JRMA (Jurnal Riset Manajemen dan Akuntansi)
Vol. 11 No. 03, Desember 2023 – Maret 2024
Hal: 159 – 170
DOI: https://doi.org/10.33508/jrma.v11i3.1257

ISSN Online: 2338-6576

MACROECONOMIC ON PROFITABILITY: CAPITAL STRUCTURE AS A MEDIATOR

Sukma Febrianti
sukma_febri@yahoo.co.id*
Didi Rahmat
didirahmat81@gmail.com

[1]Manajemen, Institut Bisnis dan Ekonomi Indonesia, Pontianak
[2]Manajemen, Sekolah Tinggi Ilmu Ekonomi Indonesia, Pontianak

Abstract

The main goal of the company is to maximize profits. Macroeconomic factors such as inflation and interest rates are important factors that can influence a company's success in achieving these goals and its capital structure policy. The aim of this research is to analyze the relationship between macroeconomic factors and profitability, using capital structure as a mediator. The population of this research are companies listed in LQ 45 on the Indonesian Stock Exchange, and sampling uses purposive sampling with certain criteria. Research data period: 2018–2022. The analysis technique is panel data regression and the path analysis approach of the Sobel test with Eviews 10 as a tool. Model selection used the Chow test and the Hausman test, and the result was the most appropriate fixed effect model. The research results show no influence between inflation and interest rates on capital structure, and capital structure does not mediate the relationship between inflation and interest rates on company profitability. There is no significant influence of macroeconomic factors on capital structure. The insignificance of these results is possible because the research period was too short to see the impact of macroeconomic factors and because there are no extreme economic conditions in Indonesia, which are generally still in a fairly stable condition.

Keywords*: macroeconomic; profitability; capital structure; mediation variable*

Abstrak

Perusahaan mempunyai tujuan utama yaitu memaksimalkan keuntungan. Makro ekonomi seperti inflasi dan suku bunga merupakan faktor penting yang dapat mempengaruhi keberhasilan perusahaan mencapai tujuan tersebut, begitu pula peranan kebijakan struktur modal di dalam perusahaan. Tujuan peneltian ini untuk menganalisis hubungan antara faktor makro ekonomi terhadap profitabilitas perusahaan yang dimediasi oleh kebijakan stuktur modal yang dijalankan perusahaan tersebut. Perusahaan yang terdaftar dalam LQ 45 pada Bursa Efek Indonesia menjadi populasi dan pengambilan sampel dengan teknik *purposive sampling* sesuai kriteria yang sudah ditentukan. Periode data penelitian dari tahun 2018-2022 (5 tahun terakhir). Data diolah dengan pendekatan analisis jalur dan menggunakan Uji Sobel Eviews 10 sebagai alat bantu. Sebelum melakukan analisis jalur terlebih dahulu dilakukan uji pemilihan model dengan Uji chow dan Uji Hausman dan diperoleh hasil menggunakan *Fixed Effect Model* yang paling tepat. Hasil penelitian menunjukkan bahwa tidak ada pengaruh antara inflasi dan suku bunga terhadap struktur modal, dan struktur modal tidak terbukti dapat memediasi hubungan antara inflasi dan suku bunga terhadap profitabilitas perusahaan. Hasil ini menunjukan bahwa hutang perusahaan tidak membuat pengaruh yang signifikan terhadap perolehan laba perusahaan, begitu pula faktor makro ekonomi (inflasi dan suku bunga) tidak signifikan terhadap hutang

perusahaan. Hasil ini kemungkinan besar dipengaruhi oleh jangka waktu penelitian yang relatif pendek sehingga tidak terdapat kondisi ekonomi yang ektrim di Indonesia yang secara umum masih di kondisi yang cukup stabil.
Kata kunci: ekonomi makro; profitabilitas; struktur kapital; variabel mediasi

INTRODUCTION

Profitability is a measure of firm performance and is one of the assessments of investors when deciding to invest in a company because investors tend to like companies that are able to generate maximum profits. Many factors can affect the growth of corporate profits, both internal factors (fundamentals and management) and external factors (macroeconomics). The study will use external factors (macroeconomics) on the performance of blue chip companies in Indonesia, because many previous studies have concentrated more on internal factors of the company, besides that as a developing country, Indonesia is vulnerable to fluctuations in these macroeconomic factors. (Ramli, 2019) found that firm and country characteristics (i.e. the interest rate of a country) affect firm performance both directly and indirectly. Macroeconomic factors are more effective in explaining firm performance than firm-specific variables (Vieira et al., 2019). The results of a study in Kenya that investigated the effect of macroeconomic fluctuations on the financial performance of manufacturing companies found evidence that foreign exchange rates, interest rates, and inflation rates have a significant effect on company performance in the construction and manufacturing sectors (Cliff & Willy, 2014). Macroeconomic changes including interest rates, money supply, exchange rates, and trade also affect financial performance.

Capital structure is an important part of the firm, so it is necessary to determine an efficient capital structure to improve firm performance. The firm's funding sources consist of equity and debt, where equity includes shareholders, and debt usually comes from creditors. The combination of equity and debt will form the capital structure of the firm. The formation of an optimal capital structure can improve the firm performance. Starting from research by Modigliani & Miller (1958) who concentrated on the cost of capital and produced 2 propositions, namely proposition 1 which states that there is no relationship between corporate debt and firm value (assuming no taxes), then revised with proposition 2 (including tax elements) which produces the theory that the higher the debt will increase the firm value due to tax savings. Followed by the tradeoff theory that the company's capital structure is a balance between the benefits of using debt with the costs of financial distress and agency costs, as well as pecking order theory that tends to use internal sources of funds compared to external. The results showed that capital structure has a negative and significant relationship with firm performance (Msomi, 2023; Ullah et al., 2020; Ramli, 2019) bootstrap and Sobel tests show that firm leverage plays a significant role in firm performance.

Some articles also consider external factors (macroeconomics) that may also determine a firm's leverage level. Various literatures allude to the important role of macroeconomics in determining a firm's capital structure decision, and there is still a wide debate on how to measure macroeconomic conditions concisely (Lemma & Negash, 2013). Gomez-Gonzalez et al., (2022) stated that the external environment (macroeconomics) plays an important role in corporate funding decisions, when the economy is developing well, companies get good cash flow so as to reduce external funding and vice versa. Statistically, there is a significant relationship between 4 external factors (inflation, GDP growth rate, GDP, and index of protection of the creditors and debtorsrights) (Jaworski, 2019). Macroeconomic factor research conducted on companies in Indonesia, Thailand, and Malaysia shows significant results only in Indonesia and Malaysia where GDP is negative for companies in Indonesia and positive for companies in Malaysia. In addition, the inflation rate coefficient in the three countries is negative, but only significant in 2 countries, namely Indonesia and Malaysia (Mursalim et al., 2017).

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

MM Theory (Capital Structure Theory)

Various theories have been developed conceptually and empirically from previous research, starting with the theory pioneered by Modigliani & Miller (1958) known as the "MM Theorem" which examined the relationship between capital structure and firm value. The MM theory explains that there is no relationship between a company's chosen capital structure and its value (with the assumption of no taxes), known as proposition I. Sheikh (2011) stated that MM proved the choice between debt and equity financing has no effect on firm value. Therefore, company management need not worry about the proportion of debt and equity because in perfect capital markets, any combination of debt and equity is as good as any other. However, the Modigliani and Miller debt irrelevance theorem was based on limiting assumptions that are not consistent with reality. When those assumptions are removed, the choice of capital structure becomes an important determinant of company value. In a separate study, the early theory was later revised known as proposition II, that companies tend to use high debt to increase firm value (with the existence of taxes), because of tax savings in using debt which can increase company profits. The tax-based model shows that profitable companies should borrow more, because they have a greater need to protect income from corporate taxes (Huang, 2006).

The MM theory initially stated capital structure is irrelevant in perfect markets, but later revised it by saying debt financing can increase firm value by generating tax shields. Empirical research found capital structure choices do impact firm value, with profitable firms having incentive to use more debt to obtain tax benefits. The theories have evolved to show capital structure as an important factor affecting firm value.

Signaling Theory

Signaling theory in finance was first introduced by Ross (1977) through his article titled "The Determination of Financial Structure: The Incentive-Signaling Approach". The core of signaling theory is that companies have better information about the prospects and risks of the company compared to outside investors. Therefore, there is information asymmetry between company management and outsiders. To reduce the information asymmetry, companies can provide signals to investors in the form of financial information such as funding decisions and dividend policy. The goal is to demonstrate the company's prospects in the future and ultimately influence investors' investment decisions.

One implication of signaling theory is that companies with high profitability tend to send positive signals in the hope of increasing firm value. Signaling theory also states that higher debt usage by companies can be a positive signal, as it reflects the company's ability to pay its obligations. The results of an empirical study by Ellili & Farouk (2011) in Tunisia support this, where debt has a positive effect on firm value.

So overall, signaling theory explains how company actions such as dividend policy, stock splits, and debt can be positive signals to investors regarding the company's prospects in the future. This theory is supported by a number of empirical studies that find positive influences from these signals on firm value. Signaling theory provides an important contribution to the finance literature regarding information asymmetry.

The Effect of Inflation and Interest Rate on Profitability

Macroeconomic factors play an important role in achieving good company performance, when economic conditions are good, companies are also in good or stable conditions; (Cliff & Willy, 2014) investigated the effect of macroeconomic fluctuations on the financial performance of manufacturing companies listed in Kenya and found evidence that foreign exchange rates, interest rates (+), and inflation rates (+) have a significant effect on company performance in the construction and manufacturing sectors. Ho & Mohd-Raff (2019) found that interest rates proved to be positively significant for Islamic companies where higher interest rates would result in higher firm performance for this group of companies. Based on this explanation, the hypothesis proposed is as follows:

H1: Inflation has an effect on Profitability.
H2: Interest Rate has an effect on Profitability

The Effect of Inflation and Interest Rate on Capital Structure

A high inflation rate in a country illustrates the economic instability of the country, this of course has an impact on companies in determining capital structure decisions. Inflation has a positive and significant impact on capital structure (Kuč & Kaličanin, 2021; Frank & Goyal, 2009; Lemma & Negash, 2013). The positive relationship supports the trade-off theory that tends to apply optimal leverage because during expansion (when equity markets perform well, expected bankruptcy costs are lower, firms are more likely to have taxable income to shelter, and firms have more cash) debt becomes more attractive to finance firm expansion. In contrast, (Jõeveer, 2013) in his research states a negative and significant relationship between inflation and capital structure where high inflation decreases corporate debt due to high loan financing rates. Korajczyk & Levy (2003) argued that the negative relationship between macroeconomic variables and leverage seems consistent with the pecking order theory that prioritizes internal financing for corporate activities.

High interest rates cause companies to reduce their debt, because with high interest rates companies bear a higher burden than when interest rates tend to be low. Interest rates show an interesting shift from relatively weak and negative effects before the crisis to strong and positive effects during the crisis (Daskalakis et al., 2017). Interest rate growth can cause companies to increase their debt ratio, due to tax benefits or a decrease in financial leverage to reduce bankruptcy risk (Mokhova & Zinecker, 2014). Jõeveer (2013) argues that there is a negative relationship between interest rates and debt. Zein (2016) states that the positive relationship with interest rates is due to the fact that the companies sampled, in terms of trade-off theory, have less risk of bankruptcy costs because these companies are stable and large-scale. Based on this explanation, the hypothesis proposed is as follows:

H3: Inflation has an effect on Capital Structure.
H4: Interest Rate has an effect on Capital Structure.

The Effect of Capital Structure on Profitability

A high inflation rate in a country illustrates the economic instability of the country, this of course has an impact on companies in determining capital structure decisions. Inflation has a positive and significant impact on capital structure (Kuč & Kaličanin, 2021; Frank & Goyal, 2009; Lemma & Negash, 2013). The positive relationship supports the trade-off theory that tends to apply optimal leverage because during expansion (when equity markets perform well, expected bankruptcy costs are lower, firms are more likely to have taxable income to shelter, and firms have more cash) debt becomes more attractive to finance firm expansion. In contrast, (Jõeveer, 2013) in his research states a negative and significant relationship between inflation and capital structure where high inflation decreases corporate debt due to high loan financing rates. Korajczyk & Levy (2003) argued that the negative relationship between macroeconomic variables and leverage seems consistent with the pecking order theory that prioritizes internal financing for corporate activities.

High interest rates cause companies to reduce their debt, because with high interest rates companies bear a higher burden than when interest rates tend to be low. Interest rates show an interesting shift from relatively weak and negative effects before the crisis to strong and positive effects during the crisis (Daskalakis et al., 2017). Interest rate growth can cause companies to increase their debt ratio, due to tax benefits or a decrease in financial leverage to reduce bankruptcy risk (Mokhova & Zinecker, 2014). Jõeveer (2013)argues that there is a negative relationship between interest rates and debt. Zein (2016) states that the positive relationship with interest rates is due to the fact that the companies sampled, in terms of trade-off theory, have less risk of bankruptcy costs because these companies are stable and large-scale. Based on this explanation, the hypothesis proposed is as follows:

H3: Inflation has an effect on Capital Structure.
H4: Interest Rate has an effect on Capital Structure

H5: Struktur Modal berpengaruh terhadap Profitability.

METHOD

Population and Sampling

Data was taken from LQ45 companies listed on the Indonesia Stock Exchange (IDX) for the period 2018-2022 through the idx.co.id website. Macroeconomic variables take data from the Bank Indonesia website (annual interest rate and annual inflation rate). The sample was selected using the Purposive Sampling method and the criteria is excluded companies with incomplete data during the observation period. Of the 45 companies, 44 companies were obtained with a total of 220 cross-section data to be tested using the Path Analysis method.

Operationalization and Measurement

The operationalization and measurement of research variable can be seen in table 2:

Table 2. Operasionalization and Measurement

Variable	Code	Indicator	Formula	Reference
Capital Structure	Z	Debt to Equity Ratio	$Total\ Debt/Equity$	(Ahmed, 2021)
Inflation Rate	X1	Inflation Rate	Annual Inflation Rate	(Masoud, 2013)
Interest Rate	X2	Repo Rate	Annual Interest Rate	(Masoud, 2013)
Profitability	Y	EBIT to total esset	$EBIT /(Total\ Equity)$	(Mufidah & Pratiwi, 2022)

Source: Data Processed

Data Collection

Data Type

This research uses secondary data obtained from library observartion and company documents.

Profitability data is taken from company's annual financial statements through te website www.idx.co.id and Macroeconomic Inflation Rate and Interest Rate data are taken from Bank Indonesia website www.bi.go.id.

Data Analysis Technique

Panel Data Regression

This research data combines timeseries data and cross-section data, so that panel data regression is needed (Hadi Ismanto & Pebruary, 2021), this analysis tools uses Eviews version 10. The data panel regression equation is as follows:

$$Y_{it} = \alpha_{01} + \beta_1 X1_{it} + \beta_2 X2_{it} + \varepsilon_t \quad (1)$$

$$Z_{it} = \alpha_{02} + \beta_1 X1_{it} + \beta_2 X2_{it} + \varepsilon_t \quad (2)$$

$$Y_{it} = \alpha_{02} + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 Z_{it} + \varepsilon_t \quad (3)$$

In using data panel regression, regression model selection is carried out with three aproaches, namely pooled least square, fixed effect model, and random effect model (Endri & Fathony, 2020). To select the right model , several test carried out, name, namely the Chow Test, Hausman Test, and Lagrange Multiplier Test (Kusumaningtyas et al., 2022).

Path Analysis

Path analysis is used to test the effect of intervening variable (mediation). Path analysis is used to analyze the pattern of relationship between variables with knowing the direct and indirect effects (Dr. Marwan et al., 2023). In this study, the Sobel Test was used to evaluate the magnitude of the indirect effect of the effect on the outcome through the mediator (Keith, 2019). The procedure for testing the mediation hypothesis was developed by Sobel in 1982 and is known as the Sobel test, which is carried out by testing the indirect effect of X to Y through M. Significance is measured by the following formula (Santosa et al., 2020):

$$Z_{Value} = a.b\sqrt{(b^2.Sa^2 + a^2.Sb^2)}$$

Decision-making criteria:

a. If Z count < Z table, then the hypothesis is rejected.
b. If Z count > Z table, then the hypothesis is accepted.

RESULT AND DISCUSSION

Model Estimation

First, using the Chow Test, the result of which is the probability value of cross section F < 0.05. The following are the test results:

Table 1. Chow Test

Redundant Fixed Effects Tests
Equation: Untitled
cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	62.874680	(43,174)	0.0000
Cross-section Chi-square	617.245310	430	0.0000

Source: Output Eviews Versi 10

The second test used is the Housman Test. Similar to the previous Chow test, using the Housman Test also obtained that the probability value of cross section F < 0.05. The following are the test results:

Table 2. Housman Test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	99.212196	10	0.0000

Source: Output Eviews Versi 10

From these two tests, the model used is the Fixed Effect Model – FEM.

Model Path Analysis dan Sobel Analysis

To measure the direct effect and indirect effect, path analysis is used. There are three models designed in this study, the first is to test the direct effect of Macroeconomics consisting of Inflation (X1) and Interest Rate (X2) on Capital Structure - DER (Z). The second model is to examine the direct effect of macroeconomics consisting of Inflation (X1), Interest Rate (X2), and Capital Structure on Profitability (Y). The third model is to test the indirect effect where Capital Structure - DER (Z) as a mediator variable. Before testing between the above variables, a model feasibility test is first carried out and the results of the Probability F statistic value of 0.000 are obtained, which means that this model is suitable for further testing.

From the results of the analysis test on the first model, it is found that inflation (X1) and Interest Rate (X2) have no significant effect on Capital Structure (Z). This can be seen from the t value of each (X1 = - 0.7731; X2 = 0.4266) which is below the t table value (t table at df 24 = 2.6039). Both independent variables also do not significantly affect the Z variable, this can be seen from the probability value which is above 0.05. The following are the results of regression data analysis using the first estimation model:

Table 3. Estimasi Model X1, X2 Terhadap Z

Dependent Variable: Z
Method: Panel Least Squares
Date: 08/31/23 Time: 10:30
Sample: 2018 2022
Periods included: 5
Cross-sections included: 44
Total panel (balanced) observations: 220

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	169.4083	24.53797	6.903926	0.0000
X1	-3.686726	4.768615	-0.773123	0.4405
X2	2.864301	6.712918	0.426685	0.6701

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.939546	Mean dependent var	172.0200
Adjusted R-squared	0.923912	S.D. dependent var	249.8627
S.E. of regression	68.92237	Akaike info criterion	11.48745
Sum squared resid	826551.0	Schwarz criterion	12.19702
Log likelihood	-1217.619	Hannan-Quinn criter.	11.77399
F-statistic	60.09414	Durbin-Watson stat	1.484185
Prob(F-statistic)	0.000000		

Source: Output Eviews Versi 10

In the second model, where the independent variables used are X1 (inflation), X2 (Interest Rate), Capital Structure (Z), against the dependent variable Profitability (Y). The following are the results of data analysis with the help of EVIEWS software:

Table 4. Estimasi Model X1, X2, Z Terhadap Y

Dependent Variable: Y
Method: Panel Least Squares
Date: 08/31/23 Time: 10:32
Sample: 2018 2022
Periods included: 5
Cross-sections included: 44
Total panel (balanced) observations: 220

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-23.44581	7.075449	-3.313685	0.0011
X1	0.452026	1.220335	0.370411	0.7115
X2	2.383993	1.715855	1.389391	0.1665
Z	0.161766	0.019367	8.352551	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.765225	Mean dependent var	17.05305
Adjusted R-squared	0.702799	S.D. dependent var	32.29813
S.E. of regression	17.60769	Akaike info criterion	8.761485
Sum squared resid	53635.32	Schwarz criterion	9.486488

Log likelihood	-916.7634	Hannan-Quinn criter.	9.054260
F-statistic	12.25816	Durbin-Watson stat	2.232224
Prob(F-statistic)	0.000000		

Source: Output Eviews Versi 10

Table 5. Direct effect dan Indirect Effect Estimation

Direct Effect

Path	Coefficient	Std. Error	t-statistic	Prob.	R-Squared	Prob. (F-statistic)	
X1 - Z	-3,686726	4,768615	-0,773123	0,4405	0,939546	0,0000	Insignificant
X2 - Z	2,864301	6,712918	0,426685	0,6701			Insignificant
C	169,4083	24,53797	6,903926	0,0000			
X1 -Y	0,452026	1,220335	0,370411	0,7115	0,765225	0,0000	Insignificant
X2 -Y	2,383993	1,715855	1,389391	0,1665			Insignificant
Z -Y	0,161766	0,019367	8,352551	0,0000			Significant
C	-24,44581	7,075449	-3,313685	0,0011			

Source: Output Eviews Versi 10

Indirect Effect

Path	Coefficient	Std. Error
X1 – Z	-3,686726	4,768615
X2 – Z	2,864301	6,712918
Z -Y	0,161766	0,019367

Source: Output Eviews Versi 10

From the test results above, it is known that only the Capital Structure (Z) variable has a significant effect on Profitability (Y) with a t value of 8.352> t table, and a probability value of 0.000 is below the tolerance value of 0.05. The remaining Inflation (X1) and Interest Rate (X2) have no significant effect on Profitability (Y), with the t value X1 = 0.3704; X2 = 1.3893 is below the t table value = 2.6039; and the probability value X1 = 0.7115, X2 = 0.1665 which exceeds 0.05. From the estimation results above, the Path Model can be made as figure 1.

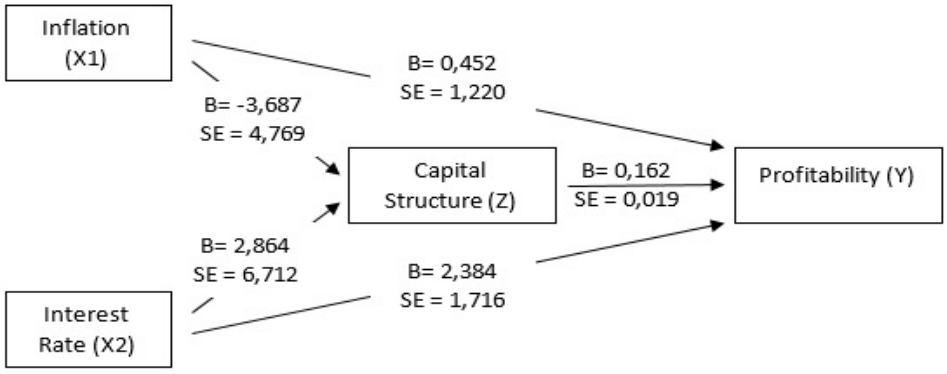

Figure 1. Path Model Direct Effect and Indirect Effect Path Model
Source: Data Processed

Based on the model above, it is continued with estimation using the Sobel Analysis model, the results of which are as follows.

Table 6. Results of Sobel Analysis

Path	Indirect effect	Z Sobel	Information
X1 -> Z -> Y	-0,59639	-0,7698323	Z Sobel = -0,7698323 < 1,96 ==> does not mediate
X2 -> Z - > Y	0,46335	0,4261293	Z Sobel = 0,4261293 < 1,96 ==> does not mediate

Source: Output Eviews Versi 10

Furthermore, from the results of the data processing above, proceed to the stage of creating a Path Analysis model which is used in finding the results of whether Variable Z can't mediate the independent variable on the dependent variable.

Discussion

Based on the path analysis results in this study, it was found that inflation did not have a significant effect on capital structure. This result is different from several previous studies such as Kuč & Kaličanin (2021) and Lemma & Negash (2013) which found a positive and significant relationship between inflation and capital structure. However, the results of this study are in line with several other studies such as Masoud (2013) and Cliff & Willy (2014) which also stated that inflation has an unimportant or statistically insignificant role on capital structure. The differences in the results of this study with previous studies can be caused by several factors such as differences in sample, research period, or analytical methods used. Nevertheless, the results of this study specifically indicate that in a certain sample of companies and time period studied, inflation was not proven to significantly influence capital structure. Further research is needed by expanding the sample coverage and observation period to understand the effect of inflation on capital structure.

Based on the results of this study, it was found that interest rates have a positive but insignificant relationship with capital structure. This positive but insignificant relationship is in line with several previous studies, including Sbeiti's (2010) research on companies in Jordan found a positive relationship between interest rates and capital structure, but the relationship was statistically insignificant. Chowdhury and Chowdhury's (2010) research in Bangladesh also showed similar results, which was a positive but weak and insignificant relationship between interest rates and capital structure. Khrawish and Khraiwesh's (2010) research in Jordan found that interest rates had a positive but insignificant effect on capital structure.

This is different from Ezeoha and Botha's (2012) study which concluded that interest rates have a positive and significant influence on capital structure in banks in South Africa. The difference in results may be due to differences in sample and research context used. However, overall the results of this study support a number of previous empirical studies indicating that interest rates tend to have a positive albeit insignificant relationship with capital structure. Further research is needed to understand the nature of the relationship between interest rates and capital structure.

This study found a significant relationship between capital structure and profitability. This is in line with the findings of Soumadi (2015) and Sbeiti (2010) which also showed that capital structure has a significant effect on profitability. However, this differs from Ezeoha & Botha (2012) which instead found that capital structure has no significant effect on the financial performance of banks in South Africa. The difference in results may be due to differences in sample and research context used.

This study also conducted a Sobel test to see whether capital structure can mediate the relationship between inflation and interest rates on profitability. The Sobel test results showed that capital structure cannot mediate the relationship. This Sobel test result is in line with Soumadi (2015) which also found that capital structure does not mediate the effect of inflation and interest rates on profitability in companies in Jordan.

Overall, the results of this study indicate that although capital structure has a significant effect on profitability, capital structure has not been proven to be able to mediate the influence of macroeconomic variables such as inflation and interest rates. Further research is needed to explore the mediating role of capital structure.

CONCLUSIONS, SUGGESTIONS, AND RECOMMENDATIONS

From the results of data estimation using panel data on the Fixed Effect Model, then estimated with path analysis, it is found that the direct variable relationship that Macroeconomic Factors consisting of inflation (X1) and Interest Rate (X2) do not have a significant effect on the Profitability of LQ45 Companies (Y), as well as X1 and X2 do not have a significant effect on Capital Structure (Z) as a moderator variable.

But Capital Structure (Z) which has a significant influence on Profitability (Y). Furthermore, from the Sobel test it is also obtained that the Moderator Variable Capital Structure (Z) cannot mediate the relationship between Inflation (X1) and Interest Rate (X2) as Macroeconomic factors on the Profitability of LQ45 companies (Y). The limitation in this study is the fact that the companies sampled are established companies or have a good liquidity category, which allows the use of capital structure is not the main thing in the ability to achieve profit. The observation period, which is from 2018-2020, is too short so that it might bias the pattern of data behavior.

REFFERENCES

Ahmed, I. E. (2021). The determinants of capital structure of the GCC oil and gas companies. *International Journal of Energy Economics and Policy*, *11*(2), 30–39. https://doi.org/10.32479/ijeep.10570

Cliff, O., & Willy, O. (2014). Macro Economic Fluctuations Effects on the Financial Performance of Listed Manufacturing Firms in Kenya. *International Journal of Social Sciences*, *21*(1), 26–40.

Daskalakis, N., Balios, D., & Dalla, V. (2017). The behaviour of SMEs' capital structure determinants in different macroeconomic states. *Journal of Corporate Finance*, *46*(2016), 248–260. https://doi.org/10.1016/j.jcorpfin.2017.07.005

Dr. Marwan, M. P., Drs. Win Konadi, M. S., Kamaruddin, S. P. M. M., Dr. Ibrahim Sufi, M. P., drh. Yusrizal Akmal, M. S., & Dr. Azhari, S. E. M. S. A. C. A. (2023). *Analisis Jalur dan Aplikasi SPSS Versi 25: Edisi Kedua*. Merdeka Kreasi Group. https://books.google.co.id/books?id=D5jCEAAAQBAJ

Endri, E., & Fathony, M. (2020). Determinants of firm's value: Evidence from financial industry. *Management Science Letters*, *10*(1), 111–120. https://doi.org/10.5267/j.msl.2019.8.011

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: Which factors are reliably important? *Financial Management*, *38*(1), 1–37. https://doi.org/10.1111/j.1755-053X.2009.01026.x

Gomez-Gonzalez, J. E., Hirs-Garzón, J., & Uribe, J. M. (2022). Interdependent capital structure choices and the macroeconomy. *North American Journal of Economics and Finance*, *62*. https://doi.org/10.1016/j.najef.2022.101750

Hadi Ismanto, S. E. M. M., & February, S. (2021). *Aplikasi SPSS Dan Eviews Dalam Analisis Data Penelitian*. Deepublish. https://books.google.co.id/books?id=hvU1EAAAQBAJ

Ho, C. S. F., & Mohd-Raff, N. E. N. (2019). External and internal determinants of performances of Shariah and non-Shariah compliant firms. *International Journal of Islamic and Middle Eastern Finance and Management*, *12*(2), 236–253. https://doi.org/10.1108/IMEFM-08-2017-0202

Jõeveer, K. (2013). Firm, country and macroeconomic determinants of capital structure: Evidence from transition economies. *Journal of Comparative Economics*, *41*(1), 294–308. https://doi.org/10.1016/j.jce.2012.05.001

Keith, T. Z. (2019). *Multiple Regression and Beyond: An Introduction to Multiple Regression*

and Structural Equation Modeling. Taylor & Francis. https://books.google.co.id/books?id=bvSDDwAAQBAJ

Korajczyk, R. A., & Levy, A. (2003). Capital structure choice: Macroeconomic conditions and financial constraints. *Journal of Financial Economics*, *68*(1), 75–109. https://doi.org/10.1016/S0304-405X(02)00249-0

Kuč, V., & Kaličanin, Đ. (2021). Determinants of the capital structure of large companies: Evidence from Serbia. *ECONOMIC RESEARCH-EKONOMSKA ISTRAŽIVANJA*, *34*(1).

Kusumaningtyas, E., Subagyo, E., Adinugroho, W. C., Jacob, J., Berry, Y., Nuraini, A., Syah, S., & Surur, M. (2022). *Konsep dan Praktik Ekonometrika Menggunakan Eview*. Academia Publication. https://books.google.co.id/books?id=dBp1EAAAQBAJ

Lemma, T. T., & Negash, M. (2013). Institutional, macroeconomic and firm-specific determinants of capital structure: The African evidence. In *Management Research Review* (Vol. 36, Issue 11). https://doi.org/10.1108/MRR-09-2012-0201

Masoud, N. (2013). Financial markets and the financing choice of firms : Empirical analysis of emerging market countries JKM. *International Research Journal of Finance and Economics*, *109*, 8–34.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, *48*(3), 261–297.

Mokhova, N., & Zinecker, M. (2014). Macroeconomic Factors and Corporate Capital Structure. *Procedia - Social and Behavioral Sciences*, *110*, 530–540. https://doi.org/10.1016/j.sbspro.2013.12.897

Msomi, T. S. (2023). Macroeconomic and firm-specific determinants of financial performance: Evidence from non-life insurance companies in Africa. *Cogent Business and Management*, *10*(1). https://doi.org/10.1080/23311975.2023.2190312

Mufidah, E. N., & Pratiwi, A. (2022). *The Effect Of Earnings Per Share (EPS), Current Ratio (CR), and Return On Equity (ROE) On Pt Unilever Indonesia Tbk ' s Stock Price*. *4*(2).

Mursalim, Mallisa, M., & Kusuma, H. (2017). Capital structure determinants and firms' performance: empirical evidence from Thailand, Indonesia, and Malaysia. *Polish Journal of Management Studies*, *16*(1), 154–164. https://doi.org/10.17512/pjms.2017.16.1.13

Ramli, N. A. (2019). Determinants of capital structure and firm financial performance—A PLS-SEM approach: Evidence from Malaysia and Indonesia. *Quarterly Review of Economics and Finance*, *71*, 148–160. https://doi.org/10.1016/j.qref.2018.07.001

Ross, S. A. (1977). Determination of Financial Structure: the Incentive-Signalling Approach. *Bell J Econ*, *8*(1), 23–40. https://doi.org/10.2307/3003485

Santosa, P. W., Aprilia, O., & Tambunan, M. E. (2020). The intervening effect of the dividend policy on financial performance and firm value in large indonesian firms. *International Journal of Financial Research*, *11*(4), 408–420. https://doi.org/10.5430/ijfr.v11n4p408

Ullah, A., Pinglu, C., Ullah, S., Zaman, M., & Hashmi, S. H. (2020). The nexus between capital structure, firm-specific factors, macroeconomic factors and financial performance in the textile sector of Pakistan. *Heliyon*, *6*(8), e04741. https://doi.org/10.1016/j.heliyon.2020.e04741

Zein, A. M. (2016). *Can Macroeconomic Factors Explain the Choice of Capital Structure?* 1–45.