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Analysis of The Effect of Company Size, Profitability and Leverage on Systematic Risk (An Empirical Study of Companies Listed on the Indonesia Stock Exchange Indexed LQ-45 for the Period 2019–2023)

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Abstract: The aims of this quantitative research are to identify and analyze company size, profitability and leverage which are part of internal factors or company fundamentals and their influence on systematic risk in LQ - 45 indexed companies for the period 2019 - 2023. The high beta value of stocks as a tool for assessing of systematic risk is the reason for the need for further observation on the factors that may influence it. Financial statements are used as objects in the research, purposive sampling method is used in withdrawing samples. Secondary data and combined data between time series and cross sectional data were used in the study, and panel regression analysis was conducted using Eviews 13 software to answer the proposed hypotheses. In selecting the best model to be used in panel data regression analysis, Chow's test and Hausman's test were required, resulting in the Fixed Effects Model being selected as the best model. Partial hypothesis testing using the t-test shows that the company size variable using a natural logarithm proxy of total assets and the profitability variable using a return on assets proxy have no significant effect on systematic risk. However, the t test results of the leverage variable with the debt to equity ratio proxy show different results, namely the leverage variable is the only variable that has a positive & significant effect on systematic risk.

Keywords: Size, Profitability, Leverage, Systematic Risk

INTRODUCTION

As an effort to improve welfare, investment has become a popular activity today. Investment itself is the activity of investing current resources and or funds for the purpose of obtaining greater returns in the future (Syamsiyah, 2022). In investment, there is the “high risk, high return” parameter, so investors should not only focus on returns but also consider the risks involved (Lutfi & Hendrian, 2019). Risk is the discrepancy between expected returns and actual returns. Returns and risk have a direct relationship, where high risk is always accompanied by high returns, and vice versa. Systematic risk or market risk is an investment risk that can't be removed with diversification because it affects the entire market (Firmansyah et al., 2023).

Additionally, there is unsystematic risk, which is a specific ‘risk affecting a single firm (Mayasari et al., 2023), and total risk is the accumulation of both risks (Hasan, 2023).

Systematic risk, also known as external risk, stems from sources outside the company. Although this market risk cannot be eliminated, it can be assessed using stock beta. Stock beta reflects the fluctuation of stock returns relative to market returns (Sodikin, 2017). Issuing companies need to consider fundamental factors by ensuring the company can create a stable stock beta value in fluctuating market conditions, as this can influence investor decisions (Agusti, 2021). The stock beta value has its own meaning, as explained by Husnan and quoted by Caeli et al. (2020), stating that a stock beta value of 1 shows that stock of the return fluctuations = market return movements, so systematic risk = market risk and a beta value < 1 shows that fluctuations in returns are smaller than movements in market returns, so systematic risk is smaller than market risk, a beta value > 1 shows that fluctuations in stock returns are greater than movements in market returns, so systematic risk is greater than market risk.

Based on historical stock beta data compiled by Pefindo as a securities rating agency in Indonesia, companies listed on the Indonesia Stock Exchange (IDX) indexed in the LQ-45 period 2019-2023 have historical stock beta values > 1. Stock price movements are more volatile in companies with a beta value greater than 1. Stock price fluctuations will affect investment returns, which will move in tandem with systematic risk, resulting in these companies having high systematic risk. Fundamental factors such as company size, profitability, and leverage are believed to contribute to this high market risk. Systematic risk is influenced by fundamental or internal factors of the company (Sari & Alteza, 2019). Company size, according to Brigman & Houston, is the measure of a company's size based on the classification of total assets, total capital, and revenue size (Mashur, 2020). Company size has a negative or inverse relationship with market risk. The capabilities of large companies can be utilized to mitigate the impact of macroeconomic shocks, so companies in the large category will have low systematic risk. Profitability is a ratio which used to evaluate a company's ability to generate profits and is assid using return on assets or ROA (Januardi & Arfianto, 2017). Similar to company size, profitability also has a negative corellation with systematic risk. Logue Marville in Januardi & Arfianto (2017) states that companies with good profit-generating capabilities will have low systematic risk. Leverage or solvency is a ratio used to assess a company's ability to repay its debts. Leverage has a negative association with systematic risk. Companies who have high leverage tend to have high systematic risk. The lower this ratio, the greater the funding used by the company from shareholders, so that in the event of a decline in assets or losses, protection for creditors will be greater (Tampi et al., 2022).

The aims of this study is to identify & analyze the influence of company size, profitability & leverage on systematic risk in LQ-45 indexed companies for the period 2019-2023. LQ-45 indexed companies are selected companies with high market capitalization from various industries, so they are expected to be a benchmark for their industries. Previous studies have been conducted, but there are still gaps in the results. For instance, Prasetyo (2020) and Agusti (2021) state that size of the company has a significant positive influence on systematic risk, while Lasmana & Wahyudin (2021) claim the opposite, that there is no significant influence on market risk. Januardi & Arfianto (2017) mention that profitability has a significant negative effect on systematic risk, but Sodikin (2017) states the opposite, that profitability has no significant effect on systematic risk. Wiyono & Mardijuwono (2020) state that leverage of the company has a significant negative effect on systematic risk, but Tampi et al. (2022) state that there is no significant effect of leverage on systematic risk. The research gap is the basis for the need for further observation to obtain more actual and relevant results. The results on this study are expected can give contribute to the development of management science,

particularly financial management,, and can be used as problem solving for listed companies and investors.

The Effect of Company Size on Systematic Risk

Large companies tend to have a greater ability to cope with and reduce the impact of macroeconomic shocks that can hinder the smooth running of the company. This aligns with Sullivan's theory, as cited in Januardi & Afrianto (2017), which states that due to their ability to mitigate the impact of macroeconomic shocks, large companies tend to have lower systematic risk. For investors, this capability can be interpreted as a positive signal or indication that the company has a bright outlook to meet expectations through higher returns. However, in terms of funding, large companies tend to require larger amounts of capital, making them more reliant on external funding. Handayani (2014) states that if the larger the size of a company so the greater its funding needs, making it more vulnerable to financial difficulties in the event of default, which can increase systematic risk. Januardi & Arfiyanto (2017), Tampi et al. (2022), Wiyono & Mardijuwono (2020), Adhikari (2015), Sodikin (2017), and Nugrahani (2024) are some of the researchers who have analyzed about the influence of company size on systematic risk. Based on the explanation at the beginning, the following hypothesis is proposed:

H1 = Company size affects systematic risk.

The Influence of Profitability on Systematic Risk

The motive of investors in carrying out investment activities is to improve their welfare through the acquisition of returns (Aji & Prasetiono, 2015). Logue & Marville in Januardi & Arfiyanto (2017) state that companies with good profitability will have low risk. For investors, the company's high profitability is a positive signal or indication because the company has good financial condition, enabling it to avoid financial distress & maintain a low level of systematic risk. However, profitability can also be a negative signal. Laham et al. in Wiyono & Mardijuwono (2020) state that companies with high profit margins are willing to accept higher risks. Soeroso (2013), Januardi & Arfianto (2017), Anggraini et al. (2023), Wiyono & Mardijuwono (2020), Adhikari (2019), and Jazuli & Witiastuti (2016) are some researchers who have studied the influence of profitability on systematic risk. Based on the explanation at the beginning, the following hypothesis is proposed:

H2 = Profitability affects systematic risk

The Effect of Leverage on Systematic Risk

High leverage levels indicate that companies use more external funding, making them more vulnerable to asset loss and financial difficulties in the event of payment default, thereby increasing systematic risk. Van Horne in Januardi & Arfianto (2017) states that financial risk will be borne by companies with high leverage levels. For investors, this can be a bad sign. Silalahi (2015), Soeroso (2013), Prasetyo (2020), Aji & Prasetiono (2015), Irana & Damayanti (2023), Ko'imah & Damayanti (2020), Anggraini et al. (2023), Arora et al (2019), Wiyono & Mardijuwono (2020), Jazuli & Witiastuti (2016) are some of the researchers who have conducted research about the effect of leverage on systematic risk. According to the explanation at the beginning, the following hypothesis is proposed:

H3 = Leverage affects systematic risk.

Conceptual Framework

There are three independent variables in this research: size of the company with the Ln Total Assets proxy, profitability with the Return on Assets (ROA) proxy, and leverage using

the Debt Equity Ratio (DER) proxy, with systematic risk using the stock beta proxy as the dependent variable.

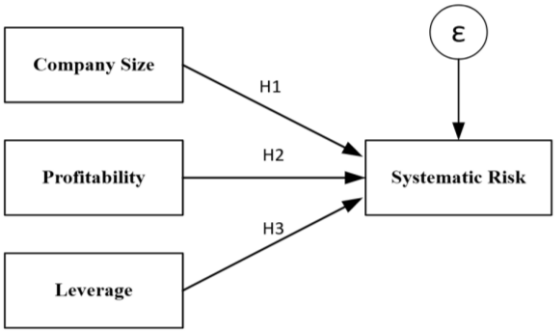

Figure 1. Conceptual Framework

METHOD

A quantitative causal design was used in this study. Companies indexed in the LQ-45 index for the period 2019-2023 are the subjects of this study, with financial statements as the object. Combined time series and cross-sectional data, as well as Eviews 13 software to process panel data regression, are used in this research to determine the influence of company size, profitability, and leverage on systematic risk. Secondary financial statement data from LQ-45 indexed companies for the period 2019–2023 were accessed using documentation techniques from www.idx.co.id, while stock beta was accessed from www.old.pefindo.com and stock prices were accessed from www.investing.com and www.financeyahoo.com. In addition to this data, data collection using literature review techniques was also conducted to obtain relevant data or information through journals or scientific articles supporting the research.

The population in this research consists of all companies listed on the LQ-45 index for the period 2019–2023, totaling 45 companies. The sample was drawn using a purposive sampling method according to specific criteria, such as: a) Companies listed on the IDX with the LQ-45 index consistently from 2019 to 2023, b) Companies listed on the IDX with the LQ-45 index that consistently issued financial reports from 2019 to 2023, c) Companies listed on the IDX and indexed in the LQ-45 with consistent stock beta data from 2019 to 2023. The sample obtained based on these criteria consisted of 21 companies (cross-section) over a 5-year period (time series) and 105 data points.

Operational Variables

Table 1. Operational Definition of Variables

Variables	Definition	Proxy	Measurement Scale
Company Size (X_1)	how large the company is in terms of total assets	Ln of total asset value	Ratio
Profitability (X_2)	the company's ability to generate profits	ROA = net income divided by total assets	Ratio
Leverage (X_3)	the company's ability to meet its long-term obligations	DER = total liabilities divided by total equity	Ratio
Systematic Risk (Y)	risk that remains even after diversification	Beta = regression coefficient between stock return and market return	Ratio

Descriptive Analysis

The analysis is used to facilitate understanding of the observation variables (size, profitability, leverage, and systematic risk) by using descriptive analysis to observe the maximum, minimum, mean & values of the standard deviation.

Model Selection

The model approaches that can be applied to panel data regression are the Common Effect Model (CEM) with the Ordinary Least Squares method, the Fixed Effect Model (FEM) with the Least Squares Dummy Variable method, and the Random Effect Model (REM) with the Generalized Least Squares method (Riswan & Dunan, 2019). Several tests are required to obtain the best model in panel data regression, the first namely the Chow test to compare CEM and FEM, the second Hausman test to compare FEM and REM, and the third Lagrange multiplier (LM) test to compare CEM and REM (Sihombing & PS, 2021).

Classical Assumptions

According to Iqbal (2015), it is not necessary to apply all classical assumption tests in panel data regression, but only the multicollinearity and heteroscedasticity tests, as the linearity test is not required given the linear nature of the model, and the normality test is not a criterion for BLUE, so it does not need to be met. while the autocorrelation test in panel data regression is less useful because autocorrelation typically occurs only in time series data.

1) Multicollinearity with a testing criterion of a tolerance limit for the correlation coefficient between independent variables < 0.85. If the value is > 0.85, then multicollinearity is indicated (Napitupulu et al., 2021).
2) Heteroscedasticity using the Park Gleser method, where if the P-value is more than α, so there is no indication of heteroscedasticity (Ko'imah & Damayanti, 2020).

Panel Data Regression Analysis

Secondary financial data from various industries and several time periods in the study resulted in increased heterogeneity. Therefore, panel data estimation techniques can explicitly accommodate the existing heterogeneity using certain variables (Arora et al., 2020). The econometric model used in the panel data regression equation (Prasetyo, 2020) is:

$$Y_{i,t} = \alpha + \beta_1 Size_{i,t} + \beta_2 Pro_{i,t} + \beta_3 Lev_{i,t} + e_{i,t}$$

Where:

Y = systematic risk or stock beta
α = constant
β1 – β3= regression coefficients
Size = company size
Pro = Profitability
Lev = Leverage
i, t = individual to t
e = error term (degree of error in the study).

Model Significance Test (F Test)

To determine whether a model is suitable for use in regression, an F-test can be performed. This test analyzes the simultaneous influence of independent variables (size, profit, and leverage) on the dependent variable (systematic risk). The test criteria are an F-statistic value > F-table value and a significance value < 0.05, which means that the regression model is suitable for use.

Partial Test (t-test)

This test is conducted to analyze the partial influence of the influencing variables (company size, profitability & leverage) on the influenced variable (systematic risk) using the Gujarati formula (Panjaitan, 2021).

Coefficient of Determination

Assesses the extent to which company size, profitability & leverage as independent variables contribute to systematic risk as the dependent variable by examining the R2 value. A higher R2 value close to 1 indicates a greater influence of independent variables on systematic risk as the dependent variable.

RESULTS AND DISCUSSION

Descriptive Analysis

Table 2. Descriptive Analysis

	BETA	SIZE	ROA	DER
Mean	1.522476	17.84981	0.057238	2.563905
Median	1.470000	17.58000	0.030000	0.910000
Maximum	4.460000	22.74000	0.450000	16.08000
Minimum	-1.480000	12.31000	-0.040000	0.130000
Std. Dev.	1.066863	2.953275	0.072715	3.223880

The descriptive analysis results are as follows:

1. Systemic risk with beta proxy as the dependent variable has the highest value 4.46 in MEDC because in 2019 it carried out sustainable business expansion not only domestically but also internationally in the fields of geothermal, solar power, and hydroelectric power. The lowest value of –1.48 was found in TBIG because in 2021 it completed its organic strategy by acquiring 3,000 IBST towers. The mean value of 1.52 this indicates that the average company in the sample has a beta value > 1 and high systematic risk. The standard deviation of 1.07 < 1.52 means that the data distribution is centered around the mean.
2. The independent variable of company size, using the natural log of total assets as a proxy, has the highest value of 22.7 for PGAS due to the addition of 0.9% exploration assets and cash equivalents in 2020 and 2021. The lowest value of 12.31 is observed in TLKM due to increased economic uncertainty in 2019, which reduced consumer spending on goods and services. The mean value of 17.85 shows that the average company in the sample has assets above the average in the study. The standard deviation of 2.95 < 17.85 means that the data distribution is centered around the mean.
3. The profitability independent variable has the highest value of 0.45 for ITMG due to an increase in profits in 2021. The lowest value of -0.04 is for MEDC due to a decline in oil prices accompanied by a decrease in demand in 2019. The mean value of 0.03 indicates that the average company in the sample tends to be less optimal in utilizing assets to generate profits. The standard deviation of 0.07 > 0.03, so the data distribution is more varied.
4. The leverage variable has the highest value of 16.08 for BBTN because there was an increase in demand for subsidized housing loans in 2020. The lowest value of 0.13 is for INCO due to an increase in equity in 2021. The mean value of 2.56 indicates that the average company in the sample has a high level of debt. The standard deviation value of 3.33 > 2.56 indicates a wider and more diverse data distribution.

Model Selection

Table 3. Output Chow test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.330075	(20,81)	0.0001
Cross-section Chi-square	63.007034	20	**0.0000**

Source: Eviews 13 (processed data)

Table 4. Output Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	22.857862	3	**0.0000**

Source: Eviews 13 (processed data)

Based on the ouput of the Chow test show that the p-value is 0.0000 < 0.05. According to the criteria, Ho will be rejected if the p-value ≤ 0.05, so the chosen model is the Fixed Effect Model or FEM. Output of the Hausman test show that the p-value of 0.000 < 0.05, with the criterion that Ho will be rejected if P-value ≤ 0.05, so the chosen model is the Fixed Effect Model (FEM). Based on the results of both tests, the Fixed Effect Model or FEM was obtained as the best model in panel data regression, so no further testing (LM) is required.

Classical Assumptions

Table 5. Output Multicolinearity Test

	SIZE	ROA	DER
SIZE	1.000000	**-0.318207**	**0.514808**
ROA	-0.318207	1.000000	**-0.378634**
DER	0.514808	-0.378634	1.000000

Source: Eviews 13 (processed data)

Table 6. Output Heteroscedastisity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.008134	3.466171	-0.579352	0.5640
SIZE	0.131131	0.195389	0.671130	**0.5040**
ROA	0.016091	0.651394	0.024702	**0.9804**
DER	-0.000424	0.045869	-0.009235	**0.9927**

R-squared	0.332112	Mean dependent var	0.332369
Adjusted R-squared	0.142465	S.D. dependent var	0.241386
S.E. of regression	0.223532	Akaike info criterion	0.039104
Sum squared resid	4.047277	Schwarz criterion	0.645723
Log likelihood	21.94705	Hannan-Quinn criter.	0.284918
F-statistic	1.751210	Durbin-Watson stat	2.849501
Prob(F-statistic)	0.034998		

Source: Eviews 13 (processed data)

Based on output of the multicollinearity test show that the correlation coefficient between Size and Profitability is -0.318207 < 0.8, and the correlation coefficient between Size & Leverage is 0.514808 < 0.85, and the correlation coefficient between Profitability & Leverage is -0. 378634 < 0.85, so there is no indication of multicollinearity. The output of the heteroscedasticity test indicate that the p-value for Size is 0.5040 > 0.05 and the p-value for Profitability is 0.9804 > 0.05, and the p-value for Leverage is 0.9927 > 0.05, so there is no indication of heteroscedasticity.

Panel Data Regression Analysis

After obtaining the best model approach according to the output of the Chow test and Hausman test, the Fixed Effect Model was used in panel data regression.

Table 7. Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.295336	13.73241	0.094327	0.9251
SIZE	-0.111815	0774098	-0.144445	0.8855
ROA	0.478647	2.580718	0.185471	0.8533
DER	0.856355	0.181727	4.712313	0.0000
R-squared	0.463331	Mean dependent var		1.522476
Adjusted R-squared	0.310944	S.D. dependent var		1.066863
S.E. of regression	0.885596	Akaike info criterion		2.792520
Sum squared resid	63.52672	Schwarz criterion		3.399140
Log likelihood	-122.6073	Hannan-Quinn criter.		3.038334
F-statistic	3.040485	Durbin-Watson stat		2.296093
Prob(F-statistic)	0.000122			

Source: Eviews 13 (processed data)

The equation from the panel data regression is:

$$BETA = 1.30 - 0.11*SIZE + 0.48*ROA + 0.86*DER + [CX=F]$$

The constant 1.30 means that if there are no independent variables (Size, Profitability & Leverage), the systematic risk variable value is 1.30. The beta coefficient value for size is -0.11 and is negative ,that means if the size variable decreases and other variables remain constant, the systematic risk variable increases, and vice versa. The beta coefficient value for Profitability is 0.48, which is positive, that means if the profitability variable increases while other variables remain constant, the systematic risk variable also increases. The beta coefficient value for Leverage is 0.86, which is positive, meaning that if the leverage variable increases while other variables remain constant so the systematic risk variable also increase.

Model Significance Test

The F-test results show that the calculated of F-value is 3.040485 > the table F-value of 2.694618 with significance 0.000122 < 0.05, indicating that company size, profitability, and leverage collectively have a substantial or significant impact on systematic risk, and the selected model can be used in the research.

T-Test

The calculated t-value of the company size variable is -0.144445 < the table t-value of 1.983264 with a significance level of 0.8855 > 0.05, so the null hypothesis (Ho) is approved & company size doesn't have a substantial or significant influence on systematic risk. The calculated t-value for the profitability variable is 0.185471 < t-table value of 1.983264 with significance 0.8533 > 0.05, so Ho is accepted and profitability doesn't have a substantial or significant effect on systematic risk. The calculated t-value of the leverage variable is 4.712313 > t-table value of 1.983264, with significance 0.000 < 0.05, so that Ho is rejected, and that means leverage has a positive and significant effect on systematic risk.

Coeficient of Determination

The R^2 value of 0.463331 or 46.3% indicates that the contribution of company size, profitability & leverage as the independent variables in this study to systematic risk as the

dependent variable is 46.3%, while the remaining 53.7% is attributed to other variables not used in the study.

Disscusion

The Effect of *Size* on Systematic Risk

The results of separate or partial testing on the *Size* variable show a calculated t-value of -0.144445 and a table t-value of 1.983264, with a significance level > 0.05. Therefore, the decision is to accept Ho, that means company *size* doesn't have a substantial or significant effect on systematic risk. Company size doesn't have a substantial effect on systematic risk because size is not a primary factor directly influencing market risk. Not all investors consider company size in their investment decisions; instead, investors focus more on factors related to company valuation, such as company image and its position within the industry. This result contradicts the theory that states that the larger a company is, the lower its systematic risk because of its resilience in anticipating economic shocks. Not only large companies are capable of generating profits, but small companies also have the same opportunities. This study reinforces the findings of Lasmana & Wahyudin (2021), and Nugrahani et al. (2024), which state that *Size* does not have a significant effect on systematic risk.

Observational data shows that PGAS has the highest company size value of 22.74 compared to other sample companies. However, PGAS's stock beta values in 2020 and 2021 show a stock beta value of 2.89 > the average stock beta value of the sample companies at 1.52. A stock beta value > 1 indicates that PGAS stock prices are more volatile than stock prices in the market, thus having higher systematic risk. The size of a company doesn't always guarantee that it will have a low level of systematic risk, so systematic risk is not influenced by company size.

The Effect of Profitability on Systematic Risk

According to the ouput t-test of the profitability variable with a calculated t-value of 0.185471 < t-table value of 1.983264 and significance > 0.05, the null hypothesis (Ho) is approved & profitability doesn't have a substantial or significant influence on systematic risk. Profitability does not have a substantial effect on systematic risk because the size of this ratio cannot eliminate or reduce systematic risk but will affect the value's company, which is attractive to investors. When linked to the theory that explains that the greater a company's ability to generate profits, the lower the systematic risk, the results of the observation on this variable do not support this theory. These observational results align with Sodikin (2017) and Nugrahani et al. (2024), who state that profitability does not have a substantial or significant impact on systematic risk.

Research data shows that ITMG has the highest profitability value of 0.45 in 2022 compared to other sample companies. However, looking at ITMG's stock beta in 2022 as a measure of systematic risk at 2.09, which is more high than the mean beta value of the sample companies at 1.52. A beta value > 1 indicates that ITMG has higher systematic risk compared to market risk. This is because ITMG's stock price is more volatile than the stock prices in the IHSG, resulting in higher systematic risk. The magnitude of profitability does not always guarantee that a company will have low systematic risk; therefore, profitability does not substantially or significantly influence systematic risk.

The Effect of Leverage on Systematic Risk

The ouput t test of the leverage variable is 4.712313 > t table 1.983264 with significance <0.05, so Ho is rejected & leverage has a significant positive effect on systematic risk. The results of this research on this variable support the theory that the higher the level of leverage of a company so the higher its systematic risk. Leverage variable has a substantial or

significant positive effect on systematic risk because companies with high leverage levels will tend to be more vulnerable to financial difficulties and even bankruptcy when default occurs. The results of this research are in line with Silalahi (2015), Soeroso (2013), Prasetyo (2020), Aji & Prasetiono (2015), Irana & Damayanti (2023), Ko'imah & Damayanti (2020), Anggraini, et al (2023), and Arora *et al* (2019), who state that leverage has a positive and substantial or significant influence on systematic risk.

Research data shows that BBTN in 2020 had the highest leverage value of 16.08 and a stock beta of 2.72 > than the mean stock beta value of other sample companies of 1.52. A DER value greater than 1 show that the company has equity dominated by external financing, while a stock beta value greater than one means that the company has high systematic risk due to stock price fluctuations above the market price. High debt levels are followed by high systematic risk, so leverage has a positive and significant influence on systematic risk. Signal theory also supports the observation on this variable, as high leverage levels can serve as a signal to investors regarding the company's use of external financing, which increases systematic risk.

CONCLUSION

The purpose of this research is to analyze the effect of company size, profitability, & leverage on systematic risk in companies indexed in the LQ-45 for the period 2019-2023. According to the results of panel data regression analysis with Eviews 13, the following conclusions can be drawn:

1. Company size doesn't have a substantial or significant effect on systematic risk.
2. Profitability doesn't have a substantial or significant effect on systematic risk.
3. Leverage has a positive and significant effect on systematic risk.

Based on the results and discussion in this resarch, the following recommendations are made to reduce systematic risk: 1) For investors: before investing, it is advisable to conduct a comprehensive analysis, both fundamental and technical, and select reputable companies with high market capitalization as an option to minimize the risk of investment losses; 2) For Issuing Companies: it is advisable to reduce dependence on external funding to mitigate systematic risk. Some ways to achieve this include increasing retained earnings and utilizing underutilized assets; 3) For Policy Makers: creating a positive investment climate through supportive policies can enhance corporate productivity and is expected to reduce systematic risk; 4) For Academics: further research could apply alternative proxies in measuring variables and incorporate additional fundamental factors such as operational efficiency, corporate image, and cash flow. Additional analysis of non-systematic risk and total risk could also be included to provide a comprehensive view of investment risk.

REFERENCES

Adhikari, N. (2015). Determinants of Systemic Risk in Companies Listed on the Nepal Stock Exchange. *Type: International Research Journal Peer-Reviewed Publisher: Global Journals Inc*, *15*.

Agusti, R. (2021). Analysis of the Impact of Firm Size on Systemic Risk Based on the Capital Asset Pricing Model in Food and Beverage Companies Listed on the Indonesia Stock Exchange. In *IJAFIBS* (Vol. 9, Issue 1). www.ijafibs.pelnus.ac.id

Aji. R. S., & Prasetiono, P. (2015). Analysis of Factors Influencing Systematic Risk (Beta) of Stocks in Manufacturing Companies Listed on the Indonesia Stock Exchange (BEI) during the Period 2009-2014 (Doctoral Dissertation, Faculty of Economics and Business).

Anggraini, S., Rinofah, R., & Sari, P. P. (2023). The Influence of Leverage, Liquidity, and Profitability on Systematic Risk in Manufacturing Companies in the Food and Beverage

Subsector. *J-MAS (Journal of Management and Science)*, *8*(1), 1042. https://doi.org/10.33087/jmas.v8i1.1033.

Arora, L. (2020, December 31). *Company Performance and Systematic Risk*. *In Second International Conference on Business, Management, and Economics* (pp. 63-79) https://doi.org/10.33422/2nd.icbmeconf.2019.06.1025.

Caeli, R., Komalasari, A., & Komaruddin, K. (2020). The Influence of Asset Growth, Financial Leverage, and Liquidity on Systematic Risk in LQ 45 Stocks Listed on the Indonesia Stock Exchange during the Period 2010-2018.

Dunan, R. & H. (2019). *Research Design & Multivariate Statistics*. CV. Anugrah Utama Raharja.

Firmansyah, A., Rizal Pua Geno, M., General Tax, D., Finance, K., Aji Pamungkas, P., Fauzi, I., General Management of Financing and Risk, D., & Izaaz Hannun Bachtiar, M. (2023). *Can Integrated Sustainability Disclosure and Reporting Reduce Idiocratic Risk?* Ultimaccounting Journal of Accounting Science, 15(2), 241-255.

Hasan, M. M. (2023). Organizational Capital and Corporate Risk. China Accounting and Finance Review, (ahead-of-print) https://doi.org/10.1108/cafr-05-2022-0044.

Iqbal, M. (2015). *Lecturers at Perbanas: A medium for exchanging information and ideas among lecturers Panel Data Regression (1) 'Introduction' What is Panel Data Regression?* http://dosen.perbanasinstitute.ac.id

Irana, I. A., & Damayanti, D. (2023). FACTORS INFLUENCING SYSTEMATIC RISK IN LQ-45 INDEX COMPANIES. *J-MACC: Journal of Management and Accounting*, 6(2), 128-139.

Januardi, N. V., & Arfianto, E. D. (2017). The influence of liquidity, leverage, operational efficiency, dividend ratio, profitability, and company size on systematic and non-systematic risk (a study on non-financial companies in the LQ45 index during the period 2012-2016). Dipenegoro Journal of Management, 6(3), 391-404.

Jazuli, A. M., & Witiastuti, R. S. (2016). Determinants of Beta Shares of Real Estate and Property Companies on the Indonesia Stock Exchange. Management Analysis Journal, 5(1). http://maj.unnes.ac.id.

Journal of Accounting and Finance, *25*(1), 1–12. https://doi.org/10.23960/jak.v25i1.190.

Ko'imah, S., & Damayanti, D. (2020). The Influence of Leverage, Profit Variability, Liquidity, and Company Performance on Systematic Risk in Companies Listed on the LQ 45 Index on the Indonesia Stock Exchange. INOBIS: Journal of Business Innovation and Management, 4(1), 113-133.

Lasmana, S. A., & Wahyudin, A. (2021). Profitability as a Moderating Variable of Systematic Risk in Mining Companies. *Accounting Analysis Journal*, *10*(2), 131–137. https://doi.org/10.15294/aaj.v10i2.47343

Lutfi, D.M., & Hendrian, S. E. M. S. (2019). Investment Management (2nd Edition). Tangerang Selatan: Open University.

Mashur, A. (2020). The Influence of Firm Size and Profit Management on Profitability in Basic and Chemical Manufacturing Companies Listed on the Indonesia Stock Exchange during the Period 2015–2019 (Doctoral Dissertation, Indonesian School of Economics, Jakarta).

Mayasari, D., Cahyadi, R. T., Wijayanti, D., & Yuswanto, Y. (2023). Determinants of Dividend Policy with Idiosyncratic Risk as a Moderating Variable. *Journal of Business Accounting*, *16*(2), 130–153.

Napitupulu, R. B., Simanjuntak, T. P., Hutabarat, L., Damanik, H., Harianja, H., Sirait, R. T. M., Tobing, L., & Ria, C. E. (2021). Business Research, Techniques, and Analysis with SPSS - STATA - Eviews. 1st Edition. Madenatera.

Nugrahani, P. Y., Soma, A. M., & Sitorus, P. M. (2024).The influence of leverage, company size, and profitability on systematic risk and its implications for stock prices.

Multidisciplinary Journal of Academic Business Studies, *1*(4), 933–951. https://doi.org/10.35912/jomabs.v1i3.2388.

Prasetyo, T. U. (2020). Determinants of Systematic Risk in Cigarette Companies in Indonesia. *Wahana: Journal of Economics, Management and Accounting*, *23*(2), 211-223.

Sari, A. N., & Alteza, M. (2019). The Influence of Fundamental Factors on Systematic Risk (BETA) in Manufacturing Companies Listed on the Indonesia Stock Exchange from 2015 to 2017. Journal of Management Science, 16(2), 61-70.

Sihombing, P. R., ST, S., Stat, M., & PS, C. (2021). Panel Data Regression Analysis. Multivariate Statistics in Research.

Silalahi, E. (2015). The Influence of Fundamental Factors on Investment Risk in Companies Listed on the Indonesia Stock Exchange. *Journal of Accounting* & Finance Research, 98-114.

Sodikin, A. (2017). *The Effect of Current Ratio, Leverage Ratio, and ROI on Systematic Risk of Food and Beverage Stocks on the Indonesia Stock Exchange. Krisnadwipayana Business Management Journal*, 5(1).

Soeroso, A. (2013). Fundamental factors (current ratio, debt to equity ratio, total asset turnover, and return on investment) on systematic risk in the food and beverage industry on the Indonesia Stock Exchange. *EMBA Journal*: Journal of Economic, Management, Business and Accounting Research, *1(4).*

Syamsiyah, N. (2022). Factors Influencing Dividend Policy in Financial Sector Companies in Indonesia: A Panel Data Analysis. JFBA: Journal of Financial Accounting and Behavior, 2(1), 35–45. https://doi.org/10.33830/jfba.v2i1.3642.2022.

Tampi, I. G., Mangantar, M., & Maramis, J. (2022). The Influence of Asset Growth, Debt to Equity Ratio, and Earnings per Share on Systematic Risk and Stock Return in Publicly Listed Banks in 2014-2018. *EMBA Journal: Journal of Economic, Management, Business, and Accounting Research, 10(3), 204-214.*

Wiyono, E. R., & Mardijuwono, A. W. (2020). *Leverage, profitability, firm size, exchange rate, and systematic risk: Evidence from the Manufacturing Industry in Indonesia Cuadernos de Economía*, 442-448. https://doi.org/10.32826//cude.

www.finance.yahoo.com. *stock price*.

www.idx.co.id. *annual financial report*.

www.investing.com. *stock price*.

www.old.pefindo.com. *historical stock beta*.