

A Review on Accounts Manipulation Via Loan Loss Provisions to Manage Regulatory Capital and Earnings Along Business Cycle

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ABSTRACT

This article reviews past academic literatures on how loan loss provision is being used as a tool to adjust regulatory capital and earnings numbers in case of Malaysian commercial banks. The incentives on managing the accruals arise due to close monitoring by central banks, which measures commercial banks performance in term of capital adequacy and earnings volatility along the business cycle. The literatures however failed to conclude that banks unanimously managed their regulatory capital and earnings by loan loss provisions being the largest accruals in bank expense account.

Keywords: loan loss provision; capital management hypothesis; earning management hypothesis

ABSTRAK

Ulasan rencana kajian lepas menerangkan tentang bagaimana "loan loss provision" digunakan sebagai alat untuk mengubah pengaturan utama dan jumlah pendapatan di dalam kes komersial bank di Malaysia. Dorongan dalam menguruskan wujudnya penambahan intensif mengawal bank pusat, di mana ukuran perlaksanaan bank komersial dalam tempoh kecukupn modal dan perihal tanggungjawab pendapatan dalam pusing ganti perniagaan. Dimana kajian lepas gagal menyimpulkan dan sebulat suara pengaturan modal dan pendapatan bank di mana "loan loss provision" merupakan penambahan paling besar dalam perakaunan perbelanjaan.

INTRODUCTION

This paper reviews relevant literature on accounts manipulation via loan loss provisions. It will first explore the incentives of managing loan loss reserve and its relation with loan loss provisions. Before going into further discussion, the capital management and earning management hypothesis will be briefly explained. The final section will examine prior research on the cyclical nature of capital and earnings as a result from loan loss provisioning behavior throughout the economic cycle.

This discussion does not cover the effect of private contracting variables, such as debt contracts and bonus plan, on a bank manager's accounting choices. The exclusion reflects the assumption that these contracts do not influence a commercial bank manager's response to anticipate regulatory and political costs.

DEVELOPMENT OF PRIOR RESEARCH

Several studies have examined the relationship between capital requirement and balance sheet adjustment. Among them are Berger and Udell (1994), Nigro and Jacques (1997), Aggarwal and Jacques (1997), Ediz, Michael and Perraudin (1998) and Rime (1998). The difference in the findings is not surprising because the approach of which undertaken by the bank to adjust their capital ratio is likely to depend on the economic cycles, the bank's financial situation and regulations that varies among locations. The Malaysian version of 1988 Basle regulatory capital requirement for example, does not put a cap on the level of general provisions. This relaxation may create incentives for banks to adjust their balance sheet via loan loss provisions and its reserves to achieve specific regulatory capital ratio and earnings target.

In the late 1980s and early 1990s, the study on loan loss provisions has become one major research attractions in the field of accounting, finance and banking. The reason is that, banks in the United States incurred huge losses and serious capital depletion as a result of default in large loans given earlier to less developed countries especially those in the Central and South America. Since then, earlier studies such as Greenwalt and Sinkey (1988) examined the managers' behaviors with regards to loan loss provisioning in managing capital and earnings.

Almost at the same time, the 1988 Basle minimum regulatory capital was introduced by the Basle committee to foresee the needs to standardize

the computation of regulatory capital across banks and to establish a more resilient banking. Since then, the study on managing banks' capital and earnings has becoming more animated.

Studies on banks' capital and earnings management was later extended by Moyer (1990), Beaver (1995), Collins, Shackelford, and Wahlen (1995), Scholes, Wilson, and Magliolo (1995) and Beatty, Chamberlain and Maglilio (1995). However, these studies did not arrive at the same conclusion. This differences in findings have encouraged researchers such as Kim and Kross (1998), Ahmed et al. (1999), Wall and Koch (2000) and many others to re-examine earlier findings by investigating these incentives and compare them with more recent sample with some improvement on the models as well as on the estimation techniques.

In the beginning of year 2000s, the discussion on regulatory capital has been getting more intense driven by the ongoing revision of the current Basle Accord. The reason is that, the Basle committee feels the need to improve its regulatory weaknesses. One of the main reasons is that the Basle minimum regulatory capital requirement is said to behave pro-cyclically and does not adequately portray the level of riskiness in banks' operations and capital positions. Researchers feel that commercial banks have failed to provide adequate amounts of provisioning to cover expected losses during downturn in the economic cycle. This has resulted in depletion of capital and earnings. Herring (1999) suggests that during economic boom, banks may underestimate the likelihood of high losses and low probability events ('disaster myopia') for the period to come. They may put too much weight on the current economic environment and too little on the possibility of changes in economic conditions in the future. Borio (2001) found evidence of the pro-cyclical characteristics of the existing Basle minimum capital requirement. These studies were later extended among others by Cavello and Majnoni (2002), Estrella (2001), Arpa et al. (2001), Chuiiri et al. (2001), Bikker and Hu (2002) and De Lis et al. (2002).

The survey of evidence on the effectiveness of 1988 Basle Accord within the G-10 countries has been carried out by Bank of International Settlements as the host of the accord (BIS 1999). Among major concerns is that the fixed minimum capital requirement is argued to behave pro-cyclical thus affecting banks' capital and earnings, the credit growth and causing credit crunch in the economy during the cyclical downturn. Following the survey, several studies have also examined earnings and income smoothing via loan loss provision. As expected, conflicting result arise especially between developed and less developed countries.

This study tries to integrate the role played by the loan loss provision in managing capital and earnings (income smoothing). Three major incentives for discretionary behavior with respect to loan loss provisions were explored by prior researches, the regulatory motives, earnings management or income smoothing and signaling incentives.

INCENTIVES FOR MANAGING DISCRETIONARY ACCRUALS

Banks with regulatory capital ratio below the minimum requirement are subject to regulatory pressure, such as being forced to merge with stronger bank or not allowed to declare dividends to shareholders. Banks attempting to avoid regulatory pressure and to gain public confidence have to find ways to improve their regulatory capital and financial results. One way of achieving this objective is by managing discretionary accruals.

Evidence that banks manage discretionary accruals to achieve specific regulatory capital and earnings target is presented in several empirical studies. Wahlen (1995) argued that early research addressing discretionary behavior often assumes that users are being 'fooled'. With the assumption that shareholders do not know the role of discretionary accruals, managers have the advantage of manipulating earnings to give a great impression of their performance. This view point was repeated by Perry and Williams (1994), Bernard and Skinner (1996), Robb (1998) and many others. These studies have also documented that managing discretionary accruals is not only to impress stakeholders on the financial performance, but also due to the other parties' expectation that the management will take discretionary actions.

Banks' manager for example may adjust regulatory capital and earnings by taking advantage of their private information regarding the default risk inherent in the loan portfolio. Having the ability to potentially use their judgment in estimating discretionary accruals such as the loan loss provision for each financial year, bank managers can exercise their discretion over the timing of the provision for certain loan losses (Wahlen 1994). By doing so, the accounting accruals are adjustable at year-end, thus achieving the banks' specific regulatory capital and earnings target. In the following sub-section, the incentives for managing discretionary accruals will be discussed in detail.

REGULATORY CAPITAL REQUIREMENT INCENTIVE

Prior research in the study of capital requirements suggests that the introduction of the minimum regulatory ratios have led some banks,

especially those which are weakly capitalized, to maintain higher capital ratios. Evidence supporting this argument is found in many studies. Haburich and Wachtel (1993) for instance, examined the portfolio structures of U.S. commercial banks since 1989. The study found strong evidence that portfolio shifts occurred when banks with low capital try to increase their capital to meet the regulatory capital requirements. The finding was later supported by Jacques and Nigro (1997), Aggarwal and Jacques (1997), and Rime (1998). These studies have found some evidence that banks do change their loan composition when they face regulatory capital constraints. Banks switch their loan portfolio composition from high risk weighted to low risk weighted assets. However, not all studies have supported the argument that low capitalized bank will make portfolio shift to increase their regulatory capital. Berger and Udell (1994) for example, found that larger banks with higher capital ratios have a much bigger decline in commercial real estate lending than those with lower capital ratios. This finding contradicts with the hypothesis that low capitalized banks and bank under capital distress shifts their lending activities from higher risk assets to lower risk assets to increase the capital.

Apart from managing the risk categories to improve regulatory capital ratios, another ways for banks to manage regulatory capital is through accounting-based capital measures. Ediz, Michael and Perraudin (1998) examining the behavior of U.K. banks between 1989 – 1995 found that low capitalized bank in U.K. adjusted their capital ratio primarily by directly boosting capital (the numerator) rather than by switching from high risk weighted assets such as corporate loans to low risk weighted assets.

The loan loss reserve has a positive effect on the regulatory capital level because it is part of the regulatory capital. The capital management hypothesis predicts that the regulatory capital ratio is negatively related to loan loss provisions because bank managers with low capital ratios can increase them by charging more loan loss provisions to reduce regulatory costs imposed by capital adequacy ratio regulations. The hypothesis also assumes that banks with low Tier 1 capital ratio are inclined to make more general loan loss provisions in order maintain sufficient regulatory capital ratios.

Consistent with the capital management hypothesis, Moyer (1990) presents evidence that the capital adequacy ratio is significantly negatively related to loan loss provisions, implying that bank managers adjust loan loss provisions to reduce regulatory costs. The author argued that the elimination of loan loss reserve from Tier 1 capital and the limitation on

the use of loan loss reserve in meeting total capital requirement implies that a dollar increase in loan loss provision will result in a decrease Tier I capital by the after tax amount of the provision. However, since loan loss reserve still count as Tier II capital up to 1.25% of risk weighted assets, a dollar increase in loan loss provision increase total capital by the tax rate times a dollar. Hence, increasing loan loss provisions has opposing effects on Tier 1 and Tier II capital.

By the same token, Bernard (1995) proposed that reason of earning manipulation in banks is to maintain a desirable regulatory capital requirements ratio thus avoiding unnecessary regulatory costs. The author argued that banks do not wait until they are below the regulatory standard before they begin managing capital as suggested by the regulatory capital management hypothesis, but rather when they feel that they are fall short in near future.

Beatty et al. (1995) however did not support the use of loan loss provisions alone in managing capital. Using different samples and periods, the study has documented a negative relationship between loan loss provisions and capital ratios. Using a sample of 638 bank year from 1985 to 1989, they showed that the primary or the Tier 1 capital ratio is negatively related to the loan loss provision but positively related to loan charge-offs. In addition, they found that banks use more primary capital securities when provisions and miscellaneous gains and losses are low. This suggests that bank trade these items off to manage capital. Managers simultaneously consider several other factors such as loan charge offs, miscellaneous gains and losses and decision to issue securities when managing regulatory capital.

Contrary to earlier findings by Moyer (1990), Collins et al. (1995) do not find support for capital management. Their study examined bank specific decision to raise regulatory capital and the impact of individual bank's changing level of capital, earnings, and taxes on decisions to engage securities gain and losses, loan loss provisions, loan charge offs, capital notes, common stocks, preferred stocks and dividends. Contradicting the capital management hypothesis, there study found evidence that banks with low regulatory capital ratios has treated loan loss provision conservatively. Banks with lower regulatory capital ratios tend to decrease rather than increase the loan loss provisions to avoid regulatory costs. According to the studies, bank regulators are possibly not swayed by the increase in capital ratios by increasing loan loss provision or managers are not willing to scarify a USD1 decrease in pre tax earnings to obtain a USD1 times tax rate increase in capital. Their findings are consistent with

managers exercising discretion in reducing reported charge-offs to avoid regulatory constraints. They argued that the mixed results between their study and Moyer (1990) and Beatty et al. (1995) was due to different definition of capital, different model of nondiscretionary provisions and the assumption that the target variable for capital management is the minimum ratio specified by regulators rather than the time-series, bank specific mean capital ratio.

The investigations of Beaver and Engel (1996) regarding the impact of loan loss reserves on securities' prices suggests that the capital market perceives the reserve to be comprised of two components, a non-discretionary portion which is negatively priced and a discretionary component which is positively priced. The non discretionary component of loan loss reserves reflect an impairment of the loan assets due to the expected non-repayment of the principal. The discretionary portion on the other hand, is estimated as the difference between the total allowance and the estimated non-discretionary component and reflects the amount of additional adjustment to the allowance based on variety of discretionary factors. The study hypothesizes that markets react positively to discretionary accruals. The finding suggests evidence for capital management using discretionary loan loss reserves.

In an attempt to re-investigate the effect of the 1988 Basle regulatory capital requirement on management behavior relative to the old regulatory regime prior to the implementation of the accord, Kim and Kross (1998) documented that bank with low capital ratios reduced their loan loss provision and increased write-offs during the 1990-1992 period relative to the 1985-1988 period. Banks with high capital ratios exhibited no difference in loss provisions, but increased loan write-offs significantly during 1990-92. Banks under the new regulatory regime have less incentive to manage regulatory capital via loan loss provisions. Ahmed et al. (1999) using a sample practice of 113 bank holding companies over 1986 to 1995, reexamine earlier findings by Kim and Kross (1998). Consistent with earlier findings by Kim and Kross (1998), the study found supports for the hypothesis that prior to the introduction of the 1988 Basle regulatory capital requirement, loan loss provision is being used extensively for managing capital. Low capitalized banks have a strong negative relationship with provisioning of loan losses to increase regulatory capital. In other words, bank managers used loan loss provision in a meaningful way to manage regulatory capital. However, after 1990, the incentives have reduced (less negative) due to the fact that over providing loan loss provision affect negatively on total capital. The study also documented

that the lack of support for the capital management hypothesis in Collin et al. (1995) is driven by the assumption that the target for capital management is the bank-specific mean capital ratio rather than the minimum capital required by regulators.

In recent years, the management of financial institutions has sharpened their focus on managing volatility. The reason is that most banks have 60-70% of their capital deployed in pro-cyclical business that is those whose earnings essentially follows the business or economic cycle (Wyman 1996). These earnings, which largely come from loans, and advances that carry certain amount of default risk tend to behave accordingly with the economic cycle. To cover against expected losses from loans released, banks have to set aside provisions for loan losses as part of the cost for giving out loans.

Wall and Koch (2000) conclude that building up loan loss reserves during good times and using part of these increase to absorb losses during economic downturn is not necessarily manipulate income from a regulatory perspective. Cavallo and Majnoni (2001) suggest that the cyclical shortage of banks' capital prominently due to lack of risk based regulation of banks' loan loss provisioning practice. Capital shortage may often due to inadequate provisioning. In other words, even though it has been recognized that bank capital should act as a buffer to unexpected losses, it is assume that expected losses have already been absorbed by loan loss provision, when, instead, provision are inadequate therefore expected losses will eat up bank capital. The study also suggests that enhancing bank provision can reduce the pro-cyclical effect on banks capital regulation. Therefore, banks should increase provisions during cyclical upswing to cover expected losses during years of cyclical downswing.

The argument by Cavello and Majnoni (2002) was later supported by Luc Laeven and Majnoni (2003). The study found that bank provisions during and not before economic downturn to buffer against expected losses. Inadequate provisioning during boom period has resulted in capital depletion during cyclical downturn.

FINANCIAL REPORTING INCENTIVES: EARNINGS MANAGEMENT AND INCOME SMOOTHING

Accruals accounting differs from cash accounting by the timing of recognition. On the entire life of the firm, there may be no difference between both methods. In a long-term perspective, earnings explain returns

quite accurately (Degeorge, Patel & Zeckhauser 1999) and (Lamont 1998). On the short term, the matching of revenue and expenses will create differences. Consequently, assuming the cash flow is not manipulated, one way to manipulate the profit remains to increase or decrease the accruals. Managing accruals is part of the earnings management. As argued by Stolowy and Breton, (2000) earnings management is not a forgery. It is just proposing another way of treating those differences, bringing the profits in the year in need while pushing the expense away. It is essentially gambling, hoping that the profit will be better in the future to cover those delayed expenses.

Various definitions have been given to earnings management. Scott (1997) for example defines earnings management as a choice by a firm of accounting policies as to achieve some specific manager objective while Healy and Wahlen (1999) in a review of the literature oriented towards standard setters defines earnings management as an occurrence when managers use of judgment in financial reporting and in structuring transactions to alter financial reports, either to mislead some stakeholders about the underlying performance of the company, to influence contractual outcomes that depend on the reported numbers.

As argued by Healy (1985), for earnings management to be successful, the perceived frictions between shareholder and manager must exist and at least one users of accounting information must be either unable or unwilling to unravel completely the effect of the earning management. The study also argued that the purpose of managing earnings can be due to several reasons, among a few are to increase remuneration benefit or to reduce earnings volatility through a concept called income smoothing. Dye (1988) on the other hand brings at least two considerations for earnings management. Firstly, the manipulation done to increase remuneration of the executive is likely to be provided for the investors. Secondly, actual shareholders have an interest in the value of the firm to be better perceived by the market. In addition the study also suggests that earnings management is due to many reasons, among a few are managers' remuneration, compliance with debt covenants clause, official examinations, initial public offering, minimizing income taxes. However in banking, one of the most important reasons is to avoid regulatory costs or regulatory pressure. The reason is that regulators monitor banks based on capital and earnings.

Most of the prior studies on earnings management have concentrated on how accounts are manipulated through accruals. Ayres (1994) defined accruals management as changing estimates such as useful lives, the

probability of recovering debtors and other year end accruals to alter reported earnings in the discretion of the desired target. Rajan (1994) argued that the fact that bank managers have substantial discretion to set loan loss provision would result in misleading earnings information to the market. However, requiring the disclosure of more information on banks' loan loss provisioning behaviors is not optimal because it can lead the banks to have extra incentives to manipulate their books in order to present better results.

Subramanyam (1996) examines the relation between stock market prices and discretionary accruals. They find that discretionary accruals are associated with contemporaneous stock price and future earnings and cash flows. The evidence reveals that, on average, the market attaches value to discretionary accruals. This evidence is consistent with two alternative scenarios. First, managerial discretion improves the ability of earnings to reflect economic value, and second, discretionary accruals are opportunistic and value-irrelevant but priced by an inefficient market. There is evidence of pervasive income smoothing, which improves the persistence and predictability of reported earnings. There is also evidence that discretionary accruals predict future profitability and dividend changes. Finally the author concludes that managers choose accruals to enhance the informativeness of accounting earnings. Kasanen, Kinnunen, and Niskanen (1996 hereafter KKN) address a different motivation for earning management in an unusual setting. The authors examine whether managers of a sample of Finnish firms adjust earnings to a target level that simultaneously (1) is large enough to allow the payout of smoothly increasing dividend stream and (2) allows managers to minimize corporate income taxes. The authors found strong support for the idea that Finnish managers set earnings to satisfy the demand for dividend by their institutional investors.

As previously discussed, the biggest accrual in bank expense account is the loan loss provision. Robb (1998) tested the hypothesis that bank managers have incentive to manage earnings through discretionary accruals to achieve market expectation. The results suggest that managers make greater use of the loan loss provision to manipulate earnings when analysts have reached a consensus in their earnings forecast.

Whereas earnings management has been defined as "a process of taking deliberate steps within the constraints of generally accepted accounting principles to bring about a desired level of reported earnings" (Davidson et al. 1987) and called "disclosure management" by Schipper (1989), several authors believe that income smoothing is one part of

earnings management: "A specific example of earnings management ... is income smoothing: (Beattie et al. 1994, p. 793); "A significant portion of this work (earnings management) has examined income smoothing, a special of disclosure management" (Bitner & Dolan 1996); "One motivation of earnings management is to smooth earnings", (Ronen & Sadan 1981).

McNichols and Wilson (1988) argued that one of the reasons to manage earnings is to eliminate extreme values of profit. They found evidence that the profit is decreases when reaching too high values. To a degree, they made a test of income smoothing using the provision of bad debts. More precisely, the smoothing behavior is defined as an effort to "reduce fluctuations in reported earnings" (Moses 1987, p. 360), rather than to maximize or minimize reported earnings, (Moses 1987) and (Ronen & Sadan 1981). Moreover, to smooth income, a manager takes actions that increase reported income when income is low and takes actions that decrease reported income when income is relatively high. This latter aspect is what differentiates income smoothing from the related process of trying to exaggerate earnings in all states (Fudenberg & Tirole 1995).

The discretionary use of provisioning is frequently associated with the practice of earnings management or income smoothing. Income smoothing has a clear objective, to produce a steadily growth stream of profit or easing the volatility of earnings. Income smoothing hypothesis predict that firms choose accruals to minimize the variance of reported earnings. Banks can smooth earnings by drawing from loan loss reserve if actual losses exceeded expected losses and by contributing additional loan loss provision to loan loss reserve if actual losses are lower than expected losses. The advantage of income smoothing is that it reduced the volatility of reported bank profits and reduced the possibility that the bank may deplete its capital. With income smoothing, earnings are less affected by the fluctuation of credit losses over the business cycle. This is achieved when loan loss provision compensates for the difference between realized credit losses and average credit losses by taking positive values during cyclical expansion and negative values during downturns. As a result, loan loss reserve would increase in good times and decrease in bad times. Reporting a less variable income flow could be seen as signaling good performance from the viewpoint of stock price stability, external rating performance and lowering of funding costs, and management rewards (Greenwalt & Sinkey 1988; Fudenberg & Tirole 1995).

As maintained by Kanagaretnam et al. (1999), income smoothing incentives exists if bank's current performance relative to that of other

banks is very high or very low. The implicit assumption underlying this argument is that regulators pay particular attention to banks with unusually high or low earnings. However, bank managers' income smoothing behavior has received considerable attention from the SEC and banking agencies in the United States recently. On November 16, 1998, for example, the SEC ordered Sun Trust Bank Inc. to trim the loan loss provision it made in 1994, 1995 and 1996 as part of a broader investigation of earnings management in banking and other industries. This resulted in an upward restatement of Sun Trust's profit for the three years and reduced its loan loss reserves to USD 666 million from USD 766 million.

There is considerable evidence supporting the income smoothing hypothesis. Hand (1989) observed that managers might smooth earnings to align with market expectations, and even to increase the persistence of earnings. If earnings are smoothed to mitigate the effects of transitory cash flow and adjust reported earnings towards a more stable trend, then income smoothing can enhance the value relevance of earnings.

In addition to meeting capital requirements, bank managers may potentially have several alternative motivations to smooth income. The manager may attempt to positively affect perception of the bank by reducing its earning variability (Greenwalt & Sinkey 1988).

Scholes et al. (1990) found that bank managers use loan loss provision to manage earnings in conjunction with realized securities gains and losses. They argued that bank managers can lower their cost of capital by using earnings to convey private information to investors. Alternatively, such incentive to manipulate earnings may arise because regulators monitor banks based on capital and earnings. Wahlen (1994) also reports that unexpected provisions are positively related to current pre-loan loss earnings, consistent with the hypothesis that discretionary components of unexpected provisions are used to smooth earnings.

Several prior studies hypothesize a positive relationship between loan loss provision and earnings before taxes and provisions. Among others are Greenwalt and Sinkey (1988), Beatty et al. (1995) and Collins et al. (1995). This hypothesis assumes that managers have incentives to engage in income smoothing to reduce volatility in earnings. Thus when earnings are low, loan loss provision will deliberately understate to mitigate the adverse effects of other factors on earnings. Based on an analysis of the relationship between banks' income, regional economic activity and loan loss provision, Scheiner (1981) found no evidence that commercial banks in the sample used loan loss provisions to smooth income.

McNichols and Wilson (1988) examined the use of discretionary loan loss provisions in manipulating earnings. The study refers the GAAP definition of accounting practice. Two hypotheses were tested in their study. One is the income smoothing hypothesis which predicts that firms choose accruals to minimize the variance of reported earnings. The second hypothesis which are proposed by Healy (1985) states that managers whose compensation plans have lower bounds have an incentive to maximize (minimize) discretionary expenses (revenue) when the plan are "out of money". The goal of this manipulation is to increase the likelihood of achieving the lower bound in the subsequent period. By using a proxy for discretionary accruals, they found evidence of firms using their earnings by choosing income decreasing accruals when income is extreme.

Using 148 large banks samples over the period of 1985 to 1989, Beatty et al. (1995) hypothesized that income smoothing incentives exists if bank managers can lower their cost of capital by using earnings to convey private information to investors. However they failed to found evidence of income smoothing via loan loss provision alone to support income smoothing practices by banks prior to the new regulatory capital requirements. Their studies found that banks simultaneously use loan charge-offs, loan loss provisions and the issuance of securities to achieve earnings and capital management goals.

Collins et al. (1995) attempting to investigate income smoothing behavior by adjusting only loan loss provisions found significant positive relationship between loan loss provisions and earnings. Approximately two thirds of the sample banks reported decreased loan loss provisions in years of relatively low non discretionary earnings, consistent with earnings management hypothesis which assumes that banks smooth earnings over time to a firm specific mean.

Using a different loan loss expectation model, Ahmed et al. (1999) hypothesized that under the new capital regulatory requirements, the relationship between earnings and loan loss provisions is more positive compared with the old capital regulatory requirements. The reason is that the new risk based capital regulations reduce the cost of earnings management. In addition, they found that earnings management is not an important determinant of loan loss provision. However, the result found was negative which is inconsistent with the smoothing hypothesis. These results became statistically significant when they tried to use the model of expected or non-discretionary provisions used in Collins et al. (1995). The reason is that the earning smoothing results of Collins et al. (1995)

are driven by the use of *NPLt-1* in modeling the non discretionary component of loan loss provision.

Robb (1998) in his testing on market consensus hypothesis about earnings management documented that when analysts have reached a consensus in their earnings forecast, managers have an incentive to manage earnings through discretionary accruals to achieve market expectations. Result suggests that bank managers make greater use of the loan loss provision to manipulate earnings in a discretionary manner when analysts have reached a consensus in their earnings predictions. Following McNichols and Wilson (1988), the study model how a specific accounting number, the loan loss provision would be reported in the absence of earnings management. The model is consistent with the GAAP that the size of a provision should be sufficient to ensure that the net loan amount on the balance sheet represents management expectation's of future repayment. Using representative approach where loan loss reserves became a proxy of discretionary accruals, the author concludes that when non-discretionary earning falls below the forecast mean, banks tend to manage earning upwards. However, when non-discretionary earnings are above mean, banks only use income-decreasing accruals to save for future period when the market lacks a consensus in its earnings expectations.

Genay (1998) examined the performance of Japanese banks in recent years related to variables used by regulators and analysts to assess their situation. The study showed that accounting profit is correlated with some bank characteristics and economic variables in puzzling ways. Additional evidence suggested that these puzzling or inconsistent results may be due to income smoothing behavior by banks. Specifically, Japanese bank appear to increase their loan loss provision when their core earnings and returns on market are high. Kanagaretnam et al. (1999) provide evidence consistent with the hypothesis that the propensity to smooth income is high for banks with good or poor performance relative to banks with moderate current performance.

The upcoming new Basle Accord on capital requirements, expected to become effective in late 2006, has raised concerns about possible reinforcement of banks' pro-cyclical behavior. The new accord makes capital requirements more risk sensitive, which could exert a pro-cyclical influence on the macro economy, where banks play a major role as suppliers of credit. This argument has motivates researchers to explore the relationship between macroeconomic variables, loan loss provisions and the economic cycle. The reason is that loans represents a large portion in banks' asset portfolio. Borrower's ability to repay the loan changes

over time, particularly in response to changes in economic conditions. A good loan can turn bad during an economic downturn, as evidenced by increasing bankruptcies during such times. Conversely, during economic upswing, borrower's ability to repay debt tends to increase thus reducing loan default. The value of the collateral on loan, which is usually comprised of real estate properties, tends to fall during recessions and rise during booms. However, loan losses may not be realized until an economic downturn occurs, even though the risk of such losses can increase during an economic upswing, as the likelihood of future downturn grows (see Borio et al. 2001). Another reason is that the non-symmetrical information between bank managers and outsiders have forced the latter to depend on macroeconomic data to mitigate the information asymmetry problem between the two parties, even though the impact of macroeconomic variables on the loan portfolio is partly observable through the loan portfolio data reported by the management of commercial banks. If the bank managers have incorporated the impact of the macroeconomic variables into their loan portfolio data, then macroeconomic variables would have little value to the external parties for the purpose of evaluating loan quality.

Among early studies that relate macroeconomic conditions with provisioning behavior are conducted by Cavello and Majnoni (2002), Apra et al. (2001), Luc Laeven and Giovanni Majoni (2002) and Borio et al. (2002). These studies hypothesized that credit quality of loans is expected to move up and down with the economic cycle. During cyclical downturns, the bank is expected to take a larger amount of provision from already low profit while during the favorable cyclical upswing; provisions for the expected credit losses are expected to go down. Surprisingly, these studies have yielded mixed results. The provisioning behavior of banks a suggested earlier in the introduction of this chapter varies accordingly based on geographical location and regulations.

Cavello and Majnoni (2002) examined 1176 large commercial banks, 372 of which were banks from non G-10 countries, over the period 1988-1999. The study found positive relation between loan loss provisions and earnings before taxes and provisions for banks from the G-10 countries. This suggests that these banks do smooth earnings as evidenced by the amount of provision when the net profits are high. Banks from non G-10 countries do not confirm such evidence. The reason is that banks from non G-10 countries did not provide adequate provisioning when the economy was expanding and therefore had to increase provisioning when the economy was in recession. In summary, banks from non G-10 countries

on average do not smooth income over time. They provide too little provision when GDP and net profit are high and increase provisions in bad times.

The finding of Cavello and Majnoni (2002) was also supported by Arpa et al. (2001). The study examines the effect of macroeconomic developments in risk provisioning and earnings by Austrian banks in the 1990s. The theory is that bank earnings are to some extent directly and indirectly dependent on the economic condition. The study found evidence of anti-cyclical behavior on the relationships between loan loss provisions and GDP. Austrian banks in the 1990s do not smooth income over time. They on average increase provision during time of falling GDP where earnings are normally low.

Another study that analyzed the cyclical pattern of bank loan loss provisions between geographical locations is by Luc Laeven and Giovanni Majoni (2002). The authors argued that economic capital should be tailored to cope with unexpected losses while the loan loss reserves should be instead act as a buffer against expected component of the loan loss distribution. The amount of loan loss provisions required to build up loan loss reserves should be considered and treated as costs while resources required to build up capital should not be dealt as costs but should come from post tax earnings. Loan loss provisions management is consistent with an increase in loan loss reserves in good times and decrease in bad times. This strategy reduces banks' profit volatility and the probability of a negative shock to economic capital (smoothing effect hypothesis). The authors also argued that banks can smooth their earnings by drawing from loan loss reserves if actual losses exceed expected losses and by contributing additional loan loss provisions to loan loss reserves if actual losses are lower than expected losses. Using data from banks in the European Union, the econometric evidence shows that bank on average postpone provisioning when faced with favorable cyclical and income conditions until negative conditions set in. Based on studies by Cavello and Majnoni (2002) and Luc Laeven and Majnoni (2003), it can be concluded that European Union banks on average do not follow the same provisioning behavior of banks in the G-10 countries.

Bikker and Hu (2002) relate earnings and business cycles by using macroeconomic variables such as GDP, inflation and unemployment to bank specific variables. The study found significant evidence of strong relationship between provisions and business cycles. Loan loss provision is negatively related to GDP, negatively related to inflation and significantly positive related with unemployment. The findings imply that bank provide

provision increase during downturn of the business cycle and decrease during economic upswing.

Contrary with findings by Cavello and Majnoni (2002), Luc Laeven and Majnoni (2003), Bikker and Hu (2002), a study that examined provisioning behavior of banks in Spain by De Lis, Pages and Saurina (2002) found a positive relation between loan loss provision and economic cycle. Banks in Spain seems to have reduced the pro-cyclical characteristics of regulatory capital by increasing provisions during positive economic growth and reducing provisions during cyclical downturn. This provisioning technique, which is known as statistical provisioning provide provisions, based on expected losses beyond the current financial year and based on expectation of future losses on years to come. This strategy corrects decrease bank profit volatility and improving bank managers' awareness of credit risk.

SIGNALING INCENTIVES

Managers possess some facts that outsiders don't have such as the information regarding the loan portfolio and its risk. Thus, a manager's choice of loan loss provisions may be used by outsiders as a signal of private information about future earnings changes. The need to signal through discretionary loan loss provisions arises because managers with information indicating that their bank values are higher than those assessed by the market will have the desire see their market values revised upward. One approach to doing so is to signal that the bank is strong enough to absorb future potential losses by increasing current loan loss provisions. Assuming that the market does not have all the information, stock market may uses published financial statement as part of their source of evaluation on the market performance. If the contents of the financial statements fail to meet expectations, markets can react positively or negatively depend on the expectations Beaver, Engel, Ryan, and Wolfson (1989).

Most of the studies on the signaling hypothesis have concentrated on analyzing the increase in loan loss reserves related to international debt crisis. One example is the additional increase of USD 3 billion on loan loss reserves by Citicorp in 1987. Concerned with the market reaction to the additional loan loss reserves have been mixed. Markets reacted positively and negatively to additional loan loss reserves announcements by various banks during this period.

Unexpected changes in non-performing loans are leading indicators of expected future loan losses. Because accounting for loan loss provision

requires management judgment, investors are likely to interpret unexpected provisions as the sum of management expectations of future loan losses plus the discretionary components. BERW find that non-performing assets play a significant role in explaining cross-sectional differences in the ratios of market value of common equity to book value of common equity (hereafter, market to book ratio) across banks and the coefficient on the allowance for loan losses is significantly positive. Beaver et al. (1989) conjecture that management to communicate favorable, private information about future earnings power may use discretionary reserving.

Beaver et al. (1989) suggest that investors interpret an increase in loan loss provisions as a sign of strength because it indicates that management perceived the earning power of the bank to be sufficiently strong that it can withstand a "hit on earnings" in form of additional loan loss provisions. In addition to what was suggested by Beaver et al. (1989), an increase in loan loss provisions can also be seen as a signal of future events because the banks are indicating that it may have to accept less than the value of the loan. Musumeci and Sinkey (1989) pointed out that a sizeable increase in loan loss reserves represents a "signal of impending assets write down". The finding indicates that markets react positively to loan loss reserves announcements. Grammatikos and Saunders (1990) found a positive reaction to the same announcement when Citicorp announce additional loan loss reserves in 1987 due to increased defaults in loan repayment from the central and South American countries. However the reaction for money center banks in a similar situation was mixed. They found no reaction for any announcements of additions to loan loss reserves, which occurred after the Citicorp announcement date.

Contradictory to earlier findings by Beaver et al. (1989), Musumeci and Sinkey (1989), Lancaster, Hatfield and Anderson (1993) examined 45 announcements prior to the international debt crisis and found negative market reactions. They concluded that the identification of unanticipated losses supplied a negative signal that dominated any positive aspects.

Wahlen (1994) using sample from 1977 to 1988, conclude that banks with abnormally low loan loss provisions tend to have relatively poor future earnings and cash flow performance. These results suggest that bank managers increase the unexpected loan loss provision when future cash flow prospects are expected to improve one year ahead changes in earnings. The result seems to support earlier findings by Beaver et al. (1989) and Musumeci and Sinkey (1989). Contrary to earlier findings by Wahlen (1994), Ahmed et al. (1999) did not find a positive relationship

between loan loss provisions and one year ahead future change in earnings, rejecting the signaling hypothesis.

Announcement of increases in loan loss reserves increase provides new information but the reaction varies by categories of loan. The market views the increase as a negative signal due to the surprise factor in which the investors are previously unaware of the problem. A positive signal could due to the tax savings and signal of future corporate restructuring. Overall, the result of the study shows statistically significant negative reaction before loan loss announcement and statistically significantly positive reaction after the announcement.

On the effect of loan loss reserves announcements on the stock market, Karels, Mann and Wilcox (1994) found that the early disclosure (before the quarterly earnings report) of the loan loss announcement provides information to investors, Musemeci and Sinkey (1990) and Madura and McDaniel (1989) found significantly positive abnormal returns to shareholders following additions to loan loss reserves.

Griffin (1998) examined the loan loss disclosure made by seventeen New England banks during 1989 and 1990. The study provides evidence of a different market reaction based on the timeliness of the announcement relative to the end of a fiscal quarter. The study documented that unanticipated increase in the loan loss provision reported early in the quarter caused the average New England bank's stock price to drop by almost five percent compared to less than one percents drop for bank that announced late. The analysis also reveals that bank stock price responded as a function of the timing and the amount of unexpected change in the loan loss provision. Early disclosure of a dollar per share unexpected increase in the loan loss provision decreased the average bank's stock price by an estimated 23.90 percents. The study however does not find evidence that investors on the whole react positively to an unexpected increase in the loan loss provision and the result are not consistent with the view that loan loss provision can provide favorable information about additional aspects of the firm.

CONCLUSION

In summary, there are four reasons that have been posited for bank managers' discretion regarding loan loss provision estimates: capital management, income smoothing, signaling, and tax considerations. While the first three of these explanations have been widely researched, the

empirical findings have been conflicting. Only for the tax management hypothesis have the results of prior research been consistent.

The conflicting results on capital management and income smoothing as discussed above may be due to several reasons. First, the amount of loan loss reserves for sample banks have reached the maximum of 1.25 percent from the risk weighted assets thus reducing the incentive of capital management via loan loss provisions. Additional provisions will only reduce the capital adequacy ratio thus rejecting the capital management hypothesis. Low capitalized banks will not increase provisions if their loan loss reserves level has reached the maximum.

Secondly, even though an increase in loan loss provisions increases regulatory ratios, there are managers who believed that regulators are not swayed by the increase in capital ratios by increasing loan loss provision. As a result, managers may not be willing to sacrifice a USD1 decrease in pre tax earnings to obtain a USD1 times tax rate increase in capital as maintained by Collins et al. (1995). This assumption reduces the capital management incentives for banks, which loan loss reserves limit nearly, reach the maximum level.

Thirdly, the conflicting results are induced by various model specifications for testing bank managers' use of discretion over loan loss provision stemming from the lack of clear consensus in the literature on the form of specification. For example, results between studies for example between Moyer (1990) and Beatty et al. (1995) was due to different definition of capital, different model of nondiscretionary provisions and the assumption that the target variable for capital management is the minimum ratio specified by regulators rather than the time-series, bank specific mean capital ratio. Finally, the mixed results may be due to different sample size, sample period, regulations and geographical and economic conditions as suggested by Ahmed et al. (1999) and Cavello and Majnoni (2002).

Based on the above, it can be summarized that the inclusion of loan loss reserves as part of the capital adequacy requirement under the Basle Accord have provided a legitimate environment for bank managers to manage accounting accruals such as loan loss provision. Via managing the level of loan loss provisions in each financial year, banks can choose the level of earnings and capital ratios they wish to maintain. What emerges from these explanation is that additional refinement in research design are required to increase the probability of detecting underlying relationship between bank managers' behavior related to loan loss provision and the incentive to engage in the management of capital and earnings.

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