"Impact of family ownership, management, and generations on IPO underpricing and long-run performance"

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IMPACT OF FAMILY OWNERSHIP, MANAGEMENT, AND GENERATIONS ON IPO UNDERPRICING AND LONG-RUN PERFORMANCE

Abstract

This paper examines the impact of family ownership, management, and generations on IPO underpricing and the long-run performance of publicly listed firms in Indonesia from 2004 to 2015. This study is based on agency theory, which discusses the relationship between shareholders and management, as well as controlling and non-controlling shareholders. Study results show that IPO underpricing was 28% higher for family firms than non-family firms. Among family firms, a family member's presence as a Chief Executive Officer (CEO) significantly reduced the level of IPO underpricing. A negative relationship between family CEO and IPO underpricing was only observed if a CEO at the time of IPO was the founder instead of family descendants. A long-run return of family-firm IPOs was more likely to underperform their non-family-firm counterparts. The findings in the primary market suggest that investors predict bigger issues of agency conflicts between controlling and non-controlling shareholders in family firms than the issues of agency conflicts between shareholders and management in non-family firms. Since investors consider family-firm IPOs to be riskier than non-family firms, they demand a higher level of IPO underpricing to compensate for such risks. The results in the secondary market confirm the findings in the primary market.

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INTRODUCTION

Family ownership has been an important research topic in the field of finance due to the significant roles family firms have played in creating wealth and employment opportunities in many countries around the world. However, several studies have documented both positive and negative views on the impact of family ownership (Anderson & Reeb, 2003; Villalonga & Amit, 2006). On one hand, family owners as the majority or controlling shareholders mitigate agency conflicts between shareholders and management (referred to as Agency Problem I). In other words, due to their large shares of ownership, family owners have higher incentives to supervise management. On the other hand, their high degree of control makes it possible for family owners to undertake actions that only benefit them at the expense of the minority or non-controlling shareholders (referred to as Agency Problem II). Therefore, the negative perspective on family ownership may counteract its positive perspective. This may affect how investors in the stock market perceive family firms' risk and determine family firm value in the primary market (i.e., IPO (initial public offering) pricing) and secondary market (i.e., long-run performance). Moreover, there is an argument that family involvement in firm management and family generations influence family firm value in both primary and secondary markets (Huang et al., 2019; Certo et al., 2001). Family firms are

prevalent in Indonesia. They account for at least 45% of Indonesian market capitalization and operate in all sectors, including finance, consumer goods, property, and energy. Around 67% of publicly listed companies in Indonesia are family firms (Claessens et al., 2000). Therefore, it is necessary to research the short-term and long-run performance of publicly listed family firms in Indonesia.

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

1.1. Family firms and IPO underpricing

Finance literature shows that there are three major theories to explain the differences in IPO pricing between family and non-family firms: information asymmetry hypothesis, signaling theory, and agency theory. According to the asymmetry information hypothesis, prospective investors have less information compared to the owners of companies that plan to go public. Therefore, issuing companies can use IPO underpricing to entice investors to purchase stocks during IPO (Rock, 1986). According to Leland and Pyle (1997), businessmen gather information about their business, and when they seek to fund expansion of their business, their commitment to invest in their business is the signal that they have a quality firm. According to this theory, family firms do not need to offer a larger discount during IPO, since controlling families have already made a major investment in family firms. Controlling families in family firms are more likely to have longer investment insight and greater motivation to increase the value of a company. Therefore, the asymmetric information theory predicts that IPO underpricing of family firms is lower than that of non-family firms.

In contrast, under signaling theory, issuing companies can use IPO underpricing to send a signal to investors regarding the quality of their company on their first days of trading (Ritter, 1984; Allen & Faulhaber, 1989; Grinblatt & Hwang, 1989). Companies with good prospects can sell their stocks at a lower price during IPO since they are convinced that investors know that only companies with good prospects dare take this action. These companies are convinced that the loss they incur during IPO due to the underpricing will be covered by a future increase of stock price in the secondary market. Companies with bad prospects cannot apply the same strategy

since they cannot cover their loss from underpricing in the future. Thus, under signaling theory, family firm IPOs should experience greater underpricing than non-family firm IPOs.

Under the agency theoretical framework, both family and non-family firms have different governance and agency costs, which could cause differences in the underpricing and long-run performance of IPO between family and non-family firms. According to agency theory (Shleifer & Vishny, 1997; Villalonga & Amit, 2006), two types of agency conflicts can occur in a company. In companies without majority or controlling shareholders, agency conflicts can occur among professionals (agents) hired by shareholders (principals) (referred to as Agency Problem I). Agency costs were incurred when the agents prioritize their own private interests rather than their principals'.

Meanwhile, in companies with a majority or controlling shareholders, Agency Problem I can be minimized since there is better monitoring done by the principal. The presence of the majority or controlling shareholders, however, can create agency conflicts with the minority or non-controlling shareholders (referred to as Agency Problem II). Due to these two types of agency problems, agency costs in family firms might be higher or lower than those in non-family firms.

Anderson and Reeb (2003) argued that family firms demonstrate an advantage in terms of monitoring management. Family firms are a unique form of companies since there are private persons or families with a large share of ownership. Since most families' or individuals' assets are invested in a company, most family members sit on the Board of Commissioners or the Board of Directors. Therefore, supervision of the directors by the founding family is relatively better due to a better communication and consistent interest (La Porta et al., 1998). Even though the director's position is held by a professional, the family still has strong motivation to supervise management. Thus,

Agency Problem I tends to be lower in family firms than in non-family firms. This is the positive perspective on family firms.

On the other hand, a larger proportion of family ownership in family firms and the presence of family members on the Board of Commissioners and/or the Board of Directors gives the family stronger control over a company. According to Villalonga and Amit (2006), family controlling shareholders could conduct expropriation for minority shareholders. They can enjoy private benefits of control at the expense of minority shareholders. For example, family members who sit in the director's or commissioner's position can have higher salaries, other companies owned by controlling families are given below-market transfer prices, and other companies owned by controlling families can face overpricing during acquisition. These private benefits of control had the potential to undermine company values. This is a negative perspective of family firms.

These positive and negative perspectives might counteract each other, and IPO underpricing in family firms relies on the relative strength of both agency problems. If investors perceive that family firms have greater agency conflicts than non-family firms, they will ask for a larger discount on the IPO price. Therefore, the level of IPO underpricing in family firms is expected to be higher than that of non-family firms. On the other hand, if they view that family firms have less severe agency conflicts than non-family firms, they might be more willing to pay a higher price for shares of family firm IPOs. Thus, the level of IPO underpricing in family firms is expected to be lower than in non-family firms.

Few studies have examined the impact of family ownership and control on IPO underpricing. The results are mixed. For example, Yang et al. (2020) investigated companies in China from 2004 to 2014 and found that family firms tend to have less underpricing than non-family firms. Jithendranathan and Daugherty (2012) documented that the IPO underpricing of family firms was lower than that of non-family firms, as found within the data of companies in the United States. Hearn (2011) investigated companies in the North African region and found that family firms' underpricing was low-

er than that of non-family firms. Alrubaishi and Alarifi (2019) looked at companies in the Middle East and found the same result: family control had a negative correlation with IPO underpricing. Walker (2008) also looked at IPOs' performances in 25 countries during the period of 1995–2002 and found that, in countries in which family firms were dominant, IPO underpricing of family firms was lower. Meanwhile, Leitterstorf and Rau (2014) reported that IPO underpricing of family firms was higher than that of non-family firms in Germany. It was argued that family firms used underpricing to protect their socioemotional wealth such as identity and continuation of family dynasty.

1.2. Family involvement and IPO underpricing

Extant studies show that family involvement in family firms affected IPO underpricing. Huang et al. (2019), who examined IPOs in China, found that IPO underpricing in family firms was 12% lower than that of non-family firms, which is consistent with asymmetry information theory. It was also found that the presence of a family member on the board of directors lowered the level of IPO underpricing, which is consistent with the positive perspective of family firms. Cirillo et al. (2015), upon examining companies in Italy, found that family control positively affected the value of IPO, leading to lower IPO underpricing. They also found that family involvement in firms lowered IPO underpricing. The same result was also reported in Spain by Hearn (2011) and in China by Cao et al. (2021). In contrast, Yu and Zheng (2012) found that family involvement is positively associated with IPO underpricing in Hong Kong.

Indonesia adopts a two-tier board system consisting of Board of Directors and Board of Commissioners. These two boards are similar to executive and non-executive directors, respectively, in countries with one-tier systems. Board of Commissioners is aimed to supervise Board of Directors. Generally, the controlling families in family firms in Indonesia place their family member(s) on the Board of Commissioners as chairman and/or on the Board of Directors as CEO. Investors view this positively as a way for a company to mitigate Agency Problem I, and therefore they are willing to pay a higher IPO share price.

1.3. Family generations and IPO underpricing

A unique aspect of family firms is the family founders with long-term insight and a strong commitment to the firm's goals. Since they want to pass down the business to the next generation, family founders or first-generation families generally try to strengthen their business (Bingham et al., 2011). Founder-controlled family firms usually have fewer family conflicts and better performance. However, when descendants begin to get involved in management, conflicts begin to appear more frequently. Fahlenbrach (2009) argued that founders had unique valuable skills; it was also found that founder CEOs had a positive impact on the stock market performance of family firms.

Jaskiewicz et al. (2005) examined family firms IPO in Spain and Germany and found that descendant-controlled family firms had worse family conflicts. Therefore, the performance of such companies declined. Cirillo et al. (2015) found that during IPO, the investors appreciated founder-controlled family firms. Basu et al. (2009) suggest that the reputation of the family founder in family firms entices investors to purchase stocks during IPOs. Nelson (2003) argued that the presence of the founder in family firms was the signal that convinced investors. Meanwhile, Certo et al. (2001) reported that the founder-controlled companies were valued higher by investors during IPO.

McConaughy and Phillips (1999) documented the differences between family firms controlled by founders and descendants in the US. It was found that family firms controlled by founders grow faster and receive more capital investment. However, firms controlled by descendants are generally more profitable. This is consistent with the life cycle view of family firms. In addition, McConaughy et al. (2001) used the agency theory framework to study the effects of founding family control. They found that family firms controlled by founders have greater value and lower leverage.

Villalonga and Amit (2006) examined the effect of a founder, descendant, and professional chairman/CEO against family firms value in the US and found that, for both family and non-family firms, a founder CEO and chairman in family firms had

a positive correlation with the value of a company, while a descendant CEO and chairman in family firms had a negative correlation with the value of a company. Similar findings are documented by Muttakin et al. (2014) in Bangladesh.

1.4. Family firms and IPO long-run performance

Few studies have examined the long-run performance of family firm IPOs. Jaskiewicz et al. (2005) examined the stock performance of companies in Germany and Spain several years after IPO. By using the buy and hold abnormal return (BHAR) as the measurement of firm performance, it was found that the performance of family firms for three years after IPO was no better than that of non-family firms. However, among family firms, family involvement had a positive effect on long-run performance. Caselli and Gatti (2007) examined the IPOs of companies in Italy and found that, during three years after IPO, the family firm performance (BHAR) was worse than the markets, but there was no significant difference in the performance of family and non-family firms. In addition, family involvement had a positive correlation with long-run IPO performance. This result is consistent with Jaskiewicz et al. (2005). In contrast, Mazzola and Marchisio (2002) found that, for a period of three years after IPO, the family firms in Italy underperformed –31.74%, while non-family firms underperformed in the market at –10.57%.

Although there have been many studies on the long-run financial performance of family firms, a number of studies on how positive and negative perspectives on family ownership and control counteract each other – specifically on the financial performance of family firms in the primary market – remains limited. This paper attempts to study how investors viewed the agency problems in family and non-family firms based on the level of IPO underpricing in Indonesia. The paper also attempts to examine the long-run performance of family firm IPOs to confirm the assessments of investors on family firm IPOs in the primary market.

This study attempts to provide several significant contributions to the family and IPO literature. This paper is the first to examine the family firm IPO performance in the primary and secondary

markets as well as in developing countries with a weak legal system and a two-tier board system. Previous studies have mainly focused on developed countries with relatively strong legal systems. This study can provide insight regarding countries with relatively weaker legal systems. Prior studies also mostly focused on the countries with a one-tier board system. The unique governance system in Indonesia allows examining the impact of family involvement and family generation in the two-tier board system on IPO underpricing and long-run performance. Moreover, previous studies on family firms have focused more on the comparison of long-run IPO performance as well as IPO underpricing between family firms and non-family firms. This study sheds further light on this issue by investigating the IPO firm performance in both markets. Finally, this is the first study to examine the impact of family generations on family-firm IPO underpricing and long-run performance under the agency theoretical framework.

Based on the literature review, this paper proposes the following hypotheses:

H1a: *Under agency theory, the positive perspective of family firms implies that family firms have smaller IPO underpricing than non-family firms.*

H1b: *Under agency theory, the negative perspective of family firms implies that family firms have greater IPO underpricing than non-family firms.*

H2a: *Under agency theory, family firms with a family CEO have a negative correlation with IPO underpricing.*

H2b: *Under agency theory, family firms with a family chairman of the board have a negative correlation with IPO underpricing.*

H3a: *Under agency theory, family firms with a family founder CEO have a negative correlation with IPO underpricing.*

H3b: *Under agency theory, family firms with a family descendant CEO have a positive correlation with IPO underpricing.*

H3c: *Under agency theory, family firms with a family founder chairman of the board have a negative correlation with IPO underpricing.*

H3d: *Under agency theory, family firms with a family descendant chairman of the board have a positive correlation with IPO underpricing.*

H4a: *Under agency theory, the positive perspective of family firms implies that the long-run IPO performance of family firms is better than that of non-family firms.*

H4b: *Under agency theory, the negative perspective of family firms implies that the long-run IPO performance of family firms is worse than that of non-family firms.*

H4c: *Under agency theory, family firms with a family CEO have a positive correlation with IPO long-run performance.*

H4d: *Under agency theory, family firms with a family chairman have a positive correlation with IPO long-run performance.*

H4e: *Under agency theory, family firms with a family founder CEO have a positive correlation with IPO long-run performance.*

H4f: *Under agency theory, family firms with a family descendant CEO have a negative correlation with IPO long-run performance.*

H4g: *Under agency theory, family firms with a family founder chairman have a positive correlation with IPO long-run performance.*

H4h: *Under the agency theory, family firms with a family descendant chairman have a negative correlation with IPO long-run performance.*

2. SAMPLE AND METHODOLOGY

2.1. Sample

The sample of this study consists of Indonesian companies that went public from 2004 to 2015.

The initial data consists of 215 observations. After financial companies (48 observations) are excluded, a final sample consists of 167 observations.

Table 1 shows the number and volume of IPOs during 12 years. The number of IPOs decreased during the global financial crisis and rose slightly again at the beginning of 2010. Each year the number of family firm IPOs was greater and more volatile than that of non-family firm IPOs. However, the number of non-family firm IPOs, such as the IPOs of state-owned and widely-held companies, was relatively stable, which was around 2-3 IPOs per year.

Table 1. Number of IPOs in Indonesia (2004–2015)

Year	All firms	Family firms	Non-family firms
2004	6	5	1
2005	3	2	1
2006	7	6	1
2007	19	16	3
2008	14	11	3
2009	8	7	1
2010	17	12	5
2011	23	21	2
2012	20	17	3
2013	22	19	3
2014	15	12	3
2015	13	9	4

2.2. Research model

To examine whether the amount of underpricing is associated with family ownership (*H1*), this paper develops the following regression model:

$$Underpricing = DFam + DHot + \\ + Leverage + IPO\ size + Board\ size + \\ + Firm\ size + Firm\ age. \tag{1}$$

The dependent variable is the amount of underpricing following Huang et al. (2019):

$$Underpricing = \frac{p_1 - p_0}{p_0}. \tag{2}$$

The higher the value *Underpricing* implies, the greater the discount offered to the public investors on the first day of trading. Since the percentage of underpricing might be influenced by the overall market performance during the IPO, this paper adjusts the amount of underpricing using three different benchmarks: the Jakarta Composite Index (JCI), the 45 largest and most liquid Indonesian public companies (LQ 45), and the sectoral index (SECTOR):

$$r_{index} = \frac{p_{index1} - p_{index0}}{p_{index0}}. \tag{3}$$

$$Underpricing\ (index\ adjusted) = \\ = \frac{1 + Underpricing}{1 + r_{index}}. \tag{4}$$

The main variable of interest in the first regression model is *DFam*, which equals 1 if a firm is controlled by a family, and 0 otherwise. Hence, control sample consists of firms controlled by non-family blockholders, such as government and widely held firms. This paper defines family-controlled firms like those in which families or individuals control a minimum of 35% shareholding. Twenty percent of the voting rights threshold is considered enough for effective control of a firm (La Porta et al., 1999). However, this study uses 35% shareholding because this is the control threshold adopted in Indonesia's takeover regulation. This study traces back ownership in the case that a firm's controlling shareholder is a corporation. For instance, Firm A is controlled by Firm B, which has family or individual controls in at least 35% of shareholdings. Then, this study categorizes Firm A as a family-controlled firm. If Firm B is not controlled by a family or individual, then it is categorized as a non-family firm.

The regression is further controlled by several variables that might influence the degree of underpricing, such as the market condition $(DHot)$, capital structure $(Leverage)$, offering size $(IPO\ size)$, size of the board $(Board\ size)$, company size $(Firm\ size)$, and company age $(Firm\ age)$ at the time of IPO.

Furthermore, to explore whether family involvement influences the degree of underpricing, this study tests *H2a* until *H2d* by developing the following three regression models for the family firm sub-samples (i.e., the observations with *DFam* equals 1).

As shown in equation (5), the main variables of interests are $DCEOFam$ and $DCOBFam$. The values of $DCEOFam$ and $DCOBFam$ equal 1 if a family member (regardless she or he is a founder or descendant) sits as the company's Chief Executive Officer (CEO) and Chairman of the Board (COB), respectively. All variables and definitions used in the analysis are provided in Table 2.

$$Underpricing = DCEOFam + DCOBFam + \\ + DHot + Leverage + IPO\ size + \\ + Board\ size + Firm\ size + Firm\ age. \quad (5)$$

To examine whether the impact of family members' involvement, either in managerial or supervisory duties, on underpricing is subject to the status of a family member (i.e., as a founder (first generation) or descendant), this study develops two regression models:

$$Underpricing = DCEOFounder + \\ + DCEODescendant + DHot + \\ + Leverage + IPO\ size + \\ + Board\ size + Firm\ size + Firm\ age. \quad (6)$$

$$Underpricing = DCOBFounder + \\ + DCOBDescendant + DHot + \\ + Leverage + IPO\ size + \\ + Board\ size + Firm\ size + Firm\ age. \quad (7)$$

$DCEOFounder$ equals 1 if a company's CEO is the founder of a company and 0 otherwise. This study sets the $DCEODescendant$ value to 1 if the CEO is the descendant of the family and 0 otherwise. Similarly, this study assigns the value of $DCOBFounder$ equal to 1 if the CBO is the founder and 0 otherwise. If the COB is a family member from the second or further generations, then this study sets the value of $DCOBDescendant$ to 1 and 0 otherwise.

To examine whether family ownership affects the long-run performance of IPO firms (*H4a* and *H4b*), this study regresses the long-run financial performance on $DFam$ and several control variables as shown in equation (8):

$$BHAR = DFam + Underpricing + \\ + DHot + Firm\ size + Firm\ age. \quad (8)$$

The dependent variable is $BHAR$, which represents the buy-and-hold abnormal return of IPO firm following Lyon et al. (1999):

$$BHAR_{i,t} = \left[\prod_{i=1}^{T} \left(1 + r_{i,t}\right) \right] - \left[\prod_{i=1}^{T} \left(1 + r_{index,t}\right) \right], \quad (9)$$

where $r_{i,t}$ and $r_{index,t}$ represent the monthly return during T periods of the IPO firm and the benchmark index, respectively. In this analysis, this study uses 1- and 5-year periods and three different benchmarks similar to previous analysis.

To test *H4c* and *H4d*, this study reruns the regression analysis only on the family sub-sample to see whether the long-run financial performance of IPO firms is influenced by the involvement of family members in managerial and supervisory duties, as shown in equation (10):

$$BHAR = DCEOFam + DCOBFam + \\ + Underpricing + DHot + Firm\ size + \\ + Firm\ age. \quad (10)$$

This study also checks whether the status of family members who serve as the company's CEO has a significant influence on the IPO firm long-run performance consistent with *H4e* and *H4f*:

$$BHAR = DCEOFounder + \\ + DCEODescendant + Underpricing + \\ + DHot + Firm\ size + Firm\ age. \quad (11)$$

Similarly, to test the hypothesis that the status of family members who are the chairmen of the board affects the long-run IPO performance (*H4g* and *H4h*), this study regresses the $BHAR$ on the two main variables of interest ($DCOBFounder$ and $DCOBDescendant$):

$$BHAR = DCOBFounder + \\ + DCOBDescendant + Underpricing + \\ + DHot + Firm\ size + Firm\ age. \quad (12)$$

All variables and definitions used in the analysis are provided in Table 2.

Table 2. Description of variables

Variable	Description
Underpricing	The IPO initial rate of return is calculated as a percentage difference between the closing price and the offering price on the first day of trading.
BHAR	The IPO long-run performance is calculated as a compounded monthly return during the 1-year and 5-year periods.
DFam	A dummy variable of 1 if a family or an individual controls a minimum of 35% of total shareholding, 0 otherwise.
DCEOFam	A dummy variable of 1 if the CEO is a family member, 0 otherwise.
DCOBFam	A dummy variable of 1 if the COB is a family member, 0 otherwise.
DCEOFounder	A dummy variable of 1 if the CEO is the founder of a company, 0 otherwise.
DCEODescendant	A dummy variable of 1 if the CEO is the descendant of a family, 0 otherwise.
DCOBFounder	A dummy variable of 1 if the COB is the founder of a company, 0 otherwise.
DCOBDescendant	A dummy variable of 1 if the COB is the descendant of a family, 0 otherwise.
DHot	A dummy variable of 1 if the number of total IPOs in the year of the company IPO is greater than the average number of IPOs during the observation period, 0 otherwise.
Leverage	The long-term debt to total assets ratio in the year before the company IPO.
IPO size	The amount of equity raised in the IPO (in IDR).
Board size	The number of board members at the time of the IPO.
Firm size	The total assets in the year before the company IPO (in million USD).
Firm age	The number of months the company has been founded at the time of the IPO.

3. RESULTS AND DISCUSSION

3.1. Descriptive statistics

Table 3 exhibits the descriptive statistics of all variables used in this paper. Approximately 82.03% of firms that went public during the observation period were family firms. At the time of IPO, on average, 50% of family firms have their family members served either as the CEOs or COBs of companies. If they served as a CEO of a company, then approximately 30.65% of them were founders themselves, while only 14.6% of them were descendants of families. Meanwhile, if family members served as COBs, then 43% of them were founders, and only 12.4% of them were from the second or younger generations.

Table 3. Descriptive statistics of variables

Variable	Number of observations	Mean	Std. Dev	Min	Max
Underpricing_JCI	167	0.243	0.265	−0.184	1.235
Underpricing_LQ45	167	0.244	0.265	−0.188	1.236
Underpricing_Sector	167	0.243	0.265	−0.188	1.264
BHAR_1Y_JCI	167	0.254	1.446	−1.329	13.026
BHAR_5Y_JCI	167	−0.020	1.978	−2.482	10.366
BHAR_1Y_LQ45	167	0.281	1.443	−1.337	13.003
BHAR_5Y_LQ45	167	0.153	1.984	−1.963	10.460
BHAR_1Y_Sector	167	0.260	1.399	−1.180	12.526
BHAR_5Y_Sector	167	0.136	1.964	−3.801	10.508
DFam	167	0.820	0.385	0.000	1.000
DHot	167	0.695	0.462	0.000	1.000
Leverage	167	0.118	0.138	0.000	0.523
IPO size (in Billion Rp)	167	762.000	1360.000	8.000	12300.000
Board size	167	3.808	1.529	2.000	9.000
Firm size	167	290.509	445.594	2.697	2977.499
Firm age	167	217.115	164.600	13.333	1100.067
DCEOFam	137	0.453	0.500	0.000	1.000
DCOBFam	137	0.555	0.499	0.000	1.000
DCEOFounder	137	0.307	0.463	0.000	1.000
DCEODescendant	137	0.146	0.354	0.000	1.000
DCOBFounder	137	0.431	0.497	0.000	1.000
DCOBDescendant	137	0.124	0.331	0.000	1.000

3.2. Regression results

This study uses the weighted least squares (WLS) instead of the ordinary least squares (OLS) regression method due to the heteroscedasticity issues found in the residuals of OLS regressions. Both the Breusch-Pagan and White tests fail to reject the null hypothesis that the residuals using the OLS method have a constant variance. To overcome this, this study implements the WLS method by first taking the absolute value of the residuals of OLS regressions and regressing those values against the size of a company (because the spread of OLS residuals tends to be higher as the firm size increases). Furthermore, this study uses the inverse of the squared fitted values of the regression as the weight variable in the WLS regression.

3.3. Family ownership and IPO underpricing

Table 4 shows the regression results for equation (1). The coefficient for *DFam* is positive and significant at the 1% level for all benchmarks. The results indicate that family firm IPOs experience significantly higher underpricing than non-family firm IPOs. The margin is around 28%. This evidence is consistent with *H1b*. This finding supports the negative view on family firms based on the agency theoretical framework in which investors predict bigger issues of Agency Problem II potentially found in family firms than the issues of Agency Problem I commonly found in non-family firms (Villalonga & Amit, 2006). Since investors consider family firm IPOs to be riskier than non-family firms, they demand a higher level of IPO underpricing to compensate for such risks. Moreover, this result also supports the signaling theory that claims that the issuing companies use IPO underpricing to send a signal to the investors that the companies have a good prospect (Ritter, 1984; Allen & Faulhaber, 1989; Grinblatt & Hwang, 1989). The result of this study, however, does not support the asymmetric information hypothesis that posits that the willingness of entrepreneurs to invest in their own businesses sends positive signals to outside investors on the business quality. As a consequence, the asymmetric information between prospective investors and family firms may be minimized and family firms may offer a lower discount on their first day of trading (Leland & Pyle, 1977; Rock, 1986).

Table 4. Effect of family ownership on IPO underpricing

Independent Variables	JCI	LQ45	Sector
DFam	0.2811***	0.2811***	0.2880***
	[0]	[0]	[0]
DHot	−0.0558	−0.0559	−0.0590
	[0.299]	[0.299]	[0.277]
Leverage	−0.3034*	−0.3012	−0.3241*
	[0.099]	[0.102]	[0.081]
IPO size	−0.0733*	−0.0728*	−0.0711*
	[0.075]	[0.077]	[0.087]
Board size	−0.0462**	−0.0467**	−0.0473**
	[0.039]	[0.037]	[0.036]
Firm size	0.0016	0.0018	0.0002
	[0.961]	[0.955]	[0.996]
Firm age	−0.0769**	−0.0771**	−0.0765**
	[0.019]	[0.019]	[0.021]
Constant	0.8363***	0.8375***	0.8393***
	[0]	[0]	[0]
Number of firms	167	167	167
R^2	0.2527	0.2516	0.2554
Prob > F	[0]	[0]	[0]

Note: ***, **, and * mean significance at 1%, 5%, and 10% levels, respectively.

3.4. Family involvement and IPO underpricing

Column 1 of Table 5 presents the regression result for equation (5) using a family firm sample. The dependent variable is underpricing using JCI as a benchmark. This study finds that the coefficient for *DCEOFam* is significantly negative at the 5% level. The result indicates that, among family firms, the involvement of a family member as CEO can lower the IPO underpricing rate. This is consistent with *H2a*. This result indicates that investors viewed the presence of a family member as the CEO can mitigate conflicts of interest between shareholders and management (Basu et al., 2009; Anderson & Reeb, 2003).

However, Column 1 of Table 5 also shows that the coefficient for the dummy variable *DCOBFam* is statistically insignificant. The result suggests that having a family member as the chairman of the Board of Commissioners in family firms has no effect on the IPO underpricing. This implies that investors might not think that having a family member as the chairman of the Board of Commissioners carried out the managerial supervision role better than a professional chairman.

This result does not support *H2b*. This study also reruns regression analysis using LQ45 and sector benchmarks. In general, the results are not different.

3.5. Family generations and IPO underpricing

Column 2 of Table 5 reports the regression result for equation (6) using a family firm sample. The dependent variable is underpricing using JCI as a benchmark. The coefficient for the variable *DCEOFounder* is significantly negative, which is consistent with *H3a*. This suggests that the presence of the founder as the CEO had a significant negative correlation with IPO underpricing. However, the coefficient for the variable *DCEODescendant* is insignificant at the conventional level, which does not support *H3b*. Taken together, the results are consistent with the no-

tion that first-generation families generally have fewer family conflicts and more valuable skills leading to better firm performance and valuation (Certo et al., 2001; Fahlenbrach, 2009; Villalonga & Amit, 2006; Cirillo et al., 2015). This finding also supports the argument that the presence of the founder as a CEO is a positive signal to help convince investors (Nelson, 2003).

Column 3 of Table 5 shows the regression results for equation (7) to test *H3c* and *H3d*. Both the coefficients for dummy variables *DCOBFounder* and *DCOBDescendant* are statistically insignificant at the conventional level. The results, therefore, do not support *H3c* and *H3d*. Both founder and descendant chairmen of the board in family firms do not have a significant impact on IPO underpricing. This study also reruns the regression analysis using LQ45 and sector benchmarks. The results are generally similar.

Table 5. Effect of family involvement and family generations on IPO underpricing

Independent Variables	(1)	(2)	(3)	(4)
DCEOFam	−0.0996**			
	[0.021]			
DCOBFam	0.0277			
	[0.515]			
DCEOFounder		−0.1256***		
		[0.008]		
DCEODescendant		−0.0297		
		[0.641]		
DCOBFounder			0.0056	
			[0.901]	
DCOBDescendant			0.1033	
			[0.207]	
DHot	−0.0613	−0.0688	−0.0868*	−0.0853*
	[0.198]	[0.148]	[0.069]	[0.071]
Leverage	0.1750	0.1721	0.1356	0.1016
	[0.289]	[0.294]	[0.415]	[0.539]
IPO size	−0.0723**	−0.0751**	−0.0750**	−0.0755**
	[0.032]	[0.025]	[0.029]	[0.027]
Board size	−0.0207	−0.0208	−0.0197	−0.0194
	[0.293]	[0.288]	[0.324]	[0.327]
Firm size	−0.0683*	−0.0662*	−0.0670*	−0.0611
	[0.069]	[0.076]	[0.079]	[0.107]
Firm age	−0.1115***	−0.1138***	−0.1127***	−0.1090***
	[0]	[0]	[0]	[0]
Constant	3.1623***	3.2571***	3.2060***	3.2046***
	[0]	[0]	[0]	[0]
Number of firms	137	137	137	137
Adjusted R²	0.5409	0.5467	0.5265	0.5337
Prob > F	[0]	[0]	[0]	[0]

Note: ***, **, and * mean significance at 1%, 5%, and 10% levels, respectively.

Table 6. Effect of family ownership on IPO long-run performance

Independent Variables	JCI		LQ45		Sector	
	1-year	**5-year**	**1-year**	**5-year**	**1-year**	**5-year**
DFam	−1.8906***	−1.3302***	−1.9166***	−1.3637***	−1.8301***	−1.2861***
	[0]	[0.002]	[0]	[0.001]	[0]	[0.002]
Underpricing	−3.2352***	−2.7760***	−3.2283***	−2.7918***	−3.2082***	−2.6276***
	[0]	[0]	[0]	[0]	[0]	[0]
DHot	−0.2135	0.1605	−0.2296	−0.0272	−0.2112	0.0392
	[0.539]	[0.648]	[0.51]	[0.939]	[0.531]	[0.911]
Firm size	−0.6416***	−0.3369***	−0.6400***	−0.3554***	−0.6557***	−0.3326***
	[0]	[0.006]	[0]	[0.004]	[0]	[0.007]
Firm age	−0.6634***	−0.4132**	−0.6575***	−0.4253**	−0.6841***	−0.5800***
	[0.001]	[0.041]	[0]	[0.037]	[0]	[0.004]
Constant	9.1762***	5.3515***	9.1992***	5.8386***	9.3012***	6.3316***
	[0]	[0]	[0]	[0]	[0]	[0.004]
Number of firms	167	167	167	167	167	167
R^2	0.5230	0.3172	0.5253	0.3307	0.5417	0.3311
Prob > F	[0]	[0]	[0]	[0]	[0]	[0]

Note: ***, **, and * mean significance at 1%, 5%, and 10% levels, respectively.

3.6. Family firms and IPO long-run performance

Table 6 shows the regression results for equation (8) using the full sample of Indonesia publicly listed companies. The regression result shows that the coefficient for the dummy variable *DFam* is negative and significant at the 1% level for all equations. This evidence strongly supports *H4b*: under agency theory, a negative perspective of family firms implies that IPO long-run performance of family firms is worse than that of non-family firms. The

Table 7. Effect of family involvement on IPO long-run performance

Independent Variables	(1)		(2)		(3)	
	1-year	**5-year**	**1-year**	**5-year**	**1-year**	**5-year**
DCEOFam	−0.2260	0.1544				
	[0.314]	[0.65]				
DCOBFam	−0.1656	−0.0629				
	[0.454]	[0.851]				
DCEOFounder			−0.1700	0.2006		
			[0.493]	[0.594]		
DCEODescendant			−0.3967	0.0319		
			[0.234]	[0.95]		
DCOBFounder					−0.3373	−0.0915
					[0.138]	[0.794]
DCOBDescendant					0.6372	0.1583
					[0.124]	[0.804]
Underpricing	0.8638*	−0.5405	0.8752*	−0.5240	0.8659**	−0.6145
	[0.055]	[0.426]	[0.053]	[0.442]	[0.047]	[0.36]
DHot	0.5622**	0.4851	0.5852**	0.5005	0.4665*	0.4944
	[0.023]	[0.195]	[0.019]	[0.184]	[0.054]	[0.184]
Firm size	0.1745	0.0930	0.1803*	0.0968	0.1423	0.0702
	[0.105]	[0.568]	[0.095]	[0.553]	[0.182]	[0.669]
Firm age	0.4078***	0.1949	0.4157***	0.2011	0.3781**	0.1707
	[0.009]	[0.407]	[0.008]	[0.394]	[0.014]	[0.469]
Constant	−3.0863***	−1.7778	−3.2572***	−1.8737	−2.8405***	−1.4778
	[0.003]	[0.25]	[0.002]	[0.228]	[0.005]	[0.337]
Number of firms	137	137	137	137	137	137
R^2	0.0965	0.0355	0.0955	0.0360	0.1262	0.0351
Prob > F	[0.0036]	[0.0971]	[0.004]	[0.0949]	[0.0006]	[0.099]

Note: ***, **, and * mean significance at 1%, 5%, and 10% levels, respectively.

results confirm the findings in the primary market, where family-firm IPOs have greater underpricing than non-family-firm IPOs.

Finally, this study also examines whether family involvement and family generations have a significant impact on IPO long-run performance. This study analyzes the sub-sample of family firms and uses equation (10). The regression results presented in Column 1 of Table 7 indicate that the dummy variables, *DCEOFam* and *DCOBFam*, are statistically insignificant. Thus, the results do not support *H4c* and *H4d*. This study also conducts regression analyses using LQ45 and sector benchmark; the results are similar. Moreover, this study also estimates the regression model using dummy variables *DCEOFounder* and *DCEODescendant* (see equation (11)) as well as *DCOBFounder* and *DCOBDescendant* (see equation (12)) as independent variables. This study finds no significant results (see Columns 2 and 3 of Table 7). Therefore, the results do not support *H4e*, *H4f*, *H4g*, and *H4h*.

CONCLUSION

This study attempts to examine how family ownership, management, and generations affect IPO underpricing and long-run performance. This study uses a sample of publicly listed firms in Indonesia between 2004 and 2015. This study finds several important results. First, the average level of IPO underpricing was 24% and the number was 28% higher for family firms than non-family firms. One can conclude that due to higher agency problems, investors consider family firm IPOs to be riskier than non-family firms. They, therefore, demand a higher level of IPO underpricing to compensate for such risks.

Second, among the family firms, family involvement in the firm management has a negative association with IPO underpricing. It can be concluded that investors viewed family member presence as a CEO potentially mitigates most agency problems, especially conflicts of interest between shareholders and management.

Third, the result of this study indicates that among family firms, family generations affect the level of IPO underpricing. Specifically, the presence of the founder as a CEO has a significant negative association with the level of IPO underpricing. Thus, first-generation families generally have fewer family conflicts and more valuable skills leading to better firm performance and valuation. Moreover, it can be concluded that the presence of the founder as a CEO sends a positive signal to outside investors.

Fourth, in the medium and long run, family firms that conduct IPO in Indonesia underperform their non-family firm counterparts. This result confirms the finding in the primary market that the investors demand a larger discount since they perceive family firm IPOs to be riskier due to the perception that family firms may create greater agency conflicts.

AUTHOR CONTRIBUTIONS

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