AN EXAMINATION IN INDONESIA IPO MARKET TO SUPPORT INVESTMENT DECISIONS BY UTILIZING LIMITED DATA AVAILABLE

Jesslyn Grimonia[a] & Sylviana Maya Damayanti[b]
[a,b]Institute Technology Bandung, Indonesia.
Corresponding Email: jesslyn.grimonia@sbm-itb.ac.id

Abstract

This research will give a supporting knowledge to support investment decision for investors that express interest in the IPO market. The data will be gathered from all the company that conducted the IPO in Indonesia Stock Exchange ("IDX") from 2014-2018 and the sample will be determined by the purposive sampling method. There will be two main discussions in this research, which are underpricing and liquidity changes. Underpricing as the main empirical phenomenon in IPO market can maximize the investor initial return. The liquidity changes can give an insight to the investor that wants to hold the stocks in some period of time. As we know that the higher uncertainty happens in the IPO market, since there are only limited available information. The uncertainty factor from the data that can be accessed, represented by 16 independent variables, will be divided into three groups company characteristics, offering characteristics, and prospectus disclosure. The company characteristics, includes age of the company, size of the company, financial conditions (financial strength, PER, PBV, ROA, and ROE), corporate governance (board size, board independence, ownership concentration, and institutional ownership), and type of industry. The offering characteristics include gross proceeds from the IPO, underwriter reputation, and auditor reputation. The prospectus disclosure includes uses of the funds. It will be tested by the multiple linear regression to find the association of each variable through the underpricing and liquidity changes. This research found that size of the company has a positive significant impact through the underpricing. While the age of the company, board size, board independence, gross proceeds, and auditor reputation have a significant negative impact through the underpricing. For the liquidity changes, size of the company, PBV, and ROA have positive significant impact. While the age of the company, gross proceeds, and auditor reputation have a negative significant impact. Moreover, from the liquidity changes and the brief condition of the price changes, we find that although there are still active tradings in the market, it cannot give certainty about the increase in prices. Thus, author recommend the investor who interest to invest in this market to maximize the initial return, then observe the stocks performance since there will be more available reliable information in the future, after that the investor can make their investment decision based on their observation.

Keywords: Initial Public Offering, Uncertainty, Investment Decision.

1. Introduction

Initial Public Offering (IPO) becomes one of the options for the company to gather long term data. There are several sources for the company to gather funds for their operational, such as banking or other financial institutions. There is another way to gather some funds by conducting Initial Public Offering (IPO). IPO is an offer by an issuer to sell securities to the public. The

different from conducting IPO is the company can gather unlimited funds from their potential investors as long as they can give a good image about their company.

The main phenomenon of IPO is short run underpricing (Ritter, 2003). Underpricing is a condition when the closing price on the initial trading higher than the offering prices. This phenomenon applied in all countries that conducted IPO (Ritter, 2003). One of the theories that can explain this is information asymmetry. This theory believed that each investor has unequal information. An Investor who has less information cannot be certain regarding the true value of the shares and the uncertainty will happen, this is called ex-ante uncertainty (Rock, 1986). This investor needs compensation through the underpricing. The form of this kind of compensation makes an investor have higher initial return.

The company value that related to the ex-ante uncertainty will become a main determinant for the underpricing. The more ex-ante uncertainty happen can higher the risk and lead to the higher degree of underpricing (Beatty and Ritter, 1986). The signaling theory also believed can minimize this information asymmetry by give the signal of the company's quality. Many of ex-ante uncertainty factors have been tested through the underpricing. Found from the research that some factors of ex-ante uncertainty have significant impact through the underpricing. Thus, in this research some variables that represent the ex-uncertainty will be tested through the underpricing and to find which factor that will have significant impact.

In addition, also will be discussed regarding the liquidity changes, which measure by the trading volume, to determining which limited information that will be associated in predict whether there are still potential buyer in the market one year after the IPO conducted. The main objectives of this research are to determine which limited information that can become a consideration when investing in IPO market to maximize the initial return and minimize the liquidity changes risk.

2. Literature Review

2.1 Initial Public Offering (IPO)

Initial Public Offering (IPO) is an offer by an issuer to sell securities to the public. There are some benefits and consequences for conducting an IPO. The benefit includes, getting long-term funding, having a better company's value and image, can maintain employee loyalty, achieve business sustainability, and tax incentives. The consequences include the previous owner might have to share their ownership and there are some obligations from capital market that should be complied. For the process, the company should prepare all required document and submit the application, if already accepted by Indonesia Stock Exchanges (IDX) and Indonesia Financial Services Authority (OJK), the IPO can be conducted, and at the last company's stocks can listed and trading in the capital market.

2.2 Uncertainty in the IPO Market

Uncertainty always happens in the capital market, especially in the IPO market much uncertainty will happen in the process (Lowry et al., 2017). The information prior to the IPO are really limited, the some investor will remain uninformed due to the inequality of information This condition makes this uninformed investor uncertain about the stocks value and makes the uncertainty in the process, this called ex-ante uncertainty. The more uncertainty then higher degree of underpricing might be happened (Beatty and Ritter, 1986). Many researcher also always develop the proxies that can be represented the ex-ante uncertainty.

2.3 Underpricing

In IPO market, there are three phenomenon that occurred in this market which are short run underpricing, average initial return, and long run underperformance (Ritter, 2003). In this paper, we will be focusing on the main phenomenon that is underpricing. Underpricing

happened when the closing price in the initial trading higher than the offering prices. Most of the researcher relates this issue with the information asymmetry and signaling theory. The information asymmetry happened due to inequality of information receive by each investor (Ritter, 2003). Since, there are some investor that not have much information, then the investment banker will try to show the true value of the stocks by underpriced the stocks as the compensation (Benveniste and Spindt, 1989).

The signaling theory also believed can minimize this information asymmetry by give the signal of the company's quality. If the prospectus content as a main IPO document represents less ambiguous information, it can give better signal and can reduce the degree of underpricing (Park and Patel, 2015). Underpricing also can become a good signal for investors, since underpricing represents the higher return for investor. Although the investor knows about the uncertainty happen, but the investor will buy the stock and hope for the higher initial return (Fine et al., 2017).

The ex-ante uncertainty related to the degree of underpricing. Many of ex-ante uncertainty factors have been tested through the underpricing (Beatty and Ritter 1986). It was found from the research that some factors of ex-ante uncertainty have significant impact through the underpricing. These factors gather from the available data prior to the IPO. The main available sources are from the prospectus.

2.4 Hypothesis Development

The ex-ante uncertainty factors that mainly gathered from prospectus, include age, size, Altman Z-core, Price to Earnings Ratio (PER), Price to Book Value (PBV), Return on Asset (ROA), Return on Equity (ROE), number of board, percentage of independence commissioner, largest ownership, largest institutional ownership, industry, gross proceeds, underwriter reputation, auditor reputation, and purpose of the funds. The H0 will be accepted if there are none of this ex-ante uncertainty factors that have been associated with underpricing. Hereby, the hypothesis development explanation:

Higher company size will reduce the degree of underpricing, since the degree of uncertainty also lowers due to the better performance achievement in the future (Kuncova et al., 2016). On the other hand, the signaling theory will apply and make investor believe that the higher size of the company can give a higher return, and make investor want to buy this stocks, also make price and underpricing higher (Zaluki and Kect, 2012). So, the size of the company might have a relationship with underpricing.

H1: Size that measure by total asset have a significant impact through underpricing.

Company with older age might have a better experience in conducting their business and also can have more competencies. Since they have more experience and the business risk might be lower also can lead to lower degree of underpricing (Kristiantari, 2013). So, the age might impact the degree of underpricing (Hapsari and Mahfud, 2012).

H2: Company's age have a significant impact through underpricing.

Altman Z-score can become an indicator and predictor of the corporate distress (Altman, 2013). This measure also can measure liquidity, profitability, asset's productivity, and income generating ability from one equation. Higher Z-score will indicate that the company is free from corporate distress, and make the uncertainty lower also can decrease the degree of underpricing (Agathee et al., 2012). But, higher Z-score also can give a good signal for the investor, and make investor want to buy this stock also make an increase in prices that can lead to higher degree of underpricing (Kristanto,2012). So, the corporate distress predictor as measure by Altman Z-score might have a significant impact through the underpricing.

H3: Corporate distress predictor (Z-score) has a significant impact through underpricing.

In this research, there are some financial ratios that represent the financial aspect that will be tested through the underpricing. These include the financial ratios including Price to Earning Ratio (PER), Price to Book Value (PBV), Return on Asset (ROA), and Return on Equity (ROE). PER calculated by divided the stock prices with earning per share. Higher PER can give a good signal because it can indicates probability to develop in the future, and make investor interests to buy the stocks and increase the underpricing (Hatta and Dwiyanto, 2012). But, PER also represent that the share is undervalued, and it can decrease the uncertainty also lower the degree if underpricing (Puspitadewi and Rahyuda, 2016). This condition also applied for PBV ratio (Kriswanto, 2016). ROA and ROE will measure how effective the company uses their asset and equity to generate the income. The same condition also applied for ROA and ROE, the higher these two ratios can give a good signal to investor and increase the underpricing, since they might buy the stock and increase the price (Kasmir, 2011). On the other hand, the higher ROA and ROE also can represent the higher ability from the company to generate income and lower the uncertainty also lower the degree of underpricing (Saqafi and Vakilifard, 2012).

H4: PER have a significant impact through underpricing.

H5: PBV have a significant impact through underpricing.

H6: ROA have a significant impact through underpricing.

H7: ROE have a significant impact through underpricing.

Previous larger ownership tends to underprice the stock prices, since when the oversubscription occurred they can control the share allocation (Brennan and Franks, 1997). Institutional ownership can solve the agency conflicts and lead to lower risk also lower degree in underpricing (Claessens and Fan, 2002). The larger number of board size, means the company can have more resources and expert people in conducting their business. Also, the larger percentage of board independence believed can have more effective in monitoring (Darmadi and Gunawan, 2012).

H8: Number of Board associated with the underpricing.

H9: Percentage of Board Independence associated with the underpricing.

H10: Largest Ownership associated with the underpricing.

H11: Percentage of Institutional Ownership associated with the underpricing.

The type of industry will be based on the classification of consumer goods sector, since the consumer goods sector have lower degree of underpricing rather than miscellaneous and basic industry and chemicals sector (Martani, 2003).

H12: Type of industry associated with the underpricing.

Larger companies basically need more funds that can lead to higher gross proceeds. Thus, gross proceeds will be related to the size of the company, which stated that the larger firm have lower risk and lower degree of underpricing (Yuksel, 2006).

H13: Offering Size associated with the underpricing.

The degree of underpricing will be affected by the underwriter reputation since they also involve in determining the share prices (Chorruk dan Worthington, 2010). An auditor can minimize the risk of mis-statement in financial statements that can impact the valuation of the shares, thus since the risk become lower the degree of underpricing also become lower (Razafindrambinina and Kwan, 2013).

H14: Underwriter reputation associated with the underpricing.

H15: Auditor Reputation associated with the underpricing.

Mostly, from the sample the uses of the funds are for long term investment. The uses for long-term investment can become a good signal for investor since this kind of investment can make the company have a good development in the future (Kristiantari, 2013).

H16: The uses of the funds as long-term investment associated with the underpricing.

This liquidity changes issue can be measured by the changes in trading volume one year after the IPO and can help investor to minimize the liquidity risk. This liquidity changes may need some additional information in the future and also increase the uncertainty happen (Reese, 1998). The liquidity changes also can represent the condition if the investor wants to hold the IPO stocks in some period of time.

H17: Liquidity, as measured by the percentage of firm trading, change with one year's trading.

H18: Any change in liquidity one year after the IPO is related to the proxies that represent the uncertainty.

3. Methodology

3.1 Data Analysis Techniques

In this research there will be two equations that will be tested by the multiple linear regression, namely; underpricing and liquidity changes as the dependent variables. The uncertainty proxies represent by 16 independent variables as mention above will be tested through the underpricing and liquidity changes, which factor that have a significant impact with the dependent variable. The coefficient determination (R^2) needs to determine model's ability to explain the dependent variables. To test whether all the proxies can explain the underpricing and liquidity changes will be performed by F-test, while, the partial t-test will be performed to determining which factor of the uncertainty that associated with the underpricing and liquidity changes. First, classic assumption test will be performed to test the data collected, namely Normality Test, Heteroscedasticity Test, Multicollinearity Test, and Autocorrelation Test (Ghozali, 2018).

The Equation are as follow:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \beta_{12}X_{12} + \beta_{13}X_{13} + \beta_{14}X_{14} + \beta_{15}X_{15} + \beta_{16}X_{16} + \varepsilon$$

While,

Y = Dependent variables (Underpricing (U) and Liquidity Changes (LIQ))

α = constant

$\beta_1 - \beta_{16}$ = coefficient regression

X1-X16 = Independent Variables (16 variables)

ε = Error

3.2 Sample and Data Collection

The data will be gathered from all the company that conducted the IPO in IDX from 2014-2018. Samples will be determined by the purposive sampling method which is a techniques for determining data source of samples with certain considerations (Sugiyono, 2014). The criteria to determining the sample are the company must had trading price data until one year after the IPO, underpriced in their initial trading, not in the finance sector, and the firms must have sufficient data. Thus, the total samples are 95 companies.

3.3 Research Variables Measurement

As stated before, there will be 16 independent variables for this research. The age of the company will be measured by the period of the company exist. Size of the company will be determined by book value of total asset as stated in the prospectus. Financial strength will be determined by the Altman Z-score result. PER, PBV, ROA and ROE will be determined by the equation of each ratio. Board size is the number of people in the boardrooms. Board independence is the percentage of the independent commissioner. Institutional ownership means the largest proportion of the common stocks ownership. While, institutional ownership will be determined by the percentage of the institutional ownership. Gross proceeds will be calculated by multiply the offering prices and amount of offering shares. Underwriter reputation will be based on the top 20 rank established by Bloomberg. The big four auditors will represent the auditor reputation. Uses of the funds will be determined by the percentage of uses for long-term investment based on the statement in the prospectus. As for the dependent variable, the underpricing will be measured by the under pricing divided by the offering prices.

4. Findings and Discussion

4.1 Classic Assumption Test Result

First the classic assumption test will be conducted, all the data already pass the classic assumption test includes, Normality Test, Heteroscedasticity Test, Multicollinearity Test, & Autocorellation Test. Both equations are normally distributed by the result value above 0.05. For hetersocedasticity, it can be seen that there is no clear pattern in the scatterplot and for addition the result from Rank Spearman Rho test show that all the significance value are above 0.05 from both equation, so it can be concluded that the data are freed from heterescedasticity. For the multicollinearity test, both equations are freed from the multicollinearity problem, since the result of all tolerance value above 0.1 and Variance Inflation Factor (VIF) below 10. For autocorrelation test, the durbin Watson test for both equation shows there are no definitive conclusion, so run test is performed, the run test show the result for both equation are above 0.05, then there are no autocorrelation in the data.

4.2 Hypothesis Testing Result and Discussion

The model match test is performed and the result for coefficient determination shows the result of 52.9% for underpricing and 35.9% for liquidity changes, that represent the model ability to explain the dependent variables. Based on the f-test, both of the equations show that all the independent variables can explain the dependent variables. The t-test will be conducted to determine whether each of the independent variables have a significant impact through the dependent variables. The t-table value for this research is 1.991. The table that shows the result of t-test for the underpricing equations is below:

Table 1. T-Test Result for Underpricing and Liquidity Changes Equation

	Underpricing		Liquidity Changes	
	t	Sig.	t	Sig
(Constant)	4.816	0	2.213	0.03
Age	-1.999	0.049	-2.711	0.008
Size	2.496	0.015	2.027	0.046
Zscore	0.649	0.518	0.738	0.463
PER	0.689	0.493	-1.633	0.107
PBV	0.028	0.978	2.257	0.027
ROA	-0.053	0.958	2.53	0.013
ROE	-0.201	0.842	-0.81	0.42
Board_Size	-3.139	0.002	0.417	0.678
Board_Ind	-2.561	0.012	1.575	0.119
Ownership_conc	-1.375	0.173	-1.812	0.074
Institutional_Own	-1.353	0.18	-0.681	0.498
Industry	0.089	0.929	-0.568	0.572
Gross_P	-3.566	0.001	-3.715	0
Underwriter_Rep	-1.655	0.102	0.38	0.705
Auditor_Rep	-2.645	0.01	-2.995	0.004
Uses_Funds	-0.428	0.67	-0.738	0.463

Source: Output SPSS 26.0, 2020

Based on the table above, it can be concluded that for the underpricing equation Size has a significant positive impact through the underpricing since the t-test value > t-table value and the significance < 0.05. While Age, Board_Size, Board_Ind, Gross_P, and Auditor_Rep have a significant negative impact through the underpricing since - t-test value > - t-table value and the significance < 0.05. Thus H0 is rejected, since there are some factors that represent uncertainty have a significant impact through the underpricing.

Age of the company has a significant impact through underpricing, thus H1 is accepted, the finding in accordance with the research conducted by Arman (2012). This result proved the argument that the older company believed to have more experience and will lower the uncertainty also the degree of underpricing. Size of the company has a positive impact through the underpricing, thus H2 is accepted and in accordance with the research conducted by Nuryasinta and Haryanto (2017). This might happen because the older firm can give a positive signal that can impact to higher price since many investor buy the shares.

Financial strength as measure by the Altman Z-score does not have significant impact to the underpricing, thus H3 is rejected, and in line with the research conducted by Kristanto (2012). While the financial ratio in this research, which are PER, PBV, ROA, and ROE also do not have

an impact through underpricing, thus H4, H5, H6, and H7 is rejected. This result is in line with previous research that conducted by Djashan (2017). Thus, all the financial factors used in this research cannot determine the degree of underpricing as the investor may not really consider the financial factor when investing in IPO market and the actual financial performance cannot be reflected only from the financial statement in the prospectus since there is a limitation period of the financial information (Enika, 2013).

Board size and board independence have a significant negative impact through the underpricing, thus H8 and H9 will be accepted. The larger board size might reduce the uncertainty, since there are more expertise in the company, and can lower the degree of underpricing, this findings also in accordance with the research that conducted by Darmadi and Gunawan (2012). The larger board independence might become a party that can give more effectiveness in monitoring and will reduce the uncertainty also the degree of underpricing (Jensen and Meckling, 1976). The ownership concentration and institutional ownership do not have a significant impact through underpricing, thus H10 and H11 will be rejected. The ownership concentration finding is in accordance with findings from Darmadi and Gunawan (2012). It might be happened since in Indonesia mostly the proportion of share offer lower than the previous owner's proportion. The institutional ownership findings is in accordance with the research conducting by Gusni et al. (2019) and argued that the institutional ownership proportion in Indonesia are quite high, but still can guarantee regarding their contribution to the company.

Industry type as manufacturing company does not have significant impact through the underpricing, thus H12 will be rejected. This finding is in accordance with the finding from Ningrum and Widiastuti (2017). This might have happened since the investor not really considers the type of the industry, but more consider regarding their competency. The gross proceeds have a significant negative impact through the underpricing, thus H13 will be rejected. This is in accordance with the findings from Aningtya and Jubaedah (2015). This might be happen since higher gross proceeds means that the company will have more funding for the future and can reduce the uncertainty and also the underpricing.

Underwriter reputation do not have significant impact through the underpricing, thus H14 will be rejected. This finding is in accordance with the finding from Hadi and Nugroho (2014). This might be happened since the investor does not consider that the underwriter reputation become a good signal from the management. Auditor reputation has a negative significant impact through the underpricing, thus H15 will be accepted. This finding is in line with the finding from Razafindrambinina and Kwan (2013) and argued that the reputable auditor might lower the possibility of the financial statement manipulation. Uses of the funds as long term investment does not have a significant impact through the underpricing, thus H16 will be rejected. This finding is in accordance with the finding from Asrini (2017). It might be happened since the uses of the funds for long term investment can not give a good signal to the investor.

For the liquidity changes equation, Size, PBV and ROA have a significant positive impact through the underpricing since the t-test value > t-table value and the significance < 0.05. While Age, Gross_P and Auditor_Rep have a significant negative impact through the underpricing since - t-test value > - t-table value and the significance < 0.05. Thus, H17 and H18 will be accepted, since from this equation found that the liquidity changes one year after and there are some proxies of the uncertainty that can explain the liquidity changes.

Liquidity changes proxy has been used in the research from German Stock Exchanges conducted by Burrowes et al. (2004). This equation mainly focused to give an insight for the investor that wants to hold the stocks in some period of time, whether the stocks that they have still liquid. This liquid terms means are there still any potential buyer that want to buy the stocks, in case they want to change their form of investment. Investors also should consider regarding the price

changes one year after IPO, and based on the sample mostly the company overcame decrease in prices. Thus, the price changes could not be certain.

5. Conclusion and Recommendation

From this research, we know that the uncertainty always happen in the capital market, especially in IPO market, called ex-ante uncertainty. Some of this uncertainty factors stated in the prospectus and can be used to determine the underpricing, this research will proved regarding this matter. The uncertainty factor in this research includes size, age, Altman Z-core, Price to Earnings Ratio (PER), Price to Book Value (PBV), Return on Asset (ROA), Return on Equity (ROE), number of board, percentage of independence commissioner, largest ownership, largest institutional ownership, industry, offering size, underwriter reputation, auditor reputation, and purpose of the funds. Multiple regression test result shows that all of this factor can simultaneously explain the degree of underpricing. But, only some factors have a significant impact through underpricing. Size of the company has a positive significant impact through the underpricing. While, age of the company, board size, board independence, gross proceeds, and auditor reputation have significant negative impact through the underpricing. Investor should consider this factors to predict the initial return that can be achieved in the first day trading.

In addition, the liquidity changes as measure by the changes in trading volume one year after can also be determined by some of the uncertainty factor. These factors include size, PBV, and ROA that have positive significant impact and age, gross proceeds, and auditor reputation have negative significant impact. This liquidity changes can help the investment decision for investor who wants to hold the IPO stocks in some period of time, whether there are still potential buyer in the market and minimize the liquidity risk. But, from the sample found that mostly the prices will be lower one year after the trading. Although there are still active trading in the market we could not certain about the prices. Thus, author recommended the investor who expressed interest to invest in this market to maximize the initial return, then observe the stocks performance since there will be more available reliable information in the future, after that the investor can make their investment decision based on their observation.

However, in this research also found from the descriptive analysis regarding the changes in price one year after IPO, mostly the prices will decrease after one year trading. This finding also represents that the mispricing in the IPO market might happen and this difficulty can be caused by uncertainty and information asymmetry. From this finding, it is better for investors to get the maximal initial return by the underpricing that almost happen to all the IPO stocks, since the price tend to decrease one year after the IPO. Also, it is better not to hold the stocks for some a period of time, maybe at first investor can analyze the stocks' performance in the secondary market and decide later about which stock is worth buying.

References

i. Agathee, U. S., Sannassee, R. V., & Brooks, C. 2012. The underpricing of IPOs on the stock exchange of Mauritius. Research in International Business and Finance, 26(2), 281-303.

ii. Altman, E. I. (2013). Predicting financial distress of companies: revisiting the Z-score and ZETA® models. In Handbook of research methods and applications in empirical finance. Edward Elgar Publishing.

iii. Aningtya, R., & Jubaedah, J. 2015. Pengaruh EPS, Proceeds, Serta Reputasi Underwriter Terhadap Underpricing. Ekonomi dan Bisnis, 2(2), 105-118.

iv. Arman, A. 2012. Pengaruh Umur dan Ukuran Perusahaan, Reputasi Underwriter, dan Return On Equity Terhadap Tingkat Underpricing Saham di Bursa Efek Indonesia. Pekan Ilmiah Dosen FEB-UKSW, 14.

v.   Asrini, A. 2017. Model Underpricing Pada Penawaran Umum Perdana (IPO) Pada Perusahaan Go Public. Develop, 1(2).

vi.   Beatty, R. P., & Ritter, J. R. (1986). Investment banking, reputation, and the underpricing of initial public offerings.

vii.   Benveniste, L. M., & Spindt, P. A. (1989). How investment bankers determine the offer price and allocation of new issues. *Journal of financial Economics*, *24*(2), 343-361.

viii.   Burrowes, A., Feldmann, H., Feldmann, M., & MacDonald, J. 2004. An examination of underperformance and liquidity of initial public offerings by high growth stocks on the German Neuer Markt. Managerial Finance.

ix.   Chorruk, J., & Worthington, A. C. 2010. New evidence on the pricing and performance of initial public offerings in Thailand, 1997–2008. Emerging markets review, 11(3), 285-299.

x.   Claessens, S., & Fan, J. P. (2002). Corporate governance in Asia: A survey. International Review of finance, 3(2), 71-103.

xi.   Darmadi, S., & Gunawan, G. 2012. Corporate Social Responsibility Disclosure and Market Reaction: An Indonesian Study. Available at SSRN 2166799.

xii.   DJASHAN, I. A. 2017. Analisis Faktor-Faktor Terhadap Underpricing Saham Perdana. Jurnal Bisnis Dan Akuntansi, 19(2), 251-258.

xiii.   Enika, H. 2013. Pengaruh Profitabilitas, Price Earning Ratio, Dan Financial Leverage Terhadap Underpricing (Studi Empiris pada Perusahaan Non-Keuangan yang IPO di BEI Tahun 2006-2011). Jurnal Akuntansi, 1(2).

xiv.   Fine, M. B., Gleason, K., & Mullen, M. (2017). Marketing spending and aftermarket performance of IPO firms. *Marketing Intelligence & Planning*, *35*(4), 560- 576.

xv.   Ghozali, I. 2018. Aplikasi Analisis Multivariate dengan Program IBM SPSS 25 (edisikesembilan). Semarang: Universitas Diponogoro.

xvi.   Gusni, Subing, H. J. T., & Lestari, W. 2019. Corporate governance mechanism, underwriter reputation and IPOs underpricing: Evidence from Indonesia capital market. International Journal of Innovation, Creativity and Change, 6(5), 45–58.

xvii.   Hadi, B. H. & Nugroho Y. 2014. Analysis of The Effect of Underwriter Reputation, Auditor Reputation, and Industry Differentiation Auditor on IPO underpricing on IPO company in Indonesia Stock Exchange for the period of 2008-2012.

xviii. Hapsari, V. A., & MAHFUD, M. K. 2012. Analisis Faktor-Faktor yang Mempengaruhi Underpricing Saham pada Penawaran Umum Perdana di BEI Periode 2008–2010 (Studi pada Perusahaan yang Terdaftar Di BEI Tahun 2008-2010) (Doctoral dissertation, Fakultas Ekonomika dan Bisnis).

xix.   Hatta, A. J., & Dwiyanto, B. S. 2012. The company fundamental factors and systematic risk in increasing stock price. Journal of Economics, Business, & Accountancy Ventura, 15(2), 245-256.

xx.   Jensen, M. C., & Meckling, W. H. 1979. Theory of the firm: Managerial behavior, agency costs, and ownership structure. In Economics social institutions (pp. 163-231). Springer, Dordrecht.

xxi.   Kasmir. 2011. Analisis Laporan Keuangan. Raja Grafindo Persada.

xxii.   Kristanto, A. A. 2012. Risiko Kebangkrutan, Proporsi Hutan g, dan Fenomena Underpricing Pada IPO: Studi Empiris di Bursa Efek Indonesia. Jurnal Riset Manajemen dan Bisnis, 7(1), 39-44.

xxiii. Kristiantari, I. D. A. 2013. Analisis faktor-faktor yang mempengaruhi underpricing saham pada penawaran saham perdana di Bursa Efek Indonesia. Jurnal ilmiah akuntansi dan humanika, 2(2).

xxiv.   Kriswanto, K. 2016. Share Price Analyst With PBV, DER, And EPS At Initial Public Offering. The Winners, 17(2), 113-123.

xxv. Kuncová, M., Hedija, V., & Fiala, R. 2016. Firm size as a determinant of firm performance: the case of swine raising. Agris on-line Papers in Economics and Informatics, 8(665-2016-45098), 77-89.

xxvi. Lowry, M., Michaely, R., & Volkova, E. 2017. Initial public offerings: A synthesis of the literature and directions for future research. Forthcoming Foundations and Trends in Finance.

xxvii. Martani, D. (2003). Pengaruh Informasi Selama Proses Penawaran Terhadap Initial Return Perusahaan yang Listing di Bursa Efek Jakarta dari Tahun 1990– 2000. Simposium Nasional Akuntansi VI, 1-15.

xxviii. Ningrum, I. S., & Widiastuti, H. 2017. Analisis Faktor-Faktor yang Mempengaruhi tingkat Underpricing Saham pada saat Initial Public Offering (IPO)(Studi Empiris pada Perusahaan yang Melakukan Penawaran Umum Perdana di Bursa Efek Indonesia Periode 2012-2016). Reviu Akuntansi dan Bisnis Indonesia, 1(2), 131-143.

xxix. Nuryasinta, A., & Haryanto, A. M. 2017Analisis Faktor-Faktor Yang Mempengaruhi Initial Return Pada Perusahaan Non Keuangan Yang Melakukan Initial Public Offering (IPO) Di Bei Periode 2010-2015. Doctoral dissertation, Fakultas Ekonomika dan Bisnis.

xxx. Park, H. D., & Patel, P. C. (2015). How does ambiguity influence IPO underpricing? The role of the signalling environment.Journal of Management Studies, 52(6), 796-818.

xxxi. Puspitadewi, I., Istri, C., & Rahyuda, H. 2016. Pengaruh DER, ROA, PER dan EVA terhadap Return Saham pada Perusahaan Food and Beverage di BEI. E-Jurnal Manajemen Universitas Udayana, 5(3).

xxxii. Razafindrambinina, D., & Kwan, T. 2013. The influence of underwriter and auditor reputations on IPO under-pricing. European Journal of Business and Management, 5(2), 199-212.

xxxiii. Reese, W. (1998). IPO underpricing, trading volume, and investor interest. Available at SSRN 115348.

xxxiv. Ritter, J. R. 2003. Investment banking and securities issuance. In Handbook of the Economics of Finance (Vol. 1, pp. 255-306). Elsevier.

xxxv. Rock, K. 1986. Why new issues are underpriced. Journal of financial economics, 15(1-2), 187-212.

xxxvi. Saqafi, V. & Vakilifard,H. 2012. The Effect of Variables of The Fundamental Techniques on Returns of The Stock in Tehran Stock Exchange. Interdisciplinary Journal of Contemporary Researh in Business, 4(3), pp: 808-813.

xxxvii. Sugiyono, P. D. 2014. Populasi dan sampel. Metode Penelitian Kuantitatif, Kualitatif dan R&D, 291, 292.

xxxviii. Yüksel, A., & Yüksel, A. 2006. The link between IPO underpricing and trading volume: Evidence from the Istanbul Stock Exchange. Journal of Entrepreneurial Finance, JEF, 11(3), 57-78.

xxxix. Zaluki, N. A., & Kect, L. B. 2012. The Investment Performance of MESDAQ Market Initial Public Offering (IPOs). Asian Academy of Management Journal of Accounting & Finance, 8(1).