CHAPTER 4

FINDING, ANALYSIS, AND DISCUSSION

4.1 Research Sample Description

This research observation consists of the cross-section (ten companies) data and periods from Q1 2014 to Q4 2023 with a total observation of 336 data (original 350 data and excluded 14 outliers data), based on the criteria:

1. Consumer Cyclical Industry listed in IDX period 2014-2023.
2. Have ESG Score or categorized as ESG Leader Stock.
3. Company still active in 2024.

4.2. Descriptive Statistics Analysis

Descriptive statistics make it easier to describe and summarize data by offering a broad picture of how the data behaves rather than specific data points or observations (Cooksey, 2020). Descriptive statistics consist of the calculation of statistical measurements, including arithmetic mean, median, maximum, minimum, and standard deviation. Microsoft Excel, EViews, and SPSS were used to process the data in this research.

4.2.1 Descriptive Statistics Analysis Model 1

Table 4.1 Descriptive Statistics of Regression Model 1

	N	Minimum	Maximum	Mean	Std. Deviation
Stock Return	336	(0.6283)	0.5833	0.0045	0.2019
Asset Efficiency	336	0.0200	1.0920	0.2984	0.2020
Liquidity	336	0.7100	21.9000	2.6180	2.3784
ROE	336	(35.1100)	67.7500	11.2515	13.4724
ExchRate	336	4.0571	4.2140	4.1504	0.0311
InterestRate	336	(1.4559)	(1.1107)	(1.2964)	0.1095
Market Return	336	(0.2795)	0.2277	0.0163	0.0762

Source: Author (SPSS result)

Table 4.1 shows that the average stock return of the consumer cyclical industry from 2014 to 2023 is 0.0045 (0.45%), with the lowest return being -0.6283 (-62.83%) and the highest being 0.5833 (58.33%). This shows that the stock return of the consumer cyclical industry is spread out widely.

4.3 Panel Data Regression Analysis

Panel data is a subset of longitudinal data in which the same subjects are observed repeatedly, it consists of different cross-sections across time (Frees, 2004 If the cumulative unit time is the same for each participant, the data is called a balanced panel, if the cumulative unit time is different for each participant, the data is called as an unbalanced panel (Zulfikar, 2019).

The panel data in this study consists of ten companies of consumer cyclical industries in Indonesia for the period 2014-2023. The cross-section is ten companies while the time series is ten years (period 2014-2023). There is one company (BOGA) that started at the end of December 2018 and two companies (FILM and MAPA) started in the middle of 2018, while the other seven companies started in January 2014, thus it is categorized as an unbalanced panel.

4.3.1 Panel Data Regression Estimation Approach

4.3.1.1 Panel Data Regression Model 1

The panel data regression model must go through the estimation approach which consists of:

4.3.1.1.1 Common Effect Model (CEM)

The common effect model (CEM) does not take into account time and individual aspects, it is assumed that the behavior of the data is the same over the various periods. CEM can use the Ordinary Least Squares (OLS) approach or the Least Squares Technique to estimate the panel data model. (Zulfikar, 2019). Yang et al. (2020) revealed that the common-effect model (CEM) simplifies meta-analysis by assuming consistent impact estimates across studies. In other words, we assume that there is no variability in effect sizes between the studies.

Table 4.2 Common Effect Model (CEM) of Model 1

STOCK_RETURN = C(1) + C(2)*ASSET_EFFICIENCY + C(3)*LIQUIDITY + C(4)*ROE + C(5)*EXCHRATE + C(6)*INTERESTRATE + C(7)*MARKET_RETURN

Variable	Prediction	Coefficient	p-value
Constant		-1.9449	0.0995
Asset Efficiency	+	0.0386	0.2303
Liquidity	-	-0.0067	0.0655
ROE	+	0.0017	0.0075
ExchRate	-	0.4289	0.1283
InterestRate	-	-0.1033	0.1476
Market Return	+	1.3307	0.0000
Adj R-Squared		0.2600	
S.E of regression		0.1737	
S.D dependent var		0.2019	
F-Statistic		20.6182	
Prob (F-Statistic)		0.0000	

Source: Author (EViews process)

4.3.1.1.2 Fixed Effect Model (FEM)

Fixed Effect Model (FEM) assumes that differences between participants can be accommodated by varied intercepts. FEM is different from CEM, but still uses Ordinary Least Squares principles. To estimate the FEM with varied intercepts amongst participants, the dummy variable technique is used. (Zulfikar, 2019). Yang et al. (2020) revealed that the fixed-effects model (FEM) bridges the gap between CEM and REM by assuming that individual study effect sizes are fixed but not equal.

4.3.1.1.3 Random Effect Model (REM)

Statistical heterogeneity occurs when the effect sizes vary between studies. Heterogeneity typically leads to the assumption that study-specific impact sizes follow a normal distribution, which yields a Random Effect Model (REM) (Yang et al., 2020).

4.3.2. Regression Model Selection

As discussed in the research procedure in the previous chapter, this study will do a regression estimation selection of the common effect model, fixed effect model, and random effect model using regression model selection of the Chow Test, Hausman Test, and Lagrange Multiplier Test. Refer to Napitupulu et al. (2021) and Baltagi (2008), model selection is based on test results shown in Table 4.3.

Table 4.3 Model Selection Test Decisions

Test	Result	Decision	Notes
Chow Test	Prob > 0.05 Prob < 0.05	CEM FEM	If the result is CEM, then directly do the Lagrange Multiplier Test. If the result is FEM, then do Hausman Test.

Hausman Test	Prob > 0.05 Prob < 0.05	REM FEM	If the result is REM, then continue with the Lagrange Multiplier Test. If the result is FEM, then finish.
Lagrange Multiplier	Prob > 0.05 Prob < 0.05	CEM REM	

Adapted from: Napitupulu et al. (2021)

4.3.2.1 Chow Test

The Chow test is used to choose the best model between the Common Effect Model (CEM) and the Fixed-Effect Model (FEM).

H0: Select CEM ($p > 0.05$)

H1: Select FEM ($p < 0.05$)

Table 4.4 Chow Test Result

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

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.792429	(9,320)	0.6236
Cross-section Chi-square	7.406223	9	0.5949

Source: Author (EViews process)

Table 4.4 shows that $p > 0.05$ which means that H0 is accepted and CEM is selected. Thus it is irrelevant to do the Hausman Test and the Lagrange Multiplier Test can be proceeded afterwards.

4.3.3 Lagrange Multiplier Test

The Lagrange multiplier test is used to choose the best model between the Common Effect Model (CEM) and the Random-Effect Model (REM).

H0: Select CEM ($p > 0.05$)

H1: Select REM ($p < 0.05$)

Table 4.5 Lagrange Multiplier Test Result

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	0.936749	0.101548	1.038297
	(0.3331)	(0.7500)	(0.3082)
Honda	-0.967858	-0.318666	-0.909710
	(0.8334)	(0.6250)	(0.8185)
King-Wu	-0.967858	-0.318666	-1.011852
	(0.8334)	(0.6250)	(0.8442)
Standardized Honda	-0.482501	0.087325	-5.771486
	(0.6853)	(0.4652)	(1.0000)
Standardized King-Wu	-0.482501	0.087325	-5.084827
	(0.6853)	(0.4652)	(1.0000)
Gourieroux, et al.	--	--	0.000000
			(1.0000)

Source: Author (EViews process)

Table 4.5 shows that $p > 0.05$ means that H0 is accepted and CEM is selected. This verifies the earlier Chow test, which found that the Common Effect Model (CEM) best fits this study.

4.4 Classical Assumption Tests Model 1

Classical assumption tests are performed to ensure that the estimated coefficients are valid, reliable, and unbiased. The classical assumption tests consist of the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. (Sholihah, et al., 2023).

4.4.1 Normality Test Model 1

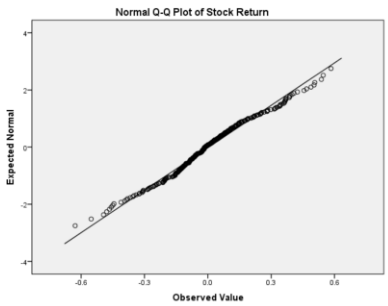
The purpose of the normality test is to assess whether the residual variable in a regression model follows a normal distribution. The Kolmogorov-Smirnov formula is used to determine the normality of data distribution. A significance value greater than 0.05 indicates normal distribution, while a significance value less than 0.05 indicates non-normal distribution (Ghozali, 2017; Sholihah, 2023).

Normality tests can be done through several methods:

1. Normality Test with Graph

Referring to Suliyanto (2011) and Sholihah (2023), a normality test can be done by using a histogram with vertical axes for dependent variables and horizontal axes for standardized residual values. The normal distribution is represented as a straight diagonal line from the bottom left to the upper right. The cumulative distribution of the real data is represented by a chart. If the data is normal, the line describing the data will align with the diagonal line.

Figure 4.1 Normal Q-Q Plot of Stock Return SPSS Result Model 1



Source: Author (SPSS process)

Figure 4.1 shows that the majority of dots aligned with the reference line, indicating that the normality test passes.

2. Normality Jarque Bera Test

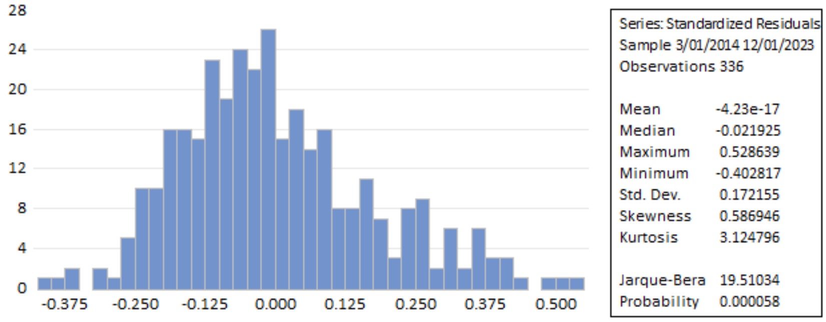
Referring to Suliyanto (2011) and Sholihah (2023), a normality test can be done by using the Jarque Bera Test. Thomson (2013) stated that to determine the assumption of normally distributed errors, we examine the p-value. If the p-value > 0.05, it means that the residual error is normally distributed.

Hypothesis:

H0: Residual data is normally distributed

Ha: Residual data is not normally distributed

Figure 4.2 Normality Jarque Bera Test EViews Result Model 1



Source: Author (EViews process)

Figure 4.2 shows that the residual error does not pass the normal distribution ($p<0.05$). Big data results are typically not normal. The histogram shows that the distribution was similar to the normal curve. Thus, the data can be utilized for regression analysis.

4.4.2 Multicollinearity Test Model 1

Ghozali (2017) stated that the multicollinearity test aims to determine whether a regression model has a strong correlation with the independent variables used. If the chosen regression model has a high correlation with the base variable, it may include multicollinear effects. The regression model is considered good if there is no correlation between variables.

Hypothesis:

H0: There is no multicollinearity

H1: There is multicollinearity

According to Shrestha (2020), a correlation coefficient method can detect multicollinearity.

Table 4.6 Multicollinearity Test EViews Model 1

	Asset Efficiency	Liquidity	ROE	ExchRate	InterestRate	Market Return
Asset Efficiency	1.0000	-0.4163	0.0986	-0.0206	0.0340	-0.0102
Liquidity	-0.4163	1.0000	0.0301	0.0891	0.0344	-0.0025
ROE	0.0986	0.0301	1.0000	-0.1151	0.0631	0.0944
ExchRate	-0.0206	0.0891	-0.1151	1.0000	-0.3791	-0.3957
InterestRate	0.0340	0.0344	0.0631	-0.3791	1.0000	-0.0984
Market Return	-0.0102	-0.0025	0.0944	-0.3957	-0.0984	1.0000

Source: Author (EViews process)

Table 4.6 shows that the correlation is below 0.9, thus it means that there is no multicollinearity between variables and this study passed the multicollinearity test.

4.4.3 Heteroscedasticity Test Model 1

The heteroscedasticity test is aimed at determining whether a regression model has heteroscedasticity. Heteroscedasticity is the condition where the variance of residuals is not constant within all levels of independent variables. Heteroscedasticity impacted bias and inconsistent standard error, which affected the reliability of a regression model. (Basuki and Prawoto, 2017).

Hypothesis:

H0: There is no heteroscedasticity

Ha: There is heteroscedasticity

Refer to Suliyanto (2011), there are several ways to do the heteroscedasticity test, one of which is through the Bresch-Pagan-Godfrey test.

Table 4.7 Heteroscedasticity Test EViews Model 1

Heteroskedasticity Test: White
Null hypothesis: Homoskedasticity

F-statistic	1.224954	Prob. F(27,308)	0.2082
Obs*R-squared	32.58175	Prob. Chi-Square(27)	0.2112
Scaled explained SS	33.18752	Prob. Chi-Square(27)	0.1910

Source: Author (EViews process)

Table 4.7 shows the Prob Chi-Square of Obs R Squared > 0.05, which means that this model passes the heteroscedasticity test.

4.4.4 Autocorrelation Test Model 1

The autocorrelation test was performed to determine if there was a series connection between the variables and error terms (Burton, 2021). According to the no autocorrelation OLS assumption, the error terms of different observations should be uncorrelated. To provide reliable estimates, the regression model's variance should be constant, with no heteroscedastic errors. The OLS assumption implies that the error terms are independent and identically distributed (IID).

The hypothesis for the autocorrelation test is:

H0: There is no autocorrelation

H1: There is autocorrelation

Table 4.8 Auto Correlation Test EViews Model 1

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.049771	Prob. F(2,327)	0.9515
Obs*R-squared	0.102251	Prob. Chi-Square(2)	0.9502

Source: Author (EViews process)

Table 4.8 shows the Prob Chi-Square of Obs R Squared > 0.05, which means that this model passes the autocorrelation test.

4.5 Result Analysis

4.5.1 Significance Test Model 1

The significance test for this study was conducted using EViews, which consists of three tests: simultaneous test (F-Test), coefficient of determination (R^2 Test), and individual significance test (t-test).

Table 4.9 Selected Model-Common Effect Model (CEM) Model 1

STOCK_RETURN = C(1) + C(2)*ASSET_EFFICIENCY + C(3)*LIQUIDITY + C(4)*ROE + C(5)*EXCHRATE + C(6)*INTERESTRATE + C(7)*MARKET_RETURN

Variable	Prediction	Coefficient	p-value
Constant		-1.9449	0.0995
Asset Efficiency	+	0.0386	0.2303
Liquidity	-	-0.0067	0.0655
ROE	+	0.0017	0.0075
ExchRate	-	0.4289	0.1283
InterestRate	-	-0.1033	0.1476
Market Return	+	1.3307	0.0000
Adj R-Squared		0.2600	
S.E of regression		0.1737	
S.D dependent var		0.2019	
F-Statistic		20.6182	
Prob (F-Statistic)		0.0000	

Source: Author (EViews process)

4.5.1.1 Simultaneous Test (F-Test) Model 1

Simultaneous Test (F-Test) measures whether all independent variables simultaneously impacted the dependent variables.

The hypothesis for F-Test :

H0: $\beta i = 0 \quad i = 1,2,3..,k$

H1: $\beta i \neq 0$ for at least 1 βi

if $p<0.05$ then H0 is rejected

Table 4.9 shows that Prob (F-Statistic) is 0.0000 which is < 0.05 meaning that all variables (asset efficiency, liquidity, profitability, exchange rate, interest rate, and market return) simultaneously affected the stock return.

4.5.2.1 Coefficient of Determination (Adjusted R Squared) Model 1

The coefficient of determination (Adjusted R2) test determines how well the regression model explains the relationship between the independent and dependent variables.

Table 4.9 shows that the value of adjusted R square 0.2600 (26%) indicates that the selected model in this research can explain 26% while the other 74% is explained by the other variables outside this research model.

4.5.3.1 Standard Error of Regression Model 1

Table 4.9 shows the Standard Error of Regression value of 0.1737 (17.37%) and the Standard Deviation value of 0.2019 (20.19%). Standard Error of Regression (17.37%) lower than Standard Deviation (20.19%) can be presumed that the regression model is valid as the predictor model.

4.5.4.1 Individual significance test (t-test) Model 1

The statistical t-test is aimed to measure the individual impact of an independent variable on the variation of dependent variables (Ghozali, 2013).

The hypothesis for the t-test:

H0: $\beta i = 0$, $i = 1,2,3..,k$

H1: $\beta i \neq 0$

if $p < 0.05$ then H0 is rejected

1. Asset Efficiency

Table 4.9 shows the coefficient of asset efficiency (total asset turnover) is 0.0386 (3.9%) which means that for every 1 unit increase of asset efficiency, the stock return will be increased by 3.9. Table 4.7 shows a probability significance value of 0.2303 > 0.05 meaning that H0 fails to be rejected. It can be concluded that asset efficiency (total asset turnover) has a positive and insignificant impact on the stock return of the consumer cyclical industry in Indonesia during the period 2014-2023. The result is not aligned with the hypothesis and is supported by the study of Widianti et al. (2019) which showed that asset efficiency (total asset turnover) does not significantly affect stock return.

2. Liquidity

Table 4.9 shows the coefficient of Liquidity (Current Ratio) is -0.0067 (-0.7%) which means that for every 1 unit decrease in liquidity; the stock return will be increased by 0.7. Table 4.7 shows a probability significance value of 0.0655 > 0.05 meaning that H0 fails to be rejected. It can be concluded that liquidity has a negative and insignificant impact on the stock return of the consumer cyclical industry in Indonesia period 2014-2023. The result is not aligned with the hypothesis and is supported by the study of Thamrin and Sembel (2020), which shows that liquidity (Current ratio) does not significantly affect stock return.

3. Profitability (Return on Equity)

Table 4.9 shows the coefficient of Return on Equity (ROE) is 0.0017 (0.2%) which means that for every 1 unit increase in ROE; the stock return will be increased by 0.2. Table 4.7 shows a probability significance value of 0.0075 < 0.05 meaning that H0 is rejected. It can be concluded that Return on Equity (ROE) has a positive and significant effect on the stock return of the consumer cyclical industry in Indonesia period 2014-2023. This result strengthens the hypothesis that Return on Equity (ROE) has a positive and significant impact on stock return. This is also aligned with the study by Silver et al. (2022) that found profitability significantly positively affects stock returns.

4. Exchange Rate

Table 4.9 shows the coefficient of the Exchange Rate is 0.4289 (42.9%) which means that for every 1 unit increase in Exchange Rate; the stock return will be increased by 42.9. Table 4.7 shows a probability significance value of 0.1283 > 0.05 meaning that H0 fails to be rejected. It can be concluded that Exchange Rate has a positive and not significant effect on the stock return of the consumer cyclical industry in Indonesia period 2014-2023. The result is not aligned with the hypothesis and this is supported by the study of Bello (2017) which showed that the exchange rate (Yuan) does not significantly affect U.S. stock return.

5. Interest Rate

Table 4.9 shows the coefficient of the interest rate is -0.1033 (10.3%) which means that for every 1 unit increase in the Interest Rate; the stock return will increase by 10.3. Table 4.7 shows a probability significance value of 0.1476 > 0.05 meaning that H0 fails to be rejected. It can be concluded that the interest rate has a negative and not significant effect on the stock return of the consumer cyclical industry in Indonesia period 2014-2023. The result is not aligned with the hypothesis and this is supported by the study of Arysoma (2018) and the study of Thamrin and Sembel (2020).

6. Market Return

Table 4.9 shows the coefficient of 1.3307 (133%) which means that for every 1 unit increase in Market Return; the stock return will be increased by 133. Table 4.7 shows a probability significance value of 0.0000 < 0.05 meaning that H0 is rejected. It can be concluded that market return has a positive and significant effect on the stock return of the consumer cyclical industry in Indonesia period 2014-2023. This result is aligned with the hypothesis and supported by the study of Thamrin and Sembel (2020) and Ihsan et al. (2023).

4.2.2 Descriptive Statistics of Model 2

Table 4.10 Descriptive Statistics of Model 2

	N	Minimum	Maximum	Mean	Std. Deviation
Stock Return	336	-0.6283	0.5833	0.0045	0.2019
ExchRate	336	4.0571	4.2140	4.1504	0.0311
InterestRate	336	-1.4559	-1.1107	-1.2964	0.1095
Market Return	336	-0.2795	0.2277	0.0163	0.0762
ExchxCovid	336	0.0000	4.2140	1.9002	2.0813
IntxCovid	336	-1.4559	0.0000	-0.6213	0.6833
MarkRetxCovid	336	-0.2795	0.2277	0.0066	0.0641

Source: Author (SPSS result)

Table 4.10 shows that the average stock return of the consumer cyclical industry from 2014 to 2023 is 0.0045 (0.45%), with the lowest return being -0.6283 (-62.83%) and the highest being 0.5833 (58.33%). This shows that the stock return of the consumer cyclical industry is spread out widely.

4.3.1.2 Panel Data Regression Model 2

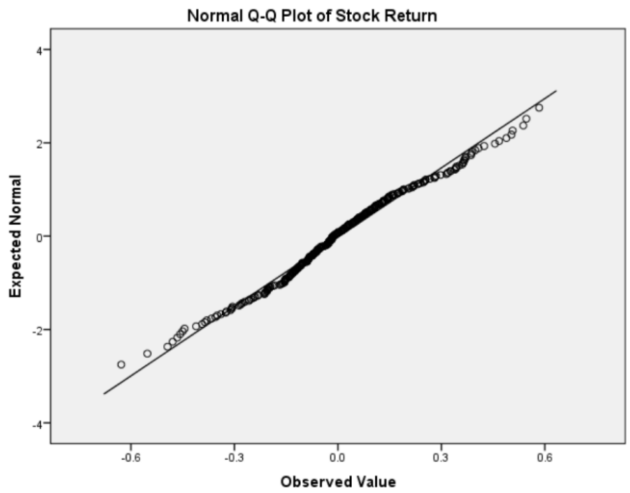
The panel data regression model must go through the estimation approach which consists of the Common Effect Model (CEM), Fixed Effect Model (FEM), Random Effect Model (REM), and go through regression model selection through Chow Test, Hausman Test, and Lagrange Multiplier Test. The best model selection after going through the test is the Common Effect Model (CEM).

4.4.1.2 Classical Assumption Test Model 2

4.4.1.2.1 Normality Test Model 2

1. Normality Test with Graph

Figure 4.3 Normal Q-Q Plot of Stock Return SPSS Result Model 2



Source: Author (SPSS result)

Figure 4.3 shows that the majority of dots aligned with the reference line, indicating that the normality test passes.

1. Normality Jarque Bera Test

Figure 4.4 Normality Jarque Bera Test EViews Result Model 2

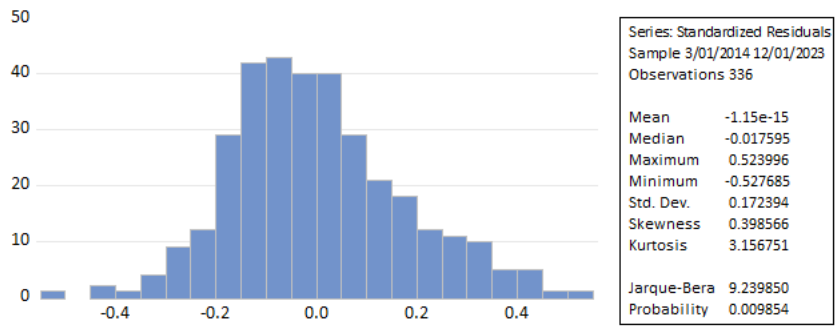


Figure 4.4 shows that the residual error does not pass the normal distribution ($p<0.05$). Big data results are typically not normal. The histogram shows that the distribution was similar to the normal curve. Thus, the data can be utilized for regression analysis.

4.4.1.2.2 Multicollinearity Test

Table 4.10 Multicollinearity Test Model 2

	ExchRate	InterestRate	Market Return	ExchxCovid	IntxCovid	MarkRetxCovid
ExchRate	1.0000	-0.3791	-0.3957	0.6663	-0.6401	-0.1974
InterestRate	-0.3791	1.0000	-0.0984	-0.5672	0.6181	-0.1705
Market Return	-0.3957	-0.0984	1.0000	-0.0251	0.0073	0.8279
ExchxCovid	0.6663	-0.5672	-0.0251	1.0000	-0.9955	0.1090
IntxCovid	-0.6401	0.6181	0.0073	-0.9955	1.0000	-0.1296
MarkRetxCovid	-0.1974	-0.1705	0.8279	0.1090	-0.1296	1.0000

Source: Author (EViews process)

Table 5.0 shows that most of the variables have a correlation below 0.9, thus we can presume that this study passed the multicollinearity test.

4.4.1.2.3 Heteroscedasticity Test

Table 4.11 Heteroscedasticity Test EViews Model 2

Heteroskedasticity Test: White
Null hypothesis: Homoskedasticity

F-statistic	1.192125	Prob. F(17,318)	0.2689
Obs*R-squared	20.13036	Prob. Chi-Square(17)	0.2676
Scaled explained SS	20.94678	Prob. Chi-Square(17)	0.2287

Table 5.1 shows the Prob Chi-Square of Obs R Squared > 0.05, which means that this model passes the heteroscedasticity test.

4.4.1.2.4 Autocorrelation Test

Table 4.12 Auto Correlation Test EViews Model 2

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.290442	Prob. F(2,327)	0.7481
Obs*R-squared	0.595814	Prob. Chi-Square(2)	0.7424

Source: Author (EViews process)

Table 5.2 shows the Prob Chi-Square of Obs R Squared > 0.05, which means that this model passes the autocorrelation test.

4.5.2 Significance Test Model 2

The significance test for this study was conducted using EViews, which consists of three tests: simultaneous test (F-Test), coefficient of determination (R^2 Test), and individual significance test (t-test).

Table 4.13 Selected Model - Common Effect Model (CEM) Model 2

STOCK_RETURN = C(1) + C(2)*EXCHRATE + C(3)*INTERESTRATE + C(4)*MARKET_RETURN + C(5)*EXCHXCOVID + C(6)*INTXCOVID + C(7)*MARKRETXCOVID

Variable	Coefficient	p-value
Constant	1.7170	0.4388
EXCHRATE	-0.5323	0.3369
INTERESTRATE	-0.3662	0.0232
MARKET RETURN	1.1148	0.0000
EXCHXCOVID	0.1871	0.0159
INTXCOVID	0.5685	0.0177
MARKRETXCOVID	0.2057	0.4681
Adj R-Squared	0.2495	
S.E of regression	0.1750	
S.D dependent var	0.2019	
F-Statistic	19.5598	
Prob (F-Statistic)	0.0000	

Source: Author (EViews process)

4.5.2.2 Simultaneous Test (F-Test) Model 2

Table 4.13 shows that Prob (F-Statistic) is 0.0000 which is < 0.05 meaning that all variables (Exchange Rate, Interest Rate, Market Return, and moderating effect of COVID-19 on the variables) simultaneously affected the stock return.

4.5.2.1 Coefficient of Determination (Adjusted R Squared) Model 2

Table 4.13 shows that the value of adjusted R square 0.2495 (24.95%) indicates that the selected model in this research can explain 24.95% while the other 75.05% is explained by the other variables outside this research model.

4.5.3.1 Standard Error of Regression Model 2

Table 4.13 shows the Standard Error of Regression value of 0.1750 (17.50%) and the Standard Deviation value of 0.2019 (20.19%). Standard Error of Regression (17.42%) lower than Standard Deviation (20.19%) can be presumed that the regression model is valid as a predictor model.

4.5.4.1 Individual significance test (t-test) Model 2

1. Exchange Rate x COVID-19

Table 4.13 shows the coefficient of the Exchange Rate and COVID-19 as moderating variables positive, with a p-value of 0.0159 < 0.05, meaning that H0 is rejected. It can be concluded that the Exchange Rate moderated by COVID-19 has a positive and statistically significant effect on the stock return of the consumer cyclical industry in Indonesia from 2014 to 2023.

2. Interest Rate x COVID-19

Table 4.13 shows the coefficient of the Interest Rate and COVID-19 as moderating variable, positive and p-value of 0.0232 < 0.05, meaning that H0 is rejected. It can be concluded that the Interest Rate moderated by COVID-19 has a positive and statistically significant effect on the stock return of the consumer cyclical industry in Indonesia period 2014-2023. This is related to the Indonesia central bank policy of reducing interest rates during the pandemic to align with accommodative and macroprudential policies to support economic financing.

3. Market Return x COVID-19

Table 4.13 shows the coefficient of the Market Return and COVID-19 as moderating variable negative and p-value of 0.4488 > 0.05 meaning that H0 fails to be rejected. It can be concluded that the Market

Return moderated by COVID-19 has a negative and statistically not significant effect on the stock return of the consumer cyclical industry in Indonesia period 2014-2023.

4.6 The Impact of COVID-19 on Stock Return of Consumer Cyclical Industry

The pandemic COVID-19 has affected almost all industries all over the world, as revealed by Donthu, N., & Gustafsson, A. (2020), thus this study would like to analyze whether there is an impact of COVID-19 on the Stock Return of the Consumer Cyclical Industry in Indonesia period 2014-2023.

This study used the F-Test Two Samples and Welch t-test to examine whether the stock returns were different in the period before COVID-19 and after COVID-19.

H5a: There is a difference in variances of consumer cyclical stock return before and after COVID-19 in the consumer cyclical industry in Indonesia.

H5b: There is a difference in consumer cyclical stock return before and after COVID-19 in the consumer cyclical industry in Indonesia.

4.6.1 F-Test Two Sample

Table 4.14 F-Test Two Sample

	Before COVID	*After COVID*
Mean	-0.0083	0.0198
Variance	0.0327	0.0503
Observations	183	153
df	182	152
F		1.5360
P(F<=f) one-tail		0.0028
F Critical one-tail		1.2900

Source: Author (Ms.Excel process)

Table 4.14 shows the p-values one tail = 0.0028 < 0.05, which means H0 is rejected, which means there is a difference in variances of consumer cyclical stock return before and after COVID-19 in the consumer cyclical industry in Indonesia.

4.6.2. Welch Test

Table 4.15 Welch T-Test

	Before COVID	After COVID
Mean	-0.0083	0.0198
Variance	0.0327	0.0503
Observations	183	153
Hypothesized Mean Difference		0
df		291
t Stat		1.2479
P(T<=t) one-tail		0.1065
t Critical one-tail		1.6501
P(T<=t) two-tail		0.2131
t Critical two-tail		1.9681

Source: Author (Ms.Excel process)

Table 4.15 shows the p-values one tail = 0.1065 > 0.05 and p-values two-tail = 0.2131, which means H0 fails to be rejected, thus there was a lack of evidence to support that there is a difference in consumer cyclical stock return before and after COVID-19 in the consumer cyclical industry in Indonesia.

4.7 Research Summary

Table 4.16 Research Summary

Hypothesis	Research Findings	Remarks
H1a: Asset efficiency positively affects the stock return of the consumer cyclical industry in Indonesia	Coefficient = 3.9% p-value = 0.2303 > 0.05 H1a not supported	Asset efficiency has a positive and insignificant impact on the stock return
H1b: Liquidity negatively affects the stock return of consumer cyclical companies in Indonesia	Coefficient = -0.7% p-value = 0.0655 > 0.05 H1b not supported	Liquidity has a negative and insignificant impact on the stock return
H1c: Profitability (Return on Equity) positively affects the stock return of consumer	Coefficient = 0.2% p-value = 0.0075 < 0.05 H1c is supported	Profitability (Return on Equity) has a positive and significant impact on stock return

cyclical companies in Indonesia		
H2a: Exchange rate negatively impact the stock return of the consumer cyclical industry in Indonesia.	Coefficient = 42.9% p-value = 0.1283 > 0.05 H2a not supported	Exchange Rate has a positive and not significant effect on the stock return
H2b: Interest rate negatively impact the stock return of the consumer cyclical industry in Indonesia.	Coefficient = 10.3% p-value = 0.1476 > 0.05 H2b not supported	Interest rate has a negative and not significant effect on the stock return
H2c: Market Return positively affects the stock return of consumer cyclical companies in Indonesia	Coefficient = 133% p-value = 0.0000 < 0.05 H2c supported	Market return has a positive and significant effect on the stock return
H3a: Covid-19 Moderates the Impact of Foreign Exchange Rate on Stock Return.	p-value = 0.0159 < 0.05 H3a supported	Exchange Rate moderated by COVID-19 has a positive and statistically significant effect on the stock return
H3b: COVID-19 Moderates the Impact of Interest Rate on Stock Return	p-value = 0.0177 < 0.05 H3b supported	Interest Rate moderated by COVID-19 has a positive and statistically significant effect on the stock return
H3c: COVID-19 Moderates the Impact of Market Return on Stock Return	p-value = 0.4681 > 0.05 H3c not supported	Market Return moderated by COVID-19 has a positive and statistically not

		significant effect on the stock return
H4a: There is a difference in variances of consumer cyclical stock return before and after COVID-19.	p-value = 0.0028 < 0.05 H4a supported	There is a difference in variances of consumer cyclical stock return before and after COVID-19
H4b: There is a difference in consumer cyclical stock return before and after COVID-19.	p-value = 0.1065 > 0.05 H4b not supported	There was a lack of evidence to support that there is a difference in consumer cyclical stock return before and after COVID-19.

4.8 Result Analysis and Discussion

The regression result shown in Table 4.9 indicates that Profitability (Return on Equity) and Market Return positively and significantly affected the stock return of the consumer cyclical industry in Indonesia for the period 2014-2023. This is aligned with the research by Silver et al. (2022) that found profitability significantly positively affects stock returns, Wicaksono et al. (2024) which revealed that Return on Equity (ROE) affects stock price in the cyclical consumer industry, while debt to equity and current ratio did not affect stock price, and supported by the study of Thamrin and Sembel (2020) and Ihsan et al. (2023) which found that market return significantly affect stock return. This study also found that Exchange Rate and Interest Rate moderated by COVID-19 has a positive and statistically significant effect on the stock return of the consumer cyclical industry in Indonesia period 2014-2023, while the Market Return is not significantly moderated by COVID-19. This research also found that there is a difference in variances of consumer cyclical stock returns before and after COVID-19 in the consumer cyclical industry in Indonesia, however, there was a lack of evidence to support that there is a difference in consumer cyclical stock returns before and after COVID-19 in the consumer cyclical industry in Indonesia.