Income Smoothing, Profitability, and Firm Size as Predictors of Valuation in Technology and Telecommunications Firms (2022–2024)

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Abstract: - Amid increasingly intense business competition, an IPO serves as an indicator of a company's success in obtaining funding to accelerate growth. Company valuation, reflected in stock prices, becomes a primary basis for investors in making investment decisions. This study examines the effect of income smoothing (earnings management), Return on Assets (ROA), Net Profit Margin (NPM), and firm size on company valuation in the technology and telecommunications sectors, which are characterized by rapid growth, dynamism, and innovation. The population consists of 42 companies listed on the Indonesia Stock Exchange (IDX) before 2022. Using purposive sampling, 13 companies were selected with a three-year observation period (2022–2024), resulting in 39 total observations. Quantitative data were obtained from the official IDX website and company websites and analyzed using multiple linear regression. The results indicate that income smoothing, NPM, and firm size do not have a positive effect on company valuation. Meanwhile, ROA shows a significant negative effect on valuation. These findings suggest that profitability ratios are not necessarily the primary determinants of valuation in Indonesia's technology and telecommunications sectors. Companies should strengthen valuation strategies by focusing on user growth, innovation development, and technological capabilities to enhance competitiveness and attract investors.

Key-Words: - Company Valuation; Initial Public Offering; Income Smoothing; Profitability.

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1 Introduction

Competition among companies in the Indonesian capital market has become increasingly intense in line with the rapid dynamics of the evolving business environment. The capital market functions as a mechanism that connects parties in need of funds (issuers) with those possessing excess funds (investors), allowing capital to be allocated to productive sectors. In this context, the success of a company in conducting an Initial Public Offering (IPO) serves as an important indicator of its ability to obtain funding to accelerate expansion and business growth. However, in recent years, the IPO trend in the technology sector on the Bursa Efek Indonesia has shown a significant slowdown, both in terms of the number of listed companies and the amount of capital raised. This condition reflects growing investor caution toward the technology sector, which is known for its rapid growth but high uncertainty. On the other hand, the telecommunications sector plays a strategic role in supporting digital transformation through infrastructure and connectivity, making the integration of these two sectors form a mutually reinforcing yet complex ecosystem in assessing corporate valuation.

Firm valuation reflects investor perception as manifested in stock prices, often measured using ratios such as Price to Book Value (PBV). From the perspective of signalling theory introduced by Michael Spence, financial statements and firm characteristics function as signals to reduce information asymmetry between management and investors. Therefore, information regarding earnings stability, profitability levels, and firm size becomes essential indicators processed by investors in shaping their perception of firm value.

One signal frequently used by management is earnings management practices, particularly income smoothing, which aims to reduce fluctuations in earnings across periods to present a more stable performance. Earnings stability is generally perceived as an indicator of lower risk, thereby increasing investor confidence. Yahya et al. (2020) explain that earnings management is undertaken to influence external perceptions of corporate performance. Rahma and Lastanti (2023), as well as Syafitri and Oktavianna (2024), find that income smoothing can positively affect firm value by creating an impression of consistency and stability. In the volatile technology and telecommunications sectors, earnings stability is therefore expected to serve as an important signal in maintaining market confidence.

H1: Income Smoothing has a positive effect on Firm Valuation.

Beyond earnings stability, profitability represents a fundamental indicator reflecting a company's operational effectiveness. Return on Assets (ROA) measures a company's ability to utilize its assets to generate profit, while Net Profit Margin (NPM) reflects efficiency in generating net income from sales. Sutandi (2020) emphasizes that profitability ratios constitute primary considerations for investors in evaluating firm value through stock prices. Indy et al. (2021) further argue that improved financial performance plays a significant role in strengthening market confidence, particularly in innovation-driven sectors. Therefore, within technology and telecommunications companies that require substantial investment in assets and innovation development, the ability to generate profits efficiently is expected to provide a positive signal to firm valuation.

H2: ROA has a positive effect on Firm Valuation.

H3: NPM has a positive effect on Firm Valuation.

In addition to performance factors, firm size reflects operational scale and resource capacity. Companies with larger total assets are generally perceived as more stable and having broader access to financing. Within the signalling theory framework, firm size may serve as an indicator of strength and business sustainability. Arianto (2022) finds that firm size positively affects firm value, although Nugroho and Budiman (2022) report contrasting results. This inconsistency highlights the need for re-examination, particularly in the technology and telecommunications sectors characterized by rapid growth and high innovation intensity, where larger size does not necessarily guarantee sustainable competitive advantage.

H4: Firm Size has a positive effect on Firm Valuation.

Simultaneously, income smoothing, ROA, NPM, and firm size represent a combination of accounting and structural signals that investors comprehensively evaluate when assessing corporate risk and growth prospects.

H5: Income Smoothing, ROA, NPM, and Firm Size simultaneously affect Firm Valuation.

This study offers novelty by focusing on the technology and telecommunications sectors during the 2022–2024 period, a time when investor sentiment toward innovation-based firms shifted significantly due to economic uncertainty and the slowdown in IPO trends. Unlike prior studies that largely concentrated on manufacturing, property, or mining sectors, this research integrates income smoothing, profitability, and firm size within a single empirical model in a high growth–high risk industry context. Furthermore, this study reconceptualizes signalling theory within an innovation-driven industry, where valuation is determined not only by historical financial performance but also by growth expectations and business model sustainability.

The implications of this research are both theoretical and practical. Theoretically, it enriches the accounting and finance literature by re-examining the relevance of signalling

theory in explaining valuation determinants within Indonesia's technology and telecommunications sectors. Practically, the findings may guide corporate management in formulating valuation-enhancing strategies through improved financial performance, transparent reporting, and effective growth management. For investors, this study provides insights into key factors to consider when evaluating innovation-based firms. For capital market regulators, the findings may serve as a reference in promoting higher-quality disclosure and stronger corporate governance within the Indonesian capital market.

2 Research Method

This study adopts a quantitative research method with a descriptive approach and employs multiple linear regression analysis using SPSS software. The objective is to examine the effect of income smoothing, Return on Assets (ROA), Net Profit Margin (NPM), and firm size on the valuation of technology and telecommunications companies listed on the Bursa Efek Indonesia during the 2022–2024 period. Quantitative research, grounded in positivist philosophy, is used to examine specific populations or samples through statistical hypothesis testing (Sugiyono, 2016, cited in Sugiono, Noerdjanah, & Afrianti Wahyu, 2020).

The objects of this study are technology and telecommunications companies listed on the Indonesia Stock Exchange from 2022 to 2024. The research includes four independent variables, income smoothing, ROA, NPM, and firm size and one dependent variable, firm valuation. Income smoothing is identified using the Eckel Index (1981), as suggested by Suhartono and Hendraswari (2020), where a firm is classified as engaging in income smoothing if the index value is less than 1 and not engaging if it exceeds 1. Return on Assets (ROA) measures a company's effectiveness in generating net income from its total assets, while Net Profit Margin (NPM) reflects the company's ability to generate net profit from sales (Kasmir, 2012). Firm size is measured using the natural logarithm of total assets (Herwinda & Safri, 2023). Firm valuation is proxied by Price to Book Value (PBV), which measures the relationship between market price per share and book value per share (Tandelilin, 2017; Jogiyanto, 2015), with higher PBV indicating greater market valuation relative to book value.

Table 1. Operational variable

Variable	Conceptual Definition	Indicator/Measurement	Formula	Scale
Income Smoothing (X1)	An earnings management practice conducted to reduce profit fluctuations across periods. Identified using the Eckel Index (1981) (Suhartono & Hendraswari, 2020).	Criteria: IE < 1 = Engages in income smoothing IE > 1 = Does not engage in income smoothing	**Eckel Index (IE)** = CV ΔI / CV ΔS	Dummy (1 = smoothing; 0 = non-smoothing)
Return on Assets (ROA) (X2)	A ratio measuring a company's effectiveness in generating net income from its total assets.	Comparison between net income and total assets	ROA = Net Income / Total Assets	Ratio
Net Profit Margin (NPM) (X3)	A ratio indicating a company's ability to generate net profit from sales (Kasmir, 2012).	Comparison between net income after tax and sales	NPM = Net Income / Sales	Ratio
Firm Size (X4)	Company size reflecting the scale of the firm based on total assets (Herwinda & Safri, 2023).	Natural logarithm of total assets	Size = ln (Total Assets)	Ratio

Firm Valuation (Y)	Company value proxied by Price to Book Value (PBV), reflecting how the market values the company's book value (Tandelilin, 2017; Jogiyanto, 2015).	Comparison between market price per share and book value per share	PBV = Market Price per Share / Book Value per Share	Ratio

Table 2. Sample Companies with Eckel Index (IE < 1)

No	Ticker Code	Eckel Index	Description
1	EMTK	0.11	Income Smoothing
2	MTDL	0.62	Income Smoothing
3	MCAS	0.48	Income Smoothing
4	ATIC	0.54	Income Smoothing
5	DIVA	0.86	Income Smoothing
6	LUCK	0.14	Income Smoothing
7	WIFI	0.97	Income Smoothing
8	GLVA	0.86	Income Smoothing
9	CASH	0.02	Income Smoothing
10	UCVR	0.90	Income Smoothing
11	ZYRX	0.43	Income Smoothing
12	LINKNET	0.37	Income Smoothing
13	MORA	0.26	Income Smoothing

The unit of analysis consists of annual financial statements and annual reports of the selected companies. Secondary data were obtained from the official website of the Indonesia Stock Exchange (www.idx.co.id), company websites, and relevant literature to measure all research variables. The population includes 42 technology and telecommunications companies listed before 2022. Using purposive sampling, the study selected companies that were listed prior to 2022, published complete annual financial statements, and showed indications of income smoothing based on the Eckel Index. Based on these criteria, 13 companies were selected, resulting in 39 firm-year observations over the three-year period.

Descriptive statistics were used to summarize the data, followed by classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests—to ensure the validity of the regression model. Multiple linear regression analysis was then conducted to test both the partial effects (t-test) and simultaneous effects (F-test) of income smoothing, ROA, NPM, and firm size on firm valuation. Finally, the coefficient of determination (R^2) was used to evaluate the extent to which the independent variables explain variations in firm valuation.

3 Research Results and Discussion

Table 3. Statistic descriptive result

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Income Smoothing	39	.02	.97	.5047	.31419
ROA	39	-2.05	.14	-1.0829	.41188
NPM	39	-2.06	-.09	-.5125	.28808
Firm Size	39	25.42	31.46	28.2836	1.80670
Valuasi Perusahaan	39	-.54	.98	.0676	.34707
Valid N (listwise)	39				

The descriptive statistics results show that the study uses 39 observations. Income Smoothing has a minimum value of 0.02 and a maximum value of 0.97, with a mean of 0.5047 and a standard deviation of 0.31419, indicating moderate variation among firms. This suggests that, on average, the sampled companies tend to engage in income smoothing practices (Eckel Index < 1). Overall, the descriptive results indicate that the data distribution across variables is relatively varied but remains within a reasonable range, suggesting that the dataset is suitable for further regression analysis.

Table 4. Normality test result

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			39
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		.29869417
Most Extreme Differences	Absolute		.133
	Positive		.133
	Negative		-.104
Test Statistic			.133
Asymp. Sig. (2-tailed)[c]			.077
Monte Carlo Sig. (2-tailed)[d]	Sig.		.074
	99% Confidence Interval	Lower Bound	.067
		Upper Bound	.081

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 334431365.

The results of the One-Sample Kolmogorov–Smirnov test indicate that the residual data are normally distributed. The Asymp. Sig. (2-tailed) value is 0.077, and the Monte Carlo Sig. (2-tailed) value is 0.074, both of which are greater than the 0.05 significance level. Therefore, the null hypothesis that the residuals follow a normal distribution cannot be rejected. This suggests that the regression model satisfies the normality assumption.

Table 5. Mulicolinearity test result

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Income Smoothing	.840	1.191
	ROA	.820	1.220
	NPM	.801	1.248
	Firm Size	.937	1.067

a. Dependent Variable: Valuasi Perusahaan

The multicollinearity test results show that all independent variables have tolerance values greater than 0.10 and Variance Inflation Factor (VIF) values below 10. Specifically, the VIF values range from 1.067 to 1.248. These results indicate that there is no multicollinearity problem among the independent variables (Income Smoothing, ROA, NPM, and Firm Size). Thus, the regression model meets the multicollinearity assumption.

Table 6. Multiple regression test result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-1.002	.840		-1.193	.241
	Income Smoothing	.019	.178	.018	.109	.914
	ROA	-.445	.137	-.528	-3.240	.003
	NPM	.297	.199	.247	1.496	.144
	Firm Size	.026	.029	.134	.882	.384

a. Dependent Variable: Valuasi Perusahaan

The multiple linear regression results indicate that the regression equation can be formulated as follows:

Firm Valuation= −1.002+0.019(IS)−0.445(ROA)+0.297(NPM)+0.026(Size)

The constant value of -1.002 indicates the estimated firm valuation when all independent variables are assumed to be zero. The coefficient of Income Smoothing (0.019) shows a positive but statistically insignificant relationship with firm valuation. ROA has a negative coefficient (-0.445), indicating that an increase in ROA is associated with a decrease in firm valuation. NPM (0.297) and Firm Size (0.026) show positive relationships with firm valuation; however, these effects are not statistically significant. These findings suggest that among all independent variables, only ROA significantly influences firm valuation during the research period, while the other variables do not demonstrate significant individual effects.

Table 7. F test result

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.187	4	.297	2.976	.033[b]
	Residual	3.390	34	.100		
	Total	4.577	38			

a. Dependent Variable: Valuasi Perusahaan

b. Predictors: (Constant), Firm Size, ROA, Income Smoothing, NPM

The ANOVA results show that the regression model is statistically significant. The F-value is 2.976 with a significance level of 0.033, which is below 0.05. This indicates that Income Smoothing, ROA, NPM, and Firm Size simultaneously have a significant effect on firm valuation. Therefore, the regression model is considered feasible and appropriate for explaining variations in firm valuation.

Table 8. t test result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.002	.840		-1.193	.241
	Income Smoothing	.019	.178	.018	.109	.914
	ROA	-.445	.137	-.528	-3.240	.003
	NPM	.297	.199	.247	1.496	.144
	Firm Size	.026	.029	.134	.882	.384

a. Dependent Variable: Valuasi Perusahaan

The partial test results show that only ROA has a statistically significant effect on firm valuation, with a significance value of 0.003 (< 0.05) and a negative coefficient (B = -0.445). This indicates that ROA has a significant negative effect on firm valuation. Meanwhile, Income Smoothing (Sig. = 0.914), NPM (Sig. = 0.144), and Firm Size (Sig. = 0.384) do not have a significant effect on firm valuation, as their significance values exceed 0.05.

Discussion

The findings of this study indicate that only Return on Assets (ROA) has a statistically significant effect on firm valuation, while Income Smoothing, Net Profit Margin (NPM), and Firm Size do not show significant partial effects. Interestingly, ROA demonstrates a significant negative relationship with firm valuation. This result suggests that higher profitability, as measured by ROA, does not necessarily lead to higher market valuation in technology and telecommunications companies during the 2022–2024 period.

The negative effect of ROA may reflect the unique characteristics of the technology and telecommunications sector, which tends to prioritize growth potential, innovation capability, and user expansion over short-term accounting profitability. Investors in this sector may value scalability, future earnings prospects, and digital ecosystem strength more than current asset efficiency. As a result, companies with high ROA may not automatically receive higher valuation if the market perceives limited future growth opportunities. This finding supports the argument that traditional profitability ratios may not always serve as primary valuation drivers in high-growth industries.

Income Smoothing does not significantly affect firm valuation, indicating that the market may not strongly respond to earnings stabilization practices. Investors may rely more on forward-looking indicators rather than accounting-based earnings management signals. Similarly, NPM does not significantly influence firm valuation, suggesting that sales-based profitability is not the dominant consideration in valuing technology-oriented firms. Firm Size also shows no significant effect, implying that larger asset bases do not necessarily translate into higher market valuation in dynamic and innovation-driven sectors.

However, the simultaneous test (F-test) confirms that Income Smoothing, ROA, NPM, and Firm Size collectively influence firm valuation. This indicates that while individual variables may not be significant, their combined explanatory power contributes to variations in firm valuation. Overall, the results highlight that valuation in the technology and telecommunications sector is complex and influenced by broader strategic and market-based factors beyond conventional financial ratios.

These findings reinforce the notion that investors in emerging and innovation-driven industries place greater emphasis on long-term growth narratives rather than short-term accounting performance, thereby reshaping the determinants of firm valuation in the modern digital economy.

4 Conclusions

The results indicate that partially, only ROA has a significant effect on firm valuation, and interestingly, the relationship is negative. Meanwhile, Income Smoothing, NPM, and Firm Size do not show significant individual effects on firm valuation. However, the simultaneous test demonstrates that all independent variables collectively have a significant effect on firm valuation, indicating that financial performance and company characteristics together contribute to explaining variations in firm value. These findings suggest that in the technology and telecommunications sector, traditional profitability indicators are not always the primary determinants of firm valuation. Investors may place greater emphasis on growth potential, innovation capability, and future prospects rather than short-term financial ratios.

Additionally, the study only focuses on financial ratio variables and does not incorporate non-financial factors such as innovation intensity, market share, or corporate governance, which may also influence firm valuation.

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