www.bircu-journal.com/index.php/birci
Budapest International Research and Critics Institute-Journal (BIRCI-Journal)
Humanities and Social Sciences
ISSN 2615-3076 Online)
ISSN 2615-1715 (Print)
Budapest Institute

Determinants of Pharmaceuticals Companies' Capital Structures Listed on the Indonesian Stock Exchange

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Abstract

Capital structure is a complex financial decision because it is related to other financial decision variables. This study aims to determine what factors affect the capital structure of pharmaceutical companies listed on the IDX in 2016-2021. The population in this research is all pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) from 2016-to 2021. The sample was selected using the purposive sampling method and obtained a sample of 10 pharmaceutical companies. The data source is secondary data from the website (www.IDX.co.id). This study uses panel regression analysis. Company Growth, Tangibility, and Firm Size are three variables that have a significant effect on capital structure. Liquidity, NDTS and profitability had no effect on capital structure. As a result, this variable does not need to be used as a proxy for investment considerations, particularly in the pharmaceutical sector.

Keywords
capital structure; firm value; panel regression

I. Introduction

Public health has a critical role in enhancing the quality of human capital and economic prosperity. The pharmaceutical business plays a critical role in community health services by ensuring the availability of necessary medications.

The outbreak of this virus has an impact of a nation and Globally (Ningrum *et al*, 2020). The presence of Covid-19 as a pandemic certainly has an economic, social and psychological impact on society (Saleh and Mujahiddin, 2020). Covid 19 pandemic caused all efforts not to be as maximal as expected (Sihombing and Nasib, 2020).

Indonesia is a country with a large market for pharmaceutical development, owing to its population is one of the largest in the world. For nearly two years The COVID-19 virus has spread around the world, including Indonesia, resulting in an increase in demand for medicines and medical devices. Numerous experts believe that in the midst of a pandemic The pharmaceutical industry is one of the fastest-growing sectors. However, the projection is not entirely accurate, as the pharmaceutical business is plagued with high expenses associated with supplying raw materials for medicines whose prices grow by three to fivefold times the normal price.

The pharmaceutical sector is confronted with a challenge, namely raw materials, as a result of the raw materials employed in the industry. 90% of pharmaceuticals in Indonesia are imported from China and India, and the country has had time to restrict the export of raw materials for medications as it prioritizes domestic requirements. Due to the fact that pharmaceutical raw materials are still sourced from other nations, the corporation is also

exposed to currency fluctuations. Other consequences felt by the Indonesian pharmacy business include decreased sales of trademarked products, sometimes known as patent medicines, because the majority of patients now have access to generic medications. This is guaranteed by BPJS Health, and all medications are generic.

Thus, while enterprises in the pharmaceutical industry have seen a reduction in revenue, the company's obligations in the form of operating and other costs must still be satisfied. This is typically handled by businesses that owe money, sell shares, or engage in a combination of the two, all of which have an effect on the structure of capital.

Excessive debt increases the danger of bankruptcy and can result in it. According to Nagar and Sen (2016), there is a negative association between cash flow and profitability, and financial troubles. Financial distress (difficulty financial hardship) is the fall in a business's financial status prior to bankruptcy (Fahmi, 2012). A sound capital structure is necessary for the operation of the business since it has a direct impact on the financial position. While corporate performance can have an effect on the fundamentals of capital structure, structural flaws cannot.

II. Review of Literature

2.1 Affective Commitment to Change

Numerous research findings on the factors affecting the capital structure of a business revealed conflicting conclusions, which will be examined in the next section.

1. Capital structure managers can raise the value of a business if it has a high cost of capital. The lowest cost of capital is accomplished through structure optimization (Nita Septiani & Suaryana, 2018). A growing company's total debt will result in a lower tax rate, but will also raise the chance of bankruptcy (Herdiyanto, 2015).
2. Profitability

Profitability is defined as the ability of a corporation to generate profit from the capital employed (Harjito & Martono, 2014). When comparing earnings before interest and taxes on total assets, profitability is defined as the difference between the two (Haron & Ibrahim, 2012). Thus, profitability can be thought of as a ratio that gauges the ability of a company to generate profits.

Yildirim, Masih, & Bacha (2018) found that the profitability variable has a significant negative correlation with the structured capital. Youssef & El-Ghonamie (2015) found that profitability has a significant negative relationship with the level of debt. This leads us to hypothesize that

H_1: Profitability has a negative effect on capital structure

3. Tangibility

Tangibility is a rough estimate of the value of the real estate, plant, and equipment (PPE). Businesses with a greater amount of tangible assets can use this sort of collateral and hence have reduced bankruptcy fees (Alnori & Alqahtani, 2019). According to the trade-off theory, a company's debt level increases in lockstep with its tangibility. The rationale for this is that fixed assets, which are easier to value than intangible assets, provide greater collateral for potential investors. This can be represented in terms of a positive relationship between the tangibility of assets and the debt ratio. According to Pecking Order Theory, tangible assets reduce information asymmetry between potential investors and shareholders, lowering the cost of equity issuance and resulting in lower debt levels (Yildirim et al., 2017). This leads us to hypothesize that,

H_2: Tangibility has a negative effect on capital structure

4. Size

The term "company size" refers to a business's total assets, total sales, and average sales (Riyanto, 2011). The size of a business is defined as the natural logarithm of its total assets (Alnori & Alqahtani, 2019)

Yildirim, Masih, and Bacha (2018) found a significant positive correlation between firm size and capital structure. According to Frank & Goyal (2009), the larger the company, the higher the level of debt. This is understandable given that the larger the company, the less volatile the cash flow (Titman & Wessels, 1988). Alnori & Alqahtani (2019) and Park, Suh, & Yeung (2019) also discovered significant positive results.

This leads us to hypothesize that,

H_3: Size has a positive effect on capital structure

5. Company Growth

According to Myers (1984), businesses with greater investment potential will have a lower level of debt because their agency costs are higher. Thus, this finding is consistent with the Trade-Off theory and with the findings of Fama and French (2002) as well as Barclay, Smith Jr., and Morellec (2006). Trade-Off Theory can be used to explain the direction of this negative relationship. Whereas the Trade-Off Theory asserts that the optimal debt ratio can be achieved by weighing the tax savings associated with debt financing against the cost of financial distress associated with risk bankruptcy and agency costs (Kraus & Litzenberger, 1973; Jensen & Meckling, 1976).

This leads us to hypothesize that,

H_4: Company growth has a negative effect on capital structure

6. Non-Debt Tax Shields (NDTS)

DeAngelo and Masulis (1980) argue that at higher levels of leverage, ceteris paribus, the marginal savings from an additional unit of debt declines as non-debt tax shields increase because of the increased probability that the potential debt tax shields (that is, interest tax shields) will be partially or fully lost through bankruptcy. Hence, NDTS may be expected to be negatively related to leverage

H_5: NDTS has a negative effect on capital structure

III. Research Method

The population of this study includes all secondary data on Debt Equity Ratio (DER), Profitability, Tangibility, Size, Growth, Liquidity, and Non-Debt Tax Shields (NDTS) for all pharmaceutical companies listed on the Indonesian Stock Exchange from 2016 to 2021. www.idx.co.id and www.wjs.com were used as data sources. Secondary data extraction by purposive sampling with a yearly time interval, as the company's financial accounts are audited annually. The sample for this study is 10 companies (DVLA, INAF, KAEF, KLBF, MERK, PEHA, PYFA, SIDO, TSPC, SDPC) with the observation period running from 2016 to 2021. The purpose of this study is to elucidate the relationship between the variables evaluated and their level of importance (explanatory studies). To determine the effect of the independent variable on the dependent variable, a panel regression model with a significance level of 1% and 5% is utilized.

The equation model was developed based on a survey of the literature. The following multivariate can be formed:

$$DER_{i,t} = \theta_0 + \theta_1 Prof_{i,t} + \theta_2 Tang_{i,t} + \theta_3 Size_{i,t} + \theta_4 Growth_{i,t} + \theta_5 LIQ_{i,t} + \theta_6 NDTS_{i,t} + \mu_{it}$$

Description:

DER i,t = Debt Equity Ratio which is a proxy of the capital structure firm-i year-t
$Prof_{i,t}$ = Profitability firm-i year-t
$Tang_{i,t}$ = Tangibility firm-i year-t
$Size_{i,t}$ = Size firm-i year-t
$Growth_{i,t}$ = Growth firm-i year-t
$LIQ_{i,t}$ = Liquidity firm-i year-t
$NDTS_{i,t}$ = Non-Debt Tax Shields firm-i year-t

IV. Results and Discussion

Table 1. Statistics Descriptive

	DER	GROWTH	LIQ	NDTS	PROF	SIZE	TANG
Mean	1.164004	0.565842	1.371201	2.10E-05	0.133217	28.50976	0.286656
Median	0.492286	0.654500	1.127120	2.09E-05	0.116428	28.26692	0.303237
Maximum	4.398161	0.916900	3.734131	5.48E-05	0.410568	30.82013	0.535359
Minimum	0.083299	0.172100	0.005373	3.90E-06	0.013056	25.79571	0.014329
Std. Dev.	1.246337	0.217840	1.035490	1.14E-05	0.087127	1.302916	0.127007
Skewness	1.454000	-0.372658	0.641260	0.783739	0.979261	-0.022364	-0.439596
Kurtosis	3.975765	1.832795	2.563405	3.759418	3.629534	2.521686	3.105211
Observations	60	60	60	60	60	60	60

DER has an mean value of 1.164004 and a standard deviation of 1.246337. SIDO obtained the minimum value of 0.083299 in 2016. While INAF has the maximum value of 4.398161 in 2021. Company Growth has mean value of 0.565842, with a standard deviation of 0.217840. SDPC obtained the minimum value of 0.172100 in 2021. While SIDO has the maximum value of 0.916900 in 2016. Company Growth has mean value of 0.565842, with a standard deviation of 0.217840. SDPC obtained the minimum value of 0.172100 in 2021. While SIDO owns the maximum value of 0.916900 in 2016. Liquidity has mean value of 1.371201, with a standard deviation of 1.035490. SIDO obtained the minimum value of 0.005373 in 2020. While KLBF owns the maximum value of 3.734131 in 2018. NDTS has mean value of 2.10E-05, with a standard deviation of 1.14E-05. SDPC obtained the minimum value of 3.90E-06 in 2018. While PYFA owns the maximum value of 5.48E-05 in 2016. Profitability has mean value of 0.133217 , with a standard deviation of 0.087127. INAF obtained the minimum value of 0.013056 in 2018. While SIDO owns the maximum value of 0.410568 in 2021. Size has mean value of 28.50976, with a standard deviation 1.302916. PYFA obtained the minimum value of 25.79571 in 2017. While KLBF owns the maximum value of 30.82013 in 2021. Tangibility has mean value of 28.50976 , with a standard deviation 0.127007. SDPC obtained the minimum value of 0.014329 in 2021. While KAEF owns the maximum value of 0.535359 in 2020.

Table 2. Panel Reggression

Dependent Variable: DER
Method: Panel Least Squares
Date: 04/20/22 Time: 20:02
Sample: 2016 2021
Periods included: 6
Cross-sections included: 10

Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GROWTH	-5.533515	0.568012	-9.741901	0.0000
LIQ	-0.111166	0.064665	-1.719110	0.0913
NDTS	11496.84	6717.690	1.711428	0.0927
PROF	2.077265	1.187287	1.749590	0.0859
SIZE	0.163402	0.006782	24.09437	0.0000
TANG	-2.569189	0.593026	-4.332336	0.0001

R-squared	0.880409	Mean dependent var	1.164004
Adjusted R-squared	0.869336	S.D. dependent var	1.246337
S.E. of regression	0.450520	Akaike info criterion	1.337809
Sum squared resid	10.96027	Schwarz criterion	1.547244
Log likelihood	-34.13428	Hannan-Quinn criter.	1.419731
Durbin-Watson stat	0.510129		

The findings indicate that profitability, NDTS and Liquidity aren't significantly to capital structure of pharmaceutical companies listed on the Indonesian Stock Exchange from 2016 to 2021. Growth, Size and Tangibility are significantly to capital structure of pharmaceutical companies.

Company growth showed a significant negative correlation with capital structure According to the findings of this study, Companies with a high growth rate in the DER measurement are more likely to be in debt. The higher the level of business growth, the less likely it is that debt levels will increase. In other words, debt levels are typically low. This result corroborates Myers's (1984) assertion that firms with greater investment potential will have a lower level of debt due to higher agency costs. Thus, this finding is consistent with the Trade-Off theory and with the findings of Fama and French (2002) as well as Barclay, Smith Jr., and Morellec (2006).

Size has a statistically significant positive correlation with capital structure. This result demonstrates that the larger the company, the greater its debt level. These findings are consistent with and explicable within the framework of trade-off theory. The trade-off theory asserts that the larger the business, the lower the risk of bankruptcy, and thus the more debt the business can hold. Additionally, these findings can be explained by the fact that large firms are more diversified and face fewer cost risks, which results in fewer bankruptcies. Additionally, they have access to a larger credit market, which boosts their debt capacity (Yildirim, Masih, & Bacha, 2018).

Tangibility has a statistically significant negative correlation with capital structure. According to Pecking Order Theory, tangible assets reduce information asymmetry between potential investors and shareholders, lowering the cost of equity issuance and resulting in lower debt levels (Yildirim, Masih, & Bacha, 2018).

V. Conclusion

Based on the analysis's findings that changing growth company, size and tangibility have effect on capital structure or yield, this study is consistent with prior studies.

Company Growth, Tangibility, and Firm Size have a significant effect on the capital structure when combined. Company Growth is a negative factor that has a significant impact on the capital structure. As a result, as the Company Growth rises, the capital structure (DER) decreases. In other words, the pharmaceutical industry, the subject of this study, has a history of reducing debt when Company Growth increase. Firm size, in part, has a beneficial effect on the capital structure. This means that the larger the firm, the more complex the capital structure. Tangibility is a negative factor that has a significant impact on the capital structure. As a result, as the Tangibility rises, the capital structure (DER) decreases. According to Pecking Order Theory, tangibility reduces information asymmetry between potential investors and shareholders, lowering the cost of equity issuance and resulting in lower debt levels. The liquidity, NDTS and profitability has no effect on the capital structure of pharmaceutical companies. Company Growth, Tangibility, and Firm Size are three variables that have a significant effect on capital structure. Thus, investors interested in the capital structure of pharmaceutical companies listed on the Indonesia Stock Exchange should use these three variables as a point of reference when investing in and forecasting capital structure, particularly in the pharmaceutical sector. Meanwhile, for businesses, these variables should be considered to ensure that the company's reputation with investors is maintained. The findings indicated that liquidity, NDTS and profitability had no effect on capital structure. As a result, this variable does not need to be used as a proxy for investment considerations, particularly in the pharmaceutical sector.

Suggestions for future researchers include broadening the scope of the research to include companies other than pharmaceuticals, extending the duration of the study to strengthen the research results, and including additional variables such as firm value, macroeconomy, stock price, managerial ownership, tax avoidance, and leverage. Additionally, Hierarchical Linier Model suggest for next research and also expand the samples and objects utilized in the completed research to include non-pharmaceutical firms such as banking and food and beverage companies in Indonesia.

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