Research Paper

Do Initial Public Offering Strategies Improve Firm's Performance? Evidence from Emerging Country

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Abstract.
The firm's decision to become a public firm is very interesting to analyze and reveal its performance. This study aims to reveal the firm's performance in the short and medium term after conducting an initial public offering (IPO). In addition, the choice of the IPO strategy, that are share-only IPO (SIPO) or package IPO (PIPO) also affects the firm's performance. Annual reports of up to 3 years of 155 companies conducting IPOs from 2010 to 2016 are used to examine the short-term and medium-term impacts of the IPO process. A very surprising result of this study is that IPO companies cannot show better performance in the short and medium term after the IPO, including State-Owned Enterprises (SOE), it gets worse if the company decides to use PIPO as a strategy during the IPO.

Keywords: initial public offering, firm performance, share-only IPO, package IPO

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1. Introduction

The capital structure theory framework consisting of retained earnings, debt, preferred shares and ordinary shares always strives for the optimal funding combination of debt and equities (Antill & R., 2019; Dhankar, 2019; Donaldson, 1961; Fama & French, 2002; Hossain, 2021). Initial Public Offering (IPO) becomes the last alternative source when the firm's debt capacity has reached a condition if the addition of debt causes a decrease in the firm's performance and value as pecking order theory and trade off theory (Badru et al., 2019; Myers, 1984, 2001; Myers & Majluf, 1984). In addition to improving the capital structure, the firm's goal of conducting an IPO is to improve the firm's image, increase the value of the firm and improve the ability to going concern (Hadi, 2013; Mun & Jang, 2019; Yazdani & Aris, 2015).

How & Howe (2001) introduced the terms shares-only IPO (SIPO) and package IPO (PIPO) as strategies that acfirm the IPO process. SIPO is defined as usual IPO activities,

that is, the firm only sells shares at the time of the IPO (Dhevi et al., 2019). Meanwhile, PIPO is a firm's strategy to attract more investors to buy by including warrants at the time of the IPO (How & Howe, 2001). One of the reasons firms use PIPO is to reduce potential agency costs associated with providing free cash flow to managers at the time of the IPO (Schultz, 1993). In addition, warrants play the role of "sweeteners" to attract more potential investors to buy shares (Garner & Marshall, 2005).

Regardless of the strategy used, the IPO process will provide benefits in the short-term, medium-term, and long-term on the firm's financial performance. In the short-term, an IPO provides significant benefits for the firm on improving the capital structure (Ozen, 2016). In the long term, the firm will use the IPO proceeds starting from increasing working capital, expanding the market, to increasing investment in subsidiaries (Pastusiak et al., 2016). However, there are also many studies that prove the decline in financial performance in post-IPO (Jain & Kini, 1994; Laokulrach, 2019; Loughran & Ritter, 1995; Ritter, 1991; S. & Supriatna, 2019; Yusmaniarti et al., 2020).

There are several explanations for the decline in the firm's performance in post-IPO. First, the reduction in management ownership that occurs when a firm goes public is likely to lead to agency problems (Jensen & Meckling, 1976). As a result of conflicts of interest between the initial owners and shareholders, the firm's performance may decline because managers have an incentive to use the proceeds from the IPO in the project of maximizing self-interest. Second, the firm conducts an IPO to coincide with a period of unusually good performance levels, which they know cannot be maintained in the future (Jain & Kini, 1994). Third, is window dressing which has become a common practice of firms at the time of pre-IPO (Laokulrach, 2019). This will cause the pre-IPO performance to become higher than in the post-IPO.

Therefore, the topic of financial performance before and after the IPO is still interesting to discuss mainly related to the choice of strategies that acfirm the IPO process, which is still very rarely researched, especially in developing countries. The results of previous research that are still debatable, Cahyani & Suhadak (2017); Khatami et al. (2017) found a significant difference in liquidity before and after the IPO, whereas with a larger sample and a longer year, the result of Soesetio & Rudhiningtyas (2021) prove the opposite result. Likewise with leverage performance, Cahyani & Suhadak (2017); Soesetio & Rudhiningtyas (2021), contrary to the results of Khatami et al. (2017) which proves that there is no significant difference in the mean value of leverage before and after the IPO.

Using a longer duration and a larger sample, this study aims to analyze the impact of IPOs and their strategies on the firm's performance over a short and medium-term period chosen by both SOE and non-SOE firms so that it is expected to enrich and revise

the previous findings and existing literature including equipping potential investors to choose prospective issuers during the IPO moment. Thus, investors are avoided from buying underperforming stocks in the future. In this article, part 2 reviews the literature. section 3 describes the data and methodology. Part 4 presents the empirical results and explains the empirical results and part 5 concludes the results of the study.

2. Literature Review

2.1. Signaling Theory

Signaling theory was proposed by Spence (1973), that describes behavior when two parties (individuals or organizations) have access to different information (Connelly et al., 2011). According to Brigham & Houston (2018) signaling theory is a management behavior in providing clues for investors regarding management's views on the firm's future prospects. Signaling theory puts forward about how a firm should give signals to users of financial statements. This signal is in the form of information about what has been done by the management to realize the wishes of the owner.

In signaling theory, it is stated that the firm's reason for providing information is because there is an asymmetry of information between managers and outside parties. This is because managers know more information about the firm in the present as well as in the future (Engko & Loupatty, 2019). Signaling theory basically deals with reducing the asymmetry of information between two parties (Spence, 2002). For example, in the IPO process, the firm as the signaling party distributes a prospectus that will be useful for reducing information asymmetry with potential investors as signal recipients.

2.2. Package IPO (PIPO) & Shares-only IPO (SIPO)

Package IPO (PIPO) and shares-only IPO (SIPO) were first introduced by How & Howe (2001). They explained that PIPO is a term given to firms that use inclusion (options or warrants) at the time of the offer. Meanwhile, SIPO is defined as usual IPO activities, which is a firm that only sells shares in its initial offering (Dhevi et al., 2019).

Schultz (1993) proposed some predictions of why the firm uses the PIPO strategy. First, firms are more likely to use PIPO when their prospects are difficult to evaluate based on existing information. Secondly, PIPO will be used where management has only a small part of the firm, thus bearing the lower cost of making bad decisions. Consistent with his predictions, he found that PIPO strategies are often issued by firms

with a high level of potential information asymmetry. In addition, PIPO firms tend to be smaller, younger, have fewer assets and income compared to firms that use SIPO (Schultz, 1993; Yao, 2021). He also mentioned that PIPO firm underwriters also charge higher underwriting fees.

How & Howe (2001) summarize some of the differences in the characteristics of IPO firms using PIPO and SIPO strategies based on agency-cost hypothesis and signaling hypothesis. They concluded that PIPO firms are younger, smaller, and riskier than SIPO firms. In addition, firms tend to prefer PIPO if managers have a smaller proportion of shareholdings post-IPO, which encourages them to choose to do poor investments (How & Howe, 2001). Firms with lower levels of managerial ownership usually have larger agency costs (McKnight & Weir, 2009; Singh & Davidson, 2003), and will tend to choose PIPO (How & Howe, 2001). In addition, firms that use the PIPO strategy tend to have greater information asymmetry than SIPO firms.

Barry et al. (1991) study the purpose of firms including warrants in initial offerings. They found that IPO firms that included warrants were small, young, risky firms with a high degree of information asymmetry. Firms with a higher level of information asymmetry and included warrants will cause the total cost of IPO units to be higher than a regular IPO.

2.3. Financial Performance

Regardless of what strategy is used, an IPO process can provide short-term, medium-term, and long-term benefits to a firm's financial performance. IPOs have great potential in influencing the firm's performance, one of which is financial performance because of the potential for a relatively large amount of capital increase so that the firm's financial performance will be better than before the IPO. In the short term, an IPO provides benefits to improved capital structure (Ozen, 2016). Towards the long term, the proceeds from the IPO will be used to increase working capital, expand the market, and increase investment in subsidiaries (Pastusiak et al., 2016).

According to Wirajunayasa & Putri (2017), Financial performance is the result of the firm's operations in a period that describes the condition of the firm's financial health. Analysis of financial performance can provide an overview of the financial condition of the firm whether in good or bad condition (Rudianto, 2020). Munisi (2017) concluded that financial performance improved after the firm conducted an IPO on Dares Salaam stock exchange. Cahyani & Suhadak (2017); Husain & Dewi (2020); Khatami et al. (2017) found that leverage decreased after conducting an IPO. Lee et al. (2019) prove that current

ratio has increased, and leverage has decreased after airline firms conducted IPOs. However, there are also many studies that prove the decline in financial performance in post-IPO (Jain & Kini, 1994; Laokulrach, 2019; Loughran & Ritter, 1995; Ritter, 1991). Moreover, S. & Supriatna (2019); Yusmaniarti et al. (2020) found that the firm's profitability tends to decline after an IPO.

3. Data and Methodology

This study uses paired sample t-test, independent sample t-test, wilcoxon rank sum test and wilcoxon signed rank test to see the firm's financial performance before and after conducting an IPO on firms using PIPO and SIPO strategies in the short and medium term.

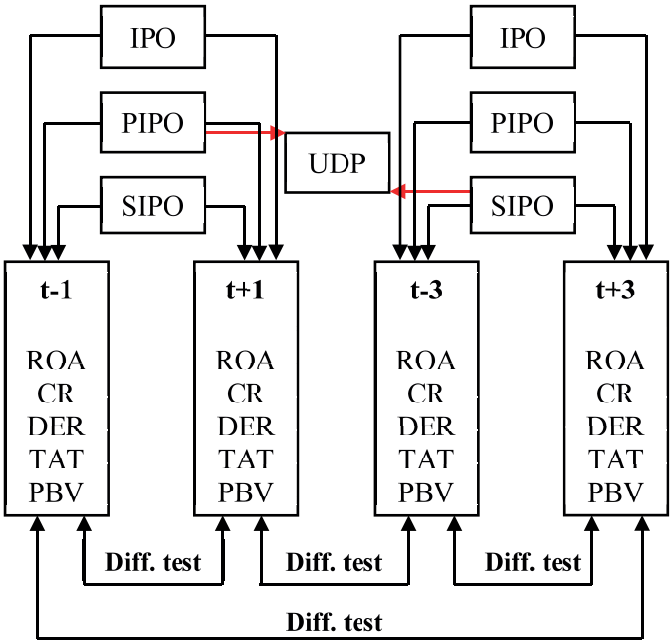

Figure 1: Research Framework.

3.1. Population and Sample

The research population is all firms that conducted IPOs on the Indonesia Stock Exchange in 2010-2016 as many as 155 firms. Using purposive sampling, that is the consideration of medium-term analysis, 3 years after the IPO and the availability of data, data samples were obtained to be further analyzed with various different test tools as many as 121 firms where 22 firms used the PIPO strategy and others 99 firms.

3.2. Types and Data Sources

The secondary data used are the firm's prospectus report issued when conducting the initial offering of shares as well as the firm's financial statements 1 and 3 years after the IPO.

3.3. Variable Operationalization

1. Underpricing (UDP)

   Underpricing means that investors who buy a new issue at the bid price and sell it at the closing price on the first day can make a profit (Korsten, 2018). Simply put, underpricing is the positive difference from the closing price at the beginning of trading in the secondary market with the offering price. Following Thoriq et al. (2018); Wirajunayasa & Putri (2017); Yuniarti & Syarifudin (2020), UDP calculated using formulas:

$$UDP = \frac{closing\ price - offering\ price}{offering\ price}$$

2. Return on Asset (ROA)

   Return on asset (ROA) used to measure a firm's ability to make a profit based on the assets owned (Yuliarni et al., 2016). The higher the value of the ratio, the more efficient the use of the firm's assets. Following Thoriq et al. (2018); Wirajunayasa & Putri (2017); Yuniarti & Syarifudin (2020), ROA calculated using formulas:

$$ROA = \frac{Earning\ after\ tax}{Total\ asset}$$

3. Current Ratio (CR)

   Current ratio (CR) is a measuring tool for the firm in generating cash and its equivalents, managing the firm's working capital, including fulfilling commitments to pay current liabilities for current assets owned (Juliana & Sumani, 2019). Following Hayati et al. (2021); Klova (2017); Soesetio & Andrian (2021), CR calculated using formulas:

$$CR = \frac{Current\ asset}{Current\ liability}$$

4. Debt to Equity Ratio (DER)

   Debt to equity ratio (DER) is a comparison between total debt and capital owned. The higher the value of this ratio shows that the firm depends more on its operational activities on funds sourced from debt than the capital accumulated in the

firm (Morina & Rahim, 2020). Following Morina & Rahim (2020); Thoriq et al. (2018); Wiguna & Yadnyana (2015), DER calculated using formulas:

$$DER = \frac{Total\ debt}{Total\ equity}$$

5. Total Asset Turnover (TAT)

Total asset turnover (TAT) according to Alarussi & Alhaderi (2018); Florenz (2012) is an efficiency that shows how much a firm uses their assets to generate sales. A higher ratio value indicates that the firm uses its assets more effectively to generate revenue (Alarussi, 2021). Following Maulidya & Lautania (2016); Renitia et al. (2021); Saputra & Sitinjak (2018), TAT calculated using formulas:

$$TAT = \frac{Total\ sales}{Total\ asset}$$

6. Price to Book Value (PBV)

Price to book value (PBV) is the relationship between the share price and the book value per share of shares (Sari & Jufrizen, 2019). According to signalling theory, price to book value can show good news/positive signals to investors (Khairudin & Wandita, 2017). The higher the PBV value indicates good firm performance (Bustani et al., 2021). Following Bustani et al. (2021); Dewi & Suaryana (2013); Sari & Jufrizen (2019), PBV calculated using formulas:

$$PBV = \frac{Stock\ market\ price}{Book\ value\ per\ share}$$

4. Results and Discussion

TABLE 1: Different Test Underpricing.

Different test	SIPO	PIPO	SOE	Non-SOE	SOE SIPO	Non-SOE SIPO	Non-SOE PIPO	Paired t test (t)	Rank sum test (z)
	Mean	Mean	Mean	Mean	Mean	Mean	Mean		
SIPO vs PIPO	0.192	0.391						3.501***	2.169**
SOE vs NSOE			0.158	0.234				0.913	0.641
SOE SIPO vs NSOE SIPO					0.158	0.196		0.511	0.302
NSOE SIPO vs NSOE PIPO						0.196	0.391	3.360***	2.076**

Source: data processed (2022). *, **, *** significant at 10%, 5%, 1%. Note: NSOE = Non-State-Owned Enterprises

4.1. Underpricing of IPO Firms

Based on table 1, it can be concluded that with the use of all types of samples, SOE and non-SOE, as well as samples of non-SOE companies, the UDP level in firms using the PIPO strategy is significantly greater than SIPO. These results support agency-cost hypothesis, when all other things become equal, PIPO firms will be more underpriced than SIPO firms (How & Howe, 2001). Firms that use PIPO have greater uncertainty about their prospects, leading to greater underpricing (Beatty & Ritter, 1986; Grinblatt & Hwang, 1989; How & Howe, 2001). Characteristics of PIPO firms tend to be smaller, have fewer revenues and assets, and are less likely to survive than SIPO firms (Schultz, 1993), so the uncertainty about its profitability is getting higher. Therefore, the company will offer initial shares accompanied by a warrant inclusion strategy that will provide an initial price that is much lower than the company's actual value so that the underpriced level becomes higher. In addition to making investors more interested in buying shares during the IPO, also as a form of compensation for the risk of stock and financial performance borne by investors.

4.2. Firm Performance Pre-IPO and Post-IPO

In table 2, the results of the ratios of profitability (ROA), liquidity (CR), leverage (DER), efficiency (TAT) and firm value (PBV) in this study show that there are significant differences before and after the IPO in both the short and medium term. However, the implementation of the IPO is not utilized by the firm to improve profitability, efficiency, and value of the firm. ROA, TAT, and post-IPO PBVs in the short to medium term tend to continue to decline. Window dressings that have become a common practice of the firm at the time of pre-IPO (Laokulrach, 2019), become the first reason why ROA and TAT decreased in post-IPO. This is proven in the period from three years to one year pre-IPO, ROA and TAT have increased. However, in the post-IPO, which in fact the firm gets additional capital from the sale of shares, it experienced a decline in the firm's performance, especially profitability and efficiency. The second reason is that the additional capital from the IPO process is more focused by the firm to avoid or overcome the financial distress experienced in pre-IPO by increasing current assets and improving the capital structure, even though these results are still unable to improve the firm's profitability, efficiency, and value. It is proven that the firm's liquidity and working capital tend to increase and leverage decreases in post-IPO.

TABLE 2: Different Test Pre-IPO and Post-IPO.

Variable	Different test	Mean		Paired t test (t)	Signed rank test (z)
		Pre	Post		
ROA	1 year before vs 1 year after	0.110	0.047	1.210	4.485***
ROA	1 year before vs 3 years after	0.110	0.020	1.704*	6.636***
ROA	3 years before vs 1 year after	0.071	0.047	1.965*	2.205**
ROA	3 years before vs 3 years after	0.071	0.020	4.084***	4.559***
CR	1 year before vs 1 year after	1.483	2.155	-3.911***	-4.889***
CR	1 year before vs 3 years after	1.483	1.947	-3.506***	-3.757***
CR	3 years before vs 1 year after	1.734	2.155	-1.391	-3.947***
CR	3 years before vs 3 years after	1.734	1.947	-0.748	-3.099***
DER	1 year before vs 1 year after	2.430	1.601	4.379***	6.060***
DER	1 year before vs 3 years after	2.430	2.039	1.493	4.080***
DER	3 years before vs 1 year after	3.712	1.601	3.560***	5.839***
DER	3 years before vs 3 years after	3.712	2.039	2.668***	4.710***
TAT	1 year before vs 1 year after	0.731	0.524	3.997***	4.917***
TAT	1 year before vs 3 years after	0.731	0.533	5.326***	5.991***
TAT	3 years before vs 1 year after	0.702	0.524	3.786***	3.579***
TAT	3 years before vs 3 years after	0.702	0.533	2.853***	4.656***
PBV	1 year before vs 1 year after	3.860	2.745	2.683***	2.971***
PBV	1 year before vs 3 years after	3.860	2.045	4.025***	3.667***
PBV	3 years before vs 1 year after	3.720	2.745	1.421	3.126***
PBV	3 years before vs 3 years after	3.720	2.045	2.537**	3.826***

Source: data processed (2022). *, **, *** significant at 10%, 5%, 1%

4.3. Firm Performance of SIPO and PIPO Firms

Based on the different tests in table 3, performance in SIPO and PIPO firms does not always show a significant difference. However, SIPO firm has a better performance than PIPO firm. In terms of profitability, current ratio, efficiency and firm value, SIPO firm is better and more stable than PIPO firm. It can be concluded that PIPO's firm's performance is worse than SIPO both before and after the IPO. How & Howe (2001) concluded that PIPO firms are younger, smaller, and riskier than SIPO firms. PIPO firms have greater agency fees than SIPO firms. In addition, firms that use the PIPO strategy tend to have greater information asymmetry than SIPO firms. Schultz (1993) provides evidence that PIPO firms are smaller, have fewer revenues and assets, and are less likely to survive than SIPO firms.

Table 3: Different Test SIPO and PIPO Firms.

Variable	Different test	Mean		Independent t test (t)	Rank sum test (z)
		SIPO	PIPO		
BEFORE					
ROA	3 years before	0.082	0.024	-1.930*	-2.423**
ROA	1 year before	0.126	0.041	-0.602	-2.712***
CR	3 years before	1.426	3.121	2.568**	-0.077
CR	1 year before	1.523	1.300	-0.760	-0.544
DER	3 years before	3.317	5.490	1.401	-1.210
DER	1 year before	2.742	1.025	-3.070***	-3.212***
TAT	3 years before	0.758	0.447	-1.771*	-2.325**
TAT	1 year before	0.776	0.527	-1.119	-1.821*
PBV	3 years before	3.952	2.676	-0.771	-1.858*
PBV	1 year before	4.343	1.684	-2.366**	-3.098***
AFTER					
ROA	1 year after	0.049	0.036	-0.767	-1.744*
ROA	3 years after	0.026	-0.008	-2.094**	-1.620
CR	1 year after	2.245	1.751	-0.950	0.007
CR	3 years after	2.027	1.587	-1.048	-0.464
DER	1 year after	1.659	1.336	-0.690	-1.478
DER	3 years after	2.182	1.394	-1.094	-1.462
TAT	1 year after	0.557	0.376	-1.368	-1.613
TAT	3 years after	0.571	0.364	-1.196	-2.154**
PBV	1 year after	2.804	2.479	-0.437	-0.376
PBV	3 years after	2.011	2.199	0.390	-0.141

Source: data processed (2022). *, **, *** significant at 10%, 5%, 1%

4.4. Firm Performance Pre-IPO and Post-IPO on SIPO Firms

The results in table 4 tend to be the same as in table 2 because the SIPO firm sample has met 82% of the entire sample. The results of profitability ratios (ROA), liquidity (CR), leverage (DER), efficiency (TAT) and firm value (PBV) show significant differences before and after the IPO in SIPO firms in both the short and medium term. However, the additional funds through the IPO are used by the firm only to pay off debts or increase current assets as an effort to increase working capital. However, these additions were not able to improve the firm's performance in terms of profitability, efficiency, and short- and medium-term markets with post-IPO ROA, TAT and PBV indicators.

TABLE 4: Different Test Pre-IPO and Post-IPO on SIPO Firms.

Variable	Different test	Mean		Paired t test (t)	Signed rank test (z)
		Before	After		
ROA	1 year before vs 1 year after	0.126	0.049	1.190	4.255***
ROA	1 year before vs 3 years after	0.126	0.026	1.536	5.866***
ROA	3 years before vs 1 year after	0.082	0.049	2.192**	2.656***
ROA	3 years before vs 3 years after	0.082	0.026	3.780***	4.267***
CR	1 year before vs 1 year after	1.523	2.245	-3.479***	-4.162***
CR	1 year before vs 3 years after	1.523	2.027	-3.251***	-3.499***
CR	3 years before vs 1 year after	1.426	2.245	-3.863***	-4.131***
CR	3 years before vs 3 years after	1.426	2.027	-3.225***	-3.426***
DER	1 year before vs 1 year after	2.747	1.659	5.669***	6.183***
DER	1 year before vs 3 years after	2.747	2.182	1.827*	4.272***
DER	3 years before vs 1 year after	3.317	1.659	3.315***	5.337***
DER	3 years before vs 3 years after	3.317	2.182	2.043**	4.201***
TAT	1 year before vs 1 year after	0.776	0.557	3.666***	4.937***
TAT	1 year before vs 3 years after	0.776	0.571	4.855***	5.501***
TAT	3 years before vs 1 year after	0.758	0.557	3.668***	3.656***
TAT	3 years before vs 3 years after	0.758	0.571	2.630***	4.483***
PBV	1 year before vs 1 year after	4.343	2.804	3.195***	3.888***
PBV	1 year before vs 3 years after	4.343	2.011	4.500***	4.265***
PBV	3 years before vs 1 year after	3.952	2.804	1.407	3.396***
PBV	3 years before vs 3 years after	3.952	2.011	2.485**	3.953***

Source: data processed (2022). *, **, *** significant at 10%, 5%, 1%

TABLE 5: Different Test Pre-IPO and Post-IPO on PIPO Firms.

Variable	Different test	Mean		Paired t test (t)	Signed rank test (z)
		Before	After		
ROA	1 year before vs 1 year after	0.042	0.036	0.646	1.559
ROA	1 year before vs 3 years after	0.042	0.002	3.509***	3.363***
ROA	3 years before vs 1 year after	0.021	0.036	-0.996	-0.828
ROA	3 years before vs 3 years after	0.021	0.002	1.451	1.266
CR	1 year before vs 1 year after	1.301	1.751	-2.991***	-2.711***
CR	1 year before vs 3 years after	1.301	1.586	-1.345	-1.412
CR	3 years before vs 1 year after	3.611	1.751	1.371	-0.049
CR	3 years before vs 3 years after	3.611	1.586	1.595	0.666
DER	1 year before vs 1 year after	1.016	1.290	-0.565	1.412
DER	1 year before vs 3 years after	1.016	11.067	-1.043	-0.568
DER	3 years before vs 1 year after	3.424	1.290	1.695	2.127**
DER	3 years before vs 3 years after	3.424	11.067	-0.778	1.380
TAT	1 year before vs 1 year after	0.527	0.376	1.604	1.088
TAT	1 year before vs 3 years after	0.527	0.364	2.171**	2.419**
TAT	3 years before vs 1 year after	0.447	0.376	0.979	0.568
TAT	3 years before vs 3 years after	0.447	0.364	1.723*	1.055
PBV	1 year before vs 1 year after	1.684	2.343	-1.157	-1.282
PBV	1 year before vs 3 years after	1.684	2.199	-0.784	-0.503
PBV	3 years before vs 1 year after	2.676	2.343	0.388	0.146
PBV	3 years before vs 3 years after	2.676	2.199	0.533	0.390

Source: data processed (2022). *, **, *** significant at 10%, 5%, 1%

4.5. Firm Performance Pre-IPO and Post-IPO on PIPO Firms

Table 5 shows that in PIPO firms, the firm's performance before and after the IPO tends not to have a significant difference. However, the firm's performance in the short and medium term shows a downward trend after conducting an IPO. Based on table 5, PIPO firms tend to use more IPO proceeds to maintain the proportion of short-term debt to liquid asset before the IPO and meet working capital needs. It is proven, the performance of liquidity and working capital has increased, but the increase was not able to improve the firm's performance from the point of view of profitability and efficiency but on the contrary, it was even significantly worse before the IPO. In the third year of the post-IPO leverage even had an average value of 11,067. This also proves that firms that use the PIPO strategy have a greater risk than SIPO so that the embedding of warrants during the IPO is a form of compensation for the risks that must be borne by investors. This result at the same time supports the argument of the How & Howe (2001) which states that PIPO firms are riskier than SIPO firms.

4.6. Firm Performance Pre-IPO and Post-IPO on State-Owned Enterprises

From a corporate ownership standpoint, state-owned firms are generally competitive industry market leaders (Hatmanto, 2012). Public trust is higher in state-owned firms so the names of government firms are a guarantee that investors' investments will be maintained. However, the attributes of state-owned firms cannot be a guarantee that the firm's performance will get better after the IPO. Referring to table 6, a firm's performance before and after an IPO at state-owned firms is less likely to show a significant difference in the firm's performance. However, profitability, efficiency and firm value performance experienced a decline in post-IPO. Based on table 6, it also shows that additional capital from the IPO process tends to be used more by firms to overcome financial distress by increasing current assets and improving capital structure, even though this method is not able to improve the firm's profitability, efficiency, and value. It is proven that the firm's liquidity tends to increase and leverage decreases in post-IPO.

4.7. Firm Performance Pre-IPO and Post-IPO on Non-State-Owned Enterprises

In non-state-owned firms, profitability (ROA), liquidity (CR), leverage (DER), efficiency (TAT) and firm value (PBV) showed significant differences before and after the IPO in

Table 6: Different Test Pre-IPO and Post-IPO on State-Owned Firms.

Variable	Different test	Mean		Paired t test (t)	Signed rank test (z)
		Before	After		
ROA	1 year before vs 1 year after	0.069	0.047	1.551	1.480
ROA	1 year before vs 3 years after	0.069	0.029	2.050*	2.599***
ROA	3 years before vs 1 year after	0.024	0.047	-0.330	-0.153
ROA	3 years before vs 3 years after	0.024	0.029	-0.072	0.561
CR	1 year before vs 1 year after	1.404	2.511	-1.231	-2.191**
CR	1 year before vs 3 years after	1.404	1.584	-0.995	-0.663
CR	3 years before vs 1 year after	2.436	2.511	-0.079	-0.612
CR	3 years before vs 3 years after	2.436	1.584	1.472	1.784*
DER	1 year before vs 1 year after	4.122	2.647	3.240**	2.497**
DER	1 year before vs 3 years after	4.122	2.996	2.285**	2.090**
DER	3 years before vs 1 year after	3.474	2.647	1.138	1.376
DER	3 years before vs 3 years after	3.474	2.996	0.610	0.968
TAT	1 year before vs 1 year after	0.799	0.532	2.724**	2.395**
TAT	1 year before vs 3 years after	0.799	0.547	2.944**	2.803***
TAT	3 years before vs 1 year after	0.962	0.532	1.556	1.376
TAT	3 years before vs 3 years after	0.962	0.547	1.615	1.580
PBV	1 year before vs 1 year after	3.694	1.847	1.847*	1.784*
PBV	1 year before vs 3 years after	3.694	1.619	1.873*	1.988**
PBV	3 years before vs 1 year after	2.894	1.847	0.702	-0.255
PBV	3 years before vs 3 years after	2.894	1.619	0.861	0.153

Source: data processed (2022). *, **, *** significant at 10%, 5%, 1%

both the short and medium term. Consistent with previous results, there were significant differences in the firm's performance before and after the IPO in all samples. The proceeds from the IPO are not used by firms to improve profitability, efficiency, and

Table 7: Different Test Pre-IPO and Post-IPO on Non-State-Owned Firms.

Variable	Different test	Mean		Paired t test (t)	Signed rank test (z)
		Before	After		
ROA	1 year before vs 1 year after	0.114	0.046	1.176	4.234***
ROA	1 year before vs 3 years after	0.114	0.019	1.643	6.282***
ROA	3 years before vs 1 year after	0.076	0.046	2.382**	2.291**
ROA	3 years before vs 3 years after	0.076	0.019	4.705***	4.577***
CR	1 year before vs 1 year after	1.490	2.123	-3.717***	-4.508***
CR	1 year before vs 3 years after	1.490	1.980	-3.418***	-3.668***
CR	3 years before vs 1 year after	1.671	2.123	-1.414	-4.001***
CR	3 years before vs 3 years after	1.671	1.980	-1.015	-3.678***
DER	1 year before vs 1 year after	2.277	1.506	3.820***	5.506***
DER	1 year before vs 3 years after	2.277	1.953	1.153	3.616***
DER	3 years before vs 1 year after	3.734	1.506	3.466***	5.714***
DER	3 years before vs 3 years after	3.734	1.953	2.620***	4.659***
TAT	1 year before vs 1 year after	0.725	0.523	3.612***	4.397***
TAT	1 year before vs 3 years after	0.725	0.532	4.848***	5.398***
TAT	3 years before vs 1 year after	0.678	0.523	3.465***	3.334***
TAT	3 years before vs 3 years after	0.678	0.532	2.436**	4.312***
PBV	1 year before vs 1 year after	3.875	2.826	2.360**	2.586***
PBV	1 year before vs 3 years after	3.875	2.083	3.714***	3.257***
PBV	3 years before vs 1 year after	3.794	2.826	1.314	3.163***
PBV	3 years before vs 3 years after	3.794	2.083	2.415**	3.885***

Source: data processed (2022). *, **, *** significant at 10%, 5%, 1%

firm value, but are mostly used to increase current assets and pay off short-term debt and long-term debt. It is evident that the firm's liquidity tends to increase and leverage decreases in post-IPO. Meanwhile, ROA, TAT and PBV tend to continue to decline in post-IPO.

Table 8: Different Test PIPO and SIPO Firms on Non-State-Owned Firms.

Variable	Different test	Mean		Independent t test (t)	Rank sum test (z)
		SIPO	PIPO		
BEFORE					
ROA	3 years before	0.088	0.024	-2.383**	-2.560**
ROA	1 year before	0.132	0.041	-0.614	-2.652***
CR	3 years before	1.313	3.121	2.701***	0.063
CR	1 year before	1.537	1.300	-0.781	-0.525
DER	3 years before	3.300	5.490	1.352	-1.191
DER	1 year before	2.587	1.025	-2.887***	-2.966***
TAT	3 years before	0.735	0.447	-1.656	-2.330**
TAT	1 year before	0.774	0.527	-1.061	-1.709*
PBV	3 years before	4.070	2.676	-0.811	-2.119**
PBV	1 year before	4.416	1.684	-2.348**	-3.063***
AFTER					
ROA	1 year after	0.049	0.036	-0.742	-1.539
ROA	3 years after	0.026	-0.008	-1.990**	-1.517
CR	1 year after	2.215	1.751	-0.953	-0.052
CR	3 years after	2.077	1.587	-1.134	-0.577
DER	1 year after	1.548	1.336	-0.466	-1.235
DER	3 years after	2.091	1.394	-0.956	-1.254
TAT	1 year after	0.559	0.376	-1.349	-1.535
TAT	3 years after	0.574	0.364	-1.159	-2.060**
PBV	1 year after	2.911	2.479	-0.556	-0.481
PBV	3 years after	2.055	2.199	0.285	-0.089

Source: data processed (2022). *, **, *** significant at 10%, 5%, 1%

4.8. Firm Performance SIPO and PIPO on Non-State-Owned Enterprises

Based on the different tests in table 8, performance differences in SIPO and PIPO firms tend not to always show significant differences. However, SIPO firm has a better performance than PIPO firm. In terms of profitability, current ratio, efficiency, and firm value, SIPO firm is better and more stable than PIPO firm. Consistent with previous results, PIPO's firm performance tends to be worse than various aspects of the firm's performance compared to SIPO both before and after the IPO on all samples. How & Howe (2001) concluded that PIPO firms are younger, smaller, and riskier than SIPO firms. PIPO firms have greater agency costs than SIPO firms. In addition, firms that use the PIPO strategy tend to have greater information asymmetry than SIPO firms. Schultz

(1993) provides evidence that PIPO firms are smaller, have fewer revenues and assets, and are less likely to survive than SIPO firms.

TABLE 9: Different Test SIPO Firms on State-Owned Firms & Non-State-Owned Firms.

Variable	Different test	Mean		Independent t test (t)	Rank sum test (z)
		SOE	NSOE		
BEFORE					
ROA	3 years before	0.024	0.088	1.419	0.437
ROA	1 year before	0.069	0.132	0.290	0.592
CR	3 years before	2.436	1.313	-2.844***	-1.469
CR	1 year before	1.404	1.537	0.306	0.006
DER	3 years before	3.474	3.300	-0.101	-0.151
DER	1 year before	3.792	2.629	-1.358	-1.510
TAT	3 years before	0.962	0.735	-0.885	-0.592
TAT	1 year before	0.799	0.774	-0.076	-1.161
PBV	3 years before	2.894	4.070	0.464	1.655*
PBV	1 year before	3.694	4.416	0.417	-0.174
AFTER					
ROA	1 year after	0.047	0.049	0.084	-0.070
ROA	3 years after	0.029	0.026	-0.154	-0.244
CR	1 year after	2.511	2.215	-0.371	-0.058
CR	3 years after	1.584	2.077	0.783	1.033
DER	1 year after	2.447	1.548	-1.411	-1.208
DER	3 years after	2.996	2.091	-0.829	-1.579
TAT	1 year after	0.532	0.559	0.141	-0.255
TAT	3 years after	0.547	0.574	0.102	-0.935
PBV	1 year after	1.847	2.911	0.961	0.656
PBV	3 years after	1.619	2.055	0.655	-0.105

Source: data processed (2022). *, **, *** significant at 10%, 5%, 1%

4.9. Firm Performance of SIPO Firms on State-Owned Firms & Non-State-Owned Firms

Based on the different tests in table 9, the performance of SIPO companies in state-owned firms (SOEs) and non-state-owned firms (NSOEs) is less likely to show significant differences. However, NSOE companies perform better than SOE companies. In terms of profitability, current ratio, leverage, and firm value, NSOE companies are better and more stable than SOE companies. It can be concluded that the performance of SOE companies is worse than NSOE both before and after the IPO.

5. Conclusion

Overall, the IPO event carried out by SOE and non-SOE is only an effort to improve liquidity conditions, working capital, and poor capital structure before the implementation of the IPO. However, these improvement efforts were not able to change for the better and improve the efficiency and value of the firm during the short and medium term after the IPO. The greater decrease in the value of DER compared to the increase in the value of the firm's CR also shows and requires the firm to use more of the IPO proceeds to improve the capital structure to return to normal debt capacity and reallocate funding sources in the form of debt to finance the firm's operations. Furthermore, the selection of SIPO strategy by the firm during the IPO shows that the firm's characteristics are large, mature, minimally risky, there is a decrease in DER and a significant increase in CR in the short and medium term after the IPO event. This further confirms the firm's selection of PIPO strategy during the IPO shows the firm is very risky and full of uncertainty in the future as it requires more additional funds just to escape the worsening financial distress before the IPO instead of increasing the firm's profitability, efficiency, and value. Thus, potential investors should avoid buying shares of companies using the PIPO strategy. However, if they still choose IPO shares it, they really need to ask for lower IPO and right issue bid price requirements to avoid worse losses in the long term and obtain even higher underpricing in the short term.

This study is still very limited in time duration and analytical tools to provide strong conclusions, so that researchers can then add time, variables, and other combinations of comparisons between industry sectors, corporate actions such as rights issues and dividend distributions.

References

[1] Alarussi AS. Financial ratios and efficiency in Malaysian listed companies. Asian Journal of Economics and Banking. 2021;5(2):116–35.

[2] Alarussi AS, Alhaderi SM. Factors affecting profitability in Malaysia. J Econ Stud. 2018;45(3):442–458.

[3] Antill S, Grenadier SR. Optimal capital structure and bankruptcy choice: dynamic bargaining versus liquidation. J Financ Econ. 2019;13(3):198–224.

[4] Badru BO, Ahmad-Zaluki NA, Wan-Hussin WN. Signalling IPO quality through female directors. International Journal of Managerial Finance. 2019;15(5):719–743.

[5] Barry CB, Muscarella CJ, Vetsuypens MR. Underwriter warrants, underwriter compensation, and the costs of going public. J Financ Econ. 1991;29(1):113–135.

[6] Beatty RP, Ritter JR. Investment banking, reputation, and the underpricing of initial public offerings. J Financ Econ. 1986;15(1-2):213–232.

[7] Brigham EF, Houston JF. Dasar-dasar manajemen keuangan. 14th ed. Salemba Empat; 2018.

[8] Bustani B, Kurniaty K, Widyanti R. The effect of earning per share, price to book value, dividend payout ratio, and net profit margin on the stock price in Indonesia stock exchange. Jurnal Maksipreneur: Manajemen, Koperasi. Dan Entrepreneurship. 2021;11(1):1–18.

[9] Cahyani RT, Suhadak. Analisis Kinerja Keuangan Perusahaan Sebelum dan Sesudah Perusahaan Melakukan IPO (Initial Public Offering) Di Bursa Efek Indonesia (BEI) [JAB]. Jurnal Administrasi Bisnis. 2017;45(1):10–18.

[10] Connelly BL, Certo ST, Ireland RD, Reutzel CR. Signaling theory: A review and assessment. J Manage. 2011;37(1):39–67.

[11] Dewi PD, Suaryana IG. Pengaruh EPS, DER, dan PBV terhadap harga saham. E-Jurnal Akuntansi. 2013;4(1):215–229.

[12] Dhankar RS. Cost of capital, capital structure, dividend policy and value of firm. Capital markets and investment decision making. Springer; 2019. pp. 187–196.

[13] Dhevi C, Soesetio Y, Octavio DQ. Profile analysis of the importance of equity financing decisions on Package IPO (PIPO) and Shares-only IPO (SIPO) in Indonesia. In Trinugroho I, Lau E (Eds.). Proceedings of the 5th Sebelas Maret International Conference on Business, Economics and Social Sciences. 2019. pp. 158–163.

[14] Donaldson G. Corporate debt capacity: A study of corporate debt policy and the determination of corporate debt capacity. Division of Research, Harvard Graduate School of Business Administration. 1961.

[15] Engko C, Loupatty LG. Pengaruh kinerja keuangan terhadap dividen payout ratio (studi empiris pada perusahaan manufaktur yang terdaftar di bursa efek Indonesia). INTELEKTUAL: jurnal Ekonomi. Sosial & Humaniora. 2019;1(1):83–109.

[16] Fama E, French KR. Testing trade-off and pecking order predictions about dividends and debt. Rev Financ Stud. 2002;15(1):1–33.

[17] Florenz CT. A comparative analysis of the financial ratios of listed firms belonging to the education subsector in the Philippines for the years 2009-2011. Int J Bus Soc Sci. 2012;3(21):173–190.

[18] Garner JL, Marshall BB. Unit IPOs: What the warrant characteristics reveal about the issuing firm. J Bus. 2005;78(5):1837–1858.

[19] Grinblatt M, Hwang CY. Signalling and the pricing of new issues. J Finance. 1989;44(2):393–420.

[20] Hadi N. Pasar Modal Acuan Teoretis dan Praktis Investasi di Instrumen Keuangan Pasar Modal. Graha Ilmu; 2013.

[21] Hatmanto BT. The initial public offerings of state-owned enterprises the short-run and long-run performance of state-owned enterprises IPOs in Indonesia. LAP LAMBERT Academic Publishing; 2012.

[22] Hayati N, Goenadhi L, Baiti N, Mujennah, Budi Artinah. Influence of financial performance on underpricing of shares. Journal of Economic Info. 2021;8(3):97–103.

[23] Hossain MS. A revisit of capital structure puzzle: Global evidence and analysis. Int Rev Econ Finance. 2021;75:657–678.

[24] How JC, Howe JS. Warrants in initial public offerings: Empirical Evidence. J Bus. 2001;74(3):433–457.

[25] Husain T, Dewi EP. Rasio Keuangan: Studi Komparasi Pada Perusahaan Industri Manufaktur dan Sektor Jasa Yang Melakukan Initial Public Offerings (IPO) Tahun 2018. JIMF (Jurnal Ilmiah Manajemen Forkamma. 2020;3(2):131–141.

[26] Jain BA, Kini O. The post-issue operating performance of IPO firms. J Finance. 1994;49(5):1699–726.

[27] Jensen MC, Meckling WH. Theory of the firm: managerial behavior, agency cost, and ownersip structure. J Financ Econ. 1976;3(4):305–360.

[28] Juliana SR, Sumani S. Analisis Kinerja Keuangan Perusahaan Sebelum Dan Sesudah Melakukan Initial Public Offering (Ipo). Jurnal Akuntansi. 2019;13(2):105–122.

[29] Khairudin L, Wandita W. Analisis pengaruh rasio profitabilitas, debt to equity ratio (DER) dan price to book value (PBV) terhadap harga saham perusahaan pertambangan di Indonesia. Akuntansi & Keuangan. 2017;8(1):68–84.

[30] Khatami N, Hidayat RR, Sulasmiyati S. Analisis Kinerja Perusahaan Sebelum Dan Sesudah Initial Public Offering (IPO) di Bursa Efek Indonesia [JAB]. Jurnal Administrasi Bisnis. 2017;47(1):2017.

[31] Klova V. IPO underpricing: what about the shipping sector? J Multinat Financ Manag. 2017;42:95–115.

[32] Korsten D. IPO underpricing based on the asymmetric information theories. 2018. https://theses.ubn.ru.nl/bitstream/handle/123456789/6172/Korsten%2C_Dirk_1.pdf?sequenc

[33] Laokulrach M. Operating performance of SMEs in Thailand after going public. Challenges for the Knowledge Society. 2019;14(1):1–13.

[34] Lee S, Kim H, Lee N. A comparative analysis of financial and operational performance pre- and post-IPO: With a focus on airline companies. Academy of Accounting and FInancial Studies Journal. 2019;23(3):1–14.

[35] Loughran T, Ritter JR. The new issues puzzle. J Finance. 1995;50(1):23–51.

[36] Maulidya PS, Lautania MF. Pengaruh Asset Turnover, Current Ratio, Debt To Equity Ratio, dan Ukuran Perusahaan terhadap Terjadinya Underpricing Saham pada Perusahaan di Pasar Penawaran Saham Perdana yang Terdaftar di Bursa Efek Indonesia Tahun 2010-2014. Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi (JIMEKA). 2016;1(1):171–182. http://jim.unsyiah.ac.id/EKA/article/view/764/568

[37] McKnight PJ, Weir C. Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis. Q Rev Econ Finance. 2009;49(2):139–158.

[38] Morina T, Rahim R. Faktor – Faktor Yang Mempengaruhi Initial Return Pada Initial Public Offering (IPO). MENARA Ilmu. 2020;XIV(02):146–157.

[39] Mun SG, Jang SC. Restaurant firms' IPO motivations and post-IPO performances. Int J Contemp Hosp Manag. 2019;31(9):3484–502.

[40] Munisi GH. Financial performance of initial public offerings: Companies listed on Dares Salaam stock exchange. Bus Econ J. 2017;8(2): https://doi.org/10.4172/2151-6219.1000302

[41] Myers SC. The capital structure puzzle. J Finance. 1984;39(3):575–592.

[42] Myers SC. Capital structure. J Econ Perspect. 2001;15(2):81–102.

[43] Myers SC, Majluf NS. Corporate financing and investment decisions when firms have information that investors do not have. J Financ Econ. 1984;13(2):187–221.

[44] Ozen E. Behaviors of companies after initial public offering the case of Turkey. Eurasian Journal of Economics and Finance. 2016;4(4):20–28.

[45] Pastusiak R, Miszcynska K, Krzeczewski B. Does public offering improve company's financial performance? The example of Poland. Ekon Istraz. 2016;29(1):32–49.

[46] Renitia S, Suripto S, Harori MI. Pengaruh total asset turnover, debt to equity ratio (DER), ukuran perusahaan, nilai tukar rupiah, dan IHSG terhadap terjadinya tingkat underpricing saham. Jurnal Perspektif Bisnis. 2021;4(1):23–37.

[47] Ritter JR. The long-run performance of initial public offerings. J Finance. 1991;XLVI(1):3–27.

[48] Rudianto D. (2020). Measuring the financial performance prior and after the initial public offering (IPO) of companies listed in the Indonesian Stock Exchange (IDX). Proceedings of the International Conference on Strategic Issues of Economics, Business and Education, 231–237.

[49] S R D I Z F, Supriatna N. Pengaruh Initial Public Offering (IPO) Terhadap Kinerja Perusahaan. Jurnal Riset Akuntansi Dan Keuangan. 2019;7(1):19–28.

[50] Saputra AR, Sitinjak EL. Pengaruh faktor-faktor keuangan dan perilaku herding investor terhadap underpricing pada penawaran perdana saham perusahaan yang terdaftar di BEI. Jurnal Ekonomi, Manajemen. Akuntansi Dan Perpajakan. 2018;1(1):1–25.

[51] Sari M, Jufrizen. Pengaruh price earning ratio dan return on asset terhadap price to book value. JURNAL KRISNA: Kumpulan Riset Akuntansi. 2019;10(2):196–203.

[52] Schultz P. Unit initial public offerings: A form of staged financing. J Financ Econ. 1993;34(2):199–229.

[53] Singh M, Davidson WA 3rd. Agency costs, ownership structure and corporate governance mechanisms. J Bank Finance. 2003;27(5):793–816.

[54] Soesetio Y, Andrian MF. Pengaruh informasi keuangan perusahaan dan profilnya terhadap underpricing. ACCOUNTHINK: Journal of Accounting and Finance. 2021;6(1):1–16.

[55] Soesetio Y, Rudhiningtyas DA. Do corporate actions have a good impact on company's performance? In Prameka AS, Parahiyanti CR (Eds.). Proceedings of the BISTIC Business Innovation Sustainability and Technology International Conference (BISTIC 2021). 2021. pp. 102–109.

[56] Spence M. Job market signaling. Q J Econ. 1973;87(3):355–374.

[57] Spence M. Signaling in retrospect and the informational structure of markets. Am Econ Rev. 2002;92(3):434–459.

[58] Thoriq KN, Hartoyo S, Sasongko H. Faktor Internal dan Eksternal yang Memengaruhi Underpricing pada saat IPO di Bursa Efek Indonesia. Jurnal Aplikasi Manajemen Dan Bisnis. 2018;4(1):19–31.

[59] Wiguna IG, Yadnyana IK. Analisis faktor-faktor yang menpengaruhi initial return pada penawaran saham perdana. E-Jurnal Ekonomi Dan Bisnis Universitas Udayana. 2015;4(12):921–946.

[60] Wirajunayasa PA, Putri IA. Analisis Kinerja Perusahaan Sebelum dan Sesudah Initial Public Offerings. E-Jurnal Akuntansi Universitas Udayana. 2017;19(3):1916–1942.

[61] Yao Z. Possible motives for floating-priced warrant issues: A survey on related securities (Vol. 169). 2021. https://doi.org/10.15017/4377803

[62] Yazdani L, Aris S. An assessment of the performance of initial public offering (IPOs) in Malaysia. Research Journal of Finance and Accounting. 2015;6(3).

[63] Yuliarni T, Maryati U, Ihsan H. Analisis Kinerja Perusahaan Sebelum dan Sesudah Initial Public Offering (IPO) di Bursa Efek Indonesia (BEI). Jurnal Akuntansi & Manajemen. 2016;11:25–37.

[64] Yuniarti D, Syarifudin A. Pengaruh leverage, profitabilitas dan ukuran perusahaan terhadap underpricing pada saat initial public offering. Jurnal Ilmiah Mahasiswa Manajemen [JIMMBA]. Bisnis Dan Akuntansi. 2020;2(2):214–227.

[65] Yusmaniarti Sesba KA, Astuti B, Marini. Kinerja Keuangan Sebelum dan Sesudah Initial Public Offering (IPO) Perusahaan yang Terdaftar di Bursa Efek Indonesia. Jurnal Sains Manajemen Dan Bisnis Indonesia. 2020;10(2):229–245.