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# Macroeconomic Effect on Capital Structure of Chemical Farma Companies

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## Abstract

*Capital structure is a study that has developed a lot since 1958; the development of this study is to examine the influence of micro and macroeconomics on the company's capital structure. Previous studies in Indonesia confirmed that macroeconomics does not affect capital structure. The situation is different empirically. When the covid-19 pandemic occurs, drug companies experience a significant increase. On this basis, researchers seek to examine the effect of macroeconomics on pharmaceutical companies. This research uses a qualitative approach with a sample of PT. Kimia Farma during the period 2016-2020 using multiple regression analysis. The results showed that inflation and interest rates did not affect capital structure. This confirms that macroeconomics does not influence the company's capital structure under normal or abnormal situations.*

Keywords
Macroeconomics; capital structure; PT. Kimia Farma

## I. Introduction

At the beginning of the development of the study of capital structure initiated by Modigliani and Miller (1958, 1963), it was stated that the problem of adverse selection was conceptually extended to information asymmetry through the incorporation of pecking order theory. Myers and Majluf (1984) suggest that dividend changes are associated with managers' knowledge of on-site firm assets. Thus, share prices will fall when managers have superior information and issue shares to finance new investments (Myers & Majluf, 1984). According to Shyam-Sunder and Myers (1999), issuing or repaying debt is equivalent to funding a current deficit when internal cash flows are short for real investments and when dividend commitments as a form of equity financing do not make sense. Myers and Majluf's (1984) model documents that the loss of information asymmetry does not apply to firms with small growth when issuing equity. Different types of asymmetric information have different predictions on capital structure and investment efficiency.

Consistent with the general growth type argument of Myers and Majluf (1984), Wu and Au Yeung (2012) further find that capital structure remains persistent because of the persistence of determinants, which include the type of firm growth and related fundamental variables such as tangible versus intangible investment style. The growth type contains information that allows the company to choose an appropriate and persistent method of capital structure, which does not always require frequent adjustments. Furthermore, Chang and Dasgupta (2009) suggest that the behaviour of the debt ratio target is not statistically significant, and this target debt behaviour does not explain the company's financing. Fama

and French (2002) find that the mean-reverting speed is too slow, making the dynamic tradeoff theory less plausible.

While some factors do not change a firm's financing behaviour, they change the efficiency with which a firm adjusts its capital structure. Fischer et al. (1989) modelled the dynamic capital structure choice theory, which considers the role of transaction costs. Existing empirical studies show that transaction costs affect capital market timing and capital structure rebalancing, as countries with low transaction costs rebalance their capital structures more quickly after deviations from targets occur (Colak et al., 2015; Lee et al., 2020).

Transaction costs appear to limit the feasibility of debt rebalancing and speed of adjustment. One of the methodological contributions is the level of speed of adjustment of the company's capital structure towards its optimal level as a proxy for the role of transaction costs in determining the optimal level of debt and company equity structure (Getzmann et al., 2014). This is because, despite the fact that varying levels of transaction costs occur inside or outside the firm, it does not necessarily mean market imperfections, whereas, from a more dynamic and continuous adjustment perspective, transaction costs can affect the speed at which a firm adjusts its debt, the optimal rate, and the firm can only partially adjust their debt ratio (Hovakimian et al., 2001). There are many empirical studies on the determinants of capital structure. Determining the factors associated with the debt ratio relies on the two opposing theories described above: the tradeoff theory and the pecking order theory. However, Frank and Goyal (2008) and Harris and Roark (2019) provide reasons why, even with these two dominating theories, capital structure theory does not have a single model to help identify the determinants of capital structure choice.

Previous studies have found that a firm's capital structure is influenced not only by firm-specific factors but also by country-specific factors (Bancel and Mottoo, 2004; De Jong et al., 2008). Single-country studies usually try to use firm-specific factors to explain differences in capital structure. International studies, on the other hand, compare the differences in capital structure between firms from different countries and try to use firm and country-specific factors to provide explanations. The general conclusion is that firm and country-specific factors have significant explanatory power on capital structure formation.

Based on the results of Seftianti's research (2019), it can be seen that inflation partially has no effect on capital structure. (2) Interest rates partially affect the Capital Structure. This can be seen from the t-test (partial), where the tcount is greater than the ttable value of (2.364 > 2.131) and the significance level is 0.099, which is greater than the significance level of ($\alpha$ = 0.05). Based on the results of this valuable research, it can be seen that the Interest Rate partially has an influence on the Capital Structure. (3) Inflation and Interest Rates simultaneously affect the Capital Structure. It can be seen that the f (simultaneous) test, which aims to determine the joint effect of the independent variable on the dependent variable, is obtained by the value of Fcount < Ftable of (5.469 < 9.55).

Based on the results of research by Yulianto, Susyanti, & Salim (2019) as well as the tests in the previous discussion in this study, the following conclusions can be drawn: 1) The results of the study state that inflation has a positive and insignificant effect on capital structure (DER), and 2) The results of the study stated that the SBI interest rate had a positive and insignificant effect on the capital structure (DER). Ramdhani (2019) stated that inflation had no significant effect in a positive direction on the Capital Structure. Budiono & Septiani (2017) shows the results of the study that inflation has a positive but not significant effect on capital structure. This shows that high inflation does not affect the capital structure of LQ-45 companies. The SBI interest rate has a positive but not significant effect on the capital structure. This shows that the high and low-interest rates of SBIs do not affect the capital structure of LQ-45 companies.

In the Indonesian context, there is an interesting phenomenon when there is a national health insurance program and the COVID-19 pandemic where company shares in the health sector show a significant increase. Medicines that are products from the company are needed not only when they are sick (curative) but also in good health (preventive) and during post-illness recovery (rehabilitative). By owning a stake in a health company, it is expected that the profits will be greater than the losses.

In principle, health sector companies, like other companies, also have a funding system, both internal and external to the company. Funds obtained from both internal and external companies will be used for company management. Funds sourced from internal companies (capital from company owners and retained earnings), this method of meeting the need for funds originating from internal companies is known as the equity financing method. In addition, there are also sources of funds from external parties (sales of shares, issuance of bonds, sales of securities or loans from banks).

Although health sector companies do not really dominate the companies listed on the Indonesia Stock Exchange, their existence plays a very important role in creating the health status of the Indonesian people. Health services can not be separated from the existence of drugs that function to prevent and rehabilitate a disease. In order to realize the ideals of the Indonesian nation towards Indonesia, all coverage, which means that all Indonesian citizens are covered by their health financing by the state in accordance with the mandate of the 1945 Constitution, which is reflected in the National Health Insurance (JKN) program. As an applicative form and operational implementation of the National Health Insurance (JKN) program is the Health Social Security Administering Body (BPJS).

The implementation of the implementation policy of the Health Insurance Administering Body on January 1, 2014, triggered the expansion of health sector companies or drug manufacturers in carrying out their operations. Why not? Because the need for drugs is increasing due to increasing public interest in caring for the health, which is marked by increased hospital patient visits, this encourages the health industry to always increase its productivity.

At the beginning of 2020, the health industry was recorded to continue to develop business and even expand. The Covid-19 outbreak that has hit the world is suspected to be an opportunity for this business sector where the demand for medical devices and multivitamins has increased. Health companies, such as PT. Pharmaceutical Chemistry. On this basis, it is necessary to conduct research on the effect of macroeconomics on the capital structure of pharmaceutical companies, which experienced a significant increase in the era of the covid-19 pandemic. Sihombing (2020) state that Covid-19 pandemic caused everyone to behave beyond normal limits as usual. The outbreak of this virus has an impact especially on the economy of a nation and Globally (Ningrum, 2020). The problems posed by the Covid-19 pandemic which have become a global problem have the potential to trigger a new social order or reconstruction (Bara, 2021).

## II. Research Methods

Researchers used two techniques, namely descriptive and causal methods, according to the research objectives. This method is focused on the accumulated scientific evidence seeking to characterize the objective factual picture of the object being examined. Causality analysis is a research technique that aims to clarify the causal relationship of the variables studied. This study was conducted to determine the difference in the effect of inflation and interest rates on the capital structure from 2016 to 2020.

The population in this study is a pharmaceutical company using a sample of PT. Kimia Farma during the 2016-2020 period. The timing was chosen because, in 2020, there was a

COVID-19 pandemic which increased the stock prices of companies in the pharmaceutical sector. Data was obtained from Bank Indonesia to obtain data on inflation and interest rates, while for the capital structure using data from the annual financial statements of PT. Pharmaceutical Chemistry. Data analysis was performed using multiple regression with the Eviews application.

## III. Discussion

The research data used in this study is annual data for 2016-2020. The results of data analysis using views show the following results:

**Table 1.** Multiple Regression Test Results

Dependent Variable: DER
Method: Least Squares
Date: 12/14/21 Time: 14:11
Sample: 1 5
Included observations: 5

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 2843.868 | 1402.651 | 2.027496 | 0.1798 |
| INFLASI | -164.3058 | 223.1725 | -0.736228 | 0.5382 |
| SUKU_BUNGA | -187.4019 | 255.7624 | -0.732719 | 0.5400 |

| | | | |
|---|---|---|---|
| R-squared | 0.377388 | Mean dependent var | 1386.400 |
| Adjusted R-squared | -0.245224 | S.D. dependent var | 268.5429 |
| S.E. of regression | 299.6660 | Akaike info criterion | 14.52692 |
| Sum squared resid | 179599.4 | Schwarz criterion | 14.29259 |
| Log-likelihood | -33.31731 | Hannan-Quinn criteria. | 13.89799 |
| F-statistic | 0.606137 | Durbin-Watson stat | 2.334752 |
| Prob(F-statistic) | 0.622612 | | |

Based on the results of the study, it shows that inflation and interest rates simultaneously only affect 37%. These results show a small effect on macroeconomics on capital structure. While partially, it shows that the Prob of inflation is 0.5382, which means it is greater than 0.05, so inflation has no effect on the capital structure of PT. Pharmaceutical Chemistry. This indicates that the increase or decrease in inflation has no impact on the capital structure of PT. Kimi Farma. The interest rate shows a Prob result of 0.5400, which means it is greater than 0.05. It can be concluded that the interest rate has no impact on the capital structure of PT. Pharmaceutical Chemistry. The results of this study indicate that an increase or decrease in interest rates does not have an impact on the company's capital structure.

The results of this study show similarity with previous studies, such as the research of Siregar & Tjandrasa (2021), which shows that inflation and interest rates have no effect on the capital structure of companies in the automotive & component manufacturing sector on the IDX in 2014-2018. Research by Julimar & Priyadi (2021) shows that inflation has a negative but not significant effect on capital structure. This means that the high and low rate

of inflation does not affect the capital structure. The interest rate has a negative but not significant effect on the capital structure. That is, the high and low-interest rates have no effect on the capital structure.

Misharni & Adziliani (2019) inflation has no significant effect on the Long Term Debt to Equity Ratio (LTDtER) with a p-value of 0.670, which means it is greater than 0.05. Wijayanti (2018) Inflation has a negative and significant effect on the company's capital structure in the first regression equation, but in the second regression, equation inflation has no effect on the company's capital structure. Interest rates have a positive and significant effect on the company's capital structure in the first and second regression equations.

The comparison shows that macroeconomics consistently has no effect on the company's capital structure. This is analyzed using the pecking order theory, which assumes that the company aims to maximize shareholder welfare. This theory was first introduced by Donaldson in 1961, while the naming of the pecking order theory was carried out by Myers (1984). The art theory that companies prefer internal financing is from the company's operating results in the form of revenue receipts. If the external publication is required, the company will issue securities first, first starting with downloading, then followed by securities with option characteristics, new and still not sufficient to issue new shares. So the order of resource use with reference to the pecking order theory is internal funds (internal funds), debt (debt) and equity (equity). Internal funds are more than external funding inputs because internal funds allow companies to not have to "open up again" from the spotlight of outside investors. In addition, the influence of asymmetric information and the cost of stock information tends to encourage pecking order behaviour (Myers, 1984).

The pecking order theory is based on the motivation of corporate managers rather than on capital market principles. Pecking order theory is based on information asymmetry. Managers have superior information. Organizational managers have better initial information. Hence the market behaviour of managers. The assumption of information asymmetry implies that managers develop and find new attractive investment opportunities with positive NPV, but they cannot convey this information well to outside shareholders because managers are not trusted by investors. The pecking order theory explains why highly profitable firms generally have less debt. This happens not because the company has a low target debt ratio but because the company does not need funds from external parties (Wikartika & Fitriyah, 2018).

The analysis of the theory indicates that company managers always focus on providing benefits to shareholders so that both when the macroeconomy is down and up, it can be controlled to continue to provide benefits for shareholders. This situation is a signal for shareholders to remain calm in the ever-changing macroeconomic conditions; conceptually, the signalling theory or signal theory developed by Ros in 1997 states that company executives who have better information about their company will be encouraged to convey this information to potential investors. Investors to increase the company's stock price. The positive thing in signalling theory is that companies that provide good information will differentiate them from companies that do not have good news. By informing the market about their condition, signals about the good future performance given by companies whose past financial performance was not good will not be trusted by the market.

According to Jogiyanto (2013), signalling theory emphasizes the importance of information issued by the company on the investment decisions of parties outside the company. Information is an important element for investors and business people because information essentially presents information, notes or descriptions for past, current and future conditions for the survival of a company and how the securities market will be. Complete, relevant, accurate and timely information is needed by investors in the capital market as an analytical tool for making investment decisions.

Jogiyanto (2013) states that information published as an announcement will provide a signal for investors in making investment decisions. If the announcement contains a positive value, it is expected that the market will react when the announcement is received by the market. When the information is announced, and all market participants have received the information, market participants first interpret and analyze the information as a good signal (good news) or a bad signal (bad news). If the announcement of the information is a good signal for investors, there will be a change in the volume of stock trading.

## IV. Conclusion

Based on the results of the study, consistently, macroeconomics (inflation and interest rates) have no effect on the capital structure. This condition indicates that companies in Indonesia in the context of capital structure are not tied to the situation of inflation or interest rates so that the increase or decrease in macroeconomics does not have an impact on drug companies in Indonesia.

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