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Corporate Resilience During the COVID-19 Pandemic: the Role of ESG Performance and Financial Flexibility

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ABSTRACT

Stocks of substantial ESG firms have been claimed to perform better during crisis periods and consequently serve as an "equity vaccine" for investors. This study explores ESG ratings and financial flexibility's impact on stock performance. We test these hypotheses in the ASEAN-5 setting by assessing the relation between ESG and financial flexibility to stock price resilience in terms of time to recover during 2020 and 2021. The method used in this study is a cross-sectional data regression analysis. In a sample of 142 stocks from 5 countries consisting of Indonesia, Malaysia, Thailand, Philippines, and Singapore, we found that firms with higher ESG ratings had a better stock market performance. They tend to recover faster to achieve their lowest price in 2019. We also discovered that having more cash and liquid assets before COVID-19 doesn't make a company better at dealing with the impacts of the pandemic compared to other companies.

Keywords: ASEAN-5; corporate resilience; COVID-19; ESG; financial flexibility

INTRODUCTION

During the COVID-19 pandemic, there were widespread claims that Environmental, Social, and Governance (ESG) performance protected socially responsible companies from extreme drop compared to similar companies with low ESG performance. Morningstar, Inc. even claims ESG as an "equity vaccine" against the market sell-off caused by the COVID-19 pandemic (Andrew Willis, 2020). Broadstock et al. (2020) studied companies listed on the CSI300 index and found that companies with high ESG scores performed higher than those with low ESG. Companies with high ESG can mitigate financial risks during times of crisis. These results are also supported by research from (Gianfrate et al., 2021), which found that companies with high ESG values in North America have high resilience during crises. A high ESG indicates a good relationship with stakeholders, and stakeholders are willing to help the company during periods of crisis. Albuquerque et al. (2020) proved that companies with high CSR investments could reduce the company's risk exposure to systematic risk. Mousa, Saleem, and Sági (2022) argue that companies that adopt sustainable finance or have good ESG performance are proven to have higher resilience and lower risk during periods of crisis. El

Khoury et al. (2022) argue that investors often use ESG to evaluate investment choices, and it is a significant measure of corporate risk management.

On the other hand, research related to the influence of ESG components on company stock performance still reveals an empirical gap, characterized by inconsistencies in the conclusions drawn from previous studies conducted in both developed and developing country settings. Bae et al. (2021) conducted research on 1,750 companies in the United States and found insufficient evidence to support the notion that CSR influenced stock returns during crash periods. Furthermore, this research demonstrates that pre-crisis CSR measures did not effectively protect shareholders during the pandemic crisis. (Alharire and Alalwani, 2021) investigated the Stockholm Stock Index OMXS30 during the first and second quarters of 2020, revealing that high ESG values did not have a significant impact on abnormal risk-adjusted returns during these periods. Additionally, Gianfrate et al. (2021) conducted a study of 6,000 stocks in 45 countries and concluded that there was no strong evidence suggesting that companies with high ESG scores exhibited better stock performance during the first quarter of 2020. The debate surrounding whether companies with high ESG performance can achieve stock performance resistant to crisis risks remains ongoing and regionally specific. Researchers then found it urgent to test whether ESG performance values were truly a factor in stock price resilience during the COVID-19 pandemic, especially within the ASEAN-5 regional scope because there had been no similar research with a sample of ASEAN-5 countries. Researchers hope that the findings of this research can be a consideration for companies in the ASEAN-5 region in managing their ESG investments.

Demers et al. (2021) conducted a similar study. They found strong evidence that ESG is not an "equity vaccine" for United States companies against falling stock prices during a crisis, during the research period of the explosion of COVID-19 cases, namely in the first quarter of 2020 and the full year ending December 31, 2020. Meanwhile, liquidity and leverage, financial performance, value chain management, intangible assets developed internally, and equity risk can clearly explain stock returns during the COVID-19 pandemic. The study from (Cardillo et al., 2022) revealed that companies with superior Environmental, Social, and Governance (ESG) ratings exhibited stronger performance compared to companies with inferior ESG ratings following the public disclosure of national COVID-19 case and mortality figures by public authorities. In line with this research, Syafrullah and Muharam (2017) found that environmental performance has a positive but insignificant impact, while social performance and corporate governance have a significant positive impact on abnormal company returns. These results are also following the legitimacy theory and stakeholder theory. H1: ESG performance positively affects corporate resilience during the COVID-19 pandemic.

As the global impact of the COVID-19 crisis started to emerge, CEOs and CFOs initially focused on ensuring the survival of their companies. Their immediate response was centered on preserving cash and allocating resources to sustain operations. During exceptional circumstances, having additional cash can play a pivotal role in preventing a company from experiencing bankruptcy. (Grube et al., 2020). Firms' cash reserves decrease their dependence

on external financing demands during the COVID-19 pandemic (Xia et al., 2022a). Fahlenbrach, Rageth, and Stulz (2021) studied all U.S. companies listed on the stock exchange and found that companies with high financial flexibility experienced a decrease in stock prices of 26% or 9.7% lower than companies with low financial flexibility. This difference continues until the stock price rebound. Cardillo, Bendinelli, and Torluccio (2022) also document that high cash holding and asset liquidity in the pre-COVID-19 period helped companies keep performing and absorb COVID-19 externalities better than others.

Companies with high financial flexibility can go through periods of crisis and take advantage of investment opportunities (Alipour et al., 2015). Companies with high financial flexibility generally performed better during the post-Lehman stock market drop in 2008-2009 (Fahlenbrach et al., 2021). Alharire and Alalwani (2021) found that companies with high financial flexibility positively and significantly affect abnormal risk-adjusted returns. By using CAPM and regression model, the authors examine three periods which are "Incubation (Thursday, January 2 through Friday, January 17), Outbreak (Monday, January 20 through Friday, February 21), and Fever (Monday, February 24 through Friday, March 20)".

H2: Financial flexibility positively affects corporate resilience during the COVID-19 pandemic.

The COVID-19 pandemic represents an exogenous shock that harms the capital market (Xu, 2021). Similar events still have the potential to occur in the future. These conditions prompted the authors to examine the significant characteristics of companies that produce the most resilience during times of crisis (Gianfrate et al., 2021) so that investors can choose the most resilient stocks when similar conditions recur.

METHOD

The unit of analysis in this study consists of companies listed on the stock exchanges of ASEAN-5 countries, including the Indonesia Stock Exchange, the Malaysia Stock Exchange, the Singapore Stock Exchange, The Stock Exchange of Thailand, and The Philippines Stock Exchange from 2019 to 2021. This period was chosen because it represents the period of the COVID-19 pandemic all over ASEAN. As an association of countries, ASEAN has a shared vision and blueprint regarding politics-security, economy, and socio-culture, so they have similar economic conditions. This condition is evidenced by the same period of collapse in the Indonesian, Malaysian, Philippine, Singaporean, and Thai stock exchanges, namely around March 2020. The sampling approach employed in this study utilizes the purposive sampling method, which involves selecting participants based on specific criteria set by the researcher.

This study falls under the category of quantitative research. The initial phase of data analysis in this study involved the utilization of descriptive statistics. Descriptive statistics were employed to compute various summary measures such as the mean, median, minimum, maximum, and standard deviation for each proxy variable. Subsequently, the study proceeded to conduct inferential analysis in order to test the formulated hypotheses. Multiple linear regression analysis was employed as the inferential analysis technique to test the hypothesis in this study. The classical assumption must be tested in linear regression with the Ordinary Least Squared (OLS) approach, including the normality, autocorrelation, heteroscedasticity, and

multicollinearity tests. Consequently, the EVIEWS 9 program will be employed to assist in the data analysis process for this research.

The data owned has the characteristics of cross-section data. This study uses two variables of interest: ESG performance and financial flexibility, in the proxy of quick ratio. This study also applied seven control variables: beta, max drawdown, ROA, inventory turnover, debt-to-equity ratio, dividend payout ratio, and strategic owner. Data for all independent, dependent, and control variables were obtained from Thomson Reuters – Eikon. Thomson Reuters – Eikon is a platform for financial scholars and professionals, commonly used as a financial market database, financial market analysis tool, and securities trading software.

Based on signaling theory, companies can use ESG performance as a positive signal to stakeholders and can be associated with low uncertainty, especially during periods of crisis (Mounir and Ali, 2022). Ding et al. (2021) found that companies with high ESG scores were less affected by the negative impacts generated by the pandemic and tended to be more resilient during the COVID-19 crisis. Engelhardt, Ekkenga, & Posch (2021) found that high ESG scores can be associated with lower stock price volatility during the pandemic. (Pisani and Russo, 2021) also found that mutual funds with high ESG scores were more resilient during the COVID-19 pandemic because they had a lower level of risk.

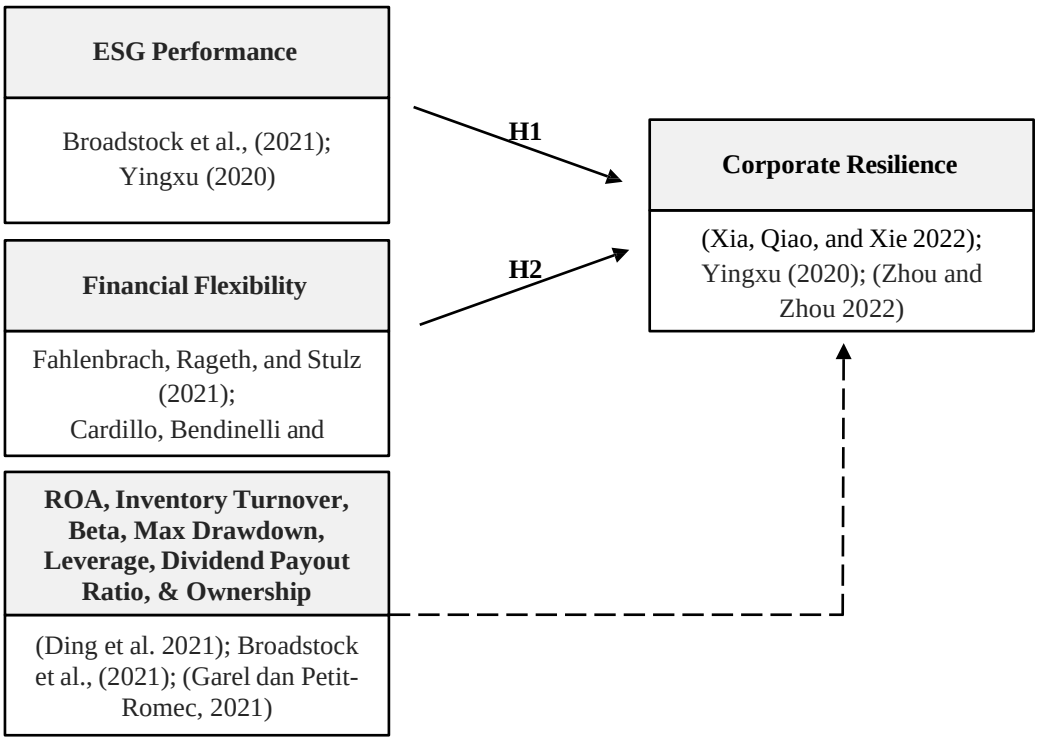

Figure. 1 Research Model

The pandemic has had an impact on the board of directors, managers, shareholders, customers, suppliers, and employees. Companies should view the era of disruption as an opportunity to adapt business models that are no longer relevant to these stakeholders. To face challenges and welcome these opportunities, companies must have flexibility, especially financial flexibility. To be able to adapt, the company must have idle resources from the

previous period that can be utilized for business process transitions. Among all companies that experience a decline in earnings, a smaller share price decline will occur in companies with higher financial flexibility. The difference in price reduction reached 26% of the average price reduction for all companies in North America (Fahlenbrach et al., 2021)

A study model has been formulated to illustrate the impact, whether positive, negative, or statistically insignificant, as depicted in Figure 1.

The subsequent equation represents the mathematical formulation employed in this study:

$$RSLNCt = \alpha 0 + \beta 1ESG_{it-1} + \beta 2QUICK_{it-1} + \beta 3BETA_{it} + \beta 4MAX\_DRAWDOWN_{it} + \beta 5ROA_{it} + \beta 6INVENTORY\_TO_{it-1} + \beta 7DEBT\_TO\_EQUITY_{it-1} + \beta 8DIVIDEND_{it-1} + \beta 9STRATEGIC\_OWNER_{it-} + e_{it} \quad (1)$$

Definitions for each variable, including their precise calculations and references, are provided in Table 1 below:

Table 1. Variable Measurement

Variable Code	Variable Name	Description and Formula	References
		Dependent Variable	
RSLNC	Corporate Resilience	Time to recovery in days from the company's share price starting from the drawdown date in March 2020 until it reached its lowest price in 2019	(Xia, Qiao, and Xie, 2022)
		Independent Variable (Variable of Interest)	
ESG	ESG Performance	ESG performance scores are available in the Thomson Reuters Eikon database.	(Broadstock et al., 2020);
QUICK	Quick Ratio	$\frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$	(Oad Rajput et al., 2019)
		Independent Variable (Control Variable)	
BETA	Stock Beta	Beta compares the volatility of a stock against the volatility of the broader market, typically measured by a reference market index.	(Engelhardt et al., 2021)
MAX_DRADOWN	Max Drawdown	The decrease from the highest point in 2019 to the bottom during the crisis period (March 2020)	(Yingxu, 2020)
ROA	Return on Assets	$\frac{\text{Net Income}}{\text{Average Total Assets}}$	(Gianfrate et al., 2021)
INVENTORY_TO	Inventory Turnover	$\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$	(Gianfrate et al., 2021)
DEBT_TO_EQUITY	Debt to Equity Ratio	$\frac{\text{Total Liabilities}}{\text{Total Equity}}$	(Cardillo et al., 2022)
DIVIDEND	Dividend Payout Ratio	$\frac{\text{Annual Dividends Per Share}}{\text{Earnings Per Share}}$	(Gianfrate et al., 2021)
STRATEGIC_OWNER	Strategic Ownership	The number of shares owned by strategic investors compared to the total number of shares outstanding.	(Garel dan Petit-Romec, 2021), (Ding et al., 2021)

Source*:* Data processed, 2023

RESULT AND DISCUSSION

Table 2. Sample Selection Scheme

Description	Number of Observation
Companies in the Association of Southeast Asian Nations (ASEAN) 5 region listed by Thomson Reuters	3699
Companies in the ASEAN-5 region in the Thomson Reuters database have ESG performance value data for 2019	322
Companies in the ASEAN-5 region in the Thomson Reuters database that have complete variable data (2019 ESG performance values, 2019 Quick Ratio, 2020 Stock Beta, 2020 Max Drawdown, 2020 ROA, 2019 Inventory Turnover, 2019 Debt to Equity Ratio 2019, 2019 Dividend Payout Ratio, and 2019 Strategic Ownership	215
Companies that do not pass the criteria in purposive sampling	(36)
Outlier Data from 1 Dependent Variable, 2 Independent Variables, and 6 Control Variables	(37)
Number of Observations	**142**

Source*:* Data processed, 2023

The purposive sampling criterias were, 1) the lowest share price in 2019 is higher than the lowest share price in 2020 (drawdown point), 2) did not experience an upward trend during 2020 - 2021. The upward trend shows that stock price movements are not in line with market movements which experienced a decline from January to March 2022 and then slowly reversed toward a positive trend, and 3) did not experience a downward trend during 2020 - 2021. The downward trend indicates that the COVID-19 pandemic did not purely influence the downward movement in the stock price.

Only 322 out of 3699 companies have an ESG score or 8.7% of the company database in the ASEAN-5 region provided by Thomson Reuters. Thus, 142 companies meet the criteria. Refer to Chart 1, and we can conclude that from the 142 companies, the most significant proportion were companies in Thailand, namely as much as 27%, followed by Malaysia, as much as 21%, Singapore at 20%, Indonesia at 18%, and the least was the Philippines as much as 14%.

Table 3. Descriptive Statistical Test Result

Variable	Mean	Standard Deviation	Maximum Value	Minimum Value
Time to Recovery	148.9577	137.9776	648	2
ESG	54.71207	17.01004	88.96250	10.26805
Quick Ratio	1.261858	0.973473	5.807330	0.092760
Beta	1.158580	0.546809	3.130370	0.216291
Max Drawdown	0.243451	0.171166	0.572391	-0.469675
Return on Assets	0.043788	0.067795	0.344300	-0.156600
Inventory Turnover	25.92787	87.60669	822.7498	0.175164
Debt to Equity Ratio	0.857801	1.166420	12.52387	0.000577
Dividend Payout Ratio	0.585208	0.653294	4.715114	0.936469
Strategic Ownership	0.541216	0.219522	0.936469	0.003380

Source*:* Data processed, 2023

Based on the results of descriptive statistics, it is known that companies in Indonesia, Malaysia, Singapore, Thailand, and the Philippines need an average time of 148.9577 days to

recover to their lowest value in 2019 from the lowest point in the 2020 period, with the standard value deviation of 137.9776 days. The standard deviation value, which almost equals the mean value, illustrates that the data distribution is quite varied. The average recovery time is much faster than the time needed by the market indices in the five countries to recover to their lowest point in 2019.

Figure 2. Time to Recovery Calculation Simulation
Source: reuters.com accessed on June 4, 2023

The time-to-recovery calculation simulation in this research utilizes price charts from PT Aneka Tambang Tbk. The company's shares reached their lowest point in the period preceding the pandemic, specifically in 2019, at IDR 675, corresponding to the company's share price on May 17, 2019, as indicated in point 1 in Figure 3.2. Subsequently, the company experienced a drawdown during the COVID-19 pandemic, causing the share price to plummet to its lowest level in 2020, amounting to IDR 357.18, precisely on March 24, 2020 (drawdown date), as illustrated in point 2 in Figure 3.2. The share price then rebounded to IDR 679.74 on July 21, 2020 (recovery date), as denoted in point 3 in Figure 3.2. This marked the first instance post drawdown date that the share price surpassed the lowest 2019 price. Consequently, the share prices were deemed to have recovered during the period between March 24, 2020, and July 21, 2020, spanning 119 days.

ESG performance scores help investors, stakeholders, and society, in general, to understand how companies manage risks and opportunities related to ESG issues. The average ESG value is 54.71207, with a standard deviation of 17.01004. Based on the ESG value description table from Refinitiv, the ESG disclosures of companies in the ASEAN-5 region generally fall within the value range of >50,75, which means that the ESG performance of companies in the ASEAN-5 region is relatively reasonable and has been able to disclose material ESG data to the public. The maximum value of ESG performance is owned by Minor International PCL, which is 88.96250. Minor International PCL is a global company in the hospitality, restaurant, food brand, and retail sectors. Minor International recovered longer than the average company in the ASEAN-5 region, with a 2019 ESG score within 442 days from the 2020 drawdown point. The minimum value of ESG performance is owned by Alliance Global Group Inc, which is 10.26805. Alliance Global Group Inc. (AGI) is a conglomerate company based in the Philippines. The company was founded in 1993 and operates in various sectors, including property, hospitality, retail, food and beverage, and infrastructure. Alliance Global

Group Inc. recovered longer than the average company in the ASEAN-5 region, with a 2019 ESG score within 387 days from the 2020 drawdown point.

The quick ratio is a financial ratio that measures a company's ability to meet its short-term obligations using liquid assets that are most quickly converted into cash. This ratio considers current assets that can be converted into cash immediately, such as cash, cash equivalents, and trade receivables. The average quick ratio of companies in the ASEAN-5 region is 1.261858, with a standard deviation of 0.973473. The maximum value of the quick ratio as a proxy for financial flexibility is owned by Genting Singapore Ltd, which is 5.80733. Genting Singapore Limited is a Singapore-based company that develops and operates integrated resorts. Genting Singapore Ltd recovered longer than the average company in the ASEAN-5 region, with a 2019 ESG score within 250 days from the 2020 drawdown point. Supalai PCL has a minimum quick ratio value of 0.09334. Supalai PCL is a property company engaged in property development and investment in Thailand. Supalai PCL also recovered longer than the average company in the ASEAN-5 region, with a 2019 ESG value within 259 days from the 2020 drawdown point.

Max drawdown is a ratio that measures how deep the stock price falls during the drawdown period (December 31, 2019, to March 15, 2020). The deeper the stock price falls, the more difficult it should be for the stock to rise to reach its lowest price in 2019. The average Max Drawdown of companies in the ASEAN-5 region with an ESG score for 2019 is 0.243451 with a standard deviation of 0.171166. This value reflects that, on average, company shares in the ASEAN-5 region experienced a significant decrease of 24.34% during the drawdown period. PT Waskita Karyaya Tbk owns the maximum beta value, 57.24%. The minimum max drawdown value is owned by XP Power Limited, which experienced an increase in the share price of 46.97% during the drawdown period. XP Power Limited is a global company that designs, manufactures, and markets advanced electrical power solutions.

The return on assets (ROA) ratio is one of the financial indicators used to assess a company's profitability in utilizing its resources. The average ROA of ASEAN-5 companies with an ESG value in 2020 is 4.3%, with a standard deviation of 6.77%. The highest ROA in 2020 was owned by P.T. Unilever Indonesia Tbk, which was 34.43%. P.T. Unilever Indonesia Tbk is a public company engaged in consumer goods and household products. The lowest ROA in 2020 was owned by P.T. Matahari Department Store Tbk, which was -15.66%. Matahari Department Store is a retail chain operating in Indonesia. Matahari Department Store is one of Indonesia's most prominent retailers that offers various products such as clothing, shoes, accessories, household appliances, cosmetics, and other items.

Inventory turnover is a financial ratio used to measure how efficiently a company manages its inventory. The inventory turnover ratio shows how quickly a company can turn inventory into sales. The average inventory turnover of companies with an ESG value for 2019 in the ASEAN-5 region is 25.92787 times with a standard deviation of 87.60669 times. The highest inventory turnover in 2019 was owned by Singapore Post Ltd, namely 822.7498 times. Singapore Post Ltd (SingPost) is a logistics and delivery company based in Singapore. The company with the lowest inventory turnover in 2019 is Bukit Sembawang Estates Ltd, which is 0.175164 times. Bukit Sembawang Estates Ltd is a real estate company based in Singapore.

The debt-to-equity ratio is a financial ratio that assesses the proportion of debt and equity a company uses to fund its operations and investments. This ratio provides an overview of the company's capital structure and the level of associated financial risk. The average debt- to-equity ratio of companies in the ASEAN-5 region with an ESG value in 2019 is 0.857801,

with a standard deviation of 1.166420. This value shows that, on average, companies with an ESG score of 2019 in the ASEAN-5 region fund most of their operations and investments with equity. Thai Airways International PCL owned the highest debt-to-equity ratio in 2019, 12.5238665. Thai Airways International PCL, commonly known as Thai Airways, is the national airline of Thailand. The company with the lowest debt-to-equity ratio in 2019 is Vale Indonesia Tbk, 0.000577. Vale Indonesia is a nickel mining company operating in Indonesia. The company is a subsidiary of Vale S.A., a global mining company based in Brazil.

The dividend payout ratio is a financial ratio that measures how much percentage of a company's net profit is distributed as dividends to shareholders in return for their share ownership. A high ratio indicates that the company provides shareholders with a good return on investment. The average dividend payout ratio of companies in the ASEAN-5 region with an ESG value in 2019 is 58.52%, with a standard deviation of 65.33%. This value shows that, on average, companies with a 2019 ESG value in the ASEAN-5 region provide dividends with a reasonably high value greater than 50%. The highest dividend payout ratio in 2019 was owned by International Container Terminal Service Inc, which was 4.7151. International Container Terminal Services Inc. (ICTSI) is a logistics and transportation company in the Philippines.

Table 4. Multicollinearity Test

Variance Inflation Factors			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	2747.665	30.61587	NA
ESG	0.316777	11.57992	1.014095
QUICK	108.6951	3.068125	1.139650
BETA	477.1819	8.715644	1.578588
MAX_DRAWDOWN	4767.569	4.693903	1.545419
ROA	28954.96	2.091037	1.472422
INVENTORY_TO	0.011884	1.098144	1.009127
DEBT_TO_EQUITY	82.21557	1.911670	1.237592
DIVIDEND	233.9310	1.997305	1.104635
STRATEGIC_OWNER	2086.591	7.923041	1.112823

Source*:* Data processed, 2023

This study's multicollinearity detection was done by looking at the Variance Inflation Factor (VIF) value. It can be seen in Table 4 that all VIF for each variable is worth less than 10 with a value range of 1.014095 to 1.578588. Therefore, there are no symptoms of multicollinearity in the research model, and the model can be used as a reliable predictor.

Table 5. Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.283280	Prob. F(9,132)	0.2517
Obs*R-squared	11.42485	Prob. Chi-Square(9)	0.2477
Scaled explained SS	7.067562	Prob. Chi-Square(9)	0.6301

Source*:* Data processed, 2023

The method used to detect indications of heteroscedasticity in this study is the Breusch-Pagan-Godfrey test. Based on the output in Table 5., the probability value of Chi-Square is

0.2477, which is greater than the α value of 0.05. Therefore, it can be concluded that this model is free from heteroscedasticity symptoms and has high accuracy.

Table 6. Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.091196	Prob. F(2,130)	0.9129
Obs*R-squared	0.198950	Prob. Chi-Square(2)	0.9053

Source: Data processed, 2023

The autocorrelation test in this study was carried out using the Breusch-Godfrey Serial Correlation L.M. test. The test results show that the probability value 0.9129 is greater than α = 0.05. Therefore, there is no autocorrelation problem in this model, and this model is sufficient to explain the variation in the data. The absence of autocorrelation underscores the model's reliability, while its capability to explain the variance in the data solidifies its adequacy as an explanatory framework.

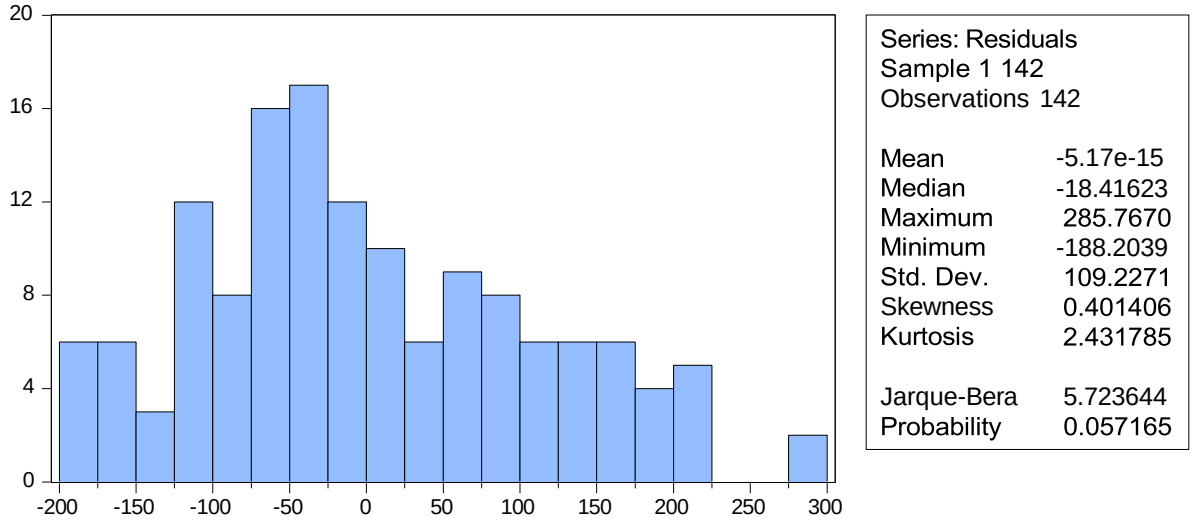

Figure 3. Normality Test

Source*:* Data processed, 2023

Normality testing in this study was carried out using the Jarque-Bera test. The test results show that the Jarque-Bera test statistic is 5.723644 with a critical point of X2(0.05;2) = 5.99 or a p-value of 0.057165 greater than α = 0.05. Therefore, based on the Jarque-Bera test results and the comparison with the critical value and significance level, it can be concluded that the residuals from the normally distributed and the research models can be used as reliable predictors. This finding underscores the validity of utilizing these residuals as dependable predictors within the context of the study, lending support to their efficacy in informing subsequent analytical or predictive endeavors.

From the result of the hypothesis test, the multiple linear regression analysis equations with cross-section data generate the following estimation model:

$$RSLNCt = 210{,}8993 - 0{,}935143ESGt - 13{,}33535QUICKt + 37{,}31206BETAt + 212{,}0963MAX\_DRAWDOWNt - 562{,}2141ROAt + 0{,}332517INVENTORY\_TOt - 32{,}53387DEBT\_TO\_EQUITYt - 12{,}71132DIVIDENDt - 69.23546STRATEGIC\_OWNERt \quad (2)$$

Table 7. T-Test Multiple Linear Regression Analysis

Dependent Variable: TIME TO RECOVERY

Method: Least Squares

Observations Included: 142

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	210.8993	52.41818	4.023400	0.0001
ESG	-0.935143	0.562830	-1.661503	0.0990*
QUICK	-13.33535	10.42570	-1.279085	0.2031
BETA	37.31206	21.84449	1.708076	0.0900*
MAX_DRAWDOWN	212.0963	69.04758	3.071741	0.0026***
ROA	-562.2141	170.1616	-3.304002	0.0012***
INVENTORY_TO	0.332517	0.109013	3.050244	0.0028***
DEBT_TO_EQUITY	-32.53387	9.067280	-3.588052	0.0005***
DIVIDEND	-12.71132	15.29480	-0.831088	0.4074
STRATEGIC_OWNER	-69.23546	45.67922	-1.515688	0.1320

Note: *, **, *** indicate a significance level at 10%, 5%, and 1%

Source*:* Data processed, 2023

Based on the regression output above, it can be concluded that:

ESG Performance and Corporate Resilience

The hypothesis test results showed that ESG performance positively affects corporate resilience during the COVID-19 pandemic, so H1 is accepted. The negative sign on the regression coefficient indicates that ESG performance has a negative relationship with stock time to recovery, meaning that if there is an increase in ESG value, the stock price will rise faster to its lowest point in the year before the COVID-19 pandemic. The faster the stock price rises, the stronger the company will be.

This conclusion is in line with research (Zhou & Zhou, 2022), which found that the increase in stock price volatility of companies with high ESG values was lower than companies with low ESG values. ESG performance is essential in increasing stock resilience and stabilizing stock prices. These results are also supported by research (Yingxu, 2020), which found that companies with good ESG performance in each industry can recover more quickly during a crisis from market turbulence. ESG can be used as an indicator of relevant corporate resilience. In addition, these results are also consistent with research from (Broadstock et al., 2020), which found that ESG performance had a positive relationship with short-term cumulative returns from CSI 300 companies during the COVID-19 pandemic.

Financial Flexibility and Corporate Resilience

The results of the hypothesis test show that financial flexibility has no significant effect on corporate resilience during the COVID-19 pandemic, so H2 is rejected. This result is not following the hypothesis and is not following previous research conducted by (Cardillo et al., 2022), which found that high levels of cash holding and liquidity in the pre-COVID period helped companies to perform and absorb externalities of COVID-19 by better than other companies.

This conclusion is also inconsistent with the results of research from (Fahlenbrach et al., 2021), which found that companies with higher financial flexibility experienced a decrease in stock prices of 26% or 9.7% lower compared to companies with low financial flexibility. Even though the company has high financial flexibility and is potentially responsive to the challenges of the COVID-19 pandemic, the pivot process in business must be done slowly. Financial flexibility cannot guarantee that the company will maintain profitability and continue to distribute dividends to shareholders. Not all business processes in the industry can be helped by digitalization during a pandemic. Based on the regression analysis results, shareholders trust the profitability and efficiency of company activities in inventory turnover and long-term debt levels as determinants of company resilience during the COVID-19 pandemic.

Table 8. F-Test Multiple Linear Regression Analysis

Simultaneous Parameter Significance			
R-squared	0.373324	Mean dependent var	148.9577
Adjusted R-squared	0.330596	S.D. dependent var	137.9776
S.E. of regression	112.8893	Akaike info criterion	12.35851
Sum squared resid	1682207	Schwarz criterion	12.56667
Log-likelihood	-867.4544	Hannan-Quinn criteria.	12.44310
F-statistic	8.737225	Durbin-Watson stat	2.054201
Prob(F-statistic)	0.000000		

Source: Data processed, 2023

Based on the output results in the table above, the F-statistic results are 8.737225 with a significance level of 0.000000, which indicates that the significance level is less than 0.05. So it can be concluded that ESG performance, financial flexibility, stock volatility, max drawdown, return on assets, inventory turnover, debt-to-equity ratio, dividend payout ratio, and strategic ownership simultaneously affect corporate resilience during the COVID-19 pandemic. The table above shows that the Adjusted R-Squared value formed in this study is 0.330596, which indicates that during the COVID-19 pandemic, the ability of the independent variables and control variables (ESG performance, financial flexibility, beta, max drawdown, ROA, inventory turnover, debt to equity ratio, dividend payout ratio, and strategic owner) in explaining the dependent variable (time to recovery) is 33.0596%. The remaining 66.9404% is explained by other variables not included in this research model.

In the context of robustness testing, a compare means analysis is applied to examine the stability and reliability of the results obtained from a statistical model or analysis by comparing the means of different groups or conditions. This analysis is employed to evaluate the robustness of the conclusions drawn from the initial analysis under varying conditions or assumptions. The compare means analysis as a robustness test involves comparing the means of two or more groups or conditions using statistical tests such as t-tests or analysis of variance.

Based on group statistics in Table 8, it can be concluded that, on average, companies with high ESG performance in the ASEAN-5 region have higher resilience than companies with low ESG performance, which are explained consistently in those five proxies. On average, companies with high ESG performance generate ROA of 4.93%, higher than those with low ESG performance, which only generate ROA of 3.58%. Companies with high ESG performance also have lower stock volatility when measured by beta and price standard deviations. Companies with high ESG performance have an average beta of 1.11, while companies with low ESG performance have an average beta of 1.22. In addition, companies

with high ESG performance have an average price standard deviation of 15.54% from price predictions. In comparison, companies with low ESG performance have an average price standard deviation of 16.09% from price predictions. Companies with high ESG performance also experience lower share price falls than those with low ESG performance. During the COVID-19 pandemic, companies with high ESG performance experienced an average share price fall of 23.75%, while companies with low ESG performance experienced an average share price fall of 25.21%. Companies with high ESG performance also recover faster than those with low ESG performance. During the COVID-19 pandemic, stocks of companies with high ESG performance recovered on average within 137 days, 29 days faster than companies with low ESG performance, which recovered on average 166 days. This finding suggests that, on average, organizations with good ESG processes may be better prepared to face the challenges provided by the pandemic.

Table 9. Group Statistics

Variable	Kategori	N	Mean	Std. Deviation	Std. Error Mean
ROA	High ESG	84	0.049305	0.0708004	0.0077250
	Low ESG	58	0.035799	0.0629323	0.0082634
BETA	High ESG	84	1.114414	0.5008972	0.0546524
	Low ESG	58	1.222546	0.6060123	0.0795733
PRICE STDEV	High ESG	84	0.155434	0.0897128	0.0097885
	Low ESG	58	0.160971	0.0971203	0.0127525
MAX DRAWDOWN	High ESG	84	0.237458	0.1824752	0.0199097
	Low ESG	58	0.252130	0.1544624	0.0202819
TIME TO RECOVERY	High ESG	84	136.95	143.466	15.653
	Low ESG	58	166.34	128.851	16.919

Source: Data processed, 2023

Based on independent samples of t-test presented in Table 9, it can be obtained that of the five resilience proxies, it is known that the Sig (2-tailed) value is not less than 0.05, so it can be concluded that there is no significant difference in company resilience between companies with high ESG values and companies with low ESG values. Although the compare means analysis of the five resilience proxies shows consistent results that companies with high ESG performance have higher resilience during the COVID-19 pandemic than companies with low ESG performance, the gap between the two is statistically insignificant.

CONCLUSION

This study aims to fill the research gap regarding the role of ESG and financial flexibility in corporate resilience during crises such as the COVID-19 pandemic in the scope of ASEAN-5 countries (Indonesia, Malaysia, Singapore, Thailand, and the Philippines). The study results show that ESG performance significantly positively affects corporate resilience during a pandemic, helping companies recover faster. However, financial flexibility not significantly affects the company's ability to survive during the pandemic. Other variables that affect company resilience are stock price volatility, max drawdown, profitability, and capital structure. Dividend payments and share ownership structure have no significant effect on

company resilience during the pandemic. The article suggests that regulators should make rules and policies that encourage companies to pay attention to ESG aspects and focus on financial performance. It can be done by introducing ESG reporting standards and guidelines and providing tax incentives for companies that meet specific ESG standards. The article also suggests that companies should have the courage to increase investment in ESG aspects. It can be a more holistic and reliable indicator of company performance, even in crises like black swan events. By improving ESG performance, companies can make more accurate predictions about future performance prospects and achieve sustainable competitive advantage.

To address the limitation of this study, the next researcher should be able to conduct additional research on a bigger scale to prevent sampling bias and fewer representative sample sizes, with the goal of making research more universal and relevant in decision-making. Furthermore, future researchers can undertake a series of robustness tests on the corporate resilience variable using a variety of additional proxies such as stock price volatility, abnormal returns, and loss severity as a substitute for time-to-recovery proxy.

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