

Bank Loan-Loss Accounting: A Review of Theoretical and Empirical Evidence

**LARRY D. WALL AND
TIMOTHY W. KOCH**

Wall is a research officer in the Atlanta Fed's research department. Koch holds the South Carolina Bankers Association Chair of Banking in The Darla Moore School of Business, University of South Carolina. The authors thank Lucy Ackert, George Benston, Mark Carey, Gerald Dwyer, Robert Eisenbeis, Frank King, and Joseph Sinkey for helpful comments.

THE TOPIC OF BANK LOAN-LOSS ACCOUNTING JUMPED INTO THE NEWS IN THE FALL OF 1998 WITH THE DISCLOSURE THAT THE SECURITIES AND EXCHANGE COMMISSION (SEC) WAS QUESTIONING THE LOAN-LOSS ACCOUNTING OF SUNTRUST BANKS, INC. AT THE TIME OF THE SEC INQUIRY, SUNTRUST HAD AGREED TO ACQUIRE CRESTAR FINANCIAL CORPORATION AND

had a common-stock registration statement pending before the SEC. As part of its agreement with the SEC to obtain approval for the registration statement, SunTrust agreed to restate prior years' financial statements to reduce its loan-loss provisions in each of the three years 1994 through 1996, resulting in a cumulative reduction in its allowance for loan losses of \$100 million.

The SEC's move to force a bank to change its loan-loss accounting was foreshadowed in a speech by the SEC's chief accountant, Michael H. Sutton (1997). Sutton expressed concern about banks' loan-loss accounting, noting that the SEC had received "a number of inquiries, both domestically and internationally, that suggest that allowances for loan losses reported by U.S. banks may be overstated."¹ He then proceeded to remind his audience of the basic rules for loan-loss accounting.²

Some bank analysts criticized the SEC's action in the SunTrust case and argued that the bank was

merely following conservative financial practices. Sean J. Ryan, an analyst at Bear, Stearns, and Company, said, "In our view, SunTrust's record of earnings stability is a function of a conservative credit culture and fast-growing markets" (quoted in Brooks 1998).

Bank regulators may also have cause for concerns about the issue of banks' loan-loss accounting. If a bank's loan-loss allowance exceeds its expected credit losses, the bank can absorb more unexpected losses without failing and imposing losses on the Federal Deposit Insurance Corporation (FDIC) if all else is held constant. Conversely, loan-loss allowances less than expected losses will ultimately reduce the bank's equity capital. Such a deficit in the loan-loss allowance implies that a bank's capital ratio overstates its ability to absorb unexpected losses.

Finally, banking organizations are worried that they might be caught in a conflict between bank regulators and the SEC. Bank regulators may demand higher

loan-loss allowances to provide a larger cushion should economic conditions weaken, and the SEC may require reduced loan-loss allowances to lessen an organization's ability to manage reported earnings during such a downturn. To provide banks with some guidance about appropriate reserves, the SEC and bank regulators issued joint interagency letters in November 1998 and in March and July 1999.³ The three letters stress that depository institutions should have "prudent, conservative, but not excessive, loan-loss allowances that fall within an acceptable range of estimated losses." The March 1999 letter goes on to promise a number of steps that the agencies would take as a group as well as measures they would try

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to take in cooperation with the Financial Accounting Standards Board (FASB) and the American Institute of Certified Public Accountants. In the July 1999 letter, the SEC also committed to "consult with the appropriate banking regulators as a part of the SEC's process in determining whether to take a significant action in its review of the accounting for a

financial institution's loan-loss allowance."

This article reviews the issues and available evidence on bank loan-loss accounting. It begins with a discussion of the differing philosophies that color approaches to loan-loss accounting and then reviews underlying accounting rules and their justification. An important theme is that recent SEC actions on bank loan-loss accounting are consistent with the philosophy underlying generally accepted accounting principles (GAAP) applied to all U.S. firms, including those principles that apply to loan-loss accounting. Next, the discussion considers the role of loan-loss accounting from a bank-supervisory perspective, focusing particularly on the importance of building up the loan-loss allowance under current regulatory capital-adequacy standards. A review of the relevant theoretical and empirical research follows. The article concludes with an analysis of the policy issues involved in bank loan-loss accounting.

Philosophies of Loan-Loss Accounting

The analysis identifies at least three different philosophies on loan-loss accounting. First, the economist's view of loan-loss allowance is

that it is intended to capture expected future losses that will occur if a borrower does not repay according to the loan contract. In contrast, the primary concern of the FASB is the measurement of a firm's net income over a given period. Thus, the FASB focuses on losses expected to result from events during a given period and explicitly excludes the expected effect of future events; economists, on the other hand, are concerned with expected future events. A third philosophy views loan losses as a type of capital that should be built up during good times to absorb losses during bad times. This perspective differs from that of the economist or the FASB in that it recommends maintaining loan-loss allowances greater than expected losses during good times. This philosophy of loan-loss accounting is implicit in existing capital regulations, which include part of the loan-loss allowance as an element of capital. If loan-loss allowances are determined only in relation to expected future losses, then banks with higher loan-loss allowances do not have the capital necessary to absorb unexpected losses. These banks merely have higher expected losses.

Which philosophy is most advisable depends upon one's purpose.⁴ The economist's view is most relevant in pricing pools of loans to be sold on the secondary market. This perspective is also implicit in any attempt that relies on historic price data to value loans or estimate their riskiness. Arguably, reported values based on the FASB's philosophy allow investors to determine the riskiness of a company's earnings more effectively. The philosophy upon which capital regulations are based may be superior at reducing bank failures if it does indeed result in an increased capacity for banks to absorb unexpected losses.

Although investors and regulators may prefer an accounting philosophy tailored to their needs, ultimately a bank's reported loan-loss allowance is largely under its managers' control, and managers are likely to use any available discretion to attain their own goals. Thus, the real key to evaluating the different philosophies is the extent to which investors and regulators can combine the reported loan-loss numbers and other information to obtain reasonable estimates of the loan-loss measure that best meets their needs. If such estimates are possible, then the prevailing philosophy used to produce that number may not be very important. If the information is available, what is really critical is that investors and regulators understand any differences between the philosophy underlying reported loan-loss allowances and the approach most relevant to their respective concerns.

The largest firms routinely provide investors with a wide range of information about their loan portfolios. Sophisticated investors can use, currently do use, and will almost surely continue to use this information to evaluate the adequacy of banking organizations' loan-loss allowances, regardless of how banks are required to account for loan losses on their financial statements. Thus, requiring banks to provide investors with loan-loss allowances that more accurately track current financial reporting requirements will, at best, provide marginal gains to investors in the form of more accurate estimates or lower costs of analysis. Similarly, bank regulators combine public financial information with their own analysis of each bank's confidential records to evaluate the adequacy of the loan-loss allowance. If regulators determine that a bank's cushion for absorbing losses is inadequate given the risks in its portfolio, they have ample authority to require a bank to increase the cushion or take less risk. Moreover, the interests of investors and bank regulators are not necessarily in opposition. Both investors and regulators benefit if banks follow consistent procedures in setting loan-loss allowances that facilitate comparability of earnings and allowances across banks and through time. Moreover, bank regulators have the ability to prevent banks from declaring dividends to shareholders or paying interest on subordinated debt; they may even close a bank if they judge it to have inadequate capital. If bank regulators judge a bank to have an inadequate loan-loss allowance, this assessment is important information for investors even if a bank has an adequate loan-loss allowance by accounting standards.

The Perspective of the Standards for Financial Accounting

The value of a business enterprise is ultimately determined by the extent to which its cash inflows exceed its cash outflows.⁵ Thus, the

information that investors ultimately need relates primarily to the net cash flow of the firm. However, merely reporting cash inflows and outflows may be misleading because the period in which cash expenditures occur is often different from the period in which cash revenues are received. For example, a bank that takes in a money market deposit on which it pays interest in one year may lend the funds to a borrower who will not be required to make either interest or principal payments until the following year. Reporting income on a cash basis in this case would be misleading. Firms that issue publicly traded securities are therefore required to follow what is called accrual accounting, in which revenue and the expenses associated with generating that revenue are recognized in the same period.

Accrual accounting requires that loan losses be recognized in the period in which they occur, even if an individual loan is not charged off until a subsequent period. For example, suppose that a textiles plant, the primary employer in a rural town with no other nearby sources of employment, closes on December 1, 2000. Even though on December 31, 2000, none of the loans made by a bank in that town have defaulted, the bank knows that because of the plant closing, a major portion of the loans will not be repaid. Under accrual accounting, the bank is obligated to recognize a reduction in the value of these loans, in turn reducing the bank's accounting earnings for the calendar year 2000.

The specific procedure used to account for loan losses is a multistep process. First, a bank compares the value of its loan-loss allowance (an adjustment of the value of its loans, which constitutes a contra-asset account) with the losses it expects to incur based on current economic conditions. If, as is normally the case, the expected losses due to past events exceed the amount in the allowance, the bank increases its loan-loss allowance and reports the increase on its income statement as its loan-loss provision (a noncash expense).⁶ As loans go bad

1. A brief review of the SEC's recent concern about bank loan-loss accounting is also provided in Baskin (1999) and Levitt (1999).
2. Although no bank has been directly accused of earnings management, excessive or deficient loan-loss allowances may be used to manage earnings. Earnings management is a practice that has attracted considerable SEC attention (see Levitt 1998). Also, see Loomis (1999) for a discussion of the SEC's overall efforts to reduce corporate earnings management.
3. The agencies issuing the joint interagency letters include the SEC, the Federal Deposit Insurance Corporation, the Federal Reserve Board, the Office of the Comptroller of the Currency (OCC), and the Office of Thrift Supervision (OTS). For the text of these interagency letters, visit the SEC's Web site at <http://www.sec.gov/news/presarch.htm>.
4. A framework for viewing the conflicting policy positions being taken by the SEC and bank regulators is provided by Wall and Eisenbeis (forthcoming).
5. The timing of the cash flows and the probability distribution of the cash flows (risk) are also important in valuing firms.
6. The expected losses due to past events would normally exceed the loan-loss allowance for two reasons. The first reason would be in recognition of the expected losses on loans made during the period. Second, the loan-loss allowance would have been reduced over the course of the period as specific bad loans from prior periods were written off.

during the course of the next period, the loans are not charged off directly against net income but instead reduce the balance in the loan-loss allowance.⁷ At the end of the accounting period, the cycle renews as the bank again compares the expected losses on outstanding loans due to past events with the balance in its loan-loss allowance.

Key in determining the accounting value of a bank's loan-loss provision is the assessment of the appropriate loan-loss allowance at the end of each period. Which procedure banks should use to arrive at the appropriate loan-loss allowance is at the heart of the SEC's discussions with SunTrust and other banks. Accounting procedures are also a critical concern of

bank regulators. A detailed discussion of the financial accounting standards for loan losses (with references) is presented in the box on page 6. This examination of accounting methods reveals that the SEC is not imposing a new standard on banks but rather appears to be trying to induce banks to follow long-standing accounting guidance. The discussion that

follows presents the highlights of the more detailed analysis provided in the box.

The SEC has the authority to set the accounting procedures for financial reporting by publicly traded firms, and sometimes it establishes procedures directly. However, in most cases the SEC defers to the FASB, which the SEC has designated as the private-sector organization responsible for setting the standards of financial accounting and reporting.

The FASB has established a set of broad principles for financial accounting by all publicly traded firms in its Statements of Financial Accounting Concepts. In its Statements of Financial Accounting Standards, the FASB has applied these concepts to a variety of specific accounting problems, including that of loan-loss accounting. The specific guidance provided by the FASB and the SEC with regard to loan-loss accounting generally follows the principles laid out in the concepts papers.

Some bank regulators would prefer more conservative, future-oriented loan-loss accounting procedures that better serve regulators' goals of maintaining bank safety and soundness. The principles laid out in the Statements of Financial Ac-

counting Concepts argue against setting financial accounting standards to attain the bank regulators' goals, contending that accounting standards should be geared to the needs of general-purpose users, such as equity investors, who cannot compel firms to meet their specific need for information. Bank regulators can and do compel banks to divulge detailed financial information and, hence, do not need financial accounting standards tailored to their needs.

The FASB principles also stipulate that financial statements should fairly present the income produced within the current reporting period. Thus, financial statements should not anticipate future events. The SEC has taken this principle to its logical limit, telling lenders, for example, that their loan-loss allowance at the end of 1999 should not anticipate losses due to computer programming errors that failed to properly handle the century date change (commonly known as the Y2K problem). Further, conservative assessments of a firm's assets are not a virtue in financial reporting since conservative estimates of asset values in one period generally result in the overstatement of the net income in future periods.

The Perspective of Bank Supervisors

Several key bank regulators, including Comptroller John D. Hawke, FDIC Chairman Donna A. Tanoue, and Office of Thrift Supervision Director Ellen Seidman, have expressed concern that the effect of the SEC's actions on loan-loss accounting may be to reduce bank loan-loss allowances. A reduction in the allowance "could have a profound effect on the continued safety and soundness of America's banking system and would not, in our judgment, be in the best interests of American taxpayers."⁸

High loan-loss allowances are thought to increase banks' ability to absorb losses without becoming financially distressed or failing if all else is held constant. However, the direct consequence of an increase in a bank's loan-loss allowance is merely that an accounting entry is made increasing the allowance and reducing reported net income (by increasing the expense account called provision for loan losses). The reduction in net income has the direct effect of reducing a bank's retained earnings and, thus, its owners' equity. Therefore, the ultimate effect of an increase in the loan-loss allowance is merely to increase the allowance on paper while decreasing both reported net income and owners' equity.

Any contribution of an increase in a bank's loan-loss allowance must occur indirectly through its effect on either a bank's risk exposure or by inducing a bank to increase its equity capital. One chan-

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nel through which an increase in the loan-loss allowance may eventually boost capital is by reducing a bank's ability to pay dividends. The dividend payments of all banks with national charters and many state banks are limited to the current year's reported accounting earnings plus retained earnings from recent years (two years in the case of national banks). An increase in the loan-loss allowance reduces both reported net income and the transfer to retained earnings. This constraint is most likely to be binding during periods of recession and, thus, would generally not limit banks during periods of sustained economic growth such as the late 1990s.

A second channel through which higher loan-loss provisions could affect banks is through banks' ability to comply with regulatory capital guidelines. Current U.S. standards are a combination of an international agreement on risk-based capital (the Basle Accord) and additional domestic leverage (or total assets) limits. The narrower measure of capital is called tier 1 capital and includes a variety of equity capital accounts including common stock, perpetual preferred stock, and retained earnings. Total capital includes not only tier 1 capital but also other types of accounts (tier 2 capital) that would absorb losses before they were borne by depositors. Such accounts include limited-life preferred stock, subordinated debt, and the loan-loss allowance to the extent that it is not allocated for losses on specific loans. The risk-based standards set minimum ratios for both tier 1 and total capital whereas the leverage constraint sets a minimum ratio only for tier 1 capital.⁹

Inclusion of the loan-loss allowance in total capital may seem undesirable if loan-loss accounting is based on the philosophies of expected losses espoused by economists and by the FASB, which perceives the intent of capital regulations as being

to provide a cushion to absorb unexpected losses. However, many banks have historically maintained a loan-loss allowance in excess of expected losses.

Compliance with the regulatory capital requirements is an important issue for U.S. banks. Banks with regulatory capital ratios judged insufficient by regulators may be refused permission to acquire other firms. Banks classified as undercapitalized may not pay dividends to their shareholders, may not pay management fees to their holding company, and are required to provide an acceptable plan for raising their capital ratios. Banks classified as critically undercapitalized (with equity capital less than 2 percent of assets) may be closed by the regulators even though their accounting capital could be positive and they are otherwise able to repay creditors in a timely manner.

If a bank increases its loan-loss allowance, the effect is to increase tier 2 capital while reducing tier 1 capital. If the transfer causes the tier 1 constraint to become binding, the bank would be required to issue more capital or reduce its measured risk. At present, tier 1 ratios are generally not binding for large U.S. banking organizations that must issue public financial statements complying with GAAP. Most of these banking organizations have capital ratios well in excess of the regulatory requirements and thus appear to have their own target tier 1 ratios.¹⁰ Increases in the loan-loss allowance at these banks may cause them to issue more capital or reduce their risk as measured under the risk-based capital standards of the Basle Accord.

Bank regulators stress the importance of building up the allowance during good times to reduce the financial stress on banks during periods of high loan losses. If a bank's capital ratio falls below regulatory requirements during a recession, the bank has two

7. If the bank unexpectedly recovers part of a loan that it had previously charged off, the recovery is added back to the loan-loss allowance. See Sinkey (1998) and Walter (1991) for a further explanation of the process for setting loan-loss reserves as well as a discussion of various ways the reserve has been historically determined.

8. The quote is taken from Barancik (1999). A review of the history of FASB, SEC, and bank regulatory guidance from the perspective of the bank regulators is provided by Tanoue (1999).

9. The capital requirements for state-chartered banks that are members of the Federal Reserve are provided in Regulation H. Appendixes A, B, and E discuss the measures of capital adequacy, and Subpart D of the regulation implements the provisions of prompt corrective action for state member banks. Prompt correction action defines five categories of capital adequacy (well capitalized, adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized) and provides a series of discretionary and mandatory actions as a bank's capital falls through the categories. State nonmember banks, national banks, and thrifts are subject to similar regulations promulgated by the FDIC, the OCC, and the OTS, respectively. Bank holding companies are also subject to minimum capital adequacy standards. The measures of bank holding company capital adequacy are defined in Appendixes A–E of Regulation Y. Bank holding companies are not directly subject to prompt corrective action. However, the primary assets of most bank holding companies are their banking subsidiaries. Thus, the continued viability of most bank holding companies would be in doubt if a relatively large banking subsidiary were closed due to inadequate capital.

10. The higher target ratios may reflect management's desire to maintain a buffer in case an unexpected growth opportunity arises or unexpected losses occur.

Financial Accounting Standards for Loan Losses

All banks must file financial statements with bank regulators that conform to regulatory accounting principles. The SEC further requires that all publicly traded bank holding companies report to investors using generally accepted accounting principles (GAAP).¹ The accounting rules under regulatory accounting principles are not necessarily the same as those of GAAP; in fact significant differences have existed in the past, particularly the regulatory accounting principles rules issued by the Federal Home Loan Bank Board for savings and loans. However, most of the differences between regulatory accounting principles and GAAP have been eliminated, in part because bank regulators were instructed by Congress to require that regulatory reports “shall be uniform and consistent with generally accepted accounting principles” by Section 121 of the Federal Deposit Insurance Corporation Improvement Act (FDICIA). Nonetheless, bank regulators need not always follow GAAP. If GAAP is “inconsistent” with minimizing the cost of resolving failed banks, the banking agencies may “prescribe an accounting principle which is no less stringent than generally accepted accounting principles.”

Although bank regulators could prescribe more stringent standards, in practice they have chosen to require banks’ loan-loss accounting to follow GAAP. Thus, to understand banks’ loan-loss accounting, one needs to understand the relevant pronouncements of the FASB. Two types of FASB pronouncements help explain GAAP accounting for loan losses. One is a series of Statements of Financial Accounting Concepts that explains the broad principles underlying GAAP as applied to all publicly traded U.S. corporations. The other is a number of Statements of Financial Accounting Standards that apply the broad principles to specific accounting issues.

Broad Principles

The FASB’s concept statements address several issues that are central to the debate on bank loan-loss accounting. In particular, arguments frequently advanced by bank regulators suggest that regulators’ goals of maintaining safety and soundness would be best served by requiring loan losses that are (1) forward-looking and (2) conservative. The concept statements argue against the regulators’ position for each of the issues raised by the regulators.

Statement of Financial Accounting Concepts No. 1: *Objectives of Financial Reporting by Business Enterprises*, issued by the FASB in November 1978, notes in paragraph 24 that there are many users of corporate financial statements and that the various users may have different needs. In paragraph 26, the paper argues that some users of the financial statements may have specialized needs but these users also have the power to obtain the information. One example is government authorities that set taxes or the rates charged by firms. Paragraph 28 indicates that the objectives of the statement “stem primarily from the informational needs of external users who lack the authority to prescribe the financial information they want from an enterprise.”² The focus on investors in the concept statement matches the SEC’s focus on investor protection. This focus also suggests that when a conflict arises between investors’ needs and bank regulators’ needs, GAAP should focus on investors because bank regulators can compel banks to provide them with any required information.

A second important issue raised by the regulators is the extent to which expected future economic conditions should be considered in setting an appropriate loan-loss allowance. For example, economic conditions in 1999 were in many ways extremely favorable for the financial condition of borrowers. A combination of technological developments, domestic macroeconomic policies, and the slowdown in some Asian countries in 1999 combined to produce a year of rapid economic growth with low inflation. While such strong economic conditions are possible and perhaps even likely in 2000, historical experience would suggest that any change in economic conditions would be likely to have adverse implications for banks’ loan losses. Thus, banks would probably report higher loan-loss allowances if they took weighted averages of the possible scenarios for 2000. However, the Statements of Financial Accounting Concepts emphasize that accrual accounting focuses on the events that occur within a reporting period. For example, paragraph 44 of Statement of Financial Accounting Concepts No. 1 states, “Accrual accounting attempts to record the financial effects on an enterprise of transactions and other events and circumstances that have cash consequences for an enterprise in the periods in which those transactions, events, and circumstances occur.”

The third issue raised by the regulators is whether financial statements should place higher priority on conservative estimates of the value of the firm's assets or on providing accurate measures of their income. At one time, accountants emphasized conservative estimates of earnings and assets. In May 1980 the FASB issued its Statement of Financial Accounting Concepts No. 2: *Qualitative Characteristics of Accounting Information*, which states in paragraph 93, "The convention of conservatism, which was once commonly expressed in the admonition to 'anticipate no profits but anticipate all losses,' developed during a time when balance sheets were considered the primary (and often only) financial statement and details of profits or other operating results were rarely provided outside business enterprises. To the bankers or other lenders who were the principal external users of financial statements, understatement for its own sake became widely considered to be desirable, since the greater the understatement of assets the greater the margin of safety the assets provided as security for loans or other debts." However, firms have since been required to provide additional financial information, and the users of financial statements now often include investors in equity and debt obligations who are primarily concerned with the cash flow of the firm. Such investors may find earnings to be a more helpful indicator. Paragraph 43 of Statement of Financial Accounting Concepts No. 1 states, "The primary focus of financial reporting is information about an enterprise's performance provided by measures of earnings and its components." Paragraph 94 of Statement of Financial Accounting Concepts No. 2 continues, "Once the practice of providing information about periodic income as well as balance sheets became common, however, it also became evident that understated assets frequently led to overstated income in later periods." Paragraph 96 adds, "The Board emphasizes that any attempt to understate results consistently is likely to raise questions about the reliability and integrity of information about those results and will probably be self-defeating in the long run. . . . As a

result, unjustified excesses in either direction (conservative or unconservative) may mislead one group of investors to the possible benefit or detriment of others." Consistent application of these Statements of Financial Concepts to loan-loss accounting would require banks to place priority on accurate estimates rather than conservative estimates of expected losses due to past events when establishing their loan-loss allowance.

Accounting for Loan Losses

The general standard for setting loan losses is established by Statement of Financial Accounting Standards No. 5: *Accounting for Contingencies* (1990a). Paragraph 8 of Statement 5 sets two standards for accruing an estimated loss from a loss contingency (including losses on loans): "(a) Information available prior to issuance of the financial statements indicates that it is probable that an asset had been impaired or a liability had been incurred at the date of the financial statement. It is implicit in this condition that it must be probable that one or more future events will occur confirming the fact of loss. (b) The amount of the loss can be reasonably estimated." Further guidance for measuring and disclosing losses on loans that "are *individually* deemed to be impaired" is offered in Statement of Financial Accounting Standards No. 114: *Accounting by Creditors for Impairment of a Loan* (1993) according to Leonard, Lucas, and Seidman (1999; emphasis in original).³

The conditions for recognizing a loan loss in Statement of Financial Accounting Standards No. 5 are consistent with the subsequent Statement of Financial Accounting Concepts in several ways. Statement 5 focuses on the requirements of general purpose users of financial statements who need "accurate" reported net income rather than those of creditors, who might benefit from conservative valuations. The statement requires not merely that losses must stand a significant chance of occurring but additionally stipulates that losses must be "probable." Moreover, Paragraph 59 of

1. Banks are specifically exempt from SEC disclosure requirements. However, nonbank firms that control banks—bank holding companies (BHCs)—are not exempt from SEC requirements. This structure gives the SEC direct power over banks' accounting since virtually all major banking organizations are organized as BHCs and issue publicly traded securities.
2. While creditors and equity investors cannot compel the production of information, this restraint does not imply that they have no influence over the information they receive about the firm. Potential creditors demand a higher rate of return and potential equity investors pay a lower price for the stock of firms that they believe are providing inadequate information.
3. Statement 114 was subsequently amended by Statement of Financial Accounting Standards No. 118: *Accounting by Creditors for Impairment of a Loan—Income Recognition and Disclosures* (1994).

Statement 5 is clear in stating that loan-loss provisions should reflect events occurring within the reporting period and not anticipate future events: "Further, even losses that are reasonably estimable should not be accrued if it is not probable that an asset has been impaired or a liability has been incurred at the date of an enterprise's financial statements because those losses relate to a future period rather than the current or a prior period. Attribution of a loss to events of the current or prior periods is an element of asset impairment or liability incurrence."

The SEC has interpreted this statement to mean that banks should not even take account of known events that will affect loan losses if these events occur outside the period. For example, in accounting for increases in loan losses due to disruptions arising from the Year 2000 computer-programming problems, the SEC has told companies that their loan losses for 1999 should be based on events in 1999 only. Since the "event" that causes the losses happens in the year 2000, the SEC pronouncement implies that the associated loan losses should be recognized in the year 2000 (see SEC 1998).

In terms of identifying loan losses, Statements 5 and 114 provide some further guidance. Statement 5 defines probable as "the event or events are likely to occur." Statement 5 does not require that all of the loan-loss allowance be associated with specific loans. Paragraph 22 permits loan losses "even though the particular receivables that are uncollectible may not be identified." Statement 114 provides some guidance on how to measure the amount of the loss.

The guidance provided by Statements 5, 114, and 118 is supplemented by specific suggestions to banks for estimating loan losses in the publication *Audit and Accounting Guide for Banks and Savings Institutions*

by the American Institute of Certified Public Accountants (1999). This publication suggests a number of factors that banks may consider in setting loan-loss allowances, but it does not provide an exact formula for calculating the loan-loss allowance. Management must use its judgment in selecting the right factors to consider for individual loans or groups of loans. Further, management's analysis may point to a range of losses rather than indicate a single figure, and management must use its judgment to select a figure from the range.

The SEC provided further guidance to banks with Financial Reporting Release 28 (FRR-28), *Accounting for Loan Losses by Registrants Engaged in Lending Activities*. FRR-28 requires that banks have a systematic process for establishing a range of loan losses. Further, the loan-loss allowance reported by a bank should fall within the range of loan losses estimated by the procedure. Chief Accountant of the SEC Lynn E. Turner stated in a February 10, 1999, speech, "While the staff understands that the determination of the allowance is a process that involves judgment, we believe that there should be documentation . . . which clearly supports the estimated range of credit losses inherent in the portfolio. We would question instances where the recorded allowance is outside (*higher or lower*) of this estimated range of probable credit losses" (emphasis in original).

FRR-28 also calls for disclosure of the process used to estimate loan losses and stipulates that the reported allowance be consistent with the discussion in the Management Discussion and Analysis section. Speaking to the AICPA Bank and Savings Institutions Annual Conference, Turner (1998) states, "You cannot have it both ways: significant issues requiring higher levels of allowances require full and fair disclosure of those issues to investors."

options for significantly raising its tier 1 capital ratio in the short run: (1) issue new equity capital or (2) reduce its risk exposure as measured by the Basle Accord. From the regulators' viewpoint both of these responses are problematic. Banks experiencing losses and falling capital are likely to have relatively low stock prices, and their managers may be unable or, more likely, unwilling to issue new stock at what they perceive as a distressed price. Yet the alternative—reducing measured risk exposure solely to comply with the capital requirements—may lead to decreased lending solely to lessen measured risk exposure. Such a reduction in lending may cut loans to otherwise creditworthy borrowers, potentially creating a credit crunch that might worsen an economic downturn.¹¹

Further, building up the loan-loss allowance account during good times and using part of the increase to absorb losses during economic downturns is not necessarily manipulating income from a regulatory perspective. Regulators believe that most bad loans are made during good economic times.¹² A strong economy that helps banks increase earnings also encourages banks to relax their underwriting standards and take greater risks. During economic downturns some of these bad loans are revealed. Thus, requiring banks to bolster their allowances during good times is merely forcing them to acknowledge that they are probably making problem loans that will not be revealed until the next recession. Allowing banks to operate with low allowances that do not reflect the buildup of weak loans exacerbates the problem of less strenuous underwriting standards by increasing the reported profitability associated with risky lending.

Theory and Evidence on Bank Loan-Loss Accounting Practices

Numerous studies have examined the recent use of accounting policies to manage earnings. Some studies address the broad issue of management of reported earnings. Others focus specifically on the use of loan-loss accounting as a tool for managing reported earnings and capital. This literature addresses several important questions: (1) Do banks use loan-loss accounting to manage reported capital and earnings? (2) Have bank regulators been consistent in requiring banks to follow conservative accounting policies on loan losses?

(3) If banks manage earnings, does doing so generate costs for investors or firms? (4) If banks manage earnings, does doing so generate additional costs for the bank regulatory system? In brief, the literature provides conflicting evidence on the nature of bank earnings management and suggests that bank regulators had not consistently required banks to follow conservative policies before FDICIA; that investors can see through loan-loss accounting but that earnings management may nevertheless generate costs; and that even though bank regulators may see through loan-loss accounting, individuals overseeing the regulators may sometimes be deceived.

Is Loan-Loss Accounting Used to Manage Earnings and Capital? If financial and managerial labor markets were strong-form efficient, in the sense that prices fully reflected all information, and if regulators relied on market-value information, banks would have no incentive to manage their reported financial statements. Financial statements would not affect how markets or regulators evaluate banks or their managers. Thus, a good starting point for assessing the management of loan-loss accounting is with a consideration of what incentives firms might have to manage earnings and capital. If it is established that firms have incentives to manage earnings, then the next step is to look for evidence that loan-loss accounting is managed to obtain earnings or capital targets.

Incentives to Manage Earnings and Capital. One requirement for financial and labor markets to be strong-form efficient is that the marginal cost of obtaining and analyzing information must be zero. If either is costly, decisionmakers (investors and boards of directors) must weigh the costs against gains. Further, incentives arise to find ways of structuring information production to obtain the most efficient disclosure and analyses. For example, Dye (1988) provides a model in which earnings management may maximize shareholder wealth for two reasons: (1) the cost-minimizing contract that spurs managers to maximize firm value may also encourage earnings management, and (2) the firm may be able to improve the terms of its contracts with outsiders by managing earnings.

DeGeorge, Patel, and Zechhauser (1999) discuss psychological evidence that all humans use thresholds in evaluating information. For example, people may use rules of thumb to reduce transaction costs,

11. See Hancock and Wilcox (1998) and the sources cited therein for a discussion of the literature on the credit crunch. Also see Eisenbeis (1998) for a critique of Hancock and Wilcox (1998).

12. See, for example, comments by Federal Reserve Bank of New York President William J. McDonough as quoted by Cope (1999).

in this case the costs of obtaining and processing information.¹³ The authors note that three thresholds may be relevant for reported earnings: zero earnings, prior year's earnings per share, and stock analysts' earnings expectations.

These thresholds may be important to investors. For example, Barth, Elliott, and Finn (1999) demonstrate that firms able to sustain increases in reported earnings per share over several years have higher price-earnings ratios than other firms. These firms also experience larger stock price declines relative to earnings multiples at other firms when they report an earnings decrease after a previous pattern of increases. Holthausen, Larcker, and Sloan (1995)

and Guidry, Leone, and Rock (1999) further show that managers respond to the earnings target in their compensation contracts.

Firms may have an incentive not only to manage accounting earnings but also to manage accounting capital. Whether loan-loss accounting influences the market's evaluation of a bank's capital adequacy is

unclear. However, reported accounting capital plays an important role in the regulator's evaluation of a bank's capital adequacy as noted above. Wall and Peterson (1987; 1995) find further evidence that in most cases regulatory capital adequacy constraints are binding on a bank's management of its capital adequacy ratios.

Theory of Earnings and Capital Management.

If firms could costlessly attain their targets for reported income and capital, they would always attain these targets. However, even a casual review of the business press suggests that firms sometimes miss their targets, which in turn suggests that firms are not able to manage earnings costlessly. Given that earnings management is costly over some range, a question arises as to exactly how firms should use their discretion over reported earnings.

DeGeorge, Patel, and Zechhauser (1999) provide a two-period model in which managers manage reported earnings to maximize their own compensation, which is a function of reported earnings.¹⁴ Their model does not distinguish between managing via the timing of real actions (investment, sales, expenditures, or financing) and managing via con-

trol over the reporting of discretionary elements of accounting. The starting point of their analysis is with "latent earnings," which are the earnings the firm would report if its loan-loss provision were set to its correct value. In their model, the firm's latent earnings may reflect one of three situations: (1) The firm may be so far below the threshold that trying to reach it via managing earnings would be too costly. In this case, the firm seeks to report earnings less than its latent earnings, an approach they call "saving for a better tomorrow." (2) If the firm is below its target but reaching the target is not too costly, managers use their influence to boost reported earnings and achieve the target, a process they describe as "borrowing for a better today." (3) Firms above the target reduce their current reported earnings (up to some point) to be able to report higher earnings in the next period, a process they call "reining in." Both the amount of saving for tomorrow and the amount by which earnings are reined in are capped in their model with certainty.

Koch and Wall (1999) focus more specifically on the use of accounting expense accruals to help manage reported earnings. They develop a two-period model of the use of accounting accruals in which managers seek to maximize their own expected discounted earnings subject to constraints imposed by auditors. Four different outcomes are possible in their model, depending upon the parameters of the managerial compensation function.¹⁵ One outcome, which is identical to the results of DeGeorge, Patel, and Zechhauser, is called the Occasional Big Bath. A second outcome is that firms always move toward their reported earnings target in the first period, a result they call Income Smoother. A third possible outcome is that the firm always minimizes its loan losses to report the highest possible income, an outcome that they call Live for Today.¹⁶ The fourth possibility, called Maximize Variability, may result in firms moving away from their current earnings target.

Evidence of Earnings and Capital Management. While this analysis focuses on how banking organizations manage earnings via their loan-loss provisions, the SEC is concerned with the use of accounting discretion to manage earnings in general and not just in the use of such discretion by banks. Two studies of the distributions of firms' reported earnings provide substantial evidence that firms in general are managing their earnings. Burgstahler and Dichev (1997) look at firms' earnings in relation to two thresholds: zero earnings and last year's earnings per share. Their sample consists of all firms on the annual industrial and research Compustat databases for the years 1976 to 1994, excluding only banks, financial institutions, and

The key to evaluating the different accounting philosophies is the extent to which investors and regulators can combine the reported loan-loss numbers and other information to obtain reasonable estimates of the loan-loss measure that best meets their needs.

firms in regulated industries (utilities). They plot histograms of the distribution of earnings scaled by market value and find a statistically significant dip in the plots immediately below both of their thresholds. This dip is consistent with the hypothesis that firms manage their earnings. Specifically, should their underlying or latent accounting earnings prove slightly less than a firm's threshold, the firm undertakes measures to boost reported income.

DeGeorge, Patel, and Zechhauser (1999) look at the distribution of earnings in relation to the earnings expectations of stock analysts as well as the two thresholds examined in Burgstahler and Dichev (1997). DeGeorge, Patel, and Zechhauser's sample consists of 5,387 firms providing partial or complete data over the period from 1974 to 1996. They plot earnings per share around some critical thresholds but fail to find evidence of a dip prior to the threshold, a result that they argue represents methodological differences with Burgstahler and Dichev. However, they do find statistically significant evidence of a pileup of observations at exactly the threshold, which is also consistent with earnings management.

The results presented by these analysts do not prove that the firms in the sample were using discretionary accounting policies to hit their earnings targets. Indeed, Burgstahler and Dichev (1997) found evidence that firms were managing cash flow from operations and changes in working capital but not through accruals merely to attain their earnings thresholds. Although the concern about earnings management is not limited to banks, these results do not necessarily apply to banks, which were excluded from their sample.

A number of studies have focused specifically on the issue of firms' use of accruals to manage reported

earnings. These studies, which are summarized in Table 1, typically model banks' loan-loss allowances as a linear function of some fundamental explanatory variables, such as total loans and nonperforming loans, and of an earnings and capital target. These empirical models, which generally predate the theoretical models, implicitly assume that banks are always moving toward their earnings target and thus implicitly are based on a model similar to Koch and Wall's (1999) "Income Smoother."

Although these analyses reach somewhat similar conclusions, they also reveal important differences, as shown in Table 1. These studies estimate the amount of the loan-loss provision required to cover expected losses and treat the remaining provision as what is called discretionary loan-loss provision. Each of the studies that has examined capital has concluded that banks use their loan-loss accounting to manage capital. However, they do not reach a consensus about the direction of this effect. Collins, Shackelford, and Wahlen (1995), Beaver and Engel (1996), and Ahmed, Takeda, and Thomas (1999) conclude that the discretionary loan-loss provision is negatively related to capital; Beatty, Chamberlain, and Magliolo (1995) conclude that discretionary loan-loss provision is positively related to capital. Disagreement also exists about whether banks use discretionary loan-loss provision to manage earnings: Collins, Shackelford, and Wahlen and Beaver and Engel find that they do; Beatty, Chamberlain, and Magliolo and Ahmed, Takeda, and Thomas find that they do not. One possible explanation for the differences is that the studies used different sample periods. If incomplete managerial discretion over the loan-loss provision is a factor or if the asymmetry in costs is important, then the results may depend on the sample period. For example, if the

13. Another interpretation of the use of thresholds may be loosely based on Persons's (1997) argument that managerial lying may sometimes be efficient. In his model, managers sometimes provide false reports to reduce inefficient monitoring and contract renegotiation. In the context of financial reporting, one possibility is that a firm's board of directors and investors expect management to use its accounting discretion to attain at least a particular threshold. Truthful accounting could lead to excessive monitoring given that the threshold is somewhat arbitrary and that accounting data contain some noise. Instead, the manager may be allowed limited discretion in managing accounting earnings given the common knowledge that failure to attain the threshold would induce additional monitoring by the directors and a drop in stock price in financial markets. In such a case, failure to attain the threshold would be a bad signal, suggesting that the firm's underlying performance fell so far below the threshold (in that period or cumulatively over several periods) that the firm lacked sufficient discretion to attain its threshold. If everyone shared this set of beliefs, then additional monitoring by the board of directors (possibly leading to reduced managerial compensation or even termination) and a substantial drop in the firm's stock price would be justified.
14. Healy (1985) provides an earlier model that generates similar results with a variable bonus for exceeding the target. The key to the similarity of results is that Healy imposes a cap on the magnitude of the variable bonus.
15. The model also permits the existence of interior solutions that depend on neither discontinuities in the managerial compensation function nor outside constraints on managerial discretion. However, nothing in the model guarantees the existence of such interior solutions.
16. This outcome is possible if the manager places a very high discount rate on next period's income.

TABLE 1 Summary of Loan-Loss Studies

Study	Sample Period	Capital Management	Earnings Management
Beatty, Chamberlain, and Magliolo (1995)	1986–89	Positive	Yes
Collins, Shackelford, and Wahlen (1995)	1971–91	Negative	No
Beaver and Engel (1996)	1977–84	Negative	No
Ahmed, Takeda, and Thomas (1999)	1987–95	Negative pre-1991	Yes

difference between book loan-loss allowance and economic loan-loss allowance is near the auditors' maximum allowable discrepancy, firms may not be able to reduce their reported loan-loss provision to obtain earnings targets. The auditor may insist on minimum levels of loan-loss provision to maintain the loan-loss allowance at acceptable levels. Similarly, if the expected costs of missing the capital target during certain periods are large relative to the costs of missing the earnings target (such as when banks generally have low capital ratios), managers may choose to forgo attaining earnings targets if necessary to achieve their capital targets.

Evidence that firms manage reported earnings to help attain regulatory capital standards is provided by Moyer (1990) and Scholes, Wilson, and Wolfson (1990). Moyer finds that reported loan charge-offs, the loan-loss provision, and the securities gains or losses are all managed to help attain regulatory capital adequacy guidelines. Scholes, Wilson, and Wolfson find evidence consistent with the hypothesis that banks choose to realize gains and defer losses to increase their regulatory capital.

Summary of Evidence on Management via Loan-Loss Accounting. More work is needed to fully understand both the theory and practice of banks' loan-loss accounting. However, the available evidence clearly suggests that banks have an incentive to use loan-loss accounting to help manage reported earnings and capital. Further, the evidence suggests that banks in general are using loan-loss accounting to help manage the earnings and capital they provide in their financial statements.

Have Bank Regulators Consistently Required Conservative Loan-Loss Accounting?

One defense of requiring banks to follow GAAP accounting is that past deviations from GAAP have been very costly. Harvey J. Goldschmid, General Counsel of the SEC, made this argument in testimony before the U.S. House of Representatives Subcommittee on Financial Institutions and Consumer Credit of the Banking Committee and Financial Services Committee (1999). In particular, he made numerous references to the problems that arose for the Federal Savings and Loan Insurance

Corporation (FSLIC) when thrifts were allowed to follow regulatory accounting principles that allowed them to report higher capital than would have been permitted under GAAP. Goldschmid was correct in arguing that thrifts' regulatory accounting principles in the 1980s were less stringent than GAAP and that providing funds to honor the FSLIC's commitments imposed a substantial cost on the U.S. Treasury. However, failure to adhere to GAAP for loan-loss accounting was not the principal problem, and adherence to GAAP may not have eliminated the losses to the Treasury. A substantial part of the problem was that thrifts were allowed by (indeed, required by) GAAP to carry long-term, fixed-rate mortgages on their books at historic cost even after the market value of these loans had dropped substantially due to a large jump in market interest rates.

A better example of how deviations from GAAP accounting for loan losses can create a misleading picture of banks' financial condition over an extended period is provided by the way in which large banks accounted for loans to less developed countries (LDCs) in the 1980s. Indeed, former FDIC Chairman L. William Seidman stated that "U.S. bank regulators, given a choice between creating panic in the banking system or going easy on requiring banks to set aside reserves for Latin American debt, had chosen the latter course. It would appear the regulators made the right decision" (1993, 127). After the fact, it appears that regulators made the "right decision" because the affected banks were able to generate enough earnings to allow them to report adequate capital levels when they finally did acknowledge the losses. This example of regulatory forbearance in loan-loss accounting did not result in the Treasury actually bearing losses. However, if banks had been unable to generate sufficient earnings and had taken increased risk to boost their capital ratios, the cost to the Treasury from this forbearance might have been substantial.

Today the Federal Deposit Insurance Corporation Improvement Act gives regulators explicit directions to follow GAAP unless more stringent accounting would better protect the deposit insurance

fund. Thus, one could argue that even if the regulators had exercised forbearance in the past, they would not do so after FDICIA. Fortunately the banking environment has been relatively benign since the passage of FDICIA, so this requirement is, as yet, untested.¹⁷

Does the Management of Loan-Loss Accounting Increase Costs to Investors or Managers?

Evidence that banks' management of loan-loss accounting deceives investors would provide important support for the SEC's concern about the management of reported loan-loss allowances. The available evidence, however, suggests that investors understand that banks may use their loan-loss accounting to manage their financial reports. Anecdotal evidence that investors see through banks' loan-loss accounting is provided by R. Harold Schroeder, a senior equity analyst in the research group at Keefe, Bruyette & Woods, in his testimony before the U.S. House of Representatives Subcommittee on Financial Institutions and Consumer Credit of the Banking Committee and Financial Services Committee. He argues that "investors generally are able to separate 'true core earnings' from 'earnings management.'" He states that "over time banks develop a reputation based on past loss experiences that the market can readily assess and take into consideration in evaluating the quality of a specific bank's earnings" (1999, 327).

Empirical studies generally support the claim that investors see through the use of loan-loss accounting to manage earnings and capital. One set of tests looks at investors' responses to announcements that imply higher loan losses between financial reports. If investors are able to reasonably accurately anticipate losses before banks announce their loan-loss provisions, then the provisions may not add much to investors' information set. Tests focusing on banks' stock market returns around the time of announcements related to loans to less-developed countries (principally Latin American countries) in the 1980s are consistent with this conjecture. Musumeci and Sinkey (1990b) analyze the case of the Brazilian debt moratorium in 1987. They note that in 1987 banks provided information about their exposure in Brazil to investors and reported that an active secondary market existed in LDC debt. They find that investors acted rationally in responding to Brazil's actions and thus reduced banks' stock prices in proportion to their individual exposure in Brazil—prior

to the release of the banks' financial statements. Thus, the market formed estimates of banks' losses on these loans prior to their recognition on the banks' financial statements.

The announcement of a debt moratorium by Mexico in 1982 provided another test of financial market response to news of loan quality problems. While investors knew that many publicly traded banks were making loans to Mexico and other LDCs, banks were not disclosing their exposure to individual countries nor did they acknowledge a secondary market in LDC debt. Nevertheless, studies by both Bruner and Simms (1987) and Smirlock and Kaufold (1987) find that the risk-adjusted returns of bank stocks accurately reflected their exposure to Mexico within, at most, a few days of the announcement of the debt moratorium.

Addressing the question of banks' loan-loss accounting more specifically, Musumeci and Sinkey (1990a) examine bank stock returns around the time of Citicorp's announcement (and subsequently by other large banks) to increase

loan-loss allowances to provide for losses associated with loans to LDCs. They find significant positive, abnormal stock returns after the Citicorp announcement. Such a market response would be almost impossible to rationalize if one believed that the large banks' accounting for the LDC loans had deceived investors. However, if the market had already adjusted Citicorp's earnings and capital for the unrecognized loan losses, the positive reaction may be rationalized in a variety of ways. For example, the increased allowance may have been taken as a signal that the bank would restructure to boost earnings or take a more aggressive approach to collecting the loans to LDCs.

Empirical analysis of security prices and returns in relation to banks' loan-loss accounting also provides evidence that investors see through banks' management of their loan-loss accounting. Beaver and Engel (1996) estimate the nondiscretionary

Both investors and regulators benefit if banks follow consistent procedures in setting loan-loss allowances that facilitate comparability of earnings and allowances across banks and through time.

17. Kane (1997) argues that the incentive structure facing regulators is an important determinant of their behavior. He suggests that prior to FDICIA many of the incentives provided to regulators encouraged them to exercise forbearance on large, financially weak banks. He argues that FDICIA only partially corrects the problem.

part of banks' loan-loss allowance by regressing the allowance on a variety of fundamental variables including charge-offs and nonperforming loans. The difference between the actual and estimated allowance is assumed to be discretionary (plus a random, mean-zero error). Beaver and Engel then regress the market value of the bank on several variables, including net income, loan-loss allowance, and discretionary loan-loss allowance. They find that the coefficient on the total loan-loss allowance is significantly negative (higher allowance implies lower market value) but that the coefficient on the discretionary part of the loan-loss allowance is insignificant. This finding suggests that mar-

Empirical evidence suggests that banks' loan-loss accounting policies reflect more than just anticipated future losses. Thus, investors would generally benefit from forming their own estimates of each bank's expected loan losses.

ket participants see through the reported loan-loss allowance and place different values on the discretionary and nondiscretionary portions.

Even if investors see through earnings management without incurring costs, it is not necessarily costless to firms and their investors. Stein (1989) develops a model in which managers may borrow from future

earnings to boost the current period's reported net income and managers' compensation. This process of borrowing from future earnings reduces the net present value of the firm. Investors know that managers can and do borrow from future earnings, but they cannot determine the extent of borrowing if it is constrained within some limits. Even though borrowing from future earnings is irrational in the sense that it reduces the expected returns to both managers and investors, shareholders anticipate earnings management such that a firm reporting low earnings is assumed to have low permanent earnings. Therefore, if earnings management is anticipated and managers care about their firm's share price in the short run, individual managers will predictably attempt to borrow, and the market's expectations are correct.

A firm's management of loan-loss accounting is not equivalent to borrowing from future earnings in Stein's (1989) model. Nevertheless, such management could impose costs on firms and investors. For example, earnings management could be costly to banks if their loan collection efforts were influenced by accounting policies. Musumeci and Sinkey

(1990a) interpret Citicorp's LDC loan provisioning in 1987 as a measure that allowed it to take a tougher negotiating stance with LDC borrowers. MacDonald (1999) provides evidence that earnings management may be costly to analysts and investors. MacDonald quotes Michael Mayo, a bank analyst at First Boston, as saying, "The reported profits number is now considered an accounting fiction." She reports that a number of stock analysts are reducing the importance of reported earnings and substituting an estimate of cash flow. While finance theory suggests that investors should be concerned about cash flows, the increased emphasis on cash flows creates problems. Because the cash account is subject to substantial manipulation, as noted in the section on financial accounting standards, stock analysts do not literally look at changes in it. Instead, they take pretax net income and adjust it for items that do not have direct cash flow implications, such as depreciation, to obtain a cash-earnings estimate. There is nevertheless no common way of calculating cash flow. The resulting confusion may increase costs to investors attempting to evaluate the stock recommendations of different analysts.

Does the Management of Loan-Loss Accounting Increase Costs to Bank Regulators or Those Overseeing the Regulators? If regulators were deceived by banks' loan-loss accounting, it could have serious implications for their ability to reduce losses to the FDIC from bank failure. However, such deception appears unlikely given that regulators regularly send examiners to review individual banks' loan portfolios. Supporting evidence that examiners are not deceived is provided by Dahl, O'Keefe, and Hanweck (1998), who find that bank examiners use their independent analysis of bank loan portfolios to influence the timing of a bank's loan-loss recognition.

A bigger concern is that misleading loan-loss accounting may confuse taxpayers and their representatives in Congress. Kane (1997) suggests that government regulators should be viewed as self-interested agents serving both the regulatees and the taxpayers. He observes that regulatees will pressure regulators in a variety of ways not to impose discipline on the industry, including job offers to "good regulators" and public criticism of "bad regulators," and that regulatees will also circulate misinformation to discourage proactive regulatory intervention. Kane argues that senior regulators often have incentives to cooperate with the industry in putting out disinformation to discourage intervention by taxpayers and their representatives. In particular, he points to the savings and loan debacle:

the problem developed over many years, but its existence was first denied, and then its magnitude was underestimated.

A partial solution to the issues discussed by Kane (1997) is to provide the public with information that does not underestimate taxpayers' exposure to loss. One important aspect of such information is banks' loan-loss allowances. If taxpayers are to assess their exposure accurately, they need reasonable estimates of expected loan losses. Kane's analysis provides some support for a policy of preventing banks from using their loan-loss accounting to manage earnings and capital. However, his analysis does not provide unqualified support for the position of the financial accounting authorities. Taxpayers underestimate their exposure to loss in Kane's analysis when banks' allowances understate expected losses arising in response to events in any period. Allowances that somewhat exceed expected losses may not cause them to underestimate their exposure. Further, taxpayers' interest in loan losses is not limited to those precipitated only by events prior to the end of a reporting period—the approach currently required by GAAP. Taxpayers risk exposure from all sorts of losses, including those that occur because of expected future events. Thus, while banks' adherence to GAAP for loan-loss accounting may be an improvement over their loan-loss accounting practices in some prior periods, taxpayers' interest may be even better served if banks' loan-loss accounting were more conservative and forward-looking than GAAP permits. Moreover, GAAP accounting prohibits the recognition of losses due to changing interest rates for a large part of banks' portfolios.

Public Policy Issues

If banks follow the loan-loss accounting procedures designed to meet regulators' needs most effectively, the outcome would be substantial income smoothing when compared with the FASB's approach, which measures income as the result of events happening during the period ending on the date of the financial statements.¹⁸ Conversely, if loan-loss accounting follows the approach advocated by the FASB, banks may have a smaller cushion for absorbing expected losses arising because of expected future events. Taking the comments of the respective sides at face value provides a potential public policy dilemma. Two unsatisfactory options present themselves: (1) to provide investors with

the information they need to value firms and force banks to be underreserved and, hence, possibly undercapitalized or (2) to allow banks to “build a cushion” during good times at the cost of misleading investors about the true variability of earnings. An important question in evaluating the two policy alternatives is determining whether this dilemma is unavoidable or whether it is a consequence of the two sides' positions on the importance of reported net income and the process of measuring capital adequacy.

Net Income. Empirical evidence suggests that banks' loan-loss accounting policies reflect more than just anticipated future losses. Thus, investors would generally benefit from forming their own estimates of each bank's expected loan losses. Available evidence suggests that investors form such an estimate for each bank using publicly available information about non-performing loans, the growth rate and composition of the loan portfolio, the “credit culture” as evidenced by a bank's historic loan losses, and economic conditions. The issue is not whether the SEC's actions are required for investors to be able to form reasonably accurate estimates of banks' expected loan losses. Banks already provide substantial information for investors to form their own estimate of expected provisions. Rather, the issue is whether investors would form more accurate estimates of loan-loss provisions, allowances, and net income at lower cost as a result of recent SEC actions.

Whether investors would significantly reduce their efforts to calculate a true loan-loss allowance if banks strictly followed the SEC's guidelines is unclear. The SEC's guidelines, which direct banks to adopt a consistent methodology, would lessen, but not totally eliminate, banks' ability to manage their loan-loss provisions. While the SEC calls upon banks to set loan-loss provisions that are within the range of reasonable provisions indicated by the guidelines, it has not required banks to adopt a formula that would result in a single number to be used as a

The question of whether changes in banks' loan-loss accounting would threaten their safety and soundness tends to overlook regulators' ability to require banks to substitute higher capital for lower provisions.

18. For a general review of the literature on earnings management and the implications of the findings for public policy, see Healy and Wahlen (1999).

requirement. A “cookie cutter” approach that applies a single formula is unlikely to be optimal because difficult-to-quantify factors may cause variations in the best estimate of appropriate provisions across both banks and time for individual banks. Yet, any discretion allowed to banks in setting provisions may be used to manage reported earnings and capital.

Further, investors not only care about changes in loan values due to events that occurred within a reporting period but also about changes in loan values due to events that are expected after a period ends. For example, in valuing a bank’s securities investors might be as interested in changes in loan losses resulting from, say, changes in bankruptcy

laws taking effect next year or from anticipated changes in macroeconomic conditions as they would be in losses resulting from the failure of a firm in the current year. Existing accounting guidelines nevertheless require banks to ignore the implications of expected future events on the current period’s reported provisions and allowance even if the

future event is virtually certain to occur. Thus, investors could not rely on the reported loan-loss allowance to incorporate all information on a bank’s expected losses based on past and future events under existing accounting guidelines.

Capital Adequacy. The question of whether changes in banks’ loan-loss accounting would threaten their safety and soundness tends to overlook regulators’ ability to require banks to substitute higher capital for lower provisions. Implicit in current U.S. capital regulations is the assumption that banks’ allowances generally incorporate total expected losses, including those arising from future events.

If the assumption that part of the loan-loss allowance represents “extra” provisioning for unexpected losses is incorrect, the treatment of the allowance for capital adequacy purposes is inappropriate. U.S. regulators could revise the definition of tier 2 capital to exclude the loan-loss allowance.

If the assumption that the loan-loss allowance fully captures expected future losses is faulty, regulators should consider measures to require banks to increase their cushion to absorb losses. Although

this assumption appears to be inaccurate under existing accounting standards, the FASB’s trend toward requiring fair value accounting for financial instruments may address regulatory concerns about expected future losses. The FASB has already required the use of fair values for financial reporting in two capital statements.¹⁹ Further, in testimony before the U.S. House of Representatives Subcommittee on Financial Institutions and Consumer Credit of the Banking Committee and Financial Services Committee on June 16, 1999, Timothy S. Lucas, director of research and technical activities at the FASB, stated that the FASB is currently working on a project that would require all financial instruments, including loans, to be carried at full value. He stated that the FASB believes in fair-value accounting for all financial instruments once certain issues are addressed, adding that the board plans to issue a “preliminary views document” in the fourth quarter of 1999.²⁰ If banks were required to recognize the fair value of loans in their financial statements, losses due to expected future events would be incorporated into financial statements because investors do not draw a distinction between likely losses due to past events and likely losses due to future events.

If fair-value accounting for loans is not required, bank regulators need to adjust their accounting or capital guidelines to ensure that banks are maintaining an allowance that incorporates expected future events. One way of doing so would be to change regulatory accounting principles, which currently follow the GAAP definition, so that loan-loss allowance is based on all expected credit losses on a bank’s portfolio. Alternatively, regulators might change the capital adequacy guidelines to require additional capital equal to the difference between expected losses due to past and future events and expected losses due solely to past events.

Conclusion

The current debate over banks’ loan-loss accounting is sometimes portrayed as a choice between providing investors with vital information and maintaining banks’ capital adequacy. The previous analysis suggests that both positions are overstated. Using currently available data, investors can and do form estimates of the “economically true” amount of banks’ loan-loss allowances, provisions, net income, and equity capital. Strict adherence to SEC guidelines may improve the quality of the data, at least in some periods, but the guidelines may not eliminate the benefit or reduce the cost for investors making their own estimates. Conversely, the effectiveness

Bank regulators use their measures of capital adequacy to determine whether one banking organization may acquire another, whether a bank may pay dividends, or even whether a bank will be allowed to continue in operation.

of the current capital adequacy regulations may be reduced by strict adherence to SEC guidelines. However, bank regulators have ample power to adjust their regulations to reflect whatever definition of loan-loss allowance the SEC requires for reporting to investors.

Given that bank regulators may achieve their desired policy outcome regardless of the way in which the loss allowance is calculated, a better question is which definition of the loan-loss allowance best serves the interests of investors. On the one hand, adherence to the SEC's position may aid investors seeking to compare reported accounting results across industries. If accounting figures meant the same thing in each industry, such reporting could reduce the costs to investors of analyzing firms in different industries. However, like banks, other industries' reported net incomes are virtually

always subject to differences between reported net income and economic net income, especially in accounting for intangible assets and depreciation. Thus, the ability to compare across industries is less valuable than it may first appear.

On the other hand, bank regulators use their measures of capital adequacy to determine whether one banking organization may acquire another, whether a bank may pay dividends, or even whether a bank will be allowed to continue in operation. Thus, investors have a strong interest in regulators' judgments about the adequacy of a bank's loan-loss allowance and capital adequacy. If regulatory judgments regarding the adequacy of a bank's loan-loss allowance differ from those obtained under GAAP, investors would also need to know or estimate the regulators' evaluation.

19. Statement No. 107 (1991) requires firms to disclose, but not recognize in their financial statements, the fair value of those financial instruments for which it is practicable to provide an estimate. Statement of Financial Accounting Standards No. 105: *Accounting for Derivative Instruments and Hedging Activities* (1990b) requires firms to recognize the fair value of their derivatives contracts in their financial statements.
20. The Financial Accounting Standards Board issued *Preliminary Views on Major Issues Related to Reporting Financial Instruments and Certain Related Assets and Liabilities at Fair Value* on December 14, 1999.

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