Determinants of IPO Underpricing in Indonesian Stock Exchange 2021-2023

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Abstract

This study investigates the influence of organizational scale, earnings performance, and capital structure on equity underpricing among corporations executing Initial Public Offerings (IPOs) within the Indonesia Stock Exchange throughout 2021–2023. Utilizing comprehensive Indonesia Stock Exchange datasets, the investigation quantifies organizational scale through the natural logarithm of total assets, earnings performance via Return on Assets (ROA), and capital structure through the Debt to Equity Ratio (DER). Through purposive sampling methodology, 87 corporations were identified for multiple regression examination. Research outcomes indicate that earnings performance individually demonstrates statistically significant positive associations with underpricing, whereas organizational scale and capital structure exhibit non-significant relationships. Simultaneously, these three determinants collectively demonstrate significant influence on underpricing phenomena. These findings emphasize the critical importance of profitability indicators in establishing initial valuation outcomes within Indonesia's emerging capital markets.

Keywords: *Underpricing, Organizational Scale, Earnings Performance, Capital Structure, Initial Public Offering*

Introduction

Modern corporations operate within increasingly volatile economic environments where capital acquisition strategies have become fundamental pillars critically determining organizational growth patterns and sustained viability. Among diverse external financing alternatives accessible to business entities, Initial Public Offerings (IPOs) constitute one of the most transformative mechanisms, furnishing organizations with extraordinary access to substantial capital resources while concurrently amplifying market recognition and stakeholder legitimacy. The IPO mechanism functions as a pivotal transformation milestone converting privately-held enterprises into publicly-traded entities, facilitating access to expanded investor constituencies and expediting strategic expansion initiatives. Nevertheless, this fundamental transition encompasses complexities extending beyond simple capital mobilization, incorporating regulatory adherence, market timing optimization, and particularly, the continuing puzzle of underpricing that persistently confounds market practitioners and scholarly investigators.

The underpricing phenomenon, distinguished by the consistent pattern wherein IPO securities are valued beneath market assessments on initial trading sessions, constitutes one of the most persistent irregularities within financial marketplaces. This valuation differential emerges when recently issued securities encounter substantial price escalation immediately subsequent to market introduction, suggesting that initial offering valuations were established cautiously beneath shares' estimated intrinsic worth. Such underpricing generates considerable wealth redistribution from issuing organizations to initial purchasers, directly affecting capital that businesses can mobilize through public offerings while simultaneously producing extraordinary returns for investors securing IPO distributions. The continuation of this occurrence across various markets, temporal periods, and economic circumstances has stimulated substantial scholarly dialogue and pragmatic concern.

Table 1: IPO Activity Overview

Year	Total IPOs	Underpriced Firms	Percentage
2021	52	27	53.76%
2022	56	35	51.92%
2023	78	38	62.50%
Total	186	100	48.72%

Source: Processed by Researchers, 2025

This investigation examines the underpricing occurrence within the IPO marketplace at the Indonesia Stock Exchange throughout 2021-2023. The empirical evidence demonstrates considerable expansion in IPO transactions, with organizations conducting public listings increasing from 52 corporations in 2021 to 78 enterprises in 2023, representing approximately 50% growth across this three-year interval. Nonetheless, the underpricing phenomenon continues as a substantial challenge, with an average of 48.72% of IPO corporations encountering underpricing during the observation period, signifying that nearly half of all newly-listed entities still confront this predicament despite advancements in digital transformation, information availability, regulatory infrastructure, and valuation techniques.

The theoretical foundation for comprehending IPO underpricing relies upon several interconnected financial frameworks, particularly the functions of information asymmetry, signaling mechanisms, and risk assessment in valuation determinations. Prior empirical investigations have repeatedly identified organizational magnitude, earnings capacity, and capital structure as fundamental determinants of underpricing intensity. This research addresses contemporary capital market challenges with considerable scholarly and practical significance, contributing to ongoing academic discourse concerning IPO pricing effectiveness and market mechanisms in developing economies.

Literature Review

Signaling Theory

Signaling theory constitutes a framework whereby organizations convey information to financial statement users to establish competitive advantages (Alqurashi et al., 2023; Chemmanur et al., 2021). Management articulates organizational performance through financial disclosure to reduce information disparities between internal leadership and external stakeholders. Within IPO environments, establishing offering valuations beneath market assessments (underpricing) operates to capture investor attention by exhibiting future earnings potential (Darmadi & Gunawan, 2023; Kolb & Tykvova, 2023). Underpricing operates as a favorable indicator intended to alleviate information uncertainty and build market credibility. Organizations confident in their operational prospects voluntarily accept near-term financial concessions to establish sustained investor trust (Engelen & van Essen, 2020; Pham et al., 2022).

Agency Theory

Agency theory, originally conceptualized by Jensen & Meckling (1976), explains the contractual arrangement between ownership (principals) and management (agents), which regularly produces interest conflicts arising from divergent goals and information disparities. This informational inequality triggers challenges including moral hazard and adverse selection, subsequently producing agency expenses encompassing monitoring expenditures and bonding costs. Within the IPO framework, underpricing often manifests as a result of interest divergences among corporate proprietors, underwriters, and prospective stakeholders. Underwriters generally establish conservative valuations to reduce underwriting exposure, notwithstanding potential disadvantage to issuing organizations (Abrahamson et al., 2020; Lukose & Rao, 2021). Therefore, underpricing can be understood as simultaneously an agency expense and a quality signaling tool to potential investors.

Information Asymmetry Theory

Information asymmetry theory describes the informational disparity between organizational insiders and external stakeholders, generating investor uncertainty in assessing organizational potential (Bangassa & Gangopadhyay, 2020; Gounopoulos & Kallias, 2022; Shi et al., 2021). In IPO contexts, this circumstance presents risks of security price deterioration and possible offering unsuccessful outcomes. Consequently, organizations must prioritize minimizing information asymmetries through improved transparency and precise financial disclosure to build market confidence.

Underpricing

Underpricing manifests when initial offering valuations fall beneath first-session closing valuations in secondary marketplaces (Deb & Marisetty, 2021; Rodrigues & Stegemoller, 2023). This occurrence produces initial gains for investors while generating "money left on the table" for issuing organizations. According to agency theory, underpricing emerges from information asymmetries between management and investors (Bhojraj & Swaminathan, 2020). For organizations, underpricing hinders capital optimization and triggers ownership dilution. Conversely, for investors, underpricing generates near-term capital appreciation opportunities (Guo et al., 2020). Underpricing additionally affects underwriter reputation, capital market mechanisms, and organizational financing approaches and sustainability (Zhang & Liu, 2023; Lowry et al., 2020).

Firm Size

Organizational magnitude represents corporate capability in producing cash flows and accessing market information. According to contemporary research, organizational scale can be quantified through total assets expressed in natural logarithm (Ln) to reduce data volatility (Chemmanur et al., 2021; Alqurashi et al., 2023). Larger organizations typically exhibit superior stability, broader information access, and diminished investment risks, subsequently encountering reduced underpricing intensity during IPO transactions. Large-scale enterprises maintain enhanced market credibility and improved transparency, thereby minimizing information asymmetries between management and potential stakeholders. This reduced uncertainty converts into more precise pricing mechanisms and diminished underpricing occurrences.

Profitability

Earnings capacity constitutes a fundamental indicator for assessing organizational financial performance, particularly within IPO frameworks. Profitability demonstrates organizational capability in producing earnings, quantifiable through various metrics including ROI, ROE, and ROA (Kolb & Tykvova, 2023; Pham et al., 2022). Return on Assets (ROA) is selected for this investigation as it reflects organizational effectiveness in generating profits from asset deployment. Higher ROA levels typically associate with diminished underpricing likelihood, as organizations are perceived to maintain favorable financial trajectories. Enhanced earnings performance signals demonstrate management proficiency and operational effectiveness, potentially affecting investor confidence and pricing precision during initial offerings.

Financial Leverage

Capital structure leverage quantifies the degree to which organizations employ debt financing within their capital composition. Elevated leverage intensities may increase financial risk exposure, subsequently affecting underpricing amplification during IPO transactions (Abrahamson et al., 2020; Lukose & Rao, 2021). Common leverage measures include DAR, DER, and TIER ratios. This investigation utilizes Debt to Equity Ratio (DER) as it demonstrates debt proportions relative to equity capital, substantially affecting investor risk assessments. Higher leverage proportions indicate amplified financial risk and potential insolvency probability, generating uncertainty concerning organizational financial sustainability and future performance capabilities.

Hypotheses Development

The Effect of Firm Size on Underpricing

Organizational magnitude reflects operational scale quantified by total asset valuation. Larger organizations tend to encounter diminished underpricing attributable to reduced information asymmetry and enhanced investor confidence. Empirical evidence demonstrates that organizational scale inversely influences underpricing phenomena (Chemmanur et al., 2021; Bangassa & Gangopadhyay, 2020). Substantial corporations benefit from extensive analyst coverage, heightened media visibility, and established operational histories, collectively contributing to decreased valuation uncertainty. Furthermore, organizational magnitude serves as a proxy for institutional maturity, financial stability, and diversification capacity, attributes that collectively mitigate perceived investment risks and facilitate more accurate price discovery mechanisms (Gounopoulos & Kallias, 2022; Lowry et al., 2020).

H_1: Organizational magnitude exhibits a negative association with underpricing.

The Effect of Profitability on Underpricing

Earnings performance represents organizational capability to generate profit and operates as an essential investor signal. Higher profitability may paradoxically amplify underpricing attributable to investor uncertainty regarding earnings sustainability and excessive market anticipations. Superior earnings capacity generates substantial investor interest, potentially creating oversubscription scenarios that influence pricing strategies. Underwriters confronting strong demand indicators may deliberately establish conservative offering valuations to ensure successful placement while simultaneously rewarding early-stage investors (Darmadi & Gunawan, 2023; Kolb & Tykvova, 2023). Additionally, exceptional profitability can trigger earnings quality concerns among sophisticated investors who question whether current performance levels represent sustainable competitive advantages or temporary peaks (Deb & Marisetty, 2021; Zhang & Liu, 2023).

H_2: Earnings performance demonstrates a positive relationship with underpricing.

The Effect of Financial Leverage on Underpricing

Organizations with strategic leverage communicate this information as signals to investors. However, elevated debt intensities indicate amplified financial risk, potentially generating conflicting market signals that influence underpricing. Capital structure composition simultaneously conveys multiple messages regarding financial risk profiles and management confidence (Abrahamson et al., 2020; Lukose & Rao, 2021). While elevated debt levels signal financial distress risk and reduced financial flexibility, strategic leverage deployment may signal management confidence regarding future cash flow generation capacity and creditor validation of business model viability (Bhojraj & Swaminathan, 2020; Guo et al., 2020).

H_3: Capital structure leverage demonstrates a positive association with underpricing.

Simultaneous Effects

Empirical investigations demonstrate that organizational magnitude, earnings performance, and capital structure simultaneously influence underpricing, supporting the proposition that all independent determinants maintain significant relationships with underpricing (Engelen & van Essen, 2020; Shi et al., 2021).

H_4: Organizational scale, earnings performance, and capital structure simultaneously demonstrate significant effects on underpricing.

Research Methodology

Methods

Data Types and Sources

This quantitative investigation employs a causality framework requiring corporate financial information processed using statistical methodologies. The study utilizes secondary data from organizational financial documents available on the Indonesia Stock Exchange (IDX) website (www.idx.co.id) or individual corporate websites.

Population and Sample

The research population encompasses all corporations executing Initial Public Offerings (IPO) and listed on the Indonesia Stock Exchange (IDX) throughout 2021-2023, totaling 186 corporations. Sample identification employs purposive sampling technique, representing sample determination based on specific criteria relevant to research objectives.

Sample Selection Criteria:

1. Corporations executing IPO on IDX during 2021-2023
2. Corporations maintaining complete data concerning offering valuation and closing valuation
3. Corporations not encountering stable pricing circumstances
4. Corporations encountering underpricing (excluding overpricing cases)
5. Corporations not reporting losses during IPO year

From 186 organizations, 87 satisfied the criteria, producing a focused dataset suitable for comprehensive underpricing examination within the Indonesian capital market context.

Findings and Discussion

Multiple Linear Regression Analysis

This study utilized multiple linear regression analysis as the principal analytical approach to process the data and gain in-depth understanding of how independent variables influence the dependent variable. The analytical findings are displayed in the table presented below.

Table 2: Multiple Linear Regression Analysis Results

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**	
(Constant)	0.628	0.221	-	2.834
Firm Size	-0.014	0.008	-0.174	-1.750
Profitability	0.501	0.108	0.447	4.655
Financial Leverage	-0.017	0.021	-0.081	-0.815

Source: Processed SPSS output, 2025

Based on the analytical results above, the multiple linear regression equation can be formulated as follows:

$Y = 0.628 - 0.014X_1 + 0.501X_2 - 0.017X_3$

The interpretation of this regression equation is as follows:

1. $\alpha = 0.628$: The constant value indicates that when the variables of Firm Size, Profitability, and Financial Leverage are held at zero or remain constant, the predicted value of Underpricing is 0.628.
2. $\beta_1 = -0.014$: The regression coefficient for Firm Size demonstrates that each one-unit increase in Firm Size will result in a 0.014 decrease in Underpricing, assuming all other variables remain unchanged (ceteris paribus).
3. $\beta_2 = 0.501$: The regression coefficient for Profitability demonstrates that each one-unit increase in Profitability will result in a 0.501 increase in Underpricing, assuming all other variables remain unchanged (ceteris paribus).
4. $\beta_3 = -0.017$: The regression coefficient for Financial Leverage demonstrates that each one-unit increase in Financial Leverage will result in a 0.017 decrease in Underpricing, assuming all other variables remain unchanged (ceteris paribus).

Research Hypothesis Testing

Partial Test (t-Test)

The t-test is employed to measure the extent to which each independent variable individually influences the dependent variable, while holding all other independent variables constant. When an independent variable's significance value is below 0.05, the hypothesis is accepted and the variable has a statistically significant effect. Conversely, when the significance value exceeds 0.05, the hypothesis is rejected.

Table 3: t-Test Statistical Results

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
(Constant)	0.628	0.221	-	2.834
Firm Size	-0.014	0.008	-0.174	-1.750
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Source: Processed SPSS output, 2025

Based on the table presented above, the following conclusions can be drawn:

1. Firm Size: The significance value of 0.084 > 0.05 (not significant) with t-calculated = |-1.750| < t-table = 1.99 indicates that H_1 is rejected. Therefore, Firm Size does not have a significant effect on Underpricing.
2. Profitability: The significance value of <0.001 < 0.05 (significant) with t-calculated = 4.655 > t-table = 1.99 indicates that H_2 is accepted. Therefore, Profitability has a significant positive effect on Underpricing.
3. Financial Leverage: The significance value of 0.418 > 0.05 (not significant) with t-calculated = |-0.815| < t-table = 1.99 indicates that H_3 is rejected. Therefore, Financial Leverage does not have a significant effect on Underpricing.

Simultaneous Test (F-Test)

The F-test is conducted to determine the simultaneous influence of independent variables on the dependent variable. The F-test results in this study are presented in the following table:

Table 4: F-Test Statistical Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.787	3	0.262	8.917	<0.001[b]
Residual	2.440	83	0.029	-	-
Total	3.227	86	-	-	-

Source: Processed SPSS output, 2025

The F-calculated value of 8.917 with a significance level of <0.001 < 0.05 reveals that simultaneously, the variables of Firm Size, Profitability, and Financial Leverage have a significant effect on Underpricing.

Coefficient of Determination Test (Adjusted R^2)

The coefficient of determination is utilized to assess the model's capability in explaining the variation of the dependent variable. The coefficient of determination (Adjusted R^2) test results are presented in the following table:

Table 5: Coefficient of Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.494[a]	0.244	0.216	0.171455

Source: Processed SPSS output, 2025

Based on the model summary test results displayed above, the Adjusted R^2 coefficient of determination is 0.216. This finding indicates that the Underpricing variable (dependent variable) can be explained by the independent variables—namely Firm Size, Profitability, and Financial Leverage—to the extent of 21.6%, while the remaining 78.4% is influenced by other variables not examined in this study.

Discussion

Firm Size Effect on Underpricing

The empirical outcomes reveal that organizational magnitude demonstrates a negative but statistically non-significant association with underpricing (t-calculated = -1.750, p = 0.084). Larger organizations encounter diminished underpricing during IPOs on the Indonesia Stock Exchange (2021-2023) attributable to enhanced transparency, market visibility, and credibility, though this relationship does not achieve statistical significance. Information Asymmetry Theory explains this association through reduced information gaps between issuers and investors. However, the non-significant result suggests that within Indonesia's emerging market context, organizational scale alone may be insufficient to substantially influence pricing decisions. Additionally, the concentrated ownership structures and family-controlled business groups prevalent in Indonesian markets may diminish the traditional size-credibility relationship observed in developed markets (Gounopoulos & Kallias, 2022; Lowry et al., 2020). These findings partially align with prior investigations by Alqurashi et al. (2023) and Rodrigues & Stegemoller (2023).

Profitability Effect on Underpricing

Earnings performance exhibits the most robust positive relationship with underpricing (t-calculated = 4.655, p <0.001). This substantial relationship underscores a paradoxical phenomenon wherein organizations with superior ROA encounter greater underpricing, contradicting conventional theoretical expectations. High profitability generates heightened investor enthusiasm, potentially prompting conservative initial pricing by underwriters to guarantee successful offerings (Darmadi & Gunawan, 2023; Kolb & Tykvova, 2023). Within the Indonesian context, exceptional pre-IPO profitability may raise questions regarding earnings quality and revenue recognition practices, particularly given concentrated ownership structures and nascent institutional oversight mechanisms (Deb & Marisetty, 2021; Zhang & Liu, 2023). Furthermore, behavioral biases may cause investors to extrapolate historical profitability linearly into future periods, generating inflated valuation expectations that contrast with more conservative offering prices (Pham et al., 2022; Engelen & van Essen, 2020). The finding reinforces signaling theory applications wherein superior financial performance generates complex market dynamics rather than straightforward risk reduction.

Financial Leverage Effect on Underpricing

Capital structure demonstrates a negative but statistically non-significant relationship with underpricing (t-calculated = -0.815, p = 0.418). The non-significant leverage effect reflects conflicting market signals—debt may signal creditor confidence while simultaneously indicating financial risk (Abrahamson et al., 2020; Lukose & Rao, 2021). Additionally, investors may concentrate more substantially on growth potential and earnings metrics rather than capital structure considerations. Within Indonesia's bank-dominated financial system, moderate leverage levels represent normative financing patterns rather than exceptional circumstances, potentially diminishing leverage's informational value (Bhojraj & Swaminathan, 2020; Guo et al., 2020). Findings align with investigations by Shi et al. (2021), suggesting that capital structure effects on IPO pricing vary substantially across institutional contexts.

Simultaneous Effect Analysis

The F-test outcomes (F-calculated = 8.917, $p < 0.001$) demonstrate that all determinants collectively influence underpricing significantly. The adjusted R-squared value of 0.216 indicates moderate explanatory power, suggesting investors systematically evaluate IPO organizations using quantifiable financial metrics, though substantial variance remains unexplained. The remaining 78.4% of variance attributed to unexamined factors highlights the multifaceted nature of IPO pricing, influenced by market sentiment, underwriter reputation, industry dynamics, macroeconomic conditions, and behavioral factors (Engelen & van Essen, 2020; Shi et al., 2021). Within emerging market contexts like Indonesia, additional institutional factors including regulatory quality, enforcement mechanisms, investor protection frameworks, and market liquidity conditions may exert considerable influence on pricing outcomes beyond firm-specific financial attributes (Bangassa & Gangopadhyay, 2020; Gounopoulos & Kallias, 2022).

Conclusion

Individual Effects: Earnings performance demonstrates positive and statistically significant effects on underpricing (t-value = 4.655, $p < 0.001$), while organizational scale and capital structure exhibit non-significant impacts (t-values: -1.750 and -0.815, $p > 0.05$). Earnings performance exhibits the strongest influence, confirming efficient asset utilization as a critical but paradoxical driver of underpricing in Indonesian IPO markets.

Simultaneous Effect: All determinants collectively exert significant effects on underpricing (F-calculated = 8.917, $p < 0.001$), validating comprehensive assessment approaches by IPO market participants.

Explanatory Power: The model explains 21.6% of underpricing variation (adjusted $R^2 = 0.216$), with 78.4% influenced by unexamined factors such as underwriter reputation, market sentiment, industry conditions, and regulatory environment.

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