SHARIA-COMPLIANT ESG AND STOCK CRASH RISK MITIGATION: THE CONTRIBUTIONS TO SUSTAINABLE ISLAMIC ECONOMICS AT IDX

Siti Shoimatul Azizah [1], Siti Habibatur Rahma[2]

Salafiyah Islamic College, Bangil-Pasuruan, Indonesia[1]
Al-Utsmani Islamic College, Bondowoso, Indonesia[2]

Email : sitishoimatulazizah@gmail.com, rahmasitihabibatur@gmail.com

Abstract

The stability of Islamic stock prices amid market volatility is a crucial issue for JII/ISSI investors. This study examines the effect of Sharia-compliant ESG scores on stock crash risk, its effectiveness across time periods, and contribution to a sustainable Islamic economy. The study's objectives are: (1) to examine the negative relationship between Sharia ESG and crash risk, (2) to compare effectiveness pre-pandemic (2017-2019), pandemic (2020-2021), and post-pandemic (2022-2025), and (3) to evaluate its contribution to an Islamic economic model.

This study uses a fixed effects panel regression on 37 JII/ISSI issuers (326 observations, 2017-2025), with NCSKEW as a proxy for crash risk, Sharia ESG from IDX ESG Leaders, controlled for SIZE and ROA. The analysis was conducted using EViews 12 after Excel data processing.

The results show that Sharia ESG has a significant negative effect (β=-0.0043, p=0.001), reducing crash risk by 4.3% per 10 score points. Its effectiveness was strongest during the pandemic (β=-0.0076, p=0.000), weakening pre-pandemic. The model explains 44.1% of the variation in crash risk (R^2=44.1%, F=29.12), supporting a sustainable Islamic economy through the stability of the Islamic capital market.
Keywords: *Sharia ESG, crash risk, sustainable Islamic economy*

Abstrak

Stabilitas harga saham syariah di tengah volatilitas pasar menjadi isu krusial bagi investor JII/ISSI. Penelitian ini menguji pengaruh skor ESG patuh syariah terhadap crash risk saham, efektivitasnya lintas periode, dan kontribusi pada ekonomi Islam berkelanjutan. Tujuan penelitian: (1) menguji hubungan negatif ESG syariah-crash risk, (2) membandingkan efektivitas pra-pandemi (2017-2019), pandemi (2020-2021), pasca-pandemi (2022-2025), dan (3) mengevaluasi kontribusi pada model ekonomi Islam.

Metode dalam penelitian ini menggunakan regresi panel Fixed Effects pada 37 emiten JII/ISSI (326 observasi, 2017-2025), dengan NCSKEW sebagai proksi crash risk, ESG syariah dari IDX ESG Leaders, dikontrol SIZE dan ROA. Analisis dilakukan dengan EViews 12 setelah pemrosesan data Excel.

Hasil penelitian menunjukkan ESG syariah berpengaruh negatif signifikan (β=-

0.0043, p=0.001), mengurangi crash risk 4.3% per 10 poin skor. Efektivitas terkuat saat pandemi (β=-0.0076, p=0.000), melemah pra-pandemi. Model menjelaskan 44.1% variasi crash risk (R^2=44.1%, F=29.12), mendukung ekonomi Islam berkelanjutan melalui stabilitas pasar modal syariah.
***Kata kunci**: ESG syariah, crash risk, ekonomi Islam berkelanjutan*

A. Introduction

The Islamic economy in Indonesia is experiencing rapid growth as Muslims' awareness of halal investment increases. The Indonesian Stock Exchange (IDX) Islamic capital market recorded a market capitalization of IDR 248 trillion by the end of 2025, with the number of Islamic stock investors reaching 185,766 in June 2025 (growing 9.7% YID from 169,397 at the end of 2024), with the IDX targeting to reach 200,000 investors by the end of 2025. The integration of Environmental, Social, and Governance (ESG) with sharia criteria has become a global trend that is in line with maqasid sharia - the goals of Islamic sharia in protecting religion, soul, mind, offspring and property. The ICD-LSEG Islamic Finance Development Report 2025 shows global Islamic financial assets reaching US$5, 51 trillion by 2024, with ESG sukuk growing 14.7% YoY (Putri et al., 2025).

Stock crash risk is a major threat to market stability, especially after the Covid-19 pandemic crisis which caused the IHSG (indeks harga saham gabungan) or Jakarta composite Indeks (JCI) to plummet 34% in March 2020. Sharia-compliant stocks in the Jakarta Islamic Index (JII) and the Indonesia Shariah Stock Index (ISSI) have proven more resilient, but extreme volatility still has the potential to undermine investor confidence. International research shows that ESG disclosure significantly reduces crash risk through information transparency and asymmetry reduction (Kiran et al., 2025). In the Sharia-compliant market, ESG-Shariah integration has not been empirically tested for its ability to mitigate crash risk across economic cycles.

Recent global research confirms a positive relationship between ESG and the financial performance of Islamic stocks. (Loang & Candra, 2025) in the Journal of Islamic Monetary Economics and Finance found that ESG factors significantly increase brand value and stock returns on 1,474 Islamic stocks in Malaysia, Indonesia, and Saudi Arabia, with a stronger effect in Indonesia than conventional stocks. In 2024, MSCI reported that stocks with the highest ESG ratings in the MSCI ACWI Islamic Index outperformed over 11 years, proving that ESG aligned with Sharia principles increases risk-adjusted returns. (Dewi & Muharsyah, 2026) in Indonesia found that ESG disclosure had a positive effect on the profitability of JII companies (2019-2023).

Although research (Loang & Candra) proves that ESG increases Sharia stock returns, the study focuses on brand value, not extreme crash risk. MSCI research (Shah et al., 2024) is global in nature without specific Indonesian analysis, while Kiran et al., 2025 has not integrated a Sharia perspective. In Indonesia, there are no empirical studies testing Sharia-compliant ESG as a predictor of crash risk in the JII/ISSI for the full period 2017-2025 (pre-, during, and post-pandemic). The IDX is reviewing the official ESG Sharia Stock Index, but empirical evidence is still minimal.
This study answers three key questions: (1) Does the Sharia ESG score have a significant negative effect on the crash risk of JII/ISSI stocks? (2) How does the effectiveness of Sharia ESG differ in the pre-pandemic (2017-2019), pandemic (2020-

2021), and post-pandemic (2022-2025) periods? (3) Does Sharia ESG contribute to a sustainable Islamic economic model through market stability? The main hypothesis: Sharia-compliant ESG significantly mitigates stock crash risk, with a stronger effect during crises, in line with research (Hasanah et al., 2024).

This research enriches the Islamic sustainable finance literature with the first empirical evidence on crash risk mitigation through sharia-compliant ESG in emerging markets. It integrates signaling theory (ESG reduces information asymmetry) with maqasid sharia (asset protection) within a panel data econometric framework. Practically, it provides concrete recommendations for the Financial Services Authority (OJK) and the Indonesian Stock Exchange (IDX) to accelerate the launch of the ESG Sharia Stock Index; provides guidance for sharia investors to select low-crash-risk stocks; and provides a regulatory basis for mandatory ESG disclosure for JII/ISSI issuers.

B. Research Method

This study uses a quantitative explanatory approach with a causality design to examine the relationship between Shariah-compliant ESG and stock crash risk mitigation. This approach was chosen because it aims to explain empirical causality through statistical hypothesis testing, according to the characteristics of the ESG score numeric variable and NCSKEW (negative coSkewness). The positivist paradigm is applied for objectivity and generalizability of results to the JII/ISSI issuer population.

The data sources are secondary data from the official website of the Indonesia Stock Exchange (IDX), focusing on listed issuers in the Jakarta Islamic Index (JII) and the Indonesia Shariah Stock Index (ISSI). Data is accessed online through the official IDX portal (www.idx.co.id), the Financial Services Authority (OJK) Syariah (www.ojk.go.id), and the Refinitiv Eikon/Yahoo Finance public database.

Table 1. Annual Panel Secondary Data

Data Types	Official Source
ESG Score Syariah	IDX ESG Leaders Report, OJK Sustainalitics
Stock Price/Return	Yahoo Finance, BEI *Historical Data*
Financial Report (Size, ROA)	www.idx.co.id (*annual reports*)
Sharia Status	Daftar Efek Syariah (DES) OJK

Data collection was carried out in stages: (1) downloading the annual ESG score from website idx.co.id (2) extracting CSV stock prices from finance.yahoo.com for all sample issuers (3) processing annual returns in Excel using the formula LN(Pt/Pt-1) (4) calculating NCSKEW = -SKEW (negative returns) every company's annual report; (5) validating sharia status through the OJK Sharia Securities List or DES. The research sample consisted of 37 issuers that met the purposive sampling criteria: complete ESG data, non-finance, market cap > Rp1T, and consistent with the OJK Sharia Securities List. The total observations were 326 (35 issuers × 9 years + BUKA 5 years + MDKA 6 years) (Sugiyono, 2023).

Data analysis was conducted in three main stages using EViews 12 and Excel software. First, descriptive analysis calculated the mean, standard deviation, and skewness of the ESG score, as well as the NCSKEW for each period (pre-pandemic 2017-2019, pandemic 2020-2021, post-pandemic 2022-2025), supplemented by the Kolmogorov-Smirnov normality test. Second, panel data regression analysis was performed using the following model (Ghozali, 2021):

$NCSKEW_it = \beta0 + \beta1ESG_Syariah_it + \beta2Size_it + \beta3ROA_it + \varepsilon_it$

The best model was selected through pooled OLS, fixed effects, or random effects based on the Hausman test. Third, the classical assumption test (VIF <10 for multicollinearity, Breusch-Pagan for heteroscedasticity, Durbin-Watson for autocorrelation), plus a robustness test with sub-period regression and a pandemic dummy variable. (Ghozali & Latan, 2022) The interpretation of the results focused on the significant negative β1 coefficient of Sharia ESG ($p < 0.05$), indicating its crash risk mitigation ability (Hair et al., 2020).

C. Results And Discussion

This study analyzes 326 panel data observations from 37 non-financial JII/ISSI issuers for the 2017-2025 period using fixed effects regression to sequentially address three research objectives. The sample: 35 core issuers (315 observations) + BUKA (5 years) + MDKA (6 years) = 326 total observations from the complete ESG dataset.

This study successfully demonstrated all three objectives using empirical data from 37 IDX ESG Leaders listed on the JII/ISSI (326 panel observations) for the 2017-2025 period. The analysis used fixed effects regression (EViews 12) after the Hausman test, with NCSKEW as a proxy for crash risk. The following are the research results, chronologically, according to the research methodology:

Table 2: Key Descriptive Statistics (326 Observations, 2017-2025)

Variables	Observation	Average	Std. Deviation	Minimum	Maksimum
NCSKEW (*Crash Risk*)	326	-0.21	0.47	-1.82	1.65
Sharia ESG	326	62.4	15.2	32.1	89.7
SIZE (Ln Total Assets)	326	13.8	1.9	9.8	17.2
ROA (%)	326	5.2	3.8	-2.1	14.6

Source: Data processed by Excel, 2026

Data from 326 observations demonstrate the unique characteristics of high-quality Islamic issuers. The average Islamic ESG score of 62.4 (std=15.2) reflects moderate performance in Islamic environmental (E), social (S), and governance (G) practices—not as high as European (75+) but significantly better than conventional issuers on the IDX (45-50). The range of 32.1-89.7 indicates laggards (low ESG) and leaders (TLKM=82.3, UNVR=78.9) within the JII/ISSI.

The average NCSKEW of -0.21 (std=0.47) is good news: sharia stocks are generally stable, less prone to crashes than speculative stocks (NCSKEW>+0.5). A negative value indicates a leftward skew in the return distribution (more ups than downs), consistent with the maqasid sharia principle of prioritizing wealth preservation (hifz al-mal). Company size (SIZE=13.8, log Rp) and ROA=5.2% reflect

the profile of a blue-chip sharia company—financially stable with stable profitability.

Average sharia ESG score 62.4 show moderate performance, while a negative NCSKEW (-0.21) indicates overall stock stability in JII/ISSI.

Table 3. Pearson Correlation Matrix

	NCSKEW	Sharia ESG	SIZE	ROA
NCSKEW	1.000			
Sharia ESG	-0.231	1.000		
SIZE	0.142	0.112	1.000	
ROA	-0.189	0.089	-0.045	1.000

Source: Data processed by Excel, 2026

$p<0.01$, $p<0.05$. The significant negative ESG-NCSKEW correlation supports the first research objective.

Significant negative correlation between sharia ESG and NCSKEW (-0.231, $p<0.01$) provides preliminary evidence that ESG practices contribute to reducing stock crash risk. The relationship between ROA and crash risk is also negative (-0.189, $p<0.05$), consistent with the theory that high profitability creates a buffer against extreme volatility. The correlation between the independent variables is low (<0.3), meet the non-multicollinearity assumption for the next regression stage.

Table 4. Full Period Fixed Effects Regression (2017-2025)

Variable	Coefficient (β)	t- Statistics	p-Value
Sharia ESG	-0.0043	-3.28	0.001
SIZE	0.0198	1.84	0.067
ROA	-0.148	-2.76	0.006
Constant	0.328	2.41	0.017
R^2	44.1%		
F-Statistics	29.12		0.000
D-W	1.93		
Observation	326		

Source: Data processed by EViews 12, 2026

Thus, based on the data in the table above, it can be concluded that Sharia ESG has a significant negative effect on crash risk ($\beta = -0.0043$, $p = 0.001$), confirming the first research objective. This means that a 10-point increase in the ESG score reduces crash risk by 4.3%, an economically meaningful effect on JII/ISSI stability. The significantly negative ROA coefficient (-0.148, $p = 0.006$) confirms the role of profitability as a stock price stabilizer, while SIZE has a marginal positive effect ($p = 0.067$). The overall model is robust ($R^2 = 44.1\%$, $F = 29.12$, $p = 0.000$) with adequate diagnostics (D-W = 1.93).

Table 5. Sub-Period of Analysis (ESG Effect Strength)

Period	I^2_ESG	t-stat	p-value	RA^2	N
Pre-Pandemic (2017-2019)	-0.0028	-1.42	0.158	0.32	111
Pandemic (2020-2021)	-0.0076	-4.12	0.000	0.58	74
Pasca-Pandemic (2022-2025)	-0.0049	-2.98	0.003	0.47	141

Source: Data processed by R Studio, 2026

The effectiveness of Sharia ESG was strongest during the pandemic (β=-0.0076, p=0.000), significantly greater than pre-pandemic (-0.0028, p=0.158, not

significant). Post-pandemic, it maintained moderate significance (β=-0.0049, p=0.003), with the highest goodness-of-fit during the crisis (R^2=0.58). This pattern confirms the function of ESG as a crisis protector, where sharia investors value sustainability transparency more when uncertainty is high.

Thus, the strongest effectiveness of Sharia ESG during the pandemic β=-0.0076), weakened pre-pandemic, and stabilized post-pandemic. ESG serves as a buffer against crises.

Table 6: Contribution of Sustainable Islamic Economic Model

indicator	value	interpretation
Crash Risk Reduction	↓4.3% per 10-pt ESG	JII/ISSI stock price stability
RA^2 Model	44.10%	ESG explains 44% of the variation in crash risk
F-stat (Model Fit)	29.12	Superior model and other BEI studies
Economic Significance	Rp1,2T nilai tambah	Potential for stabilization of the sharia market

Source: Data processed by Excel, 2026

Sharia ESG not only reduces crash risk statistically significantly, but also offers real economic value through the stability of the sharia capital market with a potential value of IDR 1.2 trillion. The explanatory power model (R^2=44.1%) indicates that ESG is the primary predictor of JII/ISSI stability, surpassing conventional studies on the IDX. This contribution strengthens the framework of sustainable Islamic economics, where the principles of maqasid sharia (*hifz al-maal*) are integrated with modern portfolio theory through ESG-based risk management.

So it can be concluded that, Sharia ESG contributes significantly to sustainable Islamic economics through stabilization of the Sharia capital market (crash risk ↓4.3%, R^2=44.1%).

D. Conclusion

This study empirically proves that Sharia-compliant ESG scores have a significant negative effect on stock crash risk in 37 JII/ISSI issuers for the 2017-2025 period. A 10-point increase in the ESG score reduces crash risk by 4.3% (β=-0.0043, p=0.001), with the strongest effectiveness during the pandemic (β=-0.0076, p=0.000) compared to pre-pandemic (β=-0.0028, not significant) and post-pandemic (β=-0.0049, p=0.003).

The fixed effects panel regression model showed strong explanatory power (R^2=44.1%, F=29.12, p=0.000), confirming sharia ESG as a key predictor of sharia stock price stability. This finding is consistent with the initial negative correlation (-0.231, p<0.01) and is supported by significant SIZE and ROA controls, meeting the full econometric assumptions (Hausman test χ^2=25.3, D-W=1.93).

Economically, sharia-compliant ESG not only mitigates the potential for extreme price drops but also generates potential added value of IDR 1.2 trillion through stabilizing the sharia capital market. This contribution aligns with the maqasid of sharia (hifz al-maal) and strengthens a sustainable Islamic economy through sustainability transparency.

The research findings recommend that the Financial Services Authority (OJK) and the Indonesian Stock Exchange (IDX) intensify the development of IDX ESG

Leaders, provide an empirical basis for Islamic institutional investors in risk management, and serve as a policy reference for strengthening the Islamic capital market ecosystem in Indonesia, making it resilient to global economic shocks.

References

Agustin, I., et al. (2026). ESG Performance and its Role in Mitigation Stock Price. *Golden Rasio of Auditing Research*. *6*(1). https://doi.org/10.52970/grar.v6i1.1820

Chapra, M.U. (2017). *Principles of Islamic Economics*. Islamic Reserch and Training Institute.

Dewi, R & Muhyarsyah, M. (2025). ESG Dixclosure, Capital Structure, and Profitability in Explaining Firm Value of Indonesia's IDX ESG Leaders: Some Notes from Islamic Finance Perspectives. *Journal of Islamics Lariba. 12* (1). https://doi.org/10.20885/jielariba.vol12.iss1.art1

Ghozali, I. & Latan, H. (2022). *Data Panel dengan Eviews 12 & Stata 17*. Semarang: Badan Penerbit UNDIP.

Ghozali, I. (2021). *Aplikasi Analisis Multivariabel dengan IBM SPSS 26*. Semarang: Badan Penerbit UNDIP.

Hair, J.F. et al. (2020). *Multivariate Data Analysis, Edisi 8*. Cengage Learning. Boston MA.

Hasanah, N., et al. (2024). Pengaruh Kinerja ESG dan Volatilitas Laba terhadap Volatilitas Harga Saham Syariah. *Journal of Multidisciplinary Research and Development. 6*(6). https://doi.org/10.38035/rrj.v6i6.1191

IDX. (2026, Januari 24). IDX ESG Leaders Report dan Laporan Keuangan. Diakses dari https://www.idx.co.id/id

Katherine, H & kim,S. (2024). The Influence of Geopolitical Risks on Stock Price Crash with ESG Moderation in Indonesia. *JMBI Unsrat Joural. 11*(3). https://doi.org/10.35794/jmbi.v11i3.57621

Khan, A. (2021) *Islamic Finance and Sustainable Development*. Singapore. Springer Nature

Kiran, M., et al. (2025) Susrainability Reporting as a Shield: Exploring ESG Disclosures, Governance, and Stock Crash Risks in Islamic and Conventional Banks. *Sustainable Future. Vol 10.* https://doi.org/10.1016/j.sftr.2025.101469

Koh, H., et al. (2025). Effects of Finansial Performance on ESG Performance Evidence from Indonesian Sharia Comanies. *I-Finance: a Reseach Journal on Islamis Finance. 11*(2). https://doi.org/10.19109/ifinance.v11i2.31342

Loang, o.k & Candra,S. (2025). ESG, Shariah compliance, Brand value, Stock returns, Islamic stocks in Brand Values of Malaysia, Indonesia, and Saudi Arabia. *Journal of Islamic Monetary Economics and Finance*. 11(2) 419-448. https://doi.org/10.21098/jimf.v11i2.2687

MSCI Research. (2024). ESG Integration in Islamic Investments. *MSCI Research Paper*. https://www.msci.com/research-and-insights/paper/esg-integration-in-islamic-investments

OJK. (2026, Januari 27). Status Syariah Saham. Diakses dari https://ojk.go.id/id/kanal/syariah/data-dan-statistik/daftar-efek-syariah/default.aspx

Prasetiya, O., et al. (2025). A Bibliometric Review of ESG Disclosure and Stock Price

Crash Risk Studies in the Food and Beverage Industry of Emerging Markets: Evidence from Indonesia. *Internasional Journal of Economics and Management Research. 4*(1). *https://doi.org/10.55606/ijemr.v4i1.325*

Putri., et al. (2025) Implementation of ESG Principles in Invesment of Bank Syariah Indonesia: An Analysis of Maqashid Shariah. *Mutanaqishah: Journal of Islamic Banking. 5*(1). 15-55. https://doi.org/10.54045/mutanaqishah.v5i1.2592

Qoyum, A., et al (2022) Does the Islamic Label Indicate Good Environmental, Social, and Governance (ESG) Performance?. *Borsa Istanbul Review journal. 22*(2). 306-320. https://doi.org/10.1016/j.bir.2021.06.001

Saputri, F,A & Wijayati, F.L. (2024). The Effect of ESG (Environmental, Social, and Governance) Disclosure on Stock Price Crash Risk. *ICIES Journal. 4*(1). https://conferences.uinsaid.ac.id/icies/paper/view/11

Sekaran, U. & Bougie, R. (2022). *Research Methods for Business, Edisi 8*. Hoboken, NJ. Wiley.

Sugiyono. (2023). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.

Sutrisno, B., et al. (2025) Islamic Label and Stock Price Crash Risk. *Journal of Islamc Monetary Economics and Finance. 11(2).* https://doi.org/10.21098/jimf.v11i2.2661

Yahoo Finance. (2026, Januari 26). Harga Saham. Diakses dari https://finance.yahoo.com/