

The Impact of Income Smoothing on Bank Performance: An Islamic Perspective on Listed Banks in Indonesia (2014-2018)

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Abstract. This study investigates the effect of income smoothing practices, bank ownership structure, leverage, and company size on bank performance in Indonesia from an Islamic perspective. Drawing on agency theory and construction theory, the authors employ a multiple regression model to analyze data from 21 listed banks on the Indonesia Stock Exchange from 2014 to 2018. The findings reveal that income smoothing practices have a negative effect on bank performance, as measured by return on assets (ROA), while company size has a positive effect. Leverage also has a negative effect on ROA, but bank ownership structure does not have a significant effect. The study contributes to the literature by providing empirical evidence on the interplay between income smoothing, Islamic principles, and bank performance in the context of Indonesian banks. The findings have important implications for bank managers, regulators, and investors seeking to promote transparency, honesty, and stability in the banking sector. The authors discuss the limitations of the study and provide suggestions for future research.

Keywords: Bank performance, Income smoothing, Management, Shareholders

1. Introduction

Earnings management is a technique that is carried out by company management that wants to take a certain advantage by arranging a financial statement so that the company's financial statement has quality and stability to the expectation of interested parties. In earnings management, accounting information and other financial reports are made not by the actual condition. This amended financial statement can certainly have consequences on dividend policy. This earnings management practice aims to achieve and satisfy the interests of company owners. One example of earnings management practice is income smoothing.

Income smoothing – one of the acts used by the company's management – is reducing a fluctuation in reported earnings to achieve the profit target to obtain certain profit. This income smoothing results in information about a profit being inconsistent with reality, so this condition can certainly lead to errors in making a decision, especially for an external party. Management that performs income smoothing intends to increase and maintain trust between management, stakeholders, investors, and creditors in achieving the goal.

If it is viewed from an Islamic perspective, income smoothing is contrary to the behavior of Rasulullah Shallallahu'alaihi Wasallam, namely, Siddiq or honesty. Honesty is the similarity between the news delivered and the facts or phenomena that exist. In addition, honesty in financial management behavior was practiced by Rasulullah *Shallallahu'alaihi Wasallam*. This honesty can be seen in Rasulullah *Sallallahu'alaihi Wasallam* – a person who always prioritizes honesty in speaking and delivering news. In financial management behavior, honesty is reflected in honesty in making company financial statements, honesty in a calculation related to a production cost, and honesty in a sales calculation and all calculations related to the company finance (Abuznaid, 2009; Asutay, 2008, 2012; Caraka, Hudaefi, et al., 2021; Haniffa et al., 2010; Hudaefi, 2020; Hudaefi et al., 2021, 2019; Ismal, 2010; Mansoor Khan et al., 2008). For many years, researchers have debated income smoothing as a broad aspect of earnings management, which is used to describe accounting techniques accepted by a company to report a financial result that may not accurately reflect the substance of the business activities. Some studies, (Dewi, 2018; Hadi Cahyadi, 2020; Husaini et al., 2016; Saitri et al., 2020), use the profitability variable as a variable that influences the practice of income smoothing.

The practice of income smoothing is to prove that the company has little risk and can predict future profit reports. This will increase the impression of good management for parties outside the company (Gondokusumo & Susanti, 2022). The implementation of income smoothing in sharia financial institutions is based on Fatwa No. 87/DSN-MUI/XII/2012 concerning Income Smoothing Methods for Third Party Funds which was stipulated on December 21 2012. This fatwa is a reference for sharia financial institutions so that they can carry out profit smoothing practices without violating the rights of customers as investors. Implementing income smoothing in banking can provide benefits for both parties, namely being able to manage profits well and providing constant profit sharing and minimizing losses that may occur.

In this study, we try to examine the effect of income-smoothing practice as proxied by the Eckel Index on bank performance since there are still some banks that practice income smoothing and do not. We assume that management aims to gain the trust of investors, and research that analyzes the effect of smoothing income practices on bank performance is still very small even though this research was conducted by Hendrawan, R., Fadhyala, R., & Aminah, 2020 in the manufacturing industry and Krisseptiyan et al., 2015 on 47 companies listed on the Indonesian stock exchange (IDX). The lack of research on the effect of income smoothing practices on bank performance using the Eckel Index in the context of Indonesian banks, and the need for a more comprehensive framework that integrates Islamic principles in assessing bank performance.

Meanwhile, Akande et al., 2019 researched banks in Nigeria, but they used the loan loss provision proxy as a variable for income smoothing practices. The same has also been done by previous researchers such as Balbao et al., 2014; Boulila Taktak et al., 2010; Curcio et al., 2013; El Sood, 2012; Leventis et al., 2012. Thus, this research is very important to do to obtain additional information in the

literature on the topic of bank financial performance. We are motivated to conduct research using the practice of income smoothing proxy by the Eckel Index because there has been no previous research in this area. Meanwhile, the variable of bank ownership is to be included in this study because it can provide evidence of whether privately owned banks or government-owned banks have better financial performance. This is closely related to the desire of bank management to provide confidence and security to investors as shareholders in their investments in the bank. If the bank's profit rate is high or by their wishes, investors will give a positive response to the performance of bank management and will maintain their investment in the bank. This study also examines the effect of the ownership structure of private and government banks on bank performance. The results of studies in most countries show that privately owned banks have better performance than state-owned banks (Berger et al., 2005; Dietrich et al., 2009; Fu et al., 2009; Kaur et al., 2013; Micco et al., 2007). However, Chantapong, 2005; Fernandez et al., 2005 found that the ownership structure of private, government, and foreign banks do not affect the performance of banks.

A study conducted by Agustin, Rahman, et al., 2020; Agustin, Sundari, et al., 2020 found that the ownership structure of state banks is better than that of private banks. The purpose of this study is to examine the effect of income smoothing practice and bank ownership structure on bank performance. The purpose of the research will be to answer whether income smoothing practice, which is a practice prohibited in Islam, has an effect on bank performance. Apart from that, differences in bank ownership structure, such as privately-owned banks or government-owned, influence bank performance. This research is rarely studied since many studies only examine the effect of bank performance on income smoothing. We believe that this research is important and timely because some banks still practice income smoothing to improve their financial performance, and only a few studies have been conducted on the object of banking companies. In addition, there are also banks that practice income smoothing, which has the possibility that the bank's performance will be low or have no effect.

2. Literature Review

2.1. Bibliometric Analysis using R Toward Income Smoothing

Science is currently expanding in conjunction with technological advancement. Science continues to improve scientists' productivity in terms of research, experimentation, and invention (Mikulecky, 2001). This rise will promote the expansion of information in communication media such as scientific publications. Increasing the intensity of scientific communication and scientific advancement can lead to more collaboration among scientists in the production of collaborative work. Collaboration in scientific communication refers to collaborative work involving more than one individual or organization to produce a result (Caraka, Noh, et al., 2021; Martini et al., 2012; Mergoni et al., 2022).

Research collaboration is always considered the spearhead of the world of science, so it receives significant attention from the scientific community and scientific policy institutions. Research collaboration is carried out to overcome increasingly complex problems based on various expertise backgrounds. Through collaborative research and solving the problems. At the same time, it can create good research results. In collaborating, each contributes resources and efforts both intellectually and physically. One method widely used to calculate the level of collaboration is bibliometrics. In addition, the bibliometric applies mathematical and statistical methods to measure a change both quantitatively and qualitatively in a set of documents and other media. Media that can be accessed quickly, such as scientific journals, are published online to communicate research results.

Bibliometric analysis is usually used to investigate references to scientific papers cited in a journal, map the scientific field, and classify scientific articles according to a research field. The approach used in the bibliometric analysis is the citation analysis approach to see each article's connection with other research papers and the cocitation analysis approach to find two or more articles cited by each article (Khan et al., 2020; Nailah et al., 2020; Souza et al., 2022; Toharudin et al., 2021). In the bibliometric analysis, we used data sourced from Scopus with the keyword 'Income Smoothing' and only obtained 11 relevant papers.

The significance of this topic is that it is generally used in the case of banks, income, credit, and management. In terms of research methodology, only basic regression can be seen. It is still necessary to develop other methods in this case to maximize the benefits of the data and to answer more comprehensive research questions. Figure 1 explains how the keyword 'income smoothing' occurs relates to issues that often develop. Only four main clusters can be formed with the highest centroid in 'income smoothing', which involves loan loss privileges, banks, and their application, earnings management, savings per capita, and supply chain management. Interestingly, the topic of Islamic banks and Chinese banks emerged. This can mean that research on financial management can be considered carefully. The keyword 'income smoothing' strongly relates to 'banks' and 'earnings management' and provides the 38 most relevant words. Dimensional statistical methods include semiparametric multiresponse, spline, and stochastic frontier analyses.

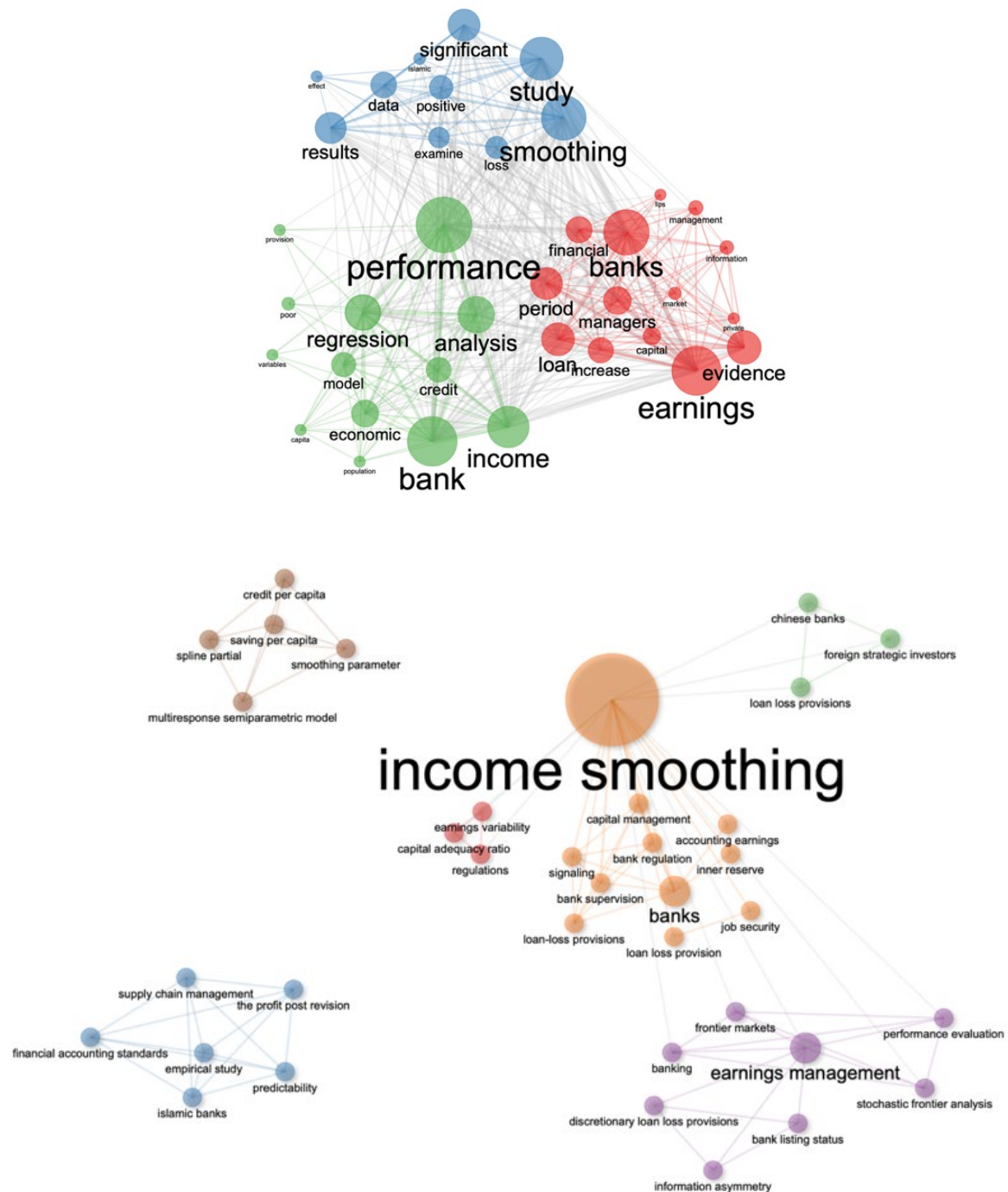


Fig. 1: Co-occurrence keyword toward income smoothing

2.2. Construction Theory

Islamic sharia is a guideline for principals (owners) and agencies (management) in cooperating with companies. Thus, all actions and policies of principals and agencies must be based on Islamic sharia. Figure 2 shows that the principle of an agent contract in the Islamic perspective is based on the ASIFAT concept, namely, Aqidah (obedience to Allah Ta'ala), Siddiq (true), Fathanah (intelligent), Amanah (honest/trustful), and Tabligh (communicative).

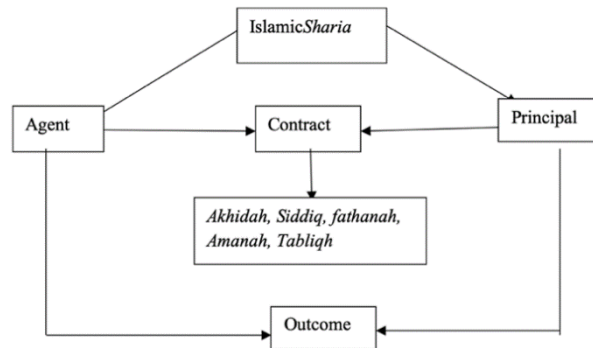


Fig. 2: Agency theory from the Islamic perspective

Agency theory in the conventional perspective developed by Jensen et al., 1976 states that An agency relationship exists when one or more people (employers) hire other people (agents or workers) to act on their behalf, transferring decision-making authority to agents and their employees. This connection emerges in the context of financial management between shareholders, managers, stockholders, and creditors (bondholders).

Today, corporate control is frequently delegated to professional managers who are not the company's owners. Because of the constraint, the owner is no longer able to oversee an increasingly vast and complicated organization. The primary purpose is to maximize the ownership of the company. Thus, management may be viewed as an agent of the company's owner, with the ability and authority to make the best decisions that benefit the company's owner.

These various interests made managers avoid making risky decisions if they perceive that the risk they face is greater than the possibility of losing their job and damaging an individual reputation. Managers no longer maximize shareholder wealth but take the middle way by minimizing potential losses from company owners. If there is a tendency for managers to prioritize their interests rather than the interests of the company, agency problems will occur.

When a corporation earns a substantial amount of free cash flow, an agency problem occurs. Free cash flow is defined as net cash flow that cannot be reinvested due to a lack of attractive investment opportunities. A disagreement between management and shareholders frequently emerges during the purchase of a firm by a large company utilizing debt, which is known as a leveraged buyout (LBO). Management in a leveraged buyout typically believes that the firm is undervalued or tender over to buy shares of a company that is not previously owned by the management group and then directly controls and owns the company. Management conflict between shareholders arises because, in the practice of buying shares, management is often seen as making an unfair offer.

In line with this, Hendrawan, R., Fadhyla, R., & Aminah, 2020 uses earnings management as an independent variable – using discretionary accruals – and ROA as a dependent variable. The result shows that the earnings management variable has a positive effect on ROA. Regarding income smoothing, Krisseptiyan et al., 2015 measured using an Eckel Index, and the dependent variable in this study is bond ratings measured using codes 1 to 7. The results of the study show that the more companies perform income smoothing, the higher the bond ratings obtained. The company is not supported because income smoothing does not affect bond ratings. A variation in a company's profit from year to year cannot be used as a measure of bond risk. A larger profit change can also have a positive impact on a change in company profit as long as larger companies generate a profit every year. Profits that increase every year indicate an increase in the company's performance from year to year. A variation of high annual profit would lay the company's financial condition better (Agustin, Sundari, et al., 2020; Turen, 1995). Company management usually performs income smoothing in the period around the issuance of bonds which leads to increase performance and bond rating. Thus, if the company has obtained a good rating, the company will only maintain the bond rating instead of income smoothing.

3. Research Methodology

3.1. Linear Models

The linear model is a model that analyzes two variables, namely, the independent variable or commonly called the predictor with the dependent variable or commonly called the response, where the predictor is assumed to affect the response linearly so that the response variable can be estimated from the predictor variable. However, this model assumes that the response variable must be normally distributed and that the variance is homogeneous. (McCullagh et al., 1989) define Generalized Linear Models as an extension of the classical linear model. An essential property of this model is that it assumes the independence of observations. Normality and homogeneity of variance are not needed, so the relationship between response variables and predictors with response distributions other than normal and nonhomogeneous variance can be modeled with this model (Caraka, Chen, et al., 2021; Goldstein et al., 1976; Lee et al., 2021). The dependent variable is assumed to be an exponential family, i.e., normal distribution, Poisson, binomial, gamma, or Gaussian inverse. Parameter set $\beta_{(px1)}$ and

independent variables (explanatory variables) $\beta = \begin{bmatrix} \beta_0 \\ \beta_1 \\ \vdots \\ \beta_p \end{bmatrix}$ $x_i = \begin{bmatrix} 1 \\ x_{i1} \\ \vdots \\ x_{in} \end{bmatrix}$. However, a monotone link function $h(\cdot)$ such that $h(\mu_i) = \eta_i = \sum_m x_{im} \beta_m = x_i^T \beta$, with $\mu_i = E(Y_i)$. Therefore, the generalized linear model can be modeled as follows in equation (1):

$$g(\mu_i) = X_i^T \beta \quad (1)$$

There is a special relationship function called the canonical relationship function that addresses the distribution of the dependent variable. For example, if the dependent variable has a Poisson distribution, then $g(\cdot)$ is the ln function. Based on equation (1). Meanwhile, the important components that make up the generalized linear model include the linear independent variable, the dependent variable an exponential family distribution, and there is a relationship function (Myers et al., 2012).

3.2. Data Analysis

The object of this study is banking companies that have been listed on the Indonesia Stock Exchange (IDX), and have financial data for 2014-2018. The population in this study is all banking companies, namely 45 companies that have been listed on the Indonesia Stock Exchange (IDX) during 2014-2018. The sampling method is based on a purposive sampling method based on a technique based on certain criteria. The sample in this study is 21 banks. The sample was taken as many as 21 companies from 45 listed companies. Because the data was incomplete and not available on the company's website, so all the population could not be sampled. Data analysis technique is using multiple regression model. The hypothesis tested in this study is as follows:

$$ROA = \alpha + \beta_1 IS + \beta_2 OWN + \beta_3 LEV + \beta_4 SIZE$$

Information:

ROA = return on assets

IS = income smoothing (Eckel Index) with dummy variable income smoothing (0 for banks that do not practice income smoothing and 1 for those who practice income smoothing)

OWN = dummy bank ownership (0 for privately owned banks and 1 for state-owned banks)

LEV = leverage (total debt divided by equity)

SIZE = Logarithm of total assets

The following is the formula for the Eckel Index:

$$Indeks\ Eckel = \frac{CV\ \Delta I}{CV\ \Delta s}$$

Δs = change in sales in one period

ΔI = change in net income/profit in one period

CV = coefficient of variation of the variable, namely the standard deviation divided by the expected value.

CV ΔI or CV ΔS can be calculated as follows:

$$CV\Delta I \text{ or } CV\Delta S = \sqrt{\frac{\sum(\Delta x - \Delta X)^2}{n-1}} = \Delta X$$

Where:

Δx : change in net profit (I) or income (S) between year n to year n-1

ΔX : average change in net profit (I) or sales (S) between years n to n-1

n : the number of years observed.

4. Results and Discussion

Table 1: Coefficient Correlations and variance inflation factor (VIF)

	SIZE	IS	LEV	OWN	VIF
SIZE	1.000	-.083	-.064	-.613	1.706
IS	-.083	1.000	-.174	.199	1.068
LEV	-.064	-.174	1.000	-.114	1.650
OWN	-.613	.199	-.114	1.000	1.067

Table 1 shows that the Coefficient Correlations results show <0.8 so that all variables do not have autocorrelation. The multicollinearity test results in this study show the variance inflation factor (VIF) < 10. This means that this study does not experience multicollinearity.

Data obtained using selected variables between application of income smoothing is presented in table 2 below:

Table 2: Comparison of the means between variables

Ratios	Mean (%)	p-value (2 tailed)
ROA		
practice income smoothing	1.2726	0.004***
Not to do practice income smoothing	1.9385	
LEV		
practice income smoothing	6.3941	0.303 ns
Not to do practice income smoothing	5.5156	
SIZE		
practice income smoothing	17.9018	0.024**
Not to do practice income smoothing	17.9993	

** and *** significant at the 5% and 1% level or ns (not significant), p-value in parentheses

Table 2 shows that the ROA ratio is higher and significantly different between banks that apply income smoothing and banks that don't apply it. In other words, the banks that do not practice income smoothing have better financial performance than banks that do practice income smoothing. This is following Islamic sharia, which is reflected in one of the characteristics of the Prophet *Shallallaahu'alaihi Wasallam*, namely, honesty. Banks that are honest in providing financial reports will receive a gift from Allah Ta'ala in the form of maximum profit for carrying out Islamic law. In addition, banks also gain the trust of shareholders in receiving any dividends distributed to them. A study reported that the return on the asset has positively affected income smoothing instead of cash holding. Therefore, the bank will always win the trust of shareholders by providing a good level of bank profitability (Krisseptiyan et al., 2015). Income smoothing to company size (total assets), profitability (net income after tax to total assets), industry (industrial and commercial, hotels and properties, and others), and nationality (Singaporean and Malaysian companies) have been reported by

Table 2 shows there is no significant difference between the leverages (LEV ratio) between banks that practice income smoothing and banks that don't practice. This conclusion was consistent with a paper by (Anwar & Chandra, 2017) in which the discriminant analysis revealed that only firm size and dividend payout ratio has a significant impact on income smoothing techniques, but Return on Assets, Debt to Equity Ratio, and Financial leverage did not.

Our study also showed that the size of the company (SIZE ratio) shows a higher and significant difference between banks that practice income smoothing and banks that don't practice. This is because investors trust the bank more so it is easier to obtain additional capital as well as the ease of obtaining deposits from customers (Alexandri & Anjani, 2014). A bigger bank has a better performance. A large bank has low fees because there are economies of scale. In addition, a large bank can diversify its income source by taking advantage of various types of investment opportunities. For example, a large bank can take on a riskier project or provide a larger loan to a company. The results of this study are in line with previous reports (Abduh et al., 2018; Bukair et al., 2015; Dan et al., 2020; Sanusi, 2019; Watuseke et al., 2019).

Table 3 shows that, our study showed that income smoothing (IS) has a negative effect on ROA. The result of this study agreed with (Ayu & Budiasih, 2018) which indicates that income smoothing will decrease the bank's performance even though the bank management still tries to show that the company has a stable level of profit to gain the trust of investors. The bank also tries to provide a stable dividend so that investors feel confident and trust the bank for their shares (Alexandri & Anjani, 2014).

Table 3: Multiple Regression Results

Variable	OLS without standard errors	
	Coef.	p-value
Constant	-2.954	0.036**
IS	-0.606	0.022**
OWN	-0.326	0.376
LEV	-0.088	0.050**
SIZE	0.304	0.000***
R-squared	0.202	
Adjusted R-squared	0.180	
Prob > F	0.000	
Total of observation	105	

and * significant at 1% and 5% in terms of p-value in parentheses

Banks with income smoothing can have an impact on government regulation because of their actions on income smoothing. Where companies report declining or increasing actual revenues, the government will collect less or more taxes. On the investor side, income smoothing is a phenomenon that uses accounting procedures to equalize changes in net income from one period to the next. Companies benefit from this strategy because investors are often ready to pay a premium for equities that provide a consistent and predictable revenue stream for the upcoming year. Investors avoid stocks whose earnings are on an unstable pattern, which can be considered riskier (Obaidat, 2017).

However, income smoothing is frequently accomplished using deceptive means. Preventing or eliminating income smoothing methods necessitates comprehension and the development of relevant remedies. To minimize the practice of income smoothing, it is necessary to first identify the variables that contribute to the occurrence of the practice of profit equipment. This is due to the fact that investors demand stability in their investments. If the firm's earnings fluctuate, investors may be exposed to the risk and uncertainty of investing in this company. A firm that can demonstrate consistent returns year after year is more likely to attract investors who are more at ease when they observe consistent returns over a longer period. Furthermore, huge corporations have greater motives, capacities, and opportunities to engage in the phenomena of income smoothing (Kustono, Roziq, & Nanggala, 2021).

Signaling theory explains why companies provide information to the capital market. The presence of information asymmetry between management and parties with an interest in the information is demonstrated by signaling theory. Signaling theory proposes how corporations should communicate with users of financial statements. On signaling, the use of loan loss provisions to smooth profits, especially when pre-managed earnings are excessive, is less consistent. The insertion of an interaction term influences the signaling outcomes. (Kanagaretnam, Lobo, & Yang, 2004).

Providing correct financial information to users of financial statements shows that the company has provided honest information so that it will have an impact on the trust of shareholders. The quality of the information revealed in the company's financial statements influences investor decisions. The goal of information quality is to eliminate information asymmetry, which occurs when management knows more about the company's internal information and prospects than external stakeholders. Income smoothing shows that the quality of information is not good, so investors give a negative reaction to the company. Information in the form of financial performance is expected to be published in a signal of the company's financial condition and describe the possibilities associated with achieving company profits. Taking income smoothing actions will cause the incorrect information to reduce the bank's financial performance (Athanasakou, Strong, & Walker, 2007).

The results of this study showed that ownership (OWN) does not affect ROA. The results of this study are in line with the results of research conducted by (Chantapong, 2005; Fernandez et al., 2005). LEV has a negative effect on ROA. The result of this study indicates that banks that have debt will experience a decrease in profit because of the interest expense on loans. The increase in operating costs from interest expense results in a decrease in a bank's profit. The results of this study are in line with the research conducted by (Al-Homaidi et al., 2020; Farooq et al., 2021).

5. Conclusion

This study investigates the effect of income smoothing practices, bank ownership structure, leverage, and company size on bank performance in Indonesia from an Islamic perspective. The findings provide empirical evidence that income smoothing practices have a negative effect on bank performance, as measured by return on assets (ROA), while company size has a positive effect. Leverage also has a negative effect on ROA, but bank ownership structure does not have a significant effect. The study contributes to the literature by highlighting the importance of Islamic principles, such as honesty and transparency, in shaping the relationship between income smoothing and bank performance. However, the study is not without limitations. The cross-sectional nature of the data and the reliance on a small sample of listed banks in Indonesia may limit the generalizability of the findings to other contexts. The use of a single measure of bank performance (ROA) may also not capture the full complexity of the relationships examined. Future research could employ longitudinal designs, larger and more diverse samples, and multiple measures of bank performance to address these limitations. Despite these limitations, the study provides a valuable foundation for future research on the interplay between income smoothing, Islamic principles, and bank performance. The findings highlight the need for bank managers, regulators, and investors to promote transparency, honesty, and stability in the banking sector, in line with Islamic principles. The study also underscores the need for a more comprehensive framework that integrates Islamic principles in assessing bank performance and provides a roadmap for future research in this area.

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