

## Comparative Analysis of ROE and DER Before and After Company IPOs in Indonesia

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### ABSTRACT

Increasingly fierce business competition has prompted companies to determine the right strategy so that they can continue to operate and excel in the competitive market. This study aims to analyze the differences in financial performance of companies before and after their IPO on the Indonesia Stock Exchange during the period 2018–2022. The method used is quantitative comparative with the Wilcoxon Signed-Rank test because the data is not normally distributed. The results show that there are significant differences in ROE and DER before and after the IPO. ROE tends to decrease, meaning that the profitability of IPO companies is declining, presumably due to a period of crisis. Similarly, DER also decreases, indicating an improvement in the capital structure of the issuing company.

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## INTRODUCTION

The ever-evolving business world creates value and contributes to the economy in the long term. Companies play an important role in driving growth through innovation and efficiency (Feng, Tang, Qi, and Liu, 2024). The existence and continuity of a company are aspects that need to be considered when establishing a company. The main objective of establishing a company is to maintain business continuity in the long term. Increasingly fierce business competition has prompted companies to determine the right strategy so that they can continue to operate and excel in the competitive market (Komalasari and Astuti, 2025). However, in the process of establishment and development, companies must face various challenges, one of which is funding. Limited funds are often a major obstacle that can threaten the continuity and growth of a company. Companies need to develop appropriate and flexible funding strategies in line with their capabilities. Funding strategies not only cover internal sources of funds, but also utilize more flexible external sources of funding (Brigham and Ehrhardt, 2019:516).

One alternative external strategy that can be implemented is to become a *public* company. A *public* company is a company that offers business ownership to the public with shared goals such as business expansion and protecting the company from bankruptcy (ocbc.id, 2022). The mechanism of a public offering by selling company shares to the public is known as an *Initial Public Offering* (IPO). Companies that conduct an IPO not only obtain capital for growth and expansion but also increase their visibility and reputation in the stock market (Baker and Nofsinger, 2022:89). Company IPO activities are carried out in the capital market. The capital market is a platform used to raise and obtain long-term funds (Martalena and Malinda, 2019:45). Through the capital market, companies can sell and offer shares to the general public. Companies that are about to conduct their first offering must fulfill their obligation of information disclosure when conducting the IPO process. Information disclosure during an IPO is presented through a prospectus, which is a guidebook or official document prepared by a company that will sell shares to the public (IPO). The prospectus must contain all important information about the company so that potential investors can assess whether the company's shares are worth buying or not (Matalena and Malinda, 2019:84).

Conducting an IPO not only improves the company's capital structure but also increases investor and creditor confidence in the company's ability to manage its finances in the future. In this study, the author refers to the research of Siregar, Achsani, and Bandonno (2024); Sucipto (2022) that profitability and solvency ratios affect IPO performance. The research by Firman Siregar et al. (2024) found that after an IPO, there was a significant decline in Return on Equity (ROE) and Debt to Equity Ratio (DER), reflecting a decline in the company's financial performance *after going public*. Similar results were found in Sucipto's (2022) study, where the DER ratio showed significant changes after four years of IPO, indicating an impact on the company's capital structure. In this study, ROE is used to examine the effect of profitability on IPO performance. According to Hanafi (2016:43), ROE is a ratio that measures a company's ability to generate

profits on shareholders' investments. The higher the ROE, the more efficient the management is in maximizing the company's equity.

However, a high ROE before the IPO reflects the company's ability to generate profits from equity efficiently. This condition is a positive signal for investors that the company is in a healthy and promising financial condition. Therefore, management is encouraged to conduct an IPO to take advantage of this momentum and attract market interest in the company's shares. This is in line with the theory of information asymmetry proposed by Hanafi (2016:314) that information about the company's prospects is not evenly distributed between internal and external parties. Because investors do not know for sure how efficiently the company uses its capital, companies often price their shares cheaper at the time of the IPO to attract investor interest.

In addition to profitability, which is proxied by ROE to assess the financial performance of IPO companies, prospective investors also consider DER as an important factor for investment. DER is used to measure a company's solvency. According to Kasmir (2019), DER is a ratio that shows the extent to which equity is used to cover a company's liabilities. A high DER reflects a company's high dependence on debt. Siregar et al. (2024) show that DER tends to decline after an IPO, reflecting the company's efforts to improve its capital structure through additional funds from the public by reducing its dependence on debt. With a healthier capital structure, the financial risk borne by investors becomes lower. However, an excessively low DER structure may also indicate that the company is not aggressive enough in using debt to drive growth. Thus, both ROE and DER can be signals that investors should pay attention to when assessing the quality and risk of issuers at the time of IPO. Siregar et al. (2024) found that after an IPO, there was a significant decline in *Return on Equity* (ROE) and *Debt to Equity Ratio* (DER), reflecting a decline in the company's financial performance after *going public*. Similar results were found in Sucipto's (2022) study, which showed that the DER changed significantly four years after the IPO, indicating an impact on the company's capital structure. Thus, both ROE and DER can be important signals for investors in assessing the quality and risk of issuers during an IPO. Based on this background, the researchers were interested in conducting research on the financial performance of companies before and after an IPO.

## LITERATURE REVIEW

Signaling theory, developed by Ross (1977), explains how companies send signals to external parties, especially investors, through voluntary disclosures or corporate actions to reduce information asymmetry. In the context of an IPO, companies release financial data and other disclosures through prospectuses to signal their quality and future potential. Financially sound companies will signal their strength by showing good performance indicators such as ROE and better capital structure, in the hope of attracting investors and obtaining favorable valuations in the market. Previous studies support or contradict this:

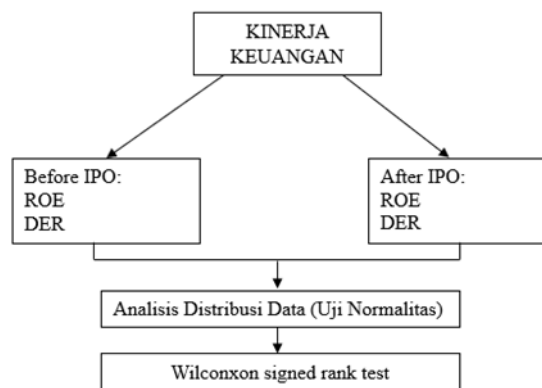
Hanafi (2017) states that companies with strong financial performance tend to send positive signals to the market. Siregar et al. (2024) found that ROE and DER changed significantly after the IPO, in line with the signaling effect where companies restructure their finances post-listing. Conversely, Pangestu and Kartini (2022) found mixed results, suggesting that the strength of the signal may not be consistently reflected in financial ratios after IPO across all sectors.

*H<sub>1</sub>: There is a significant difference in Return on Equity (ROE) before and after the IPO.*

Capital structure theory, particularly the trade-off theory, states that companies seek to balance the tax benefits of debt with the bankruptcy costs that may arise from excessive borrowing. Going public through an IPO provides an alternative source of funding, allowing companies to reduce their dependence on debt. As a result, a decrease in DER after an IPO may reflect the reing of a company's capital structure towards an optimal level (Brigham & Houston, 2019). Sucipto's (2022) research supports this idea, showing a significant decline in DER post-IPO, indicating that companies use IPO funds to pay off debt and improve solvency. Similarly, Hartono (2017) explains that reducing leverage after going public increases investor confidence and reduces the risk of financial difficulties. However, some companies may maintain high leverage after the IPO due to industry norms or reinvestment strategies.

*H<sub>2</sub>: There is a significant difference in the Debt-to-Equity Ratio (DER) before and after the IPO.*

The conceptual framework of this study describes how the IPO event serves as a benchmark for evaluating financial performance. Two financial indicators, ROE and DER, are measured in three time periods: before the IPO (T-0), one year after the IPO (T+1), and two years after the IPO (T+2). The Wilcoxon Signed-Rank test is used to determine whether there are statistically significant differences in each indicator over time.



**Figure 1. Conceptual Framework**

This framework helps guide research in testing whether IPOs cause significant changes in the financial structure and profitability of listed companies in Indonesia.

## METHODOLOGY

This study uses a quantitative comparative method to examine differences in financial performance before and after an Initial Public Offering (IPO). The study focuses on two financial indicators: Return on Equity (ROE) and Debt to Equity Ratio (DER).

### *Population and Sample*

The population consists of all companies that conducted an IPO and were listed on the Indonesia Stock Exchange (IDX) between 2018 and 2022 (275 companies). Using purposive sampling, 261 companies were selected based on the following criteria:

1. The company published complete financial reports in Rupiah.
2. Financial data is available for one year before and two years after the IPO.
3. The company remained listed and did not conduct a follow-up IPO during the observation period.

## RESEARCH RESULTS

Financial data from 261 companies was obtained from the official website of the Indonesia Stock Exchange (IDX), covering ROE and DER values for three time periods:

1. T-0 (one year before IPO)
2. T+1 (one year after the IPO)
3. T+2 (two years after the IPO)

All data was checked to ensure consistency, completeness, and uniformity of units (Rupiah and the same scale).

Descriptive statistics are used to provide an overview of the ROE and DER variables, including: Minimum and Maximum Values, Mean, and Standard Deviation. This step aims to determine the initial characteristics of the data before conducting inferential testing. Next, a normality test using **the Shapiro-Wilk Test** to determine whether the data is normally distributed. The hypothesis used is:

1.  $H_0$ : The data is normally distributed
2.  $H_1$ : The data is not normally distributed

The results show that the p-value is  $< 0.05$ , so  $H_0$  is rejected and the data is declared to be non-normally distributed. Therefore, testing is continued using non-parametric methods.

Because the data is not normal, the Wilcoxon Signed-Rank Test is used to test the difference between ROE and DER before and after the IPO. This test is used to compare two paired data sets with abnormal distributions. With the Decision Criteria, if the p-value is  $< \alpha = 0.05$ , then  $H_0$  is rejected and there is a significant difference.

This study uses result interpretation, where the average ROE and DER are categorized using the *Three-Box* method as shown in Table 1 below.

**Table 1. Categorization of ROE and DER Values Using the Three-Box Method**

Score Range	Criterion
50,00 – 100,00	Low
100,01 – 150,00	Keep
>150,00	Tall

This method aims to simplify the interpretation of a company's financial position into an easily understandable classification.

**Table 2. Summary of Wilcoxon Signed-Rank Test Results**

Variabel	Period Compared	Z-Value	p-Value	Description
ROE	T-0 vs T+1	-7,421	0	Signifikan
ROE	T-0 vs T+2	-6,832	0	Signifikan
DER	T-0 vs T+1	-8,203	0	Signifikan
DER	T-0 vs T+2	-7,905	0	Signifikan

Based on these results, it can be concluded that IPOs have a significant impact on profitability (ROE) and capital structure (DER). ROE tends to decline, while DER shows an improvement in capital structure after an IPO.

## DISCUSSION

The findings of this study indicate that there are significant differences in the financial performance of companies before and after conducting an Initial Public Offering (IPO), particularly in terms of Return on Equity (ROE) and Debt to Equity Ratio (DER) indicators. These changes show that an IPO is not only a funding strategy, but is also closely related to the financial restructuring of the company. The decline in ROE after an IPO indicates a decline in the company's profitability after going public. This can be explained by several possibilities. First, companies that have obtained funds from IPOs often expand or make new investments that do not immediately contribute to profits, so that has a temporary impact on the efficiency of equity use. Second, IPOs can cause equity dilution, namely an increase in the number of outstanding shares without a corresponding increase in profits. This phenomenon is supported by signaling theory, which states that after an IPO, companies must prove the prospects they have signaled to the market through their prospectus reports. If market expectations are not met, ROE as a profitability indicator will show a decline (Ross, 1977).

Meanwhile, the decline in DER indicates an improvement in capital structure after the company became a public entity. This decline indicates that the company tends to shift its sources of financing from debt to equity, one of which is through the use of IPO proceeds to pay off previously used debt. This is in line with the Trade-Off Theory, which states that companies will balance the tax benefits of debt with the risk of bankruptcy it poses (Brigham & Houston, 2019). By becoming a public company, the pressure to maintain a healthy debt ratio also increases because the company is monitored by shareholders and capital market regulators.

These findings are in line with research conducted by Siregar et al. (2024) and Sucipto (2022), which shows that companies in Indonesia tend to experience a decline in DER and ROE after an IPO. The decline in DER indicates that IPOs are used as an opportunity to improve financial fundamentals. On the other hand, the decline in ROE shows that not all companies are able to maintain high profitability after going public, either due to new operational challenges or external influences such as market fluctuations and regulatory changes.

In addition, capital market conditions and the macroeconomy also affect the effectiveness of IPOs in improving financial performance. Companies that go public in unstable economic conditions may experience a decline in demand or profit margins, which has a negative impact on ROE. However, in the long term, a decline in DER indicates that IPOs can provide structural benefits to the financial sustainability of companies.

Thus, the results of this study confirm that IPOs affect two important aspects of financial performance: profitability and capital structure. However, the impact may vary between companies depending on the post-IPO strategy implemented and the internal readiness of the company to manage the change in status as a public entity.

## **CONCLUSIONS AND RECOMMENDATIONS**

Based on the analysis of 261 companies that conducted Initial Public Offerings (IPOs) on the Indonesia Stock Exchange (IDX) during the 2018–2022 period, the following conclusions were drawn:

1. IPOs have a significant impact on company financial performance, particularly on two key indicators: Return on Equity (ROE) and Debt to Equity Ratio (DER).
2. ROE declined after the IPO, indicating that the company's profitability tends to decline after going public. This may be due to increased operating expenses, dilution of ownership, and suboptimal use of IPO proceeds.
3. DER has decreased significantly, indicating an improvement in capital structure. Companies tend to reduce their debt ratio after obtaining funds from the IPO, reflecting more prudent financial risk management.
4. Overall, an IPO does not always guarantee improved financial performance in the short term, but it can provide important structural benefits for the company's financial stability.

Based on the findings of this study, the author provides the following recommendations:

1. For investors, it is recommended to not only assess companies based on their financial performance prior to IPO, but also to consider the company's long-term strategy and its industry sector. High ROE prior to IPO does not necessarily mean that it will remain high after the company goes public.
2. For companies planning an IPO, it is important to strategically plan the use of IPO proceeds, not only for expansion, but also to strengthen capital structure and maintain operational efficiency in order to remain attractive to investors in the long term.
3. For regulators and market authorities, it is important to increase transparency and oversight of prospectuses and plans for the use of IPO proceeds, in order to ensure that IPOs provide sustainable added value, rather than being merely cosmetic.
4. For future researchers, it is recommended to add other variables such as ROA, EPS, or liquidity ratios, as well as to use panel data or mixed methods approaches to gain a deeper understanding of the impact of IPOs on company performance.

#### **ADVANCED RESEARCH**

This study has several limitations that should be considered in the development of further studies. First, this study only uses two financial indicators, namely Return on Equity (ROE) and Debt to Equity Ratio (DER). Although both represent important aspects of profitability and capital structure, other indicators such as Return on Assets (ROA), Earning Per Share (EPS), Current Ratio, or operational efficiency ratios also need to be considered to provide a more comprehensive picture of the company's financial performance post-IPO.

Second, the observation period is limited to only two years after the IPO. In reality, the effect of an IPO on financial performance can be long-term, so analysis with a longer time frame (e.g., five years post-IPO) can provide more accurate and representative results.

Third, this study uses a purely quantitative approach with secondary data. A qualitative approach or mixed methods could provide additional insights into managerial strategies, external factors, and investor perceptions that cannot be measured numerically.

Therefore, it is recommended that future research:

1. Adding more financial and non-financial variables to capture the dynamics of the company more comprehensively.
2. Extending the analysis period to evaluate the long-term impact of IPOs.
3. Combining interviews with company management or case study analysis to gain a deeper contextual understanding.
4. Performing segmentation based on industry sector, as the impact of an IPO may vary depending on the characteristics of each sector.

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