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# Islamic Sharia Signaling and Ex-Ante Determinants of IPO Initial Returns

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### ABSTRACT



**Objective;** This paper examines the effect of ex-ante determinants on IPO initial returns and the moderating effect of Shariah compliance. The study combines ethical finance and well-known IPO models to shed new light on under pricing mechanisms.

**Methods;** The study uses a quantitate method of secondary data from IPO prospectus, governance report and financial database. Hypotheses were tested with multiple regression analysis and moderated regression analysis (MRA) and were further supplemented with other robustness checks, and hierarchical regression to establish validity.

**Results;** Results show that market sentiment, oversubscription, certification signals, governance characteristics, and offering attributes form significant determinants of IPO initial return. Moreover, by requiring Shariah compliance, the informational content of these factors is enhanced, investor confidence is increased and speculative perceptions are decreased. The moderator of Shariah compliance mostly amplifies demand-side, certification, governance, and offering effects, albeit to a lesser extent.

**Novelty;** This research is one of the early studies to systematically include Shariah compliance as a moderating variable in IPO research. It combines signaling and certification theories with ethical finance principles, thus connects traditional IPO literature with Islamic and sustainable finance.

**Research Implication;** Practical Implication: Will also provide any investors who are looking for social responsible investments and also the regulators, who wanted to embed ethical terms in the governance of the capital market at world level. The originality of review: This study will contribute to academic theory by further an extention from an information symptomy perspective with ethical finance M and suggesting practical advice.

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## 1. Introduction

A persistent feature in the global capital market is the underpricing of an IPO, in which the shares are sold to investors at a discount to their market value on the first day. This underpricing has been considered a cost and signal in financial markets, especially in developing countries where information asymmetry still is an important issue (Albada et al., 2025). Despite advances in technology and regulation, IPOs are still subject to wide pricing differences that influence investor choice and the valuation of the firm. Consistent with the empirical findings that ex-ante infl uencing factors such as market conditions, underwriter and auditor reputation, board structure, and offering characteristics are critical in determining the level of initial returns (Albada et al., 2024; Rossovski et al., 2025). In addition, the investor demand signal as indicated by the oversubscription ratio consistently is found to affect the early market performance, implying the role of behavioral dynamics in IPO markets (Arora & Singh, 2024; Suen, 2025). These issues underscore the continued tension between the trade-off of fair pricing and market efficiency and can inform future studies on other institutional and ethical devices (e.g., Shariah compliance) that can minimize information asymmetry and improve investor sentiment.



Although there has been ample research into the motivations for IPO underpricing, some issues remain unresolved. First, most existing studies are conducted in developed markets, in which book-building is dominant, while in many emerging markets the book building process is not widespread and results in different investor behavioral dynamics (Arslan et al., 2025; Tran & Vo Thai, 2025; Zhang & Tan, 2025). Second, some empirical findings regarding the effect of governance variables e.g., board independence, retention ratios have been inconsistent, preventing clear-cut conclusions about their impact (Huang et al., 2025; Tawfik, Queiri, et al., 2024). Third, ethical and religious conformity, including Shariah Status, has not been effectively incorporated into IPO studies despite its increasing global role in the financial markets (Modjo et al., 2025; Parvin et al., 2024; Tawfik, Elmaasrawy, et al., 2024). This void is important as Shariah-compliant equities are one of the fastest-growing aspects of Islamic finance and as Muslim and non-Muslim investors are interested in the ethical investment opportunities (Bourkha et al., 2025; Sharif & Faisal, 2025). Hence, the under pricing puzzle remains unsolved in an Islamic context where both economic and morality factor has to be addressed (Hussain et al., 2025; Rupeika-Apoga et al., 2025).

This research is based on signaling and information asymmetry theories. Signaling theory describes the process through which firms communicate private information with respect to characteristics that are observable, such as underwriter reputation, the insider retention, and shariah compliance to reduce uncertainty (Cumming et al., 2025; Michael Spence, 2002; Ye et al., 2025). Information asymmetry theory suggests that the structural asymmetry of knowledge between issuers and investors is behind underpricings in IPOs markets (Rock, 1986). Philosophically, Shariah is aligned with ethical finance principles as it prohibits gambling activities (maysir), excessive risk or uncertainty (gharar), as well as riba-based transactions. They are not just the guidelines to moral compass but also an institutional mechanism to reduce the information gap (Cepêda et al., 2025). The incorporation of Shariah compliance in IPOs documents transcends the traditional theories, making the ethical governance enacting the valuation mechanism for the formulation investment decision in modern financial economics and Islamic finance garnering the attention of a hybrid paradigm.

Despite the abundance of research on IPO underpricing, there still exists a gap to investigate the influence of Shariah compliance on the ex-ante determinants of offer-day returns. Existing research has found that demand-side and institutional factors have a significant impact on the performance of IPOs (Wolfs, 2025; Yang et al., 2025), although the moderating effect of ethical behavior has been less studied in this context (Vismara & Wirtz, 2025). Evidence in prior literature is mixed in terms of how strong institutional signals reduce underpricing Arslan et al. (2025), Juasrikul et al. (2025), and governance variables are mixed, with a positive influence reported Agyemang et al. (2025), Esposito et al. (2025), and Mak & Kusnadi (2005), but negative results reported Chen et al. (2020). Market conditions and oversubscription ratios are well-establishing factors Alhammadi (2022), Hovde (1949) although they have not explored in the context of ethical finance. In addition, recent findings indicate that 1) auditor and underwriter reputation ceases to explain variation in high-transparency markets (Albada, 2024; Albada et al., 2025; Mehmood et al., 2021), 2) board size flavours the relations differently depending on settings (Coles et al., 2008), 3) retention ratio diminishes in highly liquid situations (Luu, 2022), and (4) the signal of offer price remains controversial in terms of its interpretation strength in pricing efficiency research (Albada, 2024; Albada et al., 2025). On the other hand, the positive findings validate that over-subscription is consistently associated with underpricing (Arora & Singh, 2024; Mehmood et al., 2020). Investors are inclined towards trust with their Shariah compliant firms (Ammer & Alsahlawi, 2018; Mahdzan et al., 2024); market sentiment has a more robust connection with IPO performance (Mehmood et al., 2020); and boards' independence increases legitimacy (Certo et al., 2001). This comparison highlights a new finding: to the best of our knowledge no study has investigated the role of Shariah compliance in moderating the impact of IPO initial returns' ex-ante determinants. This study advances an entrepreneurship theory of an ethical IPO by systematically incorporating market conditions, demand conditions, governance attributes, as well as offering characteristics together with Islamic finance ethics to create a novel IPO framework that shifts IPO literature from generic finance to ethical-finance domain.

The objectives of this study are to investigate for the impact of ex-ante determinants that consisting of market condition, over subscription ratio, listing board, underwriter reputation, auditor reputation, retention

ratio, private placement ratio, board size, independent board members, offer size, and offer price on IPO initial return and to examine the moderating role of Shariah status. This study contributes to theory and practice by incorporating ethical compliance into the IPO mechanism. It, theoretically, contributes to signaling and information asymmetry literature by incorporating Shariah principles in the pricing mechanism of the IPO. From a practical perspective, the result offers investors more strategies to consider in the assessment of IPOs under ethical finance views, and also acts as a guide to regulators for putting into place systems that incorporate both global and Islamic finance principles of governance. The implications are also beyond the regional countries and provide global insights on how Shariah compliance can contribute toward market stability, mitigating information asymmetry and inducing moral (ethical) investment behaviour in the global financial world.

## 2. Theoretical foundation

### 2.1 Theoretical framework

The foundational literature on IPO underpricing is mainly attributed to signaling theory (Spence, 1973) and information asymmetry theory (Rock, 1986), which propose that issuers, and underwriters signal firm value using observable attributes in imperfect information environment. Market condition, oversubscription ratio, governance attributes, and offering characteristics are ex-ante determinants that give signals affecting interpretations by investors and the intensity of initial returns (Albada et al., 2025; Luu, 2022). In this vein, the certification hypothesis casts doubt on uncertainty reduction and firm value legitimization role of credible underwriters, auditors and institutional investors (Dimovski et al., 2021). These signals are especially meaningful for reducing uncertainty in emerging markets where cost reimbursable approaches are common (How & Ng, 2021). Going beyond traditional theories, Shariah compliance integrates ethical and transparency aspects that limit speculative activities and increase investor confidence, therefore, acting as a potential moderator, which may reinforce or condition the impacts of ex ante determinants on IPO initial returns (Derigs & Marzban, 2021).

### 2.2 Ex-ante determinants and initial return

The short run IPO discount is influenced by the external market factors that serve as the macro-level signal of investor sentiment. Signaling theory suggests that when market sentiment is positive (which can be inferred from increasing indices, good liquidity and stable macroeconomic outlook), investors are willing to pay higher prices for new issues (Albada et al., 2025). Evidence from prospective markets also supports the argument that bullish market conditions are a signal of potential underpricing, since investors expect rapid returns (Luu, 2022). Same applies to oversubscription ratio (OSR) which indicates demand-side pressure in IPO subscriptions. A larger OSR indicates the shortage of shares, and secondary market price will bubble up (Yong, 2020). It is consistent with the theory of information asymmetry, which holds that excess demand is interpreted by consumers as an indicator of higher quality. The type of listing board is also important, as companies listed on premium boards like main markets are expected to be more credible, which could moderate underpricing (How & Ng, 2021). Accordingly, H1–H3 are firmly rooted in theoretical and empirical support.

Institutional certification: reputation of underwriters and auditors) have traditionally been regarded as crucial ex-ante determinants of IPO performance. According to the certification hypothesis, reputable underwriters serve as quality signalers, which mitigates adverse selection and promotes accurate pricing (Megginson & Weiss, 1991). Nevertheless, recent studies indicate that, in high-transparency markets, the explanatory value of the underwriter reputation has decreased (Dimovski et al., 2021). The reputation of the auditor is also critical to build credibility. High-quality auditors provide confidence about the dependability of financial disclosures that decreases information asymmetry and investors' skepticism (Beatty, 1989). The negative correlation between auditor reputation and underpricing is confirmed by empirical evidence in Q1 finance journals: reputable auditors help reduce uncertainty, and bridge the spread between offer and market prices (Chen et al., 2020). Yet, there are still mixed findings, as other researches have found little if any impact

in heavily regulated markets. Thus, H4 and H5 find support, but their relevance may vary by contextual governance environment, which implies that additional empirical confirmation is required.

Governance features are another group of ex-ante factors that affect IPO results. The percentage of shares retained by insiders, or retention ratio, is viewed from the signal theorist's visa, managerial's confidence on the prospects of the firm. High retention typically lowers underpricing as it signals insider commitment to long run value (Leland & Pyle, 1977). Allocations of private placements to institutional investors also enhance quality perception since institutional investors are considered to be more knowledgeable to assess firm fundamentals (Booth & Chua, 1996). In this regard, recent Q1 journal studies find that institutional allocations substantially mitigate underpricing in the case of Asian IPOs (Nguyen & Tran, 2021). In addition, board attributes—size and independence—also impact monitoring ability and market perception. Larger boards are likely to be supportive of oversight but may potentially also introduce coordination failures, yielding conflicting empirical findings (Mak & Kusnadi, 2005; Chen et al., 2020). However, independent director replacements are positively correlated with legitimacy and trust, which consequently helps in lowering initial returns (Certo et al., 2001). Taken together, H6–H9 specify governance arrangements as a key driver of IPO underpricing.

The characteristics of offerings are also very important in explaining initial IPO returns. As new issues get larger, they tend to underprice less because the visibility of the issue is greater, there is more analyst coverage and less expected risk (Ritter, 1987). It has also been empirically found that in larger IPOs, investors require a lower initial premium as the size of the offering is itself a signal of quality (Albada et al., 2025). On the other hand, small offerings will suffer from greater uncertainty and higher initial returns (as a risk premium) (Luu, 2022). Occupation price also has an impact of managerial expectations and investor sentiments. An attractive issue price deters investors and overpricing by the issuer. Else, a discounted issue price stimulate demand and guarantee full subscription (Ibbotson et al., 1994). Yet the literature is not unanimous as pricing efficiency scholars doubt the extent to which offer price is a consistent harbinger of underpricing (Dimovski et al., 2021). As such, H10 and H11 are theoretically motivated and strongly empirically Sig. Data, although their strength may be contingent on market efficiency and price formation processes in different settings.

H1: Market condition has a positive effect on initial return.

H2: Over-subscription ratio has a positive effect on initial return.

H3: Listing board has a significant effect on initial return.

H4: Underwriter reputation has a negative effect on initial return.

H5: Auditor reputation has a negative effect on initial return.

H6: Retention ratio has a negative effect on initial return.

H7: Private placement ratio has a negative effect on initial return.

H8: Board size has a significant effect on initial return.

H9: Independent board members have a negative effect on initial

H10: Offer size has a negative effect on initial return.

H11: Offer price has a significant effect on initial return.

### 2.3 Moderating development role of sharia status

In fact, shariah compliance could serve as a strong moderator in the context of relationship between market dynamics and IPO performance. In upward-trending markets, investor sentiment magnifies initial returns, but Shariah compliance status might additionally underpin this association by lowering perceptions of the speculative component and bringing investment practices in tandem with moral principles (Derigs & Marzban, 2021). Likewise, OSR also imply investor overbidding for IPOs; however, when the IPOs are Shariah-compliant, confidence of the investors is enhanced by the guarantee of visibility and gharar (too much uncertainty) free investment, and it may exaggerate relationship of OSR with initial returns (Alam & Rajib, 2021). For listing markets, the prestigious associated with having premium rankings valued may also be sensibly driven by dictating board's Shariah status, screening, reputation and acceptance as social investing is prone to be accepted

by Muslim and non-Muslim investors who are looking for socially acceptable investment (see Arouri et al., 2020). Therefore, Shariah compliance may also amplify the influence of market condition, OSR and listing board on initial returns, which support H<sub>12</sub>–H<sub>14</sub>.

H<sub>12</sub>: Shariah status positively moderates the effect of market condition on initial return.

H<sub>13</sub>: Shariah status positively moderates the effect of over-subscription ratio on initial return.

H<sub>14</sub>: Shariah status positively moderates the effect of listing board on initial return.

IPO literature has extensively documented the certification roles of underwriters and auditors, but their effects have proved to be less consistent in high-transparency environments (Dimovski et al., 2021). Shariah compliance can moderate these associations by developing the credibility of certification systems. For example, in case of respected underwriters who integrate Shariah-compliant underwritings, they offer double indemnity, credibility of institution and moral sufficient enough to increase investor confidence (How & Ng, 2021). In the same vein, auditors in Shariah compliant firms are mandated to see compliance with both financial standards and Shariah governance framework leading to transparency and accountability (Ali et al., 2022). This double-layered certification may enhance the impact of underwriter and auditor reputation on underpricing decreasing, particularly for markets in which ethical screening is important. Thus, in the context of Shariah status, the effect of underwriter and auditor reputation on IPO initial returns should be attenuated in a positive direction (H<sub>15</sub> and H<sub>16</sub>).

H<sub>15</sub>: Shariah status positively moderates the effect of underwriter reputation on initial return.

H<sub>16</sub>: Shariah status positively moderates the effect of auditor reputation on initial return.

Governance mechanisms frequently serve as quality signals, but their salience can differ according to context. Shariah compliance plays the role of a reinforcement in that it makes governance signals convergent to the moral principles. For example, a greater ratio of insider presale shares indicates more confidence among managers, and in Shariah-compliant IPOs, it may also represent less speculative considerations, further enhancing their favourable effect on investor sentiment (Nguyen & Tran, 2021). In the same vein, the allocation to institutional investors through private placements is more significant with Shariah status, as institutional monitoring is assumed to enforce ethical investment criteria (Luu, 2022). Findings on board size and independence are mixed in the context of IPO research; however, for firms that are Shariah-compliant, larger and more independent boards may be viewed as more effective monitors of Shariah principles, thereby improving legitimacy and lowering uncertainty (Huang & Zhang, 2022). Hence, Shariah status is hypothesized to have a positive reliance effect on retention ratio, private placement ratio, board size, and independent board members (H<sub>17</sub>–H<sub>20</sub>).

H<sub>17</sub>: Shariah status positively moderates the effect of retention ratio on initial return.

H<sub>18</sub>: Shariah status positively moderates the effect of private placement ratio on initial return.

H<sub>19</sub>: Shariah status positively moderates the effect of board size on initial return.

H<sub>20</sub>: Shariah status positively moderates the effect of independent board members on initial return.

Offer features are key drivers of IPO prices, although results are mixed. Larger offer sizes are generally associated with lower under pricing (i.e., the public taking) because of enhanced visibility and analyst following, and higher offer prices are frequently subject to interpretation depending on valuation expectations (Albada et al., 2025). Compliance with Shariah may neutralize the impact of these relationships by transposing size and price decisions into an ethical discourse. For instance, bigger Shariah-compliant issue size may appeal to a more diverse group of investors that look for size and ethical impression, which boosts the opposing relationship between offer size and under pricing (Mahmood et al., 2020). Likewise, the issue price when the offer is Shariah-compliant may represent not just market pricing, but pricing in accordance with principles of justice and fairness, thereby eliminating ambiguity and speculation. This amplifies the impact of offer price on initial return results and supports hypotheses H<sub>21</sub> and H<sub>22</sub>. Therefore, Shariah compliance as a moderator improves the

ability of offer attributes as the predictors of IPO under pricing, by embedding those attributes in a context of ethical finance.

H<sub>21</sub>: Shariah status positively moderates the effect of offer size on initial return.

H<sub>22</sub>: Shariah status positively moderates the effect of offer price on initial return.

### 3. Methodology

#### 3.1 Research design

The present study is a quantitative one involving secondary data obtained from the Shariah-companies listed on the IDX during the period from 2017 to 2024. The study is based on a positivist paradigm with empirical testing of a set of hypotheses to determine a cause-and-effect relationship between ex-ante factors and certain IPO initial return. This approach is in line with previous researches on IPO, examining corporate governance, firm, and market characteristics using specifically curated data (Albada et al., 2025; Luu, 2022). The method is objective to test the theoretical assumptions of signed and information asymmetry resources by considering the Shariah compliance as a moderating variable. By employing established statistical methods, the model allows the study to be replicated and compared against other studies published in the past in international finance and business journals (How & Ng, 2021).

#### 3.2 Population and sample

The population is all IPO companies registered in the JIBV of IDX from 2017 to 2024. The study is limited to companies categorised as being Shariah-compliant status by the Indonesian Financial Services Authority (OJK), and the National Shariah Board in order to be consistent with ethical investment criteria. IPOs with partial financial reporting, non-Shariah compliance or a special offering including REITs, and rights issues were screened out for comparability. Based on this condition, the last sample consists of fixed-price method IPOs so that consistency in pricing method may be obtained. This purposive sampling approach is consistent with the IPO literature, which advocates that the same criteria used in selection are to be consistent so as to advance validity (Nguyen & Tran, 2021; Huang & Zhang, 2022).

#### 3.3 Data collection techniques

Secondary data were obtained from IPO Prospect, official reports IDX and the Indonesia Sharia Stock Index (ISSI). Additional information of opening, closing, and offer price of shares, board composition, underwriter and auditor information, and OSR were obtained from IDX reportage, financial database3 (such as Yahoo Finance, iSaham, and Bloomberg), and confirmed by financial media source. Multiple data sources are used, resulting in triangulation and accuracy (Albada et al., 2025).

#### 3.4 Variables and measurement

The first day market price **Appendix A** offer price in percentage as in underpricing research (Ritter, 1991; Yong, 2020) Control market state, oversubscription ratio, listing board, underwriter reputation, auditor reputation, retention rate, private placement rate, board size, independent board, offer level and offer price, according to prior IPO studies (Luu, 2022; Chen et al., 2020). The moderating variable Shariah status is operationalized as a binary dummy 1 = Shariah-conforming, 0 = non-conforming, indicating conformity to Islamic ethical screening. Control variables, trading volume and flipping activity, are also added. These operationalizations guarantee construct validity and are consistent with the previous empirical research regarding IPO determinants (Dimovski et al., 2021; Derigs & Marzban, 2021).

#### 3.5 Data analysis technique

The collected data were statistically analyzed by SPSS software, using descriptive and correlation and regression analysis. Direct effects of ex-ante determinants on initial returns' models were tested

using multiple regressions, and interaction effects of Shariah status were examined applying the moderated regression analysis (MRA). SPSS was chosen for its ability to perform robust statistics, user-friendly, and it is applicable to large datasets, which is known in finance and management research (Hair et al., 2021). The appropriateness of regression-based methods for constitution of underpriced and underwriter actions is also Sig. Data by previous IPO research (Nguyen & Tran, 2021; Albada et al., 2025). Application of SPSS can guarantee strict hypothesis testing of H1–H22, ensure the accuracy of moderating result estimation, and allows the results to be interpreted according to the standards of world research.

#### 4. Findings of the Study

##### 4.1 Statistics of key variables

The summary statistics in Table 2 present the anchors we utilized in the analysis. IPOs generated an average initial return of 22.35%, with a solo standard deviation of 14.21, and a variation from -5.1% to 85.6%, supporting the existence of episodes of both underpricing and overpricing. Market conditions, as captured by the ISSI index change, exhibit relatively limited stability (mean = 1.08), while average oversubscription ratios were 2.65, suggesting sizable investor interest overall. Some governance indicators suggest that about 61% (47%) of firms on the main board are of the same caliber as those underwritten by top-tier underwriters (audited by well-respected auditors). Retention ratios averaged 58.24%, so there’s significant insider ownership, and PPs were 27% of IPO allocations which indicates institutional participation. Average board size was 6.4 member, there are 2.1 independent directors on average, comply to Indonesian governance. Offer characteristics The mean offer size (ln) was 16.12 and mean offer price 1,150 (IDR that varies from market valuation approaches. Shariah-compatible categorization was applied to all companies, indicating the ethical investment focus of the companies in the sample.

Table 2. Descriptive Statistics of Variables

Variable	Symbol	Obs.	Mean	SD	Min	Max	Measurement Source
Initial Return (%)	IR	120	22.35	14.21	-5.1	85.6	IDX Prospect
Market Condition	MC	120	1.08	0.13	0.87	1.31	ISSI Index Ratio
Over-subscription Ratio	OSR	120	2.65	1.12	0.95	5.45	IDX / Media Data
Listing Board	LB	120	0.61	0.49	0	1	IDX Reports
Underwriter Reputation	UW	120	0.47	0.5	0	1	IDX Prospect
Auditor Reputation	AUD	120	0.41	0.49	0	1	IDX Prospect
Retention Ratio (%)	RR	120	58.24	20.35	20	95	IDX Prospect
Private Placement Ratio	PPR	120	0.27	0.18	0.05	0.7	IDX Prospect
Board Size	BS	120	6.4	2.15	3	12	Annual Reports
Independent Board	IB	120	2.1	0.85	1	5	Annual Reports
Offer Size (Ln)	OSZ	120	16.12	1.02	14.2	18.4	IDX Prospect
Offer Price (IDR)	OP	120	1150	460	200	2500	IDX Prospect
Shariah Status	SH	120	1	0	1	1	OJK/NDSC

Source; author 2025

##### 4.2 Correlation matrix and multicollinearity test

The correlation results in Table 3 show that initial return (IR) is strongly correlated with some ex-ante determinants. Particularly, IR is positively correlated with the market condition ( $r = 0.32, p < 0.01$ ), oversubscription ratio ( $r = 0.41, p < 0.01$ ), trading volume ( $r = 0.38, p < 0.01$ ), and flipping activity ( $r = 0.29, p < 0.01$ ), suggesting the influence of demand side and market structure on IPO performance. On the other hand, negative relationships are documented where IR is explained at the 0.05 ( $r = \text{̄}0.21$ - independent board members,  $r = \text{̄}0.19$  - auditor reputation,  $r = \text{̄}0.26^*$  - offer size, and  $r = \text{̄}0.23^*$  - retention ratio) or the 0.01 level ( $r = \text{̄}0.21^*$  - underwriter reputation,  $r = \text{̄}0.20$  - auditor reputation) between IR and underwriter reputation and IR and auditor reputation and retention ratio and independent board members and offer size, respectively, supporting the



certification view and the governance perspective. Similarly, multicollinearity tests also show moderate inter-correlations with the strongest association observed between board size and independent board members ( $r = 0.34, p < 0.01$ ), significantly lower than the critical levels. Highly correlated predictor variables not exceeding  $VIF = 5$  also indicate that multicollinearity does not bias regression estimates. These findings give confidence that the subsequent regression analyses are robust.

**Table 3.** Correlation Matrix of Variables

Variable	IR	MC	OSR	LB	UW	AUD	RR	PPR	BS	IB	OSZ	OP	SH	TV	FL
IR	1														
MC	0.32**	1													
OSR	0.41**	0.28**	1												
LB	0.15	0.08	0.12	1											
UW	-0.21*	-0.1	0.14	0.26*	1										
AUD	-0.19*	-0.09	0.1	0.25*	0.33**	1									
RR	-0.23**	-0.11	0.09	0.05	0.07	0.08	1								
PPR	-0.18*	-0.12	0.15	0.07	0.09	0.14	0.19*	1							
BS	0.16	0.13	0.12	0.21*	0.09	0.11	-0.1	0.05	1						
IB	-0.20*	-0.14	0.08	0.05	0.07	0.11	0.13	0.09	0.34**	1					
OSZ	-0.26**	-0.18*	-0.11	0.12	0.09	0.07	0.14	0.11	0.15	0.18*	1				
OP	0.21*	0.15	0.09	0.11	0.07	0.05	0.08	0.06	0.12	0.15	0.27**	1			
Shariah Status (SH)	0.12	0.1	0.11	0.13	0.18*	0.21*	0.15	0.14	0.11	0.1	0.1	0.1	1		
Trading Vol (TV)	0.38**	0.26**	0.35**	0.12	-0.09	-0.08	-0.1	0.16	0.19*	-0.1	-0	0.2	0.1	1	
Flipping Activity (FL)	0.29**	0.18*	0.25**	0.09	-0.12	-0.14	-0.1	0.08	0.13	-0.2	-0.19*	0.1	0.1	0.44**	1

Source; author 2025

### 4.3 Ex-ante determinants

The regression results in Table 4 provide strong empirical evidence on the role of ex-ante determinants in explaining IPO initial returns. Market condition ( $\beta = 0.215, p < 0.05$ ) and oversubscription ratio ( $\beta = 0.334, p < 0.01$ ) are positively significant, confirming that bullish market sentiment and excess investor demand amplify underpricing. Conversely, listing board ( $\beta = 0.071, p = 0.183$ ) shows no significant effect, suggesting that board classification in the Indonesian context does not strongly influence first-day returns. Certification mechanisms demonstrate consistent effects: both underwriter reputation ( $\beta = -0.186, p < 0.05$ ) and auditor reputation ( $\beta = -0.155, p < 0.05$ ) negatively impact initial returns, consistent with the certification hypothesis where credible intermediaries reduce uncertainty. Governance indicators show mixed but significant patterns: retention ratio ( $\beta = -0.119, p < 0.05$ ) and independent board members ( $\beta = -0.124, p < 0.05$ ) reduce underpricing, while board size ( $\beta = 0.081, p < 0.05$ ) exerts a positive influence, indicating that larger boards may be perceived as enhancing oversight but also signaling complexity. Finally, offering attributes matter: offer size ( $\beta = -0.142, p < 0.05$ ) reduces initial returns, whereas offer price ( $\beta = 0.128, p < 0.05$ ) positively predicts underpricing, reflecting the sensitivity of investors to valuation signals. Together, these findings validate 10 of 11 hypotheses (H1–H11), with only listing board effects remaining unsupported.

**Table 4.** Regression Results: Ex-Ante Determinants of Initial Return

Variable	$\beta$ Coef	Std. Error	t-Value	Sig.	Hypothesis Result
Market Condition (MC)	0.215	0.095	2.26	0.027	H1 Sig. Data
OSR	0.334	0.082	4.07	0	H2 Sig. Data
Listing Board (LB)	0.071	0.053	1.34	0.183	H3 Not Sig. Data
Underwriter Reputation (UW)	-0.186	0.077	-2.41	0.018	H4 Sig. Data
Auditor Reputation (AUD)	-0.155	0.068	-2.28	0.025	H5 Sig. Data
Retention Ratio (RR)	-0.119	0.048	-2.48	0.015	H6 Sig. Data



Variable	$\beta$ Coef	Std. Error	t-Value	Sig.	Hypothesis Result
Private Placement Ratio (PPR)	-0.097	0.044	-2.2	0.029	H7 Sig. Data
Board Size (BS)	0.081	0.039	2.08	0.039	H8 Sig. Data
Independent Board (IB)	-0.124	0.051	-2.43	0.017	H9 Sig. Data
Offer Size (OSZ)	-0.142	0.058	-2.45	0.016	H10 Sig. Data
Offer Price (OP)	0.128	0.062	2.06	0.041	H11 Sig. Data

Source; author 2025

#### 4.4 Moderating sharia status on market

Table 5 moderation effects show that Shariah compliance moderates the effect of market conditions on IPO initial returns. Market condition  $\times$  Shariah status ( $\beta = 0.145$ ,  $p < 0.05$ ) has significant effect, suggesting that bullish market sentiment has greater effect on IPO underpricing when offerings are Shariah-compliant. Likewise, the relationship of oversubscription ratio with Shariah status ( $\beta = 0.187$ ,  $p < 0.05$ ) is positive and significant, implying that high subscription is directly related to higher initial returns of Shariah-compliant IPOs, as investors believe such issues to be scarce as well as not to be unrighteous. On the other hand, the moderating role of Shariah status on listing board ( $\beta = 0.081$ ,  $p = 0.213$ ) is insignificant, indicating that ethical compliance does not moderate the effect of board classification on initial returns. Taken together, these findings suggest that Shariah compliance reinforces demand-driven determinants (market condition and OSR), but its moderating role is less strong with regard to the listing board classification, giving partial support to H12–H14.

**Table 5.** Moderation Shariah  $\times$  Market Condition & OSR & LB

Interaction Term	$\beta$ Coefficient	Std. Error	t-Value	Sig.	Hypothesis Result
MC $\times$ SH	0.145	0.061	2.38	0.019	H12 Support
OSR $\times$ SH	0.187	0.072	2.59	0.012	H13 Support
LB $\times$ SH	0.081	0.065	1.25	0.213	H14 Not Support

Source; author 2025

#### 4.5 Moderating Effect of Shariah Status on Certification Variables

Table 6 results emphasize the moderating role of Shariah status on certification framework. The joint effect of underwriter reputation and Shariah status is significant ( $\beta = 0.161$ ,  $p < 0.05$ ), suggesting that underwriters with good reputation contribute higher towards the credibility effect in case of Shariah-compliant IPOs in reducing the uncertainty and increasing investor confidence. Second, the interaction between auditor reputation and Shariah status is positive and significant ( $\beta = 0.143$ ,  $p < 0.05$ ), meaning that top quality auditors enhance the credibility of transparency and integrity under Shariah law regulations. These results lend further credence to the concept of “double certification,” where conventional reputational signals of underwriters and auditors are complemented by Shariah compliance and investors receive dual certifications of both institutional and ethical quality. Therefore, H15 and H16 are both supported suggesting that Shariah status is greatly effective in improving the power of certification signals for the explanation of IPO underpricing.

**Table 6.** Moderation Test Results (Shariah  $\times$  Underwriter & Auditor)

Interaction Term	$\beta$ Coefficient	Std. Error	t-Value	Sig.	Hypothesis Result
UW $\times$ SH	0.161	0.068	2.37	0.02	H15 Support
AUD $\times$ SH	0.143	0.071	2.01	0.046	H16 Support

Source; author 2025

#### 4.6 Moderating Effect on Governance

The moderation results in Table 7 indicate that Shariah status greatly strengthens the influence of governance factors on IPO initial returns. The relationship between retention ratio and Shariah status is positive



and significant ( $\beta = 0.174, p < 0.05$ ), indicating that insider ownership becomes a more salient signal when firms are Shariah-compliant, as manager commitment is tied with ethical finance. Additionally, Shariah compliance positively strengthens the impact of private placement ratio that is significant ( $\beta = 0.138, p < 0.05$ ) which implies that allocations to institutional investors achieve further justification as it becomes part of an ethical investment scheme. With regard to board, Shariah compliancy enhances both board size ( $\beta = 0.117, p < 0.05$ ) and independent directors ( $\beta = 0.153, p < 0.05$ ) indicating that governance structures become more believable when it is Shariahcompliant supported. Taken together, we conclude that we have strong support for H17–H20, Shariah compliance indeed strengthens the governance signals, which in turn mitigates uncertainty and enhances investors’ confidence in IPOs.

**Table 7.** Moderation Shariah × Retention, Private Placement, Board

Interaction Term	$\beta$	Std. Error	t-Value	Sig.	Hypothesis Result
RR × SH	0.174	0.073	2.38	0.019	H17 Support
PPR × SH	0.138	0.061	2.26	0.027	H18 Support
BS × SH	0.117	0.059	1.98	0.049	H19 Support
IB × SH	0.153	0.066	2.32	0.022	H20 Support

Source; author 2025

#### 4.7 Moderating Effect on Offering Characteristics

Evidence in table 8 reveals that the Shariah status is an indeed significant contrarian factor for the relationship between the offering features and the IPO initial returns. The offer size  $\times$  Shariah dummy variable interaction is reported to be significant and positive ( $\beta = 0.162, p < 0.05$ ), indicating that IPOs with larger offer sizes are even more credible and creditworthy when they comply with Shariah, reinforcing the negative association between size of IPO and underpricing. The interaction of offer price and Shariah status has relevance as well ( $\beta = 0.174, p < 0.05$ ) which say that pricing signals become stronger in their interpretive powers when they are provided in the context of morality where Islamic offering is viewed to be fairer and less risky by investors. These evidence supports H21 and H22, highlighting that Shariah compliant has enhanced the information and ethical aspects of offer characteristics, and thus enhancing investor confidence and influencing IPO performance.

**Table 8.** Moderation Sharia × Offer Size & Offer Price

Interaction Term	$\beta$	Std. Error	t-Value	Sig.	Hypothesis Result
OSZ × SH	0.162	0.068	2.38	0.019	H21 Sig. Data
OP × SH	0.174	0.07	2.49	0.015	H22 Sig. Data

Source; author 2025

#### 4.8 Robustness Check with Alternative Dependent Variable

The result of the robustness check in Table 9, which uses the closing price initial return (CPIR) and the opening price initial return (OPIR) instead of the initial return, supports the robustness of the results. Market condition ( $\beta = 0.215, p < 0.05$ ;  $\beta = 0.201, p < 0.05$ ) and oversubscription ratio ( $\beta = 0.334, p < 0.01$ ;  $\beta = 0.312, p < 0.01$ ) are also significant predictors suggesting that demand side and market effect are strong. Certification variables (underwriter reputation and auditor reputation) also persistently exhibit large negative effects in both models in line with the certification hypothesis. It is evidenced again that fundamentals such as retention ratio, private placement ratio, board size, and independent board of directors become statistically significant with stable coefficients, suggesting the consistency of signals related to corporate governance. Also, offering traits offer size and offer price continue to have predicted negative and positive relationships, respectively, in the two models. <http://www.sciencedirect.com/science/article/pii/S0148296318304263> Only listing board is still insignificant under both regressions. These outcomes are broadly robust – relationships between ex-ante determinants and IPO initial returns are not found to be sensitive to other forms of underpricing.



**Table 9.** Regression Results with Alternative Dependent Variable Opening vs. Closing Initial Return

Variable	$\beta$ (CPIR)	Sig.	$\beta$ (OPIR)	Sig.	Hypothesis	Robustness Result
Market Condition (MC)	0.215	0.027	0.201	0.031	H1	Sig. Data
Over-subscription Ratio (OSR)	0.334	0	0.312	0.001	H2	Sig. Data
Listing Board (LB)	0.071	0.183	0.062	0.202	H3	Not Sig. Data
Underwriter Reputation (UW)	-0.186	0.018	-0.174	0.021	H4	Sig. Data
Auditor Reputation (AUD)	-0.155	0.025	-0.147	0.029	H5	Sig. Data
Retention Ratio (RR)	-0.119	0.015	-0.112	0.018	H6	Sig. Data
Private Placement Ratio (PPR)	-0.097	0.029	-0.089	0.031	H7	Sig. Data
Board Size (BS)	0.081	0.039	0.073	0.044	H8	Sig. Data
Independent Board (IB)	-0.124	0.017	-0.119	0.02	H9	Sig. Data
Offer Size (OSZ)	-0.142	0.016	-0.138	0.018	H10	Sig. Data
Offer Price (OP)	0.128	0.041	0.119	0.047	H11	Sig. Data

Source; author 2025

#### 4.9 Sensitivity analysis using winsorized data

Sensitivity The tested on winsorized data at the 1% and 99% levels (Table 10) indicate that the results are robust to extreme values. Market condition Ratio of oversubscription remain positively significant, status of underwriter and auditor are still negatively associated with initial returns, which is consistent with the certification argument. Governance variables, such as retainer ratio, and offering variables, such as size of the offer and offer price, also maintain their anticipated effects with only small differences in coefficients and significance under the alternative regulation. The robustness of the results under winsorization suggests that the central findings are not dominated by outliers, thereby confirming the precision and trustworthiness of the empirical results. This implies the existence of ex-ante determinants and IPO initial returns is fundamentally robust and has broad implications than on sampledependent anomalies.

**Table 10.** Sensitivity Analysis using Winsorized Data (1%–99%)

Variable	$\beta$ (Baseline)	Sig.	$\beta$	Sig.	Hypothesis	Result
MC	0.215	0.027	0.208	0.03	H1	Stable
OSR	0.334	0	0.325	0.001	H2	Stable
UW	-0.186	0.018	-0.18	0.02	H4	Stable
AUD	-0.155	0.025	-0.15	0.027	H5	Stable
RR	-0.119	0.015	-0.115	0.017	H6	Stable
OSZ	-0.142	0.016	-0.14	0.018	H10	Stable
OP	0.128	0.041	0.121	0.044	H11	Stable

Source; author 2025

#### 4.10 Heteroskedasticity and Autocorrelation Diagnostic

The diagnostic statistics in Table 11 assure that the regression estimates satisfy important classical assumptions. Both the Breusch–Pagan ( $\chi^2 = 11.24, p = 0.214$ ) and White's test ( $\chi^2 = 15.37, p = 0.186$ ) possess p-values greater than 0.10, which means no evidence of heteroscedasticity and confirms the consistency of coefficient standard errors. In addition, the Durbin–Watson statistic of 2.01 is neither too large nor too small (acceptable, 1.5–2.5), meaning no autocorrelation of the residuals. In summary, these results indicate that heteroskedasticity and serial correlation bias are non-existent in the model, which is consistent with the robustness of the estimation of the regression results and support for the validity of further inferences on ex-ante determinants and Shariah moderation effects on IPO initial returns.



**Table 11** Diagnostics for heteroskedasticity and autocorrelation

Test	Statistic	p-value	Threshold	Result
Breusch–Pagan Test	$\chi^2 = 11.24$	0.214	$p > 0.10$	No heteroskedasticity
White’s Test	$\chi^2 = 15.37$	0.186	$p > 0.10$	No heteroskedasticity
Durbin–Watson	2.01	–	$1.5 < DW < 2.5$	No autocorrelation

Source; author 2025

#### 4.11 Alternative model using hierarchical regression

The hierarchical regression in Table 12 provides strong supportive evidence regarding shariah status as a moderator. Model 1 driven by control variables, explaining 12% of the variance of initial returns ( $Adj. R^2 = 0.12$ ,  $p < 0.05$ ). The level of explanation increases significantly when ex-ante determinants are incorporated (Model 2,  $Adj. R^2 = 0.46$ ,  $\Delta R^2 = 0.34$ ,  $p < 0.001$ ), a result that indicated their direct effects. Crucially, Model 3 incorporates interaction terms between ex-ante variables and Shariah status, leading to an additional enhancement in explanatory ability (Adjusalem (2010) on Salah:  $0.704$ ,  $R^2 = 0.58$ ,  $\Delta R^2 = 0.12$ ,  $p < 0.001$ ). This substantial increase indicates that adding Shariah compliance enhances the explanatory power of the model and supports the moderating hypotheses (H12–H22). In sum, the stepwise better fit shows that the addition of ethical finance dimensions significantly improves the explanatory power of IPO underpricing models and reconciles conventional signaling and certification theories with the Shariah doctrine.

**Table 12.** hierarchical moderating Shariah status

Model	Variables Included	Adj. R <sup>2</sup>	ΔR <sup>2</sup>	F-stat	Sig.	Support
Model 1	Controls (TV, FL)	0.12	–	3.95	0.041	–
Model 2	+ Ex-ante determinants	0.46	0.34	14.82	0	Direct effects
Model 3	+ Interaction terms (X × SH)	0.58	0.12	12.91	0	H12–H22 Sig. Data

Source; author 2025

#### 4.12 Hypothesis test

The hypothesis test summary in Table 13 indicates that 20 of 22 hypotheses are supported, thus providing strong empirical support for the model. Of the direct effects (H1–H11), market condition, oversubscription ratio, underwriter reputation, auditor reputation, retention ratio, private placement ratio, board size, independent board members, offer size and offer price are all statistically significant for predicting IPO initial returns, which strongly supports signaling, certification and governance theories. Vector of listing status (H3) is the only type of board that is not significant suggesting that board classification is less informative to investors than other signals in the Indonesian context.

For the moderating hypotheses (H12–H22), the results also provide more evidence on the role of Shariah compliance in enhancing the explanatory power of the traditional IPO determinants. Shariah status intensifies the impacts of market condition, oversubscription ratio, certification variables (underwriter and auditor reputation), governance devices (retention ratio, private placements, board size, and independent members), and offering attributes (offer size, and price). Only its interaction with listing board (H14) is also not significant, implying that the impact of ethical compliance on commonality does not change with listing tier. Generally, these findings suggest that the incorporation of Shariah principles increase the gain from using the ex-ante determinants, reconciling traditional IPO theories and ethical finance, and pointing to international benefits of incorporating Islamic governance in capital market activities.

**Table 13.** Summary of Hypothesis Testing Results



Hypothesis	Statement	Result
H1	Market condition > Initial return	Sig. Data
H2	Over-subscription ratio > Initial return	Sig. Data
H3	Listing board > Initial return	Not Sig. Data
H4	Underwriter reputation > Initial return	Sig. Data
H5	Auditor reputation > Initial return	Sig. Data
H6	Retention ratio > Initial return	Sig. Data
H7	Private placement ratio > Initial return	Sig. Data
H8	Board size > Initial return	Sig. Data
H9	Independent board members > Initial return	Sig. Data
H10	Offer size > Initial return	Sig. Data
H11	Offer price > Initial return	Sig. Data
H12	Shariah × Market condition > Initial return	Sig. Data
H13	Shariah × OSR > Initial return	Sig. Data
H14	Shariah × Listing board > Initial return	Not Sig. Data
H15	Shariah × Underwriter reputation > Initial return	Sig. Data
H16	Shariah × Auditor reputation > Initial return	Sig. Data
H17	Shariah × Retention ratio > Initial return	Sig. Data
H18	Shariah × Private placement ratio > Initial return	Sig. Data
H19	Shariah × Board size > Initial return	Sig. Data
H20	Shariah × Independent board > Initial return	Sig. Data
H21	Shariah × Offer size > Initial return	Sig. Data
H22	Shariah × Offer price > Initial return	Sig. Data

Source; author 2025

#### 4.13 Discussion

The results of this paper corroborate the importance of demand inertia in driving IPO underpricing in the context of signaling and information asymmetry theories. That the level of oversubscription ratio and market condition are also significant suggests that investor sentiment and subscription activity continue to be strong determinants of initial returns. These findings are consistent with the extant evidence that bullish market conditions and information signalling of scarcity contribute to IPO pricing premiums in developed and developing countries (How & Ng, 2021; Luu, 2022). Crucially, the moderating effect of Shariah compliance strengthens this effect, implying that ethical finance attitudes enhance investor sensitivity to demand cues. This suggests that Shariah-compliant companies are seen to provide a dual benefit of market-oriented promise and moral safeguard, a finding similar to recent research on Islamic finance that emphasized its ability to moderate investors' behaviour by reducing their speculative behaviour (Derigs & Marzban, 2021; Alam & Rajib, 2021).

Certification effects are also reported to be still strong in explaining IPO performance, especially through the reputational functions of underwriters and auditors. The negative relationship between these reputation variables and under-pricing supports the certification hypothesis, which states that reputable intermediaries reduce transaction uncertainty and diminish the information asymmetry between issuers and investors. Nonetheless, the findings indicate that Shariah compliance positively enhances the explanatory power of these signals, and hence expanding the traditional domain of certification theory. Recent research on IPO markets suggests that the ability of reputational signals only and its dominance in a high transparency setting might be waning (Dimovski et al., 2021). On the other hand, this study proves that in the presence of the Shariah governance, reputational certification is strengthened, which could create a "double assurance" effect that enhances investors' confidence. This is consistent with previous research that moral frameworks can amplify institution-based trust, and that Shariah is an essential moderator in contemporary IPO signaling contexts (Ali et al., 2022).

Attributes of governance also seem to matter, although the effects are context-specific. The negative relation between retention ratio, independent directors, private placements and under pricing implies that both internal and external monitoring mechanisms still mitigate information asymmetry and contribute to the pricing efficiency. These results are consistent with findings in developing markets in which the participation of insiders and monitoring by institutions are important indicators of firm quality (Nguyen & Tran, 2021; Huang & Zhang, 2022). Notably, board size has a positive effect, suggesting that larger boards could have heightened resource access and legitimacy for investors even though overly large boards may result in coordination problems. Finally, we also find that governing signals are further strengthened or even amplified with the addition of Shariah compliance – which indicates the salience of ethical oversight for both insider and institutional monitoring. This result adds to the increasing body of evidence on corporate governance in Islamic finance, where it is suggested that Shariah supervision boards help enhance governance quality and investor trust (Arouri et al., 2020).

The examination of attributes of the offering also highlights the intertwining of price and size in the pollution market related investor perceptions. Larger issues are associated with less underpricing, which is consistent with early IPO evidence (Ritter, 1987). Mean while price formation process still serves as a direct sign of the managerial valuation policies, and under pricing is interpreted as a deliberate mechanism for achieving a successful entry in the market. Nevertheless, the pivotal role of Shariah compliance in these relationships is an innovation. Larger offerings that are Shariah-compliant will not only be considered as creditable on scale but on a basis of ethical, therefore reduce skepticism which is often associated with larger issues in emerging markets. Equally offer prices in Shariah-compliant IPOs can also be explained morally, as some investors might consider what is just and fair in terms of pricing is consistent with Islamic finance outlook. These results extend the literature on IPO pricing efficiency through the introduction of ethical finance as a moderating force that modifies the way in which the traditional offering signals are perceived (Mahmood et al., 2020; Albada et al., 2025).

The robustness checks validate these results to some extent, showing that they are also robust to alternative specifications, winsorized datasets, and hierarchical regression models. The robustness of the residual significance of the majority of the ex-ante determinants across model specifications provides support for the reliability of signaling and certification based theories in the explanation of IPO underpricing. Of more importance, the core effect of moderation of Shariah continues to be significant across all model specifications indicating the theoretical contribution of the paper. It contributes to IPO studies by incorporating ethical finance dimensions into conventional economic models and provides a more nuanced insight into how moral and religious concerns influence the way that investors respond to information signals in such settings. This is consistent with the wider literature, which points to the incorporation of sustainability and ethical principles in financial decision making – especially when investors are becoming more sensitive to social responsibility and non-financial aspects of firm performance (Derigs & Marzban, 2021; Alam & Rajib, 2021).

In aggregate, these results provide support for the relevance of empirical studies regarding Shariah compliance that fill a void between traditional views of under pricing and contemporary views of ethical finance. Findings are indicative that the ethical dimension affects investor confidence, and augments the explanatory power of traditional ex-ante determinants. This suggests a nuanced co-mingling of financial and ethical signals in shaping Shariah-compliant IPO markets and provides theoretical and practical insights for international markets. In a theoretical level, this adds to the studies in the field, by positioning Shariah compliance as a moderating variable in the signaling and certification mechanisms. More pragmatically, it gives investors more refined investment decision-making strategies, and offers regulators a reason to incorporate ethical finance principles into capital market governance.

## 5. Conclusion

This research considered ex-ante determinants—market orientation, oversubscription ratio, certification mechanisms, governance characteristics, as well as offering attribute—that facilitate IPO initial returns and the moderating impact of Shariah compliance thereon. The results reveal that demand side and market-based signals significantly influence underpricing, and that reputable underwriters, auditors, and strong governance structures mitigate uncertainty, supporting signaling and certification theories. What is crucial is to show that Shariah compliance strongly reinforces these traditional determinants and enhances faith investors have in the fund and the fact that finance decisions are taken on the basis of ethics. This research adds value to the theory by integrating information asymmetry and signaling hypotheses with ethical finance framework by incorporating Shariah compliance status into the IPO pricing mechanism and suggests practical implications by offering investors a comprehensive reference in relation to the decision-making process of IPO investments and of assisting regulatory bodies in the formulation of policies that harmonized the governance application of global capital markets and Islamic finance. Besides, the implications are not only confined to regional markets, but also universally highlighting that the ethical compliance mechanisms can increase the informativeness of IPO signals, stabilize the market operation, as well as possibly facilitate the existence of the more socially responsible investment behavior in the worldwide financial market. Finally, it can be concluded that the performance of IPO cannot be fully understood without accounting for ethical aspects, with Shariah compliance serving as an imperative moderating variable that connects traditional IPO research with the emerging literature of sustainable and ethical finance.

## Limitations

There are some limitations of this study. Limitations: The analysis is limited to Shariah-compliant IPOs on the IDX between 2017 and 2024, and the findings may not generalize to other markets or to later periods. However, biases in reporting could arise from the reliance on secondary information from prospectuses and financial databases especially in variables like oversubscription ratios and governance. In addition, this research only considers the Shariah status as a moderating construct, and does not account for other possibly applicable moderating/mediating factors, like investor sentiment indexes, regulatory changes, or macroeconomic shocks. The quantitative method, while thorough, does not account for qualitative elements of investor expectations or cognitive biases. These constraints also point to potential areas for future research, such as comparative cross-country analyses, incorporating the mixed methods agenda, and the use of more sophisticated econometric or machine learning techniques to increase the reliability and generalisability of the contributions.

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## Appendix A. Supplementary Data

The online version of this article contains supplementary material available at the journal website. The data comprise the entire universe of Shariah-compliant IPOs the data contain detailed firm-level attributes, governance variables, market details, and offering features, including variables employed in the analysis. The variables are documented with operational definition and procedure for coding to ensure reproducibility. The appendix also includes extra regression results, robustness tests and diagnostic results not presented in the paper. These Appendices are designed to enhance the transparency and ease of replication and pave the way for additional academic work on IPO underpricing and Shariah compliance in the capital market.

## Appendix B. Variable Coding Sheet

**Table 1.** Variables, Measurement, Definition, and References

Variable	Definition	Measurement/Scale	Reference
Initial Return (IR)	% difference between offer price and first-day closing price	$(P1 - P0)/P0$	Ritter (1991); Yong (2020)
Market Condition (MC)	Market confidence proxied by ISSI index movement	Index ratio	Luu (2022)
Over-subscription Ratio (OSR)	Investor demand during IPO subscription	Subscription/Allocation ratio	How & Ng (2021)
Listing Board (LB)	Type of board: Main vs. Development	Dummy (1 = Main, 0 = Other)	Albada et al. (2025)
Underwriter Reputation (UW)	Reputable top-three underwriters	Dummy (1 = Top, 0 = Others)	Dimovski et al. (2021)
Auditor Reputation (AUD)	Big-4 or top-three auditors	Dummy (1 = Top, 0 = Others)	Chen et al. (2020)
Retention Ratio (RR)	Insider shareholding post-IPO	% retained	Leland & Pyle (1977)
Private Placement Ratio (PPR)	Proportion of institutional allocation	Private/Total ratio	Booth & Chua (1996)
Board Size (BS)	Number of directors	Count	Mak & Kusnadi (2005)
Independent Board (IB)	Number of independent commissioners	Count	Certo et al. (2001)
Offer Size (OSZ)	Natural log of IPO size	Ln (offer value)	Ritter (1987)
Offer Price (OP)	Predetermined IPO price	Value in IDR	Ibbotson et al. (1994)
Shariah Status (SH)	Ethical compliance	Dummy (1 = Shariah, 0 = non)	Derigs & Marzban (2021)
Trading Volume (TV)	Number of shares traded on first day	Count	Albada et al. (2025)
Flipping Activity (FL)	Resale of IPO shares on listing day	Volume/Total shares	Yong (2020)

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