# Board of Commissioners' Structure, Ownership Retention, and IPO Underpricing: Evidence from Indonesia

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#### **Abstract**

This research examines how the board of commissioners' structure and ownership retention affect IPO underpricing in Indonesia. In this study, we have examined the following three aspects: the number of board of commissioners, percentage of independent commissioners, and percentage of female commissioners. In total, 186 Indonesian companies that have conducted IPO from 2001 to 2016 were included in this study. This study uses multiple regressions to test the hypothesis. Our findings show that ownership retention has a negative implication on underpricing. Furthermore, the number of board of commissioners and independent commissioners has also been determined to reduce the level of underpricing. However, female commissioners were found to have no significant effect on IPO underpricing; furthermore, it demonstrated no significant effect in reducing the level of underpricing. These results show that higher ownership retention, a smaller number of board members, and a higher percentage of independent commissioners can reduce IPO underpricing.

# **Keywords:**

board of commissioners, ownership retention, underpricing, female commissioner, initial public offering

#### How to Cite:

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## Introduction

Initial public offering has been considered as an important event for any company, where they can change their status from private to being a public company by selling their shares or stocks to the general public. Usually, on the first day of trading, the offer price of the share and its market value do not match. If the market value is higher than the offer price, it is referred to as underpricing. On the contrary, if the market value is lower than the offer price, it is called overpricing. Most Initial Public Offering (IPO) events result in underpricing of shares. This phenomenon has already happened in most countries around the world (Banerjee et al., 2011; Hopp & Dreher, 2013; Rathnayake et al., 2019). IPO underpricing can often range from 6.12% (in New Zealand) to 96% (in India) (Hopp & Dreher, 2013). India has been identified as the country with the highest IPO underpricing, followed by Malaysia with 87.12%. A study by Banerjee et al. (2011) shows that on average, IPO underpricing using cross-country study is approximately at 29.11%. In another study, Mehmood et al. (2020) showed that developing markets have higher IPO underpricing rates compared to developed ones.

Allen & Faulhaber (1989) and Grinblatt & Hwang (1989) have both developed signaling theory in order to explain IPO underpricing. Signaling theory argues that every company knows their value. Therefore, most companies use IPO underpricing to signal their worth. Most investors believe that companies that are able to handle the cost of IPO underpricing are good prospects. Conversely, if the company might not have good prospect they will suffer to bear underpricing cost from the IPO event. Thus, most companies use IPO underpricing in convincing investors of their potential.

The study on underpricing can be divided into the antecedents and the consequences of IPO underpricing. Some antecedents of IPO underpricing are as follows: financial condition of the firms (Darmadi & Gunawan, 2013; Kotlar et al., 2018; Kurniawan, 2014; Pahlevi, 2014) and corporate governance practice (Boulton et al., 2011; Hopp & Dreher, 2013) such as ownership structure (Bertoni et al., 2014; Handa & Singh, 2017), board structure (Bertoni et al., 2014; Darmadi & Gunawan, 2013), and gender diversity (McGuinness, 2018; McGuinness et al., 2017). Meanwhile, the other aspect of this study is the consequences of IPO underpricing to market's future performance, for example, taking into consideration the performance of the market in the short (Manjunath et al., 2020; Sahoo & Rajib, 2010; Tutuncu, 2020) and long run (Sahoo & Rajib, 2010; Thomadakis et al., 2012; Wang et al., 2015).

Previous studies on IPO underpricing in Indonesia mostly conduct by Darmadi & Gunawan (2013), Gumanti & Alkaf (2011), Gumanti et al. (2017), and Pahlevi (2014). Previous studies provide evidence that there is a significant IPO underpricing in Indonesia, with a reported average of 22.35 % (Gumanti & Alkaf, 2011) and 23.7 % (Bandi et al., 2020). Darmadi & Gunawan (2013) have also found that on average, underpricing in Indonesia is at 22.2 %, with the structure of the board serving as a significant factor affecting the level of underpricing. On the other hand, ownership

structure was determined to have no significant effect on IPO underpricing. Furthermore, Widarjo et al. (2017) and Widarjo & Bandi (2018) have highlighted the importance of intellectual capital disclosure in reducing information asymmetry and underpricing.

On the other hand, Darmadi & Gunawan (2013) demonstrated that having independent commissioners has a positive effect on IPO underpricing. Instead, of reducing IPO's underpricing level, the percentage of independent commissioners can increase the level of underpricing. This result shows that in this case, independent commissioners might have failed to effectively minimize the information asymmetry between companies and investors. This result is in line with the findings of Prabowo & Simpson (2011) who found that having independent commissioners has no significant effect on firm performance in Indonesia. This result was confirmed Handa & Singh (2017) and Arora & Singh (2020a) who determined that independent directors in India have no significant effect on underpricing. On the other hand, Bertoni et al. (2014) and Kubicek et al. (2017) support the hypothesis that independent directors have minimized the level of underpricing. Setiawan et al. (2019) showed that independent commissioners in Indonesia have mitigated earnings management. Thus, independent commissioners have positive effect on earnings quality in Indonesia.

Another aspect to examine is the size of the board of commissioners. There are two theories that need to be considered on this matter: (1) the smaller size is better as it could result in quick management responses and less communication problems (Bliss, 2011). (2) Having more commissioners on board is better for more varied expertise. On a study by Bertoni et al. (2014), it was determined that having more members in the board of commissioners can negatively affect underpricing. This result shows that the smaller the number of commissioners, the better. This result shows that the size of committee can reduce the level of underpricing. However, Handa and Singh (2017) have found that the board size has a positive effect on IPO underpricing in India. Using a specific context of SME IPOs in India, Arora & Singh (2020a) also find that board size have positive effect. On the other hand, Darmadi & Gunawan (2013), Kubicek et al. (2017), and Xu et al. (2017) have determined that this factor has no effect on IPO underpricing in China.

This current study also focuses on how having female commissioners affects IPO underpricing. A study by Dieleman & Aishwarya (2012) has showed that the number of female directors and commissioners in Indonesia is approximately at 11.6 %. This number is lower compared to other developed countries such as Europe (17 %) and Australia (13.8 %); however, Indonesia has much better percentage of women in the board compared to other emerging countries that only have 7.2 %. It is expected that this gender diversity will have a positive effect on the performance of the firm and thus a negative effect on the level of underpricing. However, previous studies have shown that female directors have no significant effect on IPO underpricing (Handa & Singh, 2015; Kaur & Singh, 2015; McGuinness, 2018). In this specific context, female directors were determined to have no significant effect on the SMEs' IPO in India (Arora & Singh, 2020b). Singh et al. (2019) have examined the impact of female directors on

the performance of firms in the long run in India. Their findings showed that this has no significant effect in terms of improving the performance of a certain firm. This was in contrary to the findings of Kubicek et al. (2017), who claimed that female directors have a positive effect on IPO underpricing. Meanwhile, a study Badru et al. (2019) has highlighted the importance of the presence of female directors on IPO events. Female directors mitigate the information asymmetry during IPO events; thus, the presence of female directors indicates the quality of the IPO.

This study also examines the effect of ownership retention on IPO underpricing. Albada et al. (2018) have looked into the indicators of IPO events in Malaysia and determined that ownership retention is one of the important aspects most investors consider. Therefore, investors use this signal to make investment decisions during IPO events in Malaysia. This result is in line with the argument made by Mehmood et al. (2020) that ownership retention is an essential factor to IPO underpricing. Furthermore, Albada et al. (2019) have examined 377 IPO events in Malaysia from 2000 to 2015, wherein it was determined that retention ratio negatively affects the first-day price range of IPO events. Most investors use retention ratio in evaluating the trading price of IPO events on the first day, thus highlighting the importance of ownership retention during IPO events.

Ekkayokkaya & Pengniti (2012) and Anand & Singh (2019) have also investigated the effect of controlling shares in order to retain ownership by using an emerging market sample such as Thailand and India. The result of this study shows that controlling ownership to retain the status of the previous owners as the majority ones has a positive effect on underpricing. However, Ekkayokkaya & Pengniti (2012) argue that controlling shares to retain ownership in a country with low investor protection can increase IPO underpricing. This result shows the importance of institutional context for IPO underpricing. Furthermore, this study shows that ownership retention positively affects IPO underpricing in most high-technology firms in Taiwan (Gao & Hou, 2019). On the other hand, Yang et al. (2020) have examined the effect of ownership retention on SMEs' IPO in Shenzhen Stock Exchange from 2004 to 2014 in China and have observed no significant effect. This result shows that ownership retention is of no relevance to the investors.

Further, Kotlar et al. (2018) have found that ownership retention has a negative effect on IPO underpricing. This retention of ownership provides a positive signal to possible investors that owners still have more power on these companies; therefore, it will ensure minimal conflicts between owners. Further, Vismara (2016) claimed that ownership retention has a positive effect on the probability of success for IPO firms.

On this study, we focus on the antecedents of IPO underpricing in Indonesia. Previous studies have showed the effects the board of directors' structure has on IPO underpricing (Kubicek et al., 2017). Unlike other countries, Indonesia uses a two-tier board system: board of directors and board of commissioners. The board of directors focuses on the day-to-day management and operation of the company, while the board of commissioners focuses on supervisory functions. The board of commissioners has

independent and non-independent members. Other countries such as the USA, the UK, and Australia use a one-tier board system. Therefore, it is interesting to examine how this two-tier board system in Indonesia affects its IPO underpricing. Further, this current study considers the importance of ownership retention in IPO underpricing.

Ownership retention refers to the percentage of share the owner maintains and holds. Ekkayokkaya & Pengniti (2012) have demonstrated that ownership retention can reduce underpricing. Albada et al. (2018) have determined that retention ratio is the most important factor in attracting potential investors in terms of IPO activity in Malaysia. The result also shows the positive effect of ownership retention on the initial IPO return. Therefore, investor uses this signal to adjust the price of share during the first day of the trading (Albada et al., 2019). Ekkayokkaya & Pengniti (2012) have also argued that controlling retention ownership in the country with low investor protection has increased IPO underpricing. This result shows the importance of institutional context in terms of IPO underpricing.

Previous study shows the importance of IPO events for investors. Mostly, there is an underpricing price during the IPO events (Banerjee, et al., 2011; Hopp & Dreher, 2013; Rathnayake, et al., 2019). Therefore, it is important to investigate the determinant factors of IPO underpricing. Provide study provide inconsistent result of the effect of variable such as board of directors structure, female directors and ownership intention to the IPO underpricing. Thus, this study tries to fill this gap. This study examines the effect of board of commissioners' structure, female commissioners and ownership retention to IPO underpricing. This study also uses unique characteristics of board structure in Indonesia. Indonesia uses two tier board system, there are board of commissioners and board od directors. It is interesting to test the effect of board of commissioners' structure to the IPO underpricing in Indonesia.

Thus, this study focuses on how the following structures affect IPO underpricing: percentage of independent commissioners, the number of the board of commissioners, percentage of female commissioners, and ownership retention. The objectives of this study are as follows: First is to provide evidence on how the board of commissioners' structure affects IPO underpricing. It is expected that the percentage of independent commissioners, the size of the board committee, and the number of female commissioners can minimize IPO underpricing. Second, this study provides evidence on the importance of ownership retention on IPO underpricing.

### Methods

In total, this study included 293 firms that conducted IPO events in Indonesia Stock Exchange from 2001 to 2016. However, we cannot find 75 prospectuses of the IPO firms and 32 of prospectus have incomplete data. Therefore, the final sample of this study consisted of 186 firms. This study has examined the effect of the board of commissioners' structure and ownership retention on IPO underpricing. Dependent variable of this study is IPO underpricing. IPO underpricing refers to the difference

between closing price in the first day of trading market and offer price divided by offer price (Handa & Singh, 2017).

The independent variables of this study are as follows: percentage of independent commissioners, the number of commissioners, percentage of female commissioners, and ownership retention. The percentage of independent commissioners can be measured by the number of independent commissioners divided by the size of board of commissioners (Darmadi & Gunawan, 2013). The size of the board of commissioners refers to the number of its members (Darmadi & Gunawan, 2013; Kubicek et al., 2017); the number of female commissioners is considered dummy variable 1 if there is female in the board and 0 if otherwise. Meanwhile, ownership retention is measured by the number of shares the previous owners have divided by the total number of issued shares (Kotlar et al., 2018; Widarjo et al., 2017). This study uses the following four control variables: firm's age, leverage, ROA, and audit firm. Firm's age refers to the number of years from the founding year to the IPO year (Kotlar et al., 2018), leverage is debt to equity ratio (Setiawan et al., 2016), ROA is defined as the return on assets, and audit firm is dummy variable 1 if audit firm is a member of Big-4 and 0 if otherwise (Darmadi & Gunawan, 2013).

**Table 1. Variable Definition** 

Variable	Definition				
Dependent Variable					
IPO underpricing	the difference between closing price in the first day of trading market and offer price divided by offer price (Handa & Singh, 2017)				
Independent Variables:					
Independent commissioners	the number of independent commissioners divided by the size of board of commissioners (Darmadi & Gunawan, 2013).				
Size of board of commissioners	the number of board of commissioners' members (Darmadi & Gunawan, 2013; Kubicek et al., 2017)				
Female commissioners	dummy, 1 if there is female in the board of commissioners and 0 if otherwise. $$				
Ownership retention	the number of shares the previous owners have divided by the total number of issued shares (Kotlar et al., 2018; Widarjo et al., 2017)				
Control Variables					
Firm's age	the number of years from the founding year to the IPO year (Kotlar et al., 2018)				
Leverage	Debt to equity ratio (Setiawan, et al., 2016)				
ROA	Return on asset				
Audit firm	dummy variable 1 if audit firm is a member of Big-4 and 0 if otherwise (Darmadi & Gunawan, 2013)				

The research model for the study is

UPit =  $\alpha$  +  $\beta_1$ OR +  $\beta_2$ SBoCs +  $\beta_3$ IC +  $\beta_4$ FBoCs +  $\beta_5$ FAge +  $\beta_6$ Lev +  $\beta_7$ ROA +  $\beta_8$ Audit +  $\epsilon$  Where:

UPit = underpricing, difference between closing price in the first day of trading market and offer price divided by offer price

OR = ownership retention, the number of share the previous owners hold divided by the total number of issued shares

SBoCs = size of the board of commissioners refers to the number of its members

IC = independent commissioners, the number of independent commissioners divided by the size of the board of commissioners

FBoCs = female commissioner is dummy variable 1 if there is female in the board of commissioners and 0 if otherwise

FAge = Firm's age is the number of year from the founding year to the IPO year

Lev = leverage, debt to equity ratio

ROA = Return on assets

Audit = audit firm is dummy variable 1 if audit firm is a member of Big-4 and 0 if otherwise

## **Results and Discussion**

Table 2 and Table 3 provide the statistics descriptive of the study. Table 2 shows that the mean value of underpricing in Indonesia is at 29.913 %. This number is higher compared to that in Darmadi & Gunawan (2013), Gumanti & Alkaf (2011), and Bandi et al. (2020) with 22.2 %, 22.35 %, and 23.7 %, respectively. However, this number is way less compared to the findings of Boulton et al. (2010) and Safitri (2013), which is at 42.3 % and 33.66 %, respectively.

**Table 2. Descriptive Statistics** 

	N	Minimum	Maximum	Mean	Std. deviation
Underpricing	186	0	188.571	29.913	29.144
Ownership retention	186	30.000	90.258	74.543	11.120
Size of BoCs	186	2	9	3.527	1.392
Independent commissioners	186	0	66.667	36.821	16.022203
Firm age	186	2	144	18.010	15.916
Leverage	186	0	84.596	3.030	6.816
ROA	186	-1.238	4.648	0.080	0.401

Furthermore, the retention ratio was determined to range from 30 % to 90 %, with a mean value of 74.53 %. This number shows that in Indonesia, majority of the shares are retained and held by its previous owners even after the IPO event. Table 1

shows that the board of commissioners often has two to nine members (mean value, 3.527). The mean value for independent commissioners in this sample was determined to be at 36.831 %. Thus, the average for independent commissioners in IPO firms in Indonesia is around 33.33 %. Table 3 shows that around 39.24 % of the board of commissioners is composed of women. Almost 4 out of 10 IPO firms in Indonesia have gender diversity.

**Table 3. Descriptive Statistics for Dummy Variables** 

	Frequency 0	Frequency 1
Female commissioners	0.608	0.393
Audit firm	0.720	0.280

Table 2 also provides information regarding control variables in this current study. Firms were determined to be on average 18 years old. Furthermore, the range of leverage is 0 % up to 84.596 %, with the average of 3.030 %. Table 3 also shows that most of the IPO firms in Indonesia use non-Big-4 as their audit firms. The percentage of IPO firms audited by Big-4 is at 28 %, while the rest is audited by non-Big-4. The average value for the ROA in this study is 8 %.

Underpricing, difference between closing price in the first day of trading market and offer price divided by offer price; ownership retention, the number of shares owned by previous owners divided by the total number of issued shares; size of BoCs = size of board of commissioners refers to the number of board members; IC = independent commissioners, number of independent commissioners divided by the total number of commissioners; female BoCs = female commissioner is dummy variable 1 if there is female in the board of commissioners and 0 if otherwise; firm age, number of years from the founding year to the IPO year; leverage, debt to equity ratio; ROA = return on assets; audit firm, dummy variable 1 if audit firm is member of Big-4 and 0 if otherwise

Table 4 provides the result of the correlation between variables. Significant correlations were determined between independent variables: ownership retention, size of the board of commissioners, percentage of independent commissioners, and underpricing. However, female commissioners have no significant correlation with underpricing. This result also shows that ownership retention has significant effects on IPO underpricing. Further, both the number of members and the presence of independent commissioners were determined to have a significant effect on IPO underpricing. Audit firm was also determined to have a significant correlation with underpricing. It might seem that audit firms have significant effect on IPO underpricing. However, firm age, leverage, and ROA were found to have no significant correlation with IPO underpricing.

**Table 4. Correlation Result** 

	Underpricing	Ownership retention	Size of BoCs	IC	Female BoCs	Firm age	Leverage	ROA
Ownership retention	-0.208ª							
	(0.004)							
Size of BoCs	-0.215ª	0.271ª						
	(0.003)	(0.000)						
16	-0.193ª	0.012	-0.037					
IC	(800.0)	(0.869)	(0.612)					
Female BoCs	0.072	-0.078	0.052	-0.006				
	(0.330)	(0.288)	(0482)	(0.931)				
F.	-0.105	0.051	0.095	0.019	0.001			
Firm age	(0.155)	(0.487)	(0.199)	(0.795)	(0.997)			
Leverage	-0.068	0.021	0.144 <sup>b</sup>	0.182 <sup>b</sup>	-0.102	0.031		
Leverage	(0.358)	(0.774)	(0.050) (0.013)	(0.165)	(0.676)			
ROA	0.075	-0.090	0.001	-0.069	-0.068	0.004	-0.056	
	(0.309)	(0.224)	(0.991)	(0.352)	(0.356)	(0.961)	(0.449)	
Audit firm	-0.236ª	0.174 <sup>b</sup>	0.178 <sup>b</sup>	-0.001	-0.206ª	0.156 <sup>b</sup>	0.135	-0.042
	(0.001)	(0.018)	(0.015)	(0.989)	(0.005)	(0.033)	(0.066)	(0.566)

<sup>&</sup>lt;sup>a,b,c</sup> significant at 1 %, 5 %, and 10 %. Number in the bracket is the probability.

Table 5 shows that the size of the board of commissioners has a negative effect on underpricing. This result confirms the theory that having a fewer number of members is better (Bliss, 2011) as it allows better decision-making and minimizes information asymmetry between companies and its investors. Its other advantages are as follows: able to make decisions quickly, less communication problems, and lesser free riders among the member of the board of commissioners. Thus, having fewer board members can effectively reduce the level of IPO underpricing. This result is confirmed by previous studies such as of Bertoni et al. (2014) who found that larger board size negatively affects IPO underpricing like in Germany, France, and Italy. However, this was contrary to the previous studies of Darmadi & Gunawan (2013), Hearn (2011, 2012), Kaur & Singh (2015), and Kubicek et al. (2017) who claimed that board size has a significant effect on IPO underpricing. Therefore, this study argues that the number of board members can significantly minimize IPO underpricing. The larger size of the board of commissioners has minimized the IPO underpricing in Indonesia. This result shows that the larger size of board of commissioners provide positive impact on the firm outcome.

-0.973 -0.412 -2.828ª (0.005)8.900ª (0.000)(0.332)(0.681)0.919 0.359 0.041 186 Ŋ -13.76035.413 -0.130 -0.129 4.833 1.751 β  $-2.618^{a}$ (0.005) $-3.103^{a}$  $8.416^{a}$ (0.355)0.028 (0.978)(0.002)0.457 0.075 186 -0.343-0.122-14.530.009 3.839 β -2.621<sup>b</sup> -0.810 -0.154-2.392 (0.419)(0.010)8.066 (0.000)(0.00)(0.878)0.350 0.937 0.070 186 m -3.645-12.443-0.107-0.0484.834 Table 5. Regression β -2.293<sup>b</sup> -0.913 -2.592<sup>b</sup> -0.468 (0.010) $4.760^{a}$ (0000'0) (0.362)(0.641)0.011 0.706 0.481 186 0.067 3.670 ~ -0.435-0.120 -12.34968.096 0.144 3.659 β -1.674<sup>b</sup> -2.151<sup>b</sup> -2.791ª -0.763 5.492ª (0.048)(0.016)(0.003)(0.291)(0.446)(0.724)-2.326<sup>b</sup> (0.021)0.550 0.353 0.678 0.499 0.111 3.873 186 -11.129-3.343-0.360-0.098 -0.3213.455 2.357 β Ownership retention Female BoCs Audit firm F statistic Firm age Leverage Size of BoCs  $Adj R^2$ ROA

obc significant at 1 %, 5 %, and 10 %. Number in the bracket is the probability.

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Table 5 also shows that when there are more independent commissioners, the IPO underpricing will be negatively affected, thus minimizing the IPO underpricing. This result confirms the assumption that the percentage of independent commissioners negatively affects the IPO underpricing: the higher the percentage of independent commissioners, the lower will be the IPO underpricing. This result is in line with Setiawan et al. (2019) who found that independent commissioners in Indonesia might have effectively mitigated earnings management. Independent commissioners in Indonesia engage in effective corporate governance in an effort to reduce information asymmetry between firms and its investor during the IPO process. The result of this study is consistent with the findings of Bertoni et al. (2014) and Kubicek et al. (2017) who claimed that independent directors were able to minimize the level of underpricing. Thus, this further shows the importance of independent commissioners during the IPO process. Independent commissioners provide effective monitoring to the IPO process in Indonesia. This result shows that independent commissioners have important effect on corporate governance mechanism. In a study by Neupane & Neupane (2017), they highlighted the importance of board independence in attracting more foreign investors to the company. Board independence is a signal to the investors that the company is better in terms of business performance. However, our findings might not agree with the previous studies conducted by Darmadi & Gunawan (2013), Handa & Singh (2017), and Arora & Singh (2020a) who found that independent commissioners do not significantly reduce the level of IPO underpricing.

Meanwhile, this current study also claims that having female commissioners does not have a significant effect on IPO underpricing. This result does not confirm the assumption that female commissioners have a negative effect on IPO underpricing. Therefore, our findings confirm the previous studies of Handa & Singh (2015), Kaur & Singh (2015), McGuinness (2016), and Arora & Singh (2020b) that claimed that female directors have no significant effect on IPO underpricing. Therefore, female commissioners are determined to have no significant effect on the process of IPO in Indonesia. The gender diversity might not effectively minimize the level of IPO underpricing. One of the arguments from Handa & Singh (2015) is that the number of female commissioners is too small. Therefore, female commissioners might not effectively engage in supervisory function. There is no significant different between male and female commissioners during IPO events. The study of Reutzel & Belsito (2015) has also determined that the market reacts negatively to the female directors during the IPO process. However, these results do not confirm the previous studies conducted by Kubicek et al. (2017) and Badru et al. (2019) who both claimed that having female directors reduce the level of IPO underpricing.

Table 5 further shows the effect of ownership retention on IPO underpricing. Our findings demonstrate that ownership retention has a negative effect on IPO underpricing. This result shows that the decision of the previous owner to retain their shares is an indicator to potential investors that previous owners still have significant control of the company. This will decrease the agency cost between previous owners and incoming owners. This is consistent with the findings of Kotlar et al. (2018) who indicated that

ownership retention has a negative effect on IPO underpricing. The higher percentage of ownership retention has lowered the underpricing during IPO events. Ownership retention can be considered as a positive signal to potential investors as the probability of the company to become successful is higher (Vismara, 2016). Investors often use this piece of information to evaluate the share price in the first day of IPO events; therefore, ownership retention has a positive effect on the initial return for an IPO on the first day. Ownership retention is deemed an important signal to potential investors in terms of the quality of the IPO (Albada et al., 2019; Albada et al., 2018). van der Goot et al. (2009) also provide evidence that Internet firms that survive after the IPO have higher ownership retention compared to the non-survivors. However, this study disagrees with the findings of Ekkayokkaya & Pengniti (2012), Anand & Singh (2019) and Yang et al. (2020) who found that ownership retention has a positive effect on underpricing.

Table 5 also shows the effects of the following control variables on IPO underpricing: firm age, leverage, ROA, and audit firms, wherein these factors were determined to have no significant effects on IPO underpricing. Therefore, most investors might not consider firm age, leverage, and ROA on their decisions during the IPO process. However, audit firms can negatively affect IPO underpricing. Our results show that Big-4 audit and non-Big-4 audit firms can affect IPO underpricing differently. Big-4 audit firms can lower the level of IPO underpricing compared to non-Big-4 firms. Thus, Big-4 audit firms can reportedly reduce the level of IPO underpricing.

## **Conclusions**

This study has examined the effect of board of commissioners' structure and ownership retention on IPO underpricing. Our findings show that having smaller board size can mitigate IPO underpricing, further reducing its level. With its smaller size, the board of commissioners will be able to respond better because of less communication problems and less free riders. Having independent commissioners can also have positive effects as it they can supervise the management. The percentage of independent commissioners has been determined to have a negatively effect on the level of IPO underpricing. Therefore, this study confirms the assumption that independent commissioners are important in corporate governance systems. As they reduce the level of underpricing during IPO process. Further, this study also shows that ownership retention has a negative effect on IPO underpricing. The higher percentage of shares retained by the previous owners can reduce the level of IPO underpricing. However, this study failed to find any significant effects of having female commissioners in terms of IPO underpricing.

This current study has used a dummy variable to measure for gender diversity in the board of commissioners. This is one of the limitations of this research. Therefore, future studies might want to explore the detailed effects of female characteristics, such as age, education background, and tenure, on IPO underpricing in order to have a more comprehensive insight on how gender diversity affects IPO process (Badru et al., 2019). Our study has focused in Indonesia; thus, future studies might want to examine these same factors using cross-country studies such as of the ASEAN.

The implications of this study are as follows: first, it is suggested that companies keep the members of the board of commissioners in small number as it will translate to better performance and further minimize the level of IPO underpricing. Second, it is suggested that companies increase their percentage of independent commissioners as it has been determined to be effective in reducing the level of IPO underpricing. Third, ownership retention has been identified to have a positive effect in attracting potential investors; thus, it is important to consider the level of ownership retention to minimize IPO underpricing.

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