STRATEGY FOR THE FORMATION OF OPTIMAL CAPITAL STRUCTURE WITH SWOT ANALYSIS IN PHARMACEUTICAL SUBSECTORS COMPANIES

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ABSTRACT

This study aims to determine the optimal capital structure formation in pharmaceutical sub-sector companies during the period 2014 - 2019 by analyzing profitability, dividend policy, and the SWOT matrix model by analyzing strengths, weaknesses, opportunities, and threats and being the basis for formulating various alternatives. These strategies can be carried out by company management. The company's profitability is not optimal; the company can still distribute dividends. And the results of the study illustrate that the capital structure of the pharmaceutical sub-sector company is not yet optimal. The average proportion of long-term debt capital structure of pharmaceutical sub-sector companies is 18.43% debt and 81.57% equity. Calculation of company value from 2014 - 2019 using the Modigliani Miller approach with a debt proportion of 0% - 100% shows that the highest company value of pharmaceutical sub-sector companies is in the composition of 30% debt and 70% equity. The total WACC averages 47% of the debt. By producing a WACC of 1.92% - 16.89% with a total average WACC of 10%. By considering the WACC, it is concluded that the optimal capital structure for the average pharmaceutical sub-sector company is in the composition of 30% to 60% of the debt. Meanwhile, the average WACC is 11.10%, and with financial distress, the average WACC value is 10%. Based on considering the company value and WACC above, the capital structure of the pharmaceutical sub-sector company is not optimal. The optimal capital structure will result in high Firm Value and the lowest cost of capital. The results of this study have implications for financial performance, capital structure, firm value, the weighted average cost of capital (WACC), and SWOT analysis, which need to be optimized to achieve optimal capital structure.

Keywords: financial ratios, capital structure, firm value, WACC, financial distress.

A.   INTRODUCTION

The increasing life expectancy and awareness of the healthy life of the Indonesian population will encourage increased consumption related to improving public health, so the Indonesian pharmaceutical market is predicted to continue to grow and have excellent prospects in the future. In this pharmaceutical sub-sector company, drugs and health supplements are some of the pharmaceutical products that play an essential role in health efforts, starting from efforts to improve health, prevention, diagnosis, treatment, and recovery, so it must always be endeavored to be available when needed.

Then needs to be increased capital that is certainly so that the pharmaceutical market in Indonesia can be competitive in the national and international sphere. Countries in the world have started to export to countries that need medicines. Because today many new consumers can be marketed globally and not infrequently also at the same time set up a research center in the intended country (Almeman, 2020). For Indonesia capital activities in the pharmaceutical field is also participated to giving special attention. Various efforts are also made so that the capital structure can be optimally implemented by minimizing capital costs so that the pharmaceutical industry in Indonesia can develop.

Several indicators determine the optimal capital structure. The first indicator is the cost of capital; if the company incurs a high cost of capital, it indicates an inadequate capital structure. The optimal capital structure can maximize the value of the company by minimizing the overall capital cost (WAAC) (Sulistio & Saifi, 2017). The cost of capital has an essential meaning for companies in making decisions on capital structure. Companies use several sources of funds, so calculating the weighted average cost of capital of all capital used can be calculated. The size of the weighted average cost of capital will affect firm value. The working capital in question is all current assets owned by the company to finance all activities of the company (Siregar et al., 2019).

In the model introduced by Modigliani and Miller (1958), there are two models of capital structure, namely pecking order theory and trade-off theory (Harjito, 2011). According to the trade-off theory, several theories determine the optimal capital structure. Companies optimize their capital structure because of their trade-offs between the advantages and disadvantages of using debt on firm value. On the one hand, increasing leverage by issuing more debt means that companies benefit from reduced taxes on interest expense, which will increase the value of the company. On the other hand, high leverage will increase direct and indirect costs of financial distress and reduce firm value. Direct costs include legal and administrative expenses of liquidation or reorganization. In contrast, indirect costs include the inability to run a business and agency costs associated with the high risk of bankruptcy, namely incentives for shareholders to choose risky projects.

Liquidity is the ability of the company to meet all financial obligations that are immediately settled (Nugroho, 2012). While the probability ratio aims to assess the ability of the company to seek revenue and to measure the effective level of management of the company. Evidenced by the results of sales and investment income. The point is that this ratio's use shows the company's efficiency.

When the company has started to have difficulty paying and is marked by no longer being able to meet the payment schedule and or at the time of cash flow can already indicate that the company can no longer meet its obligations. Then the company must be able to move quickly to prevent bankruptcy (Mastuti et al., 2012). Various analytical methods were developed to predict the onset of corporate bankruptcy. The Z-Score model was developed by Altman in (1968) (Munjiyah & Artati, 2020). With his theory, "Z-Score Altman," Altman states that the financial ratio is very limited because the ratio is partially calculated. For the ratio to be perfect, it should be tested with statistical regression calculations. Altman provides an index of various independent variables to determine whether a company will go bankrupt (unhealthy) or not bankrupt (healthy). Companies that will go bankrupt are companies that have a Z-Score <2.99, and a healthy company is a company that has a Z-Score> 2.99. Using the Altman Z-Score theory, pharmaceutical sub-sector companies can remind of financial problems that may require serious attention. In this theory, the Altman Z-Score uses financial ratios as a basis for analyzing the condition of the pharmaceutical sub-sector company. Based on the annual financial statements published through the websites of each pharmaceutical sub-sector company, the total equity of the company is as follows:

Table 1.
Capital Structure of Companies in the Pharmaceutical Sub-Sector, 2014-2019

Year	Total Debt (B)	Equity (M)	Percentage of Debt Percentage of Capital	Percentage of Capital
2014	1138	3789	23%	77%
2015	1532	4043	27%	73%
2016	1674	3965	30%	70%
2017	1964	4363	31%	69%
2018	2653	4783	36%	64%
2019	4347	5812	43%	57%

Source: Pharmaceutical Sub-Sector Company Financial Statements (data processed)

Based on Table 1, the financial statements of the pharmaceutical sub-sector companies, total debt, and equity have increased significantly. However, the total capital is more than the debt. This indicates that the company's operational activities are predominantly financed by capital. From the table above, a SWOT picture of the capital structure of the pharmaceutical sub-sector company can be made.

Maximizing company value is not always just by increasing the company's profit or simply by increasing the company's stock price. When linked with the capital structure theory and if management's goal is to make the company have maximum value, then the company must choose a debt to equity ratio that can make the company value as high as possible. To see this, the way to do this is to create several scenarios regarding the composition of the company's debt and equity. It will be seen whether the change in the composition will affect the company's value. A previous study conducted by (Ramli et al., 2019) analyzed the capital structure that highlighted the importance of various risks that occur to the shareholders of ACE Market companies. The study found that the growth and size of companies

can significantly affect information disclosure. The results also found that ACE Market companies were able to reduce debt consumption resulting in low risk. Research on capital structure is also conducted by (Khireta, 2014) resulting in that the policy of Company capital structure. Unilever Indonesia Tbk, and its Subsidiaries during the period 2010-2012 tend to use their capital composition compared to the use of long-term debt.

Several alternatives need to be done by the company, among others, consistent distribution of dividends, maximizing the potential of domestic resources, increasing the ability to produce products efficiently, maximizing the efficient use of debt capital, and improving the quality of all company resources. (Puspitasari, 2015) concluded the optimal capital structure of the company PT. XL consists of 50% debt and 50% equity. Then before the simulation as of December 31, 2014, the capital structure of PT. XL has ended up with leverage as a debt ratio of 70.10%.

According to (Naibaho, 2012), every company needs capital to carry out its operations, similar to PT. X, a company engaged in construction in Indonesia. Currently, the company has a capital structure of 49.58% debt and 50.42% equity. The higher the level of debt, the more likely the company will go bankrupt. The optimal capital structure will result in the highest company value and the lowest cost. The highest company value is in the debt composition of 30%. The lowest cost of capital (WACC) is 11.04%, in the debt composition of 40%. Based on these calculations, the optimal capital structure for PT. X is in the debt composition between 30% -40%.

B. LITERATURE REVIEW

Capital Structure

The theory of modern capital structure began in 1958 when Modigliani & Miller (1958) first stated that the value of WACC companies was not influenced by the company's capital structure. However, the perfect market assumption of such theories as no transaction fees, no taxes, symmetrical information, borrowing interest rates equal to the interest rate of lending at risk-free interest rates is contrary to the circumstances in the real world. Modigliani & Miller (1963) modified the original model and considered a tax shield effect. Following the theory that has been modified with taxes, the value of companies that owe is equal to the value of companies that do not owe plus the value of tax savings due to debt (tax shields). The more debt in the capital structure, the higher the value of the company (Rustam, 2015).

Capital structure is comparing long-term debt with own capital (Harjito and Martono, 2014). According to Weston and Copeland (2007) (Lubis et al., 2017) revealed that the capital structure is financing conducted by the company which consists of long-term debt, shares, and shareholder capital. If there are still losses by using funds derived from capital, then it can be considered to make funds from debt. If the debt is higher, the higher the risk. Capital structure can be measured using DER (Debt to Equity Ratio). This ratio shows the relationship between the

amount of debt owed by creditors with the equity provided by the owner of the company.

Value of The Firm

Maximizing company value is not always just by increasing the company's profit or simply by increasing the company's stock price (Hermuningsih, 2013). When linked with the capital structure theory, Ross et al. stated that if management's goal is to make the company have maximum value, then the company must choose a debt to equity ratio that can make the company value as high as possible. To see this, the way to do this is to create several scenarios regarding the composition of the company's debt and equity. It will be seen whether the change in the composition will affect the value of the company or not. Determination of capital that can improve the performance of the company with the composition of debt and capital can also be expected to maximize the value of the company's overall business, namely the interests of return on equity of the company and also maximize the wealth of shareholders (Wijayanto, 2015).

Altman Z-Score

Furthermore, it will be able to see that the changes can affect or not the company. Altman developed the following MDA model research in 1984 by incorporating an international dimension that changed the Z-score formulation (Elviani et al., 2020). Nedzveckas et al (2004) used several MDA models (Altman Model, Springate model) to predict bankruptcy in the Lithuanian market with a sample of the 45 largest Lithuanian manufacturing companies; the results indicated that all of these MDA models were not suitable to be applied to the Lithuanian market because they provided a low level of accuracy (64.6% for the Altman Model and 61.0% for the Springate Model). Therefore a more predictive model is needed, which is more suitable for the Lithuanian market. The Altman MDA model in Indonesia, among others, was carried out by Sarjono at a property company in Indonesia, who predicted bank failures which are 89% prediction accuracy in the one year before the collapse, and 91% prediction accuracy in the two years before the firm's failure.

The Optimal of Capital Structure

According to (Septiani, 2011), In WACC conditions can be minimized, it can be said that the capital structure can be optimized. The capital structure can be referred to as a structure that can minimize weighted average costs. Then the smaller the WACC will help influence the high value of the company. According to Riyanto (2001), WAAC is the cost of all debt and capital costs used by the company after-tax calculation (Sandria, 2015).

SWOT

The definition of a SWOT analysis is the process of systematically identifying various factors to determine the correct formulation and carry out the best corporate strategy. This analysis is based on the fairness of maximizing strengths and

opportunities and simultaneously on minimizing weaknesses and threats. The process of making corporate strategic decisions is always closely related to the development of the company's vision, mission, goals, strategies, and policies. Therefore, strategic planning requires an analysis of each of these SWOTs (strengths, weaknesses, opportunities, and threats) in today's corporate environment (Freddy Rangkuti, 2009). This analysis is also used to find the other side that is overlooked by the company and can help the managerial to make decisions (Hermawan et al., 2017).

To analyze SWOT, a matrix is needed that can enable managers to develop four types of strategies, namely; Strengths and Opportunities (SO), Weakness and Opportunities Strategy (WO), Strengths and Threats Strategy (ST), and Weakness and Threats Strategy (WT) (David & David, 2016).

C.   RESEARCH METHOD

Methods of data analysis in this study using quantitative descriptive statistical methods. The data analysis method in this study uses a quantitative approach by analyzing the numbers of research data using formulas from theories related to the research theme to answer the problem formulation. The following are the stages of analysis in this research are the analyzing the financial performance of the pharmaceutical sub-sector companies during the study period. Analyze the composition of the existing capital structure in pharmaceutical sub-sector companies during the research period. Analyzing the financial condition of pharmaceutical sub-sector companies using the Altman Z-Score. Analyze the value of the pharmaceutical sub-sector company to find the maximum value using the Modigliani Miller approach without debt and with debt. Analyzing the weighted average cost of capital (Weighted Average Cost of Capital) to find the lowest cost using without financial distress and with financial distress. Analyze the company's capital structure during the research period in the pharmaceutical sub-sector company based on firm value and cost of capital to determine the optimal capital structure composition to increase firm value. And determining alternative strategies using the TOWS matrix.

D.   RESULTS AND DISCUSSION

The Financial Performance of Pharmaceutical Sub-Sector Companies in 2014-2019

As many as nine pharmaceutical sub-sector companies studied by researchers, the development of sales and operating profit (EBIT) of pharmaceutical sub-sector companies during 2014-2019, as many as nine pharmaceutical sub-sector companies studied by researchers, found the sales volume and profit (EBIT) companies moving non-consistent. Several companies have experienced an increase in sales, but their operating profit has decreased; this shows its high operational costs. The average ROE in pharmaceutical sub-sector companies is fluctuating. A good ROE is above the average of its peers. In general, high ROE is influenced by a high increase in profit (Earning After Tax), and a low ROE is caused

by a decrease in profit (Earning After Tax). The profitability of pharmaceutical sub-sector companies is still much below average, and the gap is very high. Some companies have a negative ROE value because they experience a loss or minus profit after tax. Most of these indicated that the pharmaceutical sub-sector companies were able to pay dividends. Some companies do not pay dividends because they experience minimal losses or profits.

Capital Structure of Pharmaceutical Sub Sector Companies

Table 2 (at the attachment) shows the average capital structure of the pharmaceutical sub-sector companies in 2014-2019; it is known that the composition mainly uses their capital rather than long-term debt. Although companies with more long-term debt than capital, the proportion of funding from companies in the pharmaceutical sub-sector still uses their capital. The proportion of financing mix in pharmaceutical sub-sector companies is composed of 18.43% debt and 81.57% equity. The debt calculated here is from short-term bank loans and long-term bank loans. It is known that the company value in the pharmaceutical sub-sector company has an average company value of 3,365 M. It is in pharmaceutical sub-sector companies has a proportion of capital costs (WACC) of 3.9% to 18%, with an average WACC amount of 11.10%.

Value of The Firm

The value of the firm (value of the firm) with debt will increase with increasing debt. This is due to the tax benefits that the company gets by going into debt to fund the company's operations. WACC is also getting lower with higher corporate debt levels. Due to the tax benefit in the WACC calculation when doubling the cost of debt with the proportion of debt. The calculation of the impact of financial distress cost on firm value and the results of the V calculation from the results of the VL and VU calculations are as follows at Table 3 (at the attachment):

The maximum firm value with financial distress cost is at the point of 30% of the debt. The company's value has indeed increased due to the effect of the tax benefit from the loan (debt). But it doesn't always go up due to financial cost pressures. There is a certain point to assess the company is declining despite the increase in debt. Due to the increasing financial costs and the occurrence of delays in tax benefits obtained by companies through debt.

Altman Z-Score

To see whether the pharmaceutical sub-sector companies have a high risk of default or not, you can use the measurement with the Altman Z-Score tool for pharmaceutical sub-sector companies based on the data in the company's financial statements for 2014 – 2019 at the Table 4 (at the attachment).

It can be seen that the main factor of changes in the Z-Score value is influenced by changes in the market value of equity divided by the book value of debt (X_4)/Market Value of Equity to Book Value of Debt (X_4), this change is caused by changes in the market value of equity. Several companies show a decrease in investor confidence in company management. Meanwhile, the second factor that

affects changes in the Z-Score value by sales divided by total assets (X_5)/Sales to Total Assets (X_5), this change is caused by changes in company sales. In general, it can be concluded that investors still trust management performance in pharmaceutical sub-sector companies because most of the management conditions of pharmaceutical companies are still healthy.

Optimal Capital Structure for Pharmaceutical Sub-Sector Companies in 2014-2019

From the calculation of company value, it is found that the capital structure that produces the most excellent company value, namely the proportion of debt of 30%, for each year (2014-2019 period). The next consideration is regarding the company's capital costs. The following is calculating the weighted average cost of capital (WACC) of the pharmaceutical sub-sector companies after considering financial distress costs as in Table 5 (at the attachment).

The lowest WACC average for capital structure in pharmaceutical sub-sector companies is in the composition of 40% to 60% of the debt. So, the higher the level of debt, the higher the cost of equity for the company. From the results of the average debt composition of 0% - 100% and WACC, it is found that the average debt consists of 47%, with an average WACC of 10%. The higher the *cost of equity of a levered firm will* certainly lead to the higher the company's cost of capital because the company's cost of capital is a weighted average of the cost of capital and the cost of corporate debt. By considering this, companies in the pharmaceutical sub-sector can restructure to reach this optimal point.

SWOT Pharmaceutical Sub Sector Companies 2014-2019

Researchers create strategies based on a combination of four factors. The SO strategy was developed to think about finding specific ways to use its strengths to take advantage of current opportunities. Companies can also consider the company's strengths to avoid threats by using an SO strategy. Also, developing a WO strategy can take advantage of existing opportunities to overcome company weaknesses. And by getting the ST strategy as a defense strategy to minimize weaknesses and avoid threats to the company as follow ini Table 6 (at the attchment).

E. CONCLUSION

The conclusions that can be drawn from research conducted on the capital structure of the pharmaceutical sub-sector companies in 2014 - 2019 are: In this study, financial performance analysis is used using financial ratios consisting of the profitability ratio (Return on Equity) and Dividend Policy (Dividend Payout Ratio). The profitability movement of pharmaceutical sub-sector companies has not been maximized because many companies whose profitability is still below the average each year. Most pharmaceutical sub-sector companies are still able to distribute dividends to investors.

In general, investors still trust the performance of management in pharmaceutical sub-sector companies because most of the management conditions

of pharmaceutical companies are still healthy. The assumption of the company's WAAC calculation is the lowest for the capital structure of pharmaceutical sub-sector companies. Based on considering the value of the company and the WACC, it can be concluded that the capital structure in pharmaceutical sub-sector companies has not been optimal.

Alternative strategies that can be carried out by pharmaceutical sub-sector companies with the linkage between internal and external factors SWOT analysis produce SO, ST, WO, and WT strategies that can be summed up on the following points: Improve production quality and streamline costs. Expanding market share to increase sales by cooperating with hospitals and pharmacies. Increase the distribution of dividends for investors in building a positive image of the company. Capable of producing products efficiently to offer lower selling prices. The company can still increase the debt to reach the lowest and maximum company value. Breaking the share price down to increase the liquidity of the company's shares. Utilizing the potential of domestic raw material resources and cooperating with domestic raw material agents to get lower quality and reasonable quality prices. Improve the quality of all resources owned by the company in human resources, natural resources, and technology. Control and adjust the economic instability in Indonesia in financial planning so that the company's operations run in previous periods.

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ATTACHMENT

Table 2.
The Capital Structure of Companies in The Pharmaceutical Sub-Sector, 2014 - 2019

Companies	Liabilities		Equity	Capital Structure	Percentage		Value of The Firm	WACC
	Current Liabilities	Long Term Liabilities			Debt	Equity		
DVLA	358	85	1108	7%	7%	93%	1,213	8.4%
INAF	719	152	548	22%	22%	78%	732	7.1%
KAEF	2862	1376	3213	30%	30%	70%	4,809	3.9%
KLBF	2363	513	13185	4%	4%	96%	13,821	16.0%
MERK	258	38	556	6%	6%	94%	603	10.9%
PYFA	34	29	109	21%	21%	79%	144	12.8%
SCPI	528	615	295	68%	68%	32%	762	13.9%
SIDO	262	35	2808	1%	1%	99%	2,851	8.7%
TSPC	1763	358	4902	7%	7%	93%	5,346	18.0%
Average	**1016**	**356**	**2969**	**18.43%**	**18.43%**	**81.57%**	**3365**	**11.10%**

Source: Research Results

Table 3.
Calculation Results of Companies in The Pharmaceutical Sub-Sector

Company	Year	V	DEBT										
			100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
DVLA	2014	V	53	283	499	658	769	840	878	892	888	873	853
	2015	V	23	121	214	282	329	360	376	382	381	374	365
	2016	V	187	992	1,750	2,306	2,694	2,941	3,076	3,125	3,112	3,059	2,988
	2017	V	1,513	8,037	14,177	18,689	21,827	23,831	24,926	25,322	25,216	24,790	24,209
	2018	V	110	583	1,029	1,357	1,585	1,730	1,810	1,838	1,831	1,800	1,758
	2019	V	5.4	28.9	51.0	67.3	78.6	85.8	89.7	91.1	90.7	89.2	87.1
INAF	2014	V	1.1	5.8	10.3	13.6	15.9	17.3	18.1	18.4	18.3	18.0	17.6

	2015	V	271	1,438	2,537	3,345	3,907	4,265	4,461	4,532	4,513	4,437	4,333
	2016	V	419	2,223	3,922	5,170	6,038	6,592	6,895	7,005	6,975	6,857	6,697
	2017	V	73	387	683	901	1,052	1,148	1,201	1,220	1,215	1,194	1,167
	2018	V	32	169	298	393	460	502	525	533	531	522	510
	2019	V	192	1,022	1,802	2,376	2,775	3,030	3,169	3,219	3,206	3,152	3,078
	2014	V	2,815	14,951	26,373	34,767	40,605	44,332	46,369	47,107	46,910	46,116	45,036
	2015	V	205	1,086	1,917	2,526	2,951	3,222	3,370	3,423	3,409	3,351	3,273
KAEF	2016	V	11	57	101	133	156	170	178	181	180	177	173
	2017	V	183	970	1,711	2,255	2,634	2,876	3,008	3,056	3,043	2,991	2,921
	2018	V	526	2,794	4,929	6,498	7,589	8,286	8,667	8,805	8,768	8,619	8,418
	2019	V	761	4,040	7,127	9,395	10,972	11,980	12,530	12,729	12,676	12,462	12,170
	2014	V	59	312	550	725	846	924	966	982	978	961	939
	2015	V	10	51	91	119	139	152	159	162	161	158	155
KLBF	2016	V	108	576	1,016	1,339	1,564	1,708	1,786	1,815	1,807	1,777	1,735
	2017	V	863	4,583	8,084	10,657	12,446	13,589	14,213	14,439	14,379	14,136	13,805
	2018	V	62	331	583	769	898	980	1,025	1,041	1,037	1,019	996
	2019	V	3	15	27	35	41	45	47	48	47	47	46
	2014	V	80	424	747	985	1,151	1,256	1,314	1,335	1,329	1,307	1,276
	2015	V	235	1,247	2,199	2,899	3,386	3,697	3,867	3,929	3,912	3,846	3,756
MERK	2016	V	294	1,560	2,751	3,627	4,236	4,624	4,837	4,914	4,893	4,810	4,698
	2017	V	93	492	868	1,144	1,336	1,458	1,525	1,550	1,543	1,517	1,481
	2018	V	0.6	3.1	5.4	7.1	8.3	9.1	9.5	9.7	9.6	9.4	9.2
	2019	V	175	929	1,639	2,161	2,523	2,755	2,882	2,927	2,915	2,866	2,799
	2014	V	1,088	5,779	10,195	13,439	15,696	17,137	17,924	18,209	18,133	17,826	17,409
	2015	V	15	79	140	184	215	235	245	249	248	244	238
PYFA	2016	V	4	21	37.1	48.9	57.1	62.3	65.2	66.2	65.9	64.8	63.3
	2017	V	60	317	559	737	861	940	983	999	994	978	955
	2018	V	218	1,156	2,039	2,688	3,140	3,428	3,586	3,643	3,627	3,566	3,482
	2019	V	216	1,147	2,022	2,666	3,114	3,400	3,556	3,612	3,597	3,537	3,454
	2014	V	73	385	680	896	1,047	1,143	1,195	1,214	1,209	1,189	1,161
	2015	V	0.4	2.4	4.2	5.5	6.4	7	7.3	7.5	7.4	7.3	7.1
SCPI	2016	V	154	816	1,439	1,897	2,216	2,420	,531	2,571	2,560	2,517	2,458
	2017	V	888	4,718	8,322	10,971	12,813	13,989	14,632	14,865	14,803	14,552	14,211
	2018	V	12.9	68.8	121.3	159.9	186.7	203.9	213.2	216.6	215.7	212.1	207.1

	2019	V	4	20	36	47	55	60	63	64	63	62	61

TSPC	2014	V	839	4,459	7,865	10,368	12,109	13,221	13,828	14,048	13,990	13,753	13,431
	2015	V	32	172	304	401	468	511	535	543	541	532	519
	2016	V	3.6	19.3	34.1	44.9	52.5	57.3	59.9	60.9	60.6	59.6	58.2
	2017	V	42	224	395	521	608	664	695	706	703	691	675
	2018	V	260	1,381	2,437	3,212	3,752	4,096	4,285	4,353	4,334	4,261	4,161
	2019	V	221	1,175	2,073	2,732	3,191	3,484	3,644	3,702	3,687	3,624	3,539

Table 4.
Altman Z-Score for Pharmaceutical Sub-Sector Companies in 2014-2019

Company Code	2014			2015			2016		
	Z-Score		Predictions	Z-Score		Predictions	Z-Score		Predicctions
DVLA	8.19	-1.79	Healthy	6.41	0.04	Healthy	6.44	-0.41	Healthy
INAF	2.84	-0.68	Vulnerable	2.16	0.59	Vulnerable	2.75	-0.7	Vulnerable
KAEF	5.43	-0.93	Healthy	4.5	-1.06	Healthy	3.44	-0.75	Healthy
KLBF	9.71	0.14	Healthy	9.85	0.92	Healthy	10.76	0.89	Healthy
MERK	9.35	-0.75	Healthy	8.6	1.16	Healthy	9.76	-2.48	Healthy
PYFA	4.05	0.95	Healthy	4.99	-0.01	Healthy	4.98	0.98	Healthy
SCPI	0.9	1.32	Hazardous	2.22	1.13	Vulnerable	3.35	-0.23	Healthy
SIDO	24.76	-1.46	Healthy	23.3	-1.69	Healthy	21.61	-1.58	Healthy
TSPC	7.65	-1.12	Healthy	6.53	0.34	Healthy	6.87	-0.56	Healthy

Company Code	2017			2018			2019	
	Z-Score		Predictions	-Score		Prediksi	Z-Score	Predicctions
DVLA	6.04	0.76	Healthy	6.8	0.04	Healthy	6.84	Healthy
INAF	2.05	-0.02	Vulnerable	2.03	0.18	Vulnerable	2.21	Vulnerable
KAEF	2.7	-0.6	Vulnerable	2.1	-0.43	Vulnerable	1.66	Hazardous
KLBF	11.65	0.31	Healthy	11.96	-1.23	Healthy	10.73	Healthy

MERK	7.28	-4.79	Healthy	2.5	3.29	ʹulnerable	5.79	Healthy
PYFA	5.96	-0.74	Healthy	5.22	0.28	Healthy	5.5	Healthy
SCPI	3.12	0.25	Healthy	3.38	0.86	Healthy	4.23	Healthy
SIDO	20.03	-6.99	Healthy	13.03	-0.04	Healthy	12.99	Healthy
TSPC	6.31	0.08	Healthy	6.39	0.17	Healthy	6.56	Healthy

Source: Research Results

Table 5.
WACC Calculation Results with The Financial Distress of Companies in the Pharmaceutical sub-sector in 2014 - 2019

Company		Debt										
		0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
DVLA	WACC	8.60%	8.38%	8.17%	7.96%	7.78%	7.66%	7.89%	∞	∞	∞	∞
	KD	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
	KSL	8.60%	8.69%	8.80%	8.96%	9.21%	9.69%	11.28%	∞	∞	∞	∞
INAF	WACC	7.55%	7.36%	7.17%	6.98%	6.79%	6.61%	6.44%	∞	∞	∞	∞
	KD	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
	KSL	7.55%	7.55%	7.56%	7.56%	7.57%	7.59%	7.66%	∞	∞	∞	∞
KAEF	WACC	4.27%	4.16%	4.05%	3.92%	3.72%	3.33%	1.92%	∞	∞	∞	∞
	KD	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
	KSL	4.27%	4.00%	3.65%	3.18%	2.46%	1.03%	-3.64%	∞	∞	∞	∞
KLBF	WACC	16.17%	15.77%	15.37%	15.03%	14.86%	15.23%	18.32%	∞	∞	∞	∞
	KD	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
	KSL	16.17%	16.89%	17.81%	19.07%	21.02%	24.84%	37.37%	∞	∞	∞	∞
MERK	WACC	11.05%	10.77%	10.50%	10.25%	10.07%	10.11%	11.26%	∞	∞	∞	∞
	KD	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
	KSL	11.05%	11.34%	11.72%	12.23%	13.03%	14.59%	19.72%	∞	∞	∞	∞
PYFA	WACC	13.56%	13.22%	12.89%	12.60%	12.42%	12.62%	14.73%	∞	∞	∞	∞

	KD	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
	KSL	13.56%	14.07%	14.71%	15.59%	16.95%	19.62%	28.39%	∞	∞	∞	∞
SCPI	WACC	16.70%	16.29%	15.88%	15.54%	15.36%	15.77%	19.06%	∞	∞	∞	∞
	KD	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
	KSL	16.70%	17.47%	18.45%	19.78%	21.86%	25.91%	39.22%	∞	∞	∞	∞
SIDO	WACC	8.71%	8.49%	8.28%	8.07%	7.88%	7.77%	8.04%	∞	∞	∞	∞
	KD	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
	KSL	8.71%	8.81%	8.94%	9.12%	9.39%	9.92%	11.67%	∞	∞	∞	∞
Perusahaan							**Debt**					
		0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
TSPC	WACC	18.34%	17.88%	17.44%	17.06%	16.89%	17.40%	21.32%	∞	∞	∞	∞
	KD	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
	KSL	18.34%	19.24%	20.39%	21.96%	24.41%	29.18%	44.85%	∞	∞	∞	∞

Source: Research Results

Table 6.
Matriks TOWS

Internal factors	Strengths (S)	Weakness (W)
	- S1: Pharmaceutical sub-sector companies can still pay dividends - S2: Based on the calculation of the Z-score, the average financial condition of the	- W1: Profitability of pharmaceutical sub-sector companies is not optimal - W2: The capital structure of the pharmaceutical sub-sector company is not yet optimal

	pharmaceutical sub-sector companies is still relatively healthy, with a Z-score value above 2.99 - S3: Have a product brand that is well known to the Indonesian people - S4: The product has been recognized and registered with the Food and Drug Administration (BPPOM)	- W3: Dependence on imported raw materials

External factors

Opportunities (O)	SO Strategy	WO Strategy
- O1: The potential of the pharmaceutical industry is largely due to the increasing number of people with healthy lifestyle changes - O2: The mandatory National Health Insurance Program (JKN) can improve the pharmaceutical industry - O3: There is an increasing demand for health needs - O4: More and more new hospitals and pharmacies - O5: New technology that enables more efficient production/distribution and can improve product quality	- Improve the quality of production and streamline costs. - Expanding market share to increase sales by cooperating with hospitals and health dispensaries to supply drugs, vitamins, and medical equipment.	- The company can still increase the debt to reach the lowest and maximum company value. - Breaking the share price lower to increase the liquidity of the company's shares. - Utilizing the potential of domestic raw material resources and cooperating with domestic raw material agents to get lower quality and good quality prices.
Threats (T)	ST Strategy	WT Strategy

| - T1: Economic instability in Indonesia
 - T2: Bank interest rate volatility
 - T3: Keep up with technological developments in the era of globalization | - Able to produce products efficiently to offer lower selling prices.
- Increase the distribution of dividends for investors in building a positive image of the company. | - The company can still increase the debt to reach the lowest and maximum company value.
- Breaking the share price lower to increase the liquidity of the company's shares.
- Utilizing the potential of domestic raw material resources and cooperating with domestic raw material agents to get lower quality and reasonable quality prices. |

Source: Research Results