The effect of auditor's reputation, underwriter's market share and spread on underpricing of Indonesian initial public offerings

Jessica Angelia[1], Sautma Ronni Basana[2]
[1,2] Department of Financial Management, Petra Christian University, Indonesia

Abstract. The presence of capital market supporting professions and institutions such as auditor and underwriter are required by the Indonesia Stock Exchange (IDX) to assist issuing company in the process of going public. Using a total of 156 non-financial firm IPOs listed on IDX during the period 2007-2017, the main purpose of this paper is to investigate the effect of auditor's reputation, underwriter's market share and spread on level of underpricing, The method used in this paper is pooled Ordinary Least Squares (OLS) regression. Findings of this paper showed that underwriter's market share and auditor's reputation have a significant negative effect on level of underpricing, while underwriter's spread is insignificant to underpricing. This paper concludes that in Indonesia underpricing is lower for IPO firm that associated with reputable auditor and high-market share underwriter. Also, underwriters use their spread to substitute underpricing rather than using it as a complement.

1. Introduction

Firm's financing decision with issuance of new stocks to be listed on the stock exchange is known as going public or Initial Public Offering (IPO). In the IPO literatures, underpricing has been one of the most heavily investigated topics. In fact, underpricing has been considered as global phenomenon because it violates the efficient market hypothesis (EMH) and several past studies have shown that underpricing happened in different market across countries during different time period (Loughran, Ritter, & Rydqvist, 1994). The puzzle of IPO underpricing is an interesting topic to be explored because it leaves big question as to why firm left money on the table and decided to price their shares in a manner that results large initial returns.

Underpricing also found out to be happened in Indonesia in 2007-2017 with average of 29.97%. During last decade, IPO market in Indonesia has been significantly growing and also there has been a notable change in the trend of offer price pricing method from using earnings forecast to book-building method. In Indonesia, the IPO market is being regulated by Indonesia Stock Exchange (IDX) and the Financial Services Authority of Indonesia (OJK), where both require firms to appoint capital market supporting professions and institutions to assist them in the process of going public. In this study, capital market supporting professions were being focused on underwriters and auditors because the two professions hold vital roles in ensuring the success of a firm's IPO. Underwriter roles start from the very beginning process of IPO that are valuing the firm, assembling an underwriter syndicate, conducting book-building and road show (marketing), and even stabilizing the aftermarket (based on a firm commitment offering). On the other side, auditor have role on auditing the required financial statement published on prospectus that is a primary source of information for investor's investing decisions.

This paper is interested in shedding light on the effect of auditor's reputation, underwriter's market share and spread on underpricing of Indonesia IPOs during the period 2007-2017 based on existing theories. The remainder of the paper is structured as follows: section 2 provides brief prior literature and hypothesis development. Section 3 discusses the data selection and methodology. Section 4 provides empirical results and finally, we offer our concluding remark in section 5.

2. Literature review and hypothesis development

Underpricing is known as the difference between offer price and closing bid price on the initial trading day (Beatty & Ritter, 1986). Therefore, the presence of underpricing is indicated by positive initial return. There are several existing literatures about underpricing but these explanations stem from the presence of uncertainty and asymmetric information among the issuers, external parties (such as underwriters and auditors) and the investors. The fundamental explanations underlying this paper are winner's curse and signalling theory.

2.1 Winner's curse (asymmetric information) theory

This theory was developed by Rock (1986) based on Capen, Clapp, & Campbell (1971) preposition that in any kind of auction, because the value is uncertain then the winner is usually overvaluing it, therefore only gives return that is relatively low or even negative. Rock divided investors in the IPO market in to two groups, informed and uninformed investors. Informed investors are the one with better and more information regarding value of the issuing firm. This type of investors will only participate in the IPO of a firm that price their shares in underpriced manner with expectation of getting positive initial return. As for uninformed investors, since they held less information, they are most likely become subject to overpriced shares and therefore less interested to participate in initial public offering. This will lead to reduced succession chance of a firm's IPO. The way to attract uninformed investors is to compensate the asymmetric information by providing sufficient discount to the offer price, in other term employing underpricing (Ljungqvist, 1993). Rock's model has limited empirical results and later was developed by Beatty & Ritter (1986) with the concept of ex-ante uncertainty. They stated that investors in the IPO market generally will face uncertainty regarding the value of the firm and its offer price. This uncertainty is known as ex-ante uncertainty (such as issuing scales, firms' age and equity retention ratio). The higher the uncertainty leads to higher underpricing demanded by investors (Beatty & Ritter, 1986).

2.2 Signalling theory

This theory stated that in the investment market, there are two kinds of firms; high-quality and low-quality firm (Allen & Faulhaber, 1989). It is difficult for investors to distinguish these two types of firms that lead to the produce of asymmetric information. Hence, high-quality firms tend to give signal about their true quality by means of initial owners retention (Grinblatt, Mark, & Hwang, 1989), choice of underwriter (Titman & Trueman, 1986) and also auditor (Holland & Horton, 1993). High-quality firms tend to retained large portion of their shares and engage more in underpricing because they are confident to be able to recover the cost of doing underpricing by selling their retained shares with higher price in the secondary market or through Seasoned Equity Offerings (SEOs) with larger total proceeds. On the other side, high-quality firms tend to be associated with reputable underwriter and auditor because they have reputation to uphold therefore increases the precision of information revealed to the market and able to reduce uncertainty (Michaely & Shaw, 1995).

2.3 Auditor's reputation and underpricing

Audited financial statement is one of the information details required to be disclosed in the prospectus of issuing firms, therefore auditors play an important role in the IPO process. As stated before, selection of auditor can be considered as a signal that reveals information about the value of the firm. Prestigious auditors have the commitment to maintain their audit credibility because their reputation can be damaged by later revelation of errors or misstatements (Palmrose, 1988). By hiring prestigious auditor, the uncertainty and asymmetric information surrounding the issuing firm most likely will be reduced because the hired auditor decreases firm's opportunity to cheat in presenting misleading information. Thus, this will lead to reduced level of underpricing. Prestigious auditors also tend to be associated with less risky IPOs because they have reputation to uphold. It is known that risky IPOs are difficult to evaluate, have higher level of uncertainty and therefore more likely to be underpriced. From the issuing firm side, it also found out that high-quality firms have more incentive to enlist prestigious auditor service because it brings higher marginal benefit as their good quality can be conveyed well to the market (Michaely & Shaw, 1995).

Hypothesis 1. Auditor's reputation has negative effect on underpricing.

2.4 Underwriter's market share and underpricing

Pricing the offer price is one of the main functions of underwriters in the IPO market (Allen & Faulhaber, 1989). The competition in the underwriting market will encourage underwriters to price the offer price in a prudent manner because any mispricing (over or underpricing) may cause underwriters to face loss of future revenues. Hence, this will lead to decreased underwriter's market share as investors may be hesitant in trusting their services for future issues pricing. In fact, underwriter's reputation is damaged every time they generate inaccurate information that leads to inaccurate pricing therefore reputable underwriters screen risky IPO firms, which are more difficult to evaluate and tend to be underpriced, to protect their own reputational capital (Chemmanur & Fulghieri, 1994).

Underpricing is also known as indirect cost of going public. Employing underpricing is quiet pricey for issuing firm, hence low-risk firm try to relay their low-risk features to the market by using services of good reputation underwriter (Ammer & Ahmad-Zaluki, 2016). The reputation of underwriter can minimize the ex-ante uncertainty linked with IPO by supporting firm's management to reveal relevant information for investor's need which leads to lower asymmetric information and underpricing. In Carter & Manaster (1990), prestigious underwriters significantly reduce underpricing, same result also founded in Megginson & Weiss (1990) who used market share as a proxy of underwriter's reputation.

Hypothesis 2. Underwriter's market share has negative effect on underpricing.

2.5 Underwriter's spread and underpricing

Underwriters' revenue is generated from spread which consists of fixed and variable components. The fixed component is often associated to measurable underwriting services such as offering size, and the variable component is associated with risk such as price uncertainty of the new issue (Chen & Mohan, 2002). Underwriters use their spread as a risk-bearing function because of the fact that they face loss if IPO sells at a price lower than the preset offer price but prevented from selling shares at higher price with the increase of market price. For underwriters, there are two ways to price the issuing firm's risk: explicitly (underwriter's spread) and implicitly (underpricing). The relationship between spread and underpricing based on Chen & Mohan (2002) is found to be complementary, that is underwriters raise the spread if higher underpricing alone is not sufficient to compensate the assumed risk.

Hypothesis 3. Underwriter's spread has positive effect on underpricing.

3. Research data and methodology

3.1 Data Selection

This paper's data include all firm that going public on the Indonesia Stock Exchange (IDX) during the period of 2007 until the first semester of 2017. Criteria for the data selection are non-financial underpriced firms with underwriting contract based on full commitment offerings. Accordingly, 34 financial firms, 31 overpriced IPO firms, and 2 firms that lack of data availability were excluded from the sample. The final sample of this research narrowed at 156 out of 223 IPOs. Main sources of the data were collected from the IDX fact books and firms' prospectuses.

3.2 Research method

We test our three hypotheses regarding the effect of auditor's reputation, underwriter's market share and spread on IPO underpricing with pooled Ordinary Least Squares (OLS) method. Our regression model is presented as follows:

$$\boldsymbol{IR_{it} = \alpha_0 + \alpha_1 UND\_MS_{it} + \alpha_2 UND\_SPR_{it} + \alpha_3 AUD_{it} + \varepsilon} \quad (1)$$

where:

Dependent Variable	Measurement of Variables
Initial Return	Difference between closing price on the initial trading day and initial offering price divided by the initial offering price
Independent Variable	
UND_MS	Developed from Carter & Manaster (1990) with following steps: 1.Ranking the underwriter using three indicator: trading value, volume and frequency based on IDX's Fact Book Most Active Members Lists 2. Assign score to the underwriters with the following requirements: a. 1st rank is given a score of ten, and so on until the 10th rank which is given a score of 1 b. 11th to 15th rank is given a score of 0.5 c. 16th to 20th rank is given a score of 0.25 d. >20th rank is given a score of 0.125 3. Accumulating the score and then dividing it by the numbers of underwriter included in the IPO to anticipate syndicate underwriter (more than 1 involved) 4. Assign binary number of "1" if the final score above median value which means high-market share underwriter and "0" otherwise
UND_SPR	Summation of fees charged by the underwriter that consists of underwriting fee, selling fee, and management fee
AUD	Assign binary number of "1" if auditor is associated with Big Four accounting firms such as Ernst & Young (EY), Deloitte Touche Tohmatsu (DTT), Pricewaterhouse-Coopers and Klynveldt Pield Marwick Goerdeler (KPMG) and "0" otherwise

4. Empirical Results

4.1 Descriptive analysis

Table 1. Descriptive statistics for 156 Indonesian IPOs during period of 2007-2017.

Variables	Mean	Median	Std. Dev.	Minimum	Maximum
IR (%)	0.299667	0.206389	0.240020	0.010811	0.700000
AUD	0.250000	0.000000	0.434407	0.000000	1.000000
UND_MS	0.500000	0.500000	0.501610	0.000000	1.000000
UND_SPR (%)	0.021440	0.020000	0.013475	0.002650	0.140100

The results from descriptive statistics showed that the average initial return (underpricing) on Indonesian IPOs is 29.97%, which is quite high compared to another country from previous studies. The mean value of auditor's reputation is 0.250000 which indicates that only 39 out of 156 IPOs sample used auditing services from reputable or prestigious auditor. Mean value of underwriter's market share is 0.500000 which indicates that 78 out of 156 IPOs sample used underwriting services from high-market share underwriters. As for the underwriter's spread, the mean value is 0.021440 which indicates on average the fees charged by underwriters in Indonesia is 2.144%.

4.2 Pooled OLS regression results

Table 2. Pooled OLS regression result.

	Expected Sign	Coefficient	t-Statistic
AUD	-	-0.122230	-3.037965***
UND_MS	-	-0.174742	-5.013604***
UND_SPR	+	-0.097107	-0.074772
Constant		0.399798	11.23252***
Adjusted R^2		19.53%	
F-*value*		12.40799***	

Notes: ***, ** and * denote the 1%, 5% and 10% significance level respectively.

From the pooled OLS regression, the results showed that auditor's reputation has negative and significant effect on level of underpricing. This result supports our first hypothesis and consistent with prior study by Michaely & Shaw (1995) where more reputable or prestigious auditors can help to reduce level of uncertainty and asymmetric information, therefore lowering the underpricing level. In terms of underwriter's market share, it is found to be negatively and significantly affect level of underpricing. This result supports our second hypothesis and in line with some previous studies by Carter & Manaster (1990) and Megginson & Weiss (1990). As for underwriter's spread, it is found that spread has negative insignificant effect on level of underpricing. This result is in contrast to our third hypothesis as well to prior study by Chen & Mohan (2002). From the result, we found that in Indonesia, underwriters do not use spread to complement underpricing. Rather than using it as a complement, from the negative effect it is most likely that underwriters use spread as substitution to underpricing because the higher the spread charged will result to lower level of underpricing.

5. Concluding Remarks

This paper examines the effect of auditor's reputation, underwriter's market share and spread on level of underpricing using 156 IPOs listed on Indonesia Stock Exchange during the period 2007 to 2017. By employing pooled OLS regression, we found that underpricing on average are lower for IPO firm that used services from reputable auditor and high-market share underwriter. We also found that in Indonesia, underwriter's spread do not have significant effect on the level of underpricing. Our paper has implications in which it is limited to only full commitment underwriting IPOs contract and only used external parties to explain underpricing. For extension studies, variables such as firm's specific characteristics that represent the internal party may be taken into account as in IPO process the firm itself plays an important role. Also, industry-wise classification would be better in explaining underpricing accordingly as this study excluded financial firm but did not differentiate the industry of the sample.

References

[1] Rock K 1986 Why new issues are underpriced *Journal of Financial Economics* 187-212

[2] Capen E, Clapp R, and Campbell W 1971 Competitive bidding in high-risk situations *Journal of Petroleum Technology* 641-53

[3] Ljungqvist A 1993 Underpricing and long term performance of German IPOs *Working Paper*

[4] Beatty R, and Ritter J 1986 Investment banking, reputation, and the underpricing of initial public offerings *Journal of Financial Economics* 213-32.

[5] Allen F and Faulhaber G 1989 Signalling by underpricing in the IPO market *Journal of Financial Economics* 303-23

[6] Titman S and Trueman B 1986 Information quality and the valuation of new issues *Journal of Accounting and Economics* 159-72

[7] Holland K M and Horton J 1993 Initial public offerings on the unlisted securities market: the impact of professional advisers *Journal of Accoounting and Business Research* 19-34

[8] Michaely R and Shaw W H 1995 Does the choice of auditor convey quality in an initial public offering? *Finance Management* 15-30

[9] Palmrose Z 1988 An analysis of auditor litigation and audit service quality *The Accounting Review* 55-73

[10] Chemmanur T and Fulghieri P 1994 Investment bank reputation, information production, and financial intermediation *Journal of Finance* 57-79

[11] Ammer M A and Ahmad-Zaluki N 2016 The effect of underwriter's market share, spread and earnings management forecasts bias and accuracy on underpricing of Malaysian IPOs *International Journal of Managerial Finance* 1-26

[12] Carter R and Manaster S 1990 Initial public offerings and underwriter reputation *Journal of Finance* 1045-67

[13] Megginson W L and Weiss K A 1990 Venture capitalist certification in initial public offerings *The Journal of Finance* 879-903

[14] Chen C and Mohan N 2002 Underwriter spread, underwriter reputation, and IPO underpricing: a simultaneous equation analysis *Journal of Business Finance & Accounting* 521-40