

# **Could Indonesian SFAS 50 and 55 (Revised 2006) Reduce Earnings Management of Commercial Banks in Indonesia?**

**Yossi Diantimala**

**Ph.D Student of Faculty of Economic and Business of University of Gadjah Mada  
Lecturer of University of Syiah Kuala**

**Zaki Baridwan**

**Professor of Faculty of Economic and Business of University of Gadjah Mada**

## **Abstract**

This paper aims to examine the ability of accounting standard statements to reduce earnings management of commercial banks in Indonesia. The specific purposes of this research are to examine, first, income smoothing behavior of bank managers through the allowance for impairment loss, second, the impact of the implementation of Indonesian SFAS 50 and 55 (revision 2006) on reducing income smoothing of reported earnings of commercial banks in Indonesia, and third, income smoothing behavior of commercial banks in quarterly earnings.

The sample used in this research is 28 publicly commercial banks in Indonesia for the periods 2008:I until 2011:IV. Overall, there are 448 bank-quarter observations and 112 bank-annual observations. Unlike prior studies that rely primarily on time-series models or cross sectional models, we focus on the specification of panel time series cross-sectional models of the allowance for impairment loss and earnings before tax and allowance using quarterly and annual data. In addition, we examine differences in the power of current accrual models in detecting earnings management across audited and unaudited quarters. T-test of fixed effects model of panel data is used to test hypothesis 1 and t-test two sample means is used to test hypothesis 2. The results show that commercial bank managers manage their reported earnings through the allowance for impairment loss. The implementation of SFAS 50 and 55 (revised 2006) is not significant to reduce the level of earnings management.

**Keywords:** Indonesian SFAS 50 and 55 (Revised 2006), IAS 32 and 39, earnings management, the allowance for impairment loss, loan loss provision, and earnings before tax and allowance.

## **Introduction**

The accounting literatures stated that business firm's managers, including bank managers, manage their reported earnings for many different purposes. The best devices for managers to manage earnings are through accrual accounts (Healy and Wahlen, 1999). In

addition, financial reporting standards require that bank managers estimate loan loss provisions (hereafter, LLP) to reflect changes in expected future loan losses. A loan loss provision is an allowance formed to anticipate loan losses in the future. This allowance is a non-cash expense to anticipate a possible loss in value of loan outstanding, therefore, it is the biggest accrual of a commercial bank.

Technically, the LLP<sup>1</sup> is the amount expensed on the income statement. The way bank managers justify their allowance for loan and losses as accrual, may largely affect their reported earnings. The amount of Allowance for loan loss estimated by managers may increase or decrease the amount of reported earnings. Higher the allowance, the earnings is getting smaller. Otherwise, smaller the allowance, the earnings is getting higher.

Indonesian SFAS (we call PSAK) 50 and 55 regulate how a bank should treat the LLP. The old accounting standards<sup>2</sup> for commercial banks in Indonesia allowed banks to use their judgment in determining the amount of the allowance for impairment loss. Consequently, banks have substantial flexibility in determining lower or higher allowance for impairment losses for this period in order to accommodate their motivations. Nevertheless, at present, all commercial banks must adjust their allowance for impairment loss computation to Indonesian statements of financial accounting standards (Indonesian SFAS) 50 and 55 (revised 2006). The implementation of the new SFAS<sup>3</sup> might cause earnings management through allowance for impairment loss becoming more difficult for banks managers. Banks do not have flexibility in determining the amount of loan loss provisions because, according to the SFAS,

---

<sup>1</sup> For Indonesian banks, the term of LLP is *allowance for impairment losses*.

<sup>2</sup> PSAK 50, "Accounting for Investments in Certain Securities," and 55 (Revised 1999), "Accounting for Derivatives and Hedging Activities."

<sup>3</sup> The statements have been in operative since January 1<sup>st</sup> 2009. But, since almost all banks were not ready to implement the PSAK 50 and 55 (revision 2006) yet, the effective date was delayed until January 1<sup>st</sup> 2010.

loan are impaired when objective evidence demonstrates that a loss event has occurred after the initial recognition of the asset, and that the loss event has an impact on the future cash flow on the asset which can be estimated reliably. The impairment of loan is calculated individually based on the probability of a loan to become loss<sup>4</sup>. On one side, a good quality loan will reduce the impairment, whereas a bad quality loan will increase the impairment. Therefore, it would effectively limit the ability of bank managers to use their judgment in determining the amount of the allowance.

Regarding bank managers' behavior to smooth income, there are three issues that are still debated today that motivate this study. First, it is about the role of LLP as a tool for managers to manage their reported earnings. Ma (1988), Kanagaretnam et al. (2003), Anandarajana et al. (2003, 2007); Eng and Nabar (2007); and Pinho and Martins (2009) find that bank managers use loan loss provisions to smooth their income. Conversely, Wetmore and Brick (1994), Beatty et al. (1995), and Ahmed et al. (1999) find no association between loan loss provision and earnings management by the banks in their sample. These contradicting results motivate us to empirically examine managers' devices to manage their reported earnings.

Second, it is about the impact of changes in accounting standards on income smoothing. SFAS 50 and 55 (revised 2006) are accounting standards which have been converged to IFRS, specifically, IAS 32 and 39<sup>5</sup>. Therefore, commercial banks in Indonesia have implemented internationally accounting standards. The arguments about the ability of IFRS to reduce earnings management are mixed. One argument asserts that IFRS provides

---

<sup>4</sup> Pedoman Akuntansi Perbankan Indonesia (PAPI) 2008 (accounting guideline for Indonesian commercial banks published by Central Bank of Indonesia).

<sup>5</sup> IAS 32 Financial instruments: presentation and IAS 39 Financial instruments: recognition and measurement.

more opportunities for managers to use accruals to manipulate earnings, particularly in emerging economies such as in China (Zhou et al., 2009) and India (Rudra and Bhattacharjee, 2012). In both countries, firms adopting IFRS appear to be more likely to smooth earnings compared with firms that do not. In contrast, in developed countries, firms adopting IFRS are less likely to smooth their income (Barth et al., 2005). These contradicting arguments provide a strong basis for us to empirically examine the impact of new accounting standards, or changes in accounting standards, on the earnings management behavior of firms.

The third motivation is about the pattern of quarterly earnings and annual earnings as an indicator of earnings management. The empirical evidences demonstrate that series of quarterly earnings is useful in predicting future annual earnings (Hopwood, et al., 1982), therefore, it is reasonable enough to claim that bank managers have incentive to maintain the stability of quarterly earnings. However, the evidence on the quarterly patterns in earnings distributions is somewhat conflicting. While Kerstein and Rai (2007) and Jacob and Jorgensen (2007) find that the effort to minimize the variation in earnings is strongest in the fourth quarter, Brown and Pinello (2007), however, find that the effort of management to manage their income has been started in interim quarters in order to avoid small negative analyst forecast errors. The first two studies examine small profit firms while Brown and Pinello (2007) examine firms that avoid missing analyst forecast targets. Differences in the incentives and opportunities may be caused by differences in bank performance. Poor-performing banks tend to increase earnings in the fourth quarter to meet the level of required accounting earnings, while banks that perform well during the interim period will reduce earnings in the fourth quarter to form a reserve in the future (Das et al., 2009).

Based on the phenomena and motivations above, this research is aimed to examine the ability of SFAS (PSAK) 50 and 55 (revision 2006) to reduce earnings management. The specific purpose of this research is to examine, first, income smoothing behavior of bank managers through the allowance for impairment loss, second, the impact of the implementation of Indonesian SFAS 50 and 55 (revision 2006) on reducing income smoothing of reported earnings of commercial banks in Indonesia, and third, income smoothing behavior of commercial banks in quarterly earnings.

By applying Indonesian SFAS 50 and 55 (revised 2006) which has been converged to IAS 32 and IAS 39, commercial banks in Indonesia must use the “fair value” method in estimating the amount of loan loss provisions or allowance for impairment loss. Since all Indonesian firms formally adopted IFRS on January 1, 2012, this study provides preliminary research for future researches on the impact of IFRS with fair value method on earnings management practice, firm value, and business decision making in Indonesia. This study is also give a significant contribution for standard setter, the capital market supervisory agency (BAPEPAM), and investors concerning the ability of accounting standards to reduce earnings management.

Additionally, this study has a considerable contribution for methodological approach. Unlike prior studies that rely primarily on time-series or cross sectional models, this study concentrates on the specification of panel time series cross-sectional models of the allowance for impairment loss, and earnings before tax and allowance using quarterly and annual data. Furthermore, we examine differences in the power of current accrual models in detecting earnings management across audited and unaudited quarterly earnings. The considerations of using panel data over conventional cross sectional or time series data set are, first, it allows us

to test and relax the assumptions that are implicit in cross sectional analysis (Maddala and Lahiri, 2009: 583). Second, panel data usually give us a large number of data point, increasing the degree of freedom and reducing the problem of collinearity among explanatory variables, hence improving the efficiency of econometrics estimates to get more precise estimates. More importantly, panel data allow us to analyze a number of important economic questions that cannot be addressed using cross sectional or time series data set (Hsiao, 2003:3).

The last contribution is this study employ both annual and quarterly earnings to examine whether the pattern of quarterly earnings can potentially serve as an indicator of earnings management (Das et al., 2009). The evidence on the quarterly patterns in earnings distributions is somewhat conflicting. Therefore, the result of this study can be an empirical support on the relationship between quarterly earnings and income smoothing in accounting literature.

## **The Related Theory and Hypothesis Development**

### **Agency Theory and Income Smoothing Hypothesis**

The issue of earnings management is always interesting to study because the issue is related to the behavior of managers who take advantage of their position as supreme regulators of firm policies. This behavior is always against the wishes of owners who also want to benefit from the entity that is managed by managers. Therefore, regulatory bodies such as standard setters and capital market supervisors are always trying to balance the interest of both parties, a manager of a firm as an agent and the owner of the firm as the principal, by issuing new accounting standards or strengthening the existing standards in order to achieve certain social objectives.

Different interest of principal, agent, and regulator are described in *agency theory*. This theory is used as the basis for the development of this study. In his paper, Liang (2004) develops earnings management model which illustrates the interaction among managers, shareholders, and regulatory bodies, specifically standard setters, in an equilibrium condition and in the labor market. He calls them *self-interested economic agents*. Based on this model, he concludes that when selecting the optimal accounting standards, the regulator may face a conflict between the two objectives of reducing agency costs and increasing the valuation information content in the accounting report. In short, the equilibrium earnings management reflects various economic trade-offs.

The behavior of managers to meet their objectives can also be viewed from the income-smoothing hypothesis. Management seeks to reduce the variability in the trend of reported earnings with subjective accounting judgments. Such reductions are achieved by shifting certain revenue or expense items so that year-to-year earnings are less variable. The rationale for income smoothing can be traced to internal and external factors of a firm such as compensation motives, accounting standards and accounting considerations, market demands, and regulatory demands (Greenawalt and Sinkey,1988). These factors drive owner and managers to position reported earnings. Greenawalt and Sinkey (1988) used income smoothing hypothesis to explain the income smoothing behavior of bank managers. According to Greenawalt and Sinkey (1988), in banking, the analysis of the provision for loan losses (an expense) and of its corresponding balance-sheet entry, the allowance for loan losses (also called the bad-debt reserve) is important because (1) the former affects both the amount and the timing of reported earnings and (2) the latter reflects management's judgment of future loan losses, a crude measure of loan quality. The perfect nature of loan-loss estimates

as a smoothing device is the judgment of bank manager in determining the allowance for loan loss and in estimating the current amount of loans that will not be collected.

### **Loan Loss Provision and income Smoothing**

Income smoothing is the most interesting earnings management pattern (Scott, 2009: 405). The investigations of the role of loan loss provision as the best device for managers to manage their earnings give contradicting results. Ma's study (1988) determines whether U.S. commercial banks utilize loan loss provision (LLP) as a device to smooth reported earnings. He concluded that LLP, together with loan charge-offs, were used by banks for income smoothing. Bhat (1996) examines the income smoothing hypothesis for large banks in Texas that reported their earnings over the period 1981-1991. He analyzes whether banks use loan-loss provisions to manipulate earnings. His empirical result suggests that banks with close relationships between their loan-loss provisions and their earnings before loan-loss provisions but after taxes do tend to smooth earnings. Kanagaretnam et al. (2003) investigate the predictions of the Fudenberg-Tirole model by examining whether bank managers smooth income through LLP. Their empirical analysis is based on 4,166 bank-quarter observations. The sample consists of US bank holding companies for the period 1987 to 2000. Quarterly information is obtained from the Call Reports filed by bank holding companies with the Federal Reserve Banks. Their result shows that banks' managers use LLP to smooth their income.

Parallel to the studies above, Anandarajana et al. (2007) demonstrate that banks in Australia use loan loss provisions to manage earnings. Further, listed commercial banks engage more aggressively in earnings management using loan loss provisions (LLPs) than



other banks. They also find that earnings management behavior was more pronounced after implementation of the Basel Accord, and Anandarajana et al. (2003) find that Spanish banks more aggressively engage in earnings management through LLP since Basel I was introduced. Relatedly, Bornemann et al. (2010) investigate income smoothing behavior of German banks for the period 1995 through 2009 and conclude that bank managers can potentially avoid reporting small declines in earnings by underestimating the reserve to provision to avoid negative net income and reduce the volatility of net income over time.

On the contrary, Wetmore and Brick (1994) study factors that might be associated with income smoothing by banks, and find no evidence that loan loss provision is used as a tool for earnings management. Beatty et al. (1995) considers whether 752 domestic US banks for the period 1987 (1986 year-end) through 1990 (1989 year-end) alter timing and magnitude of transactions and accruals to achieve earnings management, but find no association between loan loss provision and earnings management. Ahmed et al. (1999), the only study to use data that include the period after the change in capital adequacy regulations, investigate 113 US bank holding companies for the period 1986-1995, also find no evidence that banks used loan loss provision to manage earnings. Their finding of no association was unexpected, since the capital adequacy regulation eliminated the costs of earnings management.

Evidence of income smoothing behavior through loan loss provisions of Asian banks is represented by Eng and Nabar's (2007) study. They examine the behavior of loan loss accounting disclosure of banks in Hong Kong, Malaysia, and Singapore from 1993 through 2000. They also examine whether Asian bank investors view unexpected loan loss provision to be positive or negative. They focus on banks in Hong Kong, Malaysia, and Singapore, as these countries follow the Anglo-Saxon accounting model, and therefore share similarities in

their accounting principles. These three countries were British colonies, and their accounting systems were initially based on the UK model. Their results indicate that unexpected loan loss provisions are positively related to bank stock returns and future cash flows. These results suggest that Asian bank managers use loan loss provision to smooth income and Asian bank investors reacted to these provisions in a fashion similar to that documented by Wahlen (1994) for US banks.

In the case of commercial banks in Indonesia, allowance for impairment loss is the term used to illustrate loan loss provision. The meaning and accounting procedures of the allowance for impairment loss is equal to loan loss provision.

**H1:** Managers of Indonesian banks smooth their income through allowance for impairment losses.

### **The SFAS 50 and 55 (revised 2006)**

The SFAS 50 (revised 2006) deals with presentation and disclosures of financial instruments and the SFAS 55 (revised 2006) copes with recognition and measurement of financial instruments. The crucial rule in both SFAS is that credit, as well as bank assets is classified as loan and receivables. Loan and receivables are initially recognized at fair value plus transaction costs and subsequently measured at amortized cost using the effective interest rate method. In the case of impairment, the impairment loss is reported as deduction from the carrying value of the financial assets classified as loans and receivables recognized in the income statements as allowance for impairment losses. At each balance sheet date, the bank assesses whether there is objective evidence that loans which are not carried at fair value through income statement are impaired. Loans are impaired when objective evidence

demonstrates that a loss event has occurred after the initial recognition of the assets, and that the loss event has an impact on the future cash flows of the assets which can be estimated reliably.

The bank considers evidence of impairment for loans measured at amortized cost individually and collectively. All individual loans are assessed for specific impairment. All individual loans measured at amortized cost found not to be specifically impaired are then collectively assessed for any impairment that has been incurred but not yet identified. Loans that are not individually significant are collectively assessed for impairment by grouping together such financial assets with similar risk characteristic. Collective allowance<sup>6</sup> for loans classified as current, special mention, substandard, doubtful and loss are calculated after deducting the value of allowable collateral in accordance with Bank Indonesia regulations. The calculation of allowance for impairment losses is based on carrying amount (amortized cost)<sup>7</sup>.

Impairment losses on financial assets carried at amortized cost are measured as the difference between the carrying amount of the financial assets and the present value of estimated future cash flows discounted at the financial assets' original effective interest rate.

---

<sup>6</sup> In assessing collective impairment, the bank applies Bank Indonesia Circular Letter No. 11/33/DPNP dated December 8<sup>th</sup> 2009, "The Amendment to the Bank Indonesia Circular Letter No. 11/4/DNDP dated January 27<sup>th</sup> 2009 on the Implementation of Accounting and Reporting Guidelines for Indonesian Banking Industry". The Bank Indonesia Circular Letter contains the amendment to PAPI 2008 regarding the transitional provision on estimation of collective impairment of loans for eligible banks. In accordance with the Appendix to the Bank Indonesia Circular letter No. 11/33/DNDP dated December 8<sup>th</sup> 2009, the allowance for collective impairment losses of loans refers to the general allowance and specific allowance in accordance with the Bank Indonesia regulations regarding the assessment of commercial banks' assets quality as follows:

1. Current: minimum of allowance for impairment losses 1%.
2. Special Mention: minimum of allowance for impairment losses 5%.
3. Substandard: minimum of allowance for impairment losses 15%.
4. Doubtful: minimum of allowance for impairment losses 50%.
5. Loss: minimum of allowance for impairment losses 100%.

<sup>7</sup> All statements in this phrase are summarized from PAPI (2008).

Calculating the present value of estimated future cash flows of financial assets with collateral reflects the cash flows that can be generated from the acquisition of collateral, minus the cost for obtaining and selling the collateral, regardless of whether the takeover is likely to happen or not. Losses are recognized in the income statement and reflected in an allowance account, namely allowance for impairment loss, against financial assets carried at amortized cost. Interest on the impaired financial assets continues to be recognized using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss. When a subsequent event causes the amount of impairment loss to decrease, the impairment loss is reversed through the income statement<sup>8</sup>.

### **Accounting Standards and Income Smoothing**

SFAS 50 and 55 (revised 2006) are accounting standard statements which have been converged to IFRS, specifically, IAS 32 and 39<sup>9</sup>. The main objective of the Indonesian standard setters to converge the statements is to tighten accounting standards in order to restrict or to reduce earnings management and to provide more relevant information to the capital market. This is reasonable because the prior accounting standard provide a chance for managers or auditors to judge the amount to be reported. By tightening the standards, managers' or auditors' judgment can be limited by requiring evident measurement and by proving better rules or exhaustive guidance (Ewert and Wagenhofer, 2005). However, there are also arguments that IFRS provides more opportunities for managers to use accruals to manipulate earnings, particularly in emerging economy such as in China (Zhou et al., 2009) and India (Rudra and Bhattacharjee, 2012). These firms adopting IFRS appear to be more

---

<sup>8</sup> All statements in this phrase are summarized from *PAPI (2008)*.

<sup>9</sup> IAS 32 Financial instruments: presentation and IAS 39 Financial instruments: recognition and measurement.

likely to smooth earnings compared with firms that do not. In contrast, in developed countries, firms adopting IFRS are less likely to smooth income (Barth et al., 2005).

These conflicting results are caused by the timing of IFRS adoption of sample firms. Rudra and Bhattacharjee (2012) use firms adopting IFRS earlier than firms in Barth's et al. study. The tendency to manage earnings occurred in the early adoption of new standard statements. Firms which have to adopt new standards use the timing of adoption and the choice of transition method to manage their earnings (Gujarathi and Hoskin, 1992; Smith and Rajae, 1995).

This conflict is reinforced by studies of Stefanescu (2006) and Oosterbosch (2009). Stefanescu (2006) investigate the impact of new accounting standards, SFAS 144 "Accounting for the Impairment or Disposal of Long-Lived Assets" (FASB 2001) on income smoothing through the timing of asset sales. She finds that income smoothing behavior through the timing of asset sales is lessened in the post-SFAS 144 reporting regime. Oosterbosch (2009) examines first whether the level of earnings management by banks through loan loss provisioning has decreased since the IFRS-adoption, and second, whether loan loss disclosure requirements are negatively related to banks' income smoothing. He uses a sample of European banks and a single-stage regression that models the non-discretionary part of LLPs and tests for income smoothing. The results show that the level of earnings management has indeed decreased since IFRS adoption. However, evidence suggested that detailed disclosure requirements regarding loan loss accounting do not motivate bank managers from using LLPs to their discretion for income smoothing. On the contrary, by examining the impact of SFAS 133 (1998) and SFAS 138, Accounting for Derivative Instruments and Hedging Activities, on income smoothing behavior of commercial banks,

Kilic et al. (2010) conclude that hedge accounting helps banks avoid earnings volatility and smooth their earnings by allowing them to change the timing of recognition of gains and losses on either the hedged item or the hedging derivative and recognize off-setting gains and losses concurrently in earnings.

A number of empirical researches also confirm the ability of new accounting standards or changes in accounting standard statements in reducing earnings management (Gujarathi and Hoskin, 1992; Demski, 2004; Ewert and Wagenhofer, 2005; Stefanescu, 2006; Oosterbosch, 2009; Kilic et al., 2010). By doing a rational expectation equilibrium model, Ewert and Wagenhofer (2005) find that tighter accounting standards induce high earnings quality as measured by variability of reported earnings and high market price reaction. Therefore, accounting earnings management is less effective. Even though there is a change in the level of earnings management if accounting standards are tightened, tighter accounting standards do not always reduce earnings management. Rudra and Bhattacharjee (2012) also examine the ability of the adoption of new accounting standards in reducing earnings management in India firms. Difference with Ewert and Wagenhofer (2005), Rudra and Bhattacharjee use a multiple regression model with a sample of 67 private sector companies exclusive of the banking and financial sector. They conclude that new accounting standards did not succeed in reducing earnings management of banks.

**H2:** the implementation of SFAS 50 and 55 (revised 2006) reduce the level of income smoothing through allowance for impairment loss.

## **Quarterly Earnings and Income Smoothing**

The evidence on the quarterly patterns in earnings distributions is somewhat conflicting. In subsequent time periods, series of quarterly earnings is useful in predicting future annual earnings (Hopwood, et al., 1982), therefore, it is reasonable enough to claim that bank managers have incentive to maintain the stability of quarterly earnings in order to smooth their annual earnings. While Kerstein and Rai (2007) and Jacob and Jorgensen (2007) find that the effort to minimize the variation in earnings is strongest in the fourth quarter, Brown and Pinello (2007), however, find that the effort of management to manage their income has been started in interim quarters in order to avoid small negative analyst forecast errors. This result is in line with Dhaliwal et al. (2004) that conclude that firms manage their tax expense from the third to the fourth quarter to meet or to beat their targeted earnings. Differences in the incentives and opportunities may be caused by differences in bank performance. Poor-performing banks tend to increase earnings in the fourth quarter to meet the level of required accounting earnings, while banks that perform well during the interim period will reduce earnings in the fourth quarter to form a reserve in the future (Das et al., 2009).

**H3:** Managers smooth their quarterly reported income

## **Research Method**

### **Sample and Data**

The sample consists of all commercial banks in Indonesia for the period 2008:I-2011:IV. There are thirty commercial banks<sup>10</sup> listed in Indonesian Stock Exchange, but this

---

<sup>10</sup> The name of commercial banks can be found in enclosed 1.

study acquires 28 commercial banks caused by incomplete data of 2 banks. This represents a balanced panel study of the data sets that combine time series (T) and cross section (N) analyses and has a total number of 448 bank-quarter observations and 224 bank-annual observations.

The data used in this research is secondary data, namely, quarterly and annually allowance for impairment losses (AIL), loan amount (LOAN), non-performing loan (NPL), earnings before taxes and provision (EBTP), and total assets. The data is collected from banks' financial reports which can be found in their websites or from the website of Indonesian Stock Exchange. Commercial banks in Indonesia are required to file annual and quarter consolidated balance sheets and income statements along with other information either in their own website or in the website of Indonesian Stock Exchange or in both.

To get the impact of the implementation of SFAS 50 and 55 (revised 2006) on income smoothing behavior of banks managers, this study compares the allowance for impairment losses before and after the implementations of SFAS 50 and 55 (revised 2006). The periods before the implementation are 2008:I-2009:IV, and the periods after the implementation are 2010:I-2011:IV. Therefore, the data set contains 224 panel data observations for the periods before the implementations of SFAS 50 and 55 (revised 2006) and 224 panel data observations for the period after the implementations of SFAS 50 and 55 (revised 2006). Overall, there are 448 panel data observations.

To test whether managers use the allowance for impairment loss to smooth income, we apply the association between earnings before taxes and allowance (EBTA) to the allowance for impairment loss (AIL). The empirical research methods demonstrate that

---



profitable banks use loan loss provision to manage earnings (Collins et al., 1995). To smooth income, banks increase the level of LLP when EBTP is high and reduce the level of LLP when EBTP is low. Consequently, a positive coefficient on EBTP reflects smoothing via LLP (Kilic et al., 2010; Anandarajana et al., 2007; Alali and Jaggi, 2011). To control the relationship between EBTP and LLP, we use control variable non performing loan in current period (NPL), and loan in current period (LOAN). As used by Kim and Kross (1998), Kanagaretnam et al. (2003), Pinho and Martins (2009), Kilic et al. (2010), and Alali and Jaggi (2011). Following Alali and Jaggi (2011), we include bank size (SIZE) as an additional control variable. The relationship between bank size (SIZE) and the allowance for impairment loss are expected to negatively affect the allowance for impairment loss. Figure 1 below presents the research model that we tested in this study. In figure 1 we illustrate that the expected sign of earnings before tax and allowance, loan, and non performing loan is positive, but the expected sign of firm size is negative. The indicator for income smoothing is the association between earnings before tax and allowance and allowance for impairment loss. If the relation is positive significant, it means that managers smooth their reported earnings through allowance for impairment loss.

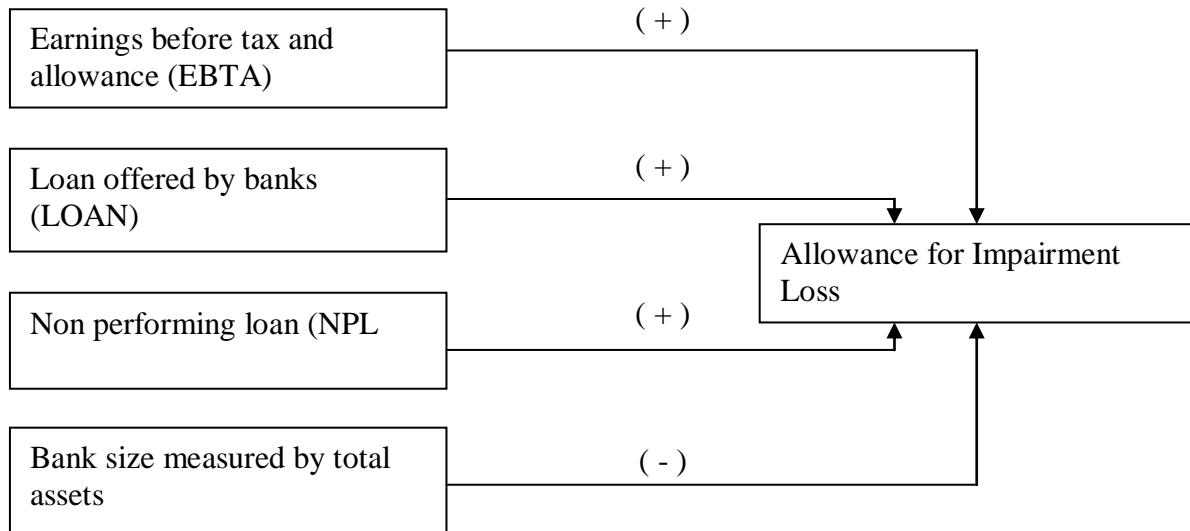
The estimated equation for that purpose is:

$$\begin{aligned}
 \text{AIL}_{it} &= \beta_0 + \beta_1 \text{EBTA}_{it} + \beta_2 \text{LOAN}_{it} + \beta_3 \text{NPL}_{it} - \beta_4 \text{SIZE} + \varepsilon_{it} & (1) \\
 i &= 1, 2, \dots, 28, & t &= 1, 2, \dots, 16
 \end{aligned}$$

where  $\text{AIL}_{it}$  is the allowance for impairment loss for the  $i^{\text{th}}$  firm in the  $t^{\text{th}}$  period,  $\text{EBTA}_{it}$  is earnings before tax and provision for the  $i^{\text{th}}$  firm in the  $t^{\text{th}}$  period,  $\text{LOAN}_{it}$  is loan amount for the  $i^{\text{th}}$  firm in the  $t^{\text{th}}$  period,  $\text{NPL}_{it}$  is non performing loan for the  $i^{\text{th}}$  firm in the  $t^{\text{th}}$  period, and

SIZE<sub>it</sub> is firm size for the i<sup>th</sup> firm in the t<sup>th</sup> period, β<sub>0</sub> is constant, and β<sub>1</sub>–β<sub>4</sub> is the coefficient of independent variables, and ε<sub>it</sub> is error term.

Figure 1. Research Model



### Test of the Model Selection in Panel Data Processing

#### Regression Model of Panel Data

In general, regression model of panel data is as follows:

$$y_{it} = \alpha_i + \beta'x_{it} + u_{it}, \quad i = 1, 2, \dots \quad t = 1, 2, \dots \quad (1)$$

where  $y_{it}$  is dependent variable for the i<sup>th</sup> firm in the t<sup>th</sup> period.  $\alpha_i$  is constant which captures firm's specific inputs assumed to be constant over time.

In the analysis of panel data model, we know three different approaches, they are, *pooled least square* or *pooled OLS model*, the *fixed effects least squares dummy variable (LSDV) model*, and the *random effects model (REM)* (Gujarati and Porter, 2009:593; Maddala and Lahiri, 2009:583). To obtain an appropriate model for our problem - OLS, LSDV, or REM - we have to test one by one of all models with Chow Test and Hausman Test.

## **Research Method to Test the Hypothesis**

Our first research hypothesis focuses on whether income smoothing is a driving influence on the allowance for impairment loss. To test whether managers use the allowance for impairment loss to smooth income, we use the t-test of the appropriate model (OLS, LSDV, or REM). We also use the t-test of quarterly panel observations to test the relation between quarterly earnings before tax and allowance and allowance for impairment loss (to test hypothesis 3). If the relation is positive significant, banks managers smooth their reporting earnings through their quarterly report.

To test hypothesis 2, we use the *paired sample t test* to compare the allowance for impairment loss before the implementation of SFAS 50 and 55 (revised 2006) and after the implementation of SFAS 50 and 55 (revised 2006). The periods before the implementation are 2008:Q1 – 2009:Q4, 2008 – 2009, and 2008:Q1-Q3 – 2009: Q1-Q3 for quarterly earnings.

## **Results and Analysis**

### **Descriptive Statistics**

Our empirical analysis is based on 448 bank-quarter observations and 112 bank-annual observations. The sample consists of commercial banks in Indonesia for the period 2008 to 2011. The descriptive statistics for our sample banks are presented in Table 1 below. In panel A, we present the mean, standard deviation, maximum and minimum of bank-quarter observations of variables used in our analysis. The sample mean of the allowance for impairment loss is Rp447,479.19 million, ranging from Rp6,559,276.00 million to zero. Banks in our sample were profitable during the period examined as indicated by the mean

earnings before tax and allowance of Rp1,640,040.60 million, ranging from Rp24,547,538.00 million to losses Rp621,408 million. In panel B, we present the mean, standard deviation, and the maximum and minimum of bank-annual observations. Based on the panel, we know that the maximum and minimum value of AIL and EBTA in quarter data and annual data of banks are equal.

Table 1. Descriptive Statistics

Panel A. Descriptive Statistics of Bank-Quarter Observations

	N	Minimum	Maximum	Mean	Std. Deviation
AIL	448	.00	6559276.00	447479.19	973243.25
EBTA	448	-621408.00	24547538.00	1640040.60	3295188.60
LOAN	448	181513.00	311000000.00	39100264.39	56967813.04
NPL	448	.00	42.96	3.46	4.99
SIZE	448	1002846.00	552000000.00	70613037.88	104322129.05

Panel B. Descriptive Statistics of Bank-Annual Observations

	N	Minimum	Maximum	Mean	Std. Deviation
AIL	112	.00	6559276.00	722493.2946	1342392.50582
EBTA	112	-621408.00	24547538.00	2696456.3411	4804769.29815
LOAN	112	677415.00	311093306.00	45178851.8304	65975760.97583
NPL	112	.35	37.59	3.4255	5.19409
SIZE	112	1259880.00	551891704.00	77114950.5804	116080221.92839

Notes: AIL is the allowance for impairment loss, EBTA is earnings before tax and allowance, LOAN is total loan, NPL is non performing loans, and SIZE is total assets to measure bank size.

### Result of Model Testing

This study uses panel data. To determine an appropriate model, we must perform Chow test and Hausman test. The first is the Chow test, which decides whether the model is either pooled least square (OLS) or fixed effect least-square dummy variable model (FEM). If the probability of Chow test is less than the significant level, 5%, the model must be fixed

effects (FEM). However, if the probability of Chow test is more than the significant level, 5%, the model must be pooled least square (OLS). The result of Chow test can be seen in Table 2 below. The results demonstrate that either F test or Chi-square of Chow test is significant at level 5%. Thus, the model is fixed effects.

Table 2. The result of Chow Test and Hausman Test

<b>Chow Test</b>			
Equation: Quarter Observation			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	8.98	-27,416	0.0000
Cross-section Chi-square	205.77	27	0.0000
Equation: Annual Observations			
Cross-section F	12.23	(27,80)	0.0020
Cross-section Chi-square	183.05	27	0.0001
<b>Correlated Random Effects - Hausman Test</b>			
Equation: Quarter Observations			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	56.46	4	0.0000
Equation: Annual Observations			
Test Summary			Prob.
Cross-section random	39.24	4	0.0016

### Results of Fixed Effects Model (FEM)

The second test is the Hausman test, which decides whether the model is either fixed effects or random effects. If the probability of Hausman test is less than the significant level, 5%, the model must be fixed effects (FEM). However, if the probability of Hausman test is more than the significant level, 5%, the model must be random effect (REM). The result of the Hausman test can be seen in Table 2 above. The results demonstrate that either F test or Chi-square of Hausman test is significant at level 5%. Thus, the model is fixed effects.

The fixed effects model is the appropriate model for this study. The result of regression of both quarterly observations and annual observations can be seen in Table 3 below. Sign of the coefficient of earnings before tax and allowance (EBTA), loan provided by banks to consumer (LOAN), non performing loan (NPL) is positive, but sign of the coefficient of total assets of banks to measure bank size (SIZE) is negative. Every sign is proper with the sign illustrated by the theory above (Anandarajana et al., 2007; Kilic et al., 2010; Alali and Jaggi, 2011).

Based on panel A of Table 3, we can observe quarter data of AIL, EBTA, LOAN, NPL, and SIZE. Any increase of 117.25% earnings before tax and allowance (EBTA) would increase the allowance for impairment loss (AIL) by 1%, and every increase of 48.97% non performing loan (NPL) would increase the AIL by 1%. The increase is significant at level of 5%. Nevertheless, an increase of 2.99% LOAN and a decrease in 18.25% total assets (SIZE) are not significant at 5%. In panel B we can see annual data of AIL, EBTA, LOAN, NPL, and SIZE. Any increase of 134.15% EBTA, 419.45% LOAN, and 96.79% NPL would increase the AIL by 1%, and every decrease of 430.31% SIZE would increase the AIL by 1%. The rise and decline are significant at 5%. Both quarter and annual observations provide the same sign for SIZE, that is, negative. This result is in line with theory.

Both panel A and panel B illustrate that the effect of annual earnings before tax and allowance for impairment loss (134.15%) is bigger than the effect of quarter earnings before tax and allowance for impairment loss (117.25%). The impact of annual non performing loan on allowance for impairment loss (96.79%) is also bigger than the impact of quarter non performing loan on allowance for impairment loss (48.97%).

Table 3. The Result of Panel Least Square Method

Panel A. Quarterly Observations					
AIL = -0.73 + 1.17EBTA + 0.03LOAN + 0.49NPL - 0.18SIZE					
	C	Log EBTA	Log LOAN	Log NPL	Log SIZE
Coefficient	-0.730	1.170	0.030	0.490	-0.180
Std. Error	1.490	0.080	0.090	0.140	0.230
t-Statistic	-0.490	15.29**	0.330	3.47**	-0.810
Prob.	0.630	0.000	0.740	0.001	0.420
F-Statistic	71.86**				
Panel B. Annual Observations					
AIL = -1.288 + 1.341EBTA + 4.195LOAN + 0.968NPL - 4.303SIZE					
Coefficient	-1.288	1.341	4.195	0.968	-4.303
Std. Error	3.228	0.353	1.400	0.344	1.422
t-Statistic	-0.399	3.796**	2.996**	2.813**	-3.025
Prob.	0.691	0.000	0.004	0.006	0.003
F-Statistic	15.647**				

Note: \*\* Significant at level 5%. Dependent Variable: Log AIL; AIL is the allowance for impairment loss, EBTA is earnings before tax and allowance, LOAN is total loan, NPL is non performing loans, and SIZE is total assets to measure bank size.

## Results of Classical Assumption Tests

### Autocorrelation Test and Test for Heteroskedasticity

To detect serial correlation in least square regression, we use Durbin-Watson d Test. The Durbin Watson Statistics of both quarter (1.572493) and annual (3.224810) observation exhibit that there is statistically significant no autocorrelation. To identify heteroskedasticity problem, we use Glejser's test. Glejser's test is conducted by regressing independent variables to the absolute value of their residuals (Gujarati, 2004). If the effect of all independent variables (EBTA, LOAN, NPL, SIZE) on their residuals (RESID\_QT and RESID\_AN) is not statistically significant at level 5%, there is no heteroskedasticity problem. The result of regression is shown in Table 4 below. Based on the Table 4 it can be seen that all independent

variables (EBTA, LOAN, NPL, and SIZE) of both quarter and annual data statistically do not affect their residual. This means that there is no heteroscedasticity problem.

Table 4. Heteroscedasticity Test

Panel A. Quarterly Observations					
	<b>C</b>	<b>Log EBTA</b>	<b>Log LOAN</b>	<b>Log NPL</b>	<b>Log SIZE</b>
Coefficient	0.000	0.000	0.000	0.000	0.000
Std. Error	1.491	0.077	0.090	0.141	0.227
t-Statistic	0.000*	0.000*	0.000*	0.000*	0.000*
Prob.	1.000	1.000	1.000	1.000	1.000
Panel B. Annual Observations					
Coefficient	0.000	0.000	0.000	0.000	0.000
Std. Error	3.228	0.353	1.400	0.344	1.422
t-Statistic	0.000*	0.000*	0.000*	0.000*	0.000*
Prob.	1.000	1.000	1.000	1.000	1.000

Note: \* Not significant at level 5%. Dependent Variable for quarterly observations: RESID\_QT and for annual observations: RESID\_AN; method: Panel Least Squares; sample: 2008Q1-2011Q4; periods include: 16; cross section include: 28; total observations for quarterly observations: 448 and for annual observations: 112.

### Hypothesis Test

To test whether managers use the allowance for impairment loss to smooth income, we use the association between earnings before taxes and allowance (EBTA) and the allowance for impairment loss (AIL). The empirical research methods demonstrate that to smooth income, banks increase the level of LLP or AIL when EBTP or EBTA is high and reduce the level of LLP when EBTP is low. Consequently, a positive coefficient on EBTP reflects smoothing via LLP (Anandarajana et al., 2007; Kilic et al., 2010; Alali and Jaggi, 2011).



The results are exposed in Table 3 above. The correlation between allowance for impairment loss (AIL) and earnings before tax and allowance (EBTA) of quarter and annual AIL and EBTA is statistically positive significant ( $\beta_1=1.172465$ , prob.= 0.0000; and  $\beta_1=1.341460$ , prob.= 0.0003, respectively). This suggests that banks increase the level of the allowance when earnings before tax and allowance are high. In addition, banks decrease the level of the allowance when earnings before tax and allowance are low. This result supports the empirical conclusions that bank managers use loan loss provision to smooth their income (Bhat, 1996; Anandarajana et al., 2003, 2007; Kanagaretnam et al., 2007, Borneman, 2010; Kilic et al., 2010; Alali and Jaggi, 2011). This result supports H1.

### The Results of Quarterly Panel Data Regression

Table 5. The Results of Quarterly Panel Data Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.501097	0.522268	-2.874186	0.0043
Log EBTA	1.204359	0.085574	14.07393	0.0000
Log LOAN	0.084771	0.089434	0.947863	0.3439
Log NPL	0.439797	0.111004	3.961996	0.0001
Log SIZE	-0.148592	0.133083	-1.116534	0.2651
R-squared	0.835034	Mean dependent var		4.599653
Adjusted R-squared	0.822304	S.D. dependent var		1.158450
F-statistic	65.59341	Durbin-Watson stat		1.346425
Prob(F-statistic)	0.000000			

Note: Dependent Variable: allowance for impairment loss (AIL); method: Panel Least Squares; sample: 2008Q1-Q3 – 2011Q1-Q3; periods include: 12; cross section include: 28; total observations: 336.

To identify income smoothing behavior of banks managers in quarterly earnings, we conduct t-test of quarterly panel data regression of periods: 2008:Q1-Q3 – 2011:Q1-Q3. The

results can be seen in table 5 below. The coefficient of earnings before tax and allowance is positively significant at level 5% (coef. = 1.204359; t-stat.= 14.07393; prob. = 0.0000). It indicates that bank managers smooth their quarterly reported income through allowance for impairment loss in interim financial report as well. This result presents empirical support for hypothesis 3. This result is consistent with the finding of Dhaliwal et al. (2004), Brown and Pinello (2007) and Das et al. (2009) that firms manage their earnings component such as effective tax rate (Dhaliwal, et al., 2004) to meet or beat specific purpose.

Table 6. The Results of Paired Sample T-Test

Panel A. Quarterly Observations					
	Mean	N/df	Std. Deviation	t-Statistic	Sig. (2- tailed)
AIL Before	450716.00	224.00	971192.68		
AIL After	444242.30	224.00	977453.89		
	6473.72	223		0.144	0.885*
Panel B. Annual Observations					
AIL Before	777825.10	56			
AIL After	663590.00	56			
	114235.10	55	1027643.01	0.832	0.409*

Note: \*Not significant at level 5%. AIL Before is the allowance for impairment loss before the implementation of Indonesian SFAS (PSAK) 50 and 55 (revised 2006).

To test hypothesis 2, we use Paired Sample T-test, applied to compare the allowance for impairment loss before the implementation of SFAS 50 and 55 (revised 2006) for periods 2008-2009 and after the implementation of SFAS 50 and 55 (revised 2006) for periods 2010-2011. The results of Paired Sample T-test are illustrated in Table 6 above. Based on the table, we can see that the mean of allowance for impairment loss of quarter and annual observations before the implementation of IAS 32 and 39 is decreased compared to after the implementation, though the decrease is not significant.

This insignificant result is caused by several factors. First, commercial banks are obligated to adopt SFAS 50 and 55 (revised 2006) on January 1<sup>st</sup> 2010. While the Indonesian Central Bank permits one year postponement to implement these SFASs, there are several banks postponed implementing these SFASs until January 1<sup>st</sup> 2011. We can not release the banks that not ready yet to apply the SFASs from our sample because banks do not explicitly affirm this condition in their financial report. Second, research periods used to compare the effect of the SFASs on earnings management, 2008:I – 2009:IV compared to 2009:I – 2011:IV, are too short, so the effect is not visible yet. The implementation of new accounting standard statement does not immediately change firms' financial position. It takes time for firms to adjust their accounting practice to new accounting standard statements. Perhaps, if the periods of study were extended until 2015, the significance level would appear. Based on these results we conclude that this study reject H2.

## **Conclusion**

In this paper we examine earnings management behavior of commercial banks in Indonesia for periods 2008-2011. We also investigate the ability of new accounting standards to reduce earnings management of commercial banks in Indonesia. By applying panel time series cross sectional model, we conclude that commercial bank managers use the allowance for impairment loss to smooth their earnings, and they also smooth not only their annual earnings but also quarterly reported earnings. This study also indicate that the implementation of SFAS 50 and 55 (revised 2006) or IAS 32 and 39 is not significant to reduce the level of earnings management of public commercial banks in Indonesia.

## References

- Ahmed, A. S., C. Takeda, and S. Thomas, 1999, Bank loan loss provisions: a reexamination of capital management, earnings management and signaling effects, *Journal of Accounting and Economics* 28, 1–25.
- Alali, Fatima., and Bikki Jaggi. 2011. Earnings versus Capital Ratios Management: Role of Bank Types and SFAS 114. *Review of Quantitative Finance Accounting* 36: 105-132
- Anandarajana, Asokan., Iftekhar Hasan, Cornelia McCarthy. 2007. Use of loan loss provisions for capital, earnings management and signaling by Australian banks. *Accounting and Finance*, 47, p.357–379.
- Baltagi, Badi H., 2001. *Econometric Analysis of Panel Data*. Second Edition. John Willey and Sons.
- Barth, M.E., W.R. Landsman, and M. Lang. 2005. International Accounting Standard and Accounting Quality. Working paper, Stanford University and University of North Carolina.
- Beatty, Anne L., S. Chamberlain, and J. Magliolo, 1995, Managing financial reports of commercial banks: the influence of taxes, regulatory capital, and earnings, *Journal of Accounting Research* 33, 231–262.
- Beatty, Anne L. Bin Ke, and Kathy R. Petroni. 2002. Earnings Management to Avoid Earnings Declines across Publicly and Privately Held Banks. *The Accounting Review*, Vol. 77, No. 3 (Jul., 2002), pp. 547-570.
- Bhat, V., 1996, Banks and income smoothing: an empirical analysis, *Applied Financial Economics* 6, 505–510.
- Bornemann, Sven, Susanne Homölle, Carsten Hubensack, Thomas Kick, and Andreas Pfingsten. 2009. Determinants for using visible reserves in German banks – an empirical study. *Discussion Paper of Deutsche Bundesbank*, Series 2: Banking and Financial Studies, No 11.
- Brewer, Elijah. Liquidity ratios weakened at district banks in 1977. 1980. *Economic Perspective of Federal Reserve Bank of Chicago*.
- Brown,. and A.S. Pinello, 2007, To What Extent Does the Financial Reporting Process Curb Earnings Surprise Games? *Journal of Accounting Research*. Vol 45 (5).
- Chang, Ruey-Dang., Wen-Hua Shen., and Chun-Ju Fang. 2008. Discretionary Loan Loss Provisions And Earnings Management For The Banking Industry. *International Business & Economics Research Journal*. Volume 7, Number 3.

- Clair, Robert T., 1992. Loan Growth and Loan Quality: Some Preliminary Evidence from Texas Banks. *Economic Review* - Third Quarter 1992.
- Collins, J., D. Shackelford, and J. Wahlen, 1995, Bank differences in the coordination of regulatory capital, earnings and taxes. *Journal of Accounting Research* 33, 263–292
- Das, Somnath, Pervin K. Shroff, and Haiwen Zhang. 2009. Quarterly Earnings Patterns and Earnings Management. *Contemporary Accounting Research* Vol. 26 No. 3. pp. 797-831.
- DeGeorge, Francois, Jayendu Patel, Richard Zeckhauser. 1999. Earnings Management to Exceed Thresholds. *The Journal of Business*, Vol. 72, No. 1, pp. 1-33.
- Demski, J. S. 2004. Endogenous Expectations. *The Accounting Review* 79. Pp. 513-539.
- Dhaliwal, D., C. Gleason, and L. Mills. 2004. Last chance earnings management: Using the tax expense to meet analysts' forecasts. *Contemporary Accounting Research* 21 (2). Pp. 431-59.
- Eng, Li Li., Sandeep Nabar. 2007. Loan Loss Provisions by Banks in Hong Kong, Malaysia, and Singapore. *Journal of International Financial Management and Accounting*, Vol 18, No. 1.
- Ewert, Ralf., Alfred Wagenhofer. 2005. Economic Effects of Tightening Accounting Standards to Restrict Earnings Management. *The Accounting Review*. Vol. 80. No. 4. Pp. 1101-1124.
- Fonseca, Ana Rosa and Gonzales Francisco. 2008. Cross-country determinants of bank income smoothing by managing loan-loss provisions. *Journal of Banking & Finance*; Feb2008, Vol. 32 Issue 2, p217-228, 12p.
- Fudenberg, Drew, and Jean Tirole. 1995. A theory of income and dividend smoothing based on incumbency rents. *Journal of Political Economy* 103, no. 1: 75-93.
- Greenawalt, M., and J. Sinkey Jr, 1988, Bank loan loss provisions and the income smoothing hypothesis: an empirical analysis, 1976–84, *Journal of Financial Services Research* 1, 301–318.
- Gujarati, D., 2004. Basic Econometric. Mc-Grawhill, New York.
- Gujarati, Damodar N., and Dawn C. Porter. 2009. Basic Econometrics. Fifth Edition. McGraw – Hill/Irwin.

- Gujarathi, Mahendra R. and Robert E. Hoskin. 1992. Evidence of Earnings Management by the Early Adopters of SFAS 96. *Accounting Horizons*. Vol. 6. Issue 4. pp. 18-31.
- Hasan, Iftekhhar, and Larry D. Wall. 2003. Determinants of the loan loss allowance: some cross-country comparisons. *Bank of Finland Discussion Papers*.
- Hsiao, Cheng. 2003. Analysis of Panel Data. Second Edition. Cambridge University Press.
- Haw, In-Mu., Daqing Qi, Donghui Wu, Woody Wu., 2005. Market Consequences of Earnings Management in Response to Security Regulations in China. *Contemporary Accounting Research* Vol. 22 No. 1. pp. 95-140.
- Healy, Paul M. 1985. The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics* 7: 85-107.
- Healy, Paul M., and James M. Wahlen. 1999. A Review of the Earnings Management Literature and Its Implications for Standard Setting. *Accounting Horizons*, Vol. 13 No. 4. pp. 365-383.
- Hopwood, W.S., J.C. Mckeown, and P. Newbold. 1982. The Additional Information Content of Quarterly Earnings Reports: Intertemporal Disaggregation. *Journal of Accounting Research*, Vol. 20. No. 2. Pt. I.
- Kanagaretnam, Kinidaran Giri, Robert Mathieu, Gerald J. Lobo. 2003. Managerial Incentives for Income Smoothing Through Bank Loan Loss Provision. *Review of Quantitative Finance and Accounting*. Vol. 20 January 2003.
- Kanagaretnam, K., G. Lobo, and D. Yang. 2004. Joint tests of signaling and income smoothing through Bank Loan Loss Provisions. *Contemporary Accounting Research* 21 (4): 843-884.
- Kilic, Emre., Gerald J. Lobo, Tharindra Ranasinghe, K. (Shiva) Sivaramakrishnan. 2010. The Impact of SFAS 133 on Income Smoothing by Banks through Loan Loss Provisions. *Working Paper*, C. T. Bauer College of Business University of Houston.
- Kim, M., and W. Kross, 1998, The impact of the 1989 change in bank capital standards on loan loss provisions and loan write-offs. *Journal of Accounting and Economics* 25, 69–100.
- Kwag, Seung-Woog, and Kenneth Small. 2007. The Impact of Regulation Fair Disclosure on Earnings Management and Analyst Forecast Bias. *Journal of Economics and Finance*. Vol. 31, No. 1. Spring 2007. 87.

- Liang, Pierre Jinghong. 2004. Equilibrium Earnings Management, Incentive Contracts, and Accounting Standards. *Contemporary Accounting Research* Vol. 21 No. 3 pp. 685-717.
- Liu, C., and S. Ryan, 1995, The effect of bank loan portfolio composition on the market reaction to and anticipation of loan loss provisions, *Journal of Accounting Research* 33, 77–94.
- Liu, C., and S. Ryan. 2006. Income smoothing over the business cycle: Changes in banks' coordinated management of provisions for loan losses and loan charge-offs from the pre-1990 bust to the 1990s boom. *The Accounting Review* 81 (2): 421-441.
- Liu, C., S. Ryan, and J. Wahlen, 1997, Differential valuation implications of loan loss provisions across banks and fiscal agents, *The Accounting Review* 72, 133–146.
- Lobo, Gerald J., Dong-Hoon Yang. 2001. Bank Manager' Heterogeneous Decisions on Discretionary Loan Loss Provisions. *Review of Quantitative Finance and Accounting*. 16:223-250.
- Ma, C. K., 1988, Loan loss reserve and income smoothing: the experience in the U.S. banking industry, *Journal of Business Finance and Accounting* 15, 487–497.
- Maddala, G.S., and Kajal Lahiri. 2009. Introduction to Econometrics. Fourth Edition. John Wiley and Sons Ltd.
- Montgomery, L., 1998, Recent developments affecting depository institutions, *FDIC Banking Review* 11, 26–34.
- Moyer, S. E., 1990, Capital adequacy ratio regulations and accounting choices in commercial banks, *Journal of Accounting and Economics* 13, 123–154.
- Oosterbosch, Renick van. 2009. Earnings Management in the Banking Industry: The consequences of IFRS implementation on discretionary use of loan loss provisions. Master thesis of the master Accounting Auditing & Control at Erasmus University Rotterdam.
- Pinho, Paulo Soares de., and Nuno Carvalho Martins. 2009. Determinants of Portuguese Bank's Provisioning Policies: Discretionary Behavior of Generic and Specific Allowances. *Journal of Money, Investment and Banking* ISSN 1450-288X Issue 10 (2009) © EuroJournals Publishing, Inc.
- Rivard, Richard, Eugenebland, and Gay B. Hatfieldmorris. 2003. Income Smoothing Behavior of U.S Banks under Revised International Capital Requirements. *IAER* 9 No. 4.

- Smith, James A. and Zabihollah Razaee. 1995. Earnings Management by the Early Adopters of SFAS No. 106. *International Advance in Economic Research*. Vol 1. No. 4.
- Stefanescu, Monica. 2006. The Effect of SFAS 144 on Managers' Income Smoothing Behavior. *Working Paper*, Smeal College of Business, the Pennsylvania State University.
- Wahlen, J. 1994. The nature of information in commercial bank loan loss disclosures. *The Accounting Review* 69 (3): 455-478.
- Wetmore, J. L., and J. R. Brick, 1994, Loan loss provisions of commercial banks and adequate disclosure: a note, *Journal of Economics and Business* 46, 299–305.
- Zhou, Haiyan., Yan Xiong., and Gouranga Ganguli. 2009. Does the Adoption of International Financial Reporting Standards Restrain Earnings Management? Evidence from an Emerging Market. *Academy of Accounting & Financial Studies Journal*. Supplement, Vol. 13, p43-56, 14p, 6.
- Moses, O. Douglas. 1987. Income Smoothing and Incentives: Empirical Tests Using Accounting Changes. *The Accounting Review*. Vol. 62. No.2. pp. 358-377.
- Rudra, Titas, and CA. Dipanjan Bhattacharjee. 2012. Does IFRS Influence Earnings Management? Evidence from India. *Journal of Management Research* Vol. 4, No. 1: E7.