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SUSTAINABILITY AND INTERMEDIARY SIGNALS SHAPING IPO UNDERPRICING UNDER CRISIS CONDITIONS

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Abstract

IPO underpricing remains a persistent phenomenon in capital markets, particularly during crisis periods when valuation uncertainty and information asymmetry intensify. This study addresses how firms and financial intermediaries convey credible signals to investors under such conditions. The research examines the role of sustainability-oriented corporate signals and intermediary credibility in shaping IPO underpricing, while assessing how crisis conditions influence signal effectiveness. A quantitative research design is applied using secondary data from firms conducting initial public offerings on the Indonesia Stock Exchange between 2020 and 2024. The final sample comprises 95 IPOs selected through purposive sampling, and the empirical analysis employs multiple linear regression and moderated regression techniques. The results indicate that stronger sustainability signals are associated with lower IPO underpricing, suggesting their effectiveness in mitigating perceived valuation risk. In contrast, higher intermediary credibility is linked to greater underpricing, reflecting conservative pricing strategies adopted to secure investor demand during turbulent periods. Crisis conditions amplify both relationships, underscoring the context-dependent nature of signal interpretation. The study concludes that sustainability disclosure enhances pricing efficiency under uncertainty, while intermediary credibility exerts a nuanced influence on IPO pricing outcomes during crises.

Keywords: crisis conditions, intermediary credibility, IPO underpricing, sustainability signals.

INTRODUCTION

Initial Public Offerings (IPOs) constitute a fundamental mechanism through which firms transition from private ownership to public equity markets. Public listing enables firms to obtain long term external capital, enhance share liquidity, and comply with stricter disclosure and corporate governance standards. IPOs play a strategic role in modern financial systems by supporting firm expansion, facilitating innovation, and strengthening capital structures through reduced reliance on debt financing. Empirical evidence confirms that IPOs remain an essential source of corporate funding across economic cycles, including periods characterized by heightened uncertainty and market stress (Ritter, 2024).

IPO pricing continues to present a persistent challenge in corporate finance research. One of the most robust empirical regularities documented in the literature is IPO underpricing, defined as the tendency for first day trading prices to exceed initial offer prices. This phenomenon appears consistently across countries, industries, and regulatory regimes, indicating that underpricing reflects structural features of IPO markets rather than temporary pricing inefficiencies (Ritter & Welch, 2002). Cross country evidence highlights its economic relevance. Average first day IPO returns in the United States reached approximately 18.9 percent during the period from 1980 to 2023, while Sweden recorded average underpricing of about 28.3 percent between 1980 and 2022. Emerging markets typically exhibit even higher levels of underpricing due to greater informational frictions and valuation uncertainty (Loughran et al., 2024). Evidence from Indonesia shows that nearly 87 percent of IPOs conducted between 2020 and 2022 experienced underpricing, with an average first day return of approximately 28.8 percent (Oktananda & Gantyowati, 2023).

IPO underpricing generates substantial economic consequences for both issuing firms and investors. Underpricing represents forgone capital for issuers, commonly described as money left on the table, which reduces the efficiency of equity financing and may constrain post IPO investment capacity. Aggregate estimates suggest that IPO underpricing imposes costs amounting to tens of billions of United States dollars annually worldwide (Loughran & Ritter, 2004). Short term gains may accrue to some investors, yet distorted price discovery and valuation reversals create risks for long term investors as market prices gradually converge toward fundamental values (Kang & Lam, 2023; Baker et al., 2021).

The theoretical foundation of IPO underpricing in this study is anchored in Information Asymmetry Theory. This theory posits that issuers and underwriters possess superior private information regarding firm quality, growth prospects, and risk exposure, while investors rely primarily on publicly disclosed information that remains limited prior to listing. Such imbalance generates ex ante uncertainty and induces investors to demand compensation for valuation risk in the form of higher initial returns (Beatty & Ritter, 1986). Extensive empirical research supports this view by demonstrating that higher uncertainty, proxied by firm age, limited operating history, and volatile market conditions, is positively associated with IPO underpricing (Ljungqvist, 2008).

Signaling Theory provides a complementary explanation of how firms mitigate information asymmetry in IPO markets. The theory explains how high quality firms convey credibility through observable and costly signals that are difficult for low quality firms to imitate (Spence, 1973). In the IPO context, sustainability oriented corporate disclosure and the selection of reputable financial intermediaries serve as important signaling mechanisms. Credible signals are expected to reduce uncertainty, enhance investor confidence, and influence IPO pricing outcomes.

Information asymmetry intensifies during periods of systemic stress. Crisis conditions disrupt information channels, increase risk aversion, and weaken the informational content of conventional financial indicators. The COVID 19 crisis represents an unprecedented global shock that simultaneously affected firm operations, macroeconomic stability, and investor sentiment. Global equity markets experienced extreme volatility during early 2020, followed by partial recoveries driven by large scale fiscal and monetary interventions. IPO markets were similarly affected as issuance activity slowed and pricing uncertainty increased substantially (Baker et al., 2021).

Empirical studies indicate that IPO underpricing intensified during the COVID 19 period, particularly in emerging markets. First day returns during crisis periods exceeded those observed in pre crisis years, reflecting heightened ex ante uncertainty and stronger investor demand for risk compensation (İlbasmış, 2023). These patterns suggest that crisis conditions fundamentally alter investor behavior and pricing mechanisms, increasing reliance on non financial and reputational signals that convey firm credibility.

Sustainability oriented corporate disclosure has emerged as an increasingly important signal under such conditions. Environmental, Social, and Governance disclosure provides information regarding a firm long term orientation, stakeholder engagement, and governance quality. Global sustainable investment assets exceeded 35 trillion United States dollars in 2022, reflecting the growing integration of ESG considerations into investment decision making (GSIA, 2022). Institutional investors increasingly incorporate ESG information into valuation and risk assessment frameworks, particularly during periods of elevated uncertainty.

The informational role of ESG disclosure in emerging markets has been reinforced by regulatory initiatives aimed at improving transparency and accountability. In Indonesia, phased sustainability reporting requirements mandated by the Financial Services Authority have strengthened the credibility and comparability of ESG disclosure in capital markets (OJK, 2017). ESG performance is commonly measured using content based indices derived from sustainability reports, capturing the extent of disclosure across environmental, social, and governance dimensions. Higher ESG scores indicate greater transparency and accountability, which may reduce information asymmetry during IPOs (Harasheh, 2023).

Empirical evidence on the relationship between ESG disclosure and IPO underpricing remains inconclusive. Several studies document a negative association, suggesting that sustainability disclosure reduces uncertainty and improves pricing efficiency (Ferri et al., 2023). Other studies report positive or insignificant relationships, implying that ESG disclosure may attract investor attention without necessarily enhancing valuation accuracy (Ahlsén & Elfstrand, 2024). Observations linking ESG disclosure to higher underpricing highlight concerns related to greenwashing and perceived disclosure credibility (Parguel et al., 2011). These mixed findings indicate that the effectiveness of sustainability signals is highly context dependent.

Intermediary credibility represents another key signal shaping IPO pricing outcomes. Underwriter reputation plays a central role in setting offer prices, absorbing issuance risk, and facilitating information transmission to the market. Certification arguments suggest that reputable underwriters reduce underpricing by lending credibility to issuers through rigorous due diligence and reputational capital (Carter & Manaster, 1990). Empirical findings reveal a more nuanced relationship. Evidence shows that reputable underwriters may be associated with higher underpricing during periods of elevated market volatility, reflecting conservative pricing strategies aimed at ensuring successful placement (Demers & Lewellen, 2003). Crisis period evidence further indicates that reputational considerations may lead underwriters to prioritize deal completion over pricing efficiency (Sherman & Titman, 2002).

Several gaps remain in the existing literature. Sustainability oriented corporate signals and intermediary credibility are frequently examined separately, despite the fact that investors evaluate multiple signals simultaneously when forming valuation judgments. Crisis conditions are often treated as simple temporal effects rather than as environments that fundamentally reshape information asymmetry and signal effectiveness. Such limitations restrict understanding of IPO pricing dynamics under extreme uncertainty.

This study addresses these gaps by integrating Information Asymmetry Theory and Signaling Theory within a unified analytical framework and by explicitly examining the moderating role of crisis conditions. Crisis intensity is measured using the Oxford COVID 19 Government Response Stringency Index, which provides a systematic proxy for policy induced uncertainty over time (Hale et al., 2021).

This research addresses three core problems. Sustainability oriented corporate signals may influence IPO underpricing. Intermediary credibility may affect IPO pricing behavior. Crisis conditions may moderate the effects of sustainability and intermediary signals on IPO underpricing.

The primary objective of this study is to examine how sustainability signals and intermediary credibility jointly shape IPO underpricing under crisis conditions. The analysis evaluates whether stronger sustainability disclosure is associated with lower underpricing, assesses the direction and magnitude of intermediary credibility effects, and examines how crisis conditions alter signal effectiveness. The study contributes to the corporate finance literature by offering a context sensitive explanation of IPO underpricing and by providing insights relevant to issuers, investors, and regulators seeking to improve pricing efficiency in uncertain market environments.

RESEARCH METHOD

This study employs a quantitative explanatory research design to investigate the determinants of IPO underpricing and the conditions under which these determinants operate. The quantitative approach is appropriate because IPO underpricing represents an observable market outcome that can be measured objectively and analyzed using statistical techniques. The explanatory design enables the study to assess causal relationships between sustainability oriented corporate signals, intermediary credibility, and IPO underpricing, as well as to examine the moderating role of crisis conditions within a theory driven framework.

The population consists of all firms that conducted Initial Public Offerings on the Indonesia Stock Exchange during the period from 2020 to 2024. This period is selected to capture variations in market conditions, including phases of elevated uncertainty, economic recovery, and post crisis stabilization. A purposive sampling technique is applied to ensure data relevance and consistency. Firms are included in the sample when complete information on IPO offer prices, first day closing prices, sustainability disclosure, and underwriter identity is available. IPOs with incomplete disclosure or missing key variables are excluded to preserve the reliability of empirical results. The final sample comprises IPOs that meet these criteria and provides sufficient observations for robust statistical analysis.

Data collection relies exclusively on secondary data obtained from publicly available sources. IPO pricing data are collected from official stock exchange publications and established financial databases. Sustainability oriented disclosure data are obtained from sustainability reports and annual reports published by issuing firms. Information on intermediary involvement is collected from IPO prospectuses and exchange announcements. Data related to crisis conditions are sourced from internationally recognized policy databases that capture the intensity of government responses and market restrictions during periods of economic disruption.

All variables in this study are quantitative. IPO underpricing is measured as the percentage difference between the first day closing price in the secondary market and the initial offer price. Sustainability oriented corporate signals are operationalized using a disclosure index based on Environmental, Social, and Governance information reported by each firm. Each disclosure item is evaluated using a binary scoring approach, where a value of one indicates disclosure and zero indicates non disclosure. The sustainability score is calculated as the proportion of disclosed items relative to the total number of indicators, providing a standardized measure of disclosure intensity. Intermediary credibility is proxied by underwriter reputation, measured by the underwriter’s relative share of total IPO issuance value during the observation period, reflecting experience and market recognition. Crisis conditions are measured using an index that captures the intensity of policy restrictions and uncertainty prevailing at the time of each IPO.

Data analysis is conducted using multiple linear regression to estimate the direct effects of sustainability oriented corporate signals and intermediary credibility on IPO underpricing. Moderated regression analysis is applied by incorporating interaction terms between crisis conditions and each explanatory variable to assess whether crisis conditions alter the strength or direction of these relationships. Diagnostic tests are performed prior to hypothesis testing to evaluate normality, multicollinearity, heteroskedasticity, and autocorrelation. Robust standard errors are employed when necessary to ensure the reliability of coefficient estimates. The analytical strategy allows for a systematic examination of IPO pricing behavior while accounting for firm level signals, intermediary characteristics, and macro level uncertainty.

RESULT AND DISCUSSION

Overview of the Research Location

This study is conducted in the Indonesian capital market, focusing on firms that carried out Initial Public Offerings on the Indonesia Stock Exchange during the period from 2020 to 2024. The Indonesian market provides a relevant empirical setting due to its active IPO environment, evolving sustainability disclosure requirements, and relatively high levels of information asymmetry. These characteristics make the market suitable for examining how sustainability oriented corporate signals and intermediary credibility influence IPO underpricing.

Table 1. Sample Selection Procedure

No	Description	Number of Firms
1	Firms conducting Initial Public Offerings during the period 2020–2024	278
2	Firms that did not experience IPO underpricing on the first trading day	(24)
3	Firms without sustainability reports published before or at the IPO date	(159)
	Final sample of IPO firms	**95**

Source: idx.co.id (processed data, 2025)

Based on Table 1, a total of 278 firms conducted Initial Public Offerings during the observation period. After applying purposive sampling criteria, 24 firms without first-day underpricing and 159 firms lacking sustainability reports published prior to or at the IPO date were excluded. The final sample therefore consists of 95 firms with complete information on IPO pricing, sustainability disclosure, and underwriter involvement.

The sample covers distinct market phases, including the COVID-19 crisis, the post-crisis recovery, and subsequent market stabilization. This variation allows the analysis to capture changes in investor behavior and IPO pricing under different levels of uncertainty. Moreover, the Indonesian IPO market is characterized by substantial retail investor participation, which heightens sensitivity to observable signals such as ESG disclosure and underwriter reputation, particularly during periods of market stress.

Overall, the Indonesian capital market from 2020 to 2024 provides an appropriate empirical setting for examining IPO underpricing under crisis conditions. Continued IPO activity, expanding sustainability reporting requirements, and heterogeneous investor participation enhance the relevance of the findings and their contribution to the literature on IPO pricing dynamics.

Description of Data Related to Research Variable

Descriptive Statistics Analysis

Table 2. Result of Descriptive Statistics Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Y	95	.01	.70	.2383	.14545
X1	95	.09	.87	.4675	.15462
X2	95	.00	.32	.0452	.06869
Z	95	5.56	71.76	30.7043	22.31213
Valid N (listwise)	95				

Source: Processed data, 2025

Table 2 presents the descriptive statistics for the study variables based on a final sample of 95 IPO firms. The statistics summarize the central tendencies and dispersion of IPO underpricing, sustainability-oriented corporate signals, underwriter reputation, and crisis conditions during the observation period.

IPO underpricing (Y) ranges from 0.01 to 0.70, with a mean of 0.2383, indicating an average first-day return of approximately 23.83 percent. The standard deviation of 0.14545 suggests considerable variation in pricing outcomes, confirming the persistence and heterogeneity of underpricing in the Indonesian IPO market. Sustainability-oriented corporate signals (X1) vary between 0.09 and 0.87, with an average value of 0.4675, implying that firms disclosed nearly half of the sustainability indicators on average. The relatively high dispersion reflects substantial differences in disclosure intensity among IPO firms.

Underwriter reputation (X2) exhibits a minimum value of 0.00 and a maximum of 0.32, with a mean of 0.0452, indicating that IPO activity is concentrated among a limited number of highly reputable intermediaries. The standard deviation of 0.06869 highlights an uneven distribution of underwriter credibility across the sample. Crisis conditions (Z) range from 5.56 to 71.76, with an average of 30.7043, suggesting that

IPOs were conducted under moderate crisis intensity overall. The large standard deviation of 22.31213 reflects substantial fluctuations in uncertainty during the study period.

Overall, the descriptive statistics demonstrate sufficient variability across all variables, supporting their suitability for regression and moderation analyses. The observed dispersion across firm-level signals, intermediary credibility, and crisis intensity provides a solid empirical foundation for examining IPO underpricing under varying market conditions.

Classical Assumption Test

Normality Test

Table 3. Normality Test Result

	Unstandardized Residual
N	95
Asymp. Sig. (2-tailed)	0.200

Source: Processed data, 2025

Based on Table 3, the Kolmogorov–Smirnov test yields an Asymp. Sig. (2-tailed) value of 0.200, exceeding the 0.05 significance level. This result indicates that the regression residuals conform to a normal distribution. The fulfillment of the normality assumption confirms the suitability of the regression model and permits further empirical analysis without indications of distributional bias.

Multicollinearity Test

Table 4. Multicollinearity Test Result

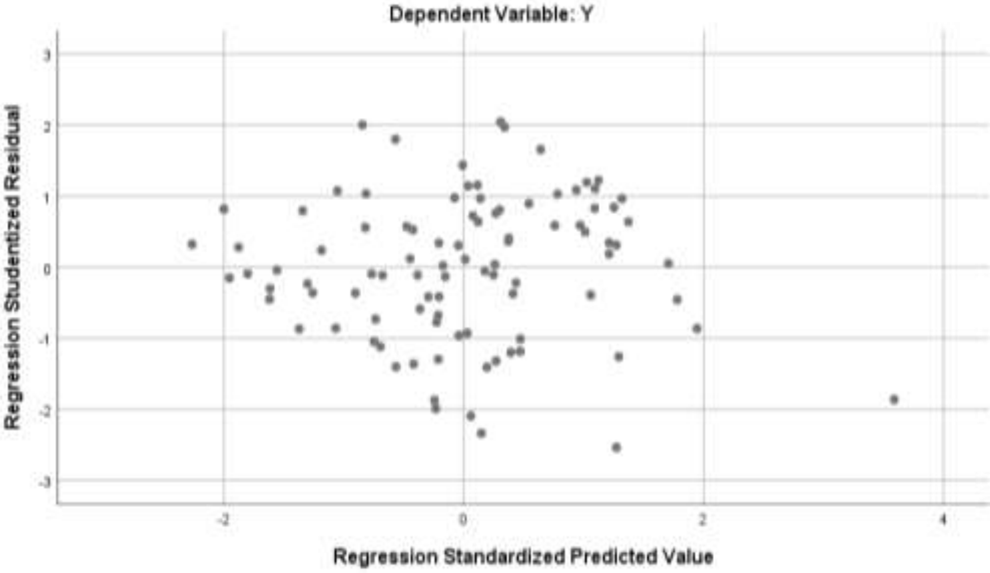
Variables	Collinearity Statistics	
	Tolerance	VIF
X1	.714	1.401
X2	.714	1.401

Source: Processed data, 2025

Based on Table 4, the tolerance values for sustainability oriented corporate signals (X1) and intermediary credibility (X2) are both 0.714, while the corresponding Variance Inflation Factor values are 1.401. These statistics exceed the minimum tolerance requirement of 0.10 and remain well below the VIF threshold of 10, indicating the absence of multicollinearity. The findings confirm that sustainability-oriented corporate signals (ESG) and underwriter reputation are not excessively correlated and can be jointly included in the regression model.

Heteroscedasticity Test

Figure 1. Heteroscedasticity Test Result



Source: Processed data, 2025

Based on Figure 1, heteroskedasticity is assessed using a scatterplot of standardized residuals against predicted values. The plotted points display a random dispersion without any systematic pattern of narrowing or widening. This distribution indicates that the variance of the residuals is constant across observations, thereby satisfying the assumption of homoskedasticity. The results confirm that the regression model is free from heteroskedasticity and suitable for subsequent analysis.

Autocorrelation Test

Table 5. Autocorrelation Test Result

Std. Error of the Estimate	Durbin-Watson
.14494	1.788

Source: Processed data, 2025

Based on Table 5, the Durbin–Watson statistic is 1.788, which lies within the acceptable range of 1.5 to 2.5. This value indicates that the residuals are not serially correlated. The absence of autocorrelation confirms that the regression model meets the independence assumption and is appropriate for further empirical analysis.

Hypothesis Test

Coefficient of Determination (R^2) Test

Table 6. Coefficient of Determination (R^2) Test Result

R	R Square	Adjusted R Square
.705[a]	.497	.486

Source: Processed data, 2025

Based on Table 6, the regression results report an R-squared value of 0.497, indicating that 49.7 percent of the variation in IPO underpricing is explained by sustainability-oriented corporate signals (ESG) and underwriter reputation. The remaining 50.3 percent of the variation is attributable to factors outside the scope of the model. The adjusted R-squared value of 0.486 suggests that the model maintains a consistent level of explanatory power after adjusting for the number of independent variables, thereby reflecting the robustness of the model's predictive capability. An R-squared value close to 0.5 indicates that the model provides a relatively strong explanation of underpricing behavior in capital market settings, where pricing outcomes are inherently influenced by multiple firm-specific and market-related factors.

Model Fit Test (F-test)

Table 7. Model Fit Test (F-test) Result

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.907	2	.954	45.397	.000[b]
	Residual	1.933	92	.021		
	Total	3.840	94			

Source: Processed data, 2025

Based on Table 7, the regression model produces an F-statistic of 45.397 with a significance level of 0.000, which is well below the conventional threshold of 0.05. This result indicates that sustainability-oriented corporate signals (ESG) and underwriter reputation jointly exert a statistically significant influence on IPO underpricing. The extremely low p-value confirms that the regression model is statistically valid and suitable for explaining the relationship between the explanatory variables and IPO underpricing with an adequate level of reliability.

Individual Significance Test (t-test)

Table 8. Individual Significance Test (t-test) Result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	.777	.039		20.067	.000
X1	-1.606	.180	-.783	-8.947	.000
X2	.739	.098	.661	7.555	.000

Source: Processed data, 2025

Based on Table 7, the estimated coefficient for sustainability-oriented corporate signals (ESG) is −1.606 and is statistically significant (p = 0.000). This result indicates a negative association between ESG performance and IPO underpricing. Firms exhibiting higher sustainability scores tend to experience lower levels of underpricing, suggesting that comprehensive sustainability disclosure enhances perceived firm quality and reduces uncertainty among investors. Improved transparency in environmental, social, and governance practices appears to lessen the need for issuers to offer substantial price discounts at the time of listing.

The coefficient for underwriter reputation is positive at 0.739 and statistically significant (p = 0.000). This finding demonstrates that underwriter reputation is positively related to IPO underpricing. Higher reputational standing among underwriters is associated with more conservative pricing behavior, as reputable intermediaries prioritize successful issue placement and reputational protection. Allowing greater initial price appreciation on the first trading day serves as a mechanism to mitigate placement risk and reinforce market confidence in the offering.

Multiple Linear Regression Analysis

Based on Table 8, the estimated regression model indicates that IPO underpricing is influenced by both sustainability-oriented corporate performance (ESG) and underwriter reputation. The regression equation is expressed as follows:

$$\boldsymbol{Y = 0.777 - 1.606X_1 + 0.739X_2}$$

The coefficient on ESG is negative (−1.606) and statistically significant, suggesting that stronger sustainability performance is associated with lower IPO underpricing. Firms with higher ESG scores are perceived as more transparent, better governed, and less risky, which reduces the need for substantial price discounts at the time of listing.

In contrast, underwriter reputation exhibits a positive and statistically significant coefficient (0.739). This finding indicates that IPOs managed by highly reputable underwriters tend to experience higher underpricing, reflecting conservative pricing strategies designed to ensure successful placement and protect reputational capital.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.746	.036		20.683	.000
	X1	-1.391	.171	-.678	-8.123	.000
	X2	.749	.102	.670	7.366	.000
	X1Z	-1.207	.262	-.909	-4.610	.000
	X2Z	1.769	.425	.816	4.162	.000

Moderated Regression Analysis (MRA)

Table 9. Moderated Regression Analysis (MRA) Result

Source: Processed data, 2025

Based on Table 9, the results of the moderated regression analysis indicate that the COVID-19 crisis functions as a significant moderating variable in the relationships between ESG performance, underwriter reputation, and IPO underpricing.

The interaction term between ESG and the COVID-19 crisis (X1Z) yields a coefficient of −1.207 and is statistically significant ($p = 0.000$). This finding suggests that crisis conditions strengthen the negative relationship between ESG performance and IPO underpricing. During periods of heightened market uncertainty, stronger ESG performance is associated with a larger reduction in underpricing. This result indicates that investors place greater weight on sustainability-related information during crises, perceiving firms with higher ESG quality as more resilient, better governed, and less exposed to risk, thereby reducing the need for aggressive underpricing.

The interaction term between underwriter reputation and the COVID-19 crisis (X2Z) is positive at 1.769 and statistically significant ($p = 0.000$). This result shows that crisis conditions amplify the positive effect of underwriter reputation on IPO underpricing. Under heightened uncertainty, reputable underwriters tend to adopt more conservative pricing strategies to ensure successful issue placement. Allowing greater initial price appreciation serves to mitigate placement risk and maintain investor confidence, which leads to higher underpricing during unstable market conditions.

Discussion

The empirical evidence presented in this study directly fulfills the research objectives articulated in the Introduction by clarifying how sustainability oriented corporate signals and intermediary credibility influence IPO underpricing under crisis conditions. The regression results reveal that ESG performance and underwriter reputation exert statistically significant yet opposing effects on IPO underpricing, with crisis intensity strengthening both relationships. These findings provide a clear response to the central research question regarding how firms and intermediaries transmit credible information to investors when market uncertainty escalates.

The observed negative relationship between ESG performance and IPO underpricing supports the predictions of Information Asymmetry Theory, which posits that more comprehensive disclosure reduces valuation uncertainty and lowers the risk premium required by investors (Beatty & Ritter, 1986). The estimated coefficient suggests that improvements in ESG performance are associated with economically meaningful reductions in underpricing, indicating that sustainability disclosure conveys substantive information during the IPO process. This result is consistent with prior studies documenting that firms with stronger ESG profiles tend to experience lower initial returns due to enhanced transparency and governance quality (Ferri et al., 2023). The amplification of this effect during the COVID-19 crisis highlights an important contextual insight. When traditional financial indicators lose reliability amid systemic disruptions, investors appear to place greater weight on non financial information, particularly ESG disclosure, as a signal of organizational resilience and long term viability (Baker et al., 2021). This pattern reinforces the view that ESG information becomes increasingly value relevant under conditions of heightened uncertainty.

In contrast, the positive association between underwriter reputation and IPO underpricing diverges from conventional certification arguments, which suggest that reputable intermediaries should mitigate underpricing by enhancing issuer credibility (Carter & Manaster, 1990). The empirical findings instead indicate that highly reputable underwriters are linked to higher levels of underpricing, especially during crisis periods. This outcome aligns with evidence showing that underwriters adopt more conservative pricing strategies in volatile markets to ensure successful issue placement and safeguard reputational capital (Demers & Lewellen, 2003). Allowing greater first day price appreciation reduces the likelihood of undersubscription and signals deal quality to the market, albeit at the expense of increased capital left on the table for issuing firms. The moderating role of the COVID-19 crisis further underscores this mechanism, suggesting that reputational concerns become more pronounced when uncertainty intensifies (Sherman & Titman, 2002).

An important contextual factor reinforcing these findings is the pronounced surge in IPO activity in Indonesia during and after the COVID-19 crisis. Official data from the Indonesia Stock Exchange indicate that 51 firms went public in 2020, followed by a slight increase to 52 IPOs in 2021, a further rise to 56 IPOs in 2022, and a sharp escalation to 78 IPOs in 2023 (BEI, 2023). Despite heightened market uncertainty, this sustained growth positioned Indonesia among the most active IPO markets in Asia during the post-pandemic period. The rapid increase in IPO issuance intensified information asymmetry, as many newly listed firms entered the market with limited public operating histories. Within this environment, ESG disclosure and underwriter reputation emerged as critical signals for investor evaluation. Firms with stronger ESG profiles were better able to mitigate uncertainty and reduce underpricing, while highly reputable underwriters responded to increased deal flow and elevated market risk by adopting more conservative pricing strategies to ensure successful issue placement. The interaction between rising IPO volume, heightened uncertainty, and greater reliance on observable quality signals underscores the importance of sustainability disclosure and intermediary credibility in sustaining investor confidence during periods of rapid market expansion.

Taken together, the results demonstrate that the effectiveness of signals in IPO markets is strongly context dependent rather than uniform across market conditions. Sustainability disclosure primarily functions as a risk-reducing signal that enhances pricing efficiency by mitigating information asymmetry between issuers and investors. In contrast, underwriter reputation operates as a strategic signal that reflects intermediary risk management behavior, particularly under heightened uncertainty. This distinction contributes to signaling theory by illustrating that signals originating from firms and financial intermediaries may generate fundamentally different pricing implications. Firm-level signals such as ESG disclosure tend to improve valuation accuracy by conveying long-term commitment, governance quality, and organizational resilience, whereas intermediary-level signals may prioritize placement success and reputational preservation, even at the expense of higher underpricing during periods of systemic stress.

The findings also extend the literature by showing that crisis conditions reshape how investors interpret and weight different signals. During periods of elevated uncertainty, conventional financial indicators often lose explanatory power, prompting investors to rely more heavily on non-financial and reputational cues. In this environment, sustainability disclosure becomes increasingly salient as it provides insights into firms’ risk management capacity and long-term strategic orientation. At the same time, reputable underwriters adjust their pricing behavior in response to heightened market risk, adopting more conservative strategies to ensure successful offerings. These dynamics highlight that IPO pricing outcomes emerge from the interaction between firm characteristics, intermediary incentives, and prevailing market conditions rather than from any single factor in isolation.

The results yield several important practical implications. For issuing firms, the evidence indicates that investments in sustainability practices and credible ESG disclosure can materially reduce IPO underpricing, especially during episodes of market instability. Firms planning to go public may therefore view ESG performance not merely as a compliance requirement or reputational asset but as a strategic tool for improving pricing efficiency and reducing the cost of equity financing. For underwriters, the findings underscore a trade-off between reputational protection and pricing efficiency. While conservative pricing strategies may be effective in securing investor demand and safeguarding reputational capital during crises, they also increase the amount of capital left on the table for issuers. A more balanced approach to pricing may help align intermediary incentives with issuer value maximization, particularly as markets stabilize. From a regulatory perspective, the results support the importance of standardized and credible sustainability reporting frameworks in reducing information asymmetry and enhancing market efficiency, especially in emerging economies where disclosure quality is often heterogeneous (OJK, 2017)

Several limitations of this study should be acknowledged. First, the analysis focuses on IPOs within a single emerging market, which may limit the generalizability of the findings to countries with different institutional, regulatory, and investor structures. Second, ESG performance is measured using disclosure-based indices, which may be influenced by reporting incentives and may not fully capture the substantive quality or effectiveness of sustainability practices. Third, crisis intensity is proxied using government response stringency, which may not entirely reflect investor-perceived uncertainty or market-level sentiment, particularly during rapidly evolving crisis episodes.

These limitations open promising avenues for future research. Cross-country comparative studies could examine whether the documented relationships between ESG performance, underwriter reputation, and IPO underpricing persist across different regulatory environments and levels of market development. Future research may also incorporate alternative ESG measures, such as third-party ratings, assurance-based indicators, or outcome-oriented sustainability metrics, to assess the robustness of sustainability signals. In addition, incorporating alternative proxies for uncertainty such as market volatility indices, liquidity measures, or investor sentiment indicators could further enrich understanding of how crisis conditions reshape IPO pricing dynamics. Such extensions would contribute to a more comprehensive and nuanced understanding of IPO valuation processes under varying market environments.

CONCLUSION

This study examines how sustainability-oriented corporate signals and intermediary credibility shape IPO underpricing under crisis conditions. The findings show that stronger ESG performance is associated with lower underpricing, indicating that sustainability disclosure reduces information asymmetry and valuation uncertainty at the time of listing. In contrast, underwriter reputation is positively related to IPO underpricing, suggesting that reputable intermediaries tend to apply more conservative pricing strategies to secure successful offerings, particularly during periods of heightened uncertainty. Crisis conditions further strengthen both relationships, highlighting the context-dependent effectiveness of firm-level and intermediary-level signals in IPO markets.

These results offer practical implications for market participants. Issuing firms can improve pricing efficiency by strengthening sustainability practices and enhancing ESG transparency, especially in turbulent market environments. Underwriters should carefully balance reputational risk management with issuer value considerations when setting offer prices under uncertainty. Overall, the study contributes to the IPO literature by demonstrating that the impact of signals on pricing outcomes varies with market conditions, providing insights relevant for issuers, intermediaries, and regulators seeking to enhance capital market efficiency.

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