ANALYSIS OF THE INFLUENCE OF MACROECONOMIC FACTORS ON FINANCIAL RISK

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Abstract

The company's prospects depend on the overall economic situation, therefore the company must consider the macroeconomic environment because investors will take into account several macroeconomic variables that affect the company's ability to generate profits which will affect financial risk. This study uses research objects in consumer cyclicals sub-sector companies listed on the Indonesia Stock Exchange 2018-2022. Consumer cyclicals consists of 14 sectors and the consumer cyclical sub sector consists of 56 companies which are the population, there are 10 companies that researchers make samples for the phenomenon. This study examines whether macroeconomic factors affect the high and low financial risk in consumer cyclicals sub-sector companies listed on the IDX for the 2018-2022 period. The research objective is to determine the macroeconomic factors affecting financial risk in consumer cyclicals sub-sector companies listed on the IDX for the 2018-2022 period. The data analysis method used in this study uses a purposive sampling method, descriptive statistical analysis, classical assumption test, panel data regression analysis, regression model selection, and hypothesis testing using Eviews 13 software. The results of this study indicate that investment has no significant effect on financial risk in the context of asset structure (DAR) or equity structure (DER), but has a significant impact in the long term on the company's long-term debt (LTDR). This may be due to differences in the duration and type of investment made by the company. Long-term investments financed through long-term debt tend to increase financial risk more significantly than short-term or equity-financed investments.

Keywords: Macroeconomic Factors, Financial Risks, IDX

INTRODUCTION

In other words, the company must be able to manage what it has to get optimal output. However, over time the company also realizes that every activity carried out must take into account the risks faced (Laan et al., 2022). Financial risk is an analysis by comparing one item with other financial statement items either individually or together to determine the relationship between certain items, both in the balance sheet and income statement. The ratio used is the Leverage Ratio to measure how much the company is financed with debt. The types of Leverage Ratio are debt to asset ratio, debt to equity, long long-term debt to equity ratio. Financial risk is proxied by debt to total assets obtained through total debt divided by total assets.

Macroeconomic factors such as inflation can affect stock prices on the stock exchange, this is because inflation describes the national economic conditions of a country, if the inflation rate is not controlled then investors will hesitate to invest in stock instruments, bonds and others, otherwise if inflation can be controlled then investors will increase their investment through the purchase of stocks, bonds and others. This risk factor causes inflation to affect financial risk. Meanwhile, if inflation can be controlled, it will not affect financial risk (Siringoringo et al., 2022). Another macroeconomic factor that affects financial risk is interest rates. The high and low interest rates will affect investors' decisions in making investments. If interest rates continue to increase, investment in deposits becomes a more attractive option than stocks, which are riskier than deposits (Silviyani, 2022). The ability of investors to understand and predict changes in macroeconomic conditions in the future will be useful for making investment decisions to be made (Adi & Rifa'i, 2023). Some macroeconomic factors that influence investment in a country are GDP, inflation, interest rates, rupiah exchange rates, budget deficits, private investment, and the balance of trade and payments. The company's prospects depend on the overall economic situation, therefore, the company must consider the macroeconomic environment because investors will take into account several macroeconomic variables that affect the company's ability to generate profits, which will affect financial risk (Adi & Rifa'i, 2023).

Macroeconomic factors that cause increased corporate financial risk can come from internal and external factors. Internal factors from within the company are declining

management performance, withdrawal of shares by management, low cash flow received, high debt, and operating losses for several consecutive periods, while external factors from outside the company are inflation, deflation, rising central bank interest rates, rising currency exchange rates, declining public demand for a product, changing public tastes for a product, rising raw material prices, and rising labor costs (Purba & Sakti, 2022).

Signaling theory explains why companies have an urge to provide financial statement information to external parties. The company's urge to provide information is because the company knows a lot about itself and the prospects of outsiders (investors and creditors). When information is announced and all market participants have received the information, market participants first interpret and analyze the information as good news and bad news. Broadly speaking, signaling theory is closely related to the availability of information (Cahyaningdyah & Ridloah, 2020). Financial reports can be used to make decisions for investors, financial reports are the most important part of the company's fundamental analysis.

The consumer cyclicals sector is a category of stocks that is highly dependent on business cycles and economic conditions, as it includes companies that manufacture or distribute products and services that are generally sold to consumers but for cyclical or secondary goods. This industry also includes companies that provide tourism, recreation, education, consumer support, media companies, advertising, entertainment providers, and secondary goods retail companies. The consumer cyclicals sector was chosen because although the performance of this sector is influenced by business cycles and economic conditions, the stock returns of companies in the consumer cyclicals sector vary greatly during the study period regardless of economic conditions so that researchers want to know whether the financial performance of consumer cyclicals companies affects their stock returns (www.idx.co.id).

Companies from the consumer cyclical sector are business entities that are affected by economic conditions and the company cycle. This study uses research objects in consumer cyclicals sub-sector companies listed on the Indonesia Stock Exchange from 2018-2022. Consumer cyclicals consist of 14 sectors, and the consumer cyclical sub-sector consists of 54 companies in the population. There are 10 companies for which researchers make samples

for phenomena using the calculation of debt to equity ratio (DER) to be able to measure Financial Risk.

REVIEW OF LITERATURE

Signaling Theory

Signaling theory explains why companies have an urge to provide financial statement information to external parties. The company's urge to provide information is because the company knows a lot about itself and the prospects of outsiders (investors and creditors). When information is announced and all market participants have received the information, market participants first interpret and analyze the information as good news and bad news. Broadly speaking, signaling theory is closely related to the availability of information (Cahyaningdyah & Ridloah, 2020). Financial reports can be used to make decisions for investors, financial reports are the most important part of the company's fundamental analysis.

The application of signal theory requires sufficient information availability. This is because the reason companies disclose financial information to external parties is to reduce information asymmetry. Information asymmetry can cause investors to shelter from stock exchange trading by only giving low company values. Based on signal theory, financial risk is information and cues to investors regarding the financial position and risk of bankruptcy of a company in the future and the long term. According to Wiagustini & Pertamawati (2015), and Dramawan (2016) in (Rahmadani & Wulandari, 2022), the decreasing financial risk of a company will increase investor confidence regarding the ability of company management to manage the company's business and financial operations so as to increase company value.

Financial Risk

Risk is an uncertainty experienced by a company as a result of ongoing business activities (Siregar, 2024). If the company is unable to overcome the various risks that exist, the company will certainly experience the risk of bankruptcy. In business activities, companies are often faced with fixed costs, which, of course, contain risks. In this regard, management must know about leverage. This leverage level may vary. The leverage ratio (Aldona & Listari, 2020) is a ratio that measures how much debt is used in corporate

spending. This ratio measures the ratio of funds provided by the owner to funds borrowed by the company from creditors. This ratio shows the company's ability to meet its financial obligations, both short and long term. Leverage ratio (solvency ratio) is a ratio used to measure the extent to which the company's assets are financed with debt. This means the amount of money the company uses to finance its business activities when compared to using its capital (Kasmir, 2015). There are several types of leverage ratios (solvency ratios), but the authors use 3 (three) ratios in conducting company research, namely as follows:

Debt To Asset Ratio (DAR)

Debt ratio is a ratio used to measure the ratio between total debt and total assets. In other words, how much of the company's assets are financed by debt or how much debt from the measurement results, if the ratio is high, meaning that there is more debt funding, it will be more difficult for the company to obtain additional loans because it is feared that the company will not be able to cover its debts with its assets. Companies with high DAR have a greater interest burden. If the company's income decreases, the ability to pay interest becomes more difficult, which can lead to financial difficulties. Therefore, DAR is used in measuring financial risk.

Debt to Equity Ratio (DER)

Debt to equity ratio is a ratio used to assess debt with equity. The ratio used to compare all debt, including current debt, with all equity. In other words, the ratio serves to know every rupiah of own capital that is used as debt collateral. Debt to-equity ratio for each company is certainly different. Companies with stable cash flow usually have a higher ratio than less stable cash flow. The lower the DER, the higher the company's ability to pay all its obligations. The greater the use of debt, can have the impact on risk and bankruptcy. If the debt burden is high, the company's ability to distribute dividends will be lower. Measurement using DER is useful to see if there is a financial risk in the future.

Long Term Debt to Equity Ratio (LtDER)

LtDER is the ratio between long-term debt and equity. The purpose is to measure how much of each rupiah of own capital is used as collateral for long-term debt by comparing long-term debt and own capital provided by the company. A high LTDER indicates that the company may have difficulty paying off its long-term debt, especially if there is a decrease

in revenue or an increase in interest rates. Measurement using the LtDER formula is useful for assessing the company's financial risk. Therefore, this study uses the LtDER formula to determine future financial risks.

Macroeconomic Factors

Macroeconomics is the second basic theory in economics. The analysis in macroeconomic theory tends to be more global and more comprehensive. Economic activity will be observed over time and the changes that occur. Macroeconomics is a useful method to help develop thinking about how to work to improve economic conditions (Putong, 2013) in (Hamid, 2024). The macroeconomic environment is an environment that can affect the company's daily operations. The ability of investors to understand and predict changes in macroeconomic conditions in the future will be useful for making investment decisions to be made (Adi & Rifa'i, 2023).

Interest rate

The interest rate is the price of a loan. According to Bank Indonesia (BI), through its official website www.bi.go.id, the BI interest rate is a policy rate that reflects the attitude or monetary policy set by Bank Indonesia and announced to the public. The operational targets of monetary policy are reflected in the development of Overnight Interbank Money Market (PUAB O/N) interest rates.

High or low interest rates can affect many aspects, ranging from the financial condition of an entity, including debt management, investments, cash flow, and overall economic disruption. When interest rates change, it can increase or decrease various types of financial risks, such as market risk, credit risk, and liquidity risk. Therefore, interest rate policy is one of the most important factors in managing financial risk for individuals, companies, and corporations.

Inflation

Inflation is a continuous increase in the general price of goods and services. According to Bank Indonesia, through its official website www.bi.go.id, inflation is a general and continuous increase in prices. In a macroeconomic context, this condition is described by real output exceeding potential output or aggregate demand being greater than the capacity of the economy (Saefulloh, Fahlevi, & Centauri, 2023).

Inflation can affect financial risk in a significant way, as high or uncontrolled inflation can lower the real value of money, reduce purchasing power, and boost the economy. Macroeconomic factors such as inflation can affect stock prices on the stock exchange.

Investment

Investment is an activity of placing funds in one or more types of assets during a certain period with the hope of obtaining income and/or increasing the value of the investment in the future. Investment decisions concern an uncertain future, so they contain an element of risk for investors

Stock investment risk is reflected in the variability of stock income (return), both individual stock income and overall stock income in the capital market (market return). The amount of investment risk in a stock can be measured by the variance or standard deviation of the stock's income.

RESEARCH METHOD

This study aims to identify the causal relationship between macroeconomic factors and financial risk by analyzing how macroeconomic variables, such as inflation, interest rates, and investment, affect financial risk. Through a quantitative approach, this research aims to reveal the pattern of interaction between changes in macroeconomic indicators and the level of risk faced by financial institutions and financial markets as a whole. By understanding this relationship, this study not only aims to provide theoretical insights but also to provide a practical foundation for policymakers and economic actors in managing financial risk amidst the dynamics of economies around the world.

The consumer cyclicals sector is a category of stocks that is highly dependent on business cycles and economic conditions because it includes companies that produce or distribute products and services that are generally sold to consumers, but for goods that are cyclical or secondary. This study uses secondary data in the form of financial reports on the index of companies in the consumer cyclicals sub-sector that have been published by the Indonesia Stock Exchange. Data is obtained by downloading via www.idx.co.id as the official IDX website in 2018-2022, financial report announcements that convey information on macroeconomic factors and financial risks, and annual reports that are accessed on the

official IDX website, namely www.idx.co.id, as well as observation of the company website. The 2018-2022 period includes several significant global and domestic economic events, such as the US-China trade war, the COVID-19 pandemic, and changes in monetary policy in various countries. By analyzing this period, researchers can gain a better understanding of how macroeconomic factors affect financial risk under dynamic and complex conditions.

56 companies are the population in this study, but only 10 companies have published financial reports in 2018-2022 consecutively. The sampling method is determined by the following criteria: (1) Companies in the consumer cyclicals sub-sector that have been published by the Indonesia Stock Exchange in 2018-2022, (2) Companies in the consumer cyclicals sub-sector that have been published by the Indonesia Stock Exchange in 2018-2022 consecutively. Based on these criteria and the use of sampling with the purposive sampling method, get we obtained results of 50 observations data or data to be studied. The data used must be clear where the source is from, because this will affect the content of the financial statements.

The independent variable (X) in the study is macroeconomic factors. Macroeconomics is a useful method to help develop thinking about how to work to improve economic conditions (Putong, 2013) in (Hamid, 2024). In this study, macroeconomic factor variables were measured using interest rates, inflation, and investment.

RESULTS AND DISCUSSION

Objects and Research

Table 1
Research Data

Description	Company
Total Population	56
Criteria	
Companies in the consumer cyclicals sub-sector that have been published by the Indonesia Stock Exchange in 2018-2022	16
Companies in the consumer cyclicals sub-sector that have been published by the Indonesia Stock Exchange in 2018-2022 sequentially.	10
Total	10
Total Observations (nx5)	50

Source: IDX, data processed

Based on the selection criteria above, there are 56 consumer cyclicals companies listed on the IDX for the 2018-2019 period, There are 16 companies that have published on the IDX 2018-2022 and 10 companies that have published on the IDX from 2018-2022, in the row. With a research period of 5 years, the number of samples used is 50.

Descriptive Statistics Analysis

Table 2
Descriptive Statistics

	LTDR	DAR	DER	Inflation	Investment	Interest Rate
Mean	0.237299	0.504078	1.014972	4.970204	1403833.	45.50000
Median	0.142199	0.301025	0.420312	5.100000	4.502175	2.190000
Maximum	0.719328	2.223885	8.092112	6.000000	68786257	2106.000
Minimum	0.000141	0.001453	0.000278	4.250000	0.091508	0.170000
Std. Dev.	0.203740	0.529056	1.470933	0.550381	9826604.	300.4929
Skewness	0.809672	2.142403	3.017582	0.273812	6.783866	6.783629
Kurtosis	2.447354	6.974275	13.25976	1.823490	47.02083	47.01873
Jarque-Bera	5.977370	69.73195	289.2754	3.438304	4332.247	4331.844
Probability	0.050354	0.000000	0.000000	0.179218	0.000000	0.000000
Sum	11.62767	24.69982	49.73364	243.5400	68787804	2229.500
Sum Sq. Dev.	1.992480	13.43519	103.8549	14.54010	4.63E+15	4334208.
Observations	50	50	50	50	50	50

Source: Data Processed, EVIEWS 13

From the results of descriptive statistical testing in the table above, it is explained that as many as 10 companies in the 5 years have an average LtDER ratio of 0.2373. The DAR variable has an average value of 0.5041, the DER variable is 1.015, the Inflation variable is 4.9702, the Inflation variable is 1,403,833, and the Interest Rate variable has an average value of 45.50. And it is known that the lowest value of LtDER is 0.0001 and the highest value is 0.7193 with a standard deviation of 0.7193. In the DAR variable, the lowest value is 0.0015 and the highest value is 2.2239, with a standard deviation of 0.5291. For the DER variable, the lowest value is 0.0003 and the highest value is 8.0921 with a standard deviation of 1.4709. In the Inflation variable, the lowest value is 4.2500 and the highest value is 6.0000 with a standard deviation of 0.5504. For the Investment variable, the lowest value is 0.0915 and the highest value is 68,786,257, with a standard deviation of 9,826,604. Meanwhile, the Interest Rate variable has the lowest value of 0.1700 and the highest value of 2106.00 with a standard deviation of 300.4929.

Classical Assumption Test

Normality Test

The normality test is carried out to determine whether the data collected has a normal distribution so that it can be used in parametric statistics. This can be done using the eviews normality program to determine whether the Jarque-Bera (JB) value fits the data. If the probability value of the test result is greater than 0.05, it is a normal distribution, and vice versa.

First Normality Test Results

The first normality test was carried out with the dependent variable DAR. The results of the normality test with the DAR variable are:

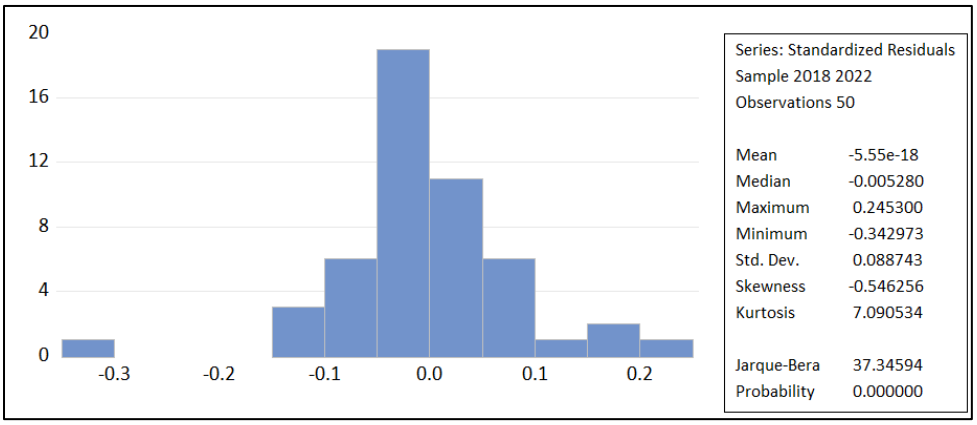

Figure 1
First Normality Test Results

Based on the results of the analysis above, the Prob.< value is 0.05 (0.000), it can be concluded that the data is not normally distributed.

Second Normality Test Results

The second normality test was carried out with the dependent variable DER. The results of the normality test with the DER variable are:

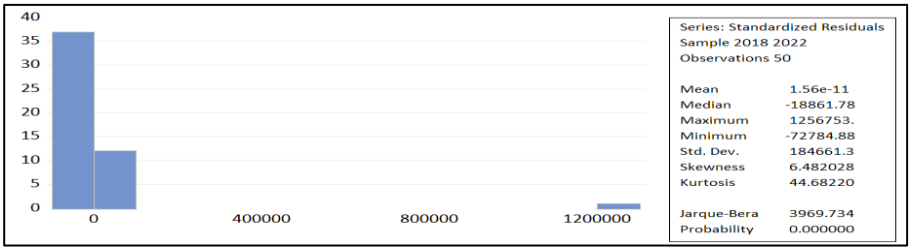

Figure 2
Second Normality Test Results

Based on the results of the analysis above, the Prob.< value is 0.05 (0.000), it can be concluded that the data is not normally distributed.

Third Normality Test Results

The second normality test was conducted with the dependent variable LTDER. The results of the normality test with the LTDER variable are:

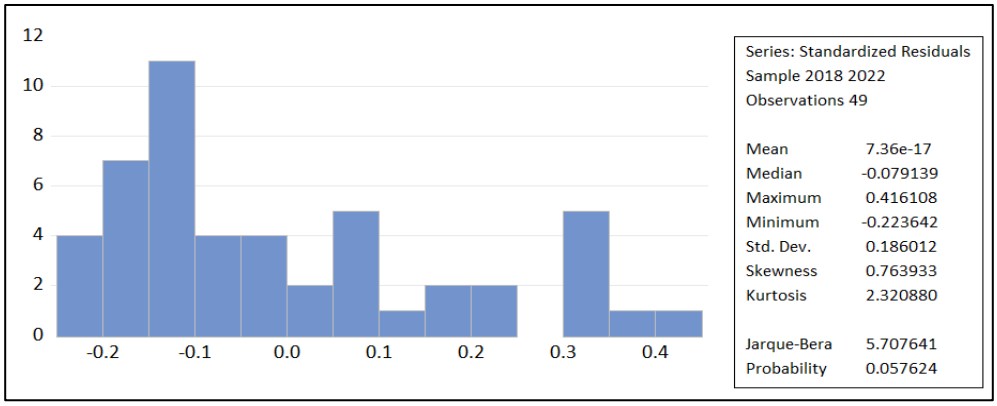

Figure 3
Third Normality Test Results

Based on the results of the analysis above, the Prob.> value is 0.05 (0.057), it can be concluded that the data is normally distributed.

Multicollinearity Test

The multicollinearity test aims to test whether the regression model found a correlation between the independent variables (Ghozali, 2017) . To determine the presence or absence of multicollinearity, it can be seen from the correlation coefficient of each independent variable. If there is a correlation between independent variables that exceeds 0.80 (> 0.80), then multicollinearity occurs (Ghozali, 2017).

First Multicollinearity Test Result

The first multicollinearity test was conducted with the dependent variable DAR. The results of the multicollinearity test with the dar variable are:

Table 3
First Multicollinearity Test Results

	DAR	Investment	Inflation	Flowers
DAR	1	- 0.00369	-0.31693	0.424571
Investment	-0.00369	1	-0.095254	-0.019000
Inflation	-0.316938	-0.09525382	1	0.0372505
Flowers	0.4245715	-0.019000	0.0372504	1

Based on the multicollinearity test on the significance value of the independent variables, below the value of 0.80. Thus, it can be concluded that there is no multicollinearity problem between the independent variables in the regression model.

Second Multicollinearity Test Result

The second multicollinearity test was conducted with the dependent variable DER. The results of the multicollinearity test with the der variable are:

Table 4
Second Multicollinearity Test Results

	DER	Inflation	Investment	Flowers
DER	1	-0.18379	-0.02040	-0.02097
Inflation	-0.1837	1	-0.09525	0.03725
Investment	-0.02040	-0.095253	1	-0.01900
Flowers	-0.02097	0.037250	-0.019000	1

Based on the multicollinearity test on the significance value of the independent variables, below the value of 0.80. Thus, it can be concluded that there is no multicollinearity problem between the independent variables in the regression model.

Third Multicollinearity Test Result

The second multicollinearity test was conducted with the dependent variable LTDER. The results of the multicollinearity test with the ltder variable are:

Table 5
Third Multicollinearity Test Results

	LTDR	Investment	Inflation	Flowers
LTDR	1	0.20124	-0.3009	0.20213
Investment	0.20124	1	-0.10074	-0.01943
Inflation	-0.30099	-0.10074	1	0.033981
Flowers	0.20213	-0.01943	0.033981	1

Based on the multicollinearity test on the significance value of the independent variables, below the value of 0.80. Thus, it can be concluded that there is no multicollinearity problem between the independent variables in the regression model.

Autocorrelation Test

Research is considered good if there is no autocorrelation. The autocorrelation test is used to determine whether there is a correlation between confounding error in the current period t and confounder in period t-1 (Ghozali, 2017). One method that can be used to

determine whether there is autocorrelation is the Durbin Watson (DW) test, the results of which are as follows:

First Autocorrelation Test Result

The first autocorrelation test was carried out with the dependent variable DAR. The results of the autocorrelation test with the dar variable are:

Table 6
First Autocorrelation Test Results

Cross-Section Fixed (Dummy Variables)			
R-squared	0.976003	Mean dependent var	0.536942
Adjusted R-squared	0.968221	S.D. dependent var	0.572879
S.E. of regression	0.102125	Akaike info criterion	-1.50633
Sum squared resid	0.3858939	Schwarz criterion	-1.009212
Log likelihood	5.065.846.	Hannan-Quinn criter.	-1.317030
F-statistic	1.254.082	Durbin-Watson stat	2.229383
Prob(F-statistic)	3,64E-11		

The Durbin-Watson test results show a statistical value of 2.229383, which is within the ideal range of 1.5 to 2.5. This indicates that there is no autocorrelation problem in this model.

Second Autocorrelation Test Result

The second autocorrelation test was conducted with the dependent variable DER. The results of the autocorrelation test with the der variable are:

Table 7
Second Autocorrelation Test Results

Cross-section fixed (dummy variables)			
R-squared	0.235561	Mean dependent var	26.5915
Adjusted R-squared	-0.012182	S.D. dependent var	188023.7
S.E. of regression	189182	Akaike info criterion	27.3577
Sum squared resid	132423	Schwarz criterion	27.854834
Log likelihood	-670.942	Hannan-Quinn criter.	27.547016
F-statistic	0.95012	Durbin-Watson stat	3.3477994
Prob(F-statistic)	0.51065072		

In this test, the Durbin-Watson value of 3.347799 indicates the potential for negative autocorrelation in the model.

Third Autocorrelation Test Result

The second autocorrelation test was conducted with the dependent variable LTDER. The results of the autocorrelation test with the LtDER variable are:

Table 8
Third Autocorrelation Test Results

Weighted Statistics			
R-squared	0.1534493	Mean dependent var	0.069751
Adjusted R-squared	0.09701	S.D. dependent var	0.1155264
S.E. of regression	0.109172	Sum squared resid	0.5363376
F-statistic	2.718964	Durbin-Watson stat	1.5755873
Prob(F-statistic)	0.055595		

The test results show a Durbin-Watson value of 1.5755873, which is close to the lower limit, indicating positive autocorrelation.

Hypothesis Test Results

Statistical Test t (Individual Parameter Significance Test)

The Effect of Interest Rate Levels on Financial Risk

The results of the panel data regression analysis show that interest rates have no significant effect on financial risk in all models tested:

a. DAR variable: The t-statistic value for interest rate is 1.315058, with a probability (p-value) of 0.19658. Since the p-value is greater than 0.05, the hypothesis that interest rates have a significant positive effect on financial risk is rejected.
b. DER variable: The table shows that the interest rate has a t-statistic of -1.4907498 and a p-value of 0.14450. It also shows that the interest rate is not significant in influencing financial risk.
c. LTDR variable: The t-statistic value is -0.302196 with a p-value of 0.76389. This result corroborates that interest rates do not contribute significantly to changes in financial risk.

Overall, interest rates do not have a significant influence on financial risk in the three models tested, so the hypothesis about the influence of interest rates is rejected.

The Effect of Inflation on Financial Risk

The results of testing inflation on financial risk show that:

a. DAR variable: Inflation has a t-statistic value of 0.60289301 and a p-value of 0.55025. Since the p-value is greater than 0.05, the hypothesis that inflation has a significant positive effect on financial risk is rejected.
b. DER variable: For inflation, the t-statistic value is -0.1963926 with a p-value of 0.84537. This indicates that inflation has no significant effect on financial risk.
c. LTDR variable: Inflation has a t-statistic of -1.12438 and a p-value of 0.26681. This also indicates that inflation does not contribute significantly to financial risk.

The conclusion is that inflation has no significant effect on financial risk in all tested variables, so the hypothesis regarding the effect of inflation is rejected.

Effect of Investment on Financial Risk

The results of the analysis regarding the effect of investment show:

a. DAR variable: Investment has a t-statistic value of 0.77607673 with a p-value of 0.44263. This indicates that investment has no significant effect on financial risk in this variable.
b. DER variable: For investment, the t-statistic is -0.0233910 and the p-value is 0.98146. This also indicates that investment has no significant effect on financial risk.
c. The variable LTDR: Investment has a t-statistic of 2.507916 and a p-value of 0.01581. Since the p-value is less than 0.05, the hypothesis that investment has a significant positive effect on financial risk is accepted.

The conclusion is that investment shows a significant effect only in the LTDR model, while in the DAR and DER models, investment has no significant effect on financial risk.

F Test Statistics

The purpose of this F test is to determine the effect of the independent variables simultaneously on the dependent variable.

Table 9
First Statistical F Test Results with DAR dependent variable

Cross-section fixed (dummy variables)			
R-squared	0.976003	Mean dependent var	0.536942
Adjusted R-squared	0.968221	S.D. dependent var	0.572879
S.E. of regression	0.102125	Akaike info criterion	-1.50633
Sum squared resid	0.3858939	Schwarz criterion	-1.009212
Log likelihood	5.065.846.	Hannan-Quinn criter.	-1.317030

F-statistic	1.254.082	Durbin-Watson stat	2.229383
Prob(F-statistic)	3,64E-11		

The first statistical F-test shows that the regression model with the dependent variable Debt to Asset Ratio (DAR) has an F-statistic value of 1,254,082 with a probability of 3.64E-11. This very small p-value indicates that simultaneously, the independent variables in the model have a significant effect on the dependent variable.

Table 10
Second Statistical F Test Results with DER dependent variable

Cross-section fixed (dummy variables)			
R-squared	0.235561	Mean dependent var	26.5915
Adjusted R-squared	-0.012182	S.D. dependent var	188023.7
S.E. of regression	189182	Akaike info criterion	27.3577
Sum squared resid	132423	Schwarz criterion	27.854834
Log likelihood	-670.942	Hannan-Quinn criter.	27.547016
F-statistic	0.95012	Durbin-Watson stat	3.3477994
Prob(F-statistic)	0.51065072		

In the second analysis with the dependent variable Debt to Equity Ratio (DER), the results show an F-statistic value of 0.95012 and a probability of 0.51065072. This p-value is much greater than 0.05, so it can be concluded that the independent variables in the model do not have a significant effect simultaneously on DER.

Table 11
Third Statistical F Test Results with LTDER dependent variable

Weighted Statistics			
R-squared	0.1534493	Mean dependent var	0.069751
Adjusted R-squared	0.09701	S.D. dependent var	0.1155264
S.E. of regression	0.109172	Sum squared resid	0.5363376
F-statistic	2.718964	Durbin-Watson stat	1.5755873
Prob(F-statistic)	0.055595		

The third statistical F-test that analyzes the dependent variable Long-term Debt to Equity Ratio (LTDER) produces an F-statistic value of 2.718964 and a p-value of 0.055595. The p-value which is close to the significance limit of 0.05, indicates that there is an indication that the independent variables have a simultaneous influence on LTDER.

Determination Coefficient Test (R2)

Table 12
First Determination Coefficient Results with DAR dependent variable

Cross-section fixed (dummy variables)			
R-squared	0.976003	Mean dependent var	0.536942
Adjusted R-squared	0.968221	S.D. dependent var	0.572879
S.E. of regression	0.102125	Akaike info criterion	-1.50633
Sum squared resid	0.3858939	Schwarz criterion	-1.009212
Log likelihood	5.065.846.	Hannan-Quinn criter.	-1.317030
F-statistic	1.254.082	Durbin-Watson stat	2.229383
Prob(F-statistic)	3,64E-11		

The first coefficient of determination with the dependent variable DAR shows an R-squared of 0.976003, which means that 97.6% of the variation in DAR can be explained by the regression model constructed.

Table 13
Results of the Second Determination Coefficient with the Dependent Variable DER

Cross-Section Fixed (Dummy Variables)			
R-squared	0.235561	Mean dependent var	26.5915
Adjusted R-squared	-0.012182	S.D. dependent var	188023.7
S.E. of regression	189182	Akaike info criterion	27.3577
Sum squared resid	132423	Schwarz criterion	27.854834
Log likelihood	-670.942	Hannan-Quinn criter.	27.547016
F-statistic	0.95012	Durbin-Watson stat	3.3477994
Prob(F-statistic)	0.51065072		

For the model with the dependent variable DER, the R-squared value obtained is 0.235561, which indicates that only 23.6% of the variation in DER can be explained by the independent variables in the model.

Table 14
Third Determination Coefficient Results with Dependent Variable LTDER

Weighted Statistics			
R-squared	0.1534493	Mean dependent var	0.069751
Adjusted R-squared	0.09701	S.D. dependent var	0.1155264
S.E. of regression	0.109172	Sum squared resid	0.5363376
F-statistic	2.718964	Durbin-Watson stat	1.5755873
Prob(F-statistic)	0.055595		

The third model with the dependent variable LTDER shows an R-squared value of 0.1534493, which means that this model is only able to explain 15.3% of the variation in LTDER.

The Effect of Interest Rates on Financial Risk

In this context, increasing interest rates can increase the debt burden, thus leading to an increase in corporate financial risk. The analysis shows that the effect of interest rates on the three financial risk variables is not significant. Based on the t-test, the t-statistic value for interest rates in the DAR model is 1.315058 with a p-value of 0.19658, in the DER model is -1.4907498 with a p-value of 0.14450, and in the LTDR model is -0.302196 with a p-value of 0.76389. All p-values are above the significance threshold of 0.05, which means that changes in interest rates have no significant impact on the three financial risk measures tested in this model. In other words, the hypothesis that interest rates have a significant effect on financial risk in all three models should be rejected.

The results of this study are in line with the findings of (Indrawan & Raymond, 2019) , which states that the Bank Indonesia Certificate (SBI) interest rate has a positive but insignificant effect on financial sector stock prices on the Indonesia Stock Exchange. Indrawan and Raymond explained that fluctuations in SBI interest rates can indeed affect the capital market as a whole, but the effect on stock prices is insignificant. Research conducted (Rifky, 2020) , also states that interest rates have no significant effect on stock returns. This shows that interest rates as a systematic risk factor do not always have a direct impact on the company's financial risk, but are influenced by broader market conditions.

If interest rates have no effect on financial risk, the implications can be significant for business and economic policy. It can also provide stability for firms in accessing funding, regardless of the monetary policy implemented by the central bank. Moreover, in a global context, if this unlinkage is generalized, capital and credit markets could become more independent of monetary policy, potentially reducing systemic risk but also creating new challenges in inflation control and economic growth.

The Effect of Inflation on Financial Risk

The t-statistic test results show that the effect of inflation on financial risk in the three models is not significant. In the DAR model, the t-statistic value for inflation is 0.60289301

with a p-value of 0.55025; in the DER model, the t-statistic value is -0.1963926 with a p-value of 0.84537; and in the LTDR model, the t-statistic value is -1.12438 with a p-value of 0.26681. The p-value exceeding the significance threshold of 0.05 indicates that inflation does not have a significant effect on financial risk in the three variables tested. Thus, the hypothesis that there is a significant effect of inflation on financial risk in the three models should be rejected.

This finding is in line with research conducted by (Nababan et al., 2019) shows that inflation has no significant effect on business risk or stock returns in insurance companies listed on the IDX. Research conducted by(Nailufaroh et al., 2021) obtained the same results, namely Inflation as measured by obtaining data from BI proved to have no effect on stock prices or in other words the hypothesis of the variable was rejected. This suggests that inflation may not always have a direct impact on business risk, especially in certain sectors such as insurance, where other factors may dominate the risks faced by companies.

If inflation has no effect on financial risk, the broader implications for business and economic policy may change the way financial stability is viewed. In the business world, this suggests that changes in the prices of goods and services do not significantly affect the ability of companies to meet their financial obligations. Companies can focus more on product innovation, operational efficiency, and marketing strategies without worrying too much about price fluctuations. In the long run, this can encourage more investment, as inflation-related uncertainty is no longer a major risk factor. On the policy side, the unlinking of inflation with financial risks can reduce the urgency to control inflation through tight monetary policy, such as interest rate hikes. Governments and central banks can more freely adopt expansionary policies to boost economic growth without worrying about creating financial instability. However, this unlinkage may also reduce the ability of inflation to serve as a risk signal in financial markets, so policymakers should rely more on other indicators, such as leverage or market volatility, to maintain overall financial system stability.

Effect of Investment on Financial Risk

The hypothesis regarding the effect of investment on financial risk is based on the assumption that investment, especially long-term ones, can increase or decrease the financial risk of the company. The results of this test show that investment has no significant effect on

financial risk in the context of asset structure (DAR) or equity structure (DER), but has a significant impact in the long run on the company's long-term debt (LTDR). This could be due to differences in the duration and type of investment made by the company. Long-term investments financed through long-term debt tend to increase financial risk more significantly than short-term or equity-financed investments.

These results are in line with research by (Wati et al., 2022) , which also found that investment decisions do not always affect overall firm value. In their research, investment decisions as measured by Total Asset Growth (TAG) did not have a significant effect on firm value (Price Book Value or PBV) in food and beverage subsector companies on the Indonesia Stock Exchange. This suggests that investment may have a more limited impact on some financial aspects of the company, particularly on debt or asset ratios that are more directly affected by long-term investment strategies

If investments, both long- and short-term, are not subject to financial risk, the implications for business and economic policy will be far-reaching. For businesses, this could encourage freedom in choosing the type of investment without worrying about its impact on financial stability. Long-term investments, such as infrastructure development or research and development (R&D), can be made without concerns about increased debt or liquidity risks. On the other hand, short-term investments, such as trading stocks or other liquid assets, can also be utilized more aggressively to pursue short-term gains without significantly affecting the company's risk profile.

From a policy perspective, governments and regulators can focus more on other aspects of supporting the investment environment, such as fiscal incentives or reducing regulatory barriers, as financial risk is no longer the primary factor to watch in the investment context. However, this disconnect also potentially makes firms more vulnerable to unstrategic or speculative investment decisions, which while not having a direct impact on financial risk, can affect long-term performance. Therefore, while this implication provides room for business and policy flexibility, there is still a need for risk management oversight and education to prevent unintended impacts, especially in the context of long-term investments that require large capital commitments.

CONCLUSION

This study provides some key conclusions regarding the impact of macroeconomic factors on financial risk. The study concludes that macroeconomic variables, especially interest rates and inflation, have substantial effects on financial risk. Changes in these factors can lead to variations in investor behavior and market stability. Through the application of the Hausman test, the study identified a suitable model to analyze the data. The results show that the fixed effects model is more suitable when the cross-sectional random value is less than the 0.05 significance level, ensuring accurate representation of the data. The use of EViews software for data analysis allows for precise calculations and effective visualization of the results. The findings are presented in tables and graphs, enhancing the clarity of the research results. The study highlights that Debt to Equity Ratio (DER) is an important leverage ratio that affects financial risk. A higher DER may indicate increased financial risk, affecting investor confidence and market dynamics. This conclusion underscores the importance of understanding the macroeconomic influences on financial risk, providing valuable insights for investors and policymakers in making informed decisions.

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