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Off-Balance Sheet and Bank Behavior: Does Market Power Matter?

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A B S T R A C T

Purpose: This paper examines the significant effect of off-balance sheets (OBS) on earnings management in the banking industry in Indonesia. Furthermore, this study also examines the role of market power as a moderating variable that moderates the relationship between off-balance sheet activities and earnings management.
Design/methodology/approach: The off-balance sheet is measured through loan commitment facilities by observing the unused commitment facilities. Moreover, earnings management is measured through discretionary loan loss provisions (DLLP) by seeing the policy management makes in forming loan loss provisions (LLP) as income reduction accounts on the income statement. Multiple regression testing is used to measure the significant effect of off-balance sheet activities on discretionary behavior in LLP and the role of market power as a moderating variable.
Findings: The study results show that off-balance sheet activity and market power are related to earnings management. Off-balance sheets have a positive effect on earnings management. Conversely, market power has a negative effect on earnings management. Another finding found that market power weakens the relationship between off-balance sheets and earnings management.
Research limitations/implications: This research did not conduct an overall analysis of off-balance sheet exposure in banking financial statements. Thus, future research on total commitments and contingencies such as letters of credit and bank guarantees will be interesting to examine.
Originality/value: Previous studies have observed LLP in earnings management and competition policies. However, they had not examined the relationship between the practice of earnings management through LLP toward off-balance sheets and market competition. Therefore, the research gap will be discussed in this study. In addition, the research has two contributions, the first is related to earnings management literature in the banking industry and the second is to assess whether higher bank market power tends to influence earnings management practices through off-balance sheet activities.

Keywords: Off-balance sheet, LLP, Market power

I. Introduction

The purpose of this study is to observe the significant effect of off-balance sheet activities and market power on discretionary loan loss provision (DLLP) as earnings management in the banking industry in Indonesia. Previous literature explains that deviations can originate from a variety of sales products offered accompanied by the ambition to offer credit aggressively (Amidu and Kuipo, 2015; Foos et al., 2010; Lepetit et al., 2008a &2008b; Soedarmono et al., 2017). In addition, those usually

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charge higher interest rates with greater competitive power. In this case, deviations may occur as a result of increasing the level of credit risk and deteriorating financial performance (Boyd and De Nicolo, 2005).

Detecting earnings management through discretionary accruals in loan loss provisions (LLP) is the most sensible way (Beaver and Engel, 1996; Adams et al., 2009; Tran et al., 2019). The loan loss provisions (LLP) is a significant discretionary accrual owned by the bank manager. In accounting calculations, the value of LLP directly impacts bank interest margins and affects overall bank income (Ozili and Outa, 2017). The determination of LLP relies on the supervision of banking regulators. It relates to the informativeness of financial statement disclosure following the statement of financial accounting standards. In the end, annual data on bank financial statements regarding LLP estimates makes research on LLP an area that needs to be observed.

Several previous studies have involved issues related to LLP, such as practices in provision management during crisis periods and in fluctuating business cycle conditions. The use of LLP in earnings management, capital, and signaling (Curcio &; Hasan, 2015; Ozili 2017a,b), provision management policies based on accounting and regulatory standards (Marton &; Runesson, 2017), provision and competition policies (Dou, Ryan, & Zou, 2018). However, previous research has yet to examine the relationship between the practice of earnings management through LLP against off-balance sheet financing and market competition. Then the gap will be discussed in this study.

The motivation in this study relates to signal theory and market power. Signal theory shows a relationship between discretionary accruals in LLP and profits, where the role of LLP can be used to increase revenue as a sign of the bank's future income prospects (Kanagaretnam, Lobo, and Mathieu 2003). In addition, banks use LLP as signals of personal information to company outsiders about the bank's loan portfolio quality. Although the use of LLP to signal a company's prospects depends on the degree of information asymmetry (Kanagaretnam et al., 2005).

Competition in the banking industry shows that higher market power in Asian banks exacerbates the probability of default (Fu et al., 2014). So, the research questions in this study are (1) Is earnings management affected by the growth of cross-loans from administrative accounts or so-called off-balance sheet activities? and (2) Is market power in the banking industry in Indonesia driving aggressive credit distribution through cross-selling that could spur unwise loan growth?

Banks involved in multiple administrative or off-balance sheet (OBS) accounts have a higher likelihood of risk and failure exposure (Ziadeh, 2012). Research conducted by Soedarmono et al. (2013) found that banks in Asia tend to take more significant risks and are vulnerable to moral hazards, mainly if banks operate in less competitive markets. Moreover, the loan distribution in Asia banks tends to have a smaller margin difference between the cost of funds and the lending rate (Chotigeat et al., 2008). Credit sales are made by offering lower interest rates. In contrast, if there is a decrease in loan interest income, the manager has the opportunity to offer other non-interest-based bank products, such as administration and commitment products.

This study has a two-way contribution related to the earnings management literature in the banking industry. First, this study observed the significant effect of OBS on DLLP as earnings management in the banking industry. Second, the study does not merely focus on a relationship between the strength of competition and banking stability as in previous literature conducted by Fu et al., 2014; Boyd and De Nicolo, 2005; Ariss, 2010 but also assess whether higher bank market power is likely to trigger earnings management through cross-selling strategies in banking on administrative accounts. In other words, this study examines whether bank market power can moderate the relationship between banking products that cannot yet be recognized on the on-balance sheet and the behavior of bank managers in determining the amount of loan loss provisions in the income statement.

II. Literature Review and Hypothesis Development

A. Off-balance Sheet Activity (OBS)

An off-balance sheet (OBS) is an administrative account that has yet to effectively impact changes in assets and debts on the balance sheet. OBS transactions include the share of productive assets that have risk exposure (Saunders and Cornett, 2003). OBS items consist of loan commitments, total securities, letters of credit, and derivatives, where loan commitments are the largest (Mckee and Kagan, 2018). OBS activity is included in the analysis of the commercial banking industry after experiencing increased growth in non-interest income due to expanding activities (McKee and Kagan, 2016). A loan commitment is part of OBS activities that generate fee income, where customers pay a fee to keep this loan commitment available (Kashian and Tao, 2014). Loan commitments oblige banks to provide loan funds in the future, even in adverse economic climates (Avery and Berger, 1991).

Loan commitments generate risk for banks because they rely on financial reliability and estimates of the debtor's working capital needs and future interest rates (Kashian and Tao, 2014; Papanikolaou & Wolff, 2014). The agreement in the loan commitment is written in the terms of the contract to reduce bank risk. The extension of the provision of the loan commitment facility is considered based on the borrower's financial situation (Ergungor, 2004). Additional increased risk due to loan commitment obligations occurs when too many commitments are withdrawn by debtors, along with conditions of tightening credit distribution (Hassan and Sackley, 1994).

OBS activity, such as loan commitments, significantly influences banking financial statements (Berger, Bouwman, Kick, &; Schaeck, 2016; Papanikolaou & Wolff, 2014). The capital adequacy ratio set by the regulator does not consider assets from the loan commitment facility in off-balance sheet activities. Therefore, OBS activity is likely to have a deceptive influence on the ratio of capital to assets (Hassan and Sackley, 1994). The loan commitment on OBS can eventually be converted into an on-balance sheet loan if the current debtor uses the funds on the loan commitment facility. However, in conditions of economic decline, this will increase the potential risk due to the blurring of capital adequacy calculations (Kashian and Tao, 2014).

The strategy of diversifying income through OBS product offerings is the ability of banks to take advantage of competitive advantages (Amidu and Wolfe, 2013). However, income diversification is likely not accompanied by gain because of the increasing production costs that may outweigh the benefits. OBS activities can incur additional charges from the company due to increased agency problems (Laeven and Levine, 2007). In addition, there is an assumption that fee and income-based products have a greater risk potential because the characteristics of their activities are considered less stable than interest-based products (DeYoung and Torna, 2013).

B. LLP (LLP) and Loan Loss Reserves (LLR)

Loan loss reserves (LLR) and loan loss provisions (LLP) are presented in two different areas of banking financial statements, namely balance sheets and income statements. The total outstanding loan is recorded on the side of the balance sheets, where the LLR account is a "counter-asset" account, which reduces the total outstanding loans. LLR is reported based on the amount of credit decline values that bank managers suspect will be lost due to non-repayment (Hasan and Wall 2004). Rules governing bank LLR require a trade-off between the goals of bank regulators, which emphasize safety and soundness, and the goals of accounting standards, which emphasize the transparency of financial statements (Balla et al., 2012).

According to accounting guidelines set by the financial accounting standards board (FASB), banks can increase their LLR when a possible loss is imminent and if the amount of that loss can reasonably be estimated. Loan loss reserves are reserves prepared

by banks to deal with the risk of impairment losses of assets such as loan that determined by IFRS 9. Accounting regarding reserves for impairment of financial assets in the form of loans to banks in Indonesia refers to PSAK 71 adopted from IFRS 9. According to PSAK 71, loan loss reserves are calculated using the forward-looking expected loss method. Banks are required to estimate the estimated risk of financial instruments from the initial recognition. Banks are required to provide reserves from the beginning of the loan distribution period.

Periodically the bank manager decides how much needs to be added to the LLR account and charges this amount against the bank's current income through the LLP account (Balla et al., 2012). The LLP is recorded as a deduction item on the bank's income statement. Empirical studies show that banks have used LLP as revenue management to obtain more favorable treatment and to manage capital positions set by regulators (Adams et al., 2009; Balla et al., 2012). Management is carried out by shifting revenue from profitable to bad quarters by charging high provisions when incomes are high and vice versa (Ozili, 2017b)..

The regulatory approach refers to safety and health considerations in determining LLR in anticipation of future losses (Balla et al., 2012). However, banks might absorb more significant unexpected losses due to economic changes without being followed by the realization of failure (Laeven and Majnoni, 2003). Banks must form sufficient reserves in anticipation of losses and response to deterioration in economic conditions. Forming reserves in times of deteriorating economic conditions can cause banks to be forced to reduce loan distribution activities and exacerbate credit crises and pressure on banking revenues (Ozili and Outa, 2017).

C. Market Power

Market power shows a firm's ability to influence prices above marginal costs (Soedarmono and Tarazi, 2016). Meanwhile, Beck et al. (2013) stated that several external factors influence market power and financial stability, such as economic conditions and the quality of potential debtors. Moreover, internal factors come from regulatory policies such as the quality of permitted deposits and the maximum limit for lending.

There is a relationship between market power and a bank's risk profile. Fu et al. (2014) conducted research on the banking industry in Asia-Pacific found that banking risk is related to market power and the level of concentration in product offering of banking products. Higher market power indicates a higher level of risk, but this is in contrast to the level of bank concentration. Goetz (2018) used a novel approach to capture market stability and found that greater competition reduces bank risk due to improved profitability and asset quality.

Amidu and Wolfe (2013) investigated the interaction of bank competition, income diversification, and financial stability. Using a sample of banks in 55 developed and developing countries from 2000 to 2007, the results suggest that greater competition increases strength in banking, as greater competition allows banks to pursue income diversification.

D. Hypothesis Development

The relationship underlying earnings management and off-balance sheet activities in the banking industry can be explained by asymmetry information theory and signal theory (Kanagaretnam et al., 2005). Asymmetry information theory shows that banks operating in several sectors have more complex structures, so managers can exploit additional information and insert it into earnings management. (Kashian and Tao, 2014). The relationship between off-balance sheet (OBS) and banking risk is closely related to lax regulation (Rim and Hindi, 1999). Previous literature explains that diversification of banking products can motivate behavior that benefits certain parties, especially if it is accompanied by a desire to maximize credit distribution (Foos et al., 2010; Lepetit et al., 2008a &2008b; Soedarmono et al.,

2017) and the possibility of a decline in credit quality is greater (Boyd and De Nicolo, 2005).

Signal theory indicates management's efforts to convey personal information to investors, which depends on the degree of information asymmetry (Kanagaretnam et al., 2005). Several previous studies have shown the use of LLP to signal personal information containing positive news to investors about future performance, capital adequacy, income, and loan quality (Kanagaretnam et al., 2005; Curcio and Hasan, 2015).

The increasing OBS activities give the perception that bank interest income has a lower level of risk and is more efficient (Gilbert et al., 2013). Several studies have been conducted to observe the use of LLP in earnings management, capital, and signaling (Ozili, 2017a,b). Therefore, we expand the study by examining the significant effect of off-balance sheet activities through loan commitment facilities on discretionary loan loss provisions (DLLP) as earnings management.

H1. OBS has a positive effect on earnings management in the banking industry.

The market power hypothesis explains that the company's ability to set product prices above the prevailing marginal cost can be described as achieving better performance (Soedarmono and Tarazi, 2016). Market power can capture the impact of pricing power on the quality of banking assets. Previous research has shown a relationship between market power and banks' risk profiles. Fu et al. (2014) stated that a higher level of market power in the banking industry is related with lower bank risk. In contrast, research conducted by Goetz (2018) used a novel approach to capture market stability and found that greater competition translates into lower market power and can reduce bank risk through increased profitability and asset quality.

Previous research found a significant effect of banks' risk profiles on earnings management behavior. Riskier banks tend to perform revenue management compared to less risky banks through discretionary accruals in LLP (Leventis et al., 2011; El Sood, 2012; Ozili, 2017b). Discretionary accruals on LLP related to banking regulator rules emphasizing safety and soundness and accounting standard-making goals emphasizing financial statement transparency (El Sood, 2012). In other words, adjusting the value of discretionary accruals in LLP aims to provide investors with good information signals regarding banking risk (Curcio & Hasan, 2015; Ozili, 2017a; Ozili and Outa, 2017).

H2. Market Power has a negative effect on earnings management in the banking industry.

The market power hypothesis states that the higher the market power, the greater the bank's ability to influence prices above marginal costs (Church and Ware, 2000). Competition in the banking industry shows high market power, exacerbating the risk of bankruptcy (Fu et al., 2014). As the competition among banks increases, banks tend to shift focus towards non-traditional through off-balance sheet activities to make them more competitive. (Gilbert et al., 2013; Pennathur et al., 2012).

Furthermore, Dou, Ryan, & Zou (2018) research shows a significant effect of provision on competition policies. The competitive climate in the banking industry encourages banks to offer off-balance sheet products (Amidu and Wolfe, 2013), despite risk exposure in off-balance sheet activities (DeYoung and Torna, 2013).

Little attention has been given to the relationship between the benefit of off-balance sheet activities, market power, and earnings management through discretionary LLP. Therefore, we expand the discretionary LLP literature by investigating the role of market power in moderating the relationship of off-balance sheet activities with earnings management.

H3. Market power moderates the relationship between OBS and earnings management in the banking industry.

III. Research Method

This research data uses financial data from the commercial bank industry in Indonesia for the years 2015-2019. The sampling criteria are all commercial banks in Indonesia that have loan commitment facilities products. A total of 35 banks were observed in this study. Off-balance sheet activities use the value of unused loan commitment facilities. Loan loss provision (LLP) is taken from the income statement, while loan loss reserves (LLR) is obtained from the bank balance sheet at the end of the period. We use data provided by the financial services authority in processing the formulation of variables used in the study. The list of banks used as a sample is all commercial banks with loan commitment products, so bank income is derived from interest and non-interest income during the sample period.

A. Model Development and Methodology

This study used the multiple regression analysis to measure the loan commitment facilities in off-balance sheet and market power against earnings management through discretionary loan loss provisions (DLLP), with the following research model:

$$DLLP_{it} = \beta_0 + \beta_1 ULC_{it} + \beta_2 LERNER_{it} + \beta_3 DTA_{it} + + \beta_4 OVER_{it} + \beta_5 SIZE_{it} + \epsilon_{it}$$

Furthermore, we expanded the study to include market power as a moderating variable that moderates the relationship between unused loan commitment and DLLP with the following research model:

$$DLLP_{it} = \beta_0 + \beta_1 ULC_{it} + \beta_2 LERNER_{it} + \beta_3 (ULC\ x\ LERNER)_{it} + \beta_4 DTA_{it} + + \beta_5 OVER_{it} + \beta_6 SIZE_{it} + \epsilon_{it}$$

B. Dependent Variables

Previous studies have shown that earnings management in the banking industry is measured using LLP by looking for abnormal discretionary magnitudes (Beaver and Engel, 1996; Adams et al., 2009; Tran et al., 2019). However, increasing LLR on the balance sheet will affect the increase in LLP and reduce net income. LLR is recognized as an alleged future loss due to the debtor's default payment, so this account will reduce the debtor's total credit score or counter-asset account (Hasan and Wall, 2004). Therefore, to identify abnormal discretionary LLP in the banking industry, it is necessary to involve two accounting processes, first, to determine the LLR on the balance sheet and second, to assess the value of LLP on the income statement.

Referring to (Amidu and Kuipo, 2015), DLLP can be measured through two stages: the first stage, calculating the normal or non-discretionary component of the LLP estimated through multiple regression results, where LLP as the main variable influenced by LLR, net loan charge-offs (CHOFF), growth in loan (GLOAN), total outstanding loans (LOAN), and non-performing loans (NPL), earnings before tax (EBTP) using the following model:

$$LLP_{it} = \beta_0 + \beta_1 LLR_{it} + \beta_2 CHGOFF_{it} + \beta_3 GLOAN_{it} + \beta_4 LOANS_{it} + \beta_5 NPL_{it} + \beta_6 EBTP_{it} + \epsilon_{it}$$

The second stage determines the estimate of DLLP calculated from the difference between the predicted level or non-discretional component of the LLP and the actual level of the LLP.

$$DLLP = actual\ level\ of\ LPP - predicted\ level$$

or

$$DLLP = actual\ level\ of\ LPP - non\ discretional\ component\ of\ LPP$$

C. Independent Variables

1. Off- balance Sheet Activities

Off-balance sheet activities in this study focus on unused loan commitment facilities presented in the notes to financial statements on commitments and contingencies. The unused loan commitment ratio is determined based on the number of unused loan commitments to the total loan commitment or called ULC (Kashian and Tao, 2014)

2. Market Power

The study uses the Lerner index (LERNER) to measure a bank's market power, where a higher LERNER indicates a bank's higher market power. (Santoso et al, 2021). The following is the formula for calculating the Lerner index for bank i in year t.:

$$LERNER_{i,t} = \frac{P_{i,t} - MC_{i,t}}{P_{i,t}} \quad (1)$$

P is the price level, the gross income ratio to total assets. Gross income is derived from non-interest income and interest income. While MC is a marginal cost calculated using the following formula:

$$MC_{i,t} = \frac{TC}{TA}\left(\propto_1 + \propto_2 \ln(TA) + \sum_{j=1}^{2} \gamma_j \ln(W_j)\right) (2)$$

TC is the total cost, which includes all costs arising from interest expenses and costs derived from banking products other than non-interest. In addition, the coefficients associated with $\propto 1$, $\propto 2$ dan γj would to calculated through the translogarithmic cost function involving bank's internal variables represented by third-party fund costs (W1) and overhead costs (W2) (Fu et al., 2014)

$$\ln(TC) = \propto_0 + \propto_1 \ln(TA) + \frac{1}{2} \propto_2 (\ln(TA))^2 \quad (3)$$
$$+ \sum_{j=1}^{2} \beta_j \ln(W_j) + \sum_{j=1}^{2} \sum_{k=1}^{2} \beta_{jk} \ln(W_j) \ln(W_k)$$
$$+ \sum_{j=1}^{2} \gamma_j \ln(TA) \ln(W_j) + \epsilon$$

The cost of third-party funds (W1) is obtained through the ratio of interest expense to funding funds, which funding funds are the entire savings, current accounts, and deposits. While overhead costs (Wa) are the ratio of non-interest expenses to the total assets.

D. Control Variables

Several control variables were used in this study through consideration of their relationship with banking risk. The control variables consist of the proportion of customer deposits to total bank's assets (DTA), the proportion of total costs of both interest and non-interest income to total revenue (OVER), and the size of the bank described through total asset ownership (SIZE).

DTA variable explains the higher deposit markets, open up greater opportunities for banks to incur higher deposit incentive fees to prevent withdrawal risks from bank depositors (Rokhim and Min, 2018). The increased potential for loss of deposits will have an impact on decreasing the ability of banks to survive in a crisis (Foo and Wang, 2009). Meanwhile, the OVER variable represents the efficiency and probability of a bank's failure. Meanwhile, SIZE also describes the bank capitalization level, which can moderate the relationship between the bank's market power and risk-taking (Santoso, 2021).

Table 1 explains the variable definitions of DLLP as earnings management obtained through the LLP regression equation with several variables involved. Moreover, the calculation of off-balance sheet activities as an independent variable, market power as a moderating variable, and several control variables involved in this research are also explained in detail in Table 1.

Table 1. Definitions of the variables

Earnings Management	DLLP	The estimation of discretionary loan loss provisions based on the coefficient from LLP's regression
Loan Loss Provisions	LLP	LLP to total loans
Loan Loss Reserves	LLR	LLR to total loans
Net loan charge-off	CHGOFF	net loan charge-off to total loans
Growth in loans	GLOAN	growth in loans to total loans
Total loan outstanding	LOAN	loan portfolio to total assets
Non-performing loan	NPL	non-performing loan to total loans
Earnings	EBTP	earning before tax and profit to total assets
Off-balance sheet activities	ULC	unused loan commitment to total commitment
Market power	LERNER	Lerner's Index
Market power as moderating	MOD	multiplying Lerner's Index and ULC
Customer deposit ratio	DTA	total deposits to total assets
Total expenses ratio	OVER	total expense to total income
Bank size	SIZE	logarithm of total assets

IV. Empirical Results and Discussion

Table 2 shows descriptive statistics of the datasets used in the analysis. The average value for discretionary loan loss provision (DLLP) is 0.05744, with a deviation of 0.07231. The average value for the off-balance sheet activities (ULC) is 0.20068, with a standard deviation of 0.16106. Furthermore, the Lerner index averages 0.50808 with a standard deviation of 0.15847.

A. Regression Analysis and Results

Discretionary LLPs are obtained through the difference between the actual level of LLP on the income statement and the non-discretionary component of the LLP through a regression equation. Table 3 shows the regression results of loan loss reserves (LLR) on-balance sheet, net loan charge-offs, growth in loans, total loans outstanding, non-performing loans, and earnings before tax against LLP. The value of absolute discretionary LLP is defined as the discretionary component owned by the management.

B. The Significant Effect of Off-balance Sheet and Market Power on Discretionary Loan Loss Provisions (DLLP)

The regression equation uses a two-model research approach to answer the hypothesis. The first model has two main variables: off-balance sheet activities (ULC) and market power (LERNER). In comparison, the second model has a moderation variable (MOD) where market power (LERNER) as a moderating variable is obtained through the results of multiplication between ULC and LERNER. Table 4 shows regression results of the significant impact of OBS activity and market power on DLLP.

H1 states that OBS has a positive effect on earnings management in the banking industry. Table 4 on the model (1) illustrates that the p-value of OBS that represented by UCL is 0.0073, which means that off-balance sheet activities are significant statistically toward earnings management. Moreover, the coefficient of UCL is 0.000602, which indicates that OBS is positively impact on DLLP as earnings management. Therefore, H1 is supported.

H2 states that market power has a negative effect on earnings management in the banking industry. The test result from Table 4 on the model (1) shows

Table 2. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
DLLP	175	0.05744	0.07231	0.00079	0.44901
LLP	175	0.14929	0.93809	0.00000	7.90814
LLR	175	0.09805	0.25175	0.00060	0.99584
CHGOFF	175	0.10323	0.51248	0.00000	4.14375
GLOAN	175	8.75165	51.55304	0.00553	473.80108
LOAN	175	0.61589	0.12036	0.00212	0.81199
NPL	175	1.87611	1.40695	0.00000	9.92000
EBTP	175	0.26621	2.65357	-0.06624	34.28443
ULC	175	0.20068	0.16106	0.00010	0.88414
LERNER	175	0.50808	0.15847	0.21239	0.87365
ULC x LERNER	175	0.09545	0.00008	0.00000	0.32944
DTA	175	0.67092	0.21020	0.00254	0.88985
OVER	175	0.62309	0.19980	0.15836	0.99338
SIZE	175	17.66103	1.86512	13.87480	21.65037

Some variables needed to determine discretionary loan loss provisions (DLLP) as dependent variables are loan loss provisions (LLP), loan loss reserves (LLR), write-off (CHGOFF), growth in the loan (GLOAN), total loans (LOAN), non-performing loans (NPL), and earnings before tax (EBTP). Independent variables are off-balance sheet activities (ULC) and market power (LERNER), where market power also acts as a moderating variable (MOD). Furthermore, the control variables used are customer deposit ratio (DTA), expenses ratio (OVER), and bank size (SIZE). All data is obtained from banking financial statements published by the Financial Services Authority website for 2015 - 2019.

Table 3. The estimation of discretionary LLP

Result of Regression Model Fixed Effect

Description	LLP
LLR	-0.069040* (0.0513)
CHGOFF	1.081024*** (0.0000)
GLOAN	0.007214*** (0.0000)
LOAN	-0.179136** (0.0308)
NPL	-0.008817** (0.0387)
EBTP	0.004709** (0.0141)
Constant	0.106951** (0.0478)
Adjusted R-squared	0.991292
Prob(F-statistic)	0.0000
Observations	175

that the p-value of market power that represented by LERNER is 0.0000, meaning market power is significant statistically toward earnings management. Further, the coefficient of LERNER is -0.024873, which indicates that market power is negatively impact on with earnings management in the banking industry. Thus, H2 is supported.

C. Market Power as Moderating Variable in the Relationship of Off-balance Sheet with Earnings Management

The role of market power as a moderating variable in the relationship between OBS and DLLP is shown in Table 4 on the model (2). H3 states that market power moderates the relationship between OBS and earnings management in the banking industry. The existence of moderating variables (MOD) is obtained from the multiplication between off-balance sheet activities that are represented by ULC and market power (LERNER). Table 4 on the model (2) illustrates that the p-value of MOD is 0.0248, which means that market power is moderating variable. Thus, H3 is supported. In addition, the moderating variables (MOD) shows the coefficient of -0.002453, indicating

Table 4. The significant effect of off-balance sheet and market power on discretionary loan loss provisons as earnings management

Description	DLLP	DLLP
	Model (1)	Model (2)
ULC	0.000602*** (0.0073)	0.00182*** (0.0003)
LERNER	-0.024873*** (0.0000)	-0.020848*** (0.0000)
MOD (LERNER x ULC)		-0.002453** (0.0248)
DTA	-0.021329* (0.0824)	-0.022957* (0.0555)
OVER	0.027683*** (0.0000)	-0.027966*** (0.0000)
SIZE	-0.008193*** (0.0000)	-0.008364*** (0.0000)
Constant	0.244414*** (0.0000)	0.246658*** (0.0000)
Adjusted R-squared	0.879539	0.882914
Prob(F-statistic)	0.000000	0.000000
Observations	175	175

In this table, we present the regression results of Model (1), the significant effect of off-balance sheet (ULC) and market power (LERNER) on discretionary loan loss provisions (DLLP) as earnings management. The regression is expanded in Model (2), which is market power as moderating variable (MOD) in the relationship of off-balance sheet with DLLP as earnings management. The control variables are customer deposit ratio (DTA), expenses ratio (OVER), and bank size (SIZE). Further, ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively; p-values are in parentheses.

that market power as moderation weakens the relationship between OBS and earnings management in the banking industry.

The overall results show that off-balance sheet activity and market power are significant statistically toward earnings management in the banking industry. Thus, the results of this study support previous research, which states that moral hazards such as earnings management can come from cross-selling both on-balance and off-balance sheets, including excessive credit growth (Soedarmono et al., 2017, Amidu and Kuipo, 2015). In addition, previous research states that market power is related to earnings management. Market power can explain capitalization levels and signal strength through managers' discretionary LLP (Curcio & Hasan, 2015).

The results of this study show that OBS has a positive effect on earnings management. In addition, the positive effect of OBS toward earnings management suggests that the larger the off-balance sheet activity, the higher the earnings management practice. Off-balance sheet activity is proxied by unused loan commitments, while earnings management is proxied by DLLP. This means that the higher the unused loan commitment, the higher the discretionary set by management to form LLP.

The higher the unused loan commitment, the lower the loan interest income. Although, unused loan commitments contribute to non-interest income from fee commitments. Income diversification through activity mix tends to cause additional costs for banking operations, so management needs to manage its revenue (Amidu and Kuipo, 2015). Thus, high unused loan commitments cause companies to add more significant reserves so that earnings management practice is higher. Earnings management is done by managing revenue from a good quarter to a lousy quarter through a discretionary modification of LLP by setting ample provisions when revenues are high and small provisions when revenues are low. Moreover, OBS is associated

with additional information that can be utilized so that management can manage profits through the establishment of LLP.

Related to signaling theory, earnings management in the banking industry is carried out to provide good signals for investors. In banking, banks have diversified income by offering fee-based products through OBS, namely loan commitment facilities. Loan commitments generate fees that contribute to increased profits. Thus, management needs to regulate the number of reserves on commitment loans though LPP because the bank has committed to providing funds that can be withdrawn at any time by debtors. If the funds have not been withdrawn, the loan will not appear on the balance sheet and is still off-balance sheet.

Similarly, the results of this study suggest that market power negatively impacts on earnings management. The negative effect explains that the greater the market power, the lower the earning management. The Lerner index measures market power through pricing power to describe a company's ability to price above marginal cost. At the same time, earnings management is proxied with discretionary loan loss provision. This suggests that firms with higher monopoly power are considered to have competitive volatility and are not worried about the risk of losing market share. Thus, banking managers with higher market power are less likely to perform earnings management through DLLP.

With higher market power, management has more ability to determine prices that are more attractive to its consumers. So that profit management is not needed. Moreover, Market power measurement uses accounting data related to profit and costs (Lubis, 2012). Therefore, it is obvious that market power can moderate the relationship between OBS and profit management.

The market structure of the imperfect competition and higher market power leads to inefficient bank conditions. Therefore, the study of market power is important to do. The results of the study can be used as additional literature on the implications of market power on banking activities. So that it can be useful for regulators in setting policies to control competition in the Indonesian banking sector.

The moderating variable in this study is market power. The results showed that market power weakens the relationship between OBS and earnings management. Market power is proxied by the Lerner index, which shows the monopoly power of a producer. Off-balance sheet activities are proxied through unused loan commitments, while earnings management is proxied through DLLP. Companies with greater monopoly power are more confident of the market risk, so differences in banking income sources do not affect earnings management practices. With its competitive advantage, banks can diversify their strategy through loan interest income on the on-balance and off-balance sheets through non-interest income from loan commitment fees and commissions.

The overall results in Table 4 show all control variables in this study show that customer deposits (DTA), the total cost to revenue (OVER), and bank size (SIZE) are related to earnings management proxied through DLLP. DTA and SIZE are negatively related to earnings management, while OVER is positively correlated. However, in model (2), the relationship of OVER to earnings management becomes negative when market power is included as a moderating variable.

The negative relationship between DTA and earnings management indicates that the higher customer deposits against total assets, the lower earnings management practices. This shows that when the deposit market rises, the bank's capitalization of the market increases so that management does not need to manage the earnings through DLLP. Similarly, the negative relationship between SIZE and earnings management indicates that the larger the size of banking by assets, the lower the earnings management practices. This shows that the more significant the total investment, the greater the capacity of the bank to provide good signals to investors. Thus, earnings management practices through DLLP tend to be lower.

Conversely, the positive relationship between OVER and earnings management indicates that the higher the cost to total revenue level, the higher the earnings management practice. This shows that the

more inefficient the company is, the higher the risk of failure. Management tends to carry out earnings management practices through managing LLP to provide better earnings reporting signals. However, when there is market power as a moderating variable, OVER shows a negative relationship with earnings management, which means that the higher the cost to total revenue, the lower the earnings management practice.

V. Conclusion, Implication and Limitation

This study examines the significant effect of OBS and market power on earnings management through discretionary loan loss provisions (DLLP) in the banking industry in Indonesia. The results of this study show, first, a significant effect exists between off-balance sheet activities and earnings management using DLLP. Second, market power is related to earnings management in the banking industry. Third, market power as a moderating variable weakens the ties between OBS and earnings management practice through DLLP. Off-balance sheet activities are measured through unused loan commitment, while market power is measured through the Lerner index that describes the company's pricing power and competitive advantage.

OBS has a positive effect on earnings management. This indicates that the higher the unused loan commitment, the higher the earnings management practice. Commission income from the loan commitment facility impacts delaying bank interest income, so management needs to manage its earnings. Similarly, market power has a negative effect on earnings management. This means that the higher the market power, the lower the earnings management. This explains that when banks have a competitive advantage through their ability to determine prices, loan loss provision management is unnecessary. Furthermore, the results of this study are consistent when market power acts as a moderating variable in the relationship between OBS and earnings management. Market power weakens the ties between unused loan committees and DLLP.

This study has limitations due to the COVID-19 pandemic, which impacts banks' financial conditions in Indonesia. Therefore, this study did not include banking financial statements after the pandemic started in 2020. Economic conditions during the pandemic are followed by several government policies related to restructuring loans owned by existing debtors. Furthermore, bank managers are given leeway in determining the value of loan loss reserves (LLR) and LLP during the pandemic. Further research can make observations on differences in management behaviour in providing adjustments related to the amount of loan loss provision in the income statement before and after the pandemic.

Off-balance sheet assets in this study are taken based on the ratio of an unused loan commitment to total commitment facilities. This study did not conduct an overall analysis of off-balance sheet exposure in banking financial statements. Banking has several committees and contingency facilities as a form of income diversification. Commitment and contingency facilities cannot be recognized as on-balance sheet assets because of the uncertain amount and timing. Thus, future research on total commitments and contingencies such as letters of credit and bank guarantees will be interesting to examine.

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