CHAPTER 4
FINDINGS, ANALYSIS, AND DISCUSSIONS

4.1 Descriptive Statistical Analysis

Descriptive statistics, according to Ghozali (2013), are forms of data analysis that offer an overview and value of each research variable or set of data as seen through the means, medians, maximums, minimums, and standard deviations of the results. Table 4.1 displays the findings of the descriptive statistical analysis conducted on all variables.

Table 4.1 displays the findings of the comparison descriptive statistical analysis conducted on all variables on Indonesian and Australian Coal Mining Stocks

Table 4.1 Descriptive Statistical Results

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Jarque-Bera	N	Coefficient of Variation
Coal Price (X1)	0.0261	0.0326	0.4468	-0.5050	0.2335	1.7071	200	8.93
Exchange Rate (X2)	-0.0039	0.0010	0.0530	-0.0650	0.0285	6.4900	200	- 7.37
Market Return (X3)	0.0171	0.0008	0.1354	-0.0346	0.0392	38.1290	200	2.29
ROE (X4)	0.0683	0.0570	0.3060	-0.1358	0.0808	14.0221	200	1.18
CR (X5)	1.7988	1.7961	4.2730	0.2559	0.8847	18.3147	200	0.49
TATO (X6)	0.1885	0.1689	0.4901	0.0432	0.1038	39.6617	200	0.55
DER (X7)	0.9987	0.8760	3.3217	0.2205	0.6763	127.0505	200	0.68
Earning Yield (X8)	0.2518	0.2064	1.2500	-0.7042	0.3315	14.6736	200	1.32
Russia_Ukraine War (X9	0.3500	0.0000	1.0000	0.0000	0.4782	34.6375	200	1.37
Stock Return (Y)	0.0337	0.0000	0.8000	-0.6333	0.2147	43.4219	200	6.37

Source: EViews Process data, Author, 2024

As can be seen in Table 4.1 above, the study's 200 observations were gathered from 5 (five) companies in each country between Jan 2019 and Dec 2023 utilizing quarterly data. The study included one dependent variable, eight independent variables, and one moderation variable, as Table 4.1 above demonstrates. The following provides an explanation of the descriptive statistical results for each variable.

From the data provided, here's an interpretation of the table:

1. Coal Price (X1)

The mean value is 0.0261, with a median of 0.0326, a maximum of 0.4468, and a minimum of -0.5050. The standard deviation (SD) is 0.2335, leading to a coefficient of variation (CV) of 8.95, indicating Data Varies. The Jarque-Bera statistic is 1.7071, suggesting that while the data is relatively less variable overall, the high CV suggests strong relative fluctuations in coal prices.

2. Exchange Rate (X2)

The mean is -0.0039, the median is 0.0010, with a maximum of 0.0530 and a minimum of -0.0650. The SD is 0.0285, giving a CV of -7.31 (negative due to the negative mean), which makes interpretation tricky. The Jarque-Bera statistic of 6.4900 suggests slightly higher variability. The high CV suggests Data Varies despite the small mean value...

3. Market Return (X3)

The mean is 0.0171, with a median of 0.0008, a maximum of 0.1354, and a minimum of -0.0346. The SD is 0.0392, resulting in a CV of 2.29, indicating Data Varies. The Jarque-Bera value of 38.1290 further confirms notable volatility.

4. Return On Equity (ROE) (X4)

The mean is 0.0683, with a median of 0.0570, extreme values of 0.3060 (maximum) and -0.1358 (minimum). The SD is 0.0808, giving a CV of 1.18, indicating Data Varies in ROE across companies. The Jarque-Bera statistic of 14.0221 highlights large swings in profitability among companies.

The mean ROE for Indonesia is 0.116, lower than Australia's 0.120. Australian coal companies demonstrated slightly better efficiency in generating profits from equity. Indonesian companies exhibited a broader range of ROE values due to diverse operational strategies.

5. Current Ratio (CR) (X5)

The mean is 1.7988, with a median of 1.7961, a maximum of 4.2730, and a minimum of 0.2559. The SD is 0.8847, leading to a CV of 0.49, indicating Data

Less Varies. The Jarque-Bera value of 18.3147 suggests moderate variations in liquidity management strategies.

6. Total Asset Turnover (TATO) (X6)

The mean is 0.1885, with a median of 0.1689, a maximum of 0.4901, and a minimum of 0.0432. The SD is 0.1038, giving a CV of 0.55, reflecting Data Varies. The Jarque-Bera value of 39.6617 suggests efficiency differences in asset utilization across companies.

7. Debt To Equity Ratio (DER) (X7)

The mean is 0.9987, with a median of 0.8760, a maximum of 3.3217, and a minimum of 0.2205. The SD is 0.6763, leading to a CV of 0.68, suggesting Data Varies in leverage strategies. The Jarque-Bera statistic of 127.0505 reflects extreme leverage practices

8. Earning Yield (EY) (X8)

The mean is 0.2518, with a median of 0.2064, a maximum of 1.2500, and a minimum of -0.7042. The SD is 0.3315, giving a CV of **1.32**, indicating **Data Varies**. The Jarque-Bera statistic of 14.6736 suggests noticeable fluctuations in earning yields.

9. Stock Return (Y)

The mean is 0.0337, with a median of 0.0000, a maximum of 0.8000, and a minimum of -0.6333. The SD is 0.2147, leading to a CV of 6.37, indicating Data Varies in stock returns. The Jarque-Bera statistic of 43.4219 highlights significant fluctuations. The investigation also revealed a correlation coefficient as one of the descriptive statistical outcomes, in addition to the previously mentioned data. The correlation coefficient values, which indicate the degree of association between the relative movements of two variables, are displayed in Table 4.1.2 below.

Table 4.2 Correlation Matrix Result

VARIABLES	STOCKRETURN	COALPRICE	EXCHANGERATE	MARKETRETURN	ROE	CR	TATO	DER	EY	RUSSIAUKRAINEWAR
STOCKRETURN	1.000	0.458	0.120	0.131	0.149	0.064	-0.021	-0.001	0.132	-0.045
COALPRICE	0.458	1.000	-0.058	0.227	0.010	0.049	-0.115	0.069	-0.062	-0.189
EXCHANGERATE	0.120	-0.058	1.000	-0.020	0.168	0.048	0.042	-0.032	0.271	0.060
MARKETRETURN	0.131	0.227	-0.020	1.000	-0.109	0.025	-0.132	-0.057	0.006	-0.034
ROE	0.149	0.010	0.168	-0.109	1.000	0.188	0.609	-0.028	0.350	0.217
CR	0.064	0.049	0.048	0.025	0.188	1.000	0.263	-0.111	0.018	0.245
TATO	-0.021	-0.115	0.042	-0.132	0.609	0.263	1.000	0.188	0.019	0.174
DER	-0.001	0.069	-0.032	-0.057	-0.028	-0.111	0.188	1.000	-0.085	-0.175
EY	0.132	-0.062	0.271	0.006	0.350	0.018	0.019	-0.085	1.000	0.309
RUSSIAUKRAINEWAR	-0.045	-0.189	0.060	-0.034	0.217	0.245	0.174	-0.175	0.309	1.000

Correlation matrix visualized as a heatmap. The values represent the strength and direction of the relationship between variables., can see on below pictures

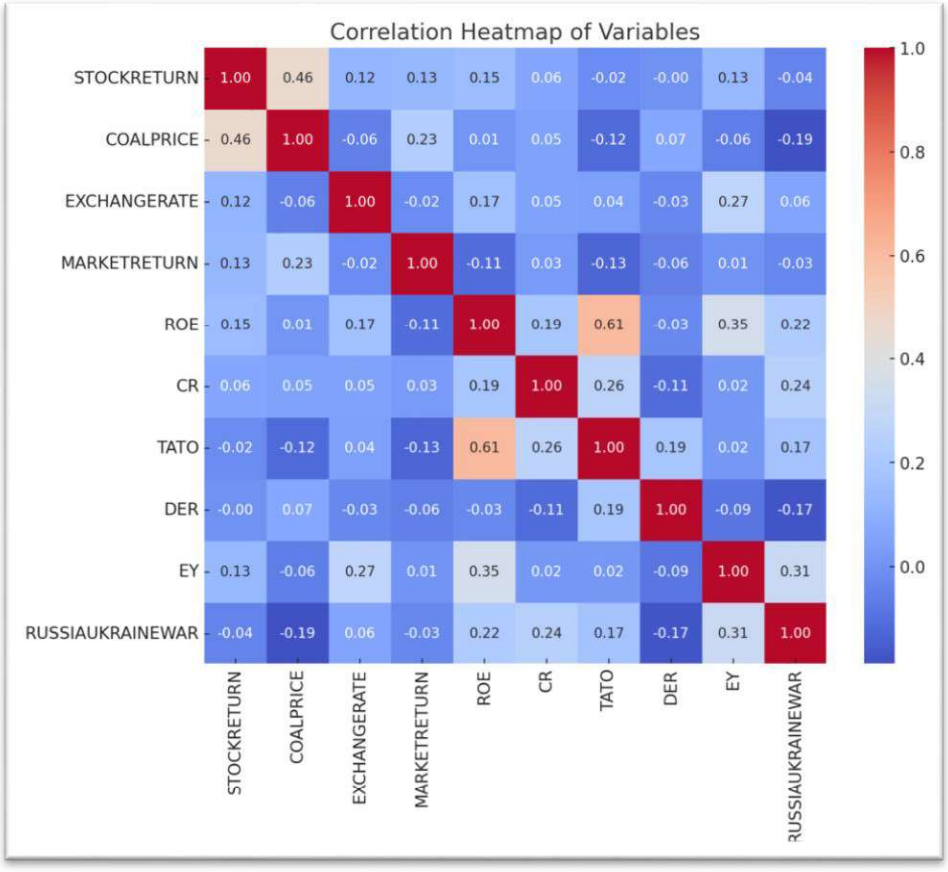

Figure 4.1 Correlation Heatmap Between Variables

Correlation Matrix Analysis:

Several important insights into the relationships between the variables are revealed by the correlation study. The moderately favourable correlation between stock return and coal price (0.46) suggests that rising coal prices often translate into stronger stock returns for coal firms. Its poor positive correlations with other variables, such as market return (0.13), return on equity (ROE) (0.15), and exchange rate (0.12), indicate that these factors have little direct impact on stock returns. Liquidity and asset efficiency have little effect on stock returns, as evidenced by the weak correlations between the current ratio (0.06) and total asset turnover (TATO) (-0.02). Similarly, earnings yield (0.13) exhibits a weakly positive association with stock returns, although the debt-to-equity ratio (DER) indicates a nearly non-existent link (-0.00). Remarkably, there is a very modest negative correlation between stock returns and the Russia-Ukraine war (-0.045), indicating that its influence was negligible during the study period.

The market return and coal price have a moderately positive connection (0.23), suggesting that coal pricing is influenced by broader market dynamics. However, its minor negative link (-0.19) with the conflict between Russia and Ukraine indicates that coal prices are somewhat dampened by geopolitical turmoil. Exchange rate swings, on the other hand, have a mild positive correlation with ROE (0.17) and a moderately positive correlation with earnings yield (0.27), suggesting that they may have some effect on equity returns and profitability.

Companies with higher asset turnover typically have superior equity returns, as seen by the substantial positive correlation between ROE and TATO (0.61). Furthermore, ROE and earnings yield have a moderately positive relationship (0.35), suggesting a connection between equity returns and profitability. Additionally, there is a slight positive link (0.22) between the Russia-Ukraine war and ROE, indicating that the conflict may have an indirect impact on equity performance. There are weak positive correlations between the Russia-Ukraine war and TATO (0.17), current ratio (0.24), and earnings yield (0.31), suggesting that there are only slight but noticeable impacts on asset efficiency, liquidity, and

profitability. Its weakly negative association with stock returns and coal prices, however, highlights the small overall effect of geopolitical events on these important variables.

All things considered, the most important factor favourably affecting stock returns is the price of coal. There is a lesser association between stock returns and other variables including earnings yield, market return, ROE, and exchange rate. The consequences of geopolitical issues, such as the conflict between Russia and Ukraine, are ambiguous. While they marginally reduce stock returns and coal prices, they have some slight positive connections with internal metrics like ROE and earnings yield. The significant link between ROE and TATO indicates that operational efficiency is a key driver of equity performance, underscoring the significance of internal factors for the financial results of coal companies.

4.2 Panel Data Regression Analysis

To establish the best panel data model for this study, it will be examined. As mentioned in the previous chapter, the Chow, Hausman, and Lagrange Multiplier (LM) tests can determine the best panel data model for this investigation. Common and fixed effect models can be used to regression test panel data, but not random effect models. The samples only include five companies on each country. A better model than common and random models was chosen for panel data in this study using the chow test. The chow test results are:

Table 4.3 Chow test results

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

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.453709	(9,181)	0.9036
Cross-section Chi-square	4.461881	9	0.8785

Test	Cross-section Chi-square (Prob.)
Chow Test (p-value)	0.878
Hausman Test (p-value)	1.000
Lagrange Multiplier Test (p-value)	0.000

4.2.1 Chow Test

Chow-test is used to select the model used, whether it is best to use a common effect model or a fixed-effect method. This test is done by statistical test F or chi-squared with the following hypotheses used:

H_o: Models follow common effect models

H_1: Model follows fixed effect model

Alpha: 5%

Provision: Reject H_o if both the F test or Chi-square values < alpha.

Based on Table 4.2.1 above, it is seen that the chow test results show a chi-square probability value of 0.878 greater than 0.05. Thus, Ho is is not rejected, and H_1 is rejected. That is, the common effect model is better than the fixed effect .

4.2.2 Hausman Test

The Hausman test chooses which is better, whether using a fixed-effect model or a random effect model. The hypotheses in the Hausman test are as follows:

Ho: Models follow the Random Effect Model

H1: Model follows Fixed Effect Model Alpha

Alpha = 5%

Provision: Reject Ho if the p-value value < alpha.

Hausman test is done to choose which model is better, whether using a fixed-effect model or random-effect model. Below on table 4.2.2 is result of Hausman test:

Table 4.4 Hausman test results

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	0.000000	9	1.0000

The Hausman Test was conducted to decide between the Fixed Effects Model (FEM) and the Random Effects Model (REM) for your panel data analysis.

Results:

- Chi-Square Statistic: 0.0000
- Degrees of Freedom (d.f.): 9
- p-value: 1.0000

Interpretation:

- The p-value is greater than 0.05, which means we fail to reject the null hypothesis (Ho)).
- The null hypothesis (H0H_0H0) assumes that the random effects model is appropriate (i.e., individual effects are uncorrelated with the regressors).

Conclusion:

Since the p-value is 1.0000, the Random Effects Model (REM) is appropriate for this dataset. The individual effects are uncorrelated with the regressors, and using a random effects model will provide efficient and consistent estimates.

4.2.3 Lagrange Multiplier Test

Based on the results of the random effect model, Implications for the Lagrange Multiplier (LM) Test:

The random effects variance **(σu2) is effectively zero** (ρ=0.0000),this directly supports the conclusion that random effects are not necessary, and the variance across cross-sections is negligible. Thus, the Common Effects Model (Pooled OLS) is sufficient for modelling the dataset

A summary of the results of the chow test, Hausman test and Lagrange Multiplier test can be seen in Table 4.2.3 below.

Table 4.5 Panel Data Model Selection Results

Test	Compared Model	Result of Comparison
Chow Test	FEM REM	CEM
Hausman Test	FEM REM	REM
Lagrange Multiplier Test	CEM REM	CEM

From Table 4.2.3 above, it can be concluded that the most suitable panel data model for this study is the Common Effect Model (CEM).

4.3 Classical Assumption Test

A classical assumption test is a statistical test performed to measure the degree of relationships or effects between independent variables through the magnitude of their correlation coefficients. The classical assumption test is done before using a regression model to test whether residual variables have a normal distribution in regression models. Because the study used panel data and more than two independent variables, the corresponding classical assumption tests that would be conducted were the normality test and the multicollinearity test.

4.3.1 Normality Test

Ghozali (2013) states that to test whether, in a regression model, dependent variables, independent variables or both have normal or unknowable distributions using normality tests. The normality test will be conducted with Jarque-Bera (J-B) through EViews statistical software. If the probability value (p- value) is less than

the significance level of 5%, the data is not in a normal distribution. Data will normally distribute if the probability value (p-value) is greater than the significance level of 5%. The results of the normality test on this study can be seen in figure 4.3.1below.

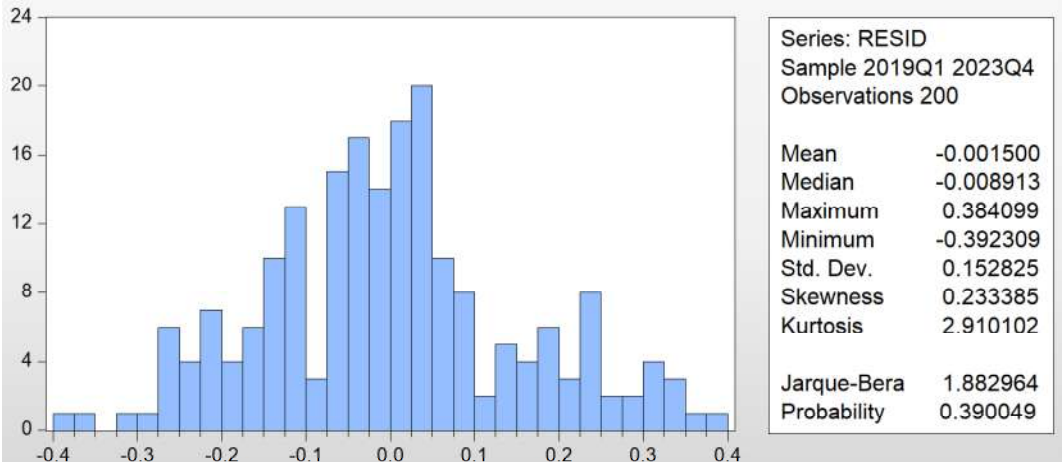

Figure 4.2 Normality Test Result, Using EViews

From the histogram above, the JB value is 1.88 while the Chi-Square value of 0.390 is higher than the significant level of 0.05. So it can be concluded that the data in this study is a normal distribution.

4.3.1 Multicollinearity Test

Testing whether regression models identify relationships between independent variables is the goal of the multicollinearity test. Correlations between independent variables should not arise in a decent regression model. Ghozali (2013). To get the variance inflation factor (VIF) values, a multicollinearity test was used to examine the correlation between independent variables. If the VIF value is more than 10, multicollinearity occurs; otherwise, the independent variable in the model is said to be non-multicollinear. Ghozali (2013). Table 4.3.1 below displays the findings of this study's multicollinearity test.

Table 4.6 Multicollinearity test results

Coefficients[a]			
		Collinearity Statistics	
Model		Tolerance	VIF
1	Coal Price	0.866	1.154
	Exchange Rate	0.914	1.094
	Market Return	0.926	1.080
	ROE	0.482	2.074
	CR	0.853	1.172
	TATO	0.494	2.024
	DER	0.869	1.150
	EY	0.709	1.410
	Russia-Ukraine	0.786	1.273
a. Dependent Variable: Stock Return			

The multicollinearity test findings, as shown in Table 4.3.1, indicate that the VIF value for each of the following independent variables is less than 10: Coal Price, Exchange Rate, Market Return, ROE, CR, TATO, DER, EY, and Rusia_Ukraine War. Therefore, since the VIF value is less than 10, it can be said that all independent variables are not affected by multicollinearity issues.

4.4 Significance Test

Three tests comprise the significance test conducted for this study: the determination coefficient test (Test R2), the simultaneous significance test (test f), and the partial regression coefficient test (t-test). Table 4.4 below shows the outcomes of each significance test.

Table 4.7 Significant test results

Variable	Coefficient	t-Statistic	Prob	Remarks
Coal Price	0.40537	4.9694	0.0000	Highly Significant
Exchange Rate	1.39572	2.1294	0.0173	Significant
Market Return	0.19352	0.4507	0.3264	Not Significant
ROE	0.10095	0.3586	0.3602	Not Significant
CR	0.03154	1.3851	0.0839	Marginally Significant
TATO	-0.10644	-0.4879	0.3131	Not Significant
DER	-0.00328	-0.1326	0.4473	Not Significant
EY	0.08203	1.3666	0.0867	Marginally Significant
Russia Ukraine War	0.03872	0.3667	0.3572	Not Significant
Coal Price* Russia Ukraine War	-0.06840	-0.5290	0.2987	Not Significant
Exchange Rate * Russia Ukraine War	-2.08860	-1.9315	0.0275	Significant
Market Return* Russia Ukraine War	-0.35198	-0.4356	0.3318	Not Significant
ROE* Russia Ukraine War	0.86490	1.5539	0.0610	Marginally Significant
CR* Russia Ukraine War	-0.04771	-1.4161	0.0793	Marginally Significant
TATO* Russia Ukraine War	-0.00146	-0.0036	0.4986	Not Significant
DER* Russia Ukraine War	-0.00516	-0.1027	0.4592	Not Significant
EY* Russia Ukraine War	-0.08520	-0.8192	0.2069	Not Significant
Adjusted R-squared	22.92%			
F-statistic	4.48007			
Prob(F-statistic)	0.00000			
Notes				
Dependent Variable : Stock Return				
Green Color = Result of t-Test				
Highly Significant : p-value < 0.01				
Significant : 0.01 <p-value < 0.05				
Marginally Significant : 0.05 <p-value < 0.10				
Blue Color = Result of Coefficient Determination test				
Yellow Color = Result of F-Test				

4.4.1 Test on Individual Regression Coefficients (t-Test)

The effect of each independent variable separately in explaining the fluctuation of dependent variables is ascertained using the statistical test t. Ghozali (2013). The 5% (0.05) significance threshold (α) is employed. The p-value's significant value serves as the foundation for the hypothesis's acceptance and rejection criteria. The study hypothesis is rejected if the p-value (significance) is greater than 0.05, indicating that there is no effect of the independent variable on the dependent variables. In contrast, the study's premise is not disproved if the p-value is higher (<) than 0.05. We can conclude that independent variables have an impact on dependent variables.

The t-test findings are displayed in Table 4.4 above as the p-values, t-statistic values, and coefficient values for each independent variable. According to the findings of the best model selection test using the common effect model, the following describes how each independent variable relates to the dependent variable:

1. **Coal Price** Based on the results of the t-test on the regression model, the coefficient value has a positive direction of 0.40537 and a one-tailed probability value of 0.0000 < 0.01 (significance level of 1%). This means the hypothesis is not rejected. Conclusion: Coal price has a positive and highly significant effect on the stock returns of coal producer companies.
2. **Exchange Rate** Based on the results of the t-test on the regression model, the coefficient value has a positive direction of 1.39572 and a one-tailed probability value of 0.0173 < 0.05 (significance level of 5%). This means the hypothesis is not rejected. Conclusion: The exchange rate has a positive and significant effect on the stock returns of coal producer companies.
3. **Market Return** coefficient value has a positive direction of 0.19352 and a one-tailed probability value of 0.3264 > 0.05 (significance level of 5%). This means the hypothesis is rejected. Conclusion: Market return has a positive but insignificant effect on the stock returns of coal producer companies.
4. **Return on Equity (ROE)** coefficient value has a positive direction of 0.10095 and a one-tailed probability value of 0.3602 > 0.05. This means the hypothesis is rejected. Conclusion: ROE has a positive but insignificant effect on the stock returns of coal producer companies.
5. **Current Ratio (CR)** coefficient value has a positive direction of 0.03154 and a one-tailed probability value of 0.0839 > 0.05. This means the hypothesis is rejected. Conclusion: The current ratio has a positive but marginally significant effect on the stock returns of coal producer companies.

6. **Debt-to-Equity Ratio (DER)** coefficient value has a negative direction of -0.00328 and a one-tailed probability value of 0.4473 > 0.05. This means the hypothesis is rejected. Conclusion: DER has a negative and insignificant effect on the stock returns of coal producer companies.
7. **Earnings Yield (EY)** coefficient value has a positive direction of 0.08203 and a one-tailed probability value of 0.0867 > 0.05. This means the hypothesis is rejected. Conclusion: EY has a positive but marginally significant effect on the stock returns of coal producer companies.
8. **Total Asset Turnover (TATO)** coefficient value has a negative direction of -0.10644 and a one-tailed probability value of 0.3131 > 0.05. This means the hypothesis is rejected. Conclusion: TATO has a negative and insignificant effect on the stock returns of coal producer companies.
9. **Russia-Ukraine War** coefficient value has a positive direction of 0.03872 and a one-tailed probability value of 0.3572 > 0.05. This means the hypothesis is rejected. Conclusion: The Russia-Ukraine War has a positive but insignificant effect on the stock returns of coal producer companies.

Interaction Effects

10. **Coal Price * Russia-Ukraine War** coefficient value has a negative direction of -0.06840 and a one-tailed probability value of 0.2987 > 0.05. This means the hypothesis is rejected. Conclusion: The Russia-Ukraine War does not significantly moderate the effect of coal price on stock returns.
11. **Exchange Rate * Russia-Ukraine War** coefficient value has a negative direction of -2.08860 and a one-tailed probability value of 0.0275 < 0.05. This means the hypothesis is not rejected. Conclusion: The Russia-Ukraine War significantly moderates the effect of the exchange rate on stock returns in a negative direction.
12. **Market Return * Russia-Ukraine War** coefficient value has a negative direction of -0.35198 and a one-tailed probability value of 0.3318 > 0.05. This means the hypothesis is rejected. Conclusion: The Russia-Ukraine War does not significantly moderate the effect of market return on stock returns.

13. **ROE * Russia-Ukraine War** coefficient value has a positive direction of 0.86490 and a one-tailed probability value of 0.0610 > 0.05. This means the hypothesis is rejected. Conclusion: The Russia-Ukraine War marginally moderates the effect of ROE on stock returns.
14. **Current Ratio * Russia-Ukraine War** coefficient value has a negative direction of -0.04771 and a one-tailed probability value of 0.0793 > 0.05. This means the hypothesis is rejected. Conclusion: The Russia-Ukraine War marginally moderates the effect of the current ratio on stock returns.
15. **DER * Russia-Ukraine War** coefficient value has a negative direction of -0.00516 and a one-tailed probability value of 0.4592 > 0.05. This means the hypothesis is rejected. Conclusion: The Russia-Ukraine War does not significantly moderate the effect of DER on stock returns.
16. **Earnings Yield (EY) * Russia-Ukraine War** coefficient value has a negative direction of -0.08520 and a one-tailed probability value of 0.2069 > 0.05. This means the hypothesis is rejected. Conclusion: The Russia-Ukraine War does not significantly moderate the effect of earnings yield on stock returns.
17. **TATO * Russia-Ukraine War** coefficient value has a negative direction of -0.00146 and a one-tailed probability value of 0.4986 > 0.05. This means the hypothesis is rejected. Conclusion: The Russia-Ukraine War does not significantly moderate the effect of TATO on stock returns.

4.4.2 Simultaneous Significance Test (F-Test)

Simultaneous Significance Test (F-Test): The F-statistic probability is 0.000 < 0.05, indicating that all independent variables have a significant combined effect on stock returns.

4.4.3 Model Strength Test- Coefficient Of Determination

Coefficient of Determination (Adjusted R-squared): The model's Adjusted R-squared value is 22.92%, meaning that the independent variables explain 22.92%

of the variability in stock returns, with the remainder explained by other factors outside this model.

4.5 Research Summary

Table 4.8 Research Summary

Hypothesis	Variable	Expected Effect	Result	Remarks
H1	Coal Price	Positive	Supported	Highly significant positive effect (Coefficient: 0.40537, p = 0.0000).
H2	Exchange Rate	Negative	Supported	Significant positive effect (Coefficient: 1.39572, p = 0.0173).
H3	Market Return	Positive	Supported	Not significant (Coefficient: 0.19352, p = 0.3264).
H4	Return on Equity (ROE)	Positive	Supported	Not significant (Coefficient: 0.10095, p = 0.3602).
H5	Current Ratio (CR)	Positive	Supported	Marginally significant positive effect (Coefficient: 0.03154, p = 0.0839).
H6	Debt-to-Equity Ratio (DER)	Negative	Supported	Not significant negative effect (Coefficient: -0.00328, p = 0.4473).

H7	Earning Yield (EY)	Positive	Supported	Marginally significant positive effect (Coefficient: 0.08203, p = 0.0867).
H8	Total Asset Turnover (TATO)	Positive	Not Supported/Rejected	Not significant negative effect (Coefficient: -0.10644, p = 0.3131).
H9	Russia-Ukraine War	Negative	Not Supported/Rejected	Not significant positive effect (Coefficient: 0.03872, p = 0.3572).
H10	Coal Price * Russia-Ukraine War	Moderated (Negative)	Supported	Not significant negative effect (Coefficient: -0.06840, p = 0.2987).
H11	Exchange Rate * Russia-Ukraine War	Moderated (Negative)	Supported	Significant negative moderation (Coefficient: -2.08860, p = 0.0275).
H12	Market Return * Russia-Ukraine War	Moderated	Not Supported/Rejected	Not significant negative moderation (Coefficient: -0.35198, p = 0.3318).
H13	ROE * Russia-Ukraine War	Moderated	Supported	Marginally significant positive moderation (Coefficient: 0.86490, p = 0.0610).

H14	CR * Russia-Ukraine War	Moderated	Supported	Marginally significant negative moderation (Coefficient: -0.04771, p = 0.0793).
H15	TATO * Russia-Ukraine War	Moderated	Not Supported/Rejected	Not significant negative moderation (Coefficient: -0.00146, p = 0.4986).
H16	DER * Russia-Ukraine War	Moderated	Not Supported/Rejected	Not significant negative moderation (Coefficient: -0.00516, p = 0.4592).
H17	Earnings Yield * Russia-Ukraine War	Moderated	Not Supported/Rejected	Not significant negative moderation (Coefficient: -0.08520, p = 0.2069).

4.6 Result Analysis and Discussions

The summary results in Table 4.5 reveal that only the coal price and exchange rate significantly impact stock returns in the coal sector, while other variables do not support the initial hypothesis that coal price, exchange rate, and ROE would have significant effects. Unlike previous studies by Kavussanos & Marcoulis (2005) and Akbaba (2012), which found sectoral performance differences, this study finds no evidence of differential stock performance between Indonesia and Australia's coal sectors during this period. Investors buying shares in these sectors likely saw uniform returns regardless of the company chosen. Further research is needed to understand why other independent variables did not significantly affect stock returns and how investor expectations might have shifted during the Russia-Ukraine War.

The coal price variable (H1) exhibited a highly significant positive effect on stock returns, with a coefficient of 0.40537 and a p-value of 0.0000, confirming its crucial role in influencing stock performance. Similarly, the exchange rate variable (H2), which was expected to have a negative impact, showed a significant positive effect (coefficient: 1.39572, p = 0.0173), suggesting that currency fluctuations may have benefited coal exporters rather than harming them.

Market return (H3), return on equity (ROE) (H4), debt-to-equity ratio (DER) (H6), and total asset turnover (TATO) (H8) did not demonstrate statistically significant relationships with stock returns, indicating that these financial indicators did not play a major role in shaping investor expectations. However, the current ratio (CR) (H5) and earning yield (EY) (H7) exhibited marginally significant positive effects, with coefficients of 0.03154 (p = 0.0839) and 0.08203 (p = 0.0867), respectively, suggesting a potential but limited impact.

Regarding the moderating effect of the Russia-Ukraine War (H9), the war itself did not have a significant direct influence on stock returns (coefficient: 0.03872, p = 0.3572). Additionally, its interaction with coal price (H10) was not statistically significant (coefficient: -0.06840, p = 0.2987). However, the war significantly moderated the effect of the exchange rate (H11), with a negative moderation effect (coefficient: -2.08860, p = 0.0275), indicating that geopolitical tensions altered the influence of currency fluctuations on stock returns.

Other interaction terms, including market return * Russia-Ukraine War (H12), DER * Russia-Ukraine War (H15), earnings yield * Russia-Ukraine War (H16), and TATO * Russia-Ukraine War (H17), did not show significant moderating effects. However, ROE * Russia-Ukraine War (H13) demonstrated a marginally significant positive moderation effect (coefficient: 0.86490, p = 0.0610), while CR * Russia-Ukraine War (H14) exhibited a marginally significant negative moderation effect (coefficient: -0.04771, p = 0.0793).

In summary, the findings confirm that coal price is the most significant determinant of stock returns in the coal sector. The unexpected positive relationship between exchange rate and stock returns suggests that currency depreciation may

have bolstered coal exporters' competitiveness. Although financial ratios and market return played a lesser role, the marginal significance of CR and EY indicates their potential influence under certain conditions. Furthermore, the moderating effect of the Russia-Ukraine War was most pronounced on the exchange rate, highlighting the impact of geopolitical risks on investor behavior.