

PERFORMANCE EXPLORATION IN THE INDONESIAN MANUFACTURING INDUSTRY

Jeremy CANDRA¹
PURWANTO²

Abstract

This study explores the performance of manufacturing companies listed on the Indonesia Stock Exchange through the determinants of capital structure and profitability. The use of quantitative methods through processing sample data of 400 observations from 80 manufacturing companies during the 2016 - 2020 period. Risk, non-debt tax shield, and liquidity have a high positive but growth, asset turnover have an insignificant effect on capital structure. For profitability, risk and non-debt tax shield have an insignificant while growth, liquidity, and asset turnover have a significant positive effect. Firm size is not able to moderate both liquidity and asset turnover and their influence.

Keywords: Capital structure, profitability, debt to equity ratio, return on assets ratio

1.Introduction

Capital structure is one of the attributes firm's financial strategy. According to Kayo and Kimura (2011), a given capital structure that helps increase shareholder value is one of the essential discussions in firm financing. This component of a firm is a mix or combination of its liabilities, equities, and hybrid securities which finance the whole business operation (Cortez & Susanto, 2012). This matter shows the way a firm funds its general operations and growth. The capital structure described in this study does not have a direct correlation with that described in the stock market. This research does not elaborate on the valuations in the capital market. This study describes the capital structure that is closely related to the mix of debt and equity required by companies to invest in their assets.

Profitability is commonly used as a measurement of a firm's effectiveness in operation. It is mainly a measurement of how effective a firm is in utilizing its assets and generating revenues. The profitability of a firm is commonly measured by ratios. Mumtaz et al (2013) stated that ratios including earnings per share, price-to-earnings ratio, operating profit margin, return on assets, and return on equity are utilized to represent a firm's financial performance. In this research, the term financial performance is occasionally used to explain profitability. Indonesia is a vast and rapidly developing country with plentiful resources and manufacturing potential.

¹Jeremy Candra, School of Business, President University, Indonesia. E-mail: jeremy.candra@student.president.ac.id. ²Purwanto, School of Business, President University, Indonesia. E-mail: purwanto@@president.ac.id

The Indonesian manufacturing industry has rapid development (Mahdaleta et al., 2016). Abukosim et al. (2014) said that manufacturing firm has the most number of issuers on the Indonesia Stock Exchange (IDX), and it is also said that the manufacturing sector has produced flagship companies whose products are consumed by communities in Indonesia. History has proven that one of the important roles in economic development in Indonesia is the contribution of the manufacturing sector (Medina, 2020). Now Indonesia is categorized as an example of an emerging market economy worldwide by the International Monetary Fund or the IMF (2021). Indonesia has been categorized as an emerging market country by multiple analysts.

Business risk has been used as a proxy for capital structure in previous research. According to Alipour et al. (2015), the negative influence supported the trade-off theory, in which a firm with high risk will not be highly leveraged. According to empirical research, business risks and the company's financial condition have a negative impact. Purohit and Khanna (2012) Taking into account the increased conversion of market value into the book value of the asset, and from their research result, the growth of assets has an insignificant negative influence on leverage, thanks to information asymmetry. Research by Chadha and Sharma measures growth by calculating annual percentage change in total assets with a higher assets growth rate means the higher performance of the firm. According to results from their research, growth is significantly and negatively correlated with the firm financial leverage (Chadha & Sharma, 2015). Opinions from the results of Chadha and Sharma's study are in conformity with the study by Ariyani et al. (2018).

Acaravci stated that interest expenses contribute to a decrease in the taxable income of the firm. This researcher also added that depreciation on tangibles and intangibles is tax deductible (Acaravci, 2015). In previous research by Goh et al. (2018), the proxy used for a non-debt tax shield is the interest expense on debt and the result is that non-debt tax benefits have a positive relationship to the capital structure but the effect is marginal. Meanwhile, research by Karacaer et al. (2016) used depreciation per total assets as the proxy and resulted in a non-debt tax shield or NDT having a positive impact on leverage.

The higher liquidity that a firm has, the better the firm can pay off its debts, and thus the researcher expected a positive influence with leverage. The pecking order theory hypothesized that liquidity has a negative impact on debt ratios and that companies with high liquidity may generate high cash inflows and utilize them for further investment financing (Hossain & Hossain, 2015). Research results by Adi Guna and Sampurno (2018) and by Sudiyatno et al. (2019) also proved the pecking order theory that liquidity has a significant negative effect on capital structure. Karacaer et al. (2016) used the current ratio as a proxy for liquidity and the result is also a significant negative influence.

Supardi et al. (2018) revealed that the influence total asset turnover ratio has a significant and positive influence on financial performance and the results from research

by Serghiescu and Văidean (2014) showed that the asset turnover ratio has a positive influence on capital structure. The size can be measured as the natural logarithm (ln) of total sales that is adjusted for inflation (Köksal & Orman, 2014). Akpınar (2016) argued that size has a weakly significant and negative impact on capital structure. However, previous research by Karacaer et al. (2016) and M’ng et al. (2017) revealed a significant positive influence of firm size on financial leverage. Similar to research by Karacaer et al., research by Ariyani et al. (2018) revealed that firm size has a positive and significant influence on capital structure. Pouraghajan et al (2012) with firms listed on the Tehran Stock Exchange examined the effect of the capital structure of firms on the firm’s financial performance. Multiple previous research aimed to establish its influence between capital structure and financial performance (Vätavu, 2015) (Magdalena et al, 2016) (Ramli et al, 2018). This research does not explain the relationship the firms’ capital structure has towards the firms’ profitability. This research essentially discusses two topics, one explores the influence the determinants have on the capital structure and the other one explores the influence of the determinants on profitability.

Following the statements by Mahdaleta et al., (2016) that the Indonesian manufacturing industry has rapid development, the following table below shows the manufacturing and development in Indonesia for year 2000-2022. This is calculated by using the evolution of real Production per capita in Indonesia’s manufacturing industry in comparison with the world average. For this data, the values have been calculated from the World Bank data by applying the *Value-added of manufacturing % on GDP*, to data of *Gross Domestic Product per capita at 2017 international prices* in the case of Indonesia.

Table A1. Manufacturing per capita in Indonesia and the World Average
(Dollars at 2017 prices and purchasing power parities)

Year	(1) Indonesia	(2) World	(3) % (1) on (2)	Year
2000	1293	1622	79.72	2000
2022	2234	2349	95.10	2022
Increase	941	727	129.44	Increase

Source: Elaborated from WB(2024)

The increase of Manufacturing per capita for the period 2000-2022 in Indonesia amounted to 941 Dollars at 2017 prices, higher than the increase in world average (727 Dollars). There was an important advance in the Indonesian convergence towards the World average, from a 79.72 % in year 2000 to 95.10 % in year 2024.

Guisan (2014) estimated an international econometric model, with a sample of 132 countries, which shows an average positive and direct effect, per year, of 1.48 Dollars of increase on Non-Manufacturing per each increase of 1 Dollar in real Value-Added of Manufacturing. The real GDP per capita in Indonesia, in Dollars at 2017 international

prices, has evolved from 5621 in year 2000 to 12410, while World average evolved from 8866 to 14829.

Table A2 presents a comparison of manufacturing per capita and several indicators of development in Indonesia in comparison with several Asian countries.

Table A2. Real-value-added of Manufacturing per capita in 10 Asian countries, 2000-2015 (International Dollars at 2005 prices)

	2000	2010	2015
China	852	2181	2806
India	258	430	533
Indonesia	760	931	1089
Japan	6009	5503	5728
Korea. Rep.	5072	8378	9139
Malaysia	3184	3171	3651
Papua-New Guinea	157	177	51
Philippines	633	748	858
Thailand	1948	2609	2621
Vietnam	271	489	635

Source: Guisan (2024) table 6.3, based on World Bank Statistics and other sources in case of unavailable data.

2. Literature review

The theories in explaining capital structure decisions and their determining factors started with the Modigliani and Miller theorem (1958), which argued that a firm’s market value is not dependent on how it financed its operations. This theorem is assumed to be applicable in a frictionless capital market. The following research resulted in the development of theories of capital structure, which include the trade-off theory and the pecking order theory. According to Kraus and Litzenberger (1973), the optimal capital structure shows a single-period trade-off between the liability financing’s tax benefits and the dead-weight cost of bankruptcy. The pecking order theory is provided by Myers (1984) and Myers and Majluf (1984). According to the pecking order theory, firms minimize the problem of asymmetric information between the firm’s insiders and outsiders by following a financing hierarchy. Another theory that is influential in determining capital structures is agency theory. Agency theory mentions that principals want to economize agency costs by assuming control over the agents. This theory is based on three assumptions: that all actors are only for self-interest, all actors act rationally, and agents are more risk-avoiding compared to the principals. Jensen and Meckling (1976) explained that capital structure is regulated by agency costs. Conflict of interest between internal managers of the firm and the firm’s shareholders is caused by disagreements over an operation decision (Acaravci, 2015).

Profitability is a measurement of the ability of firms in conducting their business activities and make profits. Firms that practice their business activities efficiently and

effectively are considered well-performing. In this research, the firm's profitability is measured by the firm's return on assets ratio (ROA). The return on assets ratio refers to how much profit is earned by firms based on their asset investments and the effectiveness in managing and using the investor's funds (Vätavu, 2015). This ratio is one of the profitability ratios.

The development of the hypothesis (H) of the relationship between variables which refers to empirical research is as follows:

H₁: The business risk of the firm has an effect on the firm's capital structure

Business risk can be defined as the risk that occurs because of the uncertainty of cash flow from investment that firms face if they do not utilize debt (Brigham & Houston, 2015). Both the trade-off theory and the pecking order theory expected a negative influence between business risk and capital structure. According to the trade-off theory, the expected financial distress expenses rise with risk (Frank & Goyal, 2008). And according to the pecking order theory, business risk intensifies the adverse selection between firms and creditors (Köksal & Orman, 2014).

H₂: The growth of the firm has an influence on the firm's capital structure

The measurement of growth in a firm is calculated by an increase in assets, mainly the amount of money allocated to its assets (Utami, 2019). According to the agency theory, a firm will apply less debt when there is a higher opportunity to lower the conflict of interest amongst the shareholders and debt holders. The pecking order theory argued that firms primarily prefer internal funding through the firms' retained earnings compared to external funding, however, the internal funds are not likely to be enough to assist in investment for higher growth firms and thus the theory expected a positive influence. If the firm's assets experience growth while other factors are constant, the asset increase will cause additional liabilities. The trade-off theory expected a negative influence because growth firms lose more of their value in the event of financial distress.

H₃: The non-debt tax shield has an impact on the firm's capital structure

A tax shield is a reduction in taxable income achieved through claiming allowable deductions. According to the pecking order theory, there is a negative relationship between non-debt tax shields and leverage. When a firm has higher non-debt tax shields, the firm will have less debt (Acaravci, 2015). The trade-off theory predicted a negative influence between nondebt tax shields and capital structure. The higher the amount of depreciation dictates higher fixed assets. Fixed assets can be used as debt collaterals so that firms find it easier to issue debts (Krisnanda & Wiksuana, 2015). Research results from Karacaer et al. (2016) and Goh et al. (2018) demonstrated that a non-debt tax shield is positively influencing the capital structure. Meanwhile, contrasting results by M'ng et al. (2017) found a negative influence on the capital structure from non-debt tax shield.

H₄: The liquidity of the firm has an influence on the firm's capital structure

Pecking order theory states that highly liquid firms will issue fewer debts and a firm with more current assets is predicted to make more inflows to fund its operating activities and its investing activities. However, the trade-off theory stated that firms with high liquidity

could also borrow more, and thus a positive influence is expected (Sheikh & Wang, 2011). Sudiyatno et al. (2019) found that liquidity has an insignificant influence on capital structure, while Hamidah stated that the influence was significant.

H₅: The asset turnover of the firm has an influence on the firm's capital structure

Asset turnover ratio is an indicator of a firm's efficiency which shows how many times the capital invested in total assets rotates to achieve the firm's turnover (Serghiescu & Văidean, 2014). Asset turnover ratio is selected as an independent variable in this research as it reflects both the firms' sales performance and asset performance.

H₆: The business risk of the firm has an influence on the firm's profitability

Ramli et al. (2018) stated that the results show a positive influence on financial performance, while Hamidah (2016) argued that business risk has a positive influence on profitability.

H₇: The growth of the firm has an influence on the firm's profitability

According to Ramli et al. (2018), stronger opportunity for growth is a sign of splendid firm performance and easier access to finance in a competitive market. Pouraghajan et al. (2012) implied a positive effect of a firm's growth on financial performance, which is different compared with research results by Hamidah (2016) which stated that growth has a negative effect on financial performance.

H₈: The non-debt tax shield has an influence on the firm's profitability

According to Sheikh and Wang (2011), a firm needs to pay heavy interest payments when the firm reports its income as less or negative because the tax shield benefits will be reduced. Non-debt tax shields provide an alternative means of reducing income taxes and may be utilized to mitigate the benefit of the debt tax shield. Previous research by Abbas et al. (2013) revealed that the non-debt tax shield plays a positive and significant role in increasing Pakistani textile firms' performance.

H₉: The liquidity of the firm has an influence on the firm's profitability

The research from Hamidah (2016) showed that liquidity has a significant negative influence on leverage and an insignificant positive influence on profitability.

H₁₀: The asset turnover of the firm has an influence on the firm's profitability

Pouraghajan et al. (2012) revealed that there existed a significant positive relationship that is significant between asset turnover ratio with measures of financial performance, in that study which is the return on assets ratio (ROA), and returns on equity ratio (ROE). Pouraghajan used the asset turnover ratio as a control variable.

H₁₁: The liquidity of the firm with size as the moderator has an influence on the firm's capital structure

Dewi and Fachrurrozie (2021) used firm size as a moderating variable between liquidity and capital structure and showed that firm size is able to significantly moderate the influence.

H₁₂: The asset turnover of the firm with size as the moderator has an influence on the firm’s capital structure

H₁₃: The liquidity of the firm with size as the moderator has an influence on the firm’s profitability

Abassi and Malik argued that firm size is able to moderate the influence of growth toward financial performance (Abbasi & Malik, 2015).

H₁₄: The asset turnover of the firm with size as the moderator has an influence on the firm’s profitability.

H₁₅: All the independent variables in this research simultaneously influence the firm’s capital structure.

H₁₆: All the independent variables in this research simultaneously influence the firm’s profitability.

Figure 1 below illustrates the variables and the hypotheses of this research:

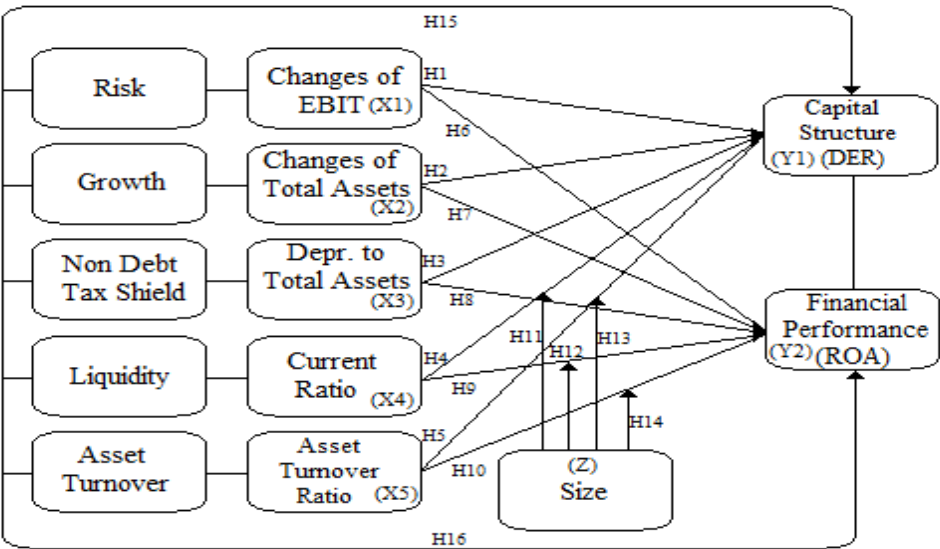


Figure 1. Conceptual Framework
Source: Adjusted by researcher, 2023

3. Method

The quantitative method was applied by taking a population of 80 manufacturing companies listed on the Indonesia Stock Exchange during the 2016 - 2020 period. Through panel data, the number of samples is 400 with a nonprobability sampling system and considering various existing criteria. The independent variables in this research consist of risk, growth, non-debt tax shield, liquidity, and asset turnover. The firm size will be used as a moderating variable, while capital structure and financial performance

will be the dependent variables. The complete operational definition is written in Table 1:

Table 1. Operational Definition

Variable	Operational Definition	Formula	Measuring Scale
Dependent Variables			
Capital Structure (Y₁)	The capital structure details how a firm finances itself through debts and equities. Measured with DER, which compares the total debt to the equity owned by the firm itself (Hanafi & Halim, 2018).	Total debts / Total equity	Ratio
Profitability (Y₂)	Profitability shows how much profit is earned by firms based on their asset investments and the effectiveness in managing the investor’s funds (Vätavu, 2015).	Net income / Total assets	Ratio
Independent Variables			
Risk (X₁)	Business risk is the difference between the annual EBIT percentage and the average in a change over the specified sample period (Ramli et al, 2018).	$(EBIT_t - EBIT_{t-1}) / EBIT_{t-1}$	Ratio
Growth (X₂)	Growth in a firm refers to an increase in assets, mainly the amount of money allocated to its assets (Utami, 2019).	$(Total\ assets - Total\ assets_{t-1}) / Total\ assets_{t-1}$	Ratio
Non Debt Tax Shield (X₃)	Non-debt tax shield is a substitute for the tax shields on debt financing (DeAngelo & Masulis, 1980).	Depreciation / Total assets	Ratio
Liquidity (X₄)	Liquidity is the firm’s capability to pay off short-term debts with the m’s available cash (Hamidah, 2016).	Current assets / Current liabilities	Ratio
Asset Turnover (X₅)	Asset turnover refers to a financial ratio which measures the firm’s efficiency in utilizing its assets to generate sales revenue to the firm (Bodie et al, 2004).	$Sales\ revenue / ((Total\ assets_t - Total\ assets_{t-1}) / 2)$	Ratio
Moderating Variable			
Firm Size (Z)	Firm size is a measure of the size of a firm indicated by total assets, total sales, total profit, tax expenses, and etcetera (Brigham & Houston, 2015).	ln(Sales Revenue)	Ratio

Source: Adjusted by researcher, 2023

Descriptive statistical analysis is a type of data analysis method used for assessing and analyzing the data in order to rearrange the sample relying on each specific data consistently and reliably. The setting of the frequency distribution can be visible in concise statistical techniques with details including average, median, standard deviation, and scoring level (Creswell, 2017). There exist three procedures for assessing the regression model with panel data. These approaches are common effect, fixed effect, and

random effect. This test is conducted to find the best method for the panel data regression model for hypothesis testing. EViews 10 is used in testing the regression model.

Chow test is a test to evaluate if this data should follow the common effect or fixed effect approach. In the Chow test, the common effect method will be chosen if the results show that the p-value is higher than 0.05. If the p-value is lower than 0.05, a fixed effect method will be chosen.

The Hausman test is conducted whether the fixed effect approach or the random effect approach is selected. The fixed effect approach will be chosen if the probability is less than 0.05, while the random effect approach will be chosen if the probability is more than 0.05.

Regression analysis is in determining the influence of the independent variable on the dependent variable. Multiple linear regression is used in this research to analyze the data as it is used to find out how multiple independent variables affect the dependent variable with the measuring or ratio scale in a linear equation. The multiple linear regression models can be seen as follows:

$$DER = a + \beta_1 Risk + \beta_2 Growth + \beta_3 NDTS + \beta_4 CR + \beta_5 AT + \varepsilon \quad (1)$$

$$ROA = a + \beta_6 Risk + \beta_7 Growth + \beta_8 NDTS + \beta_9 CR + \beta_{10} AT + \varepsilon \quad (2)$$

$$DER = a_1 + \beta_1 CR + \beta_4 Size + \beta_5 CRSize + \varepsilon_1 \quad (3)$$

$$ROA = a_2 + \beta_2 AT + \beta_3 Size + \beta_6 ATSize + \varepsilon_1 \quad (4)$$

The t-statistics test known as the partial significance Test is utilized to examine if the independent variable on its own has a significant influence on the dependent variable or not. The independent variable has a significant effect if the T-test probability value is less than 0.05.

The null hypothesis (H_0) is that the independent variable does not have a significant effect on the dependent variable and the alternative hypothesis is vice versa (Ghozali, 2013).

It can be said that the null hypothesis (H_0) is that independent variables simultaneously do not have a significant impact on the dependent variable and the alternative hypothesis is vice versa. Gujarati (2012) stated the formula for the F-test below and the hypothesis of the F-test in this research can be explained as H_0 is accepted if probability F-statistics > 0.05 then there is no simultaneous significant impact of the independent variables towards the dependent variables.

The R^2 test measures the significance of the effect independent variables have on the dependent variables. The coefficient of correlation (R) can be defined as the link between two or more independent variables to the dependent variable on a scale from 0 to 1. There is a stronger relationship when the R-value is closer to 1 (Ghozali, 2013).

4. Results and discussion

Multiple Regression Analysis

Following the results of Chow tests and Hausman tests, the multiple regression tests for DER and ROA use a fixed effect approach as the fixed effect approach is the most accurate in this research. Table 2 and Table 3 below display the results from the analysis:

Table 2. Multiple Regression Analysis Results for DER

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.0839	0.8572	-1.2645	0.2070
Risk	0.0397	0.0135	2.9399	0.0035
Growth	0.2991	0.2380	1.2566	0.2098
NDTS	-5.8057	2.1132	-2.7474	0.0064
CR	-0.2732	0.0309	-8.8537	0.0000
AT	-0.0749	0.0602	-1.2444	0.2143

Source: Data processed with EViews 10

$$DER = -1.0839 + 0.0397Risk + 0.2991Growth - 5.8057NDTS - 0.2732CR - 0.0749AT \tag{5}$$

Table 3. Multiple Regression Analysis Results for ROA

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.1429	0.0961	-1.4869	0.1380
Risk	0.0028	0.0015	1.8690	0.0626
Growth	0.0844	0.0267	3.1642	0.0017
NDTS	0.0751	0.2369	0.3170	0.7515
CR	0.0132	0.0035	3.8222	0.0002
AT	0.0385	0.0067	5.7058	0.0000

Source: Data processed with EViews 10

$$ROA = -0.1429 + 0.0028Risk + 0.0844Growth + 0.0751NDTS + 0.0132CR + 0.0385 AT \tag{6}$$

Hypothesis Testing

The significance value of $\alpha = 0.05$ will be compared to the T-test value of the probability of every independent variable. The results from Table 2 show that risk, non-debt tax shield, and liquidity have a high contribution on capital structure, with the t-test values of probability of 0.0035, 0.0064, and 0.0000 respectively.

$$DER = -1.0839 + 0.0035 Risk + 0.0064 NDTS + 0.0000 CR \tag{7}$$

The results from Table 3 revealed that the independent variables growth, liquidity, and asset turnover have a significant influence on the firm’s profitability. The results show that growth has a t-test value of the probability of 0.0017, while liquidity has 0.0002 and asset turnover has 0.0000.

$$ROA = -0.1429 + 0.0017 \text{ Growth} + 0.0002 \text{ CR} + 0.0000 \text{ AT}$$

(8)

The F-test result can be seen by looking at the probability value compared to the significant value of 0.05. The alternative hypothesis is accepted if the independent variables at the same time will have a big impact on the dependent variable if the probability value is under 0.05 and vice versa the null hypothesis is accepted if the independent variables at the same time won’t have a significant influence on the dependent variable if the probability value is more than 0.05.

Table 4. F Testing Results

Weighted Statistics		
	DER	ROA
F-Statistic	30.6151	10.6767
Prob(F-Statistic)	0.0000	0.0000

Source: Data Processed with EViews 10

Based on Table 4 above, the probability value of the F-test for DER is 0.000. The capital structure of Indonesian manufacturing firms is significantly influenced by determinants including risk, growth, non-debt tax shield, liquidity, and asset turnover ratio. The probability value the of F-test for ROA is also 0.000. This means that the profitability of Indonesian manufacturing firms is significantly influenced by determinants including risk, growth, non-debt tax shield, liquidity, and asset turnover ratio.

Coefficient of Determination Testing

The capacity of independent variables to influence the dependent variable can be seen with the R-squared value (Baltagi, 2008). The coefficient of determination assesses the capacity of the model to explain the independent variables.

Table 5. Coefficient of Determination Results

Weighted Statistics		
	DER	ROA
R-squared	0.892329	0.742943
Adjusted R-squared	0.863182	0.673357

Source: Data Processed with EViews 10

The results show that the adjusted R-squared value for DER is 0.8632, this indicates that the independent variables have the simultaneous influence of 86.3182% on capital structure. The adjusted R-squared value is close to 1, which means that capital structure has a very strong correlation with the independent variables. Other factors outside of this

research affected 13.6818% of capital structure.

As seen in Table 5, the coefficient of determination for ROA is 0.6734. This indicates that the independent variables have an altogether influence of 67.3357% on profitability. Due to the adjusted R-squared result being close to 1, profitability has a very strong correlation with the independent variables. Other factors outside of this research affected 32.6643% of profitability.

Moderating Variable Testing

Table 6. Liquidity Moderation Results - DER

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.8003	0.9028	-0.8864	0.3760
CR	-0.3038	0.2298	-1.3223	0.1870
Size	0.1428	0.0608	2.3476	0.0195
Moderating	0.0026	0.0160	0.1655	0.8687

Source: Data processed with EVIEWS 10

Based on Table 6 above, it is revealed that size cannot be used to moderate the independent variable liquidity's influence on the capital structure. As shown in the results above, which indicate that the significant value of 0.8687 that is above 0.05.

Table 7. Liquidity Moderation Results - ROA

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.4178	0.1049	-3.9820	0.0001
CR	0.0470	0.0267	1.7586	0.0796
Size	0.0292	0.0071	4.1264	0.0000
Moderating	-0.0024	0.0019	-1.3013	0.1941

Source: Data processed with EVIEWS 10

As seen in Table 7 above, it is shown that size cannot be used to moderate the influence of liquidity on the profitability of Indonesian manufacturing firms. The analysis shows that the significant value is higher than 0.05, which is 0.1941.

Table 8. Asset Turnover Moderation Results - DER

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.8075	0.9787	-1.8469	0.0657
AT	-0.2164	0.4926	-0.4392	0.6608
Size	0.1826	0.0673	2.7147	0.0070
Moderating	0.0097	0.0333	0.2916	0.7708

Source: Data processed with EVIEWS 10

Based on Table 8 above, size cannot be utilized as a moderating variable between asset turnover and manufacturing firms' capital structure. This is because the significant value of 0.7708 is above 0.05.

Table 9. Asset Turnover Moderation Results - ROA

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.1389	0.1003	-1.3848	0.1671
AT	0.0584	0.0505	1.1564	0.2484
Size	0.0095	0.0069	1.3728	0.1708
Moderating	-0.0013	0.0034	-0.3942	0.6937

Source: Data processed with EVIEWS 10

Table 9 shows that the significant value of this hypothesis is 0.6937. It is above 0.05, which means that size cannot be used to moderate the influence of asset turnover on Indonesian manufacturing firms’ profitability.

Discussion

The regression coefficient is 0.0397 which indicates a positive influence between the two variables. This implies that the higher the company's risk in operating its business, the higher the expected return so it has an impact on increasing its capital structure. This result is conflicting from previous research by Alipour et al. (2015), Ramli et al. (2018), Hamidah (2016), and the trade-off theory. Risk is represented by changes in the firm’s earnings before interests and taxes. The capital structure is shown as leverage, or the amount of money a firm borrows compared to its equities. A firm that invests more in debts and has high leverage tends to be riskier. In such a case, the firm will have a higher risk of inability to pay its debts (default risk).

Through a coefficient regression of 0.2991, growth is described in healthy conditions for the organization. When the firm’s growth increases, the firm’s capital structure increases. This research contrasts previous research by Chadha and Sharma (2015). This result however is true to the Pecking Order theory, in which firms prefer to use internal funding first before using external funding including debts. With the firm’s growth increase resulting in more internal funds, the firm will borrow even less.

The implication is that the non-debt tax shield has a high influence on Indonesian manufacturing firms. The significance value of risk is 0.0064 and H03 is rejected. The non-debt tax shield has an unfavorable impact on company performance as evidenced by a regression value of -5.8057. The results from this discussion match with results from Acaravci (2015) and Pecking Order theory. However, these results contradict Goh et al. (2018), in which the non-debt tax shield has a positive yet marginal influence on capital structure. The results also contradict Karacaer et al. (2016), who stated that a non-debt tax shield has a positive influence on capital structure.

The definition of liquidity states the company's ability to pay debts in accordance with existing cash responsibilities. The relationship with capital structure, obtained a strong relationship even though the direction is negative as evidenced by the regression value of -0.2732. Higher reserves mean that a company has a high cash inflow and chooses to finance its operations through cash, eliminating the need to borrow. According to the Pecking Order theory and some empirical results as done by Hossain

and Hossain (2015), Hamidah (2016), Karacaer et al (2016), and Adi Guna and Sampurno (2018).

The significance value of asset turnover is 0.2143 and H_{05} is accepted. The coefficient regression of -0.0749 means that asset turnover has a negative insignificant influence on capital structure. The results imply that the higher the asset turnover of a firm, the lower the capital structure. The low asset turnover implies that the firm requires a high amount of assets in its manufacturing process, and in turn, has to invest more in assets using debts and equities. These results contrast with the previous research by Pouraghajan et al. (2012) shows that the asset turnover ratio has a positive influence on capital structure. However, the positive influence from the previous research is significant.

The sixth describes that risk has no significant influence on the financial performance of Indonesian manufacturing firms. This is supported by the significant value of 0.0626 and H_{06} is accepted. Risk also has a positive influence on financial performance because the coefficient regression is 0.0028. The positive influence of this result is in line with previous research by Ramli et al. (2018) and Hamidah (2016). Risk signifies changes in earnings before interests and taxes (EBIT). When the EBIT rises, it means that the firm has an increase in sales or efficiency in reducing costs. The increase in earnings is a sign of healthy firm performance. If the EBIT for the year is lower than the previous year, it may signify a drop in business activities. This explains the positive influence between risk and financial performance.

A firm's growth has a significant relationship with the financial performance of manufacturing firms in Indonesia. This hypothesis is supported by the significant value of 0.0017 and H_{a7} accepted. The coefficient regression of 0.0844 means that a firm's growth has a positive relationship with financial performance.

From the results, it is implied that an increase in the firm's growth means an increase in the firm's financial performance. The positive influence of this result is in line with previous research by Pouraghajan et al. (2012). Firms with relatively healthy finance often conduct expansions or R&D. In this process, the firm acquires more assets. This may explain the positive influence of growth on financial performance.

The results also stated that the non-debt tax shield has a positive influence on the financial performance of Indonesian manufacturing firms. This variable has a coefficient regression of 0.0751. The result of this hypothesis is in line with Abbas et al. (2013), in which a non-debt tax shield has a positive influence on financial performance. Firms may use current debts less as current debts don't give a tax shield advantage and are not as efficient compared to non-current debts.

Firms with good liquidity are able to pay their current debts with cash. The higher the liquidity of the firm, the easier that firm to pay its debts without delay. The ability to pay its liabilities is a benchmark for thriving and successful firm activities. This result is similar to (Hamidah, 2016), however, Hamidah's result shows an insignificant influence.

Asset turnover measures the efficiency of firms' usage of assets in their sales activities. A well-performing firm often has high sales revenues. The higher the revenues mean the higher the asset turnover.

Manufacturing firms often utilize their assets in producing goods. A firm that is performing well should be using its assets efficiently and thus have a positive influence. This result is in line with previous research by Pouraghajan et al. (2012), Supardi et al. (2018), and Serghiescu and Văidean (2014) that there is a significant positive influence between asset turnover and financial performance.

4. Conclusion

Both risk and growth have a big impact on the capital structure, however, the contribution in the growth sector is felt to be weak. On the other hand, both the non-debt tax shield and liquidity have a significant effect in a negative direction on capital, on the other hand, asset turnover does not have a large impact in the same direction. Simultaneously it was revealed that the five factors when combined will have an effect on the profitability of manufacturing companies, such as risk and non-debt tax have a weak impact but growth, liquidity, and asset turnover give a very calculated color. In other words, all of the independent variables together have a significant effect on capital structure and profitability. Firm size is unable to moderate the effect of liquidity and asset turnover on the two dependent variables. All the factors studied reflect the performance of the manufacturing industry in Indonesia. In general, the determinants of the company's performance must be maintained or improved in its operations so that development can occur based on the returns obtained during this time.

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