2.4 Asset Structure

According to Kasmir (2021), asset structure refers to the wealth or assets owned by a business at a certain point in time and for a certain period. Companies that have large amounts of fixed assets tend to use debt in their capital structure, because they can take on large amounts of debt using their assets as collateral.

$$\text{FAR (Fixed Assets Ratio)} = \frac{\text{T. Fixed Assets}}{\text{Total Assets}}$$

2.5 Earning Volatility

Earning volatility is a description of the ups and downs of a company's income over a certain period of time; due to the company's unstable financial situation, the company may experience difficulties in attracting external funding (Utami & Purwohandoko, 2021). According to Muhammadiyah (2018), earnings volatility is the instability of the profits earned by a company. In other words, it is the inability of a company to maintain the stability of its profits in the short and long term. Companies with low levels of earnings instability generally do not need much funding from external sources.

$$\text{EVOL} = \text{Standard Deviation of ROA}$$

2.6 Financial Flexibility

Financial flexibility is one of the key factors that affect a company's dynamic capabilities according to Yi (2020). Financial flexibility is a company's ability to obtain funding sources both internally and externally when times are tough. Companies with a high level of financial flexibility can weather bad times and seize investment opportunities, but if a company has a high level of debt, it will become financially inflexible (Alipour et al., 2015).

$$\text{FLEX} = \frac{\text{Retained Earnings}}{\text{Total Assets}}$$

3. Method

This study uses secondary data obtained from the annual financial reports of manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the period 2019–2023. The financial reports used have been audited and contain relevant information related to the research variables, namely asset structure, profit volatility, and financial flexibility. The data was accessed through the official IDX website (<http://www.idx.co.id>), which provides annual reports and other financial information published by companies. The observation period of five consecutive years, from 2019 to 2023, was chosen considering that this time frame reflects the market dynamics and significant economic policies that affect the manufacturing sector in Indonesia, while also allowing for analysis of trends and changes in company performance during that period.

The sample selection in this study was conducted using the purposive sampling method, in which companies were selected based on specific criteria. First, the companies had to be from the manufacturing sector and listed on the IDX consecutively from 2019 to 2023. Second, companies that did not report their financial statements for the 2019–2023 period were excluded. Third, companies that reported their financial statements using currencies other than the Rupiah consecutively from 2019 to 2023 were also excluded. Fourth, companies that did not generate profits consecutively during the 2019–2023 period were excluded. Based on these criteria, this study obtained a sample of 16 companies with 5 years of observation, resulting in a total of 320 observations.

4. Finding and Discussion

Table 1 . Descriptive Analysis

Description	Minimum	Maximum	Mean	Standard Deviation	Observation
DAR	0.002480	0.923031	0.337254	0.176100	320
FAR	0.000106	0.821998	0.381199	0.200183	320
EVOL	0.002491	0.198709	0.027179	0.027219	320
FLEX	-0.306057	1.026039	0.344405	0.236302	320

The minimum value of the capital structure variable in the sample companies was 0.0025, recorded in companies with low debt dependence, while the maximum value of 0.9230 was recorded in companies with a very high proportion of debt. With an average of 0.3373 and a standard deviation of 0.1761, the data shows that the majority of companies maintain a relatively stable balance between debt and equity.

For the asset structure variable, the minimum value of 0.0001 and the maximum value of 0.8212 indicate differences in the proportion of fixed assets between companies. The average of 0.3812 with a standard deviation of 0.2002 indicates that the variation is not too large, so that most companies have a fairly uniform asset structure.

For the earning volatility variable, the minimum value of 0.0025 and the maximum value of 0.1987 indicate significant differences in the level of profit fluctuation. With an average of 0.0272 and a standard deviation of 0.0272, the data distribution is relatively poor because the variation between companies is quite high.

In terms of financial flexibility, the minimum value of -0.3061 and the maximum value of 1.0260 reflect differences in companies' ability to utilize assets as alternative sources of funding. With an average of 0.3444 and a standard deviation of 0.2363, the majority of companies have relatively balanced financial flexibility.

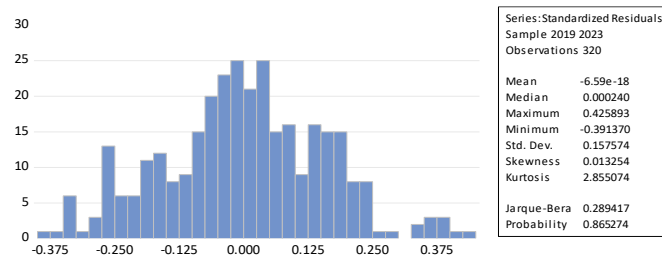


Figure 1 . Normality Test

The results of the normality test using the Jarque-Bera test obtained a Jarque-Bera probability value of $0.8653 > 0.05$, so it can be concluded that the data is normally distributed or the assumption of data normality is fulfilled.

Table 2 . Multikolinearity Test

Variable	FAR	EVOL	FLEX
FAR	1	-0.144347	-0.280481
EVOL	-0.144347	1	0.144802
FLEX	-0.280481	0.144802	1

The results of the multicollinearity test show that there is no high correlation between the variables of asset structure (FAR), earning volatility (EVOL), and financial flexibility (FLEX), with the correlation value between variables not exceeding the threshold of 0.90. This confirms that the assumption of no multicollinearity and the regression model has been fulfilled.

Heteroscedasticity test is a test that appears when the observed model error does not have constant variance. Heteroscedasticity usually occurs in cross-sectional data distribution. The presence of heteroscedasticity can be seen from the residual graph, where if the graph crosses the boundary (500 and -500), it means that the residual variance is not the same (Napitupulu et al., 2021). A heteroscedasticity test was conducted in this study, with the following results.

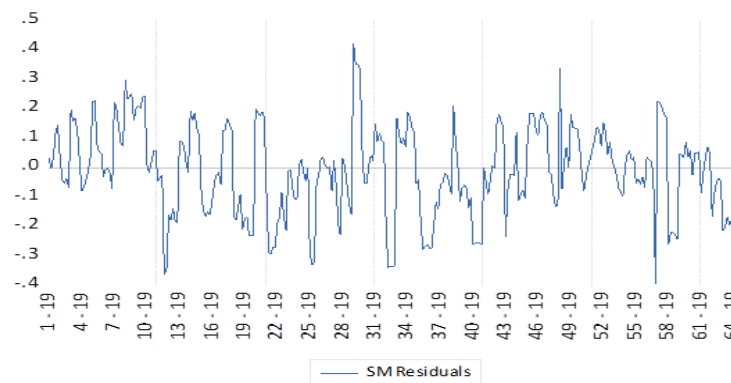


Figure 2 . Heteroscedasticity Test Chart

From the residual graph above, it can be seen that the graph is at the limit (4 and -4), meaning that the residual variance is the same, so it can be concluded that there is no heteroscedasticity.

To determine between the common effect, fixed effect model, and random effect model, there are three tests to determine the appropriate model and describe the research results more accurately and precisely than other models. The three tests are the Chow test, the Hausman test, and the LM (Breusch-Pagan) test (Widarjono, 2018).

Table 3 . Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f	Prob
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Cross section random	1.478331	2	0.4775
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The Hausman test result shows a probability of $0.4775 > 0.05$, so H_0 is accepted and the Random Effect method is selected. Next, the Lagrange Multiplier (Breusch-Pagan) test is performed to ensure the validity of the model.

Table 4 . Langrange Multiplier Test

	Cross-section	Test Hypothesis Time	Both
Breusch-Pagan	411.4434 (0.0000)	0.376728 (0.0000)	411.8201 (0.0000)

The Breusch-Pagan cross-section value is $< \alpha$, namely $0.0000 < 0.05$. It can be concluded that H_0 is rejected and H_a is accepted, which means that the best model used as panel data regression is the random effect model and the Chow test is not required in this analysis.

Table 5 . Random Effect Regression Test Results

Variable	Coefficient	Std. Error	T-statistic	Prob.
C	0.335502	0.038752	8.657772	0.0000
FAR	0.089913	0.061896	1.452646	0.1473
EVOL	1.511438	0.686278	2.202370	0.0284
FLEX	-0.213711	0.039895	-5.356839	0.0000
Specification Effect				
F-statistic	27.77645			
Prob(F-statistic)	0.000000			
R-squared	0.876667			
Adjusted R-Squared	0.845106			
Durbin-Watson Stat	1.340938			

From the regression table above, the panel data equation in this study and its explanation can be obtained as follows:

$$\text{DAR} = 0.335502 + 0.089913 \text{ FAR} + 1.511438 \text{ EVOL} + (-0.213711) \text{ FLEX}$$

If the asset structure increases by 1 point, assuming other variables remain constant, the capital structure will increase by 0.089. This indicates that companies with larger fixed assets tend to use these assets as collateral to obtain cheaper debt.

On the other hand, if profit volatility increases by 1 point, assuming other variables remain constant, the capital structure will increase by 1.511. This shows that an increase in profit volatility can increase dependence on debt, so that companies use more debt-based financing than equity.

Finally, if financial flexibility increases by 1 point, assuming other variables remain constant, the capital structure will decrease by 0.213. This shows that companies with higher financial flexibility will prefer internal financing and reduce the use of debt in order to maintain financial stability.

Based on the simultaneous test results, the significance value of the F-test is 0.000. Since the significance value of F is less than 0.05 ($0.000 < 0.05$), the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. This indicates that the variables of Asset Structure, Profit Volatility, and Financial Flexibility simultaneously have a significant effect on a company's Capital Structure. In other words, these three variables collectively contribute to changes in the capital structure used by companies.

The Adjusted R Square value of 84.5% shows that the combination of the variables of Asset Structure, Profit Volatility, and Financial Flexibility can moderately explain the variation in the company's Capital Structure. In other words, these three variables have a significant

contribution in influencing how companies determine the composition of debt and equity in their financing. However, there is still 15.5% variation in Capital Structure that is influenced by factors other than those in this model. This indicates that in addition to the three variables studied, there are other important variables such as profitability, company growth, industry conditions, and external economic factors that also need to be considered in order to understand the determination of capital structure more comprehensively.

The Effect of Asset Structure on Capital Structure

The results of the study show that the significance level of the asset structure (FAR) variable on capital structure (DAR) is $0.1473 > 0.05$. The coefficient value of 0.089913 indicates a positive effect. The results show that asset structure has a positive but insignificant effect on capital structure. The regression analysis results above show that asset structure (FAR) does not have a significant effect on capital structure (DAR) in manufacturing companies listed on the Indonesia Stock Exchange. This means that an increase or decrease in asset structure does not directly affect changes in capital structure.

The results of this study are consistent with pecking order theory. The main problem with pecking order theory lies in unsystematic information, and asset structure is a variable that determines the magnitude of this problem. When a company has a larger proportion of tangible assets, asset valuation becomes easier, thereby reducing the problem of information asymmetry. Thus, companies will reduce their use of debt when the proportion of tangible assets increases. This means that management uses the fixed asset position as the basis for debt policy decisions. This is related to the tendency for management to be cautious in using and making new debt policies so that the company's liabilities will be smaller. This study is in line with the results of Zalfi et al. (2023), where asset structure does not affect capital structure.

The Effect of Earnings Volatility on Capital Structure

The results show that the significance level of the earning volatility (EVOL) variable on capital structure (DAR) is $0.0284 < 0.05$. The coefficient value of 0.1511438 indicates a positive effect. The results show that earning volatility has a positive and significant effect on capital structure. The results of the study reveal that earnings volatility has a positive and significant effect, which means that any increase in earnings volatility will significantly increase the capital structure.

This is likely because companies with high earnings volatility tend to increase their use of debt to balance their funding needs. In addition, investors and creditors may still be willing to provide loans, considering the potential for greater returns despite the higher risks involved. As a result, long-term debt capacity in a company's capital structure tends to increase as earnings volatility rises. The results of this study are in line with research conducted by Khan et al. (2021) and Hariyanti (2023), which proves that earnings volatility has a significant positive effect on capital structure.

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The Effect of Financial Flexibility on Capital Structure

The results show that the significance level of the financial flexibility (FLEX) variable on capital structure (DAR) is $0.0000 < 0.05$. The coefficient value of -0.213711 indicates a negative effect. The results show that financial flexibility has a significant negative effect on capital structure. Companies with good financial flexibility tend to avoid excessive use of debt. Companies can utilize internal resources or equity to fund new projects. Financial flexibility allows companies to better manage risk.

Based on the pecking order theory approach, companies with higher financial flexibility have less debt, because these companies eliminate the need for external financing by increasing their flexibility. Companies with high profitability tend to prefer internal financing over debt financing Sitah (2019). The results of this study are in line with the research by Irian et al. (2022) and Melianti (2023), which states that financial flexibility has a significant effect on capital structure.

5. Conclusion and Recommendation

Based on the results of this study, it can be concluded that asset structure has a positive and insignificant effect on capital structure, whereby companies with high asset structures tend to have more assets that can be used as collateral in obtaining external funding. Profit volatility has a significant positive effect on a company's capital structure, indicating that companies with high profit volatility tend to increase their use of debt as a strategy to balance risk and meet funding needs. Financial flexibility also has a significant negative effect on capital structure, indicating that companies with high flexibility prefer internal resources for funding.

From these test results, researchers can offer several suggestions for company managers and future researchers. First, company managers are advised to increase efforts to control profit volatility and maintain financial flexibility, as both have been proven to have a significant effect on capital structure. Managers also need to ensure adaptive and sustainability-oriented financial management strategies in order to maintain long-term funding stability. Second, although asset structure does not have a significant effect on capital structure, companies should still pay attention to asset composition as part of their resource management strategy, even if it is not a primary consideration in funding policy.

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