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The Impact of Inefficiency and Bank Risk on Value of Banking Companies with Earnings Management as Moderating Variable

Yuli Rawun[1], Vinola Herawaty[2]
[1] Doctoral student at Trisakti University, Jakarta, Indonesia
[2] Doctoral programs at Trisakti University, Jakarta, Indonesia.

ABSTRACT: This research aimed to examine the effect of efficiency and credit risk on the value of banking companies with Earnings Management (EM) as a moderating variable. Size and leverage were used as control variables. The values of the companies were proxied by PBV (Price-to-Book Value). This research used secondary data from a population of 41 banks listed on the Indonesia Stock Exchange (IDX) for the 2016-2021 period. The results of this research indicated that NPL (Non-Performing Loans) negatively impacted the bank value. However, other main variables did not affect it, including Earnings Management which was not a moderator.

KEYWORDS: OEOI, NPL, EM, PBV, Size, Leverage

1. INTRODUCTION

The rapid development of the banking world, as well as the high complexity level of banking businesses can affect the financial performance of a Bank. Bank is a type of financial company operating in the savings and loans sector and becomes one of some determining factors in Indonesian economy. Bank is a type of financial institution specializing in savings and loans, and it is a key driver of the Indonesian economy. The importance of banking to the Indonesian economy and living standard requires banking companies to maintain the stability and the smoothness of its financial performance. Banking with good financial performance is not only able to realize a good Indonesian economy, but also able to improve the living standard of the Indonesian people, on the other hand, banking with poor financial performance is one of the obstacles to the economic growth in Indonesia, which is currently undergoing the process of becoming a developing country.

Many factors influence the health of a bank's financial performance, including Capital, Asset, Management, Earnings, and Liquidity (CAMEL), Operational Efficiency Ratio (OER) or Operating Expenses and Operating Income (OEOI), Capital Adequacy Ratio (CAR), Net Interest Margin Ratio (NIMR), Liquidity, Profitability, Return on Asset (ROA), Loan to Deposit Ratio (LDR), company profile risk factor or Non-Performing Loans (NPL), The Size of a company, and others. (Institute for Development of Economic and Finance/INDEF-2005, quoted by Harun Usman, 2016). Facts show that the financial performance trend, specifically Return on Asset (ROA) of several banks experiences fluctuation compared to the banking industry ratio. Return on Asset (ROA) is certainly related to the company value. In reality, there are several banks where their Return on Asset (ROA) is below the industry average in certain periods, which means that they are not healthy or does not meet the shareholder expectations.

This thing is suspected caused by Operating Expenses and Operating Income (OEOI) and Non-Performing Loans (NPL). When they increase, Return on Asset (ROA) and company value will decrease. Conversely, if Operating Expenses and Operating Income (OEOI) decreases, then Non-Performing Loans (NPL) and company value will tend to increase. Previous research found that the lower the Operating Expenses and Operating Income (OEOI) is, then the higher the Return on Asset (ROA) will be (Ovami Debbi Chyntia, 2017; Raharjo Priyanto Dwi et al., 2014; Sudiyatnoo Bambang & Setiyowati Rini, 2012).

However, Harun Usman, 2016; Haryati & Widyarti, 2016; Raharjo Priyanto Dwi et al., 2014; Sudarmawanti Erna & Pramono Joko, 2017; Wulandari Danu Lestari & Setianegara Gunawan R, 2020 stated that the higher the Operating Expenses and Operating Income (OEOI) is, then the Return on Asset (ROA) will be higher. Therefore, Operating Expenses and Operating Income (OEOI) which tends to be low can encourage Return on Asset (ROA) to increase the company value.

From empirical conditions, financial performance is not only determined by Operating Expenses and Operating Income (OEOI), but also by the company profile risk factor or Non-Performing Loans (NPL), which is related to the financial performance and Return on Asset (ROA).

There are several banks that in certain periods show high Non-Performing Loans (NPL) above the industry average, thus reducing the Return on Asset (ROA) performance. When bank management is able to reduce risks, the Return on Asset (ROA) of the company may increase and its value may become higher. Previous research by Haryati & Widyarti (2016) found that Non-Performing Loans (NPL) has a negative impact on Return on Asset (ROA). However, there is also a different view, such as Harun Usman (2016); Sudarmawanti Erna & Pramono Joko (2017), who found that company profile risk or Non-Performing Loans (NPL) do not significantly impact the financial performance or Return on Asset (ROA). Surely, a bank's good financial performance is a portrait that it has been managed well through Operating Expenses and Operating Income (OEOI) efficiency and has pressed the Non-Performing Loans (NPL), thus the bank will receive a positive response from the market or investors. This positive response will be reflected in the rising of stock prices, thus it will also increase the company value. Previous hypotheses proposed by Husna (2018); Nurminda et al. (2012); and Rachmawati Dwi and Pinem Dahlia Br. (2015) found that better financial performance leads to higher company value. However, Santosa et al. (2020) found that financial performance do not contribute to the company value.

Previous research by Nur Halimah et al. (2017) found that Operating Expenses and Operating Income (OEOI) has an insignificant negative effect on Price Book Value (PBV). Meanwhile, Agustina (2014) and Haris (2017) found that Operating Expenses and Operating Income (OEOI) has a negative effect on the Price Book Value (PBV). Research by Fitriani & Lasmanah (2022) concluded that Operating Expenses and Operating Income (OEOI) do not have any significant effect on Price Book Value (PBV) at National Private Commercial Banks during the 2013-2016 period.

Previous research by Agustina (2014) found that Non-Performing Loans (NPL) has a significant negative effect on Price Book Value (PBV). Meanwhile, Brenda (2017), Hasan (2011), and Hidayat et al., 2018, found that Non-Performing Loans (NPL) has an insignificant negative effect on Price Book Value (PBV). Furthermore, research by Fitriani & Lasmanah (2022) found that Non-Performing Loans (NPL) do not have any significant effect on Price Book Value (PBV).

Pantow et al. (2015) through their research results stated that the size of a company has an insignificant negative effect on its value. Prasetyorini Bhekti Fitri, 2013 in her research concluded that the size of a company has an effect on its value. Rachmawati Dwi and Pinem Dahlia Br., 2015 research with the independent variable concluded that the size of a company has a significant positive on its value. Manoppo Heven & Arie Fitty Valdi, 2016 research with the independent variable stated that the size of a company do not have any significant effect on its value.

Prasetyorini Bhekti Fitri (2013) concluded in her research that leverage do not have any effect on the company value. Meanwhile, Dwi et al. (2017) concluded in their research that leverage has a negative effect on the company value. Rachmawati Dwi and Pinem Dahlia Br. (2015) found that leverage do not have any significant effect on the company value as the independent variable. Hasna Firasyida (2014) found that leverage has a significant positive effect on the company value as the independent variable.

Previous research on the influence of Earnings Management on the company value was conducted by Darwis (2012) and Jefriansyah (2015), who found that earnings management do not affect the company value. This means that Earnings Management actions taken by the managers will not impact the company value. The results of this research indicated that the carried out Earnings Management actions will not provide a profitable reaction which will later have an impact on the increasing of the company value reflected in the company share price, therefore when the goals held by managers and capital owners are different, then the management will harm the capital owners by behaving unethically and committing accounting fraud. The results of this research also align with the other one conducted by Sagita et al. (2016), who found that Earnings Management has an insignificant positive effect on the company value. This thing suggested that Earnings Management carried out by a company do not have any relationship to the company value, as it reflected a difference in interests between equity holders and managers. Therefore, Earnings Management by a company do not affect the company value. The results of this research also align with the other one conducted by Nurhanimah et al. (2019), who found that earnings management has a positive effect on the company value, meaning that the greater the extent of earnings management done by the company, then the higher its value will be. However, these result is different from the research of Lestari et al. (2018), who found that Earnings Management do not have any effect on the company value. Meaning that increased Earnings Management do not necessarily lead to an increase in the company value.

The value of a company is heavily influenced by its financial performance. Companies with strong financial performance will generate maximum profits, resulting in a high rate of investment return for shareholders. Company value can be defined as the condition in which a company’s achievements reflect the public’s trust in it through its activities during its existence. Specifically, for the go public companies, their financial performance can be measured by their share price; the higher the share price is, then the higher the company value will be. Company value is commonly indicated by the Price to Book Value (PBV). A high

Price to Book Value (PBV) makes the market feel confident in the company's future prospects. This thing shows the desire of the company's owners, as a high company value indicates a high shareholder prosperity.

Price to book value (PBV) is one of the fundamental factors of a stock which is widely used by investors and analysts to determine a stock's fair value. This indicator is obtained by dividing the stock's current market price with its book value (www.stockdansaham.com). Therefore, this study used Price to book value (PBV) as an indicator to measure the company value.

As a measure of a bank's success, the bank's financial performance can be measured through its financial reports which contain information about the company financial position report, comprehensive income report, equity change report, cash flow report, and notes to the financial statements which are very useful to support an appropriate decision making for both external and internal parties. Furthermore, bank performance reflects the bank's health level. This is stated in Bank Indonesia Regulation No. 13/1/PBI/2011 "Concerning the Assessment of the Health Level of Commercial Banks," stating that bank health serves as a tool for supervisory authorities to determine strategies and focus on their supervision of the banks.

A bank's failure in maintaining its corporate value will reduce the trust level of customers and institutions that save their funds or invest their capital there. This forces banks to monitor all their activities to increase their corporate value. Bank health is its ability in carrying out banking operations normally and to fulfill all its obligations properly in a manner that complies with applicable regulations.

The primary goal of a company is to increase its value by increasing the wealth of its owners or shareholders. A company value is essentially measured by several factors, one of which is its share price. This is because a company's share price reflects investors' assessment of their total equity. Company value is a specific condition achieved by a company reflecting public trust in it over several years, since the time it was built to the present. The increase of company value is an achievement that aligns with the desires of its owners, as increased company value also improves the owners' well-being.

Based on the objective conditions and the conflicting results of previous researches, the motivation for this research was to place the efficiency ratio and bank profile risk as independent variables and company value as the dependent variable with Earnings Management as a moderating variable.

In other words, this research aimed to test and analyze the influence of Operating Expenses and Operating Income (OEOI) and Non-Performing Loans (NPL) on Company Value and to test Earnings Management as a moderator of the influence of Operating Expenses and Operating Income (OEOI) and Non-Performing Loans (NPL) on the company value.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Agency Theory

Agency theory explains the appropriate contract to align the interests of the agent and the principal when there is a conflict of interests between them (Scott, 2015). Conflict of interest arises from these different interests, it arises because the agent may not act in the principal's best interests. The divergence of interests between agents and principals creates asymmetry information between them. This thing encourages the managers to disclose certain company-related information to the investors, specifically by engaging in Earnings Management to make the investors trust the company.

Managers, who are more knowledgeable about the company's condition, naturally have more comprehensive information than the shareholders. They can inflate the company profits to make the company appear higher for a given period. High profits will attract the investors to invest in the company, this thing surely can increase the company value in the investor's perception.

Nurhanimah et al. (2019) revealed that company management engages in Earnings Management to increase its value and thus made the investors perceive the company value favorably. The manager's motivation to engage in Earnings Management is the bonus plan hypothesis. Companies plan bonuses based on its net income, then it will implement accounting procedures that shift the reporting of future earnings to the current period. Indriani, (2014) stated that Earnings Management was triggered by the separation of roles or differences in interests between shareholders and company management, therefore managers manipulated earnings through Earnings Management in order that the profits will appear as what is expected by them, which will later affect the company value. Based on the profit information, users of financial reports, both internal and external, will use this information as a basis for decision making.

2.2 Credit Risk

The company profile risk or Non-Performing Loans (NPL) is a measure of the health of a bank's assets, some even say that Non-Performing Loans (NPL) can provide information on the assessment of the liquidity, capital, profitability, credit risk, and market risk conditions of a bank. Lestari & Setianegara (2020) stated that Non-Performing Loans (NPL) was a ratio showing the ability of bank management to manage problem loans provided by the bank. According to Nur Halimah et al., (2017) Non-Performing Loans (NPL) is a ratio used to measure a bank's ability to cover the risk of failure to repay credit by debtors.

A high Non-Performing Loans (NPL) indicates a bank's inability to manage its asset quality, leading to poor asset quality and impacting financial performance. Conversely, a low Non-Performing Loans (NPL) indicates a bank's ability to manage its asset quality, thus maintaining a healthy asset condition and improving financial performance. Non-Performing Loans (NPL), which is identical to credit risk is a tendency for debtors who failed to pay their obligations or their inability to pay off their obligations (Fakhruddin & Purwanti, 2015).

The Non-Performing Loans (NPL) indicators are: 0% - 2% (very healthy), 2% - 3.5% (healthy), 3.5% - 5% (fairly healthy), 5% - 8% (less healthy), and >8% (unhealthy). Therefore, the lower the Non-Performing Loans (NPL) is, then the healthier the bank will be, and vice versa.

The Non-Performing Loans (NPL) standard set by Bank Indonesia is less than 5%, with a ratio below 5%, the Provision for Productive Asset Write-Offs that banks must provide to cover the losses incurred by non-current productive assets (in this case Non-Performing Loans) becomes small.

According to Perkasa in Nurfahmi (2014), the Provision for Productive Asset Write-Offs is a bank's income set aside as a reserve to cover losses caused by bad debts. When a bad debt occurs, the bank can write off the bad debt from its books against the income expense that has been set aside.

Therefore, it can be concluded that Non-Performing Loans (NPL) is its amount at a bank compared to its total loans. In this case, they are loans granted by the bank to the third parties, namely individual or corporate customers, excluding loans to other banks.

Credits that belong into the category of Non-Performing Loans (NPL) are substandard, doubtful, and bad debts. Therefore, the hypothesis which could be derived from the explanation above was:

H1: Credit risk had a negative effect on the value of banking companies.

2.3 Operating Expenses and Operating Income

According to Kasmir (2017: 301), the assessment of Operating Expenses and Operating Income (OEOI) is based on a bank's profitability, which is seen as a bank's ability to generate profits. Based on Bank Indonesia regulations, Operating Expenses and Operating Income (OEOI) is the comparison between their total. Operating Expenses are the expenses incurred by a bank in operating its core business, such as interest, marketing, labor, and other Operating Expenses. Operating Income is the bank's primary revenue, derived from credit and other Operating Income. In other words, Operating Expenses and Operating Income (OEOI) represent a bank's ability in managing its operational burden. The higher the operating expenses are, then the worse the bank's governance will be (Wulandari Danu Lestari & Setianegara Gunawan R, 2020). If the ratio of Operating Expenses and Operating Income (OEOI) decreases from the previous year, it can be said that the bank's operations are becoming more efficient. Conversely, if the ratio of Operating Expenses and Operating Income (OEOI) increases from the previous year, then the bank's operations are becoming less efficient. The criteria for Operational Expenses and Operational Income (OEOI) according to SEBI No.6/23/DPNP dated May 31, 2004 is 50% - 75% (very healthy), 76% - 93% (healthy), 94% - 96% (fairly healthy), 96% - 100% (unhealthy) and >100% (unhealthy).

According to Bank Indonesia regulations, the ideal ratio of Operating Expenses and Operating Income (OEOI) is between 50-75%. Therefore, it can be concluded that their ratio is also used to determine the bank's management's ability to control them. Thus, the following hypothesis could be derived from the above explanation:

H2: Inefficiency had a negative effect on the value of banking companies.

2.4 Earnings Management

Earnings Management is an effort done by the manager of a company to influence the information in financial reports with the goal to deceive the stakeholders who want to know the real performance and condition of a company (Sulistyanto, 2008). Earnings Management is a manipulation form of financial reports to increase the company value in order that it will seem good to the investor’s perception. (Windharta & Ahmar, 2014). Earnings Management adds bias to its financial reports and can be detrimental to users who believe that the manipulated earnings figures are genuine. Earnings Management results in earnings presented in financial reports which do not reflect the actual situation, this thing is done to ensure that the company performance will seem good to the investor’s perception.

In their research, Prima & Elly (2018), Tarmidi & Murwaningsari (2019), and Shevin et al. (2021) found that Earnings Management has a positive effect on the company value: the higher the Earnings Management is, then the higher the company value will be. This research is different from the research done by Jefriansyah (2015) and Lestari et al. (2018), who stated that the Earnings Management do not affect the company value.

The Impact of Inefficiency and Bank Risk on Value of Banking Companies with Earnings Management as Moderating Variable

Kanagaretnam & Mathieu's (2004) research estimated the Discretionary Component of Loan Loss Provisions (DLLP). Loan Loss Provisions consist of a Discretionary Component (i.e., DLLP) and a Nondiscretionary Component (i.e., NDLLP). Consistent with the previous research (Beaver &) Engel, 1996), who used Change in Non-Performing Loans (CHNPL), Initial Non-Performing Loans Balance (NPLt-1), and Change in Total Loans (CHLOAN) to estimate the Non-Discretionary Component of Loan Loss Provisions (LLP). The expected signs of the coefficients on these variables were as follows:

An increase in Non-Performing Loans (NPL) will likely result in an increase in Loan Loss Provisions (LLP). The initial level of Non-Performing Loans (NPL) is expected to be positively correlated with Loan Loss Provisions (LLP). This means that with a higher initial level of Non-Performing Loans (NPL), then banks must establish higher provisions for loan losses. Non-Performing Loans (NPL) is expected to be positive, because of "ceteris paribus", an increase in loans is likely to result in an increase in Loan Loss Provisions (LLP) due to the doubtful loans.

This research used the Kanagaretnam & Mathieu, 2004 model to estimate the nondiscretionary LLP:

$LLPit = \alpha 0 + \alpha 1NPLit\text{-}1 + \alpha 2CHNPLit + \alpha 3CHLOANit + \varepsilon it$

Notes:

LLPit = Loan Loss Provision reduced by the Original Loan

NPLit-1 = Non-Performing Loans reduced by Initial Credit

CHNPLit = Change in the Value of Non-Performing Loans reduced by the Initial Loan

CHLOANit = Change in Loan Value reduced by the Initial Loan

In the above equation, the independent variable accounts for the nondiscretionary component of Loan Loss Provisions (LLP). Therefore, the Discretionary Component of Loan Loss Provisions (DLLP) is given by the residual term.

Kanagaretnam's research demonstrated that bank managers used the discretionary component of Loan Loss Provisions (LLP) to smooth the earnings. More specifically, the results showed that bank managers increased (decreased) the earnings by decreasing (increasing) Discretionary Component of Loan Loss Provisions (DLLP) when the bank's relative performance was low (high). However, the managers' ability to smooth the earnings might have been limited by their banks' need to borrow or to meet the minimum capital requirements.

In this research, the researcher used Earnings Management as a moderating variable to strengthen the hypothesis that Operating Expenses and Operating Income (OEOI) influenced the company value, and Earnings Management as a moderating variable to strengthen the hypothesis that Non-Performing Loans (NPL) influenced the company value. Therefore, the following hypothesis was formulated:

H3: Earnings management strengthened the influence of inefficiency on banking company value.

H3: Earnings management strengthened the influence of credit risk on banking company value.

3. METHODOLOGY

The population of this research was the banks on the Indonesia Stock Exchange (IDX) listed from 2016 to 2021. Based on these conditions, 29 banks were consistently listed during this period and their names were listed in Table 1.

Table 1. The Name of the Banks as the Population

No.	Code	The Name of the Bank
	AGRO	Bank Raya Indonesia Tbk
	BABP	Bank MNC Internasional Tbk.
	BBKP	Bank KB Bukopin Tbk.
	BBNI	Bank Negara Indonesia Tbk
	BBRI	Bank Rakyat Indonesia Tbk
	BBTN	Bank Tabungan Negara Tbk
	BBYB	Bank Neo Commerce Tbk.
	BCIC	Bank JTrust Indonesia Tbk.
	BEKS	Bank Banten Tbk
	BGTG	Bank Ganesha Tbk.
	BINA	Bank Ina Perdana Tbk.
	BJTM	Bank Jatim Tbk
	BKSW	Bank QNB Indonesia Tbk.
	BMAS	Bank Maspion Indonesia Tbk.
	BMRI	Bank Mandiri Tbk.

Table 1. The Name of the Banks as the Population

No.	Code	The Name of the Bank
	BNGA	Bank CIMB Niaga Tbk.
	BNII	Bank Maybank Indonesia Tbk.
	BNLI	Bank Permata Tbk.
	BSIM	Bank Sinarmas Tbk.
	BSWD	Bank Of India Indonesia Tbk.
	BTPN	Bank BTPN Tbk.
	BVIC	Bank Victoria International Tbk
	DNAR	Bank Oke Indonesia Tbk.
	INPC	Bank Artha Graha Internasional Tbk
	MCOR	Bank China Construction Bank Tbk
	MEGA	Bank Mega Tbk.
	NISP	Bank OCBC NISP Tbk.
	NOBU	Bank Nationalnobu Tbk.
	SDRA	Bank Woori Saudara Indonesia Tbk

In this research, the researcher used 21 banks as samples considering that these banks passed the classical assumption tests, such as multicollinearity, autocorrelation and heteroscedasticity, with the model in equation 1.

$PBV = \beta_0 + \beta_1 OEOI + \beta_2 NPL + \beta_3 EM + \beta_4 BOPO{*}EM + \beta_5 NPL{*}EM + \beta_6 LOG(TA) + \beta_7 DAR + \varepsilon$ ..... (1)

The names of the 26 banks were coded: (1) BABP, (2) BBKP, (3) BBNI, (4) BBRI, (5) BBTN, (6) BCIC, (7) BEKS, (8) BINA, (9) BJTM, (10) BKSW, (11) BMRI, (12) BNGA, (13) BNII, (14) BSIM, (15) BSWD, (16) DNAR, (17) INPC, (18) MCOR (19) MEGA, (20) NOBU, dan (21) SDRA.

There were two main independent variables associated with the company value: inefficiency measured by Operating Expenses and Operating Income (OEOI) and credit risk measured by Non-Performing Loans (NPL). Earnings Management (EM) acted as a moderating variable. In this context, Earnings Management was measured by the Residual Value (RESID) of the Loan Loss Provision (LLP) model reduced by Initial Loans from Kanagaretnam & Mathieu (2004):

$LLP_{it} = \alpha_0 + \alpha_1 NPL_{it-1} + \alpha_2 CHNPL_{it} + \alpha_3 CHLOAN_{it} + RESID_{it}$ (2)

NPLt-1 was the Non-Performing Loans (NPL) in the previous period, CHNPL = Change in NPL, CHLOAN = Change in Credit. Meanwhile, the bank size was measured by the natural logarithm of total assets and leverage measured by the debt to total asset ratio (DAR) acted as control variables.

4. RESULT AND DISCUSSION

4.1 Result

This research used 29 banks as samples for 6 years. Thus, the number of observations was 174. Based on these 174 observations, PBV, OEOI NPL, RESID01(EM), LN_TA, and DAR were searched for the minimum, maximum, average, and standard deviation values and the results were in Table 2 below.

Table 2. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
PBV	126	.21	17.42	1.6893	1.85719
OEOI	126	.00	2.35	.9407	.30930
NPL	126	.00	.05	.0181	.01289
RESID01 (EM)	126	-.09570	.67586	-.0518355	.07543091
LOG(TA)	126	28.47	35.08	31.5153	1.79700
DAR	126	.00	1.17	.7964	.18550

Source: SPSS 19 Data Processing Results

The complete results of the classical assumption test were in Table 3. The table showed that there was no any multicollinearity, while the residuals were not normally distributed. However, according to the central limit theorem, this was still tolerable, concerning the number of observations in this research which was 126, exceeding the number of observations in a small sample of 30. Furthermore, the model did not contain heteroscedasticity or autocorrelation.

Table 3. Results of the Classical Assumption Test

Classical Assumption Test	Test Results	Information
Multicollinearity	*Variance Inflation Factor* (VIF) on BOPO, NPL, RESID01*OEOI, RESID01*NPL, LN(TA), and DAR of 1.353, 1.599, 3.924, 4.269. 1.191, and 1.031	Multicollinearity did not occur considering that all VIF values were below 10.
Normality: Kolmogorov-Smirnov (KS)	The asymptotic sig (2-tailed) value of Z KS was 0.000	The residual value was not normal because the asymp. sig (2-tailed) value was less than 5%
Heteroscedasticity: White	The probability value of Chi-square (7) was 0.3735.	Heteroscedasticity did not occur because the probability value exceeded 5%.
Autocorrelation: Runs based on mode as test value	The asymptotic sig (2-tailed) value of the Z-statistic was 0.899.	Autocorrelation did not occur because the asymp. sig (2-tailed) exceeded 5%.

Source: Processed Data Results from EVIEWS and IBM SPSS.

Multiple Regression Model Estimation Results

Table 4 presented the Multiple Regression Model Estimation Results, where the t-statistic probabilities for OEOI, NPL, RESID1, RESID1*OEOI and RESID01*NPL were less than the 5% significance level: 0.0248, 0.0034, 0.0010, 0.0096, and 0.0028. Therefore, Hypotheses 1 and 2 were accepted, indicating that inefficiency and credit risk negatively impacted banking company value, while Earnings Management (EM) positively impacted this value. Meanwhile, Hypotheses 3 and 4 were accepted: the interaction of EM*OEOI and EM*NPL negatively impacted the company value.

Table 4. Multiple Regression Model Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.95525	3.800172	3.409121	0.0009
OEOI	-1.531756	0.673941	-2.272832	0.0248
NPL	-68.26490	22.84782	-2.987808	0.0034
LN_TA	-0.243239	0.101865	-2.387850	0.0185
DAR	0.609703	0.888025	0.686583	0.4937
RESID01	56.02301	16.59973	3.374935	0.0010
RESID01*OEOI	-17.27785	6.565541	-2.631596	0.0096
RESID01*NPL	-921.1788	301.9471	-3.050795	0.0028

Source: E-VIEWS Processing Results

4.2 Discussion

Based on statistical test results, Operating Expenses and Operating Income (OEOI) as the main variable, bank size and leverage as control variables did not affect the bank value. This indicated that these three variables were not the determinants of the bank value in the capital market. The insignificant influence of Operating Expenses and Operating Income (OEOI) on the value of banking companies was in line with the research results of Fitriani & Lasmanah, 2022, which concluded that Operating Expenses and Operating Income (OEOI) did not have any effect and was not significant on Price Book Value (PBV) in National Private Commercial Banks for the 2013-2016 period. Research by Manoppo Heven & Arie Fitty Valdi (2016) also concluded that research using company size as the independent variable did not have any significant effect on the company value. Prasetyorini Bhekti Fitri (2013) also concluded that leverage did not have any effect on the company value.

A similar thing occurred with the Earnings Management which did not moderate the impact of Operating Expenses and Operating Income (OEOI) and Non-Performing Loans (NPL) on the bank value in the capital market. This indicated that bank managers did not manage their earnings or just reported them as they were. The insignificant influence of Earnings Management on the value of banking companies was in line with the research results from Jefriansyah, 2015 and Lestari et al., 2018 stating that Earnings Management did not have any significant influence on the company value.

In this research, Non-Performing Loans (NPL) was the only variable which influenced a bank value in the capital market. This indicated that capital market investors recognized the risk of bad debt as a precursor to bank failure, therefore this thing made them sensitive to the rising Non-Performing Loans (NPL). The occurrence of a negative influence on Non-Performing Loans

(NPL) with the bank value in the capital market in this research supported the previous research by Agustina (2014) which stated that Non-Performing Loans (NPL) had a significant negative influence on Price-to-Book Value (PBV).

5. CONCLUSION

Based on the results of the hypothesis test to answer the existing research objectives, this research concludes that inefficiency, credit risk and earnings management along with their interaction effects influenced the bank value in the capital market.

This research only used three main variables predicted to influence bank value in the capital market with six-year period. This thing opens the opportunities for the future researchers to add the key variables related to other internal bank conditions, such as the capital adequacy ratio and fee-based income ratio, as well as incorporate macroeconomic variables, such as the BI Rate as a central bank monetary policy instrument, inflation rate, and economic growth. Future researchers can use a longer time horizon of 10-15 years to achieve the better results.

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30) Source: Hasil Pengolahan Data SPSS 19