



Media, Market Sentiment and Startups IPO: Study of Initial Return in Indonesia Stock Market

Meliana*, Yunieta Anny Nainggolan

Faculty, School of Business and Management, Bandung Institute of Technology, Bandung
Jl. Gelas Nyawang No.1, Lb. Siliwangi, Kecamatan Coblong, Kota Bandung, Jawa Barat, Indonesia

Email: ^{1,*}meliana_mba66@sbm-itb.ac.id, ²yunieta@sbm-itb.ac.id

Correspondence Author Email: meliana_mba66@sbm-itb.ac.id

Submitted: 07/07/2023; Accepted: 07/08/2023; Published: 15/08/2023

Abstract—This study seeks to investigate the impact of media and market sentiment on IPO initial returns in the Indonesian Stock Exchange from 2017 to 2022. With a prevalent occurrence of low IPO offering prices, initial price jumps on the first day of trading, and subsequent long-term price drops demands a robust explanation. While numerous studies have examined the impact of firm's internal factors on IPO performance, these studies primarily concentrated on firm-level issues. By incorporating startups' dummy variable, we have placed particular emphasis on exploring the impact of the increasing number of startup firms' IPOs on the initial return. Given the increasing proliferation of IPOs among firms, our study aims to delve into their impact on initial returns by incorporating a dummy variable into our analysis, focusing on how these particular firms influence the initial return dynamics. Multiple linear regression analysis are used, with control variables namely pre-IPO financial performances, Underwriter reputation dummy and COVID-19 Year dummy. Results show the level of pre-IPO media coverage and herd behavior level have a significant effect on initial return, while 30 days pre-IPO market volatility negatively affects initial return. However, 30 days pre-IPO investor sentiment has a positive but non-significant impact. Additionally, the result reveals that the startup IPOs tend to have higher initial return, reflected by a positive and significant relationship with the initial return. Future research endeavours can expand the scope by conducting similar analyses across multiple countries, such as those within the ASEAN region or other developing nations with comparable characteristics in their capital markets to Indonesia. This broader approach would provide valuable insights into the IPO dynamics within a wider context

Keywords: Initial Public Offering; Initial Return; Media Sentiment; Investor Sentiment; Market Volatility; Herd Behaviour; Start-up IPOs

1. INTRODUCTION

Over the past five years, the Indonesia Stock Exchange (IDX) has seen a significant increase in companies listed, reaching a 30-year high in 2022 with 59 issuers. This growth can be attributed to factors like potential benefits and opportunities, as well as changes in regulations made by the Indonesian Financial Services Authority (OJK) making the IPO process easier. Indonesian startups are experiencing a surge in IPOs due to strong investor demand and price appreciation. Leading startup companies namely Gojek-Tokopedia and Bukalapak attract private equity firms and venture capital firms, leading to increased funding rounds and IPOs. However, startups face inherent risks, making them more prone to risk than traditional companies.

Given no historical trading experience, limited financial information a company's IPO faces significant uncertainty. Bessembinder, Cooper, Jiao and Zhang (2022), Asian countries show significant short-term positive abnormal returns, but the price spike during IPO remains difficult to comprehend. There has been no universally accepted explanation for this anomaly, hence we refer to it as the IPO Puzzle. Zou, Cheng, Chen and Meng (2020) argue that low IPO offering prices, initial price jumps, and long-term price drops are driven by investor irrational behavior. They suggest that the long-run underperformance of returns suggests that the initial return during the early phase of trading is driven by irrational behavior. This raises the question of whether the majority of investors exhibit irrational behavior in the IPO market.

Investor sentiment and market volatility are crucial factors in analyzing market conditions. IPOs perform better when the market is well-performing, as investors are more willing to take on risk. While market volatility refers to fluctuations in stock prices indicating uncertainty and risk. Several research (Arisanti and Asri, 2018; Wibowo, 2022) indicates that stock price fluctuations are influenced by herd behavior. Uncertain conditions and limited information in IPOs can lead investors to mimic others' actions without thorough analysis or even disregarding their own beliefs and private information to prevent future losses.

The uncertainty surrounding the IPO atmosphere is a topic of interest due to high initial returns phenomenons. Limited track records and risk factors can influence investor behavior, with some becoming risk-averse, while others may become more risk-seeking. Startups' growth opportunities and innovative business models may attract risk-tolerant investors willing to take higher risks. Firms considering going public and capital market investors must understand the factors affecting initial return, which can come from internal (financial, governance, ownership structure) as well as external factors (non-financial factors), which are explored more in this study.

This empirical study examines the correlation between initial return around IPO in the Indonesia Stock Exchange from year 2017 to 2022 with media sentiment and market sentiment. This study employs two different measures of initial return for robustness check: 1 day initial return and 30 days return after listing date. Media sentiment is measured by using a media coverage method proposed by (Wu and Tian, 2021; Chen, Goyal, Veeraraghavan and Zolotoy, 2020), while investor sentiment and the market volatility is measured by using the 30



day average and standard deviation of the stock market index; and the herd level is measured using CSAD method proposed by (Chang, Cheng, and Khorana, 2000; Kizys and Donadelli, 2021).

Numerous studies have explored how internal factors like financial performance and ownership structure impact IPO return (Widyawati, Juanda and Andati, 2019; Mutai, 2020). While these studies provide valuable insights, they primarily focus on internal factors. In contrast, this study emphasizes the influence of external factors, specifically media coverage and market sentiment, on initial return.

Between 2009 and 2020, approximately 88.7% of the 321 companies that conducted IPOs on the Indonesia Stock Exchange experienced underpricing. This amounts to around 285 IPOs. Several prior studies yielded varied research conclusions. We focus on Indonesia to contribute to the literature, given the country's significant number of underpriced stocks and the increasing number of companies undertaking IPOs, making this study intriguing to conduct. Additionally, to accommodate the interesting surge of Startups IPOs in the Indonesia Stock Exchange this study also uses a dummy variable to examine the impact of a startup IPOs with the initial return.

2. RESEARCH METHODS

2.1 Fundamental Research Framework

This study uses the Ordinary Least Square (OLS) regression model tested using EViews 12 program to examine the relationship between IPO Initial Return, with media sentiment represented by the level of media coverage before IPO proposed by (Gupta, Singh and Yadav, 2022), and market sentiment represented by investor sentiment and market volatility proposed by (Yan, Xionng, Meng and Zou, 2019; Zhou, Hussein and Deng, 2021), and herd behavior measured by CSAD proposed by (Chang et.al , 2000; Kizys et al., 2021; Wibowo, 2022) and to account for the unique characteristic of startups, a startup dummy variable is also incorporated into the analysis. We test the hypotheses by running the following research model:

Media Sentiment Model

$$\text{Initial Return} = \text{constant} + b_1\text{MediaSentiment} + b_3\text{Controls} + \text{error} \tag{1}$$

Market Sentiment Model

$$\text{Initial Return} = \text{constant} + b_2\text{MarketSentiment} + b_3\text{Controls} + \text{error} \tag{2}$$

Furthermore, in line with prior studies, we included control variables that are associated with the degree of underpricing. The control variables identified are: 1 Year Before IPO ROA, 1 Year Before IPO ROE, 1 Year Before IPO DER, 1 Year Before IPO NPM and 3 Dummy Variables namely 1 Year before IPO Positive OCF dummy if the company has positive operating cash flow before the initial public offering, and lastly COVID-19 year dummy assuming the IPO year is affected, not affected by COVID-19.

To test the hypotheses of this study, which aims to analyze the relationship between Initial Return with media sentiment, market sentiment and startup IPOs. 30 Days Post IPO Return is used as a robustness check proposed by (Wibowo, 2020) to determine whether the price spike happens only in the short term because investor sentiment has not been channeled to the secondary market. This study proposes a research framework as shown in Figure 1. In this research context, the association is reflected through the three following hypotheses:

H1: Media Sentiment has a significant relationship with Initial return.

H2: Market Sentiment has a significant relationship with Initial return.

H3: Startup IPO has a significant relationship with Initial return.

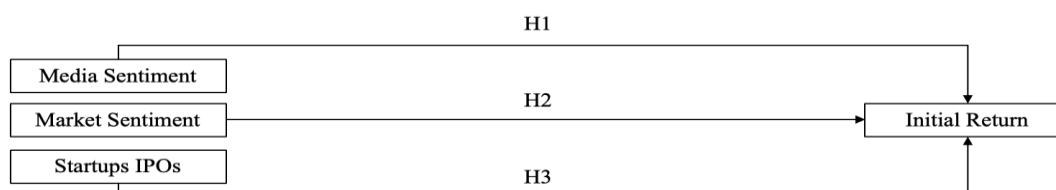


Figure 1. Research Framework

2.2 Research Variable Measurement

2.2.1 Dependent Variables

The dependent variables in this study are initial stock returns on the first day of listing, namely of companies that underwent IPO in Indonesia Stock Exchange from year 2017 to 2022 and to deliver a robust result, this study also evaluates the return after 30 days of listing. Wibowo (2020), this robustness test is required to determine whether the price spike happens only in the short term because investor sentiment has not been channeled to the secondary market as a result of the underwriter's stock allocation policy or overall market conditions.

2.2.2 Independent Variables



2.2.2.1 Media Coverage Level

The level of media coverage in the study is measured by using the real count of news articles covering the respective company 3 months prior the IPO date and a dummy variable if the specific company articles count is higher than the yearly average. Previous research (Wu and Tian, 2021; Chen et.al, 2020) suggest media coverage significantly influences public perceptions and investor sentiments regarding companies going public. A 3-month time frame captures the immediate pre-IPO period, when media attention is typically heightened. Media coverage during this period tends to focus on IPO-related news, such as valuation, offering details, management changes, and market conditions. Analyzing media coverage within this time frame allows for a more targeted assessment of the potential impact of media attention on investor sentiment and IPO pricing.

2.2.2.2 Investor Sentiment

Investor sentiment is the perception of market participants towards a financial market, influencing their buying and selling decisions. (Nawadali, Axel and Francois, 2019) positive sentiment indicates optimism about the market, anticipating price increases and potential profits. Negative sentiment, on the other hand, indicates pessimism and potential losses. Xiong (2019) found positive sentiment often leads to higher demand, which may result in higher IPO prices and an increased likelihood of oversubscription which lead to high initial return. Conversely, negative sentiment can dampen demand and potentially lead to lower IPO initial return. This study measures investor sentiment by using the Indonesian Stock market's average percentage of return for one month (30 days) prior to the IPO date of respective companies.

2.2.2.3 Market Volatility

Market volatility refers to fluctuations in stock prices reflecting uncertainty and risk. High volatility indicates larger price swings, while low volatility suggests more stable price movements. Market volatility affects IPO pricing and valuation, with higher volatility causing increased risk perceptions among investors. Dicle and Levendis (2018), during volatile periods, investor confidence may be lower, leading to decreased demand for IPOs affecting subscription levels. Conversely, during lower volatility, investor sentiment may be more positive, increasing demand for IPO shares and potentially driving up prices. This study uses the standard deviation of the stock market percentage of return for the 30 days preceding the IPO date of each respective company.

2.2.2.4 Herd Behavior Level

Due to limited public information and track record of recently public companies, those create uncertainties which are perceived as highly risky. In such situations, herding behavior can arise as investors rely on the actions and opinions of other investors to fill in the informational gaps. This can result in a bandwagon effect, with early investors joining in on the IPO's momentum, driving stock prices up and increasing initial returns. The study measures herding behavior using the Cross Sectional Absolute Deviation (CSAD) method proposed by Chang et al., (2000); Kizys et al., (2021) and Wibowo (2022). A lower CSAD value indicates higher herding behavior. To account for the inverse relationship between CSAD value and herding behavior presence, a negative value of the CSAD will be used since smaller values of CSAD represent stronger herding behavior level. The calculation of CSAD is as follows:

$$CASDt = \frac{1}{N} \sum_{i=1}^N |Ri, t - Rm, t|$$

Herding behaviour level = - (CSAD)

Where:

Ri,t = return of individual stocks in t period

Rm,t = market return in t period

N = the number of companies in the sample

2.2.2.5 Startup IPOs

A dummy variable is used to measure the impact of startup IPOs on initial return. The combination of limited track record and risk factors of startups can affect investor behavior. Some investors may become more risk-averse, while others may become more risk-seeking. The perceived growth opportunities in innovative business models and emerging markets may attract risk-tolerant investors willing to take higher risks for potentially higher returns. The study uses a dummy to represent the status of the startup company, with 1 representing a startup and 0 representing a non-startup.

2.3 Population and Sample

The population used in this research is all companies listed in the Indonesian capital market known as JCI (Jakarta Composite Index) or IDX Composite Index. Purposive sampling is a type of non-probability sampling in which the researcher selects the sample based on suitability for the research objectives and specific criteria for inclusion and exclusion. After the researcher ensures that an element meets the criteria, the element's participation in the research will be collected. Steps taken in selecting a purposive sample in this study:



1. Defining the target population, namely all companies listed on the Jakarta Composite Index (IHSG) on the Indonesia Stock Exchange (IDX) until year 2022.
2. Determining the size of the research sample using data of companies that undergone IPO in the Indonesia Stock Exchange (IDX) from year 2017 to year 2022.
3. Companies with no data of IPO offering price, first trading day closing price are excluded from the sample.
4. Complete prospectus data criteria are Total Asset, Total Equity, Total Liabilities, Sales/ Revenue, Net Profit/ Net Income, Operating Cash Flow. Companies whose prospectus are not available to be accessed through IDX, Company Website or any online database are excluded from the sample.

The final sample size is 300 companies (before outlier treatment) that issued their stock from the year 2017 to 2022 in the Indonesia Stock Exchange (IDX). After the outlier treatment sample is 289 companies.

2.4 Variable Operationalization

Table 2 presents the operationalization of variables of the research.

Tabel 2. Variable Operationalization

Variable	Type	Definition	Formula / Indicator
IPO Initial Return	Dependent Variable	The return that investors can obtain from the difference between offering price and the closing price on the first trading day	$[(\text{Closing price on the first trading day} - \text{the company's issuance price}) / \text{the company's offering price for issuance}] \times 100\%$
30 Days Post-IPO Return	Dependent Variable (Robustness test)	The return that investors can obtain from the difference between offering price and the first 30-trading days	$[(\text{Closing price on the first 30-trading days} - \text{the company's issuance price}) / \text{the company's offering price for issuance}] \times 100\%$
Media Coverage Level	Media Sentiment Independent Variable	Number of media articles covering company IPOs during the 3 month prior IPO date to the day of initial public offering.	3 months before IPO news real count
Media Coverage Dummy	Media Sentiment Dummy Variable	Is a variable dummy that shows if a company's 3 month before IPO news coverage is higher than yearly average	1 if the news count is higher than yearly average, 0 if not
Investor Sentiment	Market Sentiment Independent Variable	Market dynamics that might affect the level of investor enthusiasm in purchasing shares of companies conducting initial public offerings	IDX's average percentage return for one month (30 days) prior to Initial Public Offering dates
Market Volatility	Market Sentiment Independent Variable	Variation in stock prices that reflect market uncertainty and potential risk	The standard deviation of the IDX percentage of return for the 30 days prior to Initial Public Offering dates
Startup Dummy Variable	Dummy Variable	Is a variable dummy that shows the company is a startup	1 if the company is a startup or, 0 if not
Herding Behavior Level	Market Sentiment Independent Variable	Measured by using negative value of CSAD method of Return Dispersion in the market proposed by Chang et.al, (2000), Kizys et al., (2021) and Wibowo (2022)	Herding behavior level = - (CSAD)
Covid Year Dummy	Dummy Variable	Is a variable dummy that shows year affected by COVID-19 Pandemic	1 if the IPO year is in year 2020 and 2021, 0 if not

2.5 Classical assumption testing results

The research at hand is utilizing a regression model and employing classical assumption tests to ensure the robustness of the model and the accuracy of the Best Linear Unbiased Estimator (BLUE). The BLUE estimator is highly desirable due to its efficiency and unbiased nature in estimating parameters. To achieve a robust model, the research rigorously assesses key assumptions underlying the regression framework. These assumptions encompass linearity, non - multicollinearity and normality of residual. Table 3 presents the classical assumption result based on normality, multicollinearity and linearity test.

Tabel 3. Classical assumption test

				Detection Tool (Rule)	Result
Normality	Media Return	Sentiment Model	(Initial	Jarque-Bera Probability	Probability of 0.065304 > 0.05, normality assumption fulfilled
	Market Return)	Sentiment Model	(Initial		
					Probability of 0.076691 > 0.05, normality assumption fulfilled



	Detection Tool (Rule)	Result
Media Sentiment Model (30 days Post-IPO Return)		Probability of 0.000000 < 0.05, normality assumption not fulfilled
Market Sentiment Model (30 days Post-IPO Return)	(Significance level > 0.05)	Probability of 0.000000 < 0.05, normality assumption not fulfilled
Multicollinearity		
Media Sentiment Model (Initial Return)	Variance Inflation Factor (VIF)	All variables VIF value < 10, non-multicollinearity assumption is fulfilled
Market Sentiment Model (Initial Return)		All variables VIF value < 10, non-multicollinearity assumption is fulfilled
Media Sentiment Model (30 days Post-IPO Return)	(VIF < 10)	All variables VIF value < 10, non-multicollinearity assumption is fulfilled
Market Sentiment Model (30 days Post-IPO Return)		All variables VIF value < 10, non-multicollinearity assumption is fulfilled
Linearity		
Media Sentiment Model (Initial Return)		Prob (F-statistic) of 0.3463 > 0.05, linearity assumption fulfilled
Market Sentiment Model (Initial Return)	Ramsey RESET	Prob (F-statistic) of 0.2757 > 0.05, linearity assumption fulfilled
Media Sentiment Model (30 days Post-IPO Return)		Prob (F-statistic) of 0.5471 > 0.05, linearity assumption fulfilled
Market Sentiment Model (30 days Post-IPO Return)	(Significance level > 0.05)	Prob (F-statistic) of 0.2545 > 0.05, linearity assumption fulfilled

3. RESULTS AND DISCUSSION

3.1 Descriptive Statistic

Data shown in Table 2 indicated initial public offerings on the Indonesian stock exchange yield relatively high initial return and 30 days return. Investors who purchase IPO stocks in the primary market and swiftly sell their shares on the first day of trading in the stock exchange can expect an average return exceeding 50%. The same goes for the 30 days return following the initial listing date amounts to more than 60% average yield. Thus, it becomes evident that holding onto IPO shares for a relatively longer period after the initial listing can lead to slightly higher returns. The behavior of "hopping" into the IPO trend in pursuit of quick profits without giving due consideration to the associated risks often stems from the allure of initial public offerings (IPOs), which generate significant market attention and excitement. Investors, driven by the fear of missing out on lucrative opportunities, may be tempted to invest in IPOs solely based on the hype and momentum surrounding them. However, this strategy of blindly following or chasing the IPO trend without thorough risk assessment can lead to unfavorable outcomes. IPOs are inherently risky, as they involve companies that are often in their early stages and have limited operating histories. The valuation of IPO shares can be driven by market sentiment rather than fundamental factors, further exacerbating the risk.

When considering different holding period strategies, it is observed that shares held for a period of 30 days yielded highest returns exceeding 3 times the initial return in the Initial IPO market. However, it is important to note that the 30-day holding period strategy entails significantly higher risk compared to the 1-day holding period strategy. This increased risk is evident from the standard deviation of yields, which is nearly 2.5 times higher for the 30-day holding period in comparison to the standard deviation of returns for the 1-day holding period. Thus, while the potential returns may be substantially higher with a longer holding period, it is essential to carefully consider and manage the associated risks.

Table 4. Descriptive Statistic

Variables	Mean	Max	Min	Median	Standard Deviation
Initial Return	0.521	1.600	-0.496	0.440	0.426
30 Days Return	0.670	5.038	-0.814	0.309	1.052

3.2 Regression model results

Based on the results of the regression model 1 illustrated in Table 5, it can be seen that through testing the coefficient of determination reflected by the R-Square value which is 0.2917 (29.17%). This result shows that 29.17% of the variation in the dependent variable of initial stock returns for IPO period 2017 - 2022 in Indonesia Stock Exchange can be explained by the variation of all the main independent variables and control variables in the research model. With significant levels of 1%, 5% and 10%, the model's independent variables:

1. Media Coverage Level and Media Coverage Dummy variables have a significant positive impact on the initial stock returns, with a significant level 0.000 and 0.0285 respectively. In every increase of Media Coverage Level and when the Media Coverage is above yearly average will increase Initial Return by 0.0164 and 0.1051 respectively.



2. This positive significant relationship is also found on the independent control variables: Underwriter Reputation Dummy (p-value of 0.0007), 1 Year pre-IPO NPM (p-value of 0.0385), Startups Dummy (p-value of 0.0308).
3. While variables namely 1 Year pre IPO Positive OCF Dummy and COVID-19 Year Dummy have significant but negative relationship with initial return observed on the sample.
4. Meanwhile the rest of the control variables such as 1 Year pre IPO ROA, 1 Year pre IPO ROE, 1 Year pre IPO DER do not have a significant effect on the dependent variable.

From the result, we can conclude that media coverage intensity represented by Media Coverage Level 3 months before the IPO and Media Coverage Dummy to represent companies with media coverage higher than the yearly average are proven significantly influenced the IPO initial return. The findings of this study align with previous research conducted by (Bhardwaj and Imam, 2019; Xiong and Zhao, 2021) and offer empirical evidence supporting the asymmetric information theory. The surge in stock prices observed on the first day of trading is attributed to the presence of asymmetric information in IPOs. Unlike well-established companies that have a long history of publicly available information, IPO companies have limited track records, making it challenging for investors to access reliable information for informed decision-making. Media exposure plays a crucial role in informing investors and offering contextual interpretations, ultimately increasing the visibility of the firm. Improved media visibility can elevate the status of an IPO firm consequently enhancing its legitimacy in the eyes of investors.

Therefore, the information provided by the media can help offset the inherent characteristic of information asymmetry in recently public companies, given their limited performance history available to the general public. Extensive information provided by the media enhances IPO investors' understanding of a company's true condition, leading to more precise assessments. In situations where information asymmetry exists, investors tend to rely on reliable and low-cost signals such as the media.

Table 5. Regression Model 1 : Media Sentiment Model (Initial Return)

Variable	Coefficient	t-statistic	P-value
C	0.8911	178.429	0.0000
Media Coverage Level	0.0164	82.839	0.0000***
Media Coverage Dummy	0.1051	22.012	0.0285**
Underwriter Reputation Dummy	0.1697	34.428	0.0007***
1 Year pre IPO ROA	0.0047	0.8143	0.4161
1 Year pre IPO ROE	0.0021	0.1570	0.8753
1 Year pre IPO DER	0.0026	0.8326	0.4057
1 Year pre IPO NPM	0.0131	20.789	0.0385**
1 Year pre IPO Positive OCF Dummy	-0.0814	-17.980	0.0733*
Startups Dummy	0.5111	21.711	0.0308**
COVID-19 Year Dummy	-0.1522	-3.324	0.0010***
R-Squared	0.2917	F statistic	114.124
Adj. R-Squared	0.2662	Prob (f-stat)	0.0000

Note: Level of significance at *** 1%, ** 5%, * 10%.

Based on the regression result of research model 2 presented in Table 6, through testing the coefficient of determination, represented by the R Square value is 0.1505, this shows that 15.05% of the variation in the dependent variable, namely, initial return of IPO period 2017 - 2022 in Indonesia Stock Exchange, can be explained by the variations of the independent variable, control variables and dummy variables of the research model, while the rest 84.95% are represented by variables outside the model.

1. The estimated independent variables investor sentiment has a positive but non-significant effect on Initial Return with p-value of 0.6382, which is above the alpha level of 1%, 5% and 10%.
2. Market Volatility and Herding Behavior Level have a significant effect on Initial Return with p-value of 0.0679 and 0.0054 respectively. An increase of Market Volatility will reduce Initial Return by -10.4062, while an increase in Herd Behavior Level will increase the Initial return by 1.3420.
3. The same goes for the control and dummy variable namely Underwriter Reputation Dummy and Startups Dummy have significant positive relationship with the dependent variable.
4. Meanwhile the rest of control and dummy variables have no significant effect on initial return observed in the research sample.

The result aligned with the previous studies by (Dicle and Levendis, 2018; Nawadali et al., 2019) where market volatility significantly negatively affected the initial return. High market volatility signifies greater and unpredictable price fluctuations, whereas low volatility implies more steady and foreseeable price movements. When market volatility is high, investors tend to perceive elevated risk levels, leading to decreased demand for IPOs and potentially impacting subscription levels. On the contrary, in periods of low volatility, investor confidence tends to be stronger, driving up demand for IPO shares and potentially causing their prices to rise.

On the other hand, the finding of this research contradicted previous research done by (Kamath, Shenoy, and Subrahmanya, 2022; Ibrahim and Benli, 2022) where Investor Sentiment plays a positive and significant effect on the Initial Return. The non-significant impact of pre-IPO market sentiment on the initial return can be attributed to the



presence of more influential factors that exert a greater influence on shaping the initial return than the pre-IPO market sentiment itself such as the pricing mechanism and IPO specific factors. These factors might have more significant impact on the initial return and outweigh the overall market sentiment or trends. The positive significant effect of Herd Behavior Level is inline with previous study done by (Kizys et al., 2021; Wibowo, 2022). Limited public information, lack of track record, and uncertainties surrounding newly public companies create a perception of high risk. In this context, herding behavior emerges as investors seek guidance from the actions and opinions of their peers to fill informational gaps. This behavior can trigger a bandwagon effect, with investors joining the perceived momentum of an IPO. Positive sentiment and high demand from early investors attract others, resulting in an initial trading period marked by increased stock prices and higher initial returns for the IPO.

Table 6. Regression Model 2 : Market Sentiment Model (Initial Return)

Variable	Coefficient	t-statistic	P-value
C	0.5479	76.222	0.0000
Investor Sentiment	71.245	0.4706	0.6382
Market Volatility	-104.062	18.331	0.0679**
Herding Behavior Level	13.420	28.061	0.0054***
Underwriter Reputation Dummy	0.2090	39.240	0.0001***
1 Year pre IPO ROA	0.0059	0.9244	0.3560
1 Year pre IPO ROE	0.0009	0.0666	0.9469
1 Year pre IPO DER	0.0015	0.4426	0.6584
1 Year pre IPO NPM	0.0106	15.303	0.1271
1 Year pre IPO Positive OCF Dummy	-0.1149	-2.302	0.3376
Startups Dummy	0.2288	0.9604	0.0221**
COVID-19 Year Dummy	-0.1136	-21.421	0.331
R-Squared	0.1505	F statistic	44.467
Adj. R-Squared	0.1166	Prob (f-stat)	0.0000

Note: Level of significance at *** 1%, ** 5%, * 10%.

The robustness test proposed by Wibowo (2020) through analyzing 30 days after listing return on the stock exchange results is presented on Table 7 and Table 8.

Based on the results of the research model regression 3 in Table 6, it can be seen that through testing the coefficient of determination reflected by the R-Square value which is 0.1490. This result shows that 14.90% of the variation in the dependent variable of 30 days after listing stock returns for IPO period 2017 - 2022 in Indonesia Stock Exchange can be explained by the variation of all the main independent variables, control variables and dummy variables of the research model. In other words, the rest 85.10% of the variation is explained by other variables outside the model.

In comparison to the regression result of model 1 in Table 4, the impact of Media Coverage Level on the 30-day returns is diminished, but the relationship remains statistically significant with a p-value of 0.0086. On the other hand, Media Coverage Dummy does not exhibit a significant effect on the 30-day returns after listing. This can be attributed to investors' shifting focus towards post-IPO media coverage. While they still take into account the pre-IPO media coverage, there is a notable inclination towards placing greater importance on more recent news. This indicates that investors value up-to-date information more significantly during the post-IPO period.

Table 7. Regression Model 3: Media Sentiment Model (30 days Post-IPO Return)

Variable	Coefficient	t-statistic	P-value
C	0.8911	178.429	0.0000
Media Coverage Level	0.0164	82.839	0.0000***
Media Coverage Dummy	0.1051	22.012	0.0285**
Underwriter Reputation Dummy	0.1697	34.428	0.0007***
1 Year pre IPO ROA	0.0047	0.8143	0.4161
1 Year pre IPO ROE	0.0021	0.1570	0.8753
1 Year pre IPO DER	0.0026	0.8326	0.4057
1 Year pre IPO NPM	0.0131	20.789	0.0385**
1 Year pre IPO Positive OCF Dummy	-0.0814	-17.980	0.0733*
Startups Dummy	0.5111	21.711	0.0308**
COVID-19 Year Dummy	-0.1522	-3.324	0.0010***
R-Squared	0.2917	F statistic	114.124
Adj. R-Squared	0.2662	Prob (f-stat)	0.0000

Note: Level of significance at *** 1%, ** 5%, * 10%.

Based on the regression result of research model 4 presented in Table 7, through testing the coefficient of determination, represented by the R Square value is 0.1554, this shows that 15.54% of the variation in the dependent



variable, namely, 30 days after listing return, can be explained by the variations of the independent variable, control variables and dummy variables of the research model, while the rest 84.46% are represented by variables outside the model.

When comparing with the regression model 2 result presented in Table 5, the independent variables namely investor sentiment and market volatility have non-significant effect with p-value of 0.1881 and 0.1366 respectively with the 30 days return. After an IPO, investors tend to shift their focus to the influx of new information available over the pre-IPO market sentiment. They recognize the limitations of relying solely on pre-IPO sentiment and preferring to incorporate new information to have a more accurate assessment of the company's performance and prospects. In accordance with EMH theory, financial markets are efficient, swiftly incorporating new information into stock prices. Consequently, any pre-IPO sentiment or trends are likely already factored into the IPO's initial pricing, making it clear to investors that relying solely on pre-IPO sentiment may not accurately reflect the company's post-IPO performance. While the significance effect of Herding Behavior Level increased with lower p-value of 0.0005. This might be attributed to the growing speculation on stock prices. Investor speculative behavior increases when short-term price movements align with their expectations.

Table 8. Regression Model 4 : Market Sentiment Model (30 days Post-IPO Return)

Variable	Coefficient	t-statistic	P-value
C	0.5479	76.222	0.0000
Investor Sentiment	71.245	0.4706	0.6382
Market Volatility	-104.062	18.331	0.0679**
Herding Behavior Level	13.420	28.061	0.0054***
Underwriter Reputation Dummy	0.2090	39.240	0.0001***
1 Year pre IPO ROA	0.0059	0.9244	0.3560
1 Year pre IPO ROE	0.0009	0.0666	0.9469
1 Year pre IPO DER	0.0015	0.4426	0.6584
1 Year pre IPO NPM	0.0106	15.303	0.1271
1 Year pre IPO Positive OCF Dummy	-0.1149	-2.302	0.3376
Startups Dummy	0.2288	0.9604	0.0221**
COVID-19 Year Dummy	-0.1136	-21.421	0.331
R-Squared	0.1505	F statistic	44.467
Adj. R-Squared	0.1166	Prob (f-stat)	0.0000

Note: Level of significance at *** 1%, ** 5%, * 10%.

3.3 Discussion

The results showed a positive and significant relationship between Media Sentiment, represented by Media Coverage Level 3 months before IPO and Media Coverage Dummy if the firm's level of media coverage is higher than yearly average with the Initial Return for firm's IPOs period 2017 - 2022 in the Indonesia Stock Exchange. This is in line with the previous studies by (Gupta et al., 2022, Wu and Tian, 2021). Extensive pre-IPO media coverage is positively correlated with a higher initial return. This is primarily due to the role of media in bridging the gap caused by the limited availability of publicly accessible information about a company's performance and prospects before its IPO. In the absence of comprehensive financial reports or public disclosures, investors heavily rely on media coverage to gather insights and assess the investment potential of the company. Media coverage acts as a catalyst for generating investor interest and excitement. By raising awareness about the company and its upcoming IPO, media coverage attracts a wider audience of potential investors. This increased visibility leads to greater demand for the IPO shares and, consequently, a higher initial return

Market Sentiment represented by the level of Market Volatility has a negative significant effect on the Initial Return. In line with previous research by (Dicle and Levendis, 2018 ; Nawadali et al., 2019). When the market is highly volatile, this increases uncertainty and risk, causing investors to become cautious and risk-averse. This leads to reduced demand for IPO shares and lower initial returns as investors are unwilling to pay a premium in uncertain market conditions. The pricing mechanism of IPOs is disrupted as underwriters struggle to assess fair share values amidst rapidly changing market conditions, resulting in more conservative offering prices. Additionally, during periods of high volatility, investor sentiment becomes more pessimistic, leading to lower valuations and expectations for IPOs, further contributing to lower initial returns.

Furthermore, this study also demonstrates a positive and significant relationship between Herd Behavior Level with the study sample Initial Return, aligned with previous study by (Kizys et al., 2021; Wibowo, 2022). The limited financial performance, lack of track record, and management expertise of newly public companies create uncertainties that are perceived as high risk. In this context, herding behavior can occur as investors look to other investors for guidance in the absence of complete information. The uncertain environment and limited information surrounding IPOs lead investors to follow others' actions to mitigate potential losses due to informational disadvantages, resulting in herding behavior. Investors rely on the actions and opinions of these "informed" investors, assuming they have better insights into the company's prospects. When influential investors exhibit high levels of herding behavior in IPO



participation, it signals positive market sentiment, attracting other investors who perceive them as market leaders. Uninformed investors, seeking to maximize profits, tend to mimic those with more information. This surge in demand leads to an increase in the IPO's initial return. Investors find it convenient to mimic the actions of their peers instead of conducting independent research because they perceive it as more a convenient and cost-effective way. Moreover, the fear of missing out on profitable opportunities amplifies this behavior and results in higher initial returns. The bandwagon effect, influenced by the perceived popularity and momentum of an IPO, entices more investors to join in, creating greater demand and driving up the stock price during the initial trading period.

Meanwhile, the independent variable Investor Sentiment has a positive but non significant effect on the Initial Return. This contradicts previous research by (Tsukioka, Yanagi, and Takada, 2018; Norliza and Matsuura, 2021) who found that positive investor sentiment of the overall market increases their confidence in investing in IPO stocks, which in turn increases the initial return. The limited influence of pre-IPO market sentiment on the initial return can be attributed to more influential factors such as the pricing mechanism and IPO-specific factors. The underwriters play a crucial role in determining the IPO offer price, balancing the company's proceeds and successful share placement. Factors like investor demand, valuation, and negotiations shape the pricing mechanism. Moreover, investors focus on the unique characteristics of the company and its industry prospects, outweighing the impact of overall market sentiment. These factors have a more significant influence on the initial return, overshadowing the effect of pre-IPO investor sentiment.

The results also showed a positive relationship between Startups Companies Dummy with Initial Return. Despite the risk associated with startup companies, they are highly regarded for their disruptive technologies, innovative business models, and rapid growth potential, making them attractive to investors seeking groundbreaking opportunities. Furthermore, the backing of reputable venture capital firms and prominent investors enhances their credibility, instilling confidence among potential IPO investors. The perception of startups companies as pioneers of innovation and industry transformation further bolsters investor confidence, especially considering the potential for groundbreaking products, scalability, and market dominance. These factors collectively contribute to the positive sentiment surrounding startup companies IPOs on the Initial Return.

Additionally, this study demonstrates a negative relationship between COVID-19 Year Dummy and the initial return. The COVID-19 pandemic's uncertainty and market volatility have made investors more cautious and risk-averse. This cautiousness has led to reduced demand for IPO shares and a lower willingness to pay a premium, resulting in a negative impact on the initial return. The fear of market downturns has further dampened enthusiasm for IPOs, reducing the willingness to bid up prices. The shift to virtual formats for roadshows and investor meetings has limited direct engagement, potentially impacting investor confidence and contributing to a reduced initial return. Additionally, underwriters have adopted a more conservative approach, setting IPO offer prices cautiously to ensure successful placements and avoid post-IPO price declines, which can result in lower initial returns.

To ensure the validity of the findings, a robustness check was conducted by analyzing the yields 30 days after the IPO listing on the stock exchange. The results show that although the impact of Media Coverage Level on the 30-day returns is reduced, the relationship remains statistically significant. However, the Media Coverage Dummy does not show a significant effect on the 30-day returns after listing. This suggests that investors are placing more emphasis on post-IPO media coverage and put more emphasis on recent information more prominently.

The impact of Media Coverage Level on the 30-day returns is diminished, but the relationship remains statistically significant. On the other hand, Media Coverage Dummy does not exhibit a significant effect on the 30-day returns after listing. This can be attributed to investors' shifting focus towards post-IPO news articles. While they still take into account the pre-IPO media coverage, there is a notable inclination towards placing greater importance on more recent news. This indicates that investors value up-to-date information more significantly during the post-IPO period. The effects of investor sentiment and market volatility on 30-day returns are not statistically significant. Following an IPO, investors shift their attention to the influx of new information available, recognizing the limitations of relying solely on pre-IPO sentiment. They prefer to incorporate new information to obtain a more accurate assessment of the company's performance and prospects. Any pre-IPO sentiment or trends are likely already factored into the IPO's initial pricing, indicating to investors that relying solely on pre-IPO sentiment may not accurately reflect the company's post-IPO performance. However, the significance of Herding Behavior Level increases, potentially due to the growing speculation on stock prices. Investor speculative behavior intensifies when short-term price movements align with their expectations

4. CONCLUSION

This study analyzes the impact of media sentiment, market sentiment, and startup IPOs on initial stock returns in the Indonesian Stock Market from 2017 to 2022. Findings reveal that media sentiment, represented by 3 months pre-IPO Media Coverage Level and Media Coverage Dummy, significantly and positively influences Initial Return. Media coverage bridges the information gap about a company's performance before IPO, attracting investor interest and resulting in higher initial returns. Market sentiment, represented by 30 days pre-IPO Market Volatility and IPO date Herd Behavior Level, also significantly affects Initial Return. High market volatility makes investors becoming more risk-averse, reducing demand for IPO shares and leading to lower subscription level and lower initial returns. Herding



behavior arises due to uncertainty and limited information, amplifying demand and initial returns. However, 30 days pre-IPO Investor Sentiment has no significant impact on Initial Return. Startups, despite risks, have a positive impact on Initial Return due to their innovative models and growth prospects. Nevertheless, the study acknowledges limitations, including its short timeframe and the generalizability of the findings to other periods or markets may be affected because the stock market is subject to constant changes and evolving dynamics. Future research could expand the scope by conducting similar analyses across multiple countries, such as those within the ASEAN region or other developing nations with comparable characteristics in their capital markets to Indonesia. This broader approach would provide valuable insights into the IPO dynamics within a wider context

REFERENCES

- Arisanti, I., & Asri, M. (2018). Herding Behavior Post Initial Public Offering In Indonesia Stock Exchange. *Journal of Accounting and Investment*, 19(2), 149-159. <https://journal.umy.ac.id/index.php/ai/article/view/3998>
- Bessembinder, H., Cooper, M. J., Jiao, W., & Zhang, F. (2022). Firm Characteristics, Return Predictability, and Long-Run Abnormal Returns in Global Stock Markets. Michael J. and Jiao, Wei and Zhang, Feng, Firm Characteristics, Return Predictability, and Long-Run Abnormal Returns in Global Stock Markets (August 4, 2022). <http://dx.doi.org/10.2139/ssrn.4181881>
- Bhardwaj, A., & Imam, S. (2019). The tone and readability of the media during the financial crisis: evidence from pre-IPO media coverage. *International Review of Financial Analysis*, 63, 40-48. <https://doi.org/10.1016/j.irfa.2019.02.001>
- Chang EC, Cheng JW, and Khorana A. (2000). An Examination of Herd Behavior In Equity Markets: An International Perspective. *Journal of Banking and Finance* 24:1651–1679. [https://doi.org/10.1016/S0378-4266\(99\)00096-5](https://doi.org/10.1016/S0378-4266(99)00096-5)
- Chen, Y., Goyal, A., Veeraraghavan, M., & Zolotoy, L. (2020). Media coverage and IPO pricing around the world. *Journal of Financial and Quantitative Analysis*, 55(5), 1515-1553. <http://dx.doi.org/10.2139/ssrn.3057846>
- Dicle, M. F., & Levendis, J. (2018). IPO activity and market volatility. *Journal of Entrepreneurship and Public Policy*, 7(1), 2-13. <https://ssrn.com/abstract=3042995>
- Gupta, V., Singh, S., & Yadav, S. S. (2022). The impact of media sentiments on IPO underpricing. *Journal of Asia business studies*, 16(5), 786-801. <http://dx.doi.org/10.1108/JABS-10-2020-0404>
- Ibrahim, F. A., & Benli, V. F. (2022). Impact of investors sentiment on IPO performance: Evidence from NASDAQ and NYSE. *Journal of Business Economics and Finance*, 11(1), 1-14. <https://doi.org/10.17261/Pressacademia.2022.1548>
- Kamath, A. N., Shenoy, S. S., & Subrahmanya Kumar, N. (2022). An overview of investor sentiment: Identifying themes, trends, and future direction through bibliometric analysis. *Investment Management and Financial Innovations*, 19(3), 229-242. [http://dx.doi.org/10.21511/imfi.19\(3\).2022.19](http://dx.doi.org/10.21511/imfi.19(3).2022.19)
- Kizys, R., Tzouvanas, P., & Donadelli, M. (2021). From COVID-19 herd immunity to investor herding in international stock markets: The role of government and regulatory restrictions. *International Review of Financial Analysis*, 74(January), 101663. <http://dx.doi.org/10.1016/j.irfa.2021.101663>
- Nawadali, D., Axel, P., & Francois, D. (2019). Research in International Business and Finance Are IPOs underpriced or overpriced? Evidence from an emerging market. <https://ideas.repec.org/a/eee/riibaf/v50y2019icp171-190.html>
- Norliza, C. Y., & Matsuura, Y. (2021). Does Individual Investors' Sentiment Explain Japanese IPO Aftermarket Performance?. *The Journal of Asian Finance, Economics and Business*, 8(4), 1079-1090.
- Panda, A., & Guha Deb, S. (2023). IPO Underpricing and Short-Term Performance: A Comparative Analysis During the COVID-19 Pandemic and Tranquil Periods in a Cross-Country Setting. *Emerging Markets Finance and Trade*, 59(7), 2145-2159. <https://doi.org/10.1080/1540496X.2022.2147780>
- Tsukioka, Y., Yanagi, J., & Takada, T. (2018). Investor sentiment extracted from internet stock message boards and IPO puzzles. *International Review of Economics & Finance*, 56, 205-217. [10.1016/j.iref.2017.10.025](https://doi.org/10.1016/j.iref.2017.10.025)
- Wibowo (2021). IPO Underpricing, Accounting Conservatism, and Herd Behavior. *Jurnal ASET (Akuntansi Riset)*. Program Studi Akuntansi. Fakultas Pendidikan Ekonomi dan Bisnis Universitas Pendidikan Indonesia, 13 (1), 173-184. <https://doi.org/10.17509/jaset.v13i1.32464>
- Wu, Y., & Tian, G. G. (2021). Public relations expenditure, media tone, and regulatory decisions. *Journal of Corporate Finance*, 66, 101793. <http://dx.doi.org/10.1016/j.jcorpfin.2020.101793>
- Xiong, Y., & Zhao, Y. (2021). Guanxi, media coverage and IPO approvals: Evidence from China. *Pacific-Basin Finance Journal*, 65, 101468. [10.1016/j.pacfin.2020.101468](https://doi.org/10.1016/j.pacfin.2020.101468)
- Yan, Y., Xiong, X., Meng, J. G., & Zou, G. (2019). Uncertainty and IPO initial returns: evidence from the tone analysis of China's IPO prospectuses. *Pacific-Basin Finance Journal*, 57, 101075. [10.1016/j.pacfin.2018.10.004](https://doi.org/10.1016/j.pacfin.2018.10.004)
- Zou, G., Cheng, Q., Chen, W., & Meng, J. G. (2020). What causes the IPO underpricing? New evidence from China's SME market. *Applied Economics*, 52(23), 2493-2507. <https://doi.org/10.1016/j.irfa.2023.102794>
- Zhou, Z. G., Hussein, M., & Deng, Q. (2021). ChiNext IPOs' initial returns before and after the 2013 stock market reform: What can we learn?. *Emerging Markets Review*, 48, 100817. [10.1080/00036846.2019.1693017](https://doi.org/10.1080/00036846.2019.1693017)