Factors Affecting Oversubscription Share

Nuryasman M. N^{1*}and Brigitta Brigitta²

^{1,2}Department of Management, Faculty of Economy, Tarumanagara University, Jakarta, Indonesia

Email address:

nuryasman@fe.untar.ac.id*, brigitta.115180271@stu.untar.ac.id *Corresponding Author

Abstract: The purpose of this study is to analyze the effect of issue price, issue size, firm size, and underpricing on oversubscription on companies that are listed to have conduct Initial Public Offering (IPO) on IDX in the period of 2019 to 2021. This study uses quantitative method with descriptive approach. The samples were selected using purposive sampling method and the results consisted of 138 companies from 2019 to 2021. The data analysis was carried out with Data Panel Regression using EViews 10. The results of this study shows that firm size has a negative and significant effect on oversubscription. While underpricing has a positive and significant effect on oversubscription. On the other hand, issue price and issue size didn't have any effect on oversubscription.

Keywords: Oversubscription; Issue Price; Issue Size; Firm Size; Underpricing.

Abstrak: Tujuan dari penelitian ini adalah untuk mengetahui pengaruh issue price, issue size, firm size, dan underpricing terhadap oversubscription pada perusahaan yang terdaftar melakukan Initial Public Offering (IPO) di Bursa Efek Indonesia (BEI) pada periode 2019-2021. Desain penelitian yang digunakan penelititi dalam penelitian ini adalah metode kuantitatif dengan pendekatan deskriptif. Pengambilan sampel dilakukan dengan metode purposive sampling dan jumlah perusahaan yang diteliti sebanyak 138 perusahaan dari tahun 2019-2021. Teknik analisis data yang digunakan peneliti adalah metode analisis regresi data panel dengan program EViews 10. Hasil penelitian menunjukkan bahwa firm size berpengaruh secara negatif dan signifikan terdahap oversubscription. Sebaliknya, penelitian menunjukkan bahwa underpricing berpengaruh secara positif dan signifikan terhadap oversubscription. Sedangkan issue price dan issue size tidak memiliki pengaruh yang signifikan terhadap oversubscription.

Kata Kunci: Oversubscription; Harga Penawaran; Ukuran Penawaran; Ukuran Perusahaan; Underpricing.

INTRODUCTION

The incessant COVID-19 pandemic has affected the global economy. According to (Clifford and Wahba, 2020), the economic recovery started by June 2020. Even though there are businesses that have reopened, unfortunately there are still many businesses that have gone bankrupt. Hence, many people began to look for side incomes. One of the ways to earn

side incomes is through investments. According to (Sunariyah, 2013) investment is regarded as investment for assets that are owned and it has a long period of time with the aim of earning profits in the future.

Investment itself has several types. According to (Dewi and Vijaya, 2018), investment is divided into several types, namely investment in real wealth, visible personal wealth, finance, and commodities. Examples of financial investments can be in the form of purchasing deposits, shares, Bank Indonesia's securities and other securities (Dewi and Vijaya, 2018). Some financial investments that are commonly used are shares investments, obligations, and mutual fund investments. This investment can be done through the capital market. According to (Martalena and Malinda, 2011), the capital market is a market for sharing long-term financial instruments that can be traded, both debt securities, equities, mutual funds, derivative instruments and other instruments. Therefore, the existence of the capital market in Indonesia is becoming increasingly important for the public to be able to carry out investment activities.

Regarding the implementation of share buying and selling transactions that occur in the Capital Market, (Dewi and Vijaya, 2018) state that the implementation of the sale and purchase of securities and the system provided as a meeting point for securities bidders and other parties who provide securities can occur on the Stock Exchange. (Tandelin, 2017) also mentions that the Stock Exchange is a place for buying and selling or the physical form of the Indonesian capital market. Reporting from the idx.co.id (2021) page on the Indonesia Stock Exchange (IDX) there are various variations of products that are traded, such as stocks, debt securities, mutual funds, sharia shares and others. Reporting from kompas.com (2021), the number of capital market investors in Indonesia as of December 17, 2021 increased by 89.58 percent to 7.3 million Single Investor Identification (SID) (Sukmana, 2021). The increase in the number of investors was driven by unstable economic conditions during the pandemic and the influence of financial influencers on social media which caused people to try to find and understand about side income through investment activities. The increasing number of investors in a short period of time has prompted several companies to conduct initial public offerings (IPOs).

According to (Widioatmodjo, 2015), IPO is an issuer's activity to sell ordinary or preferred shares, or bonds which are the issuer's capital for the first time to the general public. In general, companies conduct initial public offerings (IPOs) to raise additional funds and increase the value of the company. Along with the increasing interest and number of investors in Indonesia, the company also hopes to get more additional funds by conducting an IPO. However, companies conducting IPOs may experience oversubscribe or undersubscribe events. "Oversubscribed is an event where investors buy shares above the number of shares offered by the issuer, while undersubscribed is an event where the purchase of shares by investors does not reach the number of shares offered by the issuer." (Tandelin, 2017).

Reported from kompas.com (2021), the number of capital market investors in Indonesia as of 17th December 2021 has increased by 89.580 percent to 7.300 million Single Investor Identification (SID) (Sukmana, 2021). The increasing number of investors in a short period of time has prompted several companies to conduct initial public offerings (IPO). According to (Widioatmodjo, 2015), initial public offering is a company's activity to sell ordinary or preferred shares, or bonds which are the issuer's capital for the first time to

the general public. In general, companies conduct initial public offerings (IPO) to raise additional funds and increase the value of the company. Along with the increasing interest and number of investors in Indonesia, companies also hope to get more additional funds by conducting an IPO. However, companies conducting IPOs may experience oversubscribe or undersubscribe. This phenomenon had occurred recently from the initial public offering of Bukalapak. Reported from investor.id (2021), Bukalapak (BUKA) did the IPO through the pooling method and oversubscribed 8.700 times from 100,000 investor (Olavia, 2022)

Interestingly, the oversubscribe event does not guarantee the stock price after listing. BUKA and NANO shares experienced gradual ARB (Bottom Auto Rejection) even though share prices rose and even experienced ARA (Upper Auto Rejection) after their initial listing on the Indonesia Stock Exchange. Reporting from cnbcindonesia.com (2021), Branch Manager of PT Jasa Utama Capital Sekuritas Chris Apriliony assessed that there are indications that investors are looking for short-term profits (daily traders) so that they realize profits by selling BUKA shares at prices above the IPO price. From the events above, we can conclude that the high interest in investment from the public, especially day traders, is one of the factors causing the occurrence of stock oversubscribe events during IPO on the Indonesia Stock Exchange.

The occurrence of oversubscribe events is certainly influenced by various factors. In research conducted by (Arora and Singh 2020), it is known that the offer price, price mechanism, number of shares offered, and registration delays have a negative effect on oversubscription. Meanwhile, company size, underwriter reputation, hot market, and underpricing have a positive influence on oversubscription. In research conducted by (Ramadani, 2020), it is known that the oversubscribe event occurred due to the signaling theory factor (a signal from the leakage of company information), shariah compliance status, corporate image (the company's good name), expansive companies, corporate financial performance. This research was carried out again because there were still differences such as the location of the study, the sample used, economic conditions, and the variables studied. Based on the background described above, this research will be entitled "Factors Affecting Stock Oversubscription Shares During IPO on the IDX".

THEORETICAL REVIEW

Information Asymmetry. According to (Suwardjono, 2014) information asymmetry is a condition where management is the party that has more control over information than investors or creditors. The management who has detailed information about the company will hide some information that is unknown to creditors or investors to avoid the assumption of misuse of information for personal interests. Basically, if investors have information that matches the company or management, investors will buy shares at low prices and cause these shares to be oversubscribed. Meanwhile, investors who do not have information will only get a small number of attractive shares.

According to (Suwardjono, 2014); (Harfadillah et al., 2020), information asymmetry is a condition where one party has more information than the other party. Companies that issue shares do not have as much information as underwriters in the capital market. The lack of information held by the company will be used by underwriters to set the IPO share price

lower than the actual price, so that the resulting risk is smaller. Setting a lower IPO share price may result in an oversubscription event.

The theory above can be relevant to the underpricing and issue price variables where oversubscription events can occur when the IPO share price offered is lower than its intrinsic value.

Signaling Theory. According to (Harfadillah et al., 2020), signal theory is a signal given by company management in the form of information or instructions for investors about how management assesses the company's prospects. Signaling theory relates to the availability of information, such as information about the company's financial statements. According to (Mantari and Nuryasman, 2017), a signal is considered credible only if a bad company cannot try to imitate a signal from a good company by sending the same signal. When the cost of signaling for a bad company is higher than that for a good company, the bad company may think that there is no point in imitating it and stop imitating so that the signal is said to be credible, reliable and trustworthy.

According to (Kharouf et al., 2020) signaling theory can be defined as the reduction of information asymmetry between several parties at the time of decision making. In addition, the signal can be said to be a reaction to information asymmetry in the market if investors do not have detailed information (Parasetya, 2015). This detailed information is usually found in the company's published financial statements. If the information contains a good signal or a positive value, the signal will be received by the public which can then increase the volume of stock trading. If the information contains a bad signal or negative value, then the public will analyze the information so that they are not interested in buying shares which can result in a decrease in stock trading volume. The increase in the trading volume of the stock can increase the likelihood of an oversubscription event occurring. The presence of information asymmetry in newly formed public companies raises signal relevance in resolving the asymmetry regarding latent quality characteristics that investors are not aware of (Connelly et al., 2011). Therefore, signal theory is one of the ways used by IPO companies to gain legitimacy and investor confidence to generate higher investor demand and higher stock prices. However, the theory is only effective if it satisfies several certain assumptions.

First, a signal must be credible enough to communicate its true and intrinsic value to potential investors. For example, in previous studies, signals such as firm size were used (Badru et al., 2019; Badru and Ahmad-Zaluki, 2018; Bhatt and Bhattacharya, 2017), underwriter reputation (Thorsell and Isaksson, 2014; Aslam and Ullah, 2017; Mehmood et al., 2020) and underpricing (Arora and Singh, 2020; Mehmood et al., 2020) which provide potential investors with an overview of the company's superior quality and magnitude of risk and uncertainty.

Second, signals must be made available to interested parties in advance in order for them to be utilized effectively. For example, the signaling variables of firm size, namely total assets, underwriting reputation and underpricing (measured by lower issuance price) are freely available to investors in an IPO prospectus to investigate prior to the IPO offering date.

Third, the signal must be expensive enough to prevent low-quality companies from copying it. According to Booth and Smith in (Arora and Singh, 2020) higher underwriting

costs than well-known underwriters will make these costs expensive and unaffordable for low-quality companies. Similarly, (Rumokoy and Neupane, 2017), (Sundarasen et al., 2018) considers that using prestigious underwriters is an expensive signal to market their credibility. Therefore, only superior quality companies can have a larger asset base (Badru et al., 2019; Badru and Ahmad-Zaluki, 2018) and are capable of underpricing (Arora and Singh, 2020) to lure potential investors.

The theory above is relevant to the issue price, issue size, firm size, and underpricing variables where oversubscription events are believed to occur if investors receive a positive signal through the IPO share price which is lower than the original value or based on the credibility of the company conducting the IPO which can be seen based on the size of the IPO. company, the number of shares offered and its financial statements.

Definition of Issue Price. According to the Cambridge Dictionary, the issue price is the price of an investment instrument that is sold for the first time. The issue price is the price of a new security that is delivered to the general public before the new issue trades on the secondary market. Also referred to as the "bid price" (Bainik, 2022). (Krishna, 2022) states that the offering price is the initial price of the company in selling its shares to the public. The price may be comparable, higher, or lower. When shares are issued, the price may change depending on market demand.

Based on some of the definitions above, we can concluded that issue price is the price of shares offered by the company for sale to the public for the first time.

The Meaning of Issue Size. Issue size in some studies is often referred as gross proceeds, namely the amount of funds obtained by the company through the IPO process (Ilyasa and Wahyudi, 2021). Issue size is the percentage of shares offered to the general public illustrates how much of the paid-up capital will be owned by the public and used as a proxy for the uncertainty factor that will be accepted by underwriters and investors. (Putro, 2017) argues that the percentage of share offerings to the general public shows the size of the share ownership portion that may be controlled by the general public.

From some of the definitions above, issue size is a measure of the size of the portion of shares traded by the company.

Value of Firm Size. (Setiawan and Vivien, 2021) state that company size can be measured through the number of employees, net income, total assets and others. According to (Widhiastina and Prihatni, 2016), in determining the size of an issuer can be seen through total assets or total net sales. Thus, the size of an issuer describes the size of the wealth owned by an issuer. Large-scale companies will generally be better known by the public compared to small-scale companies (Thoriq et al., 2018). The size of the company which is the market capitalization is calculated as the total number of shares issued multiplied by the offering price (Ong et al., 2020).

Concluded from those definitions above, firm size is a measure of the size of a company that can be calculated using the logarithmic value of total assets, average total asset value, average sales, number of employees, total number of shares multiplied by the offer price and others.

Comprehension of Underpricing. (Setyowati and Suciningtyas. 2018) said that underpricing is the difference between stock prices in the secondary market and stock prices in the primary market (IPO). Underpricing can also be interpreted as the difference between the closing price of the issuer's shares on the first day of the IPO and the initial price when the issuer is IPO (Pradnyadevi and Suardikha, 2020). There is also another definition which states that underpricing is an event when the closing price of shares in the primary market is lower than the selling price of shares in the secondary market, or there is a positive difference between share prices in the secondary market and share prices in the primary market (Sembiring et al., 2018).

some of the definitions above, underpricing is the phenomenon of the difference between the initial share price and the closing stock price.

The Relationship Between Issue Price and Oversubscription. To attract more institutional and retail investor participation to engage in stock market trading, the IPO offering price was lowered by the issuer. By setting a lower offer price, investors become more interested in making transactions so that sales volume will increase and the possibility of oversubscription events occurring is greater (Arora and Singh, 2020). The fixing of lower prices generates an impulse to buy shares among investors.

(Banerjee and Rangamani, 2015) stated that the IPO offer price has a negative relationship with investor demand. This is because investor demand is very elastic, so a slight increase in the supply price can have a negative effect on the informational side and vice versa. In addition, (Badru and Ahmad-Zaluki, 2018), (Mehmood et al., 2020) also uses the offering price as a factor influencing the purchase of IPO shares. The study states that MSME companies are more likely to set a lower issuance price to ensure full subscription of an issued IPO share. Based on the statement above, it can be interpreted that the company's shares with a lower issue price have a higher demand and vice versa.

The Corellation Between Issue Size and Oversubscription. According to signal theory, larger issue sizes send good quality signals to investors thereby increasing their demand. Meanwhile, a smaller issue size is a bad signal for risk-neutral investors and will lead to a lower probability of oversubscription (Arora and Singh, 2020b). This is supported by the results of several other studies conducted by (Albada et al., 2019), (Mehmood et al., 2020), (Tajuddin et al., 2015) which proves a negative relationship between supply size and oversubscription.

In addition, (Banerjee and Rangamani, 2015) stated that the relationship between issue size and oversubscription was not significant. The above discussion clearly reveals that the limited availability of company shares can increase investor demand.

The Connection Between Firm Size and Oversubscription. Larger company size encourages higher investor demand which results in a higher possibility of oversubscription events for a stock (Badru and Ahmad-Zaluki, 2018). Firms with a larger asset base have reduced information asymmetry and uncertainty related to future stock values (Arora and Singh, 2020b). Therefore, investors' bids for bids tend to be higher for firms with larger asset bases compared to firms with smaller asset bases.

Taking into account the importance of size in reducing information bias and shaping subsequent demand for supply as measured in the form of oversubscription, a positive relationship has been noted in various empirical studies (Badru et al., 2019; Badru and Ahmad-Zaluki, 2018; Bhatt and Bhattacharya, 2017; Sasikirono et al., 2018). The above discussion clearly reveals that larger firm size can increase investor demand.

The Relevancy Between Underpricing And Oversubscription. Based on signaling theory, the relationship between underpricing and oversubscription can be interpreted as an attempt to predict the signal quality of the company when the issuer lowers the stock offering price to attract stock demand from investors. (Mehmood et al., 2020), (Tajuddin et al., 2019) noted a positive relationship between underpricing and oversubscription. This statement is proven by the fact that higher demand will increase the market price on the first day of trading which will then result in higher initial returns.

The greater the degree of underpricing, the greater the demand from investors at the time of the IPO (Pradnyadevi and Suardikha, 2020). (Aslam and Ullah, 2017), (Bajo and Raimondo, 2017), (Bhatt and Bhattacharya, 2017), (Dhamija and Arora, 2017), (Sohail et al., 2018) also noted a positive relationship between oversubscription and underpricing. This suggests that a higher demand for offerings is placed by a large number of "privileged" investors due to favorable information about the company's future prospects. This higher demand can increase the market price on the first day of trading, resulting in higher initial returns. Therefore, higher underpricing stimulates investors' demand for offers.

Framework. During the IPO period, the number of shares offered is very limited, if the number of shares ordered by investors exceeds the number of shares offered, there will be an excess demand or commonly known as oversubscribe. This oversubscribe event can be influenced by several things, including Issue Price, Issue Size, Firm Size, Underpricing, etc.

Issue Price is the offer price given by the company the first time. If the company provides a low offering price at the beginning, it can be a signal for investors to buy the stock. With the increasing interest of investors to transact, it will increase the volume of demand so that oversubscribe events will occur.

Issue Size is the number of shares provided by the company for trading. If the company has a small supply size but high demand then it can encourage oversubscription events to occur. However, the small offer size can also make risk-neutral investors skeptical to purchase the shares.

Firm Size is the size of the company conducting the IPO. Larger companies are seen to have higher credibility for investors, especially companies that have large amounts of assets. Credibility owned by large companies can increase investor interest and demand which will encourage oversubscription events to occur.

Underpricing is an event where the offering price of a stock is lower than its intrinsic price. According to signaling theory, underpricing events occur to trigger investor's interest in making purchases. This strategy is a pricing strategy that can increase the likelihood of an oversubscription event occurring.

Research Model and Hypotheses. Based on the definitions above, the determinants that is used to determine Oversubscription in this study are Issue Price, Issue Size, Firm Size, and Underpricing. The relationship of those variables could be seen in **Figure 1**.

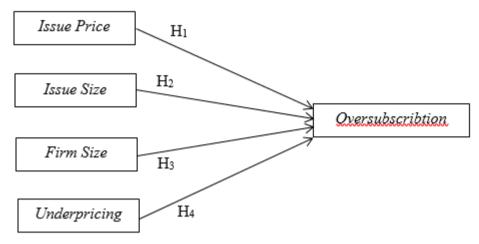


Figure 1. Research Model

Based on the research model above, the hypotheses of this study are:

H₁: Issue Price has a negative effect on Oversubscription.

H₂: Issue Size has a negative effect on Oversubscription.

H₃: Firm Size has a positive effect on Oversubcription.

H₄: Underpricing has a positive effect on Oversubscription.

METHODS

Population and Sample. The population that will be used in this study are companies listed on the IDX in the 2019 to 2021 period. The sample used was chosen by using the purposive sampling technique with the following criteria: (1) Companies that conduct IPOs on the IDX in 2019 to 2021. (2) Companies that conduct IPOs and experience underpricing. (3) Companies that publish periodic and complete financial reports as of December 31, 2019 to 2021. (4) Companies that provide data needed in calculations related to issue price, issue size, firm size, and underpricing.

Baley in (Mahmud, 2011) says that for research that uses statistical data analysis, a sample size of at least 30 is required. Roscoe in (Sugiyono, 2012) suggests that the appropriate sample size in research is between 30 to 500.

In this study, secondary data will be used. Secondary data is a type of data obtained indirectly from the main source (Sekaran and Bougie, 2016). The secondary data in this study is in the form of the annual financial statements of companies conducting IPOs on the IDX during the period 2019 to 2021. The sources of data on the company's financial statements are obtained from the prospectus available on the Indonesia Stock Exchange website (www.idx.co.id), in addition to price data shares obtained from yahoo finance (www.finance.yahoo.com) and trading view (tradingview.com). According to the

prospectus of IPO companies in the period 2019 to 2021, there were 161 companies that carried out IPOs.

Operationalization of Variables and Instruments. In this study there are 4 independent variables, namely issue price, issue size, firm size, and underpricing. The oversubscription variable is the dependent variable. This section outlines briefly the research subject and object, variable operationalization, population and samples, the sampling method, and the statistical test applied in the research.

Variable	Indicator	Scale	Source
Oversubscription (OS)	Total IPO shares Total shares offered	Ratio	(Mehmood et al., 2020)
Issue Price (IP)	Initial price when shares are offered for the first time	Ratio	(Arora and Singh, 2020)
Issue Size (IS)	Total shares offered	Ratio	(Ali et al., 2020)
Firm Size (FS)	Ln Total Asset	Ratio	(Arora and Singh, 2020)
Underpricing (UP)	Closing price — Issue price Issue price	Ratio	(Desmonda and Santioso, 2021)

Table 1. Variable Operations

Data Analysis. (Sugiyono, 2013) states that data analysis is a process of systematically searching and compiling the data obtained and then making conclusions so that they are easy to understand. Based on this explanation, this research uses quantitative data analysis. The data analysis method used is a statistical model, namely regression analysis. According to (Nawari, 2010), regression analysis is a way to invest in functional relationships between variables which are then written in mathematical models. The regression model should not be biased so that it must meet the classical assumptions, including data normality, free of multicollinearity, free of autocorrelation, and free of heteroscedasticity. The data used for this study are oversubscription (OS) as the dependent variable and issue price (IP), issue size (IS), firm size (FS), underpricing (UP) as the independent variable. Panel data regression analysis was carried out using the EViews 10 program. For hypothesis testing, panel data regression analysis tests were carried out, as well as t test, and coefficient of determination (R²) test.

Based on the explanation above, therefore the regression equations formed:

$$OS = \alpha + b_1 IP_t + b_2 IS_t + b_3 FS_t + b_4 UP_t + \varepsilon...$$
 (1)

Note: OS (Oversubscription); α (Constanta); b (Independent variable regression coefficient); t (Period 2019-2021); IP (Issue price); IS (Issue size); FS (Firm size); UP (Underpricing); ϵ (Error)

RESULTS

Descriptive Statistics Test. Referring to the figures listed in **Table 2**, the average oversubscription (OS) variable is 0.225, indicating that the oversubscription rate that occurs when companies conduct IPOs on the IDX in the 2019 to 2021 period is still relatively low. The standard deviation value of the OS is 0.096, this value is smaller than the average value, meaning that the OS has a low level of data variation.

	OS	IP	IS	FS	UP
Mean	0.225	453.022	7.26E+08	26.114	0.412
Median	0.200	174.500	3.75E+08	25.943	0.350
Maximum	0.490	12,100	1.00E+10	30.701	1.699
Minimum	0.001	80	35,000,000	20.860	0.010
Standard Deviation	0.096	1.247,652	1,12E+09	1.748	0.243
Skewness	0.136	7.343	4.990	0.111	1.349
Kurtosis	3.258	63.074	37.035	3.340	7.964
Jarque-Bera	0.811	21,991.13	7,233.427	0.950	183.561
Probability	0.667	0.000	0.000	0.622	0.000
Sum	31.058	6,2517	1.00E+11	3,603.705	56.881
Sum Square Deviation	1.264	2.13E+08	1.72E+20	418.432	8.117
Observations	138	138	138	138	138

Table 2. Descriptive Statistics Test Results

According to the results of the descriptive statistical analysis obtained, the average issue price (IP) variable is 453.022 indicating the nominal issue price offered during the IPO on the IDX for the 2019 to 2021 period is still relatively cheap. The standard deviation value of IP is 1.247,652, this value is greater than the average value, meaning that IP has a high level of data variation.

Referring to the results of the descriptive analysis in **Table 2**, the average issue size (IS) variable is 726,000,000, indicating that the number of issue sizes offered during the IPO on the IDX in the 2019 to 2021 period is quite large. The standard deviation value of IS is 1,120,000,000, this value is greater than the average value, meaning that IS has a high level of data variation.

In accordance with the results in **Table 2**, the average firm size (FS) variable is 26.114 indicating companies that conduct IPOs on the IDX in the 2019 to 2021 period are companies with large total assets. The standard deviation value of FS is 1.748, this value is smaller than the average value, meaning that FS has a low level of data variation.

Following the results in **Table 2**, the average underpricing (UP) of 0.412 shows that the level of underpricing that occurs when stocks conduct an IPO on the IDX in the 2019 to 2021 period is still relatively low. The standard deviation value of UP is 0.243, this value is smaller than the average value, meaning that FS has a low level of data variation.

Regression Model Testing

Chow Test. Chow test is used to choose between the common effect model and the fixed effect model. In performing the Chow test, the following test criteria are used: If the p-value is greater than 0.025 then the common effect model is selected, but if the p-value is less than 0.025 then the fixed effect model is selected and will be continued by performing the Hausman test.

Based on the test results shown in the **Table 3**, it was found that both the cross section value of F and the chi-square of the two models were significant (probability value greater than 0.025). This is in accordance with the test criteria described above, namely the results of the Chow test, namely the chi-square cross-section of 0.598 which is greater than 0.025. So it can be concluded that in this study the Common Effect Model will be used and the Hausman test is no longer needed because the probability value is greater than 0.025. However, the research will continue by using the Lagrange Multiplier test to determine whether the common effect model is better to use or the random effect model.

Table 3. Chow Test Results

Effects Test	Statistic	Degree of Freedom	Probability
Cross-section F	0.697	(45.880)	0.909
Cross-section Chi-square	42.046	45	0.598

Lagrange Multiplier Test. The lagrange multiplier test is used to choose between the common effect model or the most appropriate random effect model to be used in the panel data regression equation model. After the calculated LM value is obtained, the calculated LM value is compared with the chi-squared table value with degrees of freedom as many as the number of independent variables (free) or a significant level (alpha) of 0.025. In conducting the Lagrange Multiplier test, criteria are used if the calculated LM value is smaller than the chi-square then the regression model chosen is random effect, and if the LM value is greater than the chi-square then the model chosen is the common effect model.

Table 4. Lagrange Multiplier Test Results

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	1.804 (0.179)	0.467 (0.495)	2.270 (0.132)

From the results of the LM test in **Table 4**, it is known that the LM value is 0.179. So it can be concluded that the value of 0.179 is greater than chi square or a significance level of 0.025, which means that the most suitable regression model to be used in this study is the common effect model.

Classic Assumption Test

Normality test. This normality test was conducted to test wether the residual variables were normally distributed or not. If the data is not normally distributed then the data cannot be used for research. In the JB test, there is a histogram of normality which states that if the probability value is more than or equal to 0.025, it can be stated that the data is normally distributed. And vice versa, if the probability value is less than or equal to 0.025, it can be stated that the data is not normally distributed.

As shown in **Figure 2**, the Jarque-Bera probability value is 0.094. Thus it can be seen that the research model used passes the classical assumption test because the residuals from this data are normally distributed with a Jarque-Bera probability value greater than 0.025.

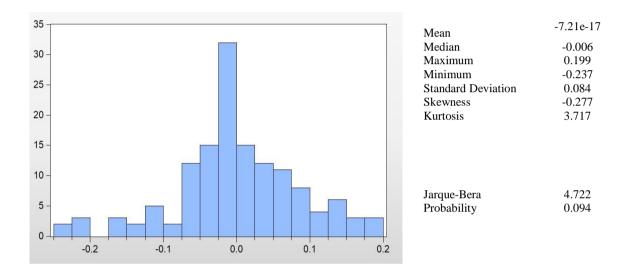


Figure 2. Normality Test Results

Multicollinearity Test. The multicollinearity test aims to test whether there is a correlation between the independent variables. A good regression model is one where there is no correlation between the independent variables and is free from multicollinearity. If there is multicollinearity in the data, the data cannot be used for research. According to Ghozali (2018), there are two possibilities in the multicollinearity test, namely if the correlation coefficient is greater than 0.800 or close to one, it can be stated that there is multicollinearity in two or more independent variables. And, if the correlation coefficient between variables is below 0.800, then the independent variables studied are protected from multicollinearity.

 Table 5. Multicollinearity Test Table

	IP	IS	FS	UP
IP	1.000	-0.083	0.059	-0.214
IS	-0.083	1.000	0.147	0.397
FS	0.059	0.147	1.000	0.141
UP	-0.214	0.397	0.141	1.000

Referring to the results listed in **Table 5**, the value of the correlation coefficient between each independent variable is not greater than 0.800. Therefore, it can be said that there is no multicollinearity in the independent variables used in this study.

Hypothesis Test

Panel Data Regression Analysis Test. This multiple linear regression analysis test serves to find out whether there is an influence of the independent variable on the dependent variable.

Following the test results in the **Table 6**, it can be seen that the panel data regression analysis equations in this study are:

From this equation, it can be explained that the constant value (c) of 0.850 indicates a constant value, where if the value of all independent variables is equal to zero, then the oversubscription (OS) variable is equal to 0.850.

The coefficient of issue price (IP) is 5.40e-06, meaning that if the other variables have a fixed value and the issue price has increased by Rp. 1 then oversubscription will increase by 5.40e-06. The value of unstandardized coefficients B issue price (IP) is positive indicating that there is a positive relationship between issue price (IP) and oversubscription (OS). This means, if the issue price increases, the oversubscription will increase.

Table 6. Regression Analysis Test Table

Variable	Coefficient	Standard Error	t-Statistic	Probability
C	0.850	0.109	7.760	0.000
IP	5.40E-06	5.99E-06	0.903	0.368
IS	5.64E-12	7.10E-12	0.795	0.428
FS	-0.026	0.004	-6.036	0.000
UP	0.089	0.033	2.683	0.008
R-squared	0.239	Mean dependent var		0.225
Adjusted R-squared	0.216	S.D. dependent var		0.096
S.E. of regression	0.085	Akaike info criterion		-2.056
Sum squared resid	0.962	Schwarz criterion		-1.950
Log likelihood	146.869	Hannan-Quinn criter.		-2.013
F-statistic	10.444	Durbin-Watson stat		2.154
Prob(F-statistic)	0.000			

The issue size (IS) coefficient is 5.64e-12, meaning that, if the other variables have a fixed value and the issue size increases by 1 unit, the oversubscription will increase by 5.64e-12. The value of unstandardized coefficients B issue size (IS) is positive indicating that there is a positive relationship between issue size (IS) and oversubscription (OS). This means, if the issue price increases, the oversubscription will increase.

The coefficient of firm size (FS) is -0.025, meaning that if the other variables have a fixed value and firm size increases by 1 unit, then oversubscription will decrease by -0.025. The unstandardized coefficients B firm size (FS) is negative, indicating that there is a negative relationship between firm size (IS) and oversubscription (OS). This means, if the issue price increases, the oversubscription will decrease.

The underpricing coefficient (UP) is 0.089, meaning that if the other variables have a fixed value and underpricing increases by 1 percent, the oversubscription will increase by 0.089. The value of unstandardized coefficients B underpricing (UP) is positive indicating that there is a positive relationship between underpricing (UP) and oversubscription (OS). This means, if the underpricing increases, the oversubscription will increase.

The t-test was conducted with the aim of knowing the effect of each independent variable on the dependent variable. Referring to the t table number with the provision that is equal to 0.025 and dk (n-1) or (138-1) the t-table value is 1.977. Following the results in **Table 6**, it can be seen that the Issue price (IP) has a significance value of t of 0.368 which is greater than 0.025, with a toount of 0.903 which is smaller than 1.977, meaning that the issue price partially has no effect on oversubscription.

Issue size (IS) has a significance value of t of 0.428 which is greater than 0.025, with a tount of 0.795 which is smaller than t-table of 1.977, meaning that the issue size partially has no effect on oversubscription.

Firm size has a significance value of t of 0.000 which is smaller than 0.025, with a tcount of -6.035 which is smaller than t-table of 1.977, meaning that firm size partially has an effect on oversubscription.

Underpricing has a significance value of t of 0.008 which is smaller than 0.025, with a tcount of 2.683 which is greater than t-table of 1.977, meaning that underpricing partially has an effect on oversubscription.

Coefficient of Determination (R²). The coefficient of determination explains how far the model's ability to explain the dependent variable is. The value of the coefficient of determination ranges between zero and one. If the value of the coefficient of determination (R²) is getting closer to one, it can be said that the independent variables in the model can explain the information needed by the dependent variable. Based on Table 6, the R-squared value is 0.239 or 23.900 percent. This shows that the independent variables consisting of issue price (IP), issue size (IS), firm size (FS), and underpricing (UP) can explain the dependent variable in the form of oversubscription (OS) by 23.900 percent and the rest of 76.10 percent is explained by other variables not examined in this study.

DISCUSSION

Effect of Issue Price on Oversubscription. Based on data analysis and hypothesis testing that have been carried out in this study, it can be seen that the issue price has no effect on

oversubscription. This is contrary to the previous hypothesis, which states that the issue price can have a negative effect on investor demand. This result is not in accordance with the research of (Nischay Arora and Balwinder Singh, 2020) which states that the issue price has a negative effect on oversubscription.

This result is in accordance with signaling theory because when stock prices increase, investors will tend to invest to follow the trend or average up. On the other hand, this result is not in accordance with the information asymmetry theory where the more the investors will be more careful and considerate if they have more information about the shares offered.

Effect of Issue Size on Oversubscription. Based on data analysis and hypothesis testing that have been carried out in this study, it can be seen that issue size has no effect on oversubscription. This result is not in accordance with the research conducted by Waqas (Mehmood et al., 2020) which states that issue size has a negative effect on oversubscription.

This result is in accordance with the signal theory because investors consider companies that are able to offer a larger number of shares to have more capability and credibility.

Effect of Firm Size on Oversubscription. Based on data analysis and hypothesis testing that have been carried out in this study, it can be seen that firm size has an effect on oversubscription. These results are in accordance with research conducted by (Nischay Arora and Balwinder Singh, 2020) which states that firm size has a significant effect on oversubscription.

In this study, the calculation of company size is carried out using the natural logarithm of the company's total assets. The results of this study are in accordance with the theory of information asymmetry because investors who have more complete information do not merely use assets as their main reference in buying shares. For long-term investors, the company's prospects for the next few years are more important than its current assets. The company's prospects may depend on the country's or global economic conditions, the company's liquidity and performance as well as current trends. This is supported by signal theory, where if the company's shares have good prospects and are in line with the existing trend, a positive signal will be generated for investors.

The Effect of Underpricing on Oversubscription. Based on data analysis and hypothesis testing that have been carried out in this study, it can be seen that underpricing has an effect on oversubscription. This result is in accordance with the results of research by (Nischay Arora and Balwinder Singh, 2020) which states that underpricing has a positive relationship to oversubscription.

The results of this study are in accordance with the signal theory which states that investors will be more interested in buying shares at a lower price than their intrinsic value. This result is also supported by the theory of information asymmetry which states that only capable companies can carry out an underpricing strategy to increase investor interest.

CONCLUSION

The conclusions of this study are: (1) Issue Price has no effect on Oversubscription on shares of companies listed for IPO on the IDX in the 2019 to 2021 period. (2) Issue Size has no effect on Oversubscription on shares of companies listed for IPO on the IDX in the 2019-2021 period. (3) Firm Size has a negative and significant effect on Oversubscription on shares of companies listed to conduct IPOs on the IDX in the 2019 to 2021 period. (4) Underpricing has a positive and significant effect on Oversubscription on shares of companies listed to conduct IPOs on the IDX in the 2019 to 2021 period.

Based on the research that has been done, suggestions for companies that will conduct an IPO on the IDX are: (1) Increasing the value of the company so that the possibility of oversubscription occurring will be higher. (2) Analyzing current trends to understand investor behavior and interests. Following the right trend can increase the likelihood of an oversubscription event occurring. (3) Not using the company's assets as a reference and capital to conduct an IPO. The company must be able to have an attraction other than the assets it owns. (4) Not focusing on the size of the number of shares to be offered, but rather focusing on determining the appropriate and attractive share price to compare with the company's value.

Then, suggestions for further researchers are: (1) Increase the research period. The addition of the research period can make the research more relevant to the current economic conditions. (2) Researching companies specifically according to their sectors to get more specific research results. More specific research can be taken into consideration and help the sector companies concerned in their preparation to conduct an IPO. (3) Comparing changes in factors that affect oversubscription before and after the pandemic occurs. Such comparisons can help determine factors that are more relevant to current economic conditions. (4) Examining more influential variables such as return on investment, interest rates, inflation, market conditions, corporate image, and underwriter reputation. The more influential variables can explain the factors that influence the dependent variable of oversubscription more clearly and well.

There are also suggestions for investors and the general public which are: (1) Conduct research on the company before buying IPO shares so that investors can have information to compare stock prices with company value. (2) Analyzing current trends to predict possible profits from buying IPO shares offered by the company. (3) Not using the offer price and the size of the offer as a reference in buying IPO shares. This is because the results of the study show that the two variables have no effect on stock oversubscription which in turn can also affect the profits that investors get. (4) Seeking information related to other factors that have a greater influence on oversubscription other than issue price, issue size, firm size, and underpricing. Knowing the factors that have a greater influence on stock oversubscription during the IPO can make it easier for investors to develop strategies and make decisions to invest.

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