

Underpricing and Long-Term Performance: A Study on Family Firm and Non-Family Firm IPOs in Indonesia

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Abstract. This study aims to determine the effect of CEO characteristics, auditor reputation, and the moderation of underwriter reputation on the level of underpricing and long-term performance of family and non-family firms in IPOs in Indonesia. The study uses data from IPO companies between 2010 and 2021, with 350 companies as research samples, consisting of 140 family firms and 210 non-family firms. Data were collected from secondary sources such as the OSIRIS website, IDX, Bloomberg, and Yahoo Finance. The study found that auditor reputation has a significant negative effect on underpricing in both family and non-family firms. The level of underpricing has a significant negative effect on long-term performance in family firms. Auditor reputation has a significant positive effect on long-term performance in family firms, but auditor reputation does not affect long-term performance in non-family firms. The moderation of underwriter reputation weakens the relationship between family firms and underpricing but does not affect the relationship between family firms and long-term performance. It was also found that CEO characteristics do not affect underpricing and long-term performance in family and non-family firms.

Keywords: Underpricing, Long-Term Performance, Family Firm, CEO Characteristics, Auditor Reputation, Moderation of Underwriter Reputation.

INTRODUCTION

Initial public offerings (IPOs) serve as an alternative method for companies to raise capital, which can be beneficial for business growth, funding capital expenditures, repaying debt, conducting, managing working capital and research and development(R&D) (Badru, 2021). However, a company may receive less funding relative to the intrinsic value of its assets if the share prices offered are too low (Yasa, 2008). Therefore, companies need to make sure that the disclosed share prices accurately represent the true value of their assets or potential for future growth (Pelawi & Pelawi, 2023). According to Ritter and Welch (2002, as referenced in Pelawi & Pelawi, 2023), the phenomenon of IPO underpricing is a consequence of adverse selection bias. This bias is further explained by Baron (1982) and Rock (1986, as referenced in Pelawi & Pelawi, 2023), who argue that it is driven by information asymmetry among companies, underwriters, and investors.

The phenomenon of underpricing in IPOs is interesting to study, especially in family-owned companies that have greater control over business decision-making. Previous research shows that family firms are more cautious in determining the IPO price to maintain the family's reputation, which can lead to lower underpricing (Sageder et al., 2018). The theory of information asymmetry explains that the inequality of information between the company and investors affects the IPO price, and the information gap can be resolved by providing signals (Huang et al., 2019). Recent data shows that the reputation of auditors and underwriters affects the level of underpricing in IPOs, both in family-owned and non-family-owned companies (Gunanto, 2023). The reputation of auditors, especially those from the Big Four, plays a crucial role in reducing underpricing by providing assurance of the quality of financial statements. Liu and Firth's (2012) research revealed that companies audited by renowned auditors tend to

experience lower underpricing, as audit quality enhances transparency and reduces investor uncertainty.

Additionally, the long-term stock performance after the IPO becomes an important focus in this research. Previous research shows that companies experiencing underpricing during the IPO often face a decline in long-term stock performance (Chamber & Dimson, 2009; Su & Bangasa, 2011). Factors such as ownership structure and CEO characteristics, including experience and education, influence IPO decisions and the company's subsequent performance. CEOs with more experience and a strong academic background can reduce information asymmetry and enhance the company's reputation in the market (Yang et al., 2011; Zhao et al., 2022). The reputation of the underwriter also plays an important role in reducing information asymmetry and providing positive signals to the market. Chen et al. (n.d.)'s research shows that IPOs backed by reputable underwriters tend to have better long-term performance due to the underwriter's credibility, which helps maintain information transparency.

This research aims to fill the gap in literature by comparing family and non-family firms and examining the influence of auditor reputation, CEO characteristics, and the moderating role of underwriter reputation on underpricing and long-term performance.

Information asymmetry in an IPO arises when the firm possesses more comprehensive information regarding its circumstances and future potential than the investors, who have restricted access to such information. This induces market uncertainty, resulting in underpricing, wherein the IPO stock price is inferior to the secondary market price on the inaugural trading day. This idea posits that to mitigate information asymmetry, organizations must deliver explicit signals to investors to enhance their confidence and diminish uncertainty (Brigham, 2011).

Signaling theory elucidates that firms provide signals to the market to mitigate the uncertainty arising from information asymmetry. In the context of an IPO, these indicators may encompass a competitive share price, transparent information disclosure in the prospectus, and the appointment of esteemed auditors and underwriters. These favorable indicators assist investors in evaluating the company's potential with greater precision, influencing the IPO stock valuation and its subsequent long-term performance (Wolk, 2000). Underpricing refers to the occurrence in which the initial public offering (IPO) stock price is set below the market price on the first trading day. This is typically attributable to information asymmetry, when the company and underwriter have superior knowledge regarding market circumstances and the company's shares relative to investors.

Family firms are characterized as enterprises owned and operated by a single family, with family members occupying significant positions in strategic and management decision-making. Family-owned enterprises generally exhibit greater prudence in executing IPOs to safeguard their emotional capital, aiming for sustained stability and the avoidance of conflicts in ownership succession (Funaoka & Yao, 2025).

The sustained performance of publicly traded corporations is frequently assessed by buy-and-hold abnormal returns (BHAR). The reputation of auditors and underwriters, along with the company's capacity to convey favorable signals to the market, affects the long-term performance of its stock. Family-owned enterprises frequently see more underpricing; yet, they generally exhibit more consistent long-term performance owing to enhanced control over company decisions and risk management (Setia & Chandera, 2021).

The gender bias present in the IPO market, combined with the influence of conservative family structures in decision-making, increases negative perceptions of female CEOs, leading to lower IPO stock prices (Rau et al., 2024; Gao et al., 2024b). The presence of female CEOs in non-family firms is viewed as an indicator of better governance and can enhance the company's credibility in the eyes of investors, thereby reducing the level of underpricing (Goyal & Deep, 2024). H1a and H1b: CEO gender has a significant negative impact on the level of IPO underpricing in family and non-family firms.

CEOs with higher education provide positive signals about managerial capacity and corporate governance, which increases investor confidence and reduces the level of underpricing (Gounopoulos et al., 2019). Education relevant to the business sends positive signals to the market that the CEO is more capable of managing the company transparently and professionally, which reduces market uncertainty and lowers underpricing (Guo et al., 2008; Sun, 2024; Sun, 2025). H2a and H2b: CEOs with higher education have a significant negative impact on the level of IPO underpricing in family firms.

The CEO's experience in handling IPOs signals stability and confidence to investors, which reduces perceived risk and lowers the level of underpricing in family firms (Setia-Atmaja & Chandera, 2021a). Experienced CEOs are more capable of planning and executing IPOs effectively, as well as establishing good governance, which increases investor confidence and reduces the level of underpricing (Lin et al., 2024). H3a and H3b: Experienced CEOs have a significant negative impact on the level of IPO underpricing in family firms.

The reputation of auditors plays an important role in reducing information asymmetry and influencing the level of IPO underpricing (Tubolla & Tjakrawala, 2024). In family firms, highly reputable auditors provide assurance to investors that the financial statements have been independently and accurately audited, reducing concerns about potential manipulation or information bias, thereby lowering the level of underpricing. On the other hand, in non-family companies, a favorable auditor's reputation also reduces underpricing because it increases investor confidence in the reliability of financial information, which is more transparent and relies on external signals. Highly reputable auditors, especially those from large public accounting firms, provide quality assurance that reduces uncertainty and market risk, while auditors with a poor reputation can increase uncertainty and trigger higher underpricing (Rini & Damayanty, 2024a). H4a and H4b: Auditor reputation has a significant negative impact on underpricing in family and non-family firms.

High levels of underpricing in family firm IPOs often reflect conflicts of interest and a lack of transparency, causing investors to worry about the long-term stability of the company, thereby hindering stock performance and growth potential (Setia & Chandera, 2021). Conversely, non-family firms experiencing high levels of underpricing tend to attract short-term investors, exacerbating price volatility and reducing long-term performance stability due to selling pressure and a lack of funds for further investment (Kotlar et al., 2018). H5a and H5b: Underpricing has a significant negative impact on the long-term performance of family and non-family firms.

Gender-diverse CEOs can bring different perspectives in managing the company post-IPO, enhancing innovation and diversity in decision-making, which positively affects the long-term performance of family firms (Gao et al., 2024; Liu et al., 2024). Gender diversity in

leadership increases creativity, more inclusive decision-making, and boosts market confidence in the company, directly contributing to the long-term performance of non-family firms. H6a and H6b: Gender-diverse CEOs have a significantly positive impact on the long-term performance of IPOs in family and non-family firms.

Higher education provides more credibility to CEOs, which increases investor confidence and facilitates access to capital, thereby contributing to the long-term performance of family firms. Highly educated CEOs, such as those with a PhD or MBA, are more capable of planning effective long-term strategies, enhancing innovation, and gaining investor trust, which results in better long-term performance for non-family firms (Tupper & Mehta, 2021). H7a and H7b: CEOs with higher education have a significantly positive impact on the long-term IPO performance of family and non-family firms.

Experienced CEOs, especially those who are also founders, can effectively manage internal conflicts and drive innovation and long-term stability in both family and non-family firms, enhancing credibility and access to capital (Carbone & Vigano, 2023). H8a and H8b: Experienced CEOs have a significantly positive impact on the long-term IPO performance of both family and non-family firms.

In family-owned companies, high-reputation auditors provide assurance to the market regarding the reliability of financial information, reduce information asymmetry between the company and investors, and enhance the credibility of companies that tend to be more closed in management, thereby supporting better post-IPO stock performance (Datta et al., 2024). In non-family-owned companies, the involvement of prominent auditors such as the Big 4 reduces the risk of IPO failure, increases market confidence, and provides signals of quality and transparency that reduce the perception of company risk, increase stock demand, and stabilize prices, which in turn contributes to better long-term performance (Alidarous, 2024). H9a and H9b: A high reputation of auditors has a significantly positive impact on the long-term IPO performance of both family and non-family firms.

Family-owned companies often face concerns related to potential conflicts of interest and lack of transparency, which can lead to higher underpricing. However, reputable underwriters can reduce underpricing by providing signals of credibility and quality, which reduces information asymmetry and increases investor confidence (Dwi & Maiyaliza, 2024). H10: The reputation of the underwriter can weaken the influence of family firms on underpricing.

Investors often perceive family firms to have high governance risks, but high-reputation underwriters provide credibility signals that enhance their trust (Y. Sun & Wu, 2024). With their reputation, underwriters help reduce the perception of risk and strengthen the long-term performance of family businesses by ensuring more transparent information disclosure and stronger external oversight, especially in a weak regulatory environment. H11: The reputation of the underwriter can strengthen the relationship between family firms and long-term performance.

RESEARCH METHOD

This research uses IPO company data from 2010–2021, based on OSIRIS data. With the research sample, there are a total of 398 IPO companies from 2010 to 2021, with 47 companies that did not provide complete data and 1 company that experienced delisting, resulting in a

sample size of 350 IPO companies, including 140 family companies and 210 non-family companies. Not only that, but this research also uses data from Yahoo Finance, prospectuses, and the Bloomberg League Table. This research employs the OLS method using R Studio software.

Underpricing is a phenomenon where the stock price at the initial public offering is lower than the stock price on the first day of trading in the secondary market (Ross, 2011).

$$\begin{aligned} \text{Underpricing}_i \\ = \frac{P_{i1} - P_{IPO}}{P_{IPO}} \times 100\% \end{aligned} \quad (1)$$

Explanation:

P_{i1} = stock price at market close on the first trading day after the IPO

P_{IPO} =IPO price or IPO offering price

Long-term performance measures stock performance after a certain period post-IPO, with the aim of evaluating the sustainability of the company's value after the IPO ends. Positive BHAR indicates better stock performance compared to the market, while negative BHAR indicates underperformance (Setia-Atmaja & Chandera, 2021). This study measures long-term performance over a 36-month period.

$$\begin{aligned} BHAR_i = \prod_{t=1}^T (1 + R_{i,t}) \\ - \prod_{t=1}^T (1 + R_{m,t}) \end{aligned} \quad (2)$$

Keterangan:

$BHAR_i$ = *Buy and hold abnormal return*

$R_{i,t}$ = *Return in month t of asset i*

$R_{m,t}$ = *Return in month t of stock index m*

Family firm in the context of an IPO refers to a company owned or controlled by one or more families, with significant influence over the company's strategic decisions. In this study, family firms are defined based on Definition 3, which refers to the research by Funaoka & Yao (2025), namely companies that have founders and one or more family members on the board of directors. This variable is measured as a dummy (1=family firm, 0=non-family firm) as used by Funaoka & Yao (2025).

Reutzel & Belsito (2015) state that CEO gender refers to the sex of a Chief Executive Officer (CEO) leading a company. In many studies, CEO gender is distinguished into two main categories: female and male. The measurement of CEO gender is generally conducted using a binary variable, where 1 indicates that the CEO is female, while 0 indicates that the CEO is male. CEO education is viewed as an indicator of cognitive capacity, decision-making skills, and the ability to process complex information. In the study, CEO education was measured on a scale of 1-7 according to the criteria listed in Table 1.

Auditors with a high reputation, such as the Big 4 public accounting firms, are viewed as third parties that can reduce information asymmetry between companies and investors

(Selvina, 2017). The presence of reputable auditors enhances the credibility of financial statements and can contribute to reducing the level of underpricing. The reputation of auditors in this study is classified based on the use of Big 4 public accounting firms and non-Big 4 firms, using a dummy variable of 1 for Big 4 firms and 0 for non-Big 4 firms (Rini & Damayanty, 2024).

In the study by Barihas et al. (2024), the reputation of underwriters is measured based on the Bloomberg League Table, so in this study, the reputation of underwriters is measured with a dummy variable: 1 for highly reputable underwriters based on the Capital Market report on the Indonesia Equity % Rights Offering table and 0 for underwriters not included in that report category.

Firm size, or company size, is used as a control variable because it can affect the level of underpricing and long-term stock performance. Larger companies tend to have a better reputation, higher information exposure, and lower bankruptcy risk (Salerno et al., 2022). The size of the company is measured using the natural logarithm of the company's total assets:

$$Firm\ Size = \ln(Total\ Aset) \quad (3)$$

Firm age, or the age of the company, is used as a control variable because an older age usually reflects greater stability and a stronger track record in the industry (Salerno et al., 2022). The age of the firm can influence investors' perceptions of risk and growth potential, which impacts the stock price at the IPO and long-term performance (Funaoka & Yao, 2025). Firm age is measured by counting the number of years from the company's establishment until the IPO date. The older the company, the greater the likelihood that the company will reduce existing uncertainty, which can decrease the level of underpricing. This variable is operationalized as:

$$\begin{aligned} Firm\ Age \\ &= Year\ of\ IPO \\ &- Company's\ Year\ of\ Establishment \end{aligned} \quad (4)$$

Leverage measures the proportion of a company's funding that comes from debt compared to assets (Salerno et al., 2022). A high level of leverage increases financial risk and can influence investor decisions during an IPO, which impacts the level of underpricing. Leverage in this study is measured using the Debt-to-Asset Ratio (DAR) formula:

$$Leverage = \frac{Liability\ Total}{Asset\ Total} \quad (5)$$

Table 1 Variable Definitions

Variables		Definition
Underpricing (UNDPR)		The phenomenon where the stock price at the initial public offering (IPO) is lower than the stock price on the first day of trading in the secondary market.
Longterm Performance (LTP)		Measuring stock performance after a certain period post-IPO, with the aim of evaluating the sustainability of the company's value after the IPO ends using the BHAR formula.
Family Firm IPO (FF)		Founders and one or more family members serve on the board of directors of companies. This variable is measured as a dummy (1=family firm, 0=non-family firm).
CEO Gender		The measurement of CEO gender is generally done using a binary variable, where 1

Variables	Definition
(CEOGEN)	indicates that the CEO is female, while 0 indicates that the CEO is male.
CEO Education (CEOEDU)	CEO education is measured on a scale of 1-7 with the following criteria: 1 = Did not graduate from high school (did not complete high school) 2 = Graduated from high school (high school or equivalent) 3 = Attended undergraduate education (not graduated) 4 = Graduated from undergraduate education (e.g., BA, BS, S.E., S.T., etc.) 5 = Attended postgraduate education (not graduated with a master's/doctorate) 6 = Graduated from postgraduate education (e.g., MBA, MS, MA, JD, M.Sc. , M.Ak., etc.) 7 = Graduated from doctoral programs (e.g., Ph.D., DBA, other doctorates)
CEO Experience (CEOEXP)	CEO experience is measured as a dummy variable, assigning a value of 1 if the CEO has held a senior executive position (such as CEO, CFO, COO, or vice president) in another company before joining the IPO company, and 0 if not. This data is obtained from the CEO's biography listed in the IPO prospectus document.
Auditor Reputation (Auditorrep)	The reputation of the auditor in this study is classified based on the use of Big 4 public accounting firms (KAP) and non-Big 4 KAP, using a dummy variable of 1 for Big 4 KAP and 0 for non-Big 4 KAP.
Underwriter Reputation (Underwrep)	Dummy variables are 1 if they're at the top of the Bloomberg League Table and 0 if not.
Firm Size (FS)	The age of the company is measured by counting the number of years from the company's establishment until the IPO date.
Firm Age (FA)	The age of a company is measured by counting the number of years since the company's establishment until the IPO date. The older the company.
Leverage (Lvrg)	<i>Leverage in this study is measured using the formula total liabilities divided by total assets.</i>

Source: Primary Data, Processed (2025)

Model Specification

We tested the hypothesis by building a multiple regression model, with underpricing (UNDPR) and long-term performance (BHAR) as dependent variables and CEOEDU, CEOGEN, CEOEXP, and Auditorrep as independent variables. We also added Firm Size (FS), Firm Age (FA), and Leverage (Lvrg) as control variables. We use Regression Model 6 to analyze the impact of the dependent variable, underpricing, on both family and non-family firms. Regression Model 7 for the regression model of the dependent variable long-term performance on each family and non-family firm. We use regression models 8 and 9, respectively, for the moderation regression of underwriter reputation on the relationship between family firms, underpricing, and long-term performance.

Underpricing_i

$$\begin{aligned}
 &= \beta_0 + \beta_1 CEOGEN_i + \beta_2 CEOEDU_i + \beta_3 CEOEXP_i \\
 &+ \beta_4 Auditorrep_i + \beta_5 FirmSize_i + \beta_6 FirmAge_i + \beta_7 Lvrg_i + \varepsilon
 \end{aligned}
 \tag{6}$$

$$BHAR_i = \beta_0 + \beta_1 UNDPR_i + \beta_2 CEO GEN_i + \beta_3 CEO EDU_i + \beta_4 CEO EXP_i + \beta_5 Auditorrep_i + \beta_6 FirmSize_i + \beta_7 FirmAge_i + \beta_8 Lvr g_i + \varepsilon_i \quad (7)$$

$$\begin{aligned} Underpricing_i &= \beta_0 + \beta_1 FF_i + \beta_2 Underwrep_i + \beta_3 FF * Underwrep_i \\ &+ \beta_4 FirmSize_i + \beta_5 FirmAge_i + \beta_6 Lvr g_i + \varepsilon_i \end{aligned} \quad (8)$$

$$\begin{aligned} BHAR_i &= \beta_0 + \beta_1 FF_i + \beta_2 Underwrep_i + \beta_3 FF * Underwrep_i \\ &+ \beta_4 FirmSize_i + \beta_5 FirmAge_i + \beta_6 Lvr g_i + \varepsilon_i \end{aligned} \quad (9)$$

Regression model 6 is used to answer hypotheses H1a-H4b and H1b-H4b. Regression model 7 is used to answer hypotheses H5a-H9b and H5b-H9b. Meanwhile, regression model 3 and regression model 4 are used to answer hypotheses 10 and 11.

RESULTS AND DISCUSSION

Descriptive Statistic

Table 2 shows that the variable UNDPR (underpricing) has an average of 0.0895 with a standard deviation of 0.5147, indicating that most companies experience underpricing within the value range of -1.00 to 2.36. The LTP (long-term performance) variable has a negative average of -0.1602, indicating a tendency for declining long-term performance, with a considerable variation (standard deviation of 1.1655). CEO characteristic variables, including CEO gender, CEO education, and CEO experience, suggest that most CEOs are not women (average CEOGEN = 0.1114). This is further supported by Table 4.5, which shows that the number of male CEOs exceeds that of female CEOs. CEO education has a high level (average CEOEDU = 4.591), and the average CEO experience is 0.9171. The variables Auditor Reputation, FF (family firm), Underwrep (underwriter reputation), and their interaction (FF_Underwrep) are all dummy scaled (0 or 1) with averages ranging from 0.17 to 0.58. Meanwhile, the FA (Firm Age) variable has a fairly large value distribution (standard deviation of 14.71) with a maximum value reaching 90.00. The FS (Firm Size) variable has an average of -0.0109, while the Lvr g (leverage) parameter has an average value of 2.3858 with a standard deviation of 2.4739, indicating a significant variation in the company's capital structure. Overall, these statistics provide an overview of the data distribution used in the research.

Table 2 Descriptive Statistics

Variable	N	Min	Max	Mean	3rd Qu.	S.D.
UNDPR	350	-1.000	2.360	0.089	0.497	0.515
LTP	350	-1.530	5.380	-0.160	0.047	1.165
CEOGEN	350	0.000	1.000	0.111	0.000	0.315
CEOEDU	350	2.000	7.000	4.591	6.000	1.005
CEOEXP	350	0.000	1.000	0.917	1.000	0.276
Auditorrep	350	0.000	1.000	0.177	0.000	0.382
FF	350	0.000	1.000	0.400	1.0	0.490
Underwrep	350	0.000	1.000	0.580	1.00	0.494
FF_Underwrep	350	0.000	1.000	0.237	0.000	0.426
FA	350	1.000	90.000	19.350	27.00	14.710
FS	350	-2.760	1.290	-0.012	0.555	0.811

Variable	N	Min	Max	Mean	3rd Qu.	S.D.
Lvrg	350	0.000	19.450	2.389	3.587	2.474

Source: Primary Data, Processed (2025)

Table 3 shows the distribution of variable categories for the entire sample and each model used in the study. The variables analyzed include CEO gender, CEO education, CEO experience, auditor reputation, underwriter reputation, and family firm. Each category of variables shows the number of samples distributed based on the applied models (Model 1A, 1B, 2A, and 2B). For example, for the CEO Gender variable, there are 39 females and 311 males in the entire sample. The CEO Education variable shows that more CEOs have bachelor's and master's degrees, while the CEO Experience variable indicates that the majority of CEOs have experience working in other companies. The reputation of auditors is more often associated with the Big 4 accounting firms, and most companies belong to the Family Firm category.

Table 3 Descriptive Statistics of Nominal and Ordinal Data

Variable	Category	Sample	Model		Model	
			1A	1B	2A	2B
CEO Gender	Female (1)	39	15	24	15	24
	Male (0)	311	125	186	125	186
CEO Education	Did not Graduated from high school (1)	0	0	0	0	0
	Graduated from high school (2)	5	3	2	3	2
	Currently graduated/undergraduate S1 (3)	1	1	0	1	0
	Graduated from undergraduate S1(4)	238	92	145	92	145
	Currently not graduated/undergraduate S2/23 (5)	0	0	0	0	0
	Graduated from postgraduate (6)	100	44	57	44	57
	Graduated from doctoral (7)	6	0	6	0	6
	Holding a position in another company (1)	321	126	195	126	195
CEO Experience	Never held a position in another company (0)	29	14	15	14	15
	Using KAP Big4 (1)	62	19	43	19	43
Auditor Reputation	Other (0)	288	121	167	121	167
	Listed on bloomberg league (1)	203	-	-	-	-
Underwriter Reputation	Other (0)	147	-	-	-	-
	Family firm (1)	140	-	-	-	-
Family Firm	Non-family firm (0)	210	-	-	-	-

Source: Primary Data, Processed (2025)

Determinants of IPO Underpricing and Long-Term Performance

Table 4 shows the regression results for the determinants of IPO underpricing and long-term performance, dividing the analysis into two models for family firms and non-family firms. In Model 1a, which shows the influence of independent variables on underpricing in family firms, underpricing in family firms shows a significant negative coefficient (-0.431977), indicating a negative relationship between family firm status and the level of underpricing. CEO Gender and CEO Education are not significant, while CEO Experience has a positive coefficient but is not significant. Auditor reputation does not significantly affect underpricing in family firms. In Model 1b, which shows the influence of independent variables on underpricing in non-family firms, underpricing is not significant (coefficient = -0.34563). CEO

Gender, CEO Education, and CEO Experience are not significant in this model. However, auditor reputation has a significant influence with a quite large negative coefficient (-0.388229), indicating that a good auditor reputation can reduce the level of underpricing in non-family firms.

In Model 2a, which shows the influence of independent variables on long-term performance in family firms, underpricing still has a negative coefficient (-0.539174), but it is not significant. CEO gender, CEO education, and CEO experience do not have a significant influence on the long-term performance of family firms. Auditors' reputation is not significant in affecting the long-term performance of family firms. In Model 2b, which shows the influence of independent variables on the long-term performance of non-family firms, underpricing does not significantly affect long-term performance, although there is a small influence from CEO experience. Auditor's reputation has a negative but not significant impact on the long-term performance of non-family firms. R-squared in Model 1 (0.3205 for family firms and 0.214 for non-family firms) indicates that this model explains most of the variation in the data for underpricing, but it is lower for long-term performance in Model 2, with a lower R-squared value. The F-value indicates that some models are not significant overall, especially for long-term performance.

Table 4 Determinants of IPO Underpricing and Long-Term Performance

	Model 1		Model 2	
	Family Firm (1a)	Non- Family Firm (1b)	Family Firm (2a)	Non- Family Firm (2b)
Underpricing	-	-	-0.431977 (-1.1025, -0.0575)	-0.34563 (-1.0057, 0.0084)
CEO Gender	-0.180596 (0.159692)	0.037501 (0.7217)	-0.279914 (-0.7405, 0.7066)	0.30723 (-0.1452, 1.0324)
CEO Education	0.042486 (0.310481)	0.007495 (0.8162)	-0.119589 (-0.3398, 0.0335)	-0.17245 (-0.3280, -0.0198)
CEO Experience	0.050793 (0.701942)	0.153388 (0.08958)	-0.005816 (-1.0154, 0.4542)	0.06937 (-0.6440, 0.5716)
Reputasi Auditor	-0.400330 (0.000654 ***)	-0.380229 (1.745e-07 ***)	0.825157 (0.0784, 1.7537)	-0.31096 (-0.7355, 0.2030)
Firm Age	-0.002480 (0.320318)	-0.003377 (0.10615)	-0.000713 (-0.0128, 0.0090)	-
Firm Size	-0.278957 (0.001645 **)	-0.226237 (9.175e-05 ***)	-0.074315 (-0.7156, 0.2615)	-
Leverage	0.020704 (0.380662)	0.016764 (0.5047)	-0.018547 (-0.1117, 0.0810)	-
R-squared	0.2005	0.214	0.109	0.030
F	4.643e-06	7.891e-10	0.002773	0.04662
n	140	210	140	210

Source: Primary Data, Processed (2025)

Tables 5 to 10 explain the correlation between variables in each research model using Pearson's correlation. Table 5 shows that auditor reputation has a significant negative correlation with underpricing at the 1% level (-0.29***), indicating that the higher the role of the auditor, the lower the level of underpricing disclosure tends to be. Additionally, the firm size variable also shows a significant negative correlation with underpricing (-0.36***) and CEOEDU (-0.29***), indicating that larger companies tend to have lower levels of disclosure

and CEO educational background. On the other hand, there is a high and significant positive correlation between firm size and Leverage (0.73***), indicating that larger companies tend to have higher leverage levels. Other correlations, such as between CEOEDU and Leverage (-0.07**), are also significant at the 10% level. These findings are important for understanding the possibility of data abnormalities and the direction of the relationship between the variables studied in the subsequent regression model.

Table 5 Correlation Model 1a

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
UNDPR (1)	1.00							
CEOGEN (2)	-0.15*	1.00						
CEOEDU (3)	0.18**	0.03	1.00					
CEOEXP (4)	0.07	-0.12	-0.07	1.00				
Auditorrep (5)	-0.29***	0.07	0.02	-0.01	1.00			
FA (6)	-0.15*	0.08	-0.05	-0.01	0.09	1.00		
FS (7)	-0.36***	0.04	-0.29***	-0.12	0.03	0.08	1.00	
Lvrg (8)	-0.19**	0.04	-0.07**	-0.10	0.01	-0.02	0.73***	1.00

Source: Primary Data, Processed (2025)

Table 6 shows that the auditor reputation and firm size variables have a negative and significant correlation with underpricing (-0.33***) and (-0.35***), as well as a significant negative correlation at the 5% level with leverage (-0.18**). This indicates that the higher the audit quality and firm size, and the lower the leverage, the more likely it is to increase the level of underpricing. Additionally, there is a positive and significant correlation between firm size (FS) and leverage (Lvrg) of 0.70***, indicating that larger firms tend to have higher leverage levels. Meanwhile, CEO characteristic variables do not show significant correlations with most other variables, except for CEOGEN, which has a positive correlation with leverage (0.13*) and FA, which has a negative correlation with CEOGEN (-0.16**) and CEOEDU (-0.15**).

Table 6 Correlation Model 1b

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
UNDPR (1)	1.00							
CEOGEN (2)	0.05	1.00						
CEOEDU (3)	-0.02	-0.02	1.00					
CEOEXP (4)	0.12*	-0.02	-0.03	1.00				
Auditorrep (5)	-0.33***	-0.03	0.07	0.00	1.00			
FA (6)	-0.15**	-0.16**	0.05	-0.17**	0.09	1.00		
FS (7)	-0.35***	0.02	0.01	-0.07	0.07	0.04	1.00	
Lvrg (8)	-0.18**	0.13*	-0.04	0.00	0.00	-0.02	0.70***	1.00

Source: Primary Data, Processed (2025)

Table 7 presents the results that the LTP variable has a negative and significant correlation with UNDPR (-0.23**) and CEOEDU (-0.12), as well as a positive and significant correlation with Auditorrep (0.30***), indicating that the company's long-term performance tends to decline when the level of disclosure and CEO education increases, but improves with better audit quality. UNDPR itself shows a significant negative correlation with Auditorrep (-0.29***), FS (-0.36***), and Lvrg (-0.19**), indicating that companies with high disclosure levels tend to have lower audit quality, smaller company size, and lower leverage. Company size (FS) also shows a strong positive correlation with leverage (0.73***), indicating that larger

companies are more likely to have higher debt. These relationships are important to note in further analysis, particularly to examine the simultaneous effects of variables within the regression model.

Table 7 Correlation Model 2a

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LTP (1)	1.00								
UNDPR(2)	-0.23**	1.00							
CEOGEN (3)	-0.04	-0.15*	1.00						
CEOEDU (4)	-0.12	0.18**	0.03	1.00					
CEOEXP (5)	0.01	0.07	-0.12	-0.07	1.00				
Auditorrep (6)	0.30***	-0.29***	0.07	0.02	-0.01	1.00			
FA (7)	0.03	-0.15*	0.08	-0.05	-0.01	0.09	1.00		
FS (8)	0.02	-0.36***	0.04	-0.29***	-0.12	0.03	0.08	1.00	
Lvrg (9)	-0.04	-0.19**	0.04	-0.07	-0.10	0.01	-0.02	0.73** *	1.00

Source: Primary Data, Processed (2025)

Table 8 shows that the LTP (Long Term Performance) variable has a negative and significant correlation with CEOEDU (-0.15^{**}) and a significant negative correlation at the 10% level with UNDPR (-0.12^{*}), indicating that the higher the CEO's education level and disclosure level, the more likely it is to be associated with a decline in the company's long-term performance. Meanwhile, underpricing shows a strong and significant negative correlation with Auditorrep (-0.33^{***}), suggesting that companies with high levels of underpricing tend to use auditors of lower quality. The CEOEXP variable shows a significant positive correlation with CEOGEN (0.12^{*}), although this relationship is weak. Overall, the correlations between variables in this model are relatively low, but there are still some significant relationships worth noting in further analysis.

Table 8 Correlation Model 2b

Variable	(1)	(2)	(3)	(4)	(5)	(6)
LTP (1)	1.00					
UNDPR (2)	-0.12*	1.00				
CEOGEN (3)	0.07	0.05	1.00			
CEOEDU (4)	-0.15**	-0.02	-0.02	1.00		
CEOEXP (5)	-0.01	0.12*	-0.02	-0.02	1.00	
Auditorrep (6)	-0.06	-0.33***	-0.33	0.07	0.00	1.00

Source: Primary Data, Processed (2025)

Table 9 shows that the FF_Underwrep variable has a fairly strong and significant positive correlation at the 1% level with FF of 0.68 and Underwrep of 0.47, indicating a close relationship between the three. The FA variable also has a significant positive correlation with several variables, namely 0.16 with FF at a significance level of 5%, and 0.18 with FF_Underwrep at a significance level of 1%. Additionally, the FS variable shows a significant negative correlation with UNDPR of -0.35 at the 1% level, indicating that as the size of the company (FS) increases, the tendency for UNDPR to decrease. The Lvrg variable has a significant negative correlation with UNDPR of -0.19 at the 1% level, as well as a high positive correlation of 0.71 with FS at the 1% significance level, indicating a strong relationship between leverage and company size. Correlations between other variables are relatively low and mostly insignificant, thereby reducing the potential for multicollinearity issues in the

model.

Table 9 Correlation Model 3

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
UNDPR (1)	1.00						
FF (2)	0.02	1.00					
Underwrep (3)	-0.02	0.02	1.00				
FF Underwrep (4)	-0.02	0.68***	0.47***	1.00			
FA (5)	-0.14***	0.16**	0.10*	0.18***	1.00		
FS (6)	-0.35***	0.11**	-0.06	0.07	0.07	1.00	
Lvrg (7)	-0.19***	0.06	-0.09*	0.02	-0.01	0.71***	1.00

Source: Primary Data, Processed (2025)

Table 10 presents the correlations between variables in Model 4, which analyzes the moderation of underwriter reputation on the relationship between family firms (FF) and long-term performance (LTP) during the period 2010 to 2021. Based on the table, it is evident that the FF_Underwrep variable has a significant positive correlation with FF of 0.68 and with Underwrep of 0.47, both significant at the 1% level, indicating a strong relationship between the moderating variable and the moderated variables. The FA variable also shows a significant positive correlation of 0.16 with FF at the 5% level, as well as a correlation of 0.10 with Underwrep at the 10% level, indicating a relationship, albeit not very strong. Meanwhile, the Lvrg variable has a significant positive correlation of 0.71 with FS at the 1% level, indicating a strong relationship between leverage and company size. The correlation between LTP and other variables is relatively low and insignificant, indicating no strong direct correlation between LTP and independent or moderating variables.

Table 10 Correlation Model 4

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
LTP (1)	1.00						
FF (2)	-0.03	1.00					
Underwrep (3)	-0.05	0.02***	1.00				
FF Underwrep (4)	-0.02	0.68***	0.47***	1.00			
FA (5)	0.01	0.16**	0.10***	0.18	1.00		
FS (6)	0.06	0.11	-0.06	0.07	0.07	1.00	
Lvrg (7)	0.01	0.06	-0.09	0.02	-0.01	0.71**	1.00

Source: Primary Data, Processed (2025)

Table 11 shows the regression results for Model 3, which is the moderation of underwriter reputation on the relationship between family firms and underpricing, and Model 4, the moderation of underwriter reputation on the relationship between family firms and long-term performance. In Model 3, the Family Firm (FF) variable has a positive coefficient of 0.122, but it is not significant (p-value = 0.1341). The underwriter reputation (Underwrep) is also not significant (coefficient = -0.002, p = 0.9678), nor is the interaction between Underwriter Reputation and Family Firm (Underwrep*FF), which has a negative and insignificant coefficient (p = 0.0205). In Model 4, Family Firm (FF) shows a larger negative coefficient (-0.214), but it remains insignificant (p = 0.6041). The underwriter reputation remains insignificant (coefficient = -0.183, p = 0.5049), and the interaction between underwriter reputation and family firm remains insignificant. Control variables such as firm

age, firm size, and leverage show varying coefficients but are also not significant in both models. The low R-squared values (0.134 for Model 3 and -0.006 for Model 4) indicate that these models explain very little variation in the data, and the very low F values suggest that the models are not significant overall.

Table 11 Determinants of IPO Underpricing and Long-Term Performance II

	Model 3	Model 4
Famili Firm (FF)	0.122056 (0.1341)	-0.214157159 (-0.6041, 0.2277)
Underwriter Reputation (Underwrep)	-0.002709 (0.9678)	-0.183456750 (-0.5049, 0.1286)
Underwrep*FF	-0.061910 (0.0205*)	0.189164448 (-0.2880, 0.7279)
<i>Firm Age</i>	-0.004154 (5.54e-09 ***)	0.001176965 (-0.0064, 0.0098)
<i>Firm Size</i>	-0.270460 (0.1261)	0.151854625 (-0.0263, 0.3167)
<i>Leverage</i>	0.022666 (0.5609)	-0.031494811 (-0.0928, 0.0254)
R-squared	0.134	-0.006
F	3.471e-10	0.7009
n	350	350

Source: Primary Data, Processed (2025)

Discussion

Research shows that CEO characteristics such as gender, education, and experience do not significantly affect underpricing, whether in family-owned or non-family-owned companies (Ahern & Dittmar, 2012; McGuinness, 2018; Gao et al., 2024). Investors tend not to consider the personal attributes of the CEO as a strong signal in IPO pricing but rather focus on external signals such as reputation and financial information. The reputation of auditors has been proven to have a negative and significant impact on underpricing in both types of companies, indicating its function as a quality signal that reduces information asymmetry (Chen et al., 2013). For the control variables, firm age has a negative but insignificant effect, while firm size shows a significant negative effect on underpricing, indicating that larger companies are more trusted by investors (Loughran & Ritter, 2004; Asriani et al., 2025). Leverage does not have a significant effect on underpricing in both family and non-family firms, although its coefficient is positive (Asnaini et al., 2025; Yanti, 2025). Overall, reputation and company size factors are more dominant in influencing the level of underpricing compared to the personal characteristics of the CEO or the capital structure.

The impact of underpricing on long-term performance differs between family-owned and non-family-owned companies. In family-owned companies, underpricing has a significant negative impact, worsening post-IPO stock performance because it is perceived as a signal of risk and conflict of interest. Conversely, in non-family-owned companies, the impact of underpricing is not significant due to a more professional and dispersed ownership structure (Setia-Atmaja, 2021; Wu & Zhao, 2023). CEO characteristics such as gender, education, and experience do not significantly affect post-IPO performance in both types of companies. Social-emotional factors and family reputation are more dominant in family firms, while in non-family firms, these factors do not affect IPO performance (Lybaert & Umans, 2024; Félix & David, 2019).

The reputation of auditors has been proven to significantly affect long-term performance in family businesses by reducing underpricing and increasing transparency. Renowned auditors provide quality signals that reduce market uncertainty, which impacts more stable post-IPO stock performance (Rodoni et al., 2018; Datta, 2023). The size of the company and the age of the company significantly affect long-term performance, with larger companies showing more stable post-IPO performance. Leverage has a negative impact on underpricing, but its influence is not significant in the regression analysis, although it still plays a role in enhancing the company's stability (Ahmed et al., 2023; Mallingu et al., 2020). Overall, IPO performance is influenced by internal and external factors. The signaling theory and information asymmetry explain the differences in influence between family-owned and non-family-owned companies, with family-owned companies being more vulnerable to negative perceptions related to governance, while non-family-owned companies are better able to manage market uncertainty and long-term risks (Chaudhary et al., 2021; Tupper & Mehta, 2025).

The regression results show that underwriter reputation moderates the relationship between family firms (FF) and underpricing at IPOs, with a coefficient of -0.061910 and a p-value of 0.0205 (significant at the 10% level). These findings support the information asymmetry and signaling theory, which state that underwriter reputation reduces information asymmetry and suppresses underpricing. Although the moderating effect is weak, the underwriter's reputation remains important in emerging markets like Indonesia (Apsari et al., 2021; Pelawi & Pelawi, 2023; Rodoni et al., 2018). A high underwriter reputation helps reduce information asymmetry and negative perceptions during the IPO of family firms by validating governance and long-term prospects (Piyasinchai et al., 2023). However, the regression results show that its influence on the long-term performance of family firms is not significant ($p > 0.05$), because the reputation of family firms tends to be more self-sustaining and influenced by internal family dynamics (Sageder et al., 2018; Piyasinchai et al., 2023; Razzak et al., 2021). The rejection of this hypothesis is also influenced by temporal factors and market context heterogeneity, wherein markets with strict regulations, the role of underwriters overlaps with regulatory oversight (Dewi et al., 2024; Song et al., 2024; Sun & Wu, 2024).

CONCLUSION

The research findings indicate that CEO characteristics, such as gender, education, and experience, do not have a significant impact on the level of underpricing or long-term performance in both family and non-family firms. On the other hand, the reputation of the auditor has been shown to have a significant negative impact on underpricing in both types of companies, indicating that highly reputable auditors can help reduce underpricing during the IPO. For family firms, the level of underpricing has a significant negative impact on long-term performance, illustrating the need for more realistic IPO pricing strategies to support the company's long-term growth. Meanwhile, the reputation of the underwriter has not been shown to have a significant moderating effect on the relationship between family firm status and long-term performance, indicating that internal family firm factors are more dominant in determining post-IPO performance. These findings hold significant practical and theoretical implications. Practically, companies are advised to focus on selecting auditors with a high

reputation and to strengthen the quality of governance and information transparency to reduce the risk of underpricing. Additionally, for further research, it is recommended to explore additional variables such as retained equity or market sentiment, as well as using methods like event studies to identify long-term performance fluctuations in specific years. Future research could also consider cross-country comparative studies to understand the dynamics of underpricing and long-term performance in other emerging markets. Theoretically, this research contributes to the development of a model on the influence of family business factors on IPOs in the Indonesian capital market, as well as enriching the literature on the roles of auditors and underwriters in the context of IPOs.

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