Journal of Islamic Monetary Economics and Finance, Vol. 8, No.3 (2022), pp. 485 - 500
p-ISSN: 2460-6146, e-ISSN: 2460-6618

DETERMINANTS OF IPO OVERSUBSCRIPTION ON ISLAMIC STOCKS: EVIDENCE FROM INDONESIA

Azwar Aulia Rasyad[1], Bayu Arie Fianto[2] and Rogier Busser[3]

Islamic Economics Department, Faculty of Economics and Business, Universitas Airlangga, Indonesia, azwar.aulia.rasyad-2018@feb.unair.ac.id
[2] Islamic Economics Department, Faculty of Economics and Business, Universitas Airlangga, Indonesia, bayu.fianto@feb.unair.ac.id
[2] Amsterdam School of International Business, Amsterdam University of Applied Science, Amsterdam, the Netherlands, rogierbusser@gmail.com

ABSTRACT

This study aims to investigate factors that affect IPO oversubscription on Islamic stocks. Using data of 202 IPOs indexed from Indonesia Sharia Stock Index, this study uses ordinary least squaresand quantile regression to test the formulated hypothesis from 2011 to 2020. This study finds that issue price and issue size negatively affect IPO oversubscription. Meanwhile, firm size and raw return positively affect IPO oversubscription. The findings of this study offer implications forcompanies especially related to go public subscription. This study can be reference for investors as well when engage in IPO related activities for Islamic stocks.

Keywords: Oversubscription, IPO, Islamic stocks, OLS, Quantile regression, Economic growth.
JEL classification: D53; F31; F37.

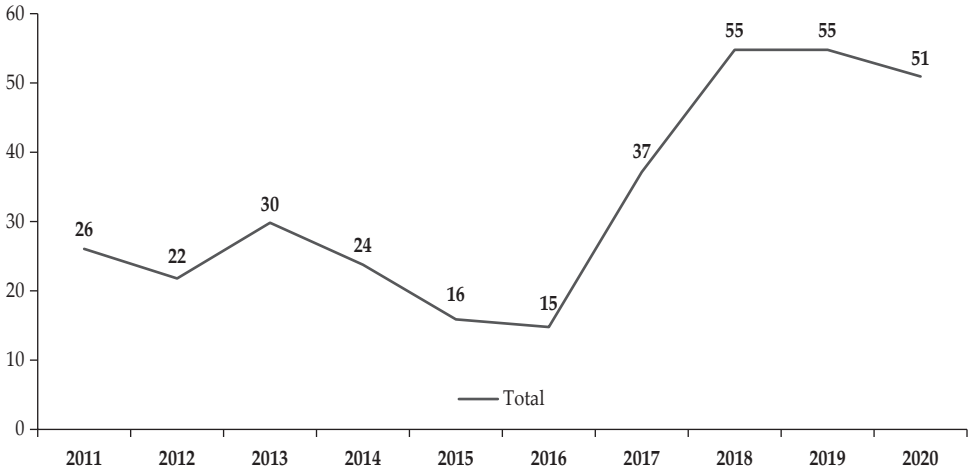
Article history:
Received : July 30, 2022
Revised : August 15, 2022
Accepted : August 26, 2022
Available online : August 30, 2022

https://doi.org/10.21098/jimf.v8i3.1566

I. INTRODUCTION

1.1. Background

Initial public offering (IPO) enables firms to raise capital to be used for various purposes including the expansion of their activities. In Indonesia, the data show that a total of 331 companies conducted initial public offerings (IPO) from 2011 to 2020 in Indonesia. The number of IPO each year in the Indonesia Stock Exchange (IDX) from 2011 to 2020 is given in Figure 1 below.



Source: Indonesia Stock Exchange (2022)

Figure 1.
IPO Development on IDX from 2011-2020

The figure indicates that there has been a significant increase in the number of companies conducting IPOs in the last 4 years. The capital market in Indonesia has its own uniqueness. In terms of market size, Indonesia is comparable to several well-established emerging markets, such as Russia and Brazil, but lags behind its neighbors, such as Malaysia, the Philippines, Singapore, and Thailand (Sharma, Narayan, Thuraisamy, & Laila, 2019).

During the IPO process, oversubscription often occurs, where the subscription for stocks by potential investors exceeds the number of stocks offered by a company (Ramadani, 2021). The role of IPO oversubscription (OS) in influencing the outcome of IPO activities has also been documented (Ljungqvist, 2007). For example, a newly listed company's reputation will improve if its IPO is in high demand, which in turn will make it easier to sell stocks in the future (Vong, 2006). Furthermore, highly over-demanded IPOs can increase the liquidity of the newly listed companies' stocks from a wide distribution and spread of ownership (Alanazi, Liu, & Al-Zoubi, 2016).

In the literature, factors that cause the oversubscription in the IPOs have received substantial attention (Avci, 2021; Dong et al., 2021; Gupta, Singh, & Yadav, 2022; Hoque & Mu, 2021; Payne, Trudell, Moore, Petrenko, & Hayes,

2022). These include investor demand (Arora & Singh, 2020; Mensi, Lee, Vinh Vo, & Yoon, 2021); promotional activities (Arora & Singh, 2020; Lan & Khoi Thach, 2022); previous number of IPO's conducted in the country (Lan & Khoi Thach, 2022; Mehmood, Mohd-Rashid, Ong, & Abbas, 2021); prior information about the company making the IPO (Chowdhry & Sherman, 1996; Hayat & Hassan, 2017), level of market efficiency (Avci, 2021; Karnatak, Malik, & Udayan Karnatak, 2021; Mehmood et al., 2021); role of the regulator (Arora & Singh, 2020; Dong et al., 2021); market capitalization (Arora & Singh, 2020; Lan & Khoi Thach, 2022); economic performance of the country (Arora & Singh, 2020; Mehmood et al., 2021); monetary policies of the country (Adra, 2021; Arora & Singh, 2020; Tekatli, 2021); investor perception about the IPO and the market (Gupta et al., 2022; Lan & Khoi Thach, 2022; Mehmood et al., 2021) and performance of previous IPOs of the company, its peers and other companies amongst the others (Agarwal, Liu, & Rhee, 2008; Badru & Ahmad-Zaluki, 2018; Lan & Khoi Thach, 2022; Tajuddin, Mohd-Rashid, Abdullah, & Abdul-Rahim, 2015).

Several previous studies on the determinants of oversubscription in Asia, such as Agarwal, Liu, & Rhee (2008), find a negative relationship between returns on the first trading day and the long-term performance of a company. A research by Low & Yong (2011) examines oversubscription in Malaysia's fixed-price IPOs. It documents a strong negative relationship between opportunity cost of fund and oversubscription. This is because investors are required to make advance payments at the time of the IPO application, a long offering period will increase the opportunity cost of funds of investors and thereby reduce their interest in the IPO. Research by Alqahtani & Boulanouar (2017) specifically describes the effect of Islamic compliance on the oversubscription in Saudi Arabia.

Along this line of research, this study examines factors that can affect IPO oversubscription of Islamic stocks in the Indonesia Stock Exchange. It applies regression analyses to determine whether such factors as issue price, issue size, firm size, list delay and raw returns have any bearing on oversubscriptions of Islamic IPOs. The rest of the paper is organised as follows: Section 2 presents relevant literature; Section 3 explains the data and methodology; Section 4 discusses results, and Section 5 concludes and provides recommendations.

II. LITERATURE REVIEW

2.1. IPO Oversubscription

Investor demand is a critical component of a successful initial public offering (IPO) and is often measured by the oversubscription ratio (Low & Yong, 2011). According to Tajuddin, Abdullah, & Taufil Mohd (2018), there are two theories underlying IPO oversubscription, namely signaling theory and winner's curse theory.

One of the theoretical explanations for oversubscription is the signaling theory (Leland & Pyle, 1977). According to Leland & Pyle (1977), a high fractional ownership of a company implies that there are certain features of the company's prospects that face a higher risk, which will provide a credible signal to future investors. The signaling model formalized by Allen & Faulhaber (1989) shows that underpricing is used as a signal to indicate that the company is of high quality. In that phase, underpricing IPO companies are considered to be better companies. In

all these models, good quality companies will receive a good response from the investors. Therefore, investor demand is an important component that determines the success of the IPO. Investors usually pay attention to the available information before making a decision. Rational investors use this information to subscribe to a quality IPO. When listing an IPO, issuers have the opportunity to demonstrate the true quality of the IPO through the disclosure of information in the prospectus (Álvarez & González, 2005).

Another widely accepted theoretical explanation that has been suggested to explain IPO oversubscription is the winner's curse (Rock, 1986). This theory explains the selection problems faced by the investors who are uninformed and are less aware of the true values of the issuing company. In contrast, well-informed investors have more information about the true value of the issuing company. Well-informed investors will only subscribe to good quality IPOs that have future potential and are worth the price. In addition, well-informed investors are unlikely to subscribe to an IPO if they feel there is a possibility that the IPO is overpriced. In the absence of informed investors in the bidding process, uninformed investors will place orders for subscriptions and will most likely secure their subscriptions. Therefore, this investment in an IPO could be aligned with a "curse" to uninformed investors when they realize that the IPO is too expensive. Thus, they avoid entering the IPO market. To attract uninformed investors to enter the market, issuers and underwriters usually have to offer discounts, and this strategy leads to underpricing of new issues. Thus, the participation of informed investors and uninformed investors will increase the level of excess demand from the IPOs involved. Issuers and underwriters usually have to offer discounts, and this strategy leads to underpricing of the new issues. Thus, the participation of the informed and uninformed investors will increase the excess demand from the IPOs involved. Issuers and underwriters usually have to offer discounts. This strategy leads to underpricing of new issues. Thus, the participation of informed and informed investors will increase the level of excess demand from the IPOs involved.

2.2. Islamic Stocks

Hayat & Hassan (2017) show that in general, Muslims are allowed to invest in stocks classified as Halal. The Indonesian Islamic Stock Index (ISSI), which was launched on 12 May 2011, is a composite index of Islamic stocks listed on the Indonesia Stock Exchange (IDX). Its constituents are Islamic stocks listed on the IDX and are included in the Islamic securities list (DES) issued by OJK. Based on OJK regulations, issuers or public companies must meet the following financial ratios to be considered as Islamic securities:

1. The ratio of total interest-based debt to total assets should not exceed 45%.
2. The ratio of total interest income and other non-Halal income compared to total operating income and other income is not more than 10%

2.3. Hypotheses Development

Issue Price: *Issue price* or the price at which stocks are offered to the public at the time of the IPO is an estimate of the intrinsic value of the company. Following Welch (1992) and Benveniste & Busaba (1997), some studies such as Low & Yong (2011) and Kumar & Dhanda (2013) find a negative relationship between the IPO offer price and investor demand on the grounds that the investors demand is very elastic. A slight increase in the offer price will have a negative effect on the information cascade and vice versa. The results of these studies conclude that the companies with lower issue prices have a larger number of requests and vice versa. Based on this argument, it is hypothesized that:

H1. *Issue price* has a negative relationship with oversubscription.

Issue Size: *Issue size* is the total number of stocks issued. The availability of a limited number of stocks to subscribe to encourage investor demand on the issue results in a higher oversubscription rate. On the contrary, the availability of a larger number of stocks for subscription will reduce the possibility of IPO oversubscription (Low & Yong, 2011). Empirical evidence in this context has different results. Tajuddin et al. (2015) and Mehmood, Mohd-Rashid, & Ahmad (2020) find a negative relationship between the issue size and oversubscription. Meanwhile, Low & Yong (2011) document an insignificant relationship. From these studies, the authors hypothesize that:

H2. *Issue size* has a negative relationship with oversubscription

Firm Size: Drawing support from the signaling framework, which shows that the company size is a signaling tool for disseminating company quality in the public arena, larger company size leads to higher investor demand, which results in higher demand for an IPO (Badru & Ahmad-Zaluki, 2018).Therefore, investors' bids tend to be higher for firms with a larger asset base than the companies with a smaller asset base. Considering the importance of size in reducing information asymmetry and shaping subsequent demand for supply as measured in the form of oversubscription, a positive relationship has been noted in various empirical studies (Badru & Ahmad-Zaluki, 2018; Badru, Ahmad-Zaluki, & Wan-Hussin, 2019). Therefore, in line with the signal theory, it has been hypothesized that:

H3. *Firm size* has a positive relationship with oversubscription

Listing Delay: Low and Young (2011) note that because IPO customers make advance payments for stocks, their funds are blocked until the time they start trading on the stock exchange. Thus, it is used as a proxy for the opportunity cost of capital in the form of returns, which will be obtained by the IPO customers on tied up capital. Based on this explanation, it is estimated that the higher the listing lag, the lower the demand for stocks. This is because investors are not only faced with marketability risks, but also face opportunity costs due to the loss of capital. Some studies that support this logic, such as Chowdhry & Sherman (1996), Low & Yong (2011) conclude that there is a negative relationship between the listing delay and oversubscription. With that, the author hypothesizes that:

H4. *Listing delay* has a negative relationship with oversubscription.

Raw Return: Raw return, which is used interchangeably with the term initial return and underpricing, represents an increase in a company's market valuation from its fair value by investment bankers. Its relationship with oversubscription is based on signaling theory, which states that in order to signal the quality of

the company to investors and trigger investor demand for offers, companies with superior quality deliberately lower their offering prices. In addition, companies enjoy underpricing to entice informed investors to aggressively buy their stocks and pave the way for other investors to follow them, resulting in a higher information cascade(Welch, 1992). Therefore, higher underpricing stimulates investor demand to bid. Based on the explanation above, research such as Mehmood et al. (2020) and Tajuddin et al. (2019) report a positive relationship between initial return and oversubscription. Therefore, the author hypothesizes:

H5. *Raw Return* has a positive relationship to oversubscription.

Based on the review of literature the conceptual framework of the research has been presented in figure 2:

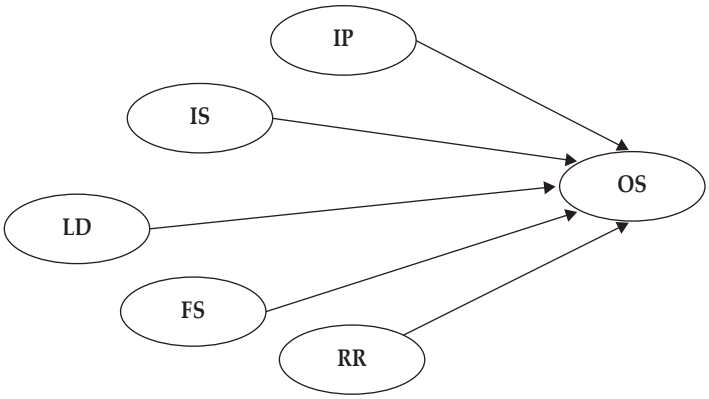


Figure 2.
Conceptual Framework

III. METHODOLOGY

3.1. Research Method

This study uses a quantitative approach to establish relationships between independent variables viz., issue price, issue size, firm size, listing delay, and underpricing, and IPO oversubscription. Based on the works of Arora & Singh (2020) and Low & Yong (2011) this research specifies the following linear regression:

$$OS = \alpha + \beta_1 IP + \beta_2 \ln(IS) + \beta_3 \ln(FS) + \beta_4 LD + \beta_5 RR + \mu \quad (1)$$

where:

OS : *Oversubscription ratio*
α : Constant
IP : *Issue Price*
IS : *Issue Size*
FS : *Firm Size*
LD : *Listing Delay*
RR : *Raw Returns*
μ : *Error term*

The dependent variable used in this study is the oversubscription ratio. This ratio shows how many times an issue is subscribed to by the investors. For example, a threefold oversubscription ratio indicates that for every one IPO share three investors have applid. An oversubscription ratio greater than 1 means higher investor demand, while an oversubscription ratio less than 1 means lower investor demand(Arora & Singh, 2020). The oversubscription ratio can be calculated by the following formula(Tajuddin et al., 2015):

$$OS = \frac{\text{Total number of IPOs Subscribed}}{\text{Total stocks offered}} \quad (2)$$

Meanwhile, the definition of each independent variable is given in Table 1.

Table 1.
Definition and Sources of Independent Variables

Variable	Definition	Source
Issue Price (IP)	The price at which stocks are issued at IPO	Low & Yong, (2011)
Issue Size (IS)	Natural log of the total number of stocks issued	Tajuddin et al. (2015)
Firm Size (FS)	Natural log of the total book value of assets	Badru & Ahmad-Zaluki (2018)
Listing Delay (LD)	Number of days between closing of issue and listing on exchange	Low & Yong, (2011)
Raw Return (RR)	Change in percent (%) of closing price on the first day with the offer price	Tajuddin et al. (2019)

This study uses secondary data of the IPOs of the ISSI listed companies conducted between 2011-2020, obtained from TICMI (https://ticmi.co.id/datapasarmodal). The population in this study is the companies listed in the Indonesian Islamic Stock Index (ISSI). Based on the data found from the IDX website, there are 464 companies registered with ISSI. Of the 206 companies 202 have been chosen because 4 companies have incomplete crucial data. The paper estimates the model using the OLS estimation method. Then, the robustness of the OLS results using quantile regression, which is applied to the full sample, pre-Covid sample and during Covid sample.

IV. RESULTS AND ANALYSIS

4.1. Descriptive Statistics

Based on table 2 there are about 10 missing data from the firm size variable, which makes data from only 192 companies available for consideration. In the listing delay variables, there is only 1 invalid data.

Table 2.
Descriptive Statistics

Variables	N	Mean	Std. Deviation	Minimum	Maximum	Median
Oversub	202	7.0379	17.31315	1	210.85	4.755
Issueprice	202	750.32	1586.43	100	17000	286.5
LnIssuesize	202	19.9484	1.03423	16.91	23.03	19.775
LnFirmSize	192	27.4539	1.38098	20.95	31.27	27.475
ListingDelay	201	10.99	2.957	4	21	11
RawReturn	202	35.5266	28.68122	-89	87.1	49.435

Source: author's calculations

Test to check normality of data have been reported in table 3 hereunder.

Table 3.
Normality Test Results

	Kolmogorov-Smirnov			Shapiro-Wilk		
Variable	**Statistics**	**Df**	**Sig.**	**Statistics**	**df**	**Sig.**
Oversubscription	0.387	202	0.00	0.184	202	0.00

Source: author's calculations

Kolmogorov-Smirnov and Shapiro-Wilk tests have been used to test the normality of the data distribution. The Kolmogorov-Smirnov and Shapiro-Wilk test results of 0.00 reject the null hypothesis that the data is normally distributed. This abnormal data problem can also be solved using quantileregression (Hao & Naiman, 2007).

4.2. OLS Results

Ordinary least squares regression is used to determine the relationship between the dependent and independent variables in overall sample period. Subsequently, the results of the OLS regression analysis are compared with the results from the quantitative regression method. The results of the ordinary least squares (OLS) regression are presented in table 4:

Table 4.
OLS Results

Variables	Estimate	t-statistic	VIF
(Constant)	28.215	1.005	
IssuePrice	-0.002	-1.978**	1.251
ListingDelay	-0.229	-0.634	1.018
RawReturn	0.07	1.673*	1.143
LnIssueSize	-9.578	-7.27***	1.447
LnFirmSize	6.242	6.016***	1.611
Adjusted R^2	0.232		
F-statistics	12.494***		
Durbin-Watson	2.023		

Notes: ***, ** and*significance at the 1%, 5% and 10% levels, respectively
Source: author's calculations

This study is free from the problem of multicollinearity as evidenced by the acceptable limits of variance inflation factors (VIFs < 10) in Table 4. (Kleinbaum, Kupper, Nizam, &Rosenberg, 2013). *Adjusted* R^2 in OLS regression analysis shows that 23.2% of the variation in oversubscription can collectively be explained by the independent variables used in this study. This value is higher when compared to the research such as Low & Yong (2011) with a value of 22.9%. However, this value is still lower than the Adjusted R^2 value in the study by Arora & Singh (2020) and Tajuddin et al. (2018) namely 30.19% and 28.8%.

Table 4 suggests that the issue price has a negative and significant relationship ($p<0.05$) with oversubscription. A negative coefficient indicates that when the stock price increases by 1 rupiah, oversubscription decreases by 0.002 times. This result is consistent with Welch (1992), which explains that the companies generally lower prices to increase demand. The result also supports the results of the studies such as Low & Yong (2011), which explain that the investor demand is elastic.A slight increase in the supply price will have a negative effect on the information cascade and vice versa.

The issue size variable shows a significantly negative relationship ($p<0.01$) with oversubscription. The negative coefficient indicates that when the issue size increases by 1 percent, oversubscription decreases by 9.578 times. This is in accordance with the theory which states that the availability of a larger number of stocks will reduce the possibility of oversubscription (Low & Yong, 2011). The result is in accordance with the results of previous studies such as Mehmood et al. (2020) and Tajuddin et al.(2015). A large issue size can also indicate that if a company offers a larger number of stocks, it can be said that the company needs more funds or it can also be linked that the company has financial problems.

Firm size variable carries a significantly positive coefficient ($p<0.01$). The positive coefficient indicates that when firm size increases by 1 percent, oversubscription increases by 6.242 times. Investor demand is always positively associated with company size, it illustrates that the companies with a larger asset base signify their credibility to investors. The result is in accordance with the results of previous studies such as Badru & Ahmad-Zaluki (2018) and Badru et al.(2019). It shows that having a larger company size will encourage higher investor demand, which results in higher oversubscription rates (Badru & Ahmad-Zaluki, 2018).

For the listing delay, a non-significant relationship has been found. This is not in accordance with research by (Low & Yong, 2011), which finds a significantly negative with oversubscription. However, there are also studies such as those by Arora & Singh (2020) which finds a non-significant relationship between listing delay and oversubscription using quantile regression. This could be due to the fact that in fixed price IPOs, the long listing lag makes investors more worried and will reduce the possibility of the IPO experiencing oversubscription. However, this does not seem to apply to IPO book building as has been found in this study. The opening of the number of demands to the public and the pricing model that is carried out through the bidding process causes investors to be less affected by the listing delay.

For the raw return variable, a positive relationship has been found ($p<0.10$) with oversubscription. A positive coefficient indicates that when the underpricing ratio increases by 1 percent, oversubscriptions increase by 0.07 times. This positive

relationship is in accordance with Tajuddin et al. (2019), Arora & Singh (2020) and Mehmood et al. (2020), which are built on the premise that only financially sound companies can afford the underpricing costs that are often associated with raw returns. Therefore, companies that use them as signaling devices are considered to have superior quality, and therefore, investor demand for such IPO's is high.

4.3. Robustness Test: Quantile Regression

Quantile regression allows to comprehensively understand the impact of the independent variable on the dependent variable beyond its mean value. It is also a solution to the problems of non-normality and heteroscedasticity. The results of the quantile regressions are presented in Table 5 to Table 7, respectively for the 2011-2020 period, the pre-COVID19 period before March 2020 and the COVID19 period. The separation of the COVID19 IPO and non-COVID19 IPO groups is based on the WHO announcement of COVID19 as a pandemic in March 2020 (Baig & Chen, 2021).

Table 5.
ISSI IPO Quantile Regression Results for the 2011-2020 period

	Quantile 25th		Quantile 50th		Quantile 75th	
Variables	**Coefficient**	**t-statistic**	**Coefficient**	**t-statistic**	**Coefficient**	**t-statistic**
(Intercept)	1.988	0.638	0.147	0.045	-5.173	-0.906
IssuePrice	-0.00027	-3.08***	-9.65E-05	-1.074	-0.00026	-1.668*
ListingDelay	-0.033	-0.819	-0.037	-0.891	0.005	0.062
RawReturn	0.003	0.663	0.004	0.919	0.007	0.866
LnIssueSize	-1.177	-8.043***	-1.278	-8.391***	-1.887	-7.038***
LnFirmSize	0.939	8.146***	1.111	9.265***	1.781	8.436***
Pseudo R^2	0.085		0.085		0.107	

Notes: ***, ** and*significance at the 1%, 5% and 10% levels, respectively.
Source: author's calculations

According to Koenker & Machado (1999), Pseudo R^2 in quantile regression is analogous to Adjusted R^2 in conventional regression analysis. In addition, Pseudo R^2 is also one of the criteria for evaluating the quality of the quantile regression model (Koenker & Machado, 1999). The robustness has been explained with the help of the figure 3 hereunder:

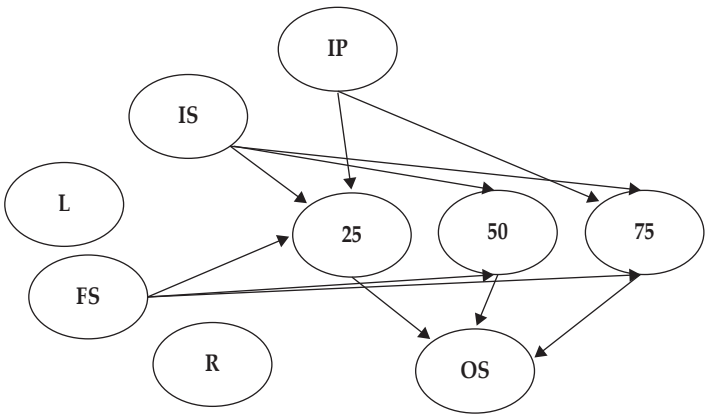


Figure 3.
ISSI IPO Quantile Regression Results for the 2011-2020 Period

From table 6, the numbers of *Pseudo R²*at the 25th and 50th quantile is greater than the results in table 5. At quantile 75th, all independent variables have a significant effect on oversubscription except listing delay. This implies that the impact of these independent variables is stronger when the oversubscription rate is higher.

Table 6.
ISSI Non-Covid IPOs Quantile Regression Results

	Quantile 25th		Quantile 50th		Quantile 75th	
Variables	**Coefficient**	**t-statistic**	**Coefficient**	**t-statistic**	**Coefficient**	**t-statistic**
(Intercept)	-0.684	-0.212	-4.706	-1.426	-9.497	-2.161**
IssuePrice	0.00000	-1.85*	-9.40E-05	-1.094	0.00000	-2.476**
ListingDelay	-0.053	-1.21	-0.03	-0.672	-0.023	-0.394
RawReturn	0.006	1.218	0.005	1.072	0.014	2.308**
LnIssueSize	-0.996	-6.84***	-1.201	-8.066***	-2.142	-10.8***
LnFirmSize	0.901	7.688***	1.223	10.204***	2.119	13.276***
Pseudo R²	0.093		0.094		0.107	

Notes: ***, ** and*significance at the 1%, 5% and 10% levels, respectively.
Source: author's calculations

The results are different when compared to the results in table 5, which shows an insignificant relationship with the raw return variable. This has been explained in the figure 4 hereunder:

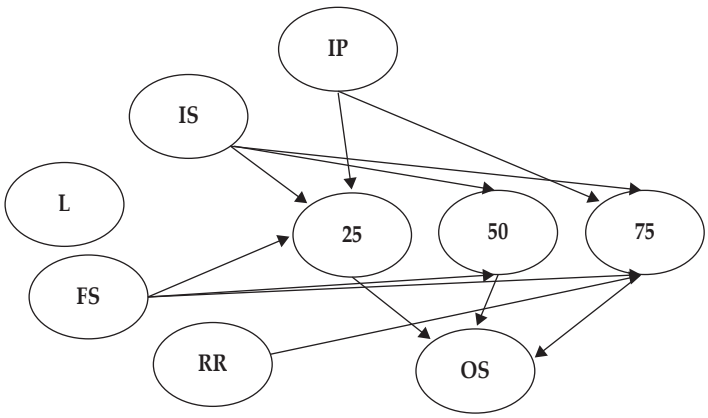


Figure 4.
ISSI Non-Covid IPOs Quantile Regression Results

The omission of data classified as COVID19 IPOs could also be the reason why more results show a significant relationship compared to the results in table 3 &.4. Several previous studies regarding oversubscription deliberately do not collect data in the year when a crisis or pandemic occurred as in Low & Yong (2011) who start their data in the year 2000 to avoid the effects of the Asian Financial Crisis in 1997-1998 and end at 2007 deadline to avoid the effects of the Global Financial Crisis in 2008.

Table 7 shows the results of quantile regression using ISSI's COVID19 IPOs data. In these results, it has been found that no independent variable has significant relationship with oversubscription. This could be due to the lack of existing data. There are only 47 valid data from the COVID19 IPOs group that can be processed. This number is far below the data in the non-COVID19 IPOs group and the complete data group for 2011-2020.

Table 7.
ISSI Covid IPOs Quantile Regression Results

	Quantile 25th		Quantile 50th		Quantile 75th	
Variables	**Coefficient**	**t-statistic**	**Coefficient**	**t-statistic**	**Coefficient**	**t-statistic**
(Intercept)	7.416	1.845	1.181	0.217	5.622	0.325
IssuePrice	0.00009	0.446	5.07E-06	0.019	0.00000	-0.205
ListingDelay	-0.157	-1.753	-0.008	-0.069	-0.441	-1.145
RawReturn	0.01	0.559	-0.029	-1.186	0.026	0.338
LnIssueSize	-0.084	-0.435	0.244	0.936	0.273	0.329
LnFirmSize	-	-	-	-	-	-
Pseudo R^2	0.05		0.024		0.074	

Notes: ***, ** and*significance at the 1%, 5% and 10% levels, respectively.
Source: author's calculations

V. CONCLUSION AND RECOMMENDATION

This study examines the determinants of oversubscription of Islamic IPOs in the Indoensia Stock Exchange (IDX). It finds that the issue price and issue size negatively affects oversubscription. Meanwhile, the firm size and the raw return positively affect oversubscription. The listing delay variable has been found to be not significantly related to oversubscription.

The results of all independent variables except listing delay are in accordance with the hypotheses. The analysis using the quantile regression method shows that under certain conditions and data sets, the relationships of these variables to oversubscription can be different in each data groups and quantiles. There is a need to separate the data if there are certain cases or events such as the COVID19 pandemic and the global financial crisis in 2008 to avoid potential bias. This is evidenced in the robustness test using quantile regression where the table using non-COVID IPOs data shows more independent variables that have significant relationships with oversubscription.

The findings of this study offer implications for academics, investors, investment advisors and companies. For investors, this study acts as a guide by revealing certain factors they should consider when buying IPO stocks. This study provides additional and new information that is useful for investors' IPO assessments and informed investment decisions. This study puts investment advisors in a better place to guide potential investors on investing in good quality IPOs in a more informative way. To increase investor demand in terms of higher oversubscription, issuers are advised to launch their IPOs at a period when investors are optimistic about their company's future growth potential. Furthermore, companies interested to make IPOs are also advised to lower their offer prices to bridge the information asymmetry and help investors differentiating good quality companies from poor quality companies.

REFERENCES

Adra, S. (2021). The conventional and informational impacts of monetary policy on the IPO market. *Economics Letters*, *200*(March 2021), 109751. https://doi.org/10.1016/J.ECONLET.2021.109751

Agarwal, S., Liu, C., & Rhee, S. G. (2008). Investor demand for IPOs and aftermarket performance: Evidence from the Hong Kong stock market. *Journal of International Financial Markets, Institutions and Money*, *18*(2), 176–190.

Alanazi, A. S., Liu, B., & Al-Zoubi, H. A. (2016). IPO underpricing in supply and demand framework: Evidence from a market of retailers. *Applied Economics*, *48*(60), 5835–5849.

Allen, F., & Faulhaber, G. R. (1989). Signalling by underpricing in the IPO market. *Journal of Financial Economics*, *23*(2), 303–323.

Alqahtani, F., & Boulanouar, Z. (2017). Sharia compliance status & investor demand for IPOs: Evidence from Saudi Arabia. *Pacific-Basin Finance Journal*, *46*, 258–268. https://doi.org/10.1016/j.pacfin.2017.09.012

Álvarez, S., & González, V. M. (2005). Signalling and the long-run performance of Spanish Initial Public Offerings (IPOs). *Journal of Business Finance and Accounting*, *32*(1–2), 325–350.

Arora, N., & Singh, B. (2020). Determinants of oversubscription of SME IPOs in India: Evidence from quantile regression. *Asia-Pacific Journal of Business Administration*, *12*(3–4), 349–370.

Avci, S. B. (2021). IPO valuation and IPO inter-industry effects. *Journal of Research in Economics Politics and Finance*, *6*(2), 418–438.

Badru, B. O., & Ahmad-Zaluki, N. A. (2018). Explaining IPO initial returns in Malaysia: Ex ante uncertainty vs signaling. *Asian Review of Accounting*, *26*(1), 84–106.

Badru, B. O., Ahmad-Zaluki, N. A., & Wan-Hussin, W. N. (2019). Signalling IPO quality through female directors. *International Journal of Managerial Finance*, *15*(5), 719–743.

Baig, A. S., & Chen, M. (2021). Did the COVID-19 pandemic (really) positively impact the IPO Market? An Analysis of information uncertainty. *Finance Research Letters*, (August), 102372. https://doi.org/10.1016/j.frl.2021.102372

Benveniste, L. M., & Busaba, W. Y. (1997). Bookbuilding vs. Fixed price : An analysis of competing strategies for marketing IPOs. *The Journal of Financial and Quantitative Analysis*, *32*(4), 383–403.

Chowdhry, B., & Sherman, A. (1996). International differences in oversubscription and underpricing of IPOs. *Journal of Corporate Finance*, *2*(4), 359–381.

Dong, L., Mcphaden, M. J., Ma, Y., Miura, S., Honjo, H., Yu, Y., … Yi, R. (2021). The effectiveness of IPO institution reform in China: From the view of pricing efficiency changing and international comparison. *Journal of Physics: Conference Series*, *1978*(1), 1–11.

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.

Hao, L., & Naiman, D. Q. (2007). *Quantile regression*. Thousand Oaks, California: Sage.

Hayat, R., & Hassan, M. (2017). Does an Islamic label indicate good corporate governance? *Journal of Corporate Finance*, *43*, 159–174. https://doi.org/10.1016/j.jcorpfin.2016.12.012

Hoque, H., & Mu, S. (2021). Does a reduction of state control affect IPO underpricing? Evidence from the Chinese A-share market. *Journal of International Money and Finance*, *115*, 102384. https://doi.org/10.1016/J.JIMONFIN.2021.102384

Karnatak, U., Malik, C., & Udayan Karnatak, M. (2021). Presence of analysts before IPO and underpricing: A meta-analysis. *Applied Finance Letters*, *10*, 114–129. https://doi.org/10.24135/AFL.V10I.431

Kleinbaum, D. G., Kupper, L. L., Nizam, A., & Rosenberg, E. S. (2013). *Applied regression analysis and other multivariable methods*. Boston, MA: Cengage Learning.

Koenker, R., & Machado, J. A. F. (1999). Goodness of fit and related inference processes for quantile regression. *Journal of the American Statistical Association*, *94*(448), 1296–1310.

Kumar, V., & Dhanda, N. (2013). Determinants of subscription: An empirical study of selected Indian IPOs. *International Journal of Research in IT and Management*, *3*(12), 34–43.

Lan, P. LE, & Khoi Thach, D. (2022). Factors affecting the volatility of post-ipo

stock prices: Evidence from state-owned enterprises in hanoi stock exchange. *The Journal of Asian Finance, Economics and Business*, *9*(5), 409–419.

Leland, H. E., & Pyle, D. H. (1977). Informational asymmetries, financial structure, and financial intermediation. *The Journal of Finance*, *32*(2), 371–387.

Ljungqvist, A. (2007). Chapter 7 - IPO underpricing. In *Handbook of empirical corporate finance*. Elsevier.

Low, S.-W., & Yong, O. (2011). Explaining over-subscription in fixed-price IPOs—Evidence from the Malaysian stock market. *Emerging Markets Review*, *12*(3), 205–216.

Mehmood, W., Mohd-Rashid, R., & Ahmad, A. H. (2020). Impact of pricing mechanism on IPO oversubscription: Evidence from Pakistan stock exchange. *Pacific Accounting Review*, *32*(2), 239–254.

Mehmood, W., Mohd-Rashid, R., Ong, C. Z., & Abbas, Y. A. (2021). Factors driving IPO variability: Evidence from Pakistan stock exchange. *Journal of Economics, Finance and Administrative Science*, *26*(52), 300–316.

Mensi, W., Lee, Y. J., Vinh Vo, X., & Yoon, S. M. (2021). Does oil price variability affect the long memory and weak form efficiency of stock markets in top oil producers and oil Consumers? Evidence from an asymmetric MF-DFA approach. *North American Journal of Economics and Finance*, *57*(April), 101446. https://doi.org/10.1016/j.najef.2021.101446

Payne, G. T., Trudell, L. T., Moore, C. B., Petrenko, O. V., & Hayes, N. T. (2022). Ambiguous signals and information asymmetry in the initial public offering process: Examining ownership concentration, process time, and underpricing. *Organizational Research Methods*, *16*(2), 270–301.

Ramadani, L. A. (2021). Shariah compliance status, market conditions and IPO oversubscription. *Jurnal Pasar Modal dan Bisnis*, *3*(2), 35–44.

Rock, K. (1986). Why new issues are underpriced. *Journal of Financial Economics*, *15*(1–2), 187–212.

Sharma, S. S., Narayan, P. K., Thuraisamy, K., & Laila, N. (2019). Is Indonesia's stock market different when it comes to predictability? *Emerging Markets Review*, *40*(September 2019), 100623. https://doi.org/10.1016/j.ememar.2019.100623

Tajuddin, A. H., Abdullah, N. A. H., & Taufil Mohd, K. N. (2018). Shariah-compliant status and IPO oversubscriptions. *Journal of Islamic Accounting and Business Research*, *9*(4), 531–548.

Tajuddin, A. H., Mohd-Rashid, R., Abdullah, N. A. H., & Abdul-Rahim, R. (2015). An empirical examination of over-subscription in the Malaysian IPO market. *International Journal of Economics and Management*, *9*(Special Issue), 81–102.

Tajuddin, A. H., Mohd Rashid, R., Khaw, K. L. H., & Che Yahya, N. (2019). Shariah-compliant status and investors' demand for IPOs: The effects of information asymmetry. *International Journal of Islamic and Middle Eastern Finance and Management*, *12*(4), 489–508.

Tekatli, N. (2021). The role of monetary policy uncertainty in corporate decisions. *American Journal of Management*, *21*(6), 14–26.

Vong, A. P. I. (2006). Rate of subscription and after-market volatility in Hong Kong IPOs. *Applied Financial Economics*, *16*(16), 1217–1224.

Welch, I. (1992). Sequential sales, learning, and cascades. *The Journal of Finance*, *47*(2), 695–732.

This page is intentionally left blank