



The Influence of Underpricing to IPO Aftermarket Performance: Comparison between Fixed Price and Book Building System on the Indonesia Stock Exchange

Arni Utamaningsih*

Politeknik Negeri Padang, Indonesia. *Email: arni6965@gmail.com

ABSTRACT

This study discusses the IPO stock trading in Indonesia stock exchange in asymmetry information conditions between heterogen investors. Underpricing is a central issue in the IPO trading, where the price conditions were considered too low to below the market price. This condition is very detrimental to the company's prime, but also a signal that the company has a good reputation. IPO with strong conditions indicated has well performance in the aftermarket period. This condition is referred to as the contradictions and an anomaly in Financial Management. This study aimed to assess the effect of underpricing on the stock performance in the aftermarket period. Indonesia stock exchange in its history ever implement the fixed price and book building IPO trading systems. This study intends to compare the IPO aftermarket performance between the book building and fixed price period. This study intends to provide answers the question that the book building can reduce the uncertainty of new stock trading and to reduce the impact of asymmetry information in the aftermarket period.

Keywords: Underpricing, Fixed Price System, Book Building System, Aftermarket Period

JEL Classifications: E44, G1

1. INTRODUCTION

Fixed price and book building methods are indicated have different impact to underpricing in the trading of the new stocks. In the long run underpricing of each method is also have difference price performance. Underpricing has a different impact on the prospects of IPO shares in the future, after several years of stock traded in the secondary market. In pricing process, particularly the involvement of potential investors in the process of pricing in premarket periods affect the quality of underpricing. Past research has stated that underpricing in IPO stock offerings related to the quality of the company issuing IPO (Rock, 1986; Allen and dan Faulhaber, 1989; Welch, 1989; Grinblatt and Hwang, 1989). The higher the amount of underpricing, then it should be the better growth of the financial performance of the company issuing the shares post-IPO.

Differences in the amount of underpricing in cycles IPO stock trading also depends on the time period of a company chooses to go public (Ritter, 1984). Market conditions "cold" can make

underpricing control purposes becomes an increasingly difficult task for the underwriters. The paper considers the market conditions "hot" versus "cold" in the selection of the study period in order to avoid biased analysis. The selected study period was January 1990-December 1994, followed by the period January 1999 to two-thirds in 2000. The period 1990-2000 two-thirds of the Indonesian capital market era implement fixed price method. The next period was called as the first observation period. The second observation period is January 2001-December 2008 in the era of capital market Indonesia has implemented a book building method in managing the IPO stock trading.

In 1977-1987 stock trading in the Indonesian capital market is very sluggish and the number of issuers until 1987 only 24 companies. In the period 1977-1989 there has been no trade records and complete the company's financial statements. 1998 was a period of crisis, in this case the market conditions very "cool." In this case the study did not include the years such as the observation research, in order to avoid bias due to the condition of the thin market trading transactions. This research is interesting because it uses a

different research settings, namely the Indonesian capital market in the era before the crisis to implement fixed price method and after the crisis that apply book building method. Furthermore, this study refer to it as the era of fixed price and book building era. The implications of this study is the acquisition of a new understanding of methods which are more beneficial and in accordance with the characteristics of capital markets in developing countries such as Indonesia.

2. THEORY

Literature study will explain the fundamental difference of two different marketing strategies in the IPO stock trading, the fixed price versus book building method.

2.1. Fixed Price Method

Benveniste and Busaba (1997) explains that the IPO marketing strategy with fixed price method sets the initial price without first studying the assessment of potential investors in the shares that will be offered. Characteristics fixed price did not take into consideration the need to study the factors which may be obtained underwriters through informal discussions with prospective investors and a survey of the market. In this case there is no information into consideration and then included as a factor ex-ante expectations. Approach Welch (1992) claimed the model of analysis in accordance with the fixed price method, and Welch (1992) also does not distinguish investors in the group of informed investors and uninformed investors. Approach Welch (1992) is a behavioral-based approach that relied on the information cascade. In this case the private information is assumed illustrated through learning to sentiment investor.

2.2. Book Building Method

In the book building method, the underwriter acts as a marketer before the shares offered in the primary market by collecting indications of interest of potential investors. Collection of a number of indications is the basis of an assessment of the demand for stocks and underwriters arrange setting directly the offer price are the reflection of the aggregate market valuation. The company issuing the shares receive a variety of information that has been collected before making the final price. Elimination of information that does not provide benefits conducted through face to face to potential investors. Aggregate information is also likely to refer to potential investors, in this case the power of individual investors neutralized. Nevertheless, the benefits derived from the information gathering costs. Investors are appropriately obtain reimbursement (reward) for his willingness to express an indication of their interest in stocks that will be offered. Potential investors want indication of their interest in the terrefleksi into the initial offering price.

2.3. Underpricing

Some literature suggests that the IPO is generally underpriced (Ibbotson and Jaffe, 1975; Ritter, 1984; Hanley, 1993). Book building and fixed price method, they both asked for some money left on the table in the form of underpricing. Rock (1986) states that underpricing is needed in order to compensate investors who are generally uninformed retail investors, so avoid

the domination of informed investors as “the winner’s curse.” The information gap between the two groups of investors that make underwriters set the price that is quite underpriced as the best decision. Simply put, underpricing in the IPO are used to allocate the problem of retail investors are generally classified as uninformed in order to obtain better outcomes on average. The explanation is relevant as explanatory IPO trading that apply fixed price method, although Welch (1992) describes the fixed price method through behavioral approach. In this case the underpricing is formed not because of the information asymmetry between investors, but because of the information cascade. On the other hand, “the winner’s curse” is not the focus of consideration in the book building method, as underwriters would ask the informed investor to honestly share information in order to establish the price. Informed investor willingness to share information to underwriters rewarded with a discount as a reward which is reflected in the price of IPO (Benveniste and Spindt, 1989). Regardless of disagreements about the price-setting process and share trading method is used, the real value of the IPO was formed immediately and instantaneously when the shares publicly traded on the secondary market.

3. METHODOLOGY

3.1. Fixed Price Versus Book Building Methods

The best way in the establishment and placement of IPO stock price has been a matter of debate in the international arena. This debate focuses on the fixed price method is a method which is historically dominated by the British application and the countries of the colony as well as most countries in Europe (Benveniste and Busaba, 1997). The debate was triggered by the IPO stock offering and the acceleration of the privatization movements carried out by some of the capital markets and generate incredible offers. Trend shows that the book building which is applied in the US capital markets evolve into a method of choice in many capital markets.

Spatt and Srivastava (1991) and Benveniste and Wilhelm (1990) showed that in different environments, book building generate the expected proceeds are greater than the fixed price method. The fundamental difference between the two methods is in the process of pricing the IPO. In the fixed price method, the initial price set without involving the role of investor demand. Instead, the investor book building method involved in road shows and meetings one by one with potential investors which allows the underwriters to consider the various appraisal investors in initial pricing decisions.

Underpricing in IPO stock offerings are generally explained by asymmetric information and risk (Ellul and dan Pagano, 2006). But the real investors are also worried about the liquidity of the shares in the IPO aftermarket period associated with the uncertainty that occurs after the IPO. Ellul and dan Pagano (2006) using various measurement periods IPO aftermarket liquidity, and found that the expected liquidity in the aftermarket and liquidity risk is an important determinant for the underpricing. Information asymmetry in trade-related IPO value of the securities and the fundamental risk. The company issuing the shares must be willing to risk “money on the table” as compensation for investors in

connection with the uncertainty about the actual value of the securities. Investors never know for sure as to what liquidity of shares traded in the period after the IPO aftermarket. Investors are not only concerned about the stock liquidity aftermarket is expected as a manifestation of uncertainty, but also concerned about the fundamental risks.

Busaba and dan Chang (2010) states that the book building process can dig up more information from informed traders in premarket period and therefore will reduce the problem of adverse selection in aftermarket trading. In this case the liquidity of shares in the aftermarket period will be more certain. Ljungqvist and dan Wilhelm (2003) says that underpricing should be greater at the time of the IPO traded with book building method than the fixed price method. Based on these studies, the hypothesis structured as follows:

H₁: Underpricing in the era of book building higher than the stock's IPO underpricing in the era of fixed price.

H₂: The volatility of stock returns over the period of 3 years post IPO book building era higher than the fixed price era.

3.2. Hypothesis Testing

This study divides the observations into two test groups, groups of samples fixed price era and the era of book building. The first hypothesis testing is performed on each sample group based on the following procedures:

Underpricing the value obtained from the calculation of initial returns on the first day of IPO trading, with the following equation:

$$UNDPRI = \frac{P_m - P_a}{P_a}$$

Notation:

P_m = Closing price on the first trading day

P_a = The initial offering price

The second hypothesis (H₂) was tested by calculating the value of returns during the period of 3 years post IPO on each sample group, namely fixed price and book building era. Returns volatility differences can be observed from the description of trends in each

era of observation. Differences volatility returns in more detail can also be compared between the era of observations using a standard deviation calculation based on return on average during the 3 years post IPO. The formula used is as follows:

$$DS_i = \sqrt{\frac{\sum_{j=1}^{t-n} (R_{ij} - \bar{R}_i)^2}{T - n - 2}}$$

Description:

DS_i = Standard deviation of shares of ith

R_{ij} = Return to the actual stock-I for the day-to-j in the observation period

\bar{R}_i = Average arithmetic return to the stock-I during the period of observation

T-n-2 = Number of days or interval of time during the observation period was reduced 2.

4. ANALYSIS AND DISCUSSION

The test results describe statistical sample size, minimum, maximum, average, standard deviation, and variance of stock returns based on fixed price and book building method. Table 1 contains the results of the descriptive statistics. Statistical test results stated that the initial returns (underpricing) in the era of fixed price of 0.127 or 12.70%, while the book building era of 0.399 or 39.90%. These results illustrate that the underpricing in the Indonesian capital market in the era of book building greater than the fixed price era. The standard deviation and variance underpricing in the era of fixed price worth 0.308 and 0.095. The test results was smaller than the underpricing in the era of book building worth of 0.495 and 0.245. Here is a Table 1 which reports the test results of the descriptive statistics.

The result of standard deviation and variance illustrates that underpricing in the Indonesian capital market in the book building era more varied than fixed price era. These results provide evidence for the hypothesis 1, that the underpricing of IPO in the book building era higher than fixed price era.

Table 1: Statistics descriptive of IPO returns at 1st year, 2nd, and 3rd in the book building and fixed price methods

Description	N	Minimum*	Maximum*	Mean*±SD	Variance
Fixed price method					
Initial returns (underpricing)	139	-0.667	2.100	0.127±0.308	0.095
IPO returns 1 st year	139	-0.957	3.167	-0.126±0.623	0.388
IPO returns 2 nd year	139	-0.926	6.658	-0.115±0.902	0.814
IPO returns 3 rd year	139	-0.888	1.821	-0.111±0.495	0.245
Book building method					
Initial returns (underpricing)	126	-0.326	2.708	0.399±0.495***	0.245
IPO returns 1 st year	126	-0.921	13.632	0.146±1.720*	2.959
IPO returns 2 nd year	126	-0.951	4.818	0.114±0.838**	0.703
IPO returns 3 rd year	126	-0.903	4.943	0.206±0.826***	0.682

***significant at α 0,01, two tailed test, **significant at α 0,05, two tailed test, *significant at α 0,10, two tailed test. SD: Standard deviation

Based on the test results of the standard deviation and variance of stock returns in the 1st, 2nd, and 3rd in the fixed price era, respectively: 0.623; 0.902; 0.495, and 0.388; 0.814, 0.245. The test results and the standard deviation of stock returns variance in the 1st, 2nd, and 3rd in the book building era, respectively: 1.720; 0.838; 0.826, and 2.959; 0,703; 0.682. The test results showed that the standard deviation and variance in the era of book building greater than the fixed price era. These results provide evidence that stock returns during the 1st, 2nd and 3rd year in the book building era more volatile than during the fixed price era. In this case hipitesa 2 is proven, that the volatility of stock returns over the period of 3 years post IPO book building era higher than the fixed price era.

The performance of the stock returns in the bookbuilding era is also better than the fixed price era. The average value of stock returns in the 1st, 2nd and 3rd years in the bookbuilding era are: 0.146; 0.114; And 0.206. The results are much larger than the average stock returns for the 1st, 2nd and 3rd years in the fixed-price era are: -0.126; -0.115; -0.111. The results of the average test of returns in the fixed price era showed a worsening stock performance, with the value of negative stock returns (overpricing). In this case in the era of fixed price the market assesses the initial stock below its initial price. In the era of bookbuilding, the average value of returns tends to increase, meaning that the market value of the stock is higher than its initial price. The descriptive statistics reported in Table 1 are supported by the results of the average difference test to ensure that underpricing, stock returns of the 1st, 2nd and 3rd years between Bookbuilding and Fixed Price methods are statistically different. Table 2 below contains the results of the average difference test:

The test results reported in Table 1 and Table 2 provide evidence that underpricing of IPO in the bookbuilding era is higher than underpricing IPO in the fixed price era. In this case hypothesis 1a (H1a) is supported by empirical evidence. This result also proves that the stock returns during 3 (three) years post IPO in bookbuilding era is higher than the fixed price era with the level of significance difference tends to increase. This trend indicates that the volatility of stock returns over the past 3 (three) years after IPO in the bookbuilding era is higher than the fixed price era.

The results of hypothesis testing 1 (a and b) provide an explanation that in the era of bookbuilding the stock market is more prime to provide certainty of stock value compared with the fixed price era. The results of this study supported the results of Spatt and Srivastava (1991), Benveniste and Wilhelm (1990), and Ellul and Pagano (2006). Investor concerns about the liquidity of IPO shares in the aftermarket period associated with the post-IPO uncertainty in the bookbuilding era are not proven. Initial stock

in the bookbuilding era in Indonesia Capital Market managed to show better performance compared with the fixed price era. This market environment is favored by investors, especially institutional investors. Utamaningsih (2012) proves that the existence of institutional investors in the event of initial public offering related to the high value of initial returns. The stock price set close to the upper limit of the price range contained in the prospectus generally gives a high initial return value. Institutional investors involved in a stock trading are suspected of having better information about the prospects of the issuing company, compared to individual investors. The results of this study supported Utamaningsih (2012) which examines sample of IPO shares based on bookbuilding, that the higher initial returns as underpricing will give an impact on the better performance of stock price after IPO, with positive returns value. Busaba and Chang (2010) stated that the bookbuilding process can extract more information from informed traders, and thereby reduce the adverse selection problem in aftermarket trade. In this case, stock liquidity in the aftermarket period will be more certain.

5. CONCLUSION

The difference of fixed price versus book building method, especially regarding the best way in setting the initial share price has been debated in the international region (Busaba and dan Chang, 2010). This study aimed to give an explanation of the difference between the two methods. Indonesian capital market is a unique research area to test for differences in fixed price versus book building method. Since the Indonesian capital market was established in 1977 until the end of the financial crisis in the first two trimesters of 2000, IPO stock offerings embrace fixed price method. Book building method applies since Bapepam No. IX.A.2. dated October 27, 2000 regarding the procedure for an IPO stock offering.

This study provides empirical evidence that the initial returns (underpricing) in the era of fixed price of 0.127 or 12.70%, whereas in the era of book building by 0.399 or 39.90%. These results illustrate that the underpricing in the Indonesian capital market in the era of book building greater than the fixed price era. The results support the Utamaningsih (2012), which examined a sample-based book building IPO stock, that initial returns are higher as a measure of underpricing will have an impact on post-IPO stock price performance is better, with a value of positive returns. Results of this study are also in line with the opinion of Busaba and dan Chang (2010) states that the book building process can explore more information from informed traders in premarket period and therefore will reduce the problem of adverse selection in aftermarket trading. In this case the liquidity of shares in the aftermarket period will be more certain.

REFERENCES

Allen, F., dan Faulhaber, G.R. (1989), Signaling by underpricing in the IPO Market. *Journal of Financial Economics*, 23, 303-323.
 Benveniste, L., dan Busaba, W.Y. (1997), Book building versus fixed price: An analysis for marketing IPOs. *Journal of Financial and Quantitative Analysis*, 32, 383-403.
 Benveniste, L.M., dan Spindt, P.A. (1989), How investment bankers

Table 2: Underpricing, stock returns of the 1st, 2nd, and 3rd year Between the Bookbuilding and Fixed Price methods

Description	t Test results	Conclusion
Initial Returns (Underpricing)	5,299***	Significant
IPO Returns 1 st Year	1,680*	Significant
IPO Returns 2 nd Year	2,132**	Significant
IPO Returns 3 rd Year	3,738***	Significant

***significant at α 0,01, two tailed test, **significant at α 0,05, two tailed test, *significant at α 0,10, two tailed test

- determine the offer price and allocation of new issues. *Journal of Financial Economics*, 24, 343-362.
- Benveniste, L.M., dan Wilhelm, W.J. (1990), A comparative analysis of IPO proceeds under alternative regulatory environments. *Journal of Financial Economics*, 28, 173-208.
- Busaba, W.Y., dan Chang, C. (2010), Book building versus fixed price revisited: The effect of aftermarket trading. *Journal of Corporate Finance*, 16, 370-381.
- Ellul, A., dan Pagano, M. (2006), IPO underpricing and after-market liquidity. *Review of Financial Studies*, 19, 381-421.
- Grinblatt, M., dan Hwang, C.Y. (1989), Signalling and the pricing of new issues. *Journal of Finance*, 44, 393-420.
- Hanley, K.W. (1993), The underpricing of initial public offerings and the partial adjustment phenomenon. *Journal of Financial Economics*, 34, 231-250.
- Ibbotson, R.G., dan Jaffe, J.J. (1975), 'Hot issue' markets. *Journal of Finance*, 30, 1027-1042.
- Ljungqvist, A.P., dan Wilhelm, W.J. (2003), IPO pricing in the dot-com bubble. *Journal of Finance*, 58, 723-752.
- Ritter, J. (1984), The hot issue market of 1980. *Journal of Business*, 57, 215-240.
- Rock, K. (1986), Why new issues are underpriced. *Journal of Financial Economics*, 15, 187-212.
- Spatz, C.S., dan Srivastava, S. (1991), Preplay communication, participation restrictions, and efficiency in initial public offerings. *Review of Financial Studies*, 4, 709-726.
- Utamaningsih, A. (2012), Informasi Asimetri dalam Proses Penjaminan Saham IPO di Pasar Modal Indonesia: Penetapan Harga, Alokasi Saham Perdana, Underpricing, dan Stabilisasi Harga. Disertasi Program Doktor Manajemen FEB UGM, Yogyakarta, Unpublished.
- Welch, I. (1989), Seasoned offerings, imitation costs, and the underpricing of initial public offerings. *Journal of Finance*, 44, 421-450.
- Welch, I. (1992), Sequential sales, learning, and cascades. *Journal of Finance*, 47, 695-732.