



The Effects of Fear Sentiment on Covid-19 on IPO Underpricing Moderated by Government Intervention

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Abstract. Underpricing is a phenomenon that often occurs when companies conduct IPOs. One of the factors that influence the occurrence of underpricing is investor sentiment. The current condition where there is a Covid-19 pandemic causes a sentiment of fear in investors. This level of fear can be reduced by reducing the spread of Covid-19. This study was conducted to find out the relationship between the sentiment of fear over Covid-19 and the level of underpricing in companies carrying out IPOs with government intervention as a moderating variable. This study uses a causal study approach and simple regression (ordinary least squares) as methods to analyze the data. The sample used in this study was 91 companies that carried out IPOs in 2020 and 2021 in the Indonesian capital market. The results of this study indicate that the sentiment of fear over Covid-19 has a significant positive relationship with the level of underpricing. Government intervention as a moderating variable increases the negative effect of fear sentiment over Covid-19 on the level of underpricing. It is expected the results of this study could contribute to the literature related to underpricing, and can be used as input for companies that will carry out IPOs.

Keywords: Covid-19 · Government Intervention · Investor Sentiment · Underpricing · Stock Market

1 Introduction

The year 2020 is a tough year for all countries in the world due to the Covid-19 pandemic. Indonesia occupies the 16th position with the highest number of positive confirmed cases in the world [1]. The Covid-19 pandemic had a negative impact on the Indonesian economy. Many companies have to “go out of business” because they cannot sell their products during this pandemic. According to the Central Statistics Agency (BPS), Indonesia’s economic growth conditions contracted by 2.19%, this figure shows that people’s purchasing power is decreasing [2].

The unstable condition of the Indonesian economy has not stopped companies in Indonesia from continuing to conduct IPOs on the Indonesia Stock Exchange (IDX). In 2020, there were 51 companies that conducted initial public offerings, this number is not far away from the total number of companies that carried out initial public offerings

in 2019, as many as 55 companies. Even for 2021, there are 54 companies that carry out IPOs throughout the year. Tech start-up company Bukalapak will also carry out an IPO in July 2021. In addition, the Ministry of SOEs is targeting 14 companies to conduct IPOs over the next 4 years [3]. However, of the 14 companies, only 1 company, namely PT Dayamitra Telekomunikasi (Mitratel) successfully carried out an IPO in 2021.

The absence of a significant decrease in companies carrying out IPOs in 2020 and 2021 could also occur due to new innovations launched by the IDX. In 2020 IDX launched a new system for the implementation of IPOs, by launching an electronic initial public offering (E-IPO) system. IDX hopes that the E-IPO can help investors to make it easier to invest in companies that will carry out the IPO. The implementation of the E-IPO is expected to make it easier for the public to get an initial public offering and can increase the capital injection received by the company by carrying out the IPO.

The Covid-19 pandemic has also had a major impact on stock prices for companies listed on the stock exchange. On March 23, 2020, the JCI recorded the lowest figure of IDR 3,937.63 (IDX). In the same year, Indonesia recorded the lowest IPO value in the last 5 years [4]. However, the number of capital market investors during 2020 increased compared to 2019 and in 2021 the number of capital market investors reached 7,489,337 investors, an increase of about 92% compared to 2020 [5].

The increase in the number of capital market investors in Indonesia is quite interesting, given the condition of high information uncertainty due to the Covid-19 pandemic, which has made the world's capital markets volatile. The increasing number of positive confirmed cases of Covid-19 and the number of deaths due to Covid-19 increased the volatility of the stock market [6]. From the previous studies, it was found that sentiment over the fear of Covid-19 affects stock prices, and the Covid-19 pandemic caused negative sentiment to investors, causing price volatility in the stock market [7–9].

The covid-19 pandemic increased the level of underpricing in initial public offerings [10], and sentiment over the fear of the Covid-19 pandemic had a negative relationship with the initial return of companies that carried out IPOs. In addition, sentiment over the fear of the Covid-19 pandemic is more sensitive to companies that have just carried out an IPO [11].

However, country-level economic characteristics such as economic resilience, the intensity of capitalism, level of corporate governance, financial development, level of monetary policy, and quality of the health system, could potentially reduce the possible adverse effects of the COVID-19 pandemic on the stock market volatility [12].

Given the negative impact of the Covid-19 pandemic which has touched almost all industrial fields, the government is required to intervene in order to reduce or suppress the spread of Covid-19. One of the interventions carried out by the Indonesian government is the Large-Scale Social Restriction (PSBB) policy. According to PP No. 21 of 2020, PSBB is a restriction on certain activities of residents in an area suspected of being infected with Covid-19. These restrictions include 1. Holidays from schools and workplaces, 2. Restrictions on religious activities, 3. Restrictions on activities in public places. In addition, the government also provides social and economic assistance to people directly affected by Covid-19 [13].

Various forms of government intervention do not always have a positive impact, government response and intervention during Covid-19 could increase stock market

volatility [14]. The implementation of the lockdown had an impact on decreasing liquidity and stock market stability, besides the more intense the response by the government, the higher the level of underpricing [6, 10].

But on the other hand, government intervention in Covid-19 cases is expected to reduce the rate of spread of Covid-19 so that it can reduce the sentiment of fear over Covid-19 and restore the level of return on the stock market. Interventions from the government such as social distancing, testing, and contact tracing had a positive impact on stock market returns, but the intervention carried out by the government could sharpen the negative impact of Covid -19 on stock market returns [15].

In this study, it was found that the sentiment of fear over Covid-19 had a negative relationship with the level of underpricing. The effect of the sentiment of fear over Covid-19 on the level of underpricing in Indonesia is not yet known. Investor sentiment is important in Indonesia because the efficiency of the capital market in Indonesia is still at a weak-form level. This means that the stock price formed in the Indonesian capital market is not fully described by the information available to the public, but is also influenced by other factors such as investor sentiment [16–18].

This study also adds a government intervention variable as a moderating variable. In the case of the Covid-19 pandemic, government intervention plays an important role in suppressing the spread of Covid-19. Although intervention from the government does not always have a positive impact, the big hope is that intervention from the government can reduce the spread of Covid-19.

Based on the description of the phenomena and theories that have been disclosed above, the authors are interested in finding out the relationship between the Covid-19 pandemic condition and the performance of companies conducting IPOs in Indonesia and the effect of government intervention as a moderating variable.

1.1 Literature Review

There have been many previous studies discussing the performance of a company's IPO. Coverage in credible financial media and the tone of media coverage of an IPO company before and after its listing will affect its stock performance. The results show that the credible financial media coverage of the IPO has a significant effect on the company's stock price. This research was conducted on 97 companies that carried out IPOs on the New York Stock Exchange in 2006 [19].

Investor sentiment also had an effect on the initial return of companies that conduct IPOs. The study found that terrorist attacks will have a negative impact on investor sentiment, and result in lower demand for new offerings and lower IPO valuations, the sentiment of fear is also related to the decline in stock prices [9, 20].

Using the fear index, the relationship between the sentiment of fear over Covid-19 and the performance of IPO shares in the short term were negatively related to the fear of a pandemic. In addition, the study also found that the sentiment of fear over Covid-19 had more influence on the stock performance of companies that had just carried out an IPO [11].

The Covid-19 pandemic increases economic uncertainty in a country, and besides that economic growth also declines. Fear can affect investor sentiment and create uncertainty in the investment decision-making process [21]. The decline in stock prices during the

Covid-19 pandemic was caused by short-term investor sentiment, namely fear of the Covid-19 disease [22]. The sentiment of fear over the Covid-19 pandemic could increase information asymmetry, therefore the stock price will decrease [23].

Investor sentiment affects initial returns on IPO shares and the sentiment of fear over the Covid-19 pandemic affected the decline in stock prices. The mass media continue to report the number of positive confirmed cases and the number of deaths due to Covid-19, this creates fear in the community and shapes investor sentiment. The higher the sentiment of fear over the Covid-19 pandemic, the initial return of companies carrying out IPOs will decrease [9, 11]. Based on the description above, the hypothesis that we take is as follows:

H1 = The sentiment of fear over the Covid-19 pandemic will affect the underpricing during IPOs

The Covid-19 pandemic has also increased information uncertainty, and this has increased volatility in the stock market, the increasing number of positive confirmed cases of Covid-19 and the number of deaths due to Covid-19 increased the volatility of the stock market [6]. Covid-19 has a negative relationship with the rate of return on the stock market [15]. The high rate of spread of Covid-19 also caused negative sentiment for investors, causing price volatility in the stock market [7, 8].

Government intervention such as the implementation of lockdown, testing, and contact tracing had a positive impact on stock returns [15]. However, the study also stated that with government intervention, the negative impact of the Covid-19 pandemic became increasingly sharp. On the other hand, intervention from the government is expected to reduce the number of cases of the spread of Covid-19, so that the sentiment of fear over Covid-19 can decrease. The decrease in fear sentiment over Covid-19 will increase underpricing at the time of the IPO [11]. Therefore, the hypothesis taken is as follows:

H2 = Government intervention moderated the effect of fear sentiment over the Covid-19 pandemic on the underpricing during IPOs

This study aims to find out the effect of fear sentiment over Covid-19 on underpricing of IPO shares. Government intervention is a moderating variable on the sentiment of fear over Covid-19. This study also adds a control variable so that the interpretation of the model is not biased. Based on the description stated above, the relationship between variables in this study can be described with the following framework in Fig. 1.

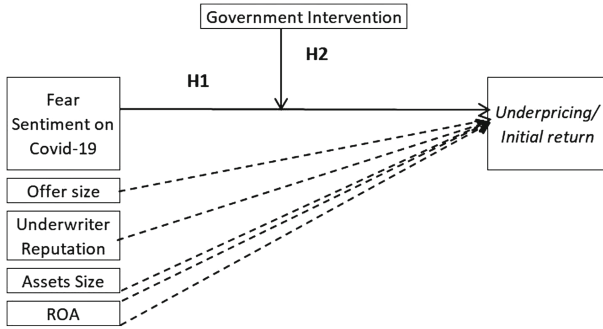


Fig. 1. Research Framework

2 Methods

This research is quantitative research and uses a causal research design. This study analyses the effect of the independent variable on the dependent variable, and the effect of the moderating variable on the independent variable. This study uses quantitative data to measure the value of the variables in this study.

The data analysis used in this research is descriptive and quantitative. Descriptive analysis was conducted to get an idea of the distribution of the data. Quantitative analysis was carried out using secondary data obtained from the company’s prospectus report when carrying out the IPO. This study uses the SPSS ver.26 application to perform data processing.

The sampling method used in this research is purposive sampling. The research sample for the research hypothesis is 51 companies that conduct IPOs on the Indonesia Stock Exchange in the 2020 period and 54 companies that conduct IPOs on the Indonesia Stock Exchanges in the 2021 period.

The type of data in this study is secondary data, namely prospectus reports, company annual financial statements, and stock price data. The data for this study was obtained from the Indonesian Stock Exchange website which presents a prospectus report for companies carrying out IPOs. The stock prices on the first day of the IPO and daily stock prices for companies are collected from Eikon. Journals, books, and other written sources are used for supporting data such as theories, previous research, and various other information.

Testing the effect of the moderating variable on the independent variable on the dependent variable will be carried out with Ordinary Least Square. The following is the equation that will be used to test the research hypothesis:

$$H1 : IR = \alpha + \beta_1CFI_i + \beta_2OS_i + \beta_3UW_i + \beta_4Asset_i + \beta_5ROA_i + e_i \quad (1)$$

$$H2 : IR = \alpha + \beta_1(CFI)_i + \beta_2(SI)_i + \beta_3(CFI)(SI)_i + \beta_4OS_i + \beta_5UW_i + \beta_5Asset_i + \beta_6ROA_i + e_i \quad (2)$$

where:

$\beta_1, \dots, \beta_6 = \text{Constant}$

IR = Initial return (Dependent)

CFI = Covid-19 Fear Index (Independent)

SI = Stringency Index (Independent)

OS = Offering Size (Control)

UW = Underwriter Reputation (Control) Asset = Company Asset Size (Control)

ROA = Return on Asset (Control)

3 Result and Discussion

Descriptive analysis is used to provide an overview of the research variables in a descriptive manner. This analysis includes the average value, standard deviation, maximum value and minimum value. Of the 105 companies that carried out IPOs in 2020 and 2021, this study only took 91 samples of companies. The following is a descriptive statistical Table 1 of the variables in this study.

In Table 1, it can be seen that the level of underpricing of companies carrying out IPOs in 2020 and 2021 is quite diverse. We can see this from the standard deviation level at the underpricing level of 12.18%. The average underpricing rate for companies conducting IPOs in 2020 and 2021 is 20.22%. This figure is quite high considering that the rate of return on government bonds or time deposits is around 4–7% per year.

From the table it can be seen that there are companies that carried out IPOs before the Covid-19 pandemic entered Indonesia, this can be seen from the minimum Covid-19 Fear Index (CFI) of 0. The average CFI is 0.48. The price of shares offered at the time of the IPO also varied, ranging from Rp. 80 per share to Rp. 7,375 per share. The average share price offered at the IPO was Rp404.68 per share. Offer size in 2020 and 2021 has an average score of 25.39. The standard deviation of the offering size is 1.4. The average total assets of companies carrying out IPOs in 2020 and 2021 are 26.45, with a standard deviation of 1.79. PT Dayamitra Telekomunikasi, Tbk is the company with the largest assets to carry out IPOs throughout 2020 and 2021, amounting to IDR 32.2 Trillion. Of the 105 samples of companies that carried out IPOs in 2020 and 2021, only 1 company

Table 1. Descriptive Statistics of Research Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Offer size	91	23,53	30,72	25,41	1,47
Top underwriter	91	0,00	1,00	0,35	0,48
ROA	91	-0,52	0,34	0,04	0,09
Assets size	91	23,48	31,10	26,56	1,77
Underpricing	91	-0,08	0,41	0,17	0,10
CFI	91	0,50	0,76	0,54	0,06
Stringency Index	91	3,53	4,43	4,22	0,23

did not experience underpricing, namely TECH issuers. The TRIN issuer became the record holder at the 2020 and 2021 IPOs as the issuer with the highest underpricing rate, at 41.2%. Since the enactment of the new autoreject limit rule in March 2020, the underpricing rate has decreased to around 20%.

3.1 The Effect of Fear Sentiment on Covid-19 on IPO Underpricing

This analysis was carried out by performing a linear regression test to see the relationship between the significance level of the independent variable and the dependent variable. Table 2 are the results of the regression test that has been carried out using the SPSS ver 26 application.

In Table 2 it can be seen that the significance value of the simultaneous significant test is 0.023. This means that simultaneously the independent variables in the H1 regression model affect the dependent variable.

The R square column shows a value of 0.14. This shows that the independent variables and control variables in this regression model simultaneously affect the dependent variable by 14%, while the remaining 86% is influenced by variables other than the variables in this model.

Table 2 can describe the magnitude and direction of the influence of each independent variable on the dependent variable. It can be seen that the sentiment of fear of Covid-19

Table 2. Summary Table oh H1 Regression Models

	Coefficient (Probability)
Constant	(,311) ,165
CFI	(,362) ,047***
Offer Size	(-,024) ,034***
ROA	(-,108) ,310
Asset Size	(,011) ,233
Top underwriter	(,004) ,850
R-Squared	,140
Adjusted R-Squared	,090
F-Statistic	2,777
Prob(F-Statistic)	,023***

as measured by CFI has a significant positive relationship to the level of underpricing, this is indicated by the significance value of the CFI variable below 0.047.

The results of this study are different from other studies which show that the sentiment of fear over Covid-19 has a negative relationship with underpricing [11]. This difference in results can show that Covid-19 does not form negative sentiment in investors toward the IPO market in Indonesia.

The results of this study are in line with research that stated that the Covid-19 pandemic had a significant positive relationship with underpricing [10]. The Covid-19 pandemic increases uncertainty about a company's performance in the future. This is in line with the signaling theory, where companies will deliberately underprice their stocks during IPOs to give a signal to investors that the company will provide good returns [24].

Although Covid-19 has a negative relationship with stock prices [9, 15], the initial return or underpricing of shares that have just carried out an IPO applies the opposite in Indonesia.

3.2 The Effect of Fear Sentiment on Covid-19 on IPO Underpricing Moderated by Government Intervention

In the second model, we used government intervention as the moderating variable. To see the interaction of the moderating variable of government intervention on the influence of the sentiment of fear over Covid-19 on underpricing, multiple linear regression analysis was used.

In Table 3 the results of the simultaneous significance test show a significant number of 0.000, this means that simultaneously all the variables in this research have an influence on the dependent variable. In the H2 regression model, the R-value increases to 27.8%, this value is higher when compared to the previous regression model. Table 3 shows that with government intervention as a moderating variable, it will increase the influence of fear sentiment over Covid-19 to the level of underpricing at the time of the IPO.

Table 3 shows that the significance level of the CFIxSI variable is 0.001, this means that the moderating variable has a significant relationship because it is below 0.05. The constant value of the moderating variable is -3.139, this shows that with government intervention as a moderating variable, the negative relationship between CFI and the level of underpricing is increasing.

It was found that the tighter social restrictions imposed by the government will increase the negative impact of Covid-19 on stock market returns [17]. Although the intervention carried out by the government has good intentions to reduce the level of the spread of Covid-19, it should be noted that there are sacrifices to the economy that must be made for this policy.

Table 3. Summary Table oh H2 Regression Models

Variable	Coefficient
	(Probability)
Constant	(-7,131) ,001
CFI	(13,945) ,001***
Stringency Index	(1,730) ,001***
CFIxSI	(-3,139) ,001***
Offer Size	(-,025) ,021**
ROA	(-,077) ,442
Asset Size	(,010) ,234
Top underwriter	(,004) ,838
R-Squared	,278
Adjusted R-Squared	,217
F-Statistic	4,559
Prob(F-Statistic)	,000***

4 Conclusion

We investigate the impact of fear associated with the pandemic on initial IPO returns moderated by government intervention. Using the fear index, we find that the initial return is positively associated with the fear of the pandemic. Government intervention as a moderating variable will weaken the relationship from the influence of the sentiment of fear over Covid-19 on underpricing. This research has not included the industrial effect of each company that carries out the IPO. The impact of Covid-19 on an industry can be different and should be a subject for future research.

Acknowledgments. I would like to thank Mr. Arief Wibisono Lubis for his input, direction, and guidance in the preparation of this article.

Authors' Contributions. Rahadian Abby the presented idea, developed the theory, and performed the computations. Arief Wibisono verified and supervised the findings of this work. All authors discussed the results and contributed to the final manuscript.

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