Al Tijarah: Vol. 12 No. 1, June 2026 (141-153)
p-ISSN: 2460-4089 e-ISSN: 2528-2948
Available at: http://ejournal.unida.gontor.ac.id/index.php/altijarah

The Impact Of Systematic Risk And The Capital Adequacy Ratio (Car) On Stock Returns At Large Conventional Banks Listed On The Indonesia Stock Exchange, 2018–2024

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Abstrak

This study aims to analyze the effect of systematic risk (beta) on stock returns for large conventional banks listed on the Indonesia Stock Exchange (IDX) and to test the moderating role of the Capital Adequacy Ratio (CAR) during the 2018–2024 period. This study employs an explanatory quantitative approach using panel data comprising six major national banks and a seven-year observation period, resulting in 42 observations. Systematic risk is measured using the beta coefficient, which is calculated and adjusted on an annual basis to ensure consistency with the stock return and CAR variables. The data analysis techniques used are panel data regression and Moderated Regression Analysis (MRA) with model selection via the Chow, Hausman, and Lagrange Multiplier tests. The results indicate that systematic risk (beta), as determined by the panel data regression model (Common Effect Model), has a negative and significant effect on banking stock returns. This finding suggests that during the study period, particularly under conditions of economic uncertainty such as the COVID-19 pandemic, banking sector investors tended to adopt a risk-averse stance, leading to a negative response toward stocks with high beta levels. Meanwhile, the Capital Adequacy Ratio (CAR) does not have a significant effect on stock returns and is not proven to moderate the relationship between systematic risk and stock returns. This suggests that CAR is viewed more as an indicator of a bank's long-term stability rather than as a primary consideration for investors in determining stock returns.
Keywords: *systematic risk stock beta, capital adequacy ratio, stock return banking*

INTRODUCTION

The banking sector plays a central role in maintaining the stability of the financial system and supporting national economic growth. As an intermediary institution, the banking sector is highly sensitive to changes in macroeconomic conditions, monetary policy, and financial market dynamics. This sensitivity is reflected in fluctuations in stock prices and returns on banking stocks in the capital market. In recent years, particularly during the 2018–2024 period, returns on banking stocks in Indonesia have exhibited high volatility amid rising global and domestic economic uncertainty, primarily due to the COVID-19 pandemic and the post-pandemic recovery process (Indonesia Stock Exchange, 2024).

Theoretically, the relationship between systematic risk and stock returns is explained by the Capital Asset Pricing Model, which states that the higher the risk, the higher the expected return. However, in practice, particularly in emerging markets, this relationship is not always linear. A report from the World Bank indicates that financial markets in developing countries tend to exhibit

higher volatility, making the relationship between risk and return unstable. Additionally, according to the International Monetary Fund, in conditions of global uncertainty, investors tend to engage in a "flight to quality" shifting investments to safer assets—causing high-risk stocks to experience price declines. On the other hand, fundamental indicators such as the Capital Adequacy Ratio (CAR) which is regulated at a minimum of 8% under Bank for International Settlements guidelines are not always a primary consideration for investors. This is because the CAR reflects compliance with regulations rather than profit potential, so in many cases it has no significant impact on stock returns.

During the 2018–2024 period, Indonesia's banking sector particularly major conventional banks such as Bank Rakyat Indonesia, Bank Mandiri, Bank Central Asia, and Bank Negara Indonesia—demonstrated very strong fundamentals, with Capital Adequacy Ratios (CAR) ranging from 18% to 26%, well above the minimum requirement of 8%. However, stock returns during the same period showed significant fluctuations. During the COVID-19 pandemic in 2020, the Composite Stock Price Index (IHSG) dropped by approximately 37%, followed by declines in banking stock prices such as BBRI, which fell by about 40%, BMRI by around 35%, and BBNI by as much as 50%, despite the banks' capital positions remaining strong and stable. Conversely, during the economic recovery period of 2021–2022, banking stocks experienced significant increases, with some rising by more than 60%, driven more by market liquidity and investor sentiment than by changes in corporate fundamentals. This phenomenon indicates that, in practice, returns on banking stocks are more influenced by systematic risk and market conditions than by fundamental indicators such as the CAR, thereby reinforcing the suspicion that the relationship between these variables does not always align with existing theory.

In addition to external factors such as market risk, internal banking factors are also a key consideration for investors when assessing stock prospects. One of the primary indicators of a bank's financial health is the Capital Adequacy Ratio (CAR), which reflects a bank's ability to absorb risk and maintain financial stability. Theoretically, banks with high CAR levels have stronger capital buffers, enabling them to better withstand economic pressures and market risks (Berger & Bouwman, 2013). In the context of the capital market, CAR is believed to influence how systematic risk is translated into stock returns, thereby potentially serving as a moderating variable.

However, empirical research on the impact of the CAR on banking stock returns still yields inconsistent findings. Some studies have found that CAR has a positive effect on stock returns because it reflects stability and investor confidence, while other studies suggest that CAR has no significant effect because it is more regulatory in nature and relatively homogeneous within the banking sector (Nugroho & Setiawan, 2020; Rahmawati & Hidayat, 2022). This inconsistency in results indicates a research gap that requires further examination, particularly in the context of volatile markets.

Given the volatility of banking stock returns, the discrepancy between the CAPM theory and market realities, and the inconsistent empirical findings regarding the role of the CAR, this study is important to re-examine. This study aims to analyze the effect of systematic risk (beta) on the stock returns of banking companies listed on the Indonesia Stock Exchange and to examine the role of the Capital Adequacy Ratio (CAR) as a moderating variable during the 2018–2024 period.

The novelty of this study lies in re-examining the relationship between systematic risk and banking stock returns in the context of periods of economic uncertainty using long-term panel data. Unlike the classical CAPM assumption, which emphasizes a positive relationship between beta and returns, this study accommodates the possibility of a negative relationship resulting from changes in investor behavior that tends to be risk-averse. Furthermore, this study also makes an empirical contribution by testing the limitations of the Capital Adequacy Ratio (CAR) as a moderating variable in the relationship between market risk and banking stock returns.

This study not only reexamines the relationship between systematic risk and stock returns but also places it within the context of investor behavior under conditions of economic uncertainty. Thus, this study offers the perspective that the relationship between risk and return is not universal, as posited by classical theory, but rather contextual, depending on market conditions and investor characteristics. This represents an important contribution to the development of financial literature, particularly regarding emerging markets.

Literature Review

Capital Asset Pricing Model (Capital Asset Pricing Model)

The Capital Asset Pricing Model (CAPM) is one of the fundamental theories in modern finance that explains the relationship between risk and stock returns. The CAPM states that a stock's expected return is determined by its level of systematic risk, which is measured by the beta coefficient (Sharpe, 1964). Systematic risk is risk that stems from overall market movements and cannot be eliminated through portfolio diversification.

According to the CAPM, investors are compensated only for systematic risk, while unsystematic risk can be eliminated through diversification. Thus, stocks with a higher beta have a greater degree of

market risk and, in theory, should yield higher returns as compensation for that risk. This model is based on the assumptions of efficient markets, rational investors, and the absence of market friction (Bodie et al., 2018).

However, various empirical studies indicate that CAPM predictions do not always align with market realities, particularly during periods of economic uncertainty and financial crises. Under such conditions, the relationship between beta and stock returns may weaken or even reverse (Fama & French, 2012). Therefore, empirical testing of the CAPM in different contexts and time periods remains relevant.

Capital Adequacy Ratio (CAR)

The Capital Adequacy Ratio (CAR) is a financial ratio used to measure a bank's capital adequacy in absorbing potential losses resulting from the risks it faces. The CAR is calculated by comparing a bank's capital to its risk-weighted assets. This ratio serves as a key indicator of banking sector health and is strictly regulated by authorities through the provisions of the Basel Accord (Basel Committee on Banking Supervision, 2019).

In theory, banks with a high CAR have greater resilience to credit and market risks, and are therefore considered more stable and secure. Berger and Bouwman (2013) state that strong capitalization enhances a bank's ability to weather periods of financial crisis. Consequently, the CAR is frequently used as a fundamental indicator in assessing banking performance and stability.

However, in the context of the capital market, the CAR better reflects a bank's regulatory compliance and long-term stability. The relatively homogeneous high levels of the CAR across the banking sector may result in this ratio having limited discriminatory power in explaining variations in stock returns, particularly in the short term (Rahmawati & Hidayat, 2022).

Sistematic Risk

Systematic risk is risk influenced by macroeconomic factors such as inflation, interest rates, economic growth, and financial system stability. This risk is systemic in nature and affects all stocks in the market; therefore, it cannot be eliminated through diversification (Jogiyanto, 2017). The beta coefficient is used as the primary indicator to measure a stock's systematic risk. Beta indicates the sensitivity of a stock's return to changes in market returns. A beta value greater than one indicates an aggressive stock that is more volatile than the market, while a beta less than one indicates a defensive stock (Bodie et al., 2018). In the banking sector, a stock's beta value is generally influenced by macroeconomic conditions and monetary policy, given that the banking sector is highly sensitive to changes in interest rates and economic stability (Mishkin, 2019).

Several studies have found that beta does not always have a positive impact on stock returns. During periods of economic uncertainty, investors tend to avoid high-risk stocks, resulting in lower returns for high-beta stocks. This suggests that the relationship between systematic risk and stock returns is dynamic and context-dependent (Sari & Putra, 2021; Rahman et al., 2022).

Capital Adequacy Ratio

In this study, the Capital Adequacy Ratio (CAR) is treated as a moderating variable that is hypothesized to influence the strength of the relationship between systematic risk and stock returns. Conceptually, banks with a high CAR possess a stronger capital buffer, enabling them to mitigate the impact of market risk fluctuations on performance and investor perceptions. Thus, the CAR is expected to weaken the influence of systematic risk on stock returns.

However, the effectiveness of the CAR as a moderating variable is highly dependent on market conditions and the characteristics of the banking sector. In volatile market conditions, investors tend to pay more attention to market sentiment and macroeconomic risks than to regulatory capital indicators. Consequently, the CAR is not always able to significantly moderate the relationship between systematic risk and stock returns (Wijaya & Lestari, 2023). The inclusion of CAR as a moderating variable in this study aims to empirically test whether a bank's capital strength can alter the relationship between market risk and banking stock returns in Indonesia.

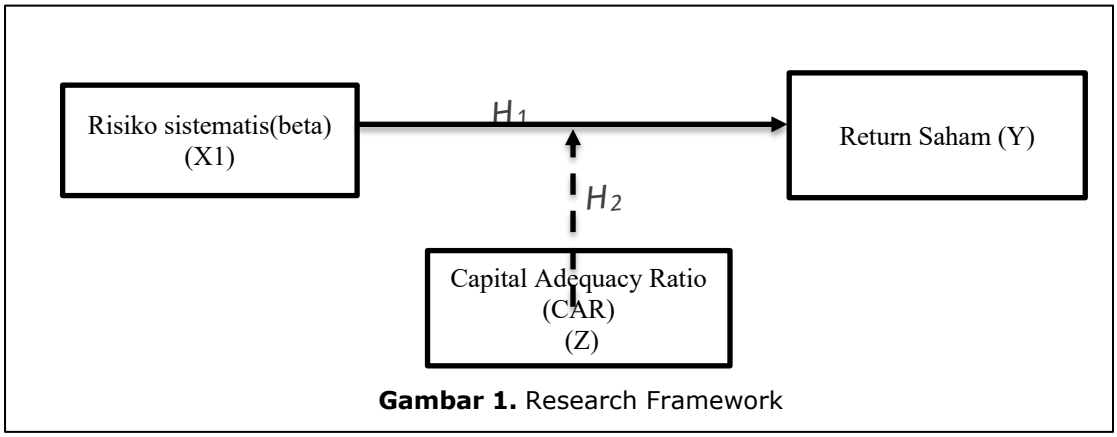
Behavioral Finance

Behavioral finance explains that investor behavior is not always rational and is often influenced by psychological factors such as fear, overreaction, and herding behavior. In times of economic uncertainty, investors tend to become risk-averse and avoid high-risk assets, even though, in theory, such assets offer higher returns (Shefrin, 2007).

The behavioral finance approach is relevant for explaining research findings that identify a negative impact of systematic risk on stock returns. When market volatility increases, investors prefer defensive stocks with lower risk, causing high-beta stocks to face price pressure and declining returns. Barberis and Thaler (2003) argue that market sentiment and investor behavioral biases can cause deviations in the risk–return relationship from classical theoretical predictions.

Thus, behavioral finance serves as a supporting framework to explain the limitations of the CAPM in the context of volatile markets and to reinforce the interpretation of the findings of this study.

Research Framework



Gambar 1. Research Framework

Based on the theory and previous research findings, the hypotheses proposed in this study are as follows:

1. H1: Systematic risk (beta) affects the stock returns of banking companies
2. H2: The Capital Adequacy Ratio (CAR) moderates the impact of systematic risk (beta) on the stock returns of banking companies

METODE

This study is a quantitative study using an associative approach aimed at testing the relationship between systematic risk, the Capital Adequacy Ratio (CAR), and stock returns in banking companies. A quantitative approach was used because this study relies on numerical data analyzed using statistical methods to test the formulated hypotheses. The analysis method used is panel data regression, given that the data used has both a time dimension (time series) and an individual dimension (cross-section). The use of panel data is considered superior to cross-sectional or time-series data alone because it can capture the dynamics of variable changes over time while accommodating differences in characteristics between companies. According to Sugiyono (2019), quantitative research is used to test hypotheses through numerical data analysis and statistical techniques, making it suitable for research oriented toward testing relationships between variables.

The study population consists of major banks—namely BBCA, BBRI, BMRI, BBTN, BBNI, and BNGA—listed on the Indonesia Stock Exchange (IDX) during the 2018–2024 period. Using purposive sampling, Number of observations = n (6 banks) × t (7 years) = 42 observations. The sample was selected using purposive sampling, with the criterion being banks that had complete data for the study period, including financial statements and consistent stock price data. This study uses secondary data obtained from official and reliable sources.

Data was collected from the Indonesia Stock Exchange (IDX), the annual financial reports of banking companies, and relevant market data publications during the study period of 2018–2024. Regarding the data collection methods for each variable, the Capital Adequacy Ratio (CAR) data was obtained from the banks' audited year-end financial reports, which were officially published by each of the sample banks.

RESULTS AND DISCUSSION

It should be emphasized that the results of this study should not be interpreted as measur ment errors in the data, but rather as empirical consequences of differences in data characteristics, observation periods, and capital market behavior in the Indonesian banking sector during the 2018–2024 period. This study deliberately employs an annual approach to align all variables at the same observation level, thereby ensuring the model's methodological validity.

Descriptive Data Analysis

The data used in this study are presented using descriptive statistics. This study uses the minimum, maximum, mean, median, and standard deviation as measures of descriptive statistics. The following table presents the descriptive statistics for each variable:

Tabel 1. Results of the Descriptive Data Analysis

	RETURN_SAHAM%	RISIKO_SISTEMATIS	CAR%	RISIKO_CAR

Mean	1.26	1.109	22.21	132212
Median	2.50	1.080	21.48	180075
Maximum	43.04	1.770	29.40	382483
Minimum	-88.00	0.720	16.80	1764
Std. Dev.	23.21	0.244	3.28	115205
Skewness	-1.245	0.712	0.544	0.258
Kurtosis	6.601	3.221	2.409	1.651
Jarque-Bera	33.544	3.633	2.681	3.647
Probability	0.000	0.163	0.262	0.161
Sum	52.92	46.570	932.98	5552897.
Sum Sq. Dev.	22.09	2.431	441.09	5.44E+11
Observations	42	42	42	42

The descriptive statistics show that the stock return variable has a mean of 1.26% with a relatively high standard deviation of 23.21%. This indicates that banking stock returns during the study period tended to fluctuate significantly, reflecting a high level of market volatility. The minimum value of -88.00% and the maximum of 43.04% further reinforce the instability of stock returns. Meanwhile, systematic risk has a mean value of 1.109, indicating that banking stocks generally have a higher risk level compared to the market. The CAR variable has an average of 22.21%, indicating that banks' capital adequacy is at a very good level and far above the minimum standard. However, this high CAR value is not accompanied by stable stock returns, suggesting a possible weak relationship between fundamental variables and market performance.

Table 2. Panel Model Selection Test

Uji Chow	Prob > 0,05	CEM
	Prob < 0,05	FEM
Uji Housman	Prob >0,05	REM
	Prob < 0,05	FEM
Uji LM	Prob > 0,05	CEM
	Prob < 0,05	REM

The selection of the panel data regression model in this study was conducted in a step-by-step, systematic manner based on statistical tests, rather than on the researcher's preferences. This was done to ensure that the model used could produce consistent, efficient, and unbiased estimates, in accordance with the characteristics of the research data.

Table 3. Chow Test

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

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.119	(5,34)	0.087
Cross-section Chi-square	11.394	5	0.044

The Chow test was used to compare the Common Effects Model (CEM) with the Fixed Effects Model (FEM). The test results showed that the p-value was near the significance threshold (marginal). This indicates the possibility of differences in characteristics among banks, but the evidence is not yet strong enough to directly conclude that the FEM is the best model. Therefore, no decision was made at this stage, and the analysis proceeded to the next test.

Tabel 4. Hausman 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	0.957	2	0.620

The Hausman test aims to choose between the Fixed Effects Model (FEM) and the Random Effects Model (REM). The test results show a p-value greater than 0.05, which means there is no correlation between individual effects (differences in the characteristics of each bank) and the independent variables in the model.

Methodologically, this indicates that the Random Effects estimator is consistent and more efficient than the Fixed Effects estimator. Therefore, the REM is more appropriate to use than the FEM.

Gambar 5. LM Test

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	22.300	15	0.100
Pesaran scaled LM	1.333		0.183
Pesaran CD	3.274		0.001

The Lagrange Multiplier test was used to determine whether the Random Effects Model is superior to the Common Effects Model. The test results indicate that the random effects model is better able to capture data variation than the common effects model.
This suggests that there is significant random heterogeneity among banks, which cannot be ignored in the model.

Based on that series of test:

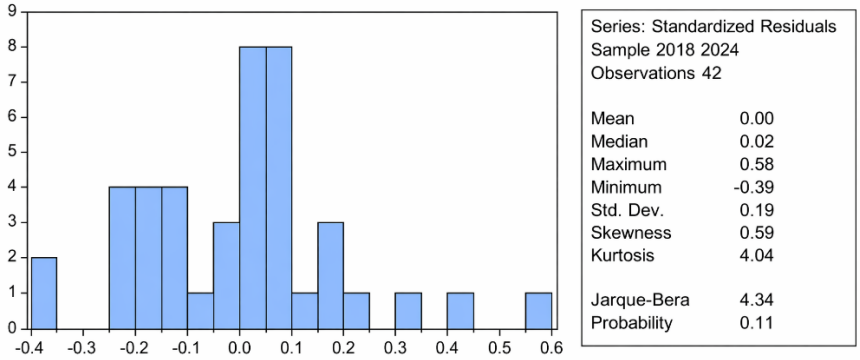
- Chow test: not strong enough to support the FEM
- Hausman test: supports the REM
- LM test: supports the REM over the CEM

Thus, the most appropriate model to use in this study is the Random Effects Model (REM), as it provides more efficient estimates and is better suited to the characteristics of the panel data used. This approach ensures that the estimation results are unbiased and can more accurately capture variation across individuals and over time

Test of Classical Assumptions

Classical assumption tests were conducted to ensure that the panel data regression model used in this study produces unbiased, efficient, and consistent estimates, so that the analysis results can be interpreted validly and scientifically justified. The testing of classical assumptions in this study was conducted contextually, taking into account the characteristics of panel data that combine time and individual dimensions, and was tailored to the selected panel regression model. Therefore, not all classical assumptions were tested rigidly as in Ordinary Least Squares (OLS) regression, but rather the focus was on relevant assumptions, such as normality, multicollinearity, heteroscedasticity, and autocorrelation.

Tabel 6. Normality Test



The results of the normality test indicate that the stock return variable has a p-value of 0.000, which is less than 0.05, suggesting that the data are not normally distributed. This indicates an asymmetric distribution and the possible presence of outliers in the data.

However, in the context of financial data, particularly stock returns, non-normal distributions are common due to market volatility and economic shocks. Therefore, the violation of the normality assumption in this study does not significantly affect the validity of the model, especially since panel data regression is relatively robust to deviations in data distribution.

Table 7. Multikolinearitas Test

	RISIKO_SISTEMATIS	CAR	RISIKO_CAR
RISIKO_SISTEMATIS	1.000	-0.479	0.034
CAR	-0.479	1.000	0.059
RISIKO_CAR	0.034	0.059	1.000

The results of the multicollinearity test indicate that the correlation coefficients between the independent variables—systematic risk and CAR—are below 0.8, suggesting that there is no multicollinearity in the research model.
This indicates that each independent variable provides distinct information in explaining stock return variation. Consequently, the estimated regression coefficients can be interpreted independently without bias resulting from high linear relationships among the variables.

Table 8. Uji Autokolerasi

R-squared	0.266	Mean dependent var	1.26
Adjusted R-squared	0.228	S.D. dependent var	23.21
S.E. of regression	20.40	Akaike info criterion	18.148
Sum squared resid	1.62E+08	Schwarz criterion	18.272
Log likelihood	-378.10	Hannan-Quinn criter.	18.193
F-statistic	7.049	Durbin-Watson stat	1.192
Prob(F-statistic)	0.002		

A Durbin-Watson statistic of 1.192 indicates a tendency toward positive autocorrelation in the model, as the value is below 2. This suggests that the residuals in one period are correlated with those of the previous period.

However, in the context of panel data regression, autocorrelation is not always a serious issue because the panel model simultaneously accounts for both the time and individual dimensions. Furthermore, this study focuses more on the relationships between variables than on short-term predictions, so the presence of autocorrelation within certain limits is still tolerable.

Table 9. Heteroskedastisitas Test

Dependent Variable: RETURN_SAHAM
Method: Panel Least Squares
Date: 01/28/26 Time: 20:40
Sample: 2018 2024
Periods included: 7
Cross-sections included: 6

Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.842	5.380	0.156	0.877
RISIKO_SISTEMATIS	-0.177	2.454	-0.072	0.943
CAR	-0.086	0.166	-0.515	0.609
RETURN_CAR	481.885	11.636	41.413	0.145

The results of the heteroscedasticity test show that the p-values for each variable are above 0.05, so it can be concluded that there is no heteroscedasticity issue in the model. This indicates that the residual variance is constant (homoscedasticity), meaning the regression model is capable of producing efficient and unbiased estimates. In the context of financial research, this condition is important because heteroscedasticity often arises due to differences in company scale or market fluctuations.

Table 10. Panel Data Regression Analysis

Dependent Variable: RETURN_SAHAM
Method: Panel Least Squares
Date: 01/28/26 Time: 20:28
Sample: 2018 2024
Periods included: 7
Cross-sections included: 6
Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	32.065	35.714	0.898	0.375
RISIKO_SISTEMATIS	-43.274	14.901	-2.904	0.006
CAR	0.773	1.106	0.699	0.489

R-squared	0.266	Mean dependent var	1.26
Adjusted R-squared	0.228	S.D. dependent var	23.21
S.E. of regression	20.40	Akaike info criterion	18.148
Sum squared resid	1.62E+08	Schwarz criterion	18.272
Log likelihood	-378.104	Hannan-Quinn criter.	18.193
F-statistic	7.049	Durbin-Watson stat	1.192
Prob(F-statistic)	0.002		

The regression results show that the systematic risk variable has a coefficient of -43.274 with a p-value of 0.006, which is less than 0.05. This indicates that systematic risk has a negative and significant effect on stock returns. The negative coefficient suggests that an increase in systematic risk is actually followed by a decrease in stock returns. These findings are inconsistent with the Capital Asset Pricing Model, which states that risk is directly proportional to return. However, empirically, this phenomenon can be explained by investors' risk-averse behavior, particularly in unstable market conditions. In such situations, investors prefer safe assets over highly volatile stocks, so an increase in risk actually reduces stock returns.

Meanwhile, the CAR variable has a coefficient of 0.773 with a p-value of 0.489, which is greater than 0.05, indicating that it does not have a significant effect on stock returns. This suggests that a bank's capital adequacy ratio is not a primary factor in determining stock returns.

Uji Hipotesis

Table 11. t (Parsial) Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	32.065	35.714	0.898	0.375
RISIKO_SISTEMATIS	-43.274	14.901	-2.904	0.006
CAR	0.773	1.106	0.699	0.489

The t-test results indicate that systematic risk has a significant effect on stock returns, with a p-value of 0.006 < 0.05, whereas the CAR does not have a significant effect, with a p-value of 0.489 > 0.05. This indicates that, in part, only systematic risk is the dominant factor influencing stock returns. This finding reinforces the argument that investors are more responsive to market risk than to company fundamental indicators.

Table 12. f (simultan) Test

R-squared	0.266	Mean dependent var	1.26
Adjusted R-squared	0.228	S.D. dependent var	23.21
S.E. of regression	20.40	Akaike info criterion	18.148
Sum squared resid	1.62E+08	Schwarz criterion	18.272
Log likelihood	-378.104	Hannan-Quinn criter.	18.193
F-statistic	7.049	Durbin-Watson stat	1.192
Prob(F-statistic)	0.002		

The F-test result shows a p-value of 0.002, which is less than 0.05; therefore, it can be concluded that the systematic risk variable and CAR simultaneously have a significant effect on stock returns. The coefficient of determination (R^2) of 0.266 indicates that the model explains 26.6% of the variation in stock returns, while the remaining 73.4% is influenced by other factors outside the model, such as interest rates, inflation, exchange rates, and market sentiment.

Table 13. R2 (Determin) Test

R-squared	0.266	Mean dependent var	1.26
Adjusted R-squared	0.228	S.D. dependent var	23.21
S.E. of regression	20.40	Akaike info criterion	18.148
Sum squared resid	1.62E+08	Schwarz criterion	18.272
Log likelihood	-378.104	Hannan-Quinn criter.	18.193
F-statistic	7.049	Durbin-Watson stat	1.192
Prob(F-statistic)	0.002		

The coefficient of determination (R^2) in this study is 0.266, indicating that the systematic risk variable and the Capital Adequacy Ratio (CAR) account for 26.6% of the variation in stock returns. Meanwhile, the remaining 73.4% is explained by other variables outside the research model. This relatively moderate R^2 value indicates that although the model has the ability to explain variations in stock returns, there are still other more dominant factors that have not been included in the model. In the context of the capital market, particularly in the banking sector, stock returns are not only influenced by internal company factors such as risk and capital, but are also significantly influenced by external factors such as macroeconomic conditions, interest rates, inflation, exchange rates, and investor sentiment. Thus, the relatively low R^2 value in this study is not a weakness but reflects the complexity of the stock market, which is influenced by numerous factors. This aligns with the characteristics of emerging markets, which tend to be more volatile and sensitive to changes in economic conditions and investor psycholo

Table 14. MRA Test

Dependent Variable: RETURN_SAHAM
Method: Panel Least Squares
Date: 02/03/26 Time: 09:13
Sample: 2018 2024
Periods included: 7
Cross-sections included: 6
Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	32.015	36.176	0.885	0.382
RISIKO_SISTEMATIS	-43.412	15.130	-2.869	0.007
CAR	0.761	1.125	0.676	0.503
RISIKO_CAR	0.000004	0.000028	0.129	0.898

The results of the moderation test indicate that the interaction term between systematic risk and CAR has a coefficient of 0.000362 with a p-value of 0.898, which is greater than 0.05. This suggests that CAR does not moderate the relationship between systematic risk and stock returns. In theory, a high CAR should strengthen a bank's resilience to risk; however, the results of this study indicate that in volatile market conditions, external factors such as market risk and investor sentiment are more dominant than internal company factors. Consequently, the role of CAR as a moderating variable proves ineffective in the context of this study.

CONCLUSION

Based on the results of the analysis and discussion regarding the effect of systematic risk (beta) on stock returns, with the Capital Adequacy Ratio (CAR) as a moderating variable, for banking companies listed on the Indonesia Stock Exchange during the 2018–2024 period, the following key conclusions can be drawn.:

1. The results of the first hypothesis test (H1) indicate that systematic risk has a negative and significant effect on stock returns. This is evidenced by a p-value of 0.006, which is less than 0.05, and a negative regression coefficient. These findings suggest that an increase in market risk is actually followed by a decrease in stock returns. Theoretically, these results are inconsistent with the Capital Asset Pricing Model, which states that the higher the risk, the higher the expected return. However, in an empirical context, particularly in emerging markets, this relationship does not always hold linearly. This condition can be explained by investor behavior, which tends to be risk-averse,
   especially in times of economic uncertainty. Under such conditions, investors prefer stable assets over high-risk ones, so an increase in risk is met with selling pressure, leading to a decline in stock returns. Thus, the findings of this study confirm that, in practice, the relationship between risk and return is contextual and heavily influenced by market conditions and investor psychology.
2. The results of the second hypothesis test (H2) indicate that the Capital Adequacy Ratio (CAR) does not have a significant effect on stock returns, with a p-value of 0.489, which is greater than 0.05. This suggests that a bank's capital adequacy level is not a primary factor in determining stock returns. Theoretically, the CAR reflects a bank's financial health and stability, and thus should enhance investor confidence. However, in practice, the CAR is more of a regulatory requirement and tends to be homogeneous among large conventional banks, where CAR values generally far exceed the minimum standards set by the Bank for International Settlements. Consequently, the CAR is no longer a variable with strong

discriminatory power in the eyes of investors. Furthermore, investors in the capital market tend to focus more on factors that have a direct impact on stock price movements, such as market conditions, investor sentiment, and macroeconomic factors. Therefore, although the CAR is important for banking stability, this variable does not have a significant impact on stock returns in the context of capital market investments.

3. The Role of CAR as a Moderating Variable.
   The results of the moderation analysis indicate that the interaction term between systematic risk and CAR does not have a significant effect on stock returns, with a p-value of 0.898, which is greater than 0.05. This suggests that CAR is unable to moderate the relationship between systematic risk and stock returns. Conceptually, a high CAR should strengthen a bank's resilience to market risk and mitigate the negative impact of systematic risk. However, the findings of this study indicate that such an effect is not significant. This can be explained by the dominance of external factors over internal company factors in determining stock return movements. In volatile market conditions, investors place greater emphasis on overall market risk than on the individual fundamental conditions of companies. Therefore, even though a bank has a strong capital adequacy ratio, this is insufficient to alter investors' perceptions of systematic risk. Consequently, the role of CAR as a moderating variable proves ineffective in this study.
4. The Simultaneous Effect of Independent Variables
   The results of the simultaneous test (F-test) indicate that systematic risk and CAR together have a significant effect on stock returns, with a p-value of 0.002, which is less than 0.05. This suggests that the research model as a whole is capable of explaining variations in stock returns. However, the coefficient of determination (R^2) value of 0.266 indicates that the model can only explain 26.6% of the variation in stock returns, while the remaining 73.4% is influenced by other factors outside the model. This suggests that stock returns are a complex variable influenced by numerous factors, such as macroeconomic conditions, interest rates, inflation, exchange rates, and market sentiment.

Overall, this study indicates that systematic risk is the primary factor influencing stock returns, while the Capital Adequacy Ratio (CAR) does not have a significant effect, either directly or as a moderating variable. These findings confirm that in the context of capital markets, particularly in the banking sector of developing countries, external factors such as market risk and investor behavior play a more dominant role than corporate fundament.

RECOMMENDATIONS

Based on the research findings and conclusions reached, the following recommendations can be made:

The results of this study have several important implications, both theoretical and practical.

Theoretically, the finding that systematic risk has a negative effect on stock returns suggests that the relationship between risk and return does not always follow the classical assumptions of the Capital Asset Pricing Model. This indicates that in unstable market conditions, particularly in emerging markets, the relationship between risk and return is contextual and influenced by risk-averse investor behavior. Thus, this study enriches the financial literature by demonstrating that classical theory must be interpreted flexibly in accordance with prevailing market conditions.

Practically, the results of this study imply that systematic risk is a factor that investors must take seriously in investment decision-making. Increased risk is not always accompanied by increased returns, so investors need to be more cautious when selecting stocks with high volatility. Furthermore, the results indicate that fundamental indicators such as the Capital Adequacy Ratio (CAR) do not have a significant impact on stock returns, meaning investors cannot rely solely on CAR as the basis for investment decisions.

For bank management, the results of this study indicate that a company's fundamental strength—particularly in terms of capital—does not directly guarantee higher stock returns. Therefore, in addition to maintaining financial stability, companies must also consider external factors such as market perception, information transparency, and investor communication strategies to enhance market confidence.

Limitations of the Study

This study has several limitations that should be considered when interpreting the

results. First, this study uses a sample consisting solely of large conventional banks; therefore, the findings may not be generalizable to the entire banking sector, particularly small-scale or non-conventional banks. Second, the variables used in this study are limited to systematic risk and the Capital Adequacy Ratio (CAR), so they do not capture all factors influencing stock returns. Third, this study does not include macroeconomic variables such as interest rates, inflation, and exchange rates, which in practice have a significant influence on stock market movements.

Research Recommendations

Given these limitations, future research is recommended to expand the sample scope by including a wider variety of banks, both in terms of size and operational type, so that the research findings can be more representative. In addition, future research is also recommended to include other variables, particularly macroeconomic variables such as interest rates, inflation, and exchange rates, in order to obtain a more comprehensive understanding of the factors influencing stock returns.

In addition, future research may consider using more complex analytical methods, such as dynamic panel or volatility-based models, to capture deeper market dynamics. Thus, future research findings are expected to make a broader contribution to the development of financial science.

Closing

Overall, this study confirms that in the context of the capital market, particularly in Indonesia's banking sector, stock returns are not solely determined by corporate fundamentals but are significantly influenced by market risk dynamics and investor behavior. The finding that systematic risk has a negative impact on stock returns indicates a shift in the relationship between risk and return from a theoretical framework to a more contextual one.

Furthermore, the inability of the Capital Adequacy Ratio (CAR) to influence or moderate stock returns suggests that fundamental banking indicators have limitations in explaining stock market behavior. This reinforces the view that capital markets, particularly in developing countries, are not fully efficient and are heavily influenced by external factors as well as investor psychology. Thus, this study not only provides empirical insights but also offers a deeper understanding of the complex relationship between risk, corporate fundamentals, and stock returns. The findings of this study are expected to serve as a reference for academics, investors, and practitioners in gaining a more comprehensive understanding of capital market dynamics

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