



THE INFLUENCE OF STOCK OFFERING QUANTITY, MARKET VOLATILITY, OVERSUBSCRIPTION RATIO AND LEVERAGE ON INITIAL RETURN

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Abstract:

This study aims to analyze the Effect of Stock Offering Quantity, Market Volatility, Oversubscription Ratio, and Leverage. The sample of this study was 145 companies listed on the Indonesia Stock Exchange. Sampling was done by purposive sampling. This study uses a quantitative approach using the Eviews 12 Application. The analysis technique used is multiple linear regression, with a research sample of 135 companies. The data used in this study are secondary data obtained from the Indonesia Stock Exchange website. The data in this study include Cross-Sectional data. The analysis techniques used in this study consist of classical assumption tests (Normality Test, Multicollinearity Test and Heteroscedasticity Test), multiple linear regression analysis, t-statistical test, statistical test, and R² statistical test. All of these tests have passed all problems. Based on data analysis, the results of the study indicate that Stock Offering Quantity, Oversubscription Ratio, and Leverage do not have a significant effect on Initial Return. While Market Volatility has a significant effect on Initial Return. The results of this study emphasize the importance of market volatility as a major factor affecting initial returns on initial public offerings, so issuers and investors need to pay more attention to market conditions when making decisions. This finding also encourages regulators to increase supervision of market stability to protect investor interests.

Keywords: Stock Offering Quantity, Market Volatility, Oversubscription Ratio, Leverage, Debt to Asset Ratio, Initial Return.

BACKGROUND

Business development in Indonesia is currently very fast and the competition is also getting tighter. All companies want to develop and grow. As a result, companies will carry out various strategies to be able to develop and even survive in a very competitive environment, one of which is their funding strategy. A company or business entity definitely needs funding or capital to operate. Companies must raise funds to achieve the expected growth and progress. The more the business grows, the more funds are needed. Therefore, the need for additional company funds is a problem that will never disappear from all its operational activities.

Business can be a solution to the problem from internal or external funds. However, the company's internal funds from retained earnings are often insufficient to solve it. So, the company will look for other sources of funds, namely external companies that come from the use of bank debt, issuance of debt securities, and financing in the form of shares.

One way for a company to obtain additional capital is by becoming a public company, namely by selling its shares through the Indonesia Stock Exchange (IDX), then the company will become a public company and become part of the capital market in Indonesia. Issuers and investors can invest their excess funds in the form of securities. Both in the form of shares and bonds and provide an attractive rate of return (Rahma et al., 2024). Stocks and bonds are two different investment instruments, where stocks represent ownership in a company and entitle the holder to receive dividends and participate in company decisions, while bonds are debt instruments issued by companies or governments that provide a fixed return to the holder for a certain period of time, without providing ownership rights in the entity.



If a company wants to be part of the capital market on the Indonesia Stock Exchange, the company must become a public company. According to the guidelines published on the Indonesia Stock Exchange website, a company that goes public is a company whose status has changed from previously having the status of a private company to now having the status of a public company. This means that the company sells and offers some of its shares to the general public (investors) and has an obligation to provide information about the company they manage transparently to the public.

The Indonesia Stock Exchange (IDX) plays an important role as a means for companies to obtain funds from external parties. By conducting an initial public offering (IPO), companies can sell their shares to the public, so they can raise the capital needed for various purposes, such as expanding their business, developing products, or investing in new technologies. Access to this capital market not only increases the company's liquidity but also strengthens its financial condition.

In addition, obtaining funds through the IDX also serves to help companies maintain their operational continuity. When companies face financial challenges or difficulties in the market, additional capital from investors can be used to cover operational costs, pay debts, or even restructure. Thus, the existence of the IDX is very important in preventing companies from possible bankruptcy. Furthermore, the success of companies in attracting investment through the IDX can improve the company's reputation and image in the eyes of the public and investors. This has the potential to have a positive impact on consumer and business partner trust, which can ultimately increase sales and profitability. When a company is able to show stable growth and good performance after being listed on the stock exchange, this will attract more investors to invest in the future.

Thus, BEI is not just a place to transact shares, but also a strategic platform that offers various opportunities for companies to grow and develop. Through wider access to capital and support from investors, companies have a greater chance of achieving their long-term goals and reducing the risk of bankruptcy that can harm all parties involved.

The development of public companies listed on the Indonesia Stock Exchange (IDX) from 2010 to 2022 shows strong and stable dynamics. According to OJK statistics published on their website, the number of issuers listed on the IDX increased significantly during this period. In 2010, there were 234 listed issuers, while in 2023, the number increased to 903 issuers. This shows that investors and market players are starting to believe more in the potential for Indonesia's economic growth and want to participate directly in the national capital flow. This is contradictory to the very rapid increase in the number of issuers because in 2020 to 2022 the world was hit by the Covid-19 pandemic which has the potential to harm companies.

Covid-19 which has attacked many countries in the world has not only affected the health sector, but also attacked the business sector. The Covid-19 pandemic has also shocked the public, especially companies that are a threat to the survival of the company because it can kill the operations of a company in terms of company income or other aspects that can cause the bankruptcy of the company.

Reported from Liputan6, the Ministry of Manpower (Kemnaker) noted that 72,983 employees had become victims of Termination of Employment (PHK) due to the Covid-19 pandemic. Another consequence of the Covid-19 pandemic is the implementation of the Lockdown system and others, which have caused a very severe economic shock that has hit companies in Indonesia. The Covid-19 pandemic has also shocked the public, especially companies that are a threat to the survival of the company because it can kill the operations of a company in terms of company income or other aspects that can cause the bankruptcy of the



company.

However, there are still companies that want to or have just implemented an IPO (Initial Public Offering) in 2020 to 2022 which should be logically thought, the pandemic that attacks companies has a high potential to cause a company to go bankrupt but is inversely proportional to the facts that have occurred, and continued with the growth of IPOs in 2023 and is quite large.

According to Zulmariadi (2017) The benefit of this IPO is to provide long-term funding access to the company. The capital market will obtain capital in increasing the company's working capital which is useful for regulating the development of the issuer, by going public it can increase the equity value of the issuer, so that the issuer has a maximum capital investment system.

Companies that will go public must undergo an initial public offering (IPO). During this period, companies conducting an initial public offering will start offering their shares on the primary market for the first time and then the shares that have been issued will be traded on the secondary market because the offering has reached a certain target. Investors who want to invest in a company conducting an Initial Public Offering (IPO) need to make an order first. After the order period is over, the company will allocate and distribute its shares fairly according to the number of shares that have been offered.

One of the interesting phenomena that has become a topic of discussion for researchers in the capital market sector is the difference between the closing prices on the first day of trading and the offer price divided by the offer price or often referred to as the initial return. (Kelen, 2022). According to Gautama et al. (2022), the initial return occurs when the shares are traded on the secondary market on the first day where the share price increases compared to the purchase price on the primary market.

There is a condition where the share price on the first day on the stock exchange is higher than the price on the primary market, so there is a positive initial return and the shares are said to be underpriced. (Kelen, 2022). This condition indicates that the stock price offered in the primary market is lower than its intrinsic value, so that investors, especially those who do not obtain the shares according to their demand in the primary market, are willing to buy them at a higher price in the secondary market, while there are some other investors who are willing to sell their shares at a higher price with the intention of immediately realizing profits in the form of capital gains. Conversely, if the stock price on the first day on the stock exchange is lower than the price in the primary market, a negative initial return occurs and the shares are said to be overpriced.

In general, companies as parties issuing shares do not want a Positive initial return because the capital received by the company during the public offering is not optimal. On the other hand, investors benefit by obtaining Initial returns. Obtaining Initial returns means that investors receive abnormal returns through IPOs that only occur in a short time and are not prolonged. This means that investors who buy shares some time after the IPO announcement will no longer get abnormal returns, because the price of the securities has reached a new equilibrium.

Investors need information about the company as a basis for analysis for their investment decisions. Sometimes the source of information about IPO companies is limited to only the prospectus issued by the company, making it more difficult for investors to assess the actual level of profit and risk of IPO shares. This information will certainly affect investment decisions by investors to buy shares offered by the company to the public for the first time and also affect the Initial return that will be received by investors.

Many researchers have analyzed various factors that can affect Initial Return in the



context of Initial Public Offering (IPO). The information contained in the IPO prospectus can be categorized into two types of factors, namely factors related to trading performance in the capital market and financial performance. Factors related to trading performance in the IPO prospectus refer to elements originating from the company's external environment that can affect investment decisions and the results of the initial public offering. One important aspect that is often analyzed is the quantity of stock offerings, which refers to the total number of shares offered to investors at the time of the IPO. This quantity of offering is crucial because it can reflect the level of market interest and demand for the company's shares in question. According to Darpius et al. (2019), Putri & Asandimitra (2014), Nalurita (2017) and Sari & Nidya (2020) found that the quantity of stock offerings has a negative effect on Initial Return. Thus, it can be concluded that this factor does not have a significant impact on the Initial Return during the initial public offering. The size of the stock offering is the number of shares offered by the company to the public. This indicates how much ownership portion will be controlled by the public. The greater the shares offered to the public, the less private company information will be. The implication can be concluded that the greater the percentage of stock offerings offered to the public will have an impact on the smaller underpricing that occurs in the company, thus affecting the Initial Return (Darpius et al., 2019). This research is directly proportional to the research of Mahirun et al., (2023) and inversely proportional to the research of Instinct, (2017).

Next, there are external factors that affect the Initial return, namely information about the company's opportunities to gain profit, as an indicator of the risk of price fluctuations of a company's assets and helping investors in planning a protection strategy for the shares they want to buy, namely market volatility. Market volatility is an indicator as an investor's consideration when evaluating an investment. High volatility is a price that rises high quickly and then suddenly drops quickly too. Basically, volatility or market turmoil has a role in investment returns causing a high influence on Initial return (Romli et al., 2017). The results of this study are directly proportional to the research Wisudanto et al. (2021), Yolanda et al. (2022) and Amalia & Sunarso (2022). But some of the above tests are actually the opposite of the research by Soeroto et al. (2021) which revealed the results that market volatility did not affect *Initial return* because investors in Indonesia make investment decisions without considering market uncertainty. Investment returns will increase in the long term if investors pay more attention and analyze changes in stock prices in the market.

Empirical results show that the higher the Volatility, the higher the profit obtained. But this theory does not necessarily have an effect if the conditions at that time are experiencing the Covid-19 Pandemic where the economic shock is very severe and even lowers the economic conditions of each country.

Various other external factors that affect Initial Return have become the focus of researchers' attention besides the quantity of stock offerings, one of which is the oversubscription ratio. The oversubscription ratio is a phenomenon that arises as a public response to a stock offered by a company. The oversubscription ratio reflects the value of excess demand for shares from the amount offered by the company in the primary market. This ratio is identical to the indicator of a company's success in implementing an IPO.

There are companies that have excess demand ahead of the IPO. When viewed from the IPO price value, industrial stocks are very low or underpriced and there is information leakage, so this will cause a large oversubscription. On the other hand, a very large offering price will trigger the failure of the IPO process (underpricing) so that the oversubscription ratio shows a positive effect on Initial return (Haniifah & Hartati, 2021). This is in line with research Long & Sundarasan (2015), Sulistyowati (2020) and Nadila (2021) found that the



oversubscription ratio has a positive effect on initial returns. However, from the research of Hanifah et al. (2022) it was revealed that investors assume that a high oversubscription ratio does not necessarily provide greater returns in the future and this makes investors less interested in a company's oversubscription ratio and more interested in considering other ratios. In this case, it means that investors do not consider the oversubscription ratio as a signal that can be used as a basis for decision making in investing. In the study Farida & Yusriyati (2023) also showed that the oversubscription ratio has no effect on initial returns. It is said that the higher the investor demand for shares of the company that is IPO, the more there is no object indicating that investors have great confidence in the shares.

However, in Indonesia, research on the oversubscription ratio on initial returns is still relatively limited and there has been no recent research, so the author will re-examine this factor using objects on the IDX.

Researchers have also analyzed factors that influence Initial return other than external factors (Quantity of stock offerings, Oversubscription ratio and Market volatility) namely there are internal factors in the IPO prospectus. Internal factors in the IPO prospectus refer to elements originating from within the company that can affect the results of the initial public offering, one of which is leverage. Leverage is an indicator that shows the company's ability to pay its debts with the assets it owns. If leverage is high, it indicates a high risk of a company (Sinaga, 2020).

The results of research on leverage and the factors that influence it still produce different findings. As research by Kuncara & Astuti (2024) leverage is a measure that shows the extent to which debt and preferred stock are used in a company's capital structure. A company's leverage will affect earnings per share, risk level, and stock price. Financial leverage is a measure that shows the extent to which fixed-income securities (debt and preferred stock) are used in a company's capital structure (Brigham and Joel, 2001:14). Meanwhile, according to Horne and John (2013:138), financial leverage is related to the existence of fixed financing costs, especially debt interest. The high risk reflected in the DAR (Debt to Asset Ratio) causes investors to consider investing and choose not to give a high price to the initial shares. In the research of Darpius et al. (2019), Sinaga (2020), Nadila (2021), Sari & Nidya (2020) and Rofika et al. (2024) stated that Leverage affects Initial Return. However, in the research of Yandes (2013), Mahirun et al. (2023), Mentari (2024), Nadia & Daud (2017), Morina & Rahim (2020), Pradnyadevi & Suardikha (2020) and Putri et al. (2024) stated that leverage has a negative effect on Initial Return.

In this study, the author will focus on the Quantity of Stock Offerings, Oversubscription Ratio, Market Volatility and Leverage. The period of the year used by the researcher is the most recent period, namely 2021 - 2023. The observation year was chosen because in that year the Covid-19 Pandemic occurred which should have caused the capital market to collapse because work and other operational activities were disrupted, but instead there was a surge in investors in the capital market which was inversely proportional to the conditions at that time.

In this study, the researcher also found a research gap (Research Gap) in this study that can be identified. The first Research Gap is that there has been no research that combines the quantity of stock offerings and market volatility as independent variables with the oversubscription ratio and leverage in the context of IPOs in Indonesia. The second Research Gap is that there has been no research that combines the 2021 - 2023 period for research related to IPOs in Indonesia which is marked by market turmoil during the pandemic to after the Covid-19 pandemic.

THEORETICAL FRAMEWORK



Signaling Theory

Signaling Theory was first introduced by Michael Spence in 1973, and won the Nobel Prize in 2001 for the theory of market signals. Signaling Theory is information about a company that gives a signal to investors, in investment decisions. The signal can be in the form of financial and non-financial information that states that the company is better than other companies. Investors who will invest in the capital market will definitely do an analysis first before making an investment decision. In this context, the signals sent by the company can affect the Initial Return level, which is the difference between the IPO price and the closing price of the shares on the first day of trading in the secondary market.

According to Gennusi & Maharani (Ningsih & Maharani, 2022) signal theory is a company that provides a signal containing information about the company's opportunities to the market. Managers usually use this information to signal to shareholders that the company has an advantage over other companies. Shareholders see this signal as an opportunity for the company to have better funding that is used to improve their welfare. "Signaling theory" is very useful for shareholders because they can get information through signals announced by managers in the market.

Signal theory emerged to overcome information asymmetry, where in 1970 there was a theory of information asymmetry put forward by George Akerlof. The theory of information asymmetry states that there is an information gap between sellers and buyers which can result in market failure (MR Putri et al., 2024). Signal Theory is a theory that shows how economic behavior is influenced by information and communication. Signal theory can be interpreted as a sign, and in this context it is a sign from management to investors regarding the company's prospects. This includes the principles of what the company can and has disclosed to external parties, for example, shareholders.

Asymmetry or knowledge gap between internal and external parties is the basis for information transmission (Bergh et al, 2014). This is because of course the company's management has more information related to the company's prospects than external parties. So it can be said that to reduce information asymmetry, information producers are given information signals to external parties with the belief that financial reports provide a reflection or picture of the company's future.

From the explanation above, it can be concluded that the Signaling Theory provides a useful framework for understanding how information conveyed by companies affects investor behavior and market dynamics. By understanding this theory, investors can better assess the signals given by companies and make more informed investment decisions.

Initial Public Offering (IPO)

Initial Public Offering (IPO) comes from English which means Initial Public Offering. The term IPO is a stock offering in the primary market carried out by a company that wants to go public (Jogiyanto, 2015). A public offering is an activity carried out by a company to obtain funds from investors by selling shares or bonds. Public Offerings are also often known as going public. Companies that need funds can issue securities such as stocks, bonds, and other securities. The newly sold securities can be in the form of an initial public offering (IPO) or additional new securities if the company has gone public (Ifani et al, 2022).

Initial public offering(IPO) is the activity of offering shares or other securities by issuers (companies that will go public) in order to sell shares or securities for the first time to the general public or public investors (Hanifah et al., 2022). Then in another study it was revealed that Initial Public Offering (IPO) is an activity of offering shares or other securities (bonds, rights, warrants) in the primary market. The initial public offering transaction is offered



in the primary market, then the shares are traded on the stock exchange, namely in the secondary market (Darpius et al., 2019).

The primary market is a market where the purchase of shares from a company (issuer) by investors occurs for the first time. IPO is a turning point for a company from private status to a public company (Mamduh, 2013). At this time, for the first time the public has the opportunity to own shares in a public company. So it can be concluded that IPO is an activity of offering new shares sold to the public through the stock exchange, where the new shares are marketed on the capital market. Through the capital market, companies can raise funds to develop business plans, in other words, by conducting an IPO, companies can raise funds for the benefit of the company in terms of funding and others.

Initial Return

Initial return is the return obtained from assets in the initial offering from the time they are purchased on the primary market until they are first listed on the secondary market (Djaelani et al., 2022). According to Hermunigsih (2014), Initial return is the profit received by investors which comes from the difference between the initial price of a share and the price at the time in the secondary market. Then according to Wulandari (2016), Initial return is the difference between the IPO price and the price when the shares are listed on the stock exchange. Initial return is the difference between the closing share price on the first day of stock trading (closing price) on the secondary market and the share price when conducting an IPO (Sunandes & Fatluloh, 2019).

By obtaining it Initial return, then it shows that there has been a Positive Initial return. Positive Initial return causes losses for the company because the funds obtained by the company at the time of the IPO are not optimal, but it benefits investors because with the occurrence of a Positive Initial return, investors will get an Initial return (Kurnia et al., 2022).

Stock Offering Quantity

The quantity of stock offering is the number of shares at the time of the IPO offered by the company to the public. In other words, it shows how much portion of ownership will be controlled by the public. This information can usually be found in the prospectus issued by the company at the time of the IPO.

Based on Signaling Theory, information about how many shares will be sold during an IPO provides a signal in the form of information to investors as a basis for consideration in investing, because the greater the amount offered to the public, the less information the company keeps secret. The less information the company keeps secret, it is hoped that investors will get more information about the company so that it will reduce uncertainty about the company and ultimately reduce underpricing. In the research of Darpius et al. (2019), Putri and Asandimitra (2014), Nalurita (2017) and Sari & Nidya (2020) found that the quantity of stock offerings had a negative effect on initial returns. However, in the research of Mahirun et al. (2023) revealed that the Quantity of Stock Offerings has a positive effect on Initial Return.

H1: The quantity of stock offerings affects initial returns.

Market Volatility

According to Juanda & Junaidi (2012) Volatility comes from the basic word volatile, which refers to conditions that have unstable connotations, tend to vary, and are difficult to



predict. According to Firmansyah (2006), volatility is a statistical measurement of price fluctuations of a security or commodity during a certain period. Given that volatility can be represented by standard deviation. The higher the level of volatility, the higher the level of uncertainty of the stock returns that can be obtained.

Market volatility is the fluctuation of stock movements seen with the standard deviation that investors are likely to face in stock trading. Market volatility can be measured using the annual distance from the highest to the lowest stock price per month then divided by the average of the highest and lowest company stock prices. When the market experiences high volatility, investors may be more careful in making investment decisions, which can result in a decrease in demand for newly issued shares. Given that volatility can be represented by standard deviation. The higher the level of volatility, the higher the level of uncertainty of the stock returns that can be obtained.

This often results in lower initial returns compared to stable market conditions. In the study of Soeroto et al. (2021) found that market volatility has no effect on initial returns. However, in the studies of Wisudanto et al. (2021), Yolanda et al. (2022) and Amalia & Sunarso (2022) revealed that Market Volatility has a positive effect on Initial Return. From several studies above, it is explained that Market Volatility has an effect because high levels of uncertainty can affect investment decisions, thereby affecting Initial Return.

H2: Market volatility affects initial return.

Oversubscription Ratio

Stock price volatility describes changes in the closing price of a stock or a stock index that occur during a certain observation period. Changing closing prices of stocks can occur due to internal and external factors (Ajireswara, 2014).

Internal factors causing closing price fluctuations are related to the company issuing the shares concerned, for example changes in the company's profit level. In addition, there are also dividend policies, strategic and operational announcements, company issues or scandals and stock liquidity. Then we can also see from external factors that occur, such as shocks that occur in foreign stock markets, macroeconomic factors such as exchange rates and interest rates, as well as issues that are developing in the stock market itself, political and geopolitical events and natural disasters and global crises. The oversubscription ratio is calculated by comparing the number of requests for shares in an IPO with the number of shares offered.

The high oversubscription ratio indicates high investor interest. If the oversubscription ratio is high, it can indicate positive investor expectations for the stock, so that the stock price can rise higher on the first day of trading, resulting in a higher initial return. According to research by Haniifah and Hartati (2021), Long & Sundarasan (2015), Sulistyowati (2020) and Nadila (2021), it was found that the oversubscription ratio has a positive effect on initial returns.

However, the research results of Farida & Yusriyati (2023) show that the oversubscription ratio has no effect on initial returns. It is said that the higher the investor demand for shares of an IPO company, the more there is no object indicating that investors have great confidence in the shares. In other words, the increasing demand for shares of an IPO company does not cause an increase in the initial return that will be received by shareholders. So the research hypothesis that will be proposed:

H3: Oversubscription ratio has an effect on initial return.



Leverage

According to Puspita (2016) stated that investors in making investment decisions, of course, will consider leverage information so as to avoid overestimating the initial stock price which causes a positive initial return. Leverage is defined as a tool to measure how much an organization is funded by obligations. Leverage can also be used to determine the level of dependence of a company's funding on creditors. Companies with high leverage have greater interest and principal payment obligations, which can be a financial burden, especially when economic conditions are less favorable or company performance declines. Investors will look at the leverage ratio to assess the company's ability to meet its financial obligations.

Leverage which is studied from several previous studies formulated with DER (Debt to Equity Ratio) by dividing Total Liabilities by Total Equity. But there are also those who formulate with DAR (Debt to Asset Ratio) by dividing Total Liabilities by Total Assets. Leverage in this study is measured using the Debt to Asset Ratio (DAR) with the ratio of total debt to total assets. In the research of Darpius et al. (2019), Sinaga (2020), Nadila (2021), Sari & Nidya (2020) and Rofika et al. (2024) stated that Leverage affects Initial Return. But in the research of Yandes (2013), Mahirun et al. (2023), Mentari (2024), Nadia & Daud (2017), Morina & Rahim (2020), Pradnyadevi & Suardikha (2020) and Putri et al. (2024) stated that leverage has a negative influence on Initial Return.

H4: Leverage has an effect on initial return.

METHOD

This study was conducted to analyze the influence of Stock Offering Quantity, Market Volatility, Oversubscription Ratio and Leverage on Initial Returns in Companies undergoing IPOs in the period 2021 - 2023. This study uses secondary data based on all data listed on the official website of the Indonesia Stock Exchange (IDX), namely www.idx.co.id, company financial reports, and publications from other trusted sources related to the Indonesian capital market. This study includes Cross Section data and uses multiple linear regression analysis methods. The sample in this study were companies that conducted IPOs in the 2021 - 2023 period, namely 145 companies. However, the final data used in the study became 135 companies because when the Normality test was carried out using a sample of 145 companies, the data was not normally distributed so that a method was needed so that the data was normally distributed, namely by using Outliers.

Initial Return

Initial Return is the profit received by investors from the difference between the initial price of a stock and the price at the time in the secondary market. The reason for using the formula from previous researchers is that it allows to obtain realistic and representative figures from the increase or decrease in stock prices, provides a comprehensive picture of how stocks react to their initial offerings in the market, and provides a relevant indicator of how investors assess the potential profit from new stock investments (Pahlevi, 2014). The following is the Initial Return formula according to (Haymans, 2013; Rahma et al., 2024; Setiyono & Wisnu, 2024; Mahirun et al., 2023; Pangestuti, 2022; Soeroto et al., 2021; Sinaga, 2020; Darpius et al., 2019; Pahlevi, 2014; Djaelani et al., 2022; Mentari, 2024):

$$IR = \frac{CP - OP}{OP}$$



Where :

IR :initial return

CP :closing price or the closing price of the first day the stock is traded on the secondary market

OP :offer price or initial offering price

Stock Offering Quantity

The quantity of stock offering is the number of shares at the time of the IPO offered by the company to the public. The more shares sold to the public, the higher the number of shares that will be purchased by investors or potential investors. The reason for taking the formula from previous research is because it can understand how much influence the offering has on the Company's ownership structure, can show the potential liquidity of newly issued shares, can analyze how investors respond to stock offerings, can function as an indicator of market balance, and provide important information for investors and analysts regarding ownership structure, liquidity, and market response to initial public offerings. The quantity of stock offerings can be measured by returns (Putri & Asandimitra, 2014; Nalurita, 2017; Darpius et al., 2019; Pahlevi, 2014; Rahma et al., 2024):

$$\text{Offer} = \frac{J1 - J0}{J1}$$

Where:

Offer : Quantity of shares offered

J1 : Number of shares owned by the company
(on the first day) IPO

J0 :The number of shares sold to the public in an initial public offering (on the first day of the IPO)

Market Volatility

Market volatility is the fluctuation of stock movements seen with the standard deviation that investors are likely to face in stock trading. The reason for choosing the calculation from Putri's research (2020) is because it can determine how much price variation is experienced by the stock, can provide insight into the stability and sensitivity of stock prices to changes in the macroeconomic environment, provide a more objective picture of the relative performance of each stock by comparing them. This ratio can be calculated using the formula (Putri, 2020;Kuncara & Indriastuti, 2024;Mukmin & Firmansyah, 2015;Romli et al., 2017;Amalia, 2022;Hugida & Sofian, 2013):

$$VP = \frac{\text{Hit} - \text{Lit}}{\frac{(\text{Hit} + \text{Lit})}{2}}$$

Where :

VP : Market volatility

Hit : The highest stock price of company i in period t
(measured on the first day of the IPO running on that day)

Lit : The lowest stock price of company i in period t
(measured on the first day of the IPO running on that day)



Oversubscription Ratio

The Oversubscription Ratio is the excess demand for shares from a number of shares that a company offers to investors in the primary market. The Oversubscription Ratio can be said to be an indicator of the success of an IPO. The reason for choosing the calculation from Tajuddin's research (2018) is because it can measure how much investor demand for the shares offered is compared to the number of shares available, can be an early indicator of stock performance after the IPO and can analyze how effective the company is in attracting investor attention through marketing and communication strategies. The number of shares requested and the number of shares offered are taken on the first day of a company's IPO. This ratio can be calculated using the formula ((Hanifah et al., 2022)Tajuddin, 2018;(Sari et al., 2017);Haniifah & Hartati, 2021;Nadila, 2021;(Sochi & Islam, 2018):

$$\text{Oversubscription Ratio} = \frac{\text{number of shares requested}}{\text{number of shares offered}}$$

Leverage

Leverage in this study is measured by the Debt to Asset Ratio (DAR) which is the company's ability to meet all its debt obligations in comparison to the total assets it owns. The data to be taken comes from a company's Pre-IPO report. The reason for choosing DAR over other ratios is that DAR can provide a broader perspective on the company's financial risk, provide information about the company's dependence on debt, can be more relevant in the context of risk assessment, especially for investors and creditors, and allow for better comparisons between companies in different industries. This ratio can be measured by the formula (Yandes, 2013;Sun, 2024;(Sinaga, 2020):

$$\text{Debt to Asset Ratio (DAR)} = \frac{\text{Total Liabilities}}{\text{Total Asset}}$$

RESULT

Descriptive Statistical Analysis

Descriptive Statistics Results before Outliers

	Y	X1	X2	X3	X4
Mean	0.227156	0.742250	0.049057	1.014921	0.452741
Median	0.248000	0.750000	0.055100	1.012600	0.465500
Maximum	0.350000	0.969100	0.087300	1.035000	0.986200
Minimum	0.006700	0.332500	0.001700	1.009400	0.016400
Std. Dev.	0.119729	0.113917	0.025133	0.006903	0.232175
Skewness	-0.347417	-0.760286	-0.334187	2.069162	0.054924
Kurtosis	1.535368	4.393255	1.545063	5.956024	2.341908
Jarque-Bera	15.87715	25.69703	15.48821	156.2605	2.689457
Probability	0.000357	0.000003	0.000433	0.000000	0.260610
Sum	32.93760	107.6263	7.113200	147.1636	65.64740
Sum Sq. Dev.	2.064245	1.868711	0.090960	0.006862	7.762364
Observations	145	145	145	145	145



Source: Eviews processed data (2025)

Descriptive Statistics Results after Outliers

	Y	X1	X2	X3	X4
Mean	0.227961	0.737260	0.049811	1.014601	0.450699
Median	0.250000	0.750000	0.055600	1.012500	0.464100
Maximum	0.350000	0.969100	0.074500	1.035000	0.986200
Minimum	0.010000	0.332500	0.002500	1.009400	0.016400
Std. Dev.	0.121652	0.114755	0.025083	0.006834	0.230659
Skewness	-0.332086	-0.729384	-0.392380	2.317242	0.056241
Kurtosis	1.461353	4.365659	1.536491	6.914641	2.376265
Jarque-Bera	15.79814	22.46078	15.51210	207.0161	2.259549
Probability	0.000371	0.000013	0.000428	0.000000	0.323106
Sum	30.77470	99.53010	6.724500	136.9711	60.84440
Sum Sq. Dev.	1.983089	1.764622	0.084306	0.006258	7.129249
Observations	135	135	135	135	135

Source: Eviews processed data (2025)

Based on the calculation results obtained in table 4.3, the following results can be obtained:

The dependent variable used in this study is Initial Return which is measured by dividing the IPO price by the first day stock price. From the descriptive statistics table, the Initial Return (Y) of 135 samples has an average (mean) of 22.79% and a median of 25%, with a maximum value of 35% owned by 26 companies, namely:

1. PT. Main Laboratory Diagnosis Tbk
2. PT. Indo Pureco Pratama Tbk
3. PT. Nusa Palapa Gemilang Tbk
4. PT. Trinita Dynamics Tbk
5. PT. Triputra Agro Persada Tbk
6. PT. PAM Mineral Tbk
7. PT. Adaro Minerals Tbk
8. PT. Mitra Angkasa Sejahtera Tbk
9. PT. Nusatama Berkah Tbk
10. PT. Cilacap Samudra Fishing Indonesia Tbk
11. PT. Dewi Shri Farmino Tbk
12. PT. Tera Data Indonesia Tbk
13. PT. National Shipping Ekalya Tbk
14. PT. Black Diamond Resources Tbk
15. PT. Wulandari Bangun Laksana Tbk
16. PT. Primadaya Plasticindo Tbk\
17. PT. Together Zata Jaya Tbk
18. PT. Janu Putra Sejahtera Tbk
19. PT. Lovina Beach Brewery Tbk
20. PT. Sumber Sinergi Makmur Tbk
21. PT. ITSEC Asia Tbk
22. PT. Sarana Mitra Luas Tbk
23. PT. Information Technology Indonesia Tbk
24. PT. Era Digital Media Tbk
25. PT. Gemilangindah Enterprises Tbk
26. PT. Jasa Berdikari Logistics Tbk.



Then at a minimum value of 1% owned by PT.Oscar Mitra Sukses Sejahtera Tbk. The standard deviation value of 12.17% indicates that there is variation in returns between issuers.

For variable Y, the average value is 0.2280, indicating that in general the Y values are around that number. However, the standard deviation of 0.1217 indicates that the Y values are not too tightly concentrated and there is still a significant spread of data around the average.

In contrast to Y, variable X1 has a higher mean, which is 0.7373, but with a relatively similar standard deviation of 0.1148. This indicates that although the center of X1's value is higher, its spread is similar to Y whose values are not too close together, but also not too far apart. The maximum value of X1 is 0.9691 and the minimum value is 0.3330.

It is different with variable X2. The average of X2 is very small, only 0.0499, and its spread is quite narrow, reflected by the standard deviation of only 0.02501. This gives the impression that the values of X2 tend to be clustered close to their average, reflecting the stability of the data in a small value space. The maximum value of variable X2 is 0.0750 and the minimum value is 0.0025.

Then, the variable X3 becomes the most prominent in terms of stability. With an average of 1.0146 and a standard deviation of only 0.0068, it is clear that the values of X3 are highly concentrated around the average. Almost all of the X3 data are at very close points to each other indicating extraordinary stability. For the maximum value of X3 of 1.0350 and the minimum value of 1.0094

In contrast, variable X4 tells a different story. Its average of 0.4507 is quite moderate, but its value spread is the highest among all variables, namely 0.2307. This shows that the values of X4 are quite diverse; some are far above the average, some are far below it. This data character could indicate diversity, or the presence of external factors that influence its values unevenly. The maximum value of X4 is 0.9862 and the minimum value is 0.0164.

Classical Assumption Test

Normality Test

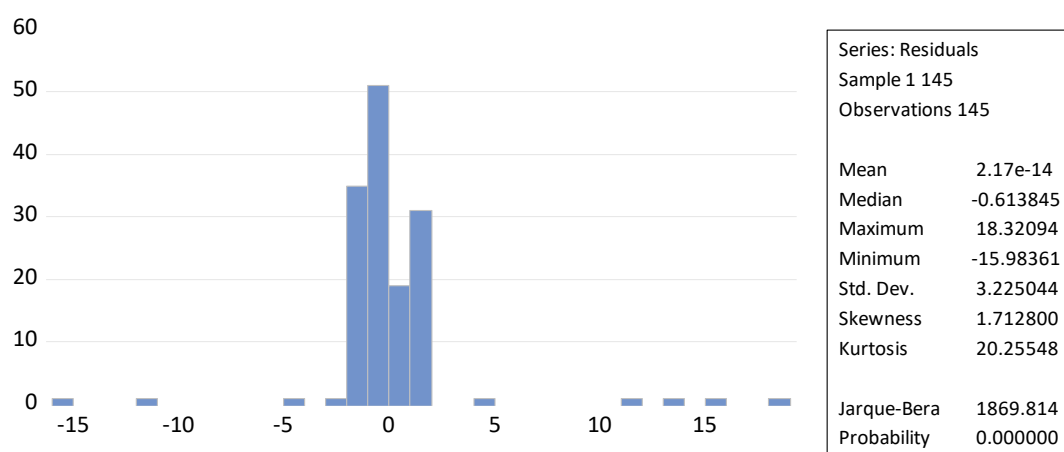


Figure 4.1 Normality Test Results before Outliers

Source: Eviews processed data (2025)

From the results of the Normality Test from the Figure above, the Jaque-Bera value is 1869.814 and the Probability Value is 0.0000. The Probability Value is <0.05 , so it can be concluded that the residual data of this regression is not normally distributed. The regression model is not yet suitable for further analysis. To normalize the data, treatment is needed,



namely deleting outlier data. Outlier data is data that has unique characteristics that look very different from other observations and appear in the form of extreme values (Ghozali, 2017). The way to overcome the abnormal data above according to Anwar Hidayat (2017) is by conducting outlier data. Data that is detected in Eviews will be removed from the research sample in order to produce better normality so that it is suitable for use for further analysis. The author will retest the normality test. The following is the attached data after using the healing method, namely outlier data:

Outlier Data Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.244429	5.888103	-0.720848	0.4723
X1	-0.006321	0.308741	-0.020474	0.9837
X2	484.7469	1.583681	306.0888	0.0000
X3	2.983336	5.810062	0.513477	0.6085
X4	-0.271810	0.153426	-1.771606	0.0788
@ISPERIOD("1")	1.326688	0.418168	3.172620	0.0019
@ISPERIOD("3")	18.93061	0.411249	46.03204	0.0000
@ISPERIOD("4")	-2.475728	0.407981	-6.068250	0.0000
@ISPERIOD("5")	6.253397	0.416932	14.99861	0.0000
@ISPERIOD("6")	19.11185	0.422636	45.22063	0.0000
@ISPERIOD("7")	-16.29705	0.411844	-39.57096	0.0000
@ISPERIOD("8")	-11.88730	0.408159	-29.12423	0.0000
@ISPERIOD("9")	14.45201	0.423539	34.12202	0.0000
@ISPERIOD("10")	15.53815	0.416805	37.27914	0.0000
@ISPERIOD("11")	-3.637600	0.411341	-8.843273	0.0000
R-squared	0.998965	Mean dependent var	22.71557	
Adjusted R-squared	0.998854	S.D. dependent var	11.97290	
S.E. of regression	0.405314	Akaike info criterion	1.129387	
Sum squared resid	21.35631	Schwarz criterion	1.437325	
Log likelihood	-66.88058	Hannan-Quinn criter.	1.254513	
F-statistic	8966.041	Durbin-Watson stat	1.821611	
Prob(F-statistic)	0.000000			

Source: Eviews
(2025)
So it
concluded
details in
research
outlier data
table 4.1
the results of
process, the
found that

processed data
can be
related to the
taking
samples with
attached in
before. From
this healing
researcher
there were 10

samples that were considered outliers, namely in samples number 1, 3, 4, 5, 6, 7, 8, 9, 10 and 11. These outliers have the potential to significantly affect the analysis results and create data distribution inconsistencies. The company data that is outlier is attached in appendix 4.

After deleting outlier the number of samples used in this study became 135 samples. This outlier removal was done to ensure that the data used met the assumptions of the statistical test and produced a more valid and normal analysis. The results of the normality test are as follows:

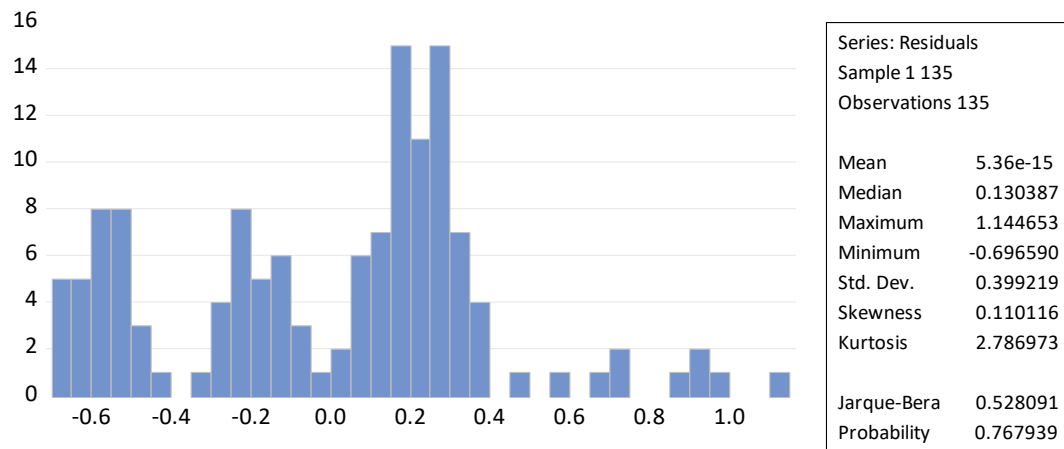


Figure 4.2 Results of Normality Test after Outliers

Source: Eviews processed data (2025)

In Figure 4.2, the Jarque – Bera value can be seen to be 0.528.1 with a Probability value of 0.767939 which can be concluded that this research data is normally distributed, because the Probability value of $0.7679 > 0.05$, it can be concluded that the data is normally distributed.

Multicollinearity Test

Multicollinearity Test Results

Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	34.65736	28480.66	NA
X1	0.095321	43.60209	1.023925
X2	2.506850	6.394955	1.285733
X3	33.74427	28547.21	1.285258
X4	0.023539	4.950880	1.021542

Source: Eviews
(2025)

processed data

Based on the results of the multicollinearity test shown in table 4.5 shows that the Centered VIF value for all independent variables is in a very low range, which is between 1.0215 to 1.2857. In detail, the Quantity of Stock Offerings (X1) has a VIF value of 1.0239, Market Volatility (X2) of 1.2857, Oversubscription Ratio (X3) of 1.2853, and Leverage (X4) of 1.0215. All of these values are far below the general threshold of 10 which is usually used as a benchmark for indications of multicollinearity. Thus, it can be concluded that there are no significant symptoms of multicollinearity between the independent variables in this regression model.

Heteroscedasticity Test

Heteroscedasticity Test Results

Heteroskedasticity Test: ARCH

F-statistic	1.044215	Prob. F(1,132)	0.3087
Obs*R-squared	1.051717	Prob. Chi-Square(1)	0.3051



Source: Eviews processed data (2025)

The test results are shown in Table 4.6, where the F-statistic probability value is 0.3087 and the Chi-Square Prob. (Obs*R-squared) is 0.3051. Both of these probability values are above the 0.05 significance level, which means there is insufficient evidence to reject the null hypothesis (H_0) which states that there is no heteroscedasticity in the model.

Thus, it can be concluded that this regression model has escaped the problem of heteroscedasticity. This means that the variance of the residual tends to be constant and the model can be said to meet the assumption of homoscedasticity. This strengthens the validity of the regression results used in analyzing the effect of Stock Offering Quantity, Market Volatility, Oversubscription Ratio, and Leverage on Initial Return.

Multiple Linear Regression Equation Analysis

Multiple Linear Regression Estimation Results

Dependent Variable: Y
Method: Least Squares
Included observations: 135

		Variable	Coefficient	Std. Error	t-Statistic	Prob.		
Source: processed data Table 4.7 multiple		C	-4.248977	5.887050	-0.721750	0.4717	Eviews (2025) Based on above, a linear	
		X1	-0.006286	0.308741	-0.020359	0.9838		
		X2	484.7467	1.583304	306.1616	0.0000		
		X3	2.987810	5.808982	0.514343	0.6079		
		X4	-0.271816	0.153423	-1.771676	0.0788		

$$Y = -4.2489 - 0.0062X_1 + 484.747X_2 + 2.9878X_3 - 0.2718X_4 + e$$

regression equation is formed, namely as follows:

From the results of the equation above, it can be interpreted as follows:

1. The constant value (C) is -4.2489, which is the initial value of Y if all factors (X_1 to X_4) are zero.
2. X_1 Coefficient Value which has a value of -0.0062 means that for every increase of one, the Y value will decrease by 0.0062, thus meaning that X_1 (Quantity of Share Offering) has a negative effect on Y (Initial Return).
3. The X_2 coefficient value of 484.7476 means that for every one increase in X_2 , Y will increase by 484.7476, thus meaning that X_2 (Market Volatility) has a positive effect on Y (Initial Return).
4. The value of the X_3 coefficient is 2.9878 means that for every one increase in X_3 , Y will increase by 2.9878, so it means that X_3 (Oversubscription Ratio) has a positive effect on Y (Initial Return).
5. The value of the X_4 coefficient is -0.2718 means that for every one increase in X_4 , Y will decrease by -0.2718, thus meaning that X_4 (Leverage) has a negative effect on Y (Initial Return).

Hypothesis Testing

Partial Significance Test Results (t-Test)



Dependent Variable: Y
Method: Least Squares
Included observations: 135

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.248977	5.887050	-0.721750	0.4717
X1	-0.006286	0.308741	-0.020359	0.9838
X2	484.7467	1.583304	306.1616	0.0000
X3	2.987810	5.808982	0.514343	0.6079
X4	-0.271816	0.153423	-1.771676	0.0788

Source:

Eviews

processed data (2025)

Based on the results of the Partial Significance Test attached to table, variable X1 namely Stock Offering Quantity has a probability value of $0.9838 > 0.05$ so it can be concluded that H1 is rejected. So Stock Offering Quantity has no effect on Initial Return.

Next, there is X2, namely Market Volatility, which is reviewed from the probability value of $0.0000 < 0.05$, it can be interpreted that H2 is accepted. So Market Volatility has an effect on Initial Return.

Next, there is X3, namely the Oversubscription Ratio, which is reviewed from the probability value of $0.6079 > 0.05$ so that it can be concluded that H3 is rejected, so the Oversubscription Ratio has no effect on Initial Return.

In addition, there is X4, namely Leverage, which is reviewed from the probability value of $0.0788 > 0.05$ so it can be concluded that H4 is rejected. So Leverage has no effect on Initial Return.

Model Feasibility Test Results (F-Test)

Model Feasibility Test Results

Source: Eviews (2025) Based using	R-squared	0.998923	Mean dependent var	22.79606	processed data on table 4.8 multiple
	Adjusted R-squared	0.998890	S.D. dependent var	12.16519	
	S.E. of regression	0.405314	Akaike info criterion	1.068024	
	Sum squared resid	21.35631	Schwarz criterion	1.175627	
	Log likelihood	-67.09161	Hannan-Quinn criter.	1.111751	
	F-statistic	30146.12	Durbin-Watson stat	1.819024	
	Prob(F-statistic)	0.000000			
	linear regression estimation for this study. This F test is used to test the overall significance of the regression model. This result has a probability F value of 0.0000 which indicates that at least one or more of the variables have a joint effect on the dependent variable. The interpretation is that the multiple linear regression model is considered significant or feasible to use.				

Determination Coefficient Test (R2 - Test)

R-squared	0.998923	Mean dependent var	22.79606
Adjusted R-squared	0.998890	S.D. dependent var	12.16519
S.E. of regression	0.405314	Akaike info criterion	1.068024
Sum squared resid	21.35631	Schwarz criterion	1.175627
Log likelihood	-67.09161	Hannan-Quinn criter.	1.111751
F-statistic	30146.12	Durbin-Watson stat	1.819024
Prob(F-statistic)	0.000000		



Source: Eviews processed data (2025)

In the results of the determination coefficient test attached in table 4.8, it can be concluded that this study can be seen from the Adjusted R-squared value in table 4.8, the value is 0.998890, which shows that the variation of Initial Return can be explained by the Quantity of Stock Offerings, Market Volatility, Oversubscription Ratio and Leverage of 99.89%, as a result the remaining 0.11% is influenced by other independent variables outside this research model.

DISCUSSION

The Influence of Stock Offering Quantity on Initial Return

Based on the research results, it was found that the quantity of stock offerings (X1) did not affect the initial return (Y) in companies conducting initial public offerings (IPOs) in the 2021–2023 period. This means that the quantity of stock offerings does not affect the initial return. This means that changes in the number of shares offered do not have a significant impact on the amount of initial return obtained by investors on the first day of trading.

Thus, although the effect of the quantity of stock offerings on initial returns is not statistically significant, the direction of this negative relationship is still important for companies and market players to consider. This finding suggests that the decision regarding the number of shares to be offered in an IPO not only impacts the amount of funds raised, but can also affect the attractiveness of the stock in the eyes of investors and the potential return on the first day of trading (Darpius et al., 2019). The results of the test of the effect of the quantity of stock offerings on initial returns are in line with previous studies, namely from Darpius et al. (2019), Putri & Asandimitra (2014), Nalurita (2017) and Sari & Nidya (2020).

The Influence of Market Volatility on Initial Return

From the results of this study, it was found that the market volatility variable (X2) has a positive and significant effect on initial returns. This means that the higher the level of volatility or price fluctuations in the market during the IPO, the higher the possibility of a large initial return on the first day of stock trading. In the world of investment, volatile market conditions are generally interpreted as a situation full of uncertainty. However, on the other hand, volatility is also an indicator of the potential for sharp price movements in a short time, either up or down.

Thus, it can be concluded that market volatility is one of the important factors that drives initial returns in IPOs. This finding is in line with the theory and research results of Wisudanto et al. (2021), Yolanda et al. (2022), Long & Sundarasan (2015), Natalia et al. (2022), Amalia & Sunarso (2022) and Jati & Indriastuti (2024) which state that fluctuating market conditions tend to increase profit expectations, which ultimately affect investor behavior in making investment decisions during an IPO.

The Influence of Oversubscription Ratio on Initial Return

Based on the results of this study, it is known that the oversubscription ratio (X3) does not affect the initial return (Y). This means that in general there is a tendency that the higher the level of oversubscription of an IPO stock, the greater the initial return that may occur. Although this effect is statistically insignificant, the positive direction of the relationship still provides an interesting picture of market behavior and investor response to IPOs.



Overall, although not statistically significant, these findings still indicate that high investor interest in IPO stocks, as reflected in the oversubscription ratio, tends to drive higher initial returns. This confirms the importance of the role of market sentiment and enthusiasm in influencing investment results at the beginning of initial stock trading. These findings are in line with previous studies by Haniifah and Hartati (2021), Long & Sundarasan (2015), Sulistyowati (2020), Sochi & Islam (2018), Nadila & Hayati (2022) and Nadila (2021).

The Influence of Leverage on Initial Return

The results of the study showed that leverage (X4) has no effect on initial return (Y) in companies conducting IPOs during the 2021 – 2023 period. This means that statistically, the effect of leverage on initial return is not strong enough to be categorized as significant. However, the direction of this negative relationship provides an illustration that the higher the leverage level of a company, the lower the initial return received by investors when the shares start trading.

Although the effect is not statistically significant, this finding is still relevant as a consideration in determining IPO strategy and corporate communication to potential investors. Maintaining a balanced capital structure between debt and equity can help create a positive perception and increase the attractiveness of shares in the market (Mentari, 2024). This is important because investor expectations of company fundamentals are one of the keys to creating profitable initial returns. This finding is in line with research from Yandes (2013), Mahirun et al. (2023), Mentari (2024), Nadia & Daud (2017), Morina & Rahim (2020), Pradnyadevi & Suardikha (2020) and Putri et al. (2024).

CONCLUSION

This study aims to examine the relationship between dependent variables and independent variables. The dependent variable analyzed is the Initial Return of companies conducting IPOs in the period 2021 - 2023. Meanwhile, the independent variables consist of Stock Offering Quantity, Market Volatility, Oversubscription Ratio and Leverage. The data used comes from the IPO prospectus of companies listed on the IDX in the period 2021 - 2023. This data is included in the Cross Section data. Sampling was carried out using the purposive sampling technique method, and the analysis was carried out using multiple linear regression with Eviews 12 software. Based on the results of the hypothesis test in this study, it can be concluded that:

1. The quantity of shares offered does not have a statistically significant effect on initial returns.
2. Market volatility has a positive and significant influence on initial return. This indicates that volatile market conditions tend to increase investor interest in IPO shares and encourage underpricing.
3. Oversubscription ratio does not affect the initial return, but this indicates that although in general the high investor interest in IPO shares (as reflected in the high oversubscription ratio tends to be associated with underpricing, in the context of this study, this relationship is not strong enough to be considered significant.
4. Leverage does not affect the initial return. This suggests that investors tend to be more cautious about IPO shares from companies with high debt levels, as they are considered to contain greater risk.



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