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Does Listing Board Influence The Level of Underpricing?

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ABSTRACT

Regulatory contrasts among stock market listing boards can significantly affect firms' initial returns. Newly listed firms often encounter an informational asymmetry, creating uncertainty. To mitigate the risk of insufficient market absorption, underwriters typically set IPO prices below the fair value to attract investors. This practice is particularly evident on boards with stricter regulations, such as the Main Board, where full commitment underwriting often leads to underpricing. This study explores the differences in underpricing between firms listed on the Main Board and their alternative board and how board listing factors influence this underpricing. Utilising ANOVA and linear regression analysis, the results reveal a significant difference in underpricing based on the listing board. The novelty of this research lies in introducing the listing board variable and addressing the limited empirical investigation of whether listing boards influence underpricing in Indonesia.

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1. INTRODUCTION

The capital market plays a crucial role in strengthening the national economy by supplying external funding sources that boost the productivity of firms' economic cycles. It facilitates the exchange between investors providing capital and firms seeking funds through issuing shares. This issuance process, which involves an initial listing on the capital market, is called an initial public offering (IPO) (Kumar, 2014). Once shares are issued, they can be traded on the secondary market, offering investors potential profit through capital gains and dividends. In 2023, the Indonesian Stock Exchange (IDX) experienced its highest annual listings since 1990, with 79 firms raising Rp54,71 trillion in IPO funds. This achievement reflects a significant increase in IPO. It underscores entrepreneurs' trust in the capital market, supported by favourable regulatory policies, such as the IDX-incubator, which supports SMEs and startups accessing capital markets for funding needs. Figure 1 illustrates the IPO trend from January 2020 to June 2024.

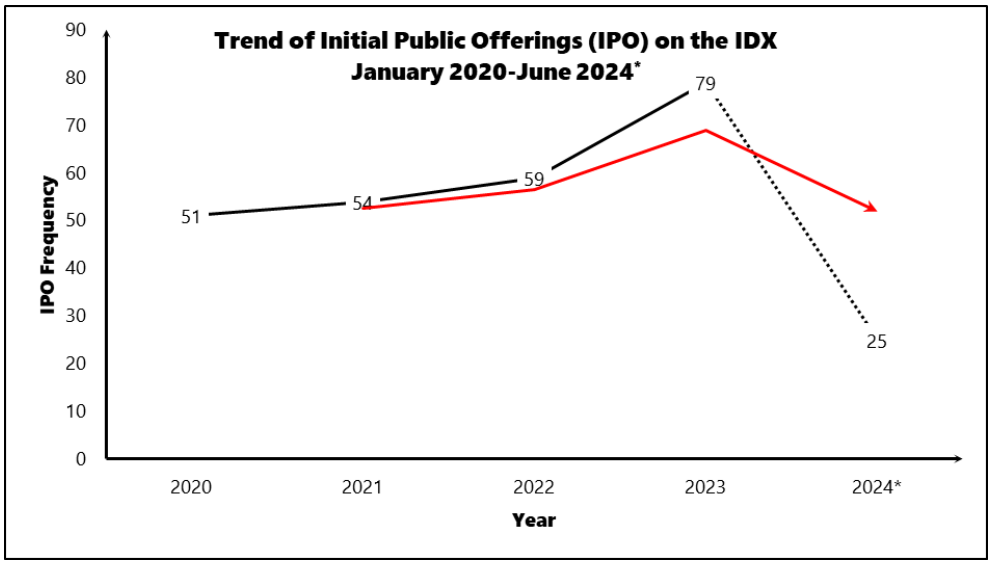

Figure 1 Trend of Initial Public Offerings (IPO) on the IDX January 2020-June 2024*.
Source: Indonesian Stock Exchange (2024)

Figure 1 highlights the growth of IPO on the IDX, indicating an increase from 51 firms in 2020 to 79 by 2023. However, by mid-2024, only 25 IPO were recorded, reflecting a slowdown in this trend. Despite this decline, firms' interest in pursuing IPO remains evident. The IDX organises firms into various listing boards to maintain the quality of listed firms (issuers) and secure investors. The listing board's classification is based on the characteristics of the firms (Vismara et al., 2012). This systematic approach allows emerging firms to compete effectively at a similar level, enhancing their credibility as they strive for listings on more prestigious boards. IDX details the framework regulating IPO and listing boards in Indonesia in Regulation Number I-A of 2021, which pertains to the Listing of Shares and Equity Securities Other than Shares Issued by Listed Firms. The most recent amendment to this regulation occurred in December 2021. The IDX features four categories of listing boards: (a) Main Board, (b) Main Board-New Economy, (c) Development Board, and (d) Acceleration Board (Otoritas Jasa Keuangan, 2023). Additionally, Figure 2 presents an overview of IPO frequency categorised by their respective listing boards between January 2022 and June 2024.

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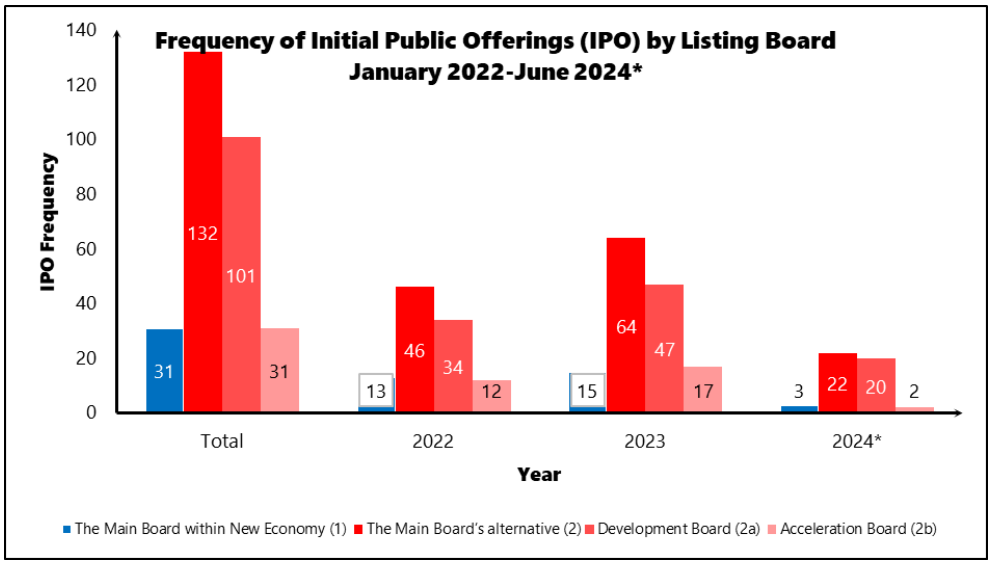

Figure 2 Frequency of Initial Public Offerings (IPO) by Listing Board January 2022-June 2024*.
Source: Indonesian Stock Exchange (2024)

Figure 2 indicates a high tendency for observation listings on the alternative of Main Board between January 2022 and June 2024; 81% of the 163 issuer firms, amounting to 132 issuers are listed on the Main Board alternative, including the Development and Acceleration Board. The Development Board emerged as the most prominent category, accounting for 101 issuers or 62% of the total. In contrast, the Main Board, which encompasses the New Economy sector, has only 19% of IPO, representing 31 firms. This trend underscores the challenges many firms face in meeting the stringent listing requirements set for IPO, such as the Main Board. Previous research by Vismara et al. (2012) revealed that 77,5% of IPO in major European countries were also conducted on alternative boards. Similarly, Doukas & Hoque (2016) highlighted that 78,1% of firms in the London Stock Exchange (LSE) are primarily listed in the Alternative Investment Market (AIM).

Each listing board possesses distinct characteristics (Ramírez et al., 2019). In the context of the IDX, for example, there is a distinction between the Main Board and the Development Board as specified in Regulation Number I-A of 2021. Key distinctions include the operational age for listing: firms need at least 3 years for the Main Board and 1 year for the Development Board. The Main Board requires issuers not to incur financial loss, while the Development Board allows losses as long as profit projections for years two to six are provided. Additionally, the Main Board requires 3 years of audited financial statements, compared to 1 year for the Development Board. However, it is worth noting that their underwriting requirements are the same, requiring full commitment across both boards (BEI, 2021). Compared to the Main Board, the listing requirements for smaller regulated boards imply that firms often face significant uncertainty (Yaakub et al., 2018). However, the *high-risk, high-return* principle indicates that these offerings can yield substantial initial returns. Ritter & Welch (2002) reported that investor confidence rises as the market is bullish. There is a marked increase in demand for IPO shares of unproven and risky firms. Despite this, investors tend to favour purchasing stocks when the offer price is reasonable or lower (Fadila & Utami, 2020).

According to the information asymmetry theory outlined in the Baron Model, underwriters typically negotiate with issuers to avoid setting overly high IPO prices. This approach helps minimise the risk of losses, in case the shares do not perform well in the primary market, mainly when a full commitment contract is used (Widayani & Yasa, 2013). Such strategies often lead to underpricing, where the closing price on the first trading day exceeds the IPO price; meanwhile, overpricing occurs when the opposite happens. Neutral conditions arise when the bid price equals the market

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price. Analysis of the period from January 2022 to June 2024 presented in Figure 3 reveals that a significant majority of IPO firms—approximately 76,1% (124 firms out of 163)—experienced underpricing. In contrast, 20,9% (34 firms) faced overpricing and only 3% (5 firms) reported neutral initial returns.

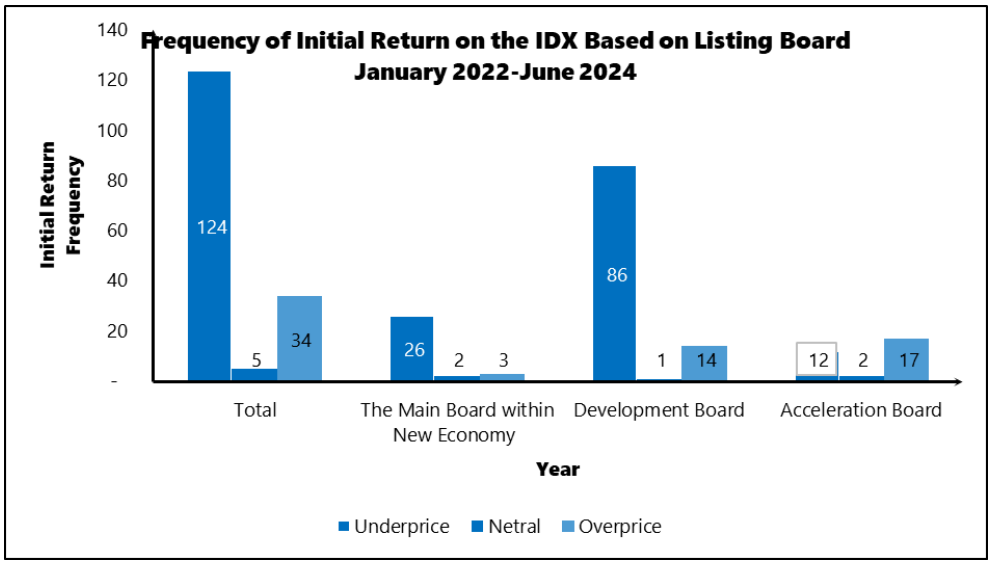

Figure 3 Frequency of Initial Return on the IDX Based on Listing Board January 2022-June 2024. Source: Indonesian Stock Exchange (2024)

Figure 3 illustrates that firms listed on the Development Board experience the highest levels of underpricing, with 86 out of 101 firms (85,1%) affected. The Main Board shows underpricing in 26 out of 31 firms (83,9%). These patterns suggest that underpricing is prevalent in Indonesia's stock markets. According to signal theory highlighted by Desmonda & Santioso (2021), underpricing is seen as a positive indicator (signal) for investors. This phenomenon implies the potential for initial returns shortly after an IPO (Kristiantari, 2013). Even though the firm initially shows strong returns, it might be part of a group that faces unrestricted regulation. These firms are often smaller, can have unpredictable performances, and may have gaps in their information.

The novelty of this research lies in introducing the listing board variable and addressing the limited empirical investigation of whether listing boards influence the level of underpricing in Indonesia, despite the possibility that other firms' characteristics could significantly impact this phenomenon. Previous studies, including those by Ramírez et al. (2019), Doukas & Hoque (2016) and Vismara et al. (2012) have indicated differences in underpricing levels across various alternative boards, particularly in comparison to the Main Board. Additionally, Sharma & Wazal (2020) found that underpricing rates are generally lower for IPOs on SME Boards than those on NSE Boards—the Main Board. Ramírez et al. (2019) further noted that issuers on the Main Board tend to experience higher underpricing due to the involvement of more parties, which exacerbates information asymmetry. The inconsistencies observed in research findings and the notable prevalence of underpricing in firms not listed on the Main Board underscore the importance of further investigation into this topic.

Based on the previously disclosed background, the research questions for this study are formulated as follows: (1) Does the level of underpricing differ significantly between the Main Board and its alternative board? (2) Is there an influence between listing board classification and underpricing levels?

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Signalling Theory

Spence (1973) presents the Signalling Theory in his article Job Market Signalling, exploring how financial and non-financial signs can significantly influence investor decisions. IPO, the prospectus distribution, can signal positively or negatively to potential investors. Positive signals enhance investors' perceptions of the firm, leading to increased demand for IPO shares in the primary market. High-quality firms often set lower bid prices to mitigate ex-ante uncertainty and attract investor interest. This strategy, while risky as it may reduce the total funds raised, creates an underpricing phenomenon. According to Ibbotson (1975), underpricing can leave a promising impression on investors, *leaving a taste in investors' mouths* and boosting their confidence in the firm's future performance prospects. This strategy favours high-quality firms for subsequent seasoned equity offerings (SEO). However, as noted by Allen & Faulhaber (1989), low-quality firms embrace challenges. Typically, low-quality firms are younger and have unstable performance, making them heavily reliant on IPO funds. Additionally, limited information disclosure can hinder these firms from establishing credibility with investors, affecting their ability to pursue future seasoned equity offerings.

Information Asymmetry Theory

The theory of information asymmetry investigates the unequal distribution of information among market participants during the IPO, including issuers, underwriters, and investors. Baron (1982) highlighted the information asymmetry between issuers and their underwriters. Firms often set higher prices to maximise their fundraising during an IPO, while underwriters suggest lower prices to mitigate risk, particularly when a full commitment contract is necessary. This tendency towards lower IPO pricing can create opportunities for underpricing. Beatty (1989) elaborated on information asymmetry, noting the circumstances between publishing firms and investors. When prices are set too low, the funds raised may not meet the firm's needs; however, this can benefit investors, as they may obtain significant initial returns. On the other hand, prices that are set excessively high can lead to overpricing and result in negative returns. In scenarios where information is symmetrical, the IPO price aligns closely with the market price, reflecting a more balanced information landscape. Rock (1986) also examined the information disparities among investors, distinguishing between informed and uninformed investors. Informed investors typically jump into IPO when perceiving profitability, while uninformed investors often acquire leftover shares after allocating them to informed investors. This situation contributes to the Winner's Curse phenomenon, wherein uninformed investors tend to receive shares when the price has been inflated. To safeguard potential investors from this uncertainty, IPO prices are frequently set lower as compensation, reflecting the friction created by varying levels of information among investors.

Underpricing

Underpricing is a prevalent phenomenon observed in IPO. It is marked by a positive initial return that occurs when the closing price on the first day exceeds the offering price (Ibbotson & Ritter, 1995). Research by Ljungqvist (2007) has identified four primary causes of this underpricing such as information asymmetry, institutional factors, ownership and control considerations, and investor behaviour. Information asymmetry occurs when one party possesses more information than the other. This situation leads informed investors to focus on stocks that are expected to be profitable, leaving uninformed investors with less attractive options (Rock, 1986). As a result, IPO prices are often set lower to mitigate the risks associated with adverse selection. Institutional factors play a significant role as well. Concerns related to litigation, price stabilisation, and taxation can lead to discounted prices to avoid potential lawsuits (Logue, 1973), ensure stability in post-IPO stock prices, and optimise profits, considering that capital gains tax rates are typically lower than income

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tax rates (Taranto, 2003). Conflicts may arise from separating ownership and control before an IPO. In this context, underpricing may serve as a strategy to maintain control through oversubscription (Brennan & Franks, 1997) or to enhance external oversight and decrease agency costs by broadening public ownership (Stoughton & Zechner, 1998). Finally, investor behaviour significantly influences underpricing. The concept of informational cascades suggests that investors often mimic the actions of others when faced with uncertainty (Welch, 1992). Additionally, the characteristics of high-risk firms can lead them to set lower prices to attract investors, aligning with the principle of high risk, high return (Beatty & Ritter, 1986).

Capital Market—Indonesian Stock Exchange and Listing Board

As defined by Law Number 8 of 1995, the capital market is a comprehensive financial system that includes various activities such as public offerings, securities transactions, investment management, and the roles of issuers and public firms, along with associated institutions and professionals. The capital market is divided into two main parts based on the transaction period: the primary market and the secondary market. In the primary market, shares are initially offered to the public through an IPO, which raises funds for operational financing. This process involves numerous stakeholders, including underwriters and other institutions. The IPO process begins with submitting required documents, followed by the bookbuilding stage, during which the price is established. The public offering typically lasts 3 to 5 working days after shares are allotted. Once the shares are listed, they can be freely traded in the secondary market, where the prices fluctuate based on supply and demand, firm performance, or comprehensive economic conditions. The transactions are facilitated by the trading securities in the secondary market. At the same time, the clearing and settlement processes are managed by PT Kliring Penjaminan Efek Indonesia (KPEI) and PT Kustodian Sentral Efek Indonesia (KSEI), typically completed within 2 working days (t+2).

The Indonesian Stock Exchange (IDX) employs a listing board to categorise issuers according to their capital structure, specific characteristics, and risk profiles. This organisation aids in investor analysis and promotes fair competition among issuers. The listing board comprises four categories: (a) The Main Board (*Papan Utama*) is designated for large firms with a solid track record. (b) Development Boards (*Papan Pengembangan*) that have yet to fulfil the criteria of the Main Board. Both are regulated under Regulation Number I-A of 2021 pertains to the Listing of Shares and Equity Securities Other than Shares Issued by Listed Firms. (c) New Economy (*Ekonomi Baru*) is aimed at firms whose business models are driven by technology. It operates under Regulation Number I-Y of 2022. Finally, the Acceleration Board (*Papan Akselerasi*), as regulated by Regulation Number I-V of 2023, is tailored for small and medium-sized enterprises (SME). Table 1 compares the different boards within the IDX listing framework based on the Financial Services Authority (FSA) of Indonesia (2023):

Table 1 IPO Requirements on the Main Board and Main Board Alternative

Criterion	The Main Board	The Main Board Alternative	
		Development Board	Acceleration Board
Legal entity	Limited liability	Limited liability	Limited liability
Operational period	Minimum 36 months	Minimum 12 months	Minimum 12 months
Financial reports and audits	Minimum 3 years and 2 years with a Fair Opinion Without Modification	Minimum 12 months and 1 year with a Fair Opinion Without Modification	At least 1 year with a Fair Opinion Without Modification
Profit from business	Mandatory profit for the last 1 year	Tolerating a loss within profit projections for the second to sixth years	Tolerating a loss within the profit projection in the sixth year
Shares are offered to the public.	Greater than or equal to 300 million shares	Greater than or equal to 150 million shares	Minimum 20%

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Criterion	The Main Board	The Main Board Alternative	
		Development Board	Acceleration Board
Shareholder	Minimum 1,000 parties	Minimum 500 parties	Minimum 300 parties
Stock offering price	Minimum Rp100	Minimum Rp100	Minimum Rp50
Underwriting contract	Full commitment	Full commitment	Best effort

Source: Otoritas Jasa Keuangan (2023)

Hypothesis

Underpricing is a principal phenomenon observed in IPO, which is represented by the closing price on the first trading day being higher than the offering price (Ljungqvist, 2007). This event can be explained through the information asymmetry theory, which implies that underpricing is a response to the information asymmetry between the issuers and investors. Issuers often impose a lower stock price to mitigate the risk of adverse selection. While this strategy may be disadvantageous for the issuers due to less funding supply, investors perceive it as an opportunity to achieve significant initial returns. Ibbotson (1975) emphasised that underpricing can signal the issuer's quality, potentially allowing investors to sell shares in the secondary market at raised prices. Firms on the Main Board with more stable financial performance often use underpricing to signal confidence in their prospects to build a good market reputation. For these firms, underpricing encourages a positive perception among investors, enabling future seasoned equity offerings (SEO) to compensate for any funding shortcomings encountered during the IPO. Conversely, firms listed on the Main Board's alternatives, such as the Development and Acceleration Boards, are typically less-known firms and have financial instability, making them more speculative (Yong & Albada, 2018). Low pricing offers by these firms can adversely impact their ability to raise sufficient IPO funds needed for expansion and working capital (Chincarini et al., 2020). Additionally, the high uncertainty arising from limited disclosure increases biases toward underpricing.

During the offering period, underwriters interested in Main Board IPO must ensure full commitment to emission and often set lower prices to mitigate failures if the shares do not perform well in the primary market (Teja, 2021). In contrast, for certain firms at the Main Board's alternative, the best effort allowed means that the issuer bears the risk while the underwriter primarily acts as a marketer. However, bullish market conditions gained investor confidence in IPO, driving demand for shares, leading to substantial initial returns in alignment with the principle of high risk equating to high return (Ritter & Welch, 2002). Yaakub et al. (2018) indicate that firms at the Main Board alternative operate under more flexible regulatory frameworks and face higher levels of risk, which influences the prevalence of underpricing. Data from IDX spanning January 2022 to June 2024 shows that 132 IPO firms listed at the Main Board alternative experienced underpricing, with 103 slipping into this category. Empirical research by Doukas & Hoque (2016) reveals distinct levels of underpricing between various boards, with alternative board markets often displaying higher levels. In contrast, Sharma & Wazal (2020) found that IPO at the Main Board alternative tend to have lower underpricing levels. Further support for these findings comes from Ramírez et al. (2019), which suggests that issuers on the Main Board are more likely to be underpriced due to the involvement of numerous agents in the issuance process.

H_1 : There is an underpricing level distinction between the Main Board and its alternative board.

As interpreted through the Baron Model, the study by Beatty & Ritter (1986) highlights information asymmetry between issuers and underwriters. This condition is derived from the underwriters' motivation to set low IPO prices. By doing so, they aim to attract investors and mitigate underwriting risks. This is particularly relevant for firms listed on the Main Board and those on the Development Board, where underwriters must buy unsubscribed shares in the primary market (Yanti & Yasa, 2016). Contrarily, firms listed under the Acceleration Board have the best

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effort option, allowing SME's underwriters to shift the risk entirely onto the issuers (Teja, 2021). This might allow issuers to set higher IPO prices. According to signal theory, underpricing can signify a firm's confidence in its future performance. Established firms with stable histories—often deemed high-quality may intentionally underprice their IPO to cast positive signals to investors (Allen & Faulhaber, 1989). This strategy, however, may be challenging for lower-quality firms to replicate, as the risks involved could overshadow the potential advantages.

Vismara et al. (2012) noted that firms listed on less-regulated markets/boards tend to experience higher underpricing, which is viewed as a means to establish credibility. In contrast, (Song et al., 2014) found that stringent regulations, such as *price-earnings ratio* restrictions imposed by the China Securities Regulatory Commission (CSRC), can lead to increased underpricing due to restrictions on bidding prices. Incorporating control variables, Ramírez et al. (2019) examined factors such as firm size, age, sector, stock price, public float fraction, and underwriter reputation. Partama & Gayatri (2019) indicated that larger firms on the Main Board benefit from greater public awareness, reducing information inequality and underpricing. Ritter (1991) reinforced this view by stating that a more vast firm history diminishes information uncertainty. Additionally, Hafidz & Tara (2024) pointed out that technology firms, which are predominantly listed on the Main Board alternative, tend to draw investor interest due to their perceived innovation despite experiencing price fluctuations. High IPO prices are generally associated with lower initial returns. Firms characterised by large free floats and advocated by reputable underwriters often set higher prices without incurring underpricing issues, except in high-risk firms requiring comprehensive assurances to minimise the risk of shares not being absorbed in the market (Kristiantari, 2013).

H_2 : Listing boards influence the level of underpricing.

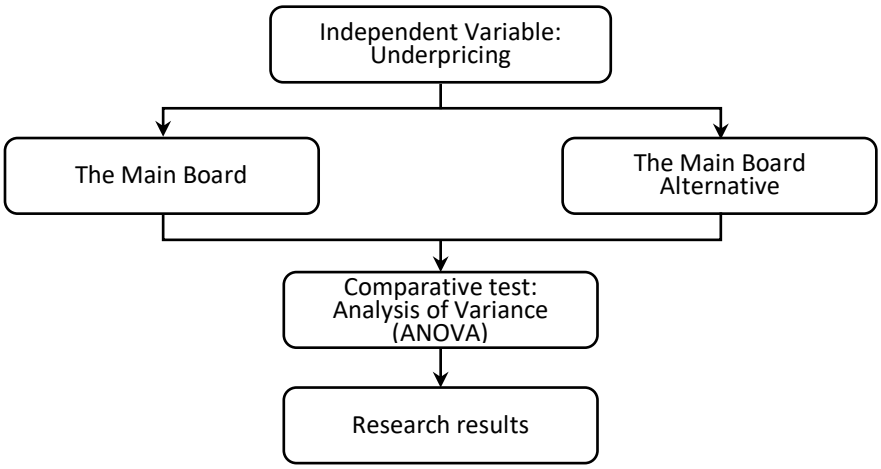

Figure 4 Conceptual Framework of Underpricing Level Distinction Between the Main Board and the Main's Alternative Board

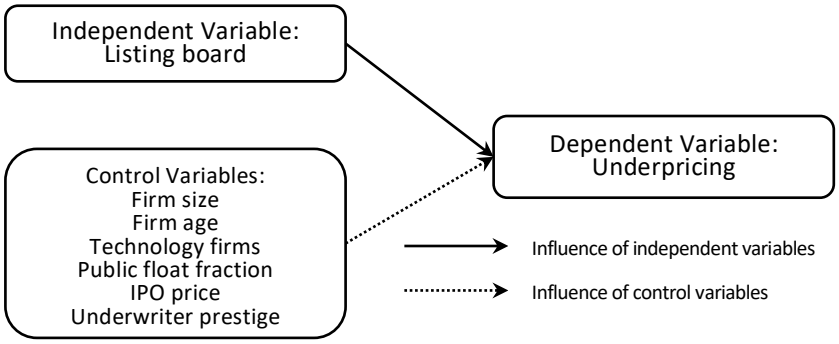

Figure 5 Conceptual Framework of Listing Boards Influence on The Level of Underpricing

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2. METHODOLOGY

This research employs a quantitative method to examine the influence of the listing board on the level of IPO underpricing and to explore differences in underpricing across board categories. To compare levels of underpricing, the study tested a comparative hypotheses model that also incorporated influential observations to analyse the relationship between the listing board and the level of underpricing. The observation period spans from January 2022 to June 2024, following the amendment of the Listing Regulation Number I-A and is contingent upon the authorisation of the research proposal. The population includes all firms that went public during this timeframe, a total of 163 firms. The sample is selected through purposive sampling, explicitly focusing on issuers that experienced underpricing, including 124 firms to observe. The utilised variables and their measurement in this study are detailed in Table 2.

Table 2 Variable Operational Definitions

	Variabel	Variable operational definition	Formula	Authors
1.	Independent variable:			
	(1.a)Underpricing level (*U*)	Defined as the percentage representing the positive gap between the closing price at the end of the first trading day. Information: $IR_{i,t}$ = initial return of shares i on the first day of trading $P_{i,t}$ = closing price of shares i on the first day of trading $P_{i,t-1}$ = IPO price	$IR_{i,t} = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}}$	Ramírez et al. (2019)
2.	Dependent variable:			
	(2.a) Listing board (*DMD* dan *AMD*)	It is defined as categorising potential issuers according to their specific characteristics. It is designed to facilitate investors' evaluation of investment possibilities and risks, enabling them to make better decisions. Proxied with: (a) Market dummy (b) Development market dummy (DMD) (c) Acceleration market dummy (AMD)	Analysis of variance: (a) Main Board (0) (b) Development Board (1) (c) Acceleration Board (2) Linear regression analysis: (a) Development Board = 1, vice versa = 0 (b) Acceleration Board = 1, vice versa = 0	Ramírez et al. (2019)
3.	Control Variables:			
	(3.a) Company age (*AGE*)	The duration of a firm's presence is often measured from its establishment, as outlined in its deed of incorporation, until the point at which it conducts an IPO. Information: $t_{i,IPO}$ = IPO year of firm i $t_{i,0}$ = establishment year firm i	$AGE = t_{IPO,i} - t_{0,i}$	Ramírez et al. (2019)
	(3.b) Company size (*SIZE*)	Defined as a scale that indicates the magnitude or dimensions of a firm	$SIZE = \ln(outstanding\ share)$	Ramírez et al. (2019)
	(3.c) IPO share price (*PRICE*)	It is defined as the price agreed upon by prospective issuers and underwriters when a firm initially offers its shares to the public. Information: $P_{i,IPO}$ = IPO price	$PRICE = P_{i,IPO}$	Ramírez et al. (2019)
	(3.d) Technology firms (*TD*)	Defined as a firm that leverages technology to enhance its products and services, it can be referred to as a technology-driven organisation	Dummy: (a) Technology (1) (b) Non-technology (0)	Ramírez et al. (2019)

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Variabel		Variable operational definition	Formula	Authors
(3.e)	Public float fraction (*PFF*)	It is defined as the proportion of shares made available to the public at an IPO, which illustrates the level of shares held by public investors compared to the total shares outstanding.	$PFF = \frac{Issued\ share}{Outstanding\ share} \cdot 100\%$	Ramírez et al. (2019)
(3.f)	Underwriter prestige (*UP*)	The quality of an underwriter during an IPO is often measured using various metrics. This measurement reflects the underwriter's reputation and performance in the IPO process.	Dummy: (a) Prestige underwriter (1) (b) Non-prestige underwriter (0)	Ramírez et al. (2019)

Source: Ramírez et al. (2019)

The data analysis applies descriptive statistics, classical assumption testing—including normality, multicollinearity, heteroscedasticity, autocorrelation, and hypothesis testing. This study tested the hypothesis using ANOVA and linear regression analysis. The resulting regression model incorporates the variables under investigation, presented as follows:

$$U = \alpha + \beta_1 AMD + \beta_2 DMD + \beta_3 AGE + \beta_4 SIZE + \beta_5 PRICE + \beta_6 TD + \beta_7 PFF + \beta_8 UP + \varepsilon \quad \text{..... (1)}$$

Where:

U = level underpricing
AMD = Acceleration Board
DMD = Development Board
AGE = firm age
SIZE = firm size
PRICE = IPO price
TD = technology firms
PFF = public float fraction
UP = underwriter prestige
α = constant
βi = regression estimations i, with i = 1, 2, 3, ..., 8
ε = error term

The model's statistical significance is evaluated using p-values and setting 0,05 as the significance level (α). All analyses were conducted using SPSS version 26, which is widely acknowledged in social science research.

3. RESULTS AND DISCUSSION

This study found that a population of 163 firms had initial public offerings between January 2022 and June 2024. The sample was selected using a purposive sampling method, particularly targeting listing firms that experienced underpricing or achieved a positive initial return on their first day of trading. Following these criteria, 124 issuers were identified as fit for analysis. The details regarding the determination of the research sample are in Table 3.

Table 3 Determination of Research Sample

Description	Year			
	2022	2023	2024*	Total
Issuers that carry out IPO after the amendment of Listing Regulation Number I-A of 2021	59	79	25	163
Emiten dengan initial return:				
(a) Stagnant / price does not experience a price change	(2)	(3)	-	(5)
(b) Negative / closing price below the IPO price	(10)	(20)	(4)	(34)
Number of samples that meet the criteria by year	47	56	21	124

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Description	Year			
	2022	2023	2024*	Total
Total number of observed samples (n)		124		

*) Period between January to June 2024
Source: SPSS analysis (2024)

Descriptive statistics are essential for summarising key characteristics of research data without concluding. Table 4 presents the descriptive statistics from the study.

Table 4 Descriptive Statistics

Variabel	Sum	Minimum	Maximum	Rerata	Deviation standard
(1) Variable dependent:					
(1.a) Level of underpricing	124	0,010	0,350	0,225	0,122
(2) Independent variable:					
(2.a) Boards other than the Main Board	124	0,000	1,000	0,782	0,414
(2.b) Development Board	124	0,000	1,000	0,693	0,463
(2.c) Acceleration Board	124	0,000	1,000	0,089	0,285
(3) Variable Control:					
(3.a) Firm age	124	1,000	55,000	14,500	10,263
(3.b) Firm size	124	20,292	27,800	22,261	1,160
(3.c) IPO price	124	90,000	1.695,000	230,927	270,445
(3.d) Technology firms	124	0,000	1,000	0,113	0,318
(3.e) Public float fraction	124	0,030	0,350	0,199	0,061
(3.f) Underwriter prestige	124	0,000	1,000	0,137	0,345
Number of valid samples (n)	124				

Source: SPSS analysis (2024)

The analysis in Table 4 highlights that the observed level of underpricing ranges from 0,010 to 0,350 with an average of 0,225 and a standard deviation of 0,122. This average, notably close to the maximum value, suggests that underpricing during the observation period is generally high. The maximum underpricing value of 0,350 aligns with the upper auto rejection established by the IDX for stocks priced between Rp50 and Rp200. Furthermore, the relatively low standard deviation compared to the average indicates that the data distribution is homogeneous.

Table 5 Underpricing Levels with IPO Period Between January 2022 and June 2024 by Listing Board Subcategory

Description	The level of Underpricing				
	Total	Minimum	Maximum	Rerata	Deviation standard
(1) Overall observation	124	0,010	0,350	0,225	0,122
(2) Observation based of 2 categories:					
(2.a) The Main Board	27	0,020	0,350	0,195	0,118
(2.b) The Main Board's alternative	97	0,010	0,350	0,234	0,122
(3) Observation based of 3 categories:					
(3.a) The Main Board	27	0,020	0,350	0,195	0,118
(3.b) Development Board*	86	0,019	0,350	0,253	0,116
(3.c) Acceleration Board*	11	0,010	0,100	0,087	0,030

*) The Main Board's alternative subcategories
Source: SPSS analysis (2024)

Table 5 presents the categorisation of underpricing levels across subcategories of the listing boards. Notably, issuers on the Development Board display the highest average underpricing rate at 0,253, followed closely by the Main Board at 0,195. Both averages are relatively near the overall observation average of 0,225. In contrast, the Acceleration Board has recorded the lowest average underpricing at 0,087. The descriptive statistic indicates that the distribution of underpricing across the different board subcategories is homogeneous.

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The study classifies the record boards into three categories such as Main Board, Development Board, and Acceleration Board. According to Table 4, the firms listed show an average dummy value of 0,782, indicating that most issuers tend to list their shares in categories, the Main Board's alternative. Specifically, the Development Board has an average value of 0,693, close to its maximum value, highlighting its dominance among alternative listing boards. Contrarily, the Acceleration Board has a lower average of 0,089, suggesting a relatively small number of issuers in this category.

Table 6 Frequency of Listed Firms Underpricing with IPO Period Between January 2022 and June 2024 based on Listing Board Subcategories

Description	The Main Board		The Main Board's Alternative		Sub-total	
	Sum	Percentage	Sum	Percentage	Sum	Percentage
Main Board	27	21,8%			27	21,8%
Development Board			86	69,3%	86	69,3%
Acceleration Board			11	8,9%	11	8,9%
Total	27	21,8%	97	78,2%	124	100,0%

Source: SPSS analysis (2024)

Table 6 presents a detailed analysis of IPO and their listing on stock exchange boards. Notably, a substantial majority, 78,2% of IPO are shown on the Main Board's alternative. This is split into 69,3% happening on the Development Board and 8,9% on the Acceleration Board. In contrast, only 21,8% of firms are listed on the Main Board. Based on Table 4, this distribution suggests a relatively homogeneous category of listing boards.

The analysis of firm age on previous Tabel 4 reveals that these issuers range from 1 to 55, with an average age of 14,5, indicating that most firms participating in IPO are relatively young. When considering firm size, which is estimated through the natural logarithm of the number of outstanding shares, the values span from $\pm$20.292 to $\pm$27.800, with an average of $\pm$22.261. This suggests that most issuers fall within the small to medium-sized category. The IPO prices range from Rp90 to Rp1,695, with an average price of approximately Rp230,927, close to the lower end of this price range. This indicates that many stocks are being offered at relatively low prices. The analysis of technology firms, represented by a dummy variable, shows an average value of 0.113 within a 0 and 1 dummy, suggesting that most issuers are not from the technology sector. Furthermore, the public float fraction varies between 3% and 35%, with an average of 19,9%, almost equal to the minimum public listing requirement of 20%, particularly for smaller firms with equity below Rp500 billion. Additionally, the underwriter reputation variable averages 0,137 across the 0 and 1 dummy, indicating that most firms do not engage prestige underwriters.

Classical assumption testing is conducted to validate the outcomes of hypothesis testing. It begins with a normality test based on the *Central Limit Theorem*, suggesting that with a sample size exceeding 30 samples ($n \geq 30$), the data distribution can be considered approximately normal (Pek et al., 2018). With a total of 124 observations in this study, the data are assumed to be normally distributed. Subsequent tests include evaluating heteroscedasticity, which examines the condition where residual variance is not consistent across different levels of predictors. This issue is tested using the *Breusch-Pagan* method, as presented in Table 7 below.

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Table 7 Heteroscedasticity Test

Description	Chi-square (χ^2)	p-value
Research model	5,341	0,021*

*) Significant at the $\alpha_{5\%}$ level
Source: SPSS analysis (2024)

Table 7 shows that the significance value (0,021) is less than the significance level, indicating a heteroscedasticity problem. To execute regression analysis, addressing the potential bias in the standard error using the *Heteroskedasticity-Robust Standard Error* or *Huber-White* approach. Following the identification of heteroscedasticity, a multicollinearity test was performed to verify the absence of linear correlations among the independent variables. It is assessed through tolerance values and variance inflation factor (VIF). The results of this test is presented in Table 8 below.

Table 8 Multicollinearity Test

Description	Tolerance	VIF
Acceleration Board	0,442	2,264
Development Board	0,491	2,038
Firm age	0,856	1,165
Firm size	0,512	1,954
IPO Price	0,541	1,848
Technology firms	0,973	1,027
Public float fraction	0,504	1,985
Underwriter prestige	0,747	1,339

Source: SPSS analysis (2024)

Table 8 presents the tolerance and variance inflation factor (VIF) values for all variables, showing a tolerance value > 0.01 and a VIF ≤ 10. The result implies no evidence of multicollinearity within the model. Further, an autocorrelation analysis was conducted to verify the absence of residual relationships in the regression model and finalise the classical assumption tests. This analysis employed the *Durbin-Watson* statistic, presented in Table 9 below.

Table 9 Autocorrelation Test

Description	n	k	Durbin-Watson	Durbin lower	Durbin upper
Research model	124	8	1,887	1,572	1,846

Source: SPSS analysis (2024)

Table 9 presents a *Durbin-Watson* value of 1.887, which falls within the acceptable range. $\underset{(Durbin\ Upper)}{1,846} < \underset{(Durbin-Watson)}{1,887} < \underset{(4-Durbin\ Upper)}{2,154}$ and is considered free of autocorrelation issues. Following the verification of the classical assumptions, an F-test was conducted to assess the validity of the regression model in forecasting the simultaneous effects of independent variables on the dependent variables. The outcomes of this F-test are presented in Table 10.

Table 10 F-statistic Goodness of Fit

Description	F-statistic	p-value
Research Model	4,987	0,000*

*) Significant at the $\alpha_{5\%}$ level
Source: SPSS analysis (2024)

Table 10 indicates a significance value of 0,000, below the significance level. This result allows us to conclude that the model is viable, as not all regression coefficients are equal to zero simultaneously.

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Following the F-test, the analysis moved to another goodness of fit, which evaluates the dimensions of the predictor variables contributing to explaining the variations of the response variable within the model.

Table 11 Coefficient of Determination Test

Description	Adjusted R-squared
Research Model	20,6%

Source: SPSS analysis (2024)

According to Table 11, the model displays an adjusted R-squared value of 20,6%, implying that the model can explain 20,6% of the influence of the listing board on the level of underpricing. While this figure is considered low because it falls below the 25% point, it is necessary to note that Rosenthal & Rubin (1979) argue that a low R-squared value can still hold significance in accounting research, emphasising the relevance of understanding the relationships between variables rather than exclusively focusing on the model's explanation.

An analysis of variance (ANOVA) was conducted to test the first hypothesis (H_1), which examines the distinctions in underpricing levels across listing boards.

Table 12 Descriptive Statistics Result of ANOVA

Description	Dummy	Sum	Rerata	Default deviation	Standard errors
Acceleration Board	2	11	0,087	0,030	0,009
Development Board	1	86	0,253	0,116	0,013
Main Board	0	27	0,195	0,118	0,023

Source: SPSS analysis (2024)

Table 13 Pairwise Mean Difference Results between Groups in ANOVA

Description	Average difference
Main Board ≠ Development Board	0,058
Main Board ≠ Acceleration Board	0,108

Source: SPSS analysis (2024)

According to the data presented in Table 12, the Main Board's alternative subcategories—Development Board, displayed the highest average underpricing at 0,253, followed by the Main Board itself at 0,195 and the Acceleration Board with the lowest average underpricing at 0,087. Further analysis of the listing board's subcategories reveals a substantial average contrast compared to other categories, notably a difference of 0,108 between the Main Board and the Acceleration Board subcategories, as displayed in Table 13. The statistical ANOVA analysis for the first hypothesis is presented in Tables 14 and 15 below.

Table 14 ANOVA

Dependent variable: the level of underpricing	Test results
Homogeneity of variances/Levene test (mean)	0,000*
F-statistic	11,859
Sig. (2-tailed)	0,000*

*) Significant at the $\alpha_{5\%}$ level
Source: SPSS analysis (2024)

Table 15 ANOVA Post-hoc Test

Dependent variable: the level of underpricing	Test results
(1) Variant assumed to be the same (Bonferroni Method)	
(1.a) Main Board ≠ Development Board	0.064
(1.b) Main Board ≠ Acceleration Board	0.025*

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Dependent variable: the level of underpricing	Test results
(2) Variants are assumed not to be the same (Games-Howell Method)	
(2.a) Main Board ≠ Development Board	0.078
(2.b) Main Board ≠ Acceleration Board	0.000*

*) Significant at the $\alpha_{5\%}$ level
Source: SPSS analysis (2024)

The ANOVA investigation presented in Table 14 above implies a statistically significant p-value, leading to the acceptance of the first alternative hypothesis (H_1). This result indicates at least one considerable dissimilarity in the levels of underpricing across the various categories of the listing board. The Levene Test revealed homogeneity of variance, driving the Bonferroni post-hoc test for further pairwise analysis. Table 15 shows significant results between the Main Board and the alternative subcategories—Acceleration Board, with a p-value of 0,025, which supports the first alternative hypothesis (H_1), as the findings demonstrate a differing level of underpricing in the Acceleration Board category compared to the Main Board.

Furthermore, the second hypothesis (H_2) test is analysed using linear regression, incorporating *Heteroskedasticity-Robust Standard Errors*. The estimated coefficients resulting from this analysis are presented in Table 16 below.

Table 16 Regression Estimation

Dependent variable: the level of underpricing	Estimation
Constant (α)	0,083
Acceleration Board (β_1)	−0,182
Development Board (β_2)	−0,001
Firm age (β_3)	$3{,}240e^{-4}$
Firm size (β_4)	0,005
IPO Price (β_5)	$-1{,}150e^{-4}$
Technology firm (β_6)	0,020
Public float fraction (β_7)	0,387
Underwriter prestige (β_8)	−0,008

Source: SPSS analysis (2024)

According to the analysis presented in Table 16, the regression equations derived after substituting the estimated coefficients are formulated as follows:

$$U = 0{,}083 - 0{,}182AMD - 0{,}001DMD + 3{,}240e^{-4}AGE + 0{,}005SIZE - 1{,}150e^{-4}PRICE + 0{,}020TD + 0{,}387PFF - 0{,}008UP + \varepsilon \quad \text{..... (2)}$$

Where:

U	= level underpricing
AMD	= Acceleration Board
DMD	= Development Board
AGE	= age of the firm
SIZE	= firm size
PRICE	= IPO price
TD	= technology firms
PFF	= public float fraction
UP	= reputation underwriter
ε	= error term

The linear regression analysis shows a constant value of 0,083, indicating an underpricing rate of 8,3% when all other variables are held constant. Notably, issuers listed on the Main Board's alternative subcategories—Acceleration Board- are cast an underpricing rate of 18,2% lower than that of firms on other listing boards. In contrast, the alternative subcategories—Development

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Board's underpricing rate is estimated to be just 0,1% lower than the rates observed in the other two categories, assuming other variables are constant. Further details regarding the significance of each parameter are presented in Table 17 below.

Table 17 Significance Values of Regression

Dependent variable: the level of underpricing	Significant value
Acceleration Board (β_2)	0.000*
Development Board (β_1)	0.981
Firm age (β_3)	0.776
Firm size (β_4)	0.702
IPO Price (β_5)	0.020*
Technology firm (β_6)	0.562
Public float percentage (β_7)	0.083
Underwriter prestige (β_8)	0.819

*) Significant at the $\alpha_{5\%}$ level

Source: SPSS analysis (2024)

The analysis shows that the dummy variable associated with the Acceleration Board displays a significant p-value of 0,000 at a 5% significance level, indicating that shares listed on this specific listing board have an influence on decreasing the level of underpricing compared to other listing board categories. Thereby supporting the acceptance of the second alternative hypothesis (H_2). The IPO price also shows significance with a p-value of 0,020, meaning that a higher offering price contributes to a lower rate of underpricing. However, it is essential to mention that while this influence is statistically significant, the effect size is relatively small, given that the price is measured in thousands of Rupiah. In contrast, the Development Board's dummy and other variables do not show statistical significance.

The Level of Underpricing between the Main Board and the Main's Alternative Board

The first findings indicate a significant distinction in the level of underpricing between issuers listed on the Main Board and those on alternative board subcategories, particularly the Acceleration Board. The non-Main Board issuer commonly performs within a less stringent regulatory framework, making them encounter prominent risks (Yaakub et al., 2018). This increases information asymmetry among other market participants (Ljungqvist, 2007). In uncertain market scenarios, investors favour an initial public offering (IPO) when prices are low enough to compensate, allowing them to potentially get initial returns in the secondary market, thereby causing underpricing (Ibbotson, 1975). Further, signalling theory provides an understanding of underpricing, suggesting that this strategy boosts an optimistic perception among investors. However, for non-listed Main Board firms—often marked as low-quality firms, in the early stages of operation, and facing financial issues—this strategy may not lead to optimal results, relinquish the IPO expected proceeds for development or work capital. High-risk environments and unstable liquidity often surround issuers on a less stringent board, like the Acceleration Board (Chincarini et al., 2020). The contrast in characteristics across listing boards can also be linked to the underwriting contract. Issuer's underwriters for the Acceleration Board may opt for a "best effort" contract, meaning they perform primarily as marketers while the issuer carries all emissions-related risks (Teja, 2021). Therefore, this arrangement can result in inferior motivations to lower IPO prices, leading to lower underpricing.

In contrast, there are no statistically significant differences in underpricing between the Main Board and the Development Board subcategory, indicating that not all issuers within the alternative board ecosystem meet extreme risk and uncertainty. Some issuers, such as the Development Board's firm, maintain financial qualities comparable to those on the Main Board. Descriptive statistics reveal that both boards' underpricing levels reflect identical initial returns. Both boards are relatively regulated and reflect the same market pressures. Prevailing market conditions likely influence these

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stock price movements on the first day rather than differences between boards. This finding aligns with research by Ritter & Welch (2002), which concludes that during bullish market conditions, investor confidence in emerging firms, including those listed on boards with more flexible regulatory frameworks, tends to rise. However, firms on the Acceleration Board may face challenges in attaining credibility, as their situations are generally more uncertain and risky than those on the Development Board. These findings affirm Yong & Albada (2018), Ljungqvist (2007), and research by Allen & Faulhaber (1989), indicating that issuing firms and underwriters are typically more careful in deciding IPO prices as a risk management strategy in risk cases.

The Listing Boards' Influence on The Level of Underpricing

The second finding of the research indicates that issuers listed at the Main Board's alternative, notably those in the Acceleration Board subcategory, significantly influence the level of IPO underpricing. A study by Allen & Faulhaber (1989) suggests that setting low IPO prices can be an effective quality signal and advantageous for firms with strong financial performance, such as those on the Main Board. In contrast, issuers on the Acceleration Board, which are often classified as lower-quality firms, are less likely to benefit from this practice. Underpricing can pose challenges for emerging firms, decreasing their IPO potential proceeds. Evidence shows that these firms typically avoid setting IPO prices too low, resulting in a lower level of underpricing than their Main Board counterparts; as shown in descriptive statistics, the Acceleration Board's underpricing tends to be lower. Permitting a best-effort contract on the Acceleration Board enables younger firms to set higher IPO prices without the pressure from underwriters (Teja, 2021), optimising their liquidity within the stock markets' IPO. These findings align with Ramírez et al. (2019), who highlight the negative influence of high IPO prices on initial returns and support the relevance of signal theory in pricing decisions.

Moreover, issuers ranked under the Development Board subcategory did not significantly influence the underpricing of observations. This result can be attributed to their more stable financial characteristics. Given that the listing requirements for the Development Board resemble those of the Main Board, these firms are also subject to strict regulations and a full commitment underwriting scheme, which generally leads underwriters to adopt a conservative approach to assessing IPO prices (Widayani & Yasa, 2013). Hence, the underpricing phenomena observed in this listing board tend to stick to a general pattern shaped by market pressures and stringent regulatory frameworks, suggesting a similarity to those on the Main Board (Song et al., 2014).

Comparative test finds a significant distinction in underpricing levels between firms listed on the Main Board of the Indonesia Stock Exchange (IDX) and those on its alternative boards. Significant differences were found, particularly among younger firms with higher risk and unstable financial performance, subject to looser regulations. For these issuers, a low IPO pricing strategy can limit capital raised from the IPO, resulting in less motivation for underpricing. The second research highlights that listing boards influence underpricing levels, especially for high-risk firms, while other firms show no significant influence. This variation depends on each listing firm's specific conditions. The research implies information asymmetry and signalling theories, as non-Main Board issuers face more significant risks due to biased information and more flexible regulations. Lower IPO prices may attract investors, but low pricing strategies may reduce the capital raised for firms with very low liquidity. While such pricing can positively signal high-quality firms, it is less effective for low-quality firms with financial constraints.

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4. CONCLUSION

This research aims to investigate the influence of the Indonesian Stock Exchange's listing board classifications on the level of underpricing. The results show a significant difference in underpricing levels between companies listed on the Main Board compared to those on its alternative boards. Significant differences were found, particularly among younger firms with higher risk and unstable financial performance, subject to looser regulations. For these issuers, a low IPO pricing strategy can limit capital raised from the IPO, resulting in less motivation for underpricing. The research also shows that the influence of listing board classification on underpricing is more prominent for high-risk firms. In contrast, for more stable companies, the type of board does not significantly influence underpricing. These results suggest that companies strategically use IPO pricing to navigate investor uncertainty and signal their quality to the market. It is important to note that the sample size was limited. Therefore, future research should include a broader range of periods, examine the role of underwriters and listing regulations, and explore the influence of ownership structure with a significant market share in greater depth. Enhanced analytical tools are recommended to improve the accuracy of the analysis.

5. REFERENCES

Allen, F., & Faulhaber, G. R. (1989). Signalling by Underpricing in the IPO Market. *Journal of Financial Economics*, *23*(2), 303–323. https://doi.org/10.1016/0304-405X(89)90060-3

Baron, D. P. (1982). A Model of the Demand for Investment Banking Advising and Distribution Services for New Issues. *The Journal of Finance*, *37*(4), 955–976. https://doi.org/10.1111/J.1540-6261.1982.TB03591.X

Beatty, R. P. (1989). Auditor Reputation and the Pricing of Initial Public Offerings. *The Accounting Review*, *64*(4), 693–709.

Beatty, R. P., & Ritter, J. R. (1986). Investment Banking, Reputation, and the Underpricing of Initial Public Offerings. *Journal of Financial Economics*, *15*(1–2), 213–232. https://doi.org/10.1016/0304-405X(86)90055-3

Song, S., Tan, J., & Yi, Y. (2014). IPO initial returns in China: Underpricing or overvaluation? *China Journal of Accounting Research*, *7*(1), 31–49. https://doi.org/10.1016/j.cjar.2013.12.001

Brennan, M. J., & Franks, J. (1997). Underpricing, Ownership and Control in Initial Public Offerings of Equity Securities in The UK. *Journal of Financial Economics*, *45*(3), 391–413. https://doi.org/10.1016/S0304-405X(97)00022-6

Chincarini, L. B., Kim, D., & Moneta, F. (2020). Beta and Firm Age. *Journal of Empirical Finance*, *58*, 50–74. https://doi.org/10.1016/j.jempfin.2020.05.003

Desmonda, A., & Santioso, L. (2021). Faktor yang Mempengaruhi Tingkat Underpricing pada Pelaksanaan IPO di Bursa Efek Indonesia. *Jurnal Paradigma Akuntansi*, *3*(4).

Doukas, J. A., & Hoque, H. (2016). Why Firms Favour the AIM When They Can List on Main Market? *Journal of International Money and Finance*, *60*, 378–404. https://doi.org/10.1016/j.jimonfin.2015.10.001

Fadila, A., & Utami, K. (2020). IPO Underpricing di Bursa Efek Indonesia. *Inovasi: Jurnal Ekonomi, Keuangan Dan Manajemen*, *16*(2).

DOI: https://doi.org/10.17509/jrak.v13i1.82897
p- ISSN 2338-1507 e- ISSN 2541-061X

Hafidz, N. S., & Arifah Tara, N. A. (2024). Analisis Initial Public Offering Underpricing dan Kinerja Saham pada Sektor Teknologi di Bursa Efek Indonesia. *JMM UNRAM - Master Of Management Journal*, *13*(1), 40–55. https://doi.org/10.29303/jmm.v13i1.807

Ibbotson, R. G. (1975). Price performance of common stock new issues. *Journal of Financial Economics*, *2*(3), 235–272. https://doi.org/10.1016/0304-405X(75)90015-X

Ibbotson, R. G., & Ritter, J. R. (1995). *Initial Public Offerings*. https://doi.org/10.1016/S0927-0507(05)80074-X

Kristiantari, I. D. A. (2013). Analisis Faktor-Faktor yang Mempengaruhi Underpricing Saham pada Penawaran Saham Perdana di Bursa Efek Indonesia. *Jurnal Ilmiah Akuntansi Dan Humanika*, *2*(2), 785–811.

Kumar, R. (2014). Stock Markets, Derivatives Markets, and Foreign Exchange Markets. *Strategies of Banks and Other Financial Institutions*, 125–164. https://doi.org/10.1016/B978-0-12-416997-5.00005-1

Ljungqvist, A. (2007a). IPO Underpricing. *Handbook of Empirical Corporate Finance*, 375–422. https://doi.org/10.1016/B978-0-444-53265-7.50021-4

Ljungqvist, A. (2007b). IPO Underpricing. In *Handbook of Empirical Corporate Finance* (pp. 375–422). Elsevier. https://doi.org/10.1016/B978-0-444-53265-7.50021-4

Logue, D. E. (1973). On the Pricing of Unseasoned Equity Issues: 1965-1969. *The Journal of Financial and Quantitative Analysis*, *8*(1), 91. https://doi.org/10.2307/2329751

Partama, I. G. N. A., & Gayatri, G. (2019). Analisis Determinan Underpricing Saham di Bursa Efek Indonesia. *E-Jurnal Akuntansi*. https://doi.org/10.24843/EJA.2019.v26.i03.p23

Pek, J., Wong, O., & Wong, A. C. M. (2018). How to Address Non-normality: A Taxonomy of Approaches, Reviewed, and Illustrated. *Frontiers in Psychology*, *9*. https://doi.org/10.3389/fpsyg.2018.02104

Perubahan Peraturan Nomor I-A Tentang Pencatatan Saham Dan Efek Bersifat Ekuitas Selain Saham Yang Diterbitkan Oleh Perusahaan Tercatat, Pub. L. No. Kep-00101/BEI/12-2021 (2021).

Ramírez, M. Á. A., Mendoza, A. C. D., & Cabestre, F. J. R. (2019). IPO Underpricing in The Second And Main Markets: The Case of The London Stock Exchange. *International Finance*, *22*(1), 103–117. https://doi.org/10.1111/infi.12137

Ritter, J. R. (1991). The Long-Run Performance of Initial Public Offerings. *The Journal of Finance*, *46*(1), 3–27. https://doi.org/10.1111/j.1540-6261.1991.tb03743.x

Ritter, J. R., & Welch, I. (2002). A Review of IPO Activity, Pricing, and Allocations. *The Journal of Finance*, *57*(4), 1795–1828. https://doi.org/10.1111/1540-6261.00478

Rock, K. (1986). Why New Issues Are Underpriced. *Journal of Financial Economics*, *15*(1), 187–212. https://doi.org/10.1016/0304-405X(86)90054-1

Rosenthal, R., & Rubin, D. B. (1979). A Note on Percent Variance Explained as A Measure of the Importance of Effects. *Journal of Applied Social Psychology*, *9*(5), 395–396. https://doi.org/10.1111/j.1559-1816.1979.tb02713.x

DOI: https://doi.org/10.17509/jrak.v13i1.82897
p- ISSN 2338-1507 e- ISSN 2541-061X

Sharma, S. K., & Wazal, M. S. (2020). Comparative Analysis of Underpricing and Subscription of SME IPOs and Main Board IPOs in India. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3547863

Spence, M. (1973). Job Market Signaling. *Quarterly Journal of Economics*, *87*(3), 355–374. https://doi.org/10.2307/1882010

Stoughton, N. M., & Zechner, J. (1998). IPO-Mechanisms, Monitoring and Ownership Structure. *Journal of Financial Economics*, *49*(1), 45–77. https://doi.org/10.1016/S0304-405X(98)00017-8

Taranto, M. A. (2003). Employee Stock Options and the Underpricing of Initial Public Offerings. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.479901

Teja, A. (2021). A Comparison of Underwriter Reputation Measurement Methods in Explaining IPO Stock Performance. *Jurnal Akuntansi Dan Keuangan*, *4*(2), 195–209.

Vismara, S., Paleari, S., & Ritter, J. R. (2012). Europe's Second Markets for Small Companies. *European Financial Management*, *18*(3), 352–388. https://doi.org/10.1111/j.1468-036X.2012.00641.x

Welch, I. (1992). Sequential Sales, Learning, and Cascades. *The Journal of Finance*, *47*(2), 695–732. https://doi.org/10.1111/j.1540-6261.1992.tb04406.x

Widayani, N. L. U. M., & Yasa, G. W. (2013). Tingkat Underpricing dan Reputasi Underwriter. *E-Jurnal Akuntansi Universitas Udayana*, *4*(1), 159–176.

Yaakub, N., Sherif, M., & Haniffa, R. (2018). The Post-Issue Market Performance of Initial Public Offerings: Empirical Evidence from the Malaysian Stock Markets. *Journal of Emerging Market Finance*, *17*(3_suppl), S376–S414. https://doi.org/10.1177/0972652718798188

Yanti, E., & Yasa, G. W. (2016). Determinan Underpricing Saham Perusahaan Go-Public 2009-2013. *E-Jurnal Akuntansi*.

Yong, O., & Albada, A. (2018). Under-Pricing and Listing Board in Explaining Heterogeneity of Opinion Regarding Values of Malaysian IPOs. *Jurnal Pengurusan*, *52*, 63–72. https://doi.org/10.17576/pengurusan-2018-52-05

DOI: https://doi.org/10.17509/jrak.v13i1.82897
p- ISSN 2338-1507 e- ISSN 2541-061X