



FEDERAL RESERVE BANK
OF DALLAS

ROBERT D. McTEER, JR.
PRESIDENT
AND CHIEF EXECUTIVE OFFICER

DALLAS, TEXAS
75265-5906

July 31, 1998

Notice 98-64

TO: The Chief Executive Officer of each
financial institution and others concerned
in the Eleventh Federal Reserve District

SUBJECT

Lending Standards for Commercial Banks

DETAILS

In response to concerns raised both within the industry and in the supervisory community, the Federal Reserve recently undertook an intensive study of lending terms and standards. This study, involving several hundred loans from across the country and many of the Federal Reserve's most experienced examiners, compared loans made in late 1995 with loans made in late 1997. The study concludes that intense competition for loan customers has led to significant easing of pricing and some nonprice terms. In general, however, the overall quality of loans being made has not changed significantly over the period, due in large measure to favorable economic conditions

To assist examiners in their evaluations of the quality of credit risk management processes within banking organizations, the Federal Reserve has developed additional guidance that reflects the benefit of this study. The attached supervisory letter outlines the Federal Reserve's new guidance. The guidance describes the following:

- Indications of easing in bank lending
- Loan Quality Assessment Project
- Issues identified by the project as warranting increased supervisory attention
- Sound practices in loan underwriting
- Approval processes that contribute to maintaining an institution's loan quality

For additional copies, bankers and others are encouraged to use one of the following toll-free numbers in contacting the Federal Reserve Bank of Dallas: Dallas Office (800) 333-4460; El Paso Branch *Intrastate* (800) 592-1631, *Interstate* (800) 351-1012; Houston Branch *Intrastate* (800) 392-4162, *Interstate* (800) 221-0363; San Antonio Branch *Intrastate* (800) 292-5810.

Included with the supervisory letter is a supervisory staff report entitled *The Significance of Recent Changes in Bank Lending Standards: Evidence from the Loan Quality Assessment Project*. The report describes the project's findings in more detail.


ATTACHMENTS

Copies of the supervisory letter and the supervisory report are attached.

MORE INFORMATION

For more information, please contact Marion White (214) 922-6155, at the Dallas Office, or Richard Burda (713) 652-1503, at the Houston Branch. For additional copies of this Bank's notice, contact the Public Affairs Department at (214) 922-5254.

Sincerely yours,

Handwritten signature of Robert D. McTeer, Jr. in cursive script.



BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

DIVISION OF BANKING
SUPERVISION AND
REGULATION

SR 98-18 (SUP)
June 23, 1998

TO THE OFFICER IN CHARGE OF SUPERVISION AND APPROPRIATE
SUPERVISORY AND EXAMINATION STAFF AT EACH FEDERAL
RESERVE BANK AND TO EACH DOMESTIC AND FOREIGN
BANKING ORGANIZATION SUPERVISED BY THE FEDERAL RESERVE

SUBJECT: Lending Standards for Commercial Loans

Summary

A careful review of asset quality, credit standards, and lending practices has long been a major focal point of on-site supervisory examinations conducted by the Federal Reserve. Over the past several years, surveys of bankers and supervisors, as well as comments and anecdotal indications from examiners, bankers and industry groups, have confirmed that banks have been easing their lending terms and standards, largely because of intense competition to attract customers. This easing has occurred during a period of strong economic growth and stable market conditions. If carried too far, such easing can undermine a bank's financial health, especially if the economy weakens or the extraordinary recent performance of business profits and cash flows does not persist.

In response to ongoing concerns within the industry and the supervisory community, Federal Reserve supervision staff recently undertook an intensive study of lending terms and standards. This study, involving several hundred loans from across the country and many of the Federal Reserve's most experienced examiners, compared loans made in late 1995 with loans made in late 1997. The study concludes that intense competition for loan customers has led to significant easing of pricing and some non-price terms, but that, on balance, the overall quality of loans being made has in general not changed significantly over the period, due in large measure to favorable economic conditions.

Notwithstanding the level of credit risk in loan portfolios today, the degree to which terms and some standards appear to have eased, and the continuing indications of intense competition for lending business, suggest that this is a critical time for banks to maintain their lending discipline, and indeed to continue to enhance their controls and practices where they can. As part of the credit risk management process, banks should consider the potential impact of a wide range of borrower default rates and losses on the institution, especially on loans with more relaxed terms. Banks should resist any tendency to assume in evaluating credits that the unusually favorable economic environment of the last few years will continue indefinitely.

In this context, it is important that examiners continue to focus on the strength of the credit risk management process, with somewhat greater scrutiny to certain areas that may warrant heightened supervisory attention. It is also important that examiners emphasize sound practices that promote and maintain discipline in the lending process. As always, examiners should discuss matters of concern with the institution and include them in their reports of examination, even if cited practices and problem loans have not yet reached harmful or criticized levels.

This SR letter and attachment summarize the findings of this study and provide guidance to examiners on certain specific areas of lending practice that supervisors should review during on-site examinations and as part of the ongoing supervision process. These areas include:

- the use of formal forward-looking analysis in the loan approval process,
- appropriate pricing of loans to the risk they entail, and
- potential concentrations of credit risk arising from lending to real estate investment trusts (REITs).

This SR letter also describes certain sound lending practices, based in part on elements of the credit underwriting and loan administration programs observed during the Loan Quality Assessment Project. These sound practices address formal credit policies, formal credit staff approval of transactions, loan approval documents, the use of forward-looking tools in the approval process, internal credit risk ratings systems, and management and lender information systems.

The guidance set forth in this letter does not constitute a regulation, nor does it seek to establish new regulatory requirements. The guidance and sound practices set forth in this letter are designed to assist examiners in assessing the quality of the credit risk management process, and to inform the industry of some of the factors examiners will consider and evaluate during on-site examinations.

In addition to assessing these matters during examinations, supervisory personnel and examiners may also wish to discuss the results of this study with loan portfolio managers at institutions where a full credit review is being performed. Bankers should be made aware of the potential for deterioration in the loan portfolio if lending discipline is not maintained, whether from inadequate assessment or communication of lending risks, incomplete adherence to prudent lending standards that reflect the risk appetite of the board of directors, or both.

Background

Although supervisors have been on the alert for the emergence and possible effects of lax lending practices, the aggregate statistics for the banking industry show problem business loans to be at historically favorable levels. Similarly, the results of the normal supervisory process are not indicating any unusual amount of underwriting weaknesses, nor is it apparent that the credit risk in loan portfolios has materially changed. Nonetheless, it is important that bankers maintain sound lending practices and that they adhere to their own internal policies and procedures.

Nearly three years ago, the Federal Reserve issued a supervisory letter (SR 95-36) that urged examiners and bankers to maintain prudent lending standards and

that alerted them to underwriting practices that could be or could become unsound. It also directed examiners to discuss these matters with bank management during examinations and to cite shortcomings in their reports. At that time, however, the industry was emerging from conditions in the early 1990s, when many institutions had significantly tightened lending terms and standards and may have contributed to the so-called "credit crunch." Consequently, it was more difficult at that time to determine whether much of the cited easing of standards was appropriate, in view of previously excessively tight standards at some banks, or whether the softening was, even then, reaching inappropriate levels. Subsequent industry performance and examination findings suggest the former, although that experience reflects the benefit of robust economic conditions.

More recent comments and indications have raised new questions about the appropriateness of continued easing, and whether banks are exercising adequate care in making some credit decisions. Throughout recent years, the Federal Reserve has emphasized the value of and need for forward-looking supervisory practices and the importance of risk-focused examinations. As part of this emphasis, we have underscored the need for banks to have sound lending policies, as well as internal control procedures to ensure that these policies are followed and that business practices do not succumb to the competitive pressures to take excessive risks during the upswing of a business cycle. In particular, evaluations of bank asset quality and underwriting practices -- whether done by bankers or bank supervisors -- should consider the strength of a loan or portfolio not only under current or favorable conditions, but also under stressful circumstances, including periods of possible economic adversity.

The lending decision is properly that of the banker and of bank boards of directors, not that of the bank supervisor. However, in fulfilling their roles, bank directors and senior managers have the obligation to monitor lending practices and to ensure that their policies are enforced and that lending practices more generally remain within the overall ability of the institution to manage.

For their part, examiners should evaluate whether adequate internal oversight exists and whether bank management has timely and accurate information. As always, examiners should also discuss matters of concern with the institution and include them in their reports of examination, even if cited practices and problem loans have not yet reached harmful or criticized levels. Such cautionary remarks help to alert bank management to potential or emerging sources of concern and may help to deter future problems. Of course, any practices that extend beyond prudent bounds should be corrected promptly.

Loan Quality Assessment Project

Continuing expressions of concern that easing had gone beyond prudent bounds led Federal Reserve supervision staff to undertake an intensive review of lending standards at a sample of large institutions and evaluate the changes in lending practices by reviewing the actual loans being made as well as the approval process at each institution. The Loan Quality Assessment Project involved teams of senior examiners from throughout the Federal Reserve System, and was designed to link changes in lending terms and standards to the overall credit quality of bank loans made in the second half of 1997 as compared to loans made in the second half of

1995. This intensive review was undertaken to achieve three goals: to provide an objective, measurable benchmark for lending terms and practices; to identify the nature and magnitude of any easing trend in underwriting standards over the past two years; and to determine whether any identified easing of standards is cause for supervisory concern.

Although there are some important limitations to its findings, this review provides some useful insight into bank lending practices. Consistent with what others have found, the review identified noteworthy and measurable easing in bank lending terms and, to some extent, standards over the past two years. On balance, however, it appears that the overall quality of loans may not have deteriorated significantly to this point, attributable in large measure to the salutary effects of a robust economy. A supervisory staff report summarizing the project findings is attached.

Since there is no indication that these competitive pressures to ease terms are subsiding, supervisory experience strongly suggests that this is a critical time for banks to maintain their lending discipline, and indeed to continue to enhance their controls and practices where they can. In particular, institutions should not rely unduly on the benign experiences of the past several years in assessing the underlying risks of current and future borrowers.

These findings have important implications for the supervisory process, particularly at institutions where a full credit review is being performed. Examiners should devote appropriate attention to three areas of lending activity that may reflect the current state of credit discipline at an institution, namely, the use of formal forward-looking analysis in the loan approval process, appropriate pricing of loans to the risks they represent, and lending to real estate investment trusts (REITs). More generally, examiners should assess whether policies and procedures adequately embody sound practice with respect to formal credit policies, formal credit staff approval of transactions, loan approval documents, the use of forward-looking tools in the approval process, internal credit risk ratings systems, and management and lender information systems. These areas and sound practices are described below.

Areas for Increased Supervisory Attention

1. *Use of formal forward-looking analysis in the loan approval process*

The attached supervisory staff report notes that formal projections of a borrower's future performance were present in only 20 to 30 percent of the loan approval documents reviewed, and that formal analysis of alternative or "downside" scenarios was even less common. Although the frequency might have been different had different loan samples been drawn, discussions with bankers and examiners suggest that this is broadly representative of current bank practice. As a result, approval decisions may be more often keyed to the borrower's current financial performance and to informal, individualized judgments as to whether that performance is adequate to cover potential downside risk.

After several years of favorable economic conditions, banks should guard against complacency and, in particular, the temptation to base expectations of a borrower's future financial performance almost exclusively on that borrower's recent performance. In making lending decisions, and in evaluating their loan portfolio, banks should give sufficient consideration to the potential for negative events or

developments that might limit the ability of borrowers to fulfill their loan obligations. Unforeseen changes in interest rates, sales revenue, and operating expenses can have material and adverse effects on the ability of many borrowers to meet their obligations. In prior decades, inadequate attention to these possibilities during the underwriting process contributed significantly to asset quality problems in the banking system. Recent turmoil in several Asian countries provides a useful reminder that conditions can quickly change.

Examiners should evaluate the frequency and adequacy with which institutions conduct forward-looking analysis of borrower financial performance as one consideration in assessing an institution's credit risk management process. Formal use of forward-looking financial analysis in the loan approval process, and financial projections in particular, can be important in guarding against such complacency, especially at a time when financial institutions are competing intensely to attract borrowers. Such projections, if they include less favorable scenarios for the key determinants of the borrower's financial performance, can help to contain undue optimism and assure that management and other approving authorities within the organization are presented in a formal way with a robust analysis of the risks associated with each credit. They also provide credit staff and other risk management personnel with information important to assuring adherence to the bank's lending standards and overall appetite for loan risk.

2. Pricing to risk

Many recent reports about the degree of easing prominently cite significant decreases in loan spreads, and the findings of the Loan Quality Assessment Project are consistent with these reports. Although most larger institutions incorporate some form of profitability analysis into loan approval documents, some may be tempted to ignore or minimize the effect of price concessions, particularly when such concessions appear to be essential to retaining business customers. Examiners should review loan pricing policies and practices to assess whether the institution may be unduly weighting the short-term benefit of retaining or attracting new customers while giving insufficient consideration to potential longer-term consequences.

Profitability analysis is often oriented to the overall banking relationship of the customer, covering both credit and non-credit products, typically with reference to some minimum acceptable rate of return on capital or assets employed. Nonetheless, institutions in their pricing policies should give due consideration to the possibility that the borrower might choose not to continue to purchase its non-credit products from the bank at some point in the future, so that an inadequately priced loan might remain part of the bank's portfolio while non-credit revenues diminish, especially if the borrower's financial performance itself begins to deteriorate.

In addition, regardless of the manner in which profitability is analyzed, banks should incorporate into the pricing decision the appropriate risk of loss on the loans being considered. Although loan pricing may be adequate to provide for an overall relationship rate of return that is acceptable to the bank, institutions should understand the profitability of loans as a stand-alone product in order to gauge properly the significance of price concessions.

3. Lending to real estate investment trusts (REITs)

Several of the institutions reviewed as part of the Loan Quality Assessment

Project had experienced rapid growth in exposure to real estate investment trusts over the past year, with the growth in each case amounting to hundreds of millions of dollars. These loans are typically large, syndicated, and unsecured. Although bankers and others have emphasized that REITs currently have strong equity positions and a ready ability to raise funds in public financial markets, loans to REITs remain fundamentally a form of real estate exposure. Therefore, lenders should consider the ability of REIT borrowers to maintain their financial strength and liquidity in the event of a widespread downturn in commercial property markets. Acquisitions of new properties by REITs have been cited as an important force in escalating commercial property values, which in turn tends to increase the net worth of the REITs themselves.

To this point, there appear to be no substantial safety and soundness issues with regard to loans currently being extended to REITs. Nonetheless, they have become an important concentration of credit risk at some banking organizations. In this setting, examiners should remain informed about developments in a banking organization's loans to REITs and, in particular, should note the degree to which its REIT loans are contributing to a material concentration of credit risk within the loan portfolio. Assessing whether a concentration exists may be complex, depending on the characteristics and holdings of the REITs to which an institution lends, and may involve consideration of the institution's direct commercial real estate lending as well as its loans to REITs. Examiners should discuss with the institution the specific characteristics of its REIT borrowers, and similarities between these borrowers and other loans in the institution's portfolio, as one means to determine whether a material concentration of credit risk has developed.

Sound Practices in Loan Standards and Approval

In addition to those areas for which additional supervisory attention appears to be warranted, certain sound practices in lending can help to maintain strong credit discipline and assure that a bank's decision to take risk in lending is well-informed, balanced, and prudent. Several sound practices that are particularly important are described below. These and others are also discussed in the attached supervisory staff report summarizing the Loan Quality Assessment Project's findings.

1. Formal credit policies

The Federal Reserve and other supervisory authorities have long stressed the importance of formal written credit policies in a sound credit risk management process. Such policies can provide crucial discipline to a bank's lending process, especially when the institution's standards are under assault due to intense competition for loans. They can serve to communicate formally a bank's appetite for credit risk in a manner that will support sound lending decisions, while focusing appropriate attention on loans being considered that diverge from approved standards.

In developing and refining loan policies, some institutions specify "guidance minimums" for financial performance ratios applying to certain types of loans or borrowers (e.g., commercial real estate). Such guidance makes explicit that loans not meeting certain financial tests (based on current performance, projected future performance, or both) should in general not be made, or alternatively should only be made under clearly specified situations. Institutions using this approach most effectively tend to avoid specifying standards for broad ranges of lending situations and instead focus on those areas of lending most vulnerable to excessive optimism, or

where the institution expects loan volume to grow most significantly.

Formal policies can also provide lending discipline by stating clearly the type of covenants to be imposed for specific loan types. When designed and enforced properly, financial covenants can help significantly to reduce credit losses by communicating clear thresholds for financial performance and potentially triggering corrective or protective action at an early stage. In nearly half of the loans reviewed for the Loan Quality Assessment Project, however, loan approval documents did not describe the key financial covenants even when discussions with the banks made clear that significant covenants were indeed present. When questioned further on this subject, most banks indicated that they have a "common practice" of imposing certain types of covenants on various types of loans that is well-known to lenders and others at the institution (but not articulated in written loan policies), so that describing the actual covenants in the loan approval document would be redundant. However, management and other approving authorities within a bank then receive no formal positive indication that "common practice" controls have been imposed, and no indication of the level of financial performance that the covenants require of the borrower. As such, management and other approving authorities may be inadequately informed as to the risks and controls associated with the loan under consideration. In contrast, loan policies can create a clear expectation that all key covenants should be described in loan approval documents, that certain covenant types be applied to all loans meeting certain criteria, and that explicit approval of an exception to these policies is necessary if such covenant requirements are to be waived.

Some institutions have introduced credit scoring techniques in their small business lending in an effort to improve credit discipline while allowing heavier reliance on statistical analysis rather than detailed and costly analysis of individual loans. Institutions should take care to make balanced and careful use of credit scoring technology for small business lending, and in particular should avoid utilizing this technology for loans or credit relationships that are large or complex enough to warrant a formal and individualized credit analysis.

In formalizing their lending standards and practices, banks are not precluded from making loans that do not meet all written standards. Exceptions to policies, though, should be approved and monitored by management. Formal reporting that describes exceptions to loan policies, by type of exception and organizational unit, can be extremely valuable for informing management and directors of the number and nature of material deviations from the policies that they have designed and approved.

2. Formal credit staff approval of transactions

Credit discipline is also enhanced by the involvement of experienced credit professionals in the approval process who are independent of line lending functions. Such staff can play a vital role in ensuring adherence to formal policies and that individual loan approvals are consistent with the overall risk appetite of the institution. These independent credit professionals can be most valuable if they have the authority to reject a loan that does not meet the institution's credit standards, or alternatively, if they must concur with a loan before it can be approved.

Providing credit staff with independent approval authority over lending decisions, rather than with a more traditional requirement for "consultation" between

the lending function and credit staff, allows credit staff to influence outcomes on a broad and ongoing basis. This influence, and indeed the ability of credit staff to reinforce lending discipline, is clearly enhanced by early involvement of credit staff in negotiations with borrowers; a more traditional approach might be only to involve credit staff once the loan proposal is well developed, allowing credit staff the opportunity to have only minor influence on the outcome of negotiations except in extreme cases. Maintaining a proper balance of lending and control functions calls for a degree of partnership between line lenders and credit staff, but also requires that the independence of credit staff not be compromised by conflicting compensation policies or reporting structures.

Independent credit staff can also support sound lending practice by maintaining complete and centralized credit files that contain all key documents relevant to each loan, including complete loan approval packages. Such files assure that decisions are well documented and avoid undue reliance on the files maintained by individual loan officers.

3. *Loan approval documents*

Banks can help ensure a careful loan approval decision by requiring thorough and standardized loan approval documents. Thoroughness can be enhanced by requiring *formal* analysis of the borrower's financial condition, key characteristics and trends in the borrower's industry, information on collateral and its valuation, financial analysis of entities providing support or guarantees, and formal forward-looking analysis appropriate to the size and type of loan being considered. Incorporating such elements into standardized formats, and requiring that analysis and supporting commentary be complete and in adequate depth, allows approving authorities access to all relevant information on the risk profile of the borrower. Loan approval documents should also include all material details on the proposed loan agreement itself, including key financial covenants. Standardization of formats, and to some extent content, can be useful in assuring that all relevant information is provided to management and other approving authorities, and in a manner that is understandable. Standard formats also draw attention to cases in which certain key information is not presented.

One area of particular interest in this regard is analysis and commentary on participations in syndicated loans. While it may be tempting to rely on the analysis and documentation provided by the agent bank to the transaction, it has been longstanding Federal Reserve policy that participating institutions should conduct their own analysis of the borrower and the transactions, particularly if the risk appetite or portfolio characteristics of the agent differs from that of the participating bank.

4. *Use of forward-looking tools in the approval process*

As discussed earlier, formal presentation of financial projections or other forms of forward-looking analysis of the borrower are important in making explicit the conditions required for a loan to perform, and in communicating the vulnerabilities of the transaction to those responsible for approving loans. They also provide a useful benchmark against which banks can assess the borrower's future performance. Detailed analysis of industry performance and trends can be a useful supplement to such analysis, and in some circumstances may serve to some extent as a substitute for detailed projections for the borrower.

Such projections have the most value in maintaining credit discipline when, rather than only describing the single "most likely" scenario for future events, they characterize the kind of negative events that might impair the performance of the loan in the future. This analysis of such alternative scenarios, or "stress testing," should generally focus on the key determinants of performance for the borrower and the loan, such as the level of interest rates, the rate of sales or revenue growth, or the rate at which expense reductions can be realized.

Although it may be tempting to avoid analyzing detailed projections for smaller borrowers, such as middle market firms, these customers may collectively represent a significant portion of the institution's loan portfolio. As such, applying formal forward-looking analysis even on a basic level assists the institution in identifying and managing the overall risk of its lending activities.

5. Risk rating system

Many larger institutions utilize an internal risk rating system to describe the credit risk of each loan, with some grades representing low risk (i.e., low risk of loss) and others representing higher risk. Assigning a risk grade to each loan during the approval process is a useful means to identify the overall level of risk associated with the loan, so long as the risk rating structure and assignment procedures provide a meaningful and consistent indication of the risk of a loan. Risk rating analysis can also provide a valuable reference point for assessing the appropriate degree of trade-off among various loan terms and characteristics and, in particular, in determining appropriate loan pricing.

To best perform this role, the risk ratings structure should meaningfully differentiate the degree of credit risk in loans, and should be supported by independent analysis or review of the risk ratings being assigned to loans both at inception and periodically over the life of the loan.¹ The criteria used in assigning a rating should be clear, explicit, and applied consistently both throughout the institution and over time. Although many elements of the decision to assign a risk rating to a given loan are inherently judgmental, banks can make these elements both more explicit and more consistent by articulating assignment criteria that describe both quantitative and qualitative considerations. Consistency can be aided in some cases by explicitly identifying individual internal risk grades as corresponding with well-known external standards, such as the ratings scales produced by Standard and Poor's or Moody's. Adequate training of lenders and review personnel, together with diligent oversight by management is also important to maximizing the value of a risk ratings process. In particular, institutions should monitor and evaluate the actual default or loss experience of loans in each risk grade as one means to assess the consistency and reliability of the ratings being assigned.

6. Management and lender information

Management information systems that support the loan approval process should clearly indicate the composition of the bank's current portfolio and/or exposure, to allow for consideration of whether a proposed new loan -- regardless of its own merits -- might affect this composition sufficiently to be inconsistent with the bank's risk appetite. In particular, institutions active in commercial real estate lending should know the nature and magnitude of aggregate exposure within relevant subclasses, such as by the type of property being financed (i.e., office, residential, retail).

In addition to portfolio information, banks should be encouraged to acquire or develop information systems that provide ready access for lenders and credit analysts to information sources that can support and enhance the financial analysis of proposed loans. Depending on the nature of a bank's borrowers, appropriate information sources may include industry financial data, economic data and forecasts, and other analytical tools such as bankruptcy scoring and default probability models.

Footnotes

1 As described in the December 1993 Interagency Policy Statement on the Allowance for Loan and Lease Losses, internal risk rating systems and/or supporting documentation should also be sufficient to enable examiners to reconcile the totals for the various internal risk ratings under the institution's system to the federal banking agencies' categories for those loans graded below "Pass" in the credit grading framework used by the agencies (i.e., pass, special mention, substandard, doubtful, and loss). The guidance contained in this SR letter complements this earlier guidance by addressing internal credit grading systems as they relate to "pass" credits.

Supervisory Staff Report

The Significance of Recent Changes in Bank Lending Standards: Evidence from the Loan Quality Assessment Project¹

EXECUTIVE SUMMARY

Surveys of bankers and examiners conducted in 1997, along with industry sources, provided strong indications that underwriting standards and pricing had become much more favorable to borrowers. Indeed, both supervisory and industry officials began to warn that standards had become excessively lax. Nonetheless, on-site examinations did not seem to reveal significant deterioration in portfolio quality or in the credit risk management process. It became clear that a structured series of on-site reviews would be needed to provide greater clarity on the current state of bank lending.

This paper describes the key findings of the Loan Quality Assessment Project, designed and undertaken by the Federal Reserve System to determine the extent and supervisory significance of the widely-reported easing in bank lending terms and standards. The exercise was designed in late 1997 to gather pertinent information about changes in bank lending practices between the second half of 1995 and the second half of 1997. Several specific types of loans were chosen for review at a number of large institutions, in order to enhance comparability of results across banks while providing a sufficiently broad view of bank lending. The review teams were staffed by experienced senior examiners from eleven Reserve Banks. In order to streamline the review, examiners focused on internal loan approval documents at each bank rather than undertaking a complete re-assessment of each credit. The reviews took place during the first quarter of 1998, with each review lasting about two weeks.

Examiners on each team were assigned to specific loan types at the beginning of the project, and to the greatest extent possible were responsible for reviewing that loan type at all three reviews conducted by that team. Specific loans were selected for review from lists provided by the institution, making use of statistical sampling and balancing techniques when appropriate. After reviewing each loan and forming their own subjective conclusions about the strength of the credit, examiners formally compiled information on each loan using a "codesheet" of detailed data on the transaction and borrower. At the end of each bank review, to provide a summary indication of the change in lending practices, each examiner was asked to "rank" the loans in the appropriate loan type at that institution according to the financial ability of the borrower to repay its loans (i.e., the overall quality of the loan) and the rigor of the underwriting

¹ William F. Treacy of the Board's Division of Banking Supervision and Regulation was the principal author of this report. Valuable contributions were also made by John Greco of the Federal Reserve Bank of New York, Kenneth Krynicki of the Federal Reserve Bank of Chicago, and John Robins of the Federal Reserve Bank of Cleveland.

process to which the loan was subjected, regardless of the year in which the loan was extended. In addition, teams reviewed bank lending policies and met with bank officials to discuss overall trends in lending.

The streamlined aspects of this review created the opportunity for an intensive review to be completed in a relatively short period of time. However, the aggressive time frame and tightly focused examination scope also imposed important limitations on the examination findings. These and other limitations are described more fully below.

KEY FINDINGS:

1. *Although all of the institutions cited intensified competition for lending business, the exercise found that the negative implications of easing since 1995 were mostly offset by improved (current) financial performance of many of the borrowers; thus, on balance, examiners found no evidence of significant deterioration in the credit quality of loans made in 1997 when compared to those made in 1995.*

The reviews found that there have been identifiable changes in underwriting practices, lending terms and pricing, and in the ability of “typical” borrowers to repay their debts at the institutions. The changes in terms of lending and underwriting standards appear to confirm the negative trends reported in surveys in 1997, and appear to be the result of intensified competition involving both bank and non-bank lenders. Areas in which changes were noted include lower pricing, longer maturities, lower loan fees, and more favorable collateral requirements. Pricing and maturity changes were clearly the most significant, while changes in collateral, fees, and other non-price terms were modest.

In general, however, the changes identified here were more gradual than suggested by the press and industry sources. This general finding does vary across banks and loan types. On balance, the changes do not appear to have materially altered the quality of the “typical” credit in 1997 as compared with 1995. In particular, the negative implications of easing have tended to be offset by improved cash flow and balance sheet characteristics for many borrowers when compared with 1995; examiners observed that this seemed to reflect the effects of a continuing favorable economy.

Moreover, there have been notable enhancements to the loan approval process at several of the institutions that may themselves tend to counterbalance some of the effect of these negative trends in the loans themselves. The enhancements include improved credit analysis, more formal documentation, improved internal risk ratings systems, and stronger representation of professional credit risk management staff in the lending process.

There were particularly clear indications that pricing became more competitive between 1995 and 1997. Although significant pricing changes were noted, loan approval documents at nearly every bank included some form of customer relationship profitability analysis. The examiners saw no evidence of any loan approval that did not meet the institution’s stated

minimum profitability “hurdle” requirements, nor were there indications that these hurdles themselves had changed.

One area in which the underwriting process may have changed between 1997 and 1995 is an increasing focus on cash flow analysis, with relatively less attention or analysis devoted to the borrower’s balance sheet as a potential source of repayment. This difference in focus was most evident for leveraged loans, such as acquisition financing in the communications category, and was not evident at all institutions. Bankers indicated that the typical loan has fewer, more focused covenants now than loans made a few years ago. Analysis of covenants on the loans reviewed for this exercise does not provide confirmation of this assertion.

2. *Lending approval processes appear generally adequate, although examiners noted some limitations on the extent of pre-approval analysis of a borrower’s future performance, and “stress-testing” of borrowers in particular.*

Examiners judged the lending processes at the institutions to be generally adequate and in some cases strong, with analysis and documentation of risks generally appropriate to the loan being considered. There were important areas of difference among the institutions, however, and in some cases there were notable potential deficiencies. One area in which institutions differed was the formality of credit analysis and, in particular, whether the analysis included a formal assessment of the future prospects of the borrowing entity.

The impression created by what the teams observed at these institutions is that commercial lending continues to be an experience-driven, judgment-oriented decision process that reflects individualized characteristics of the borrower and the lender. Much lending is being done with reference to informal and individualized standards for the kind of financial performance that would lead a loan to be considered an “acceptable” risk. In most cases, these informal “rules of thumb” are keyed primarily to the borrower’s current financial performance. Thus, for example, a borrower that is able to “cover” its debt service (or total fixed charge) requirements by a certain margin -- such as 1.3 times the projected requirement -- given current levels of financial performance might be considered well able to repay the loan unless specific weaknesses are known.

Although long-term loans and syndicated credits generally included pro forma projections of future performance, these projections were most often provided by the borrowing entity and often did not include “down-side” or “worst-case” alternative projections. Even in those cases in which projections were provided, examiners judged that the projections were insufficient to evaluate the strength of the loan in one out of ten cases. For a *small* number of loans in the communications and printing group, the “worst-case” projections themselves seemed somewhat ambitious. The use of alternative tools for assessing the range of risk in each loan, such as default-probability modeling, was evident only in rare cases. *This means that approving authorities (up to and including senior management and the board) may not be provided formally with information on, or the direct opportunity to control, the downside risks associated with some transactions.*

3. *There are areas in which some institutions could benefit from application of sound practices observed in the exercise, particularly with regard to the systematic use of projections or other tools for evaluating downside risks in the future, formal requirement for credit department approval of or concurrence with loans, the development and use of better information systems, improved communication with directors and senior management, and strong credit documentation.*
4. *Although in general these findings do not indicate cause for immediate supervisory concern, there are certain areas for which further supervisory attention may be warranted.*

Considering the above, there are several areas for which increased supervisory attention might be appropriate, including rapid growth in lending to real estate investment trusts, increasing aggressiveness in financing leveraged transactions, the growth in loan policy exceptions in some cases and the need for enhanced monitoring of exceptions at some institutions, possibly incomplete integration of credit scoring techniques into small-business lending, some need for enhanced documentation of credit decisions, breadth of internal risk grading systems, and integration of projections and alternative performance scenarios into the decision to extend credit.

5. *The findings of this exercise may suggest opportunities in the future to utilize similar examination techniques in the supervisory process.*

The success of this streamlined and targeted approach suggests that certain of its elements might be incorporated more broadly into ongoing supervisory efforts, including on-site examinations. These include the focus on "pass" credits to provide information on the credit approval and risk management process, reliance on loan approval documents rather than fully re-underwriting each credit for at least some portion of an institution's loan portfolio, techniques for identifying some areas of a bank's portfolio that might warrant increased scrutiny, and the collection and use of objective/quantitative information on an institution's loans through the examination process to facilitate the assessment of safety and soundness.

From a broader perspective, the demonstrated feasibility of this exercise suggests that other uses of a bank's own information to assist in ongoing monitoring of lending conditions could hold great promise for enhancing supervisory effectiveness with minimal imposition of supervisory burden.

I. PROJECT DESIGN AND SCOPE

A. BACKGROUND AND OBJECTIVES

Late in 1997, reports from industry sources, the press, and other regulators raised concerns that bank lending practices had deteriorated, in the words of one senior bank official, to the point of being “the worst I’ve seen in thirty years of banking”. Surveys of examiners conducted by the Federal Reserve, OCC, and FDIC, as well as surveys of bankers conducted by the Division of Monetary Affairs, reported continuing easing in loan terms and standards as well. Both the public reports and the survey results were very general in nature, and left unclear whether lending practices had deteriorated “too far”. Moreover, bank examination reports continued to show very low levels of problem loans, a point that bankers have often stressed when referring to conditions in their own portfolios.

This exercise was undertaken to achieve three objectives:

- To establish a benchmark for comparing bank lending standards and terms in an objective and measurable manner,
- To identify the magnitude and significance of the easing trend in underwriting standards over the past two-four years, and
- To determine whether the current degree of lending ease should give cause for supervisory concern.

B. STRUCTURE

The project was designed in close consultation with Reserve Bank Officers in Charge of Supervision at all twelve Reserve Banks. Three teams of seven highly experienced examiners, plus three examiners assigned specifically to emerging markets loans, were selected, with members drawn from eleven Reserve Banks and Board staff.

The banks reviewed were all large state members or FBOs, encompassing several Federal Reserve districts. Eight industry or loan types were reviewed at each institution. Among *domestic commercial and industrial (C&I) loans*, borrowers were selected from five industry groups. (See Table 1.) These industries were selected as borrower types that appear to be both *broadly represented* in bank portfolios and *high-growth* areas for bank lending. Supporting information in this selection came from 1997 summary results of the Shared National Credit program and from Census Bureau data on selected industry groups; relevant Census Bureau data is summarized in Table 2.

Table 1
Selected Borrower Types for Domestic Commercial & Industrial Loans

	Standard Industrial Classification (SIC) Codes	Comments
Heavy Manufacturing	34 (Fabricated Metals) 35 (Machinery except Electronics) 36 (Electronics/Electronic Equipment) <i>except</i> 367 371 (Motor Vehicle and Equipment)	As shown in Table 2, these categories represent more than half of all lending to manufacturers of durable goods, and exhibit year-on-year growth rates in excess of 12%. Upon further analysis, the category 367 was pulled out of this industry group and treated as a separate industry group.
Communications and Printing	48 (Communications) 27 (Printing and Publishing)	Broadly representing loans to media firms, these categories were cited in summary findings of the 1997 Shared National Credit program as active and high-growth areas for syndicated lending.
Wholesalers of Durables	50 (Wholesale Trade – Durables)	As shown in Table 2, total bank lending in this area was comparable to that in the heavy manufacturing group, while year-on-year growth came to 7.5%.
Retail/General Merchandise	53 (Retail Trade – General Merchandise)	Although much smaller than heavy manufacturing in absolute size, lending to this group grew at an annual rate of 35%.
Electronics/High Tech	367 (Electronics Components including Semiconductors)	

Table 2
Bank Loan Growth to Manufacturing and Trade Firms
(\$MM, except SIC)

Industry Group	SIC	2Q96	2Q97	2Q97 vs. 2Q96	% of Group Total (2Q97)
Total Durables Manufacturing Group		\$137,008	\$151,820	10.8%	-
Lumber & Wood	24	6,229	7,115	14.2%	5%
Furniture & Fixtures	25	5,576	5,892	5.7%	4%
Stone, Clay, Glass	32	9,516	9,838	3.4%	6%
Primary Metals	33	11,012	12,092	9.8%	8%
Fabricated Metals	34	18,697	20,934	12.0%	14%
Machinery except Electronics	35	28,197	31,921	13.2%	21%
Electronics & Electronic Equipment	36	17,533	21,152	20.6%	14%
Transportation Equipment	37	14,612	15,708	7.5%	10%
Motor Vehicle & Equipment	371	8,239	9,372	13.8%	6%
Instruments & Related	38	22,322	23,208	3.9%	15%
Total Wholesale Trade Group		69,490	73,672	6.0%	
Wholesale Trade - Durables	50	40,500	43,527	7.5 %	59%
Wholesale Trade - Non-Durables	51	28,990	30,145	4.0%	41%
Total Retail Trade Group		48,524	52,075*	7.3%*	
Retail - General Merch	53	10,258	13,006*	35.7%*	25%
Retail - Food Stores	54	13267	14,215*	9.5%*	27%
Other Retail Trade		24,999	24,854*	-0.8%*	48%

Borrower types that were selected are identified in bold.

* -- Latest available data was 1Q97; growth rates are annualized.

Source: Census Bureau, *Quarterly Financial Report*. Includes loans from banks with original maturity of 1 year or less, installments due in 1 year or less on long-term debt from bank loans, and long-term debt from bank loans due beyond one year.

Some borrower types were combined in order to enhance the likelihood of finding adequate samples at each bank. Specifically, the heavy manufacturing industries were taken together, and communications was grouped with printing and publishing to capture a broader representation of lending to media firms. Combinations were selected with the intent that borrowers within these larger categories would have sufficiently similar financial structure and operating characteristics that comparison within the group would be meaningful.

Three other loan types were selected. Among *commercial real estate loans*, which historically have behaved procyclically, two loan types were selected, namely, residential construction loans and office construction/permanent financing. Finally, foreign C&I loans to borrowers in emerging markets were included as a loan type, specifically excluding loans with sovereign risk or that were guaranteed by a G-10-country parent company.

Each bank provided an electronic listing of loans that

- fell into one of the eight categories above,
- were originated, renewed, or amended in the second half of 1997/1995, and
- were drawn from the lowest internal “pass” risk grade, that is, the grade representing the highest degree of credit risk that is neither treated as classified for regulatory purposes nor included in a bank’s internal watch process.

The combined effect of these selection criteria was to homogenize the loans selected within each category, in order to facilitate direct comparison of underwriting standards and practices across institutions. Indeed, in about a dozen cases (always involving syndicated loans) examiners encountered a given borrower at more than one of the institutions.

Samples were drawn from among the loans identified by the bank with a goal of selecting ten loans in each year in each category at each institution. Some additional loans were selected as alternates when possible. In practice, random sampling was often not necessary, as the combination of restrictions on borrower type and risk grade often left ten or fewer borrowers in each category for each year. Indeed, as the exercise progressed it became evident that certain loan types would not yield adequate samples at any of the institutions.

In selecting the loans to be reviewed from among those provided by each bank, certain firm rules were followed. Although sampling and balancing criteria differed across institutions, reflecting the number of potential loans and the information provided on their characteristics, such criteria were not allowed to differ across periods at any single institution. At any institution the number of loans selected from each of the two periods in each category was equal, or differed at most by one or two. Even when the number of potential loans was small, no more than one loan to the same borrower was selected at each bank; this prevents the results from being influenced by the course of events at a single borrower (e.g., survivorship bias). Strong preference was given to selecting committed facilities, even if unfunded (e.g., backup lines), to assure that credit analysis would be most complete.

Where circumstances allowed, limited "balancing" was performed on each sample to control for relationship or loan size, whether the credit was a new origination or a renewal to an existing customer, the geographic unit or business line of origination, and type of facility (term loan versus revolving line of credit). In some cases the discipline of balancing was such that an otherwise "full" sample was reduced.

C. THE ON-SITE REVIEWS

Each team spent two weeks at each of its institutions, with all reviews taking place during the first quarter of 1998. Each team was comprised of seasoned examiners from several Reserve Banks, and was assigned to review as geographically diverse a set of banks as was practicable.

Each team assigned each examiner to a specific target loan type at the beginning of the project, with the goal of having the same individual review the same type of loan at all bank reviews the team would conduct. By and large this goal was achieved.

Relying principally on loan approval documentation, rather than loan files, the team members reviewed loans selected for their designated loan type as if they were loan committee members or credit review officers at the bank. They evaluated loan pricing, terms and provisions, pertinent information about borrowers, and the analysis performed by the sponsoring lender without themselves re-analyzing the credit. Examiners then were asked to form impressions about the strength of the borrower and the underwriting process to which the credit was subjected.

Team members were asked to record critical data on each loan being reviewed on an input form (or codesheet) designed for the project. This data included vital statistics on loan pricing, terms, maturity, collateral, covenants, the borrower's financial condition (such as projected debt service coverage and debt-to-worth ratios). In addition, where pertinent and available, direct "before and after" comparisons were noted on terms for loans being renewed or refinanced.

In order to provide a summary indication of changes in standards and practices, at the conclusion of the review at each institution team members were asked to rank the loans they had reviewed in their respective category from "Strongest" to "Least Strong" without regard to the period in which the loan was approved. Team members were asked to separately rank the set of loans reviewed at that institution with respect to (a) the financial ability of the borrower to repay the loan (i.e., overall loan quality) and (b) the strength of analysis and underwriting applied in each case, as reflected in the loan documents. These rankings provided an opportunity to evaluate whether loans from 1997 were likely to be ranked more favorably, less favorably, or no differently than 1995 loans.

Separately, the teams interviewed senior lenders and credit officers and reviewed formal loan policies in order to understand the loan approval and review process and to note how either formal policies or lending practices had been changed between 1995 and 1997. Particular

attention was applied to policy exceptions, the role of credit staff in the underwriting and approval process, and strategic changes in the institution's lending posture including those areas of lending growing most rapidly.

D. INNOVATIONS AND LIMITATIONS OF THIS EXERCISE

Many elements of this exercise were novel or adaptations of more traditional examination techniques. These innovations allowed the teams to gather key information in a focused and efficient manner, including both subjective evaluations and data on key characteristics of each loan. However, there are limitations that come with each of these elements, beginning with the choice of institutions and loan types and extending to variations in the ability of each bank's management information system to provide complete and accurate information on key characteristics of the loans identified as meeting the sampling criteria. In particular, as noted earlier, efforts were made to assure that the loans selected for review fully met the sampling criteria and were appropriately balanced by loan or relationship size, geographical dispersion, and loan type. However, these efforts were based on the best available information from the bank, which was often incomplete in this regard. In addition, as noted above, it was common that only a relatively small number of loans met the sampling criteria, meaning that it became more difficult to control for these balancing factors.

Although these institutions represent a significant share of the total assets of state member banks, conclusions reached here reflect only what was observed at these institutions, and may not apply to loan types that were not reviewed. Although all were large institutions, the diversity of these institutions -- in terms of overall approach to business lending, size, and customer base -- made certain comparisons difficult and others less meaningful.

Most broadly, the aggressive time schedule limited what could be reviewed at each institution; in several cases, for example, loans could not be reviewed because the files arrived too late from outlying offices of the bank. Although the focus on loan approval documents streamlined the review process, these documents were not always complete, and indeed sometimes may have been less than accurate regarding certain loan details. An advantage to reliance on loan approval documents is that they illustrate the formal basis upon which loans are actually approved; to the extent that part of the approval process is informal, however, these elements of the process may well have been missed.

II. SAMPLE CHARACTERISTICS

A. SAMPLE SIZE

Overall, about 1000 loans were selected from among those identified by the banks as meeting the project's sampling criteria. Two categories -- electronics/computers and retail-general merchandise -- did not yield a full sample at any of the institutions. Full samples -- at least ten loans in each of the periods -- were possible in the other C&I and real estate categories at some banks, but were much less frequent than expected. Only 17 of the category-bank

combinations were full. Table 3 summarizes the number of loans initially selected for review in each category.

Although the identification of borrowers by industry was fairly straightforward for the banks, some experienced difficulty in identifying the commercial real estate loans by property type. In most cases the bank was able to identify loans as residential construction or office-related commercial real estate, although manual intervention was required for certain of these. In other cases, the institution had little or no real estate lending of these types, reflecting in part a decision to avoid real estate lending in the wake of the difficulties experienced by the industry early in this decade.

Table 3
Loans Selected for Review

	1995		1997	
	Primary	Alternate	Primary	Alternate
Heavy Manufacturing	71	21	74	24
Communications & Printing	87	12	79	16
Wholesalers of Durables	70	23	63	23
Residential Construction	48	7	48	17
Office-Related Real Estate	43	10	43	16
Other	65	7	70	16
Total	384	80	377	112

B. SAMPLE EFFECTIVENESS

Of the roughly 1000 loans initially selected for review, a significant number -- about 270, or nearly 30% -- were excluded once the examination had commenced or were unavailable for review within the time constraints of the exercise. About 60 of these were alternate selections which were not needed to achieve a full sample at the institution in question. Among the remaining number, exclusion most commonly occurred because the loan was a problem loan (e.g., a loan which had been classified and has been recently renegotiated), the loan clearly did not meet the sample characteristics (e.g., it was obvious that the borrower had been assigned an

incorrect SIC code in the bank's loan information system), or materials for the loan did not reach the examiners before the end of the review.

For the 695 loans sampled and actually reviewed during the examination, the results which follow will show only 596 loans. Of the remaining loans, more than half were in the three categories for which no full samples could be drawn (i.e., computer/electronics manufacturing, retail trade-general merchandise, and emerging markets). The remainder were selected to support special comparisons at specific institutions, the results of which were not conclusive and are not reported here.

Key characteristics of the loans actually reviewed are summarized below. (See Tables 4 and 5.) Loans in the communications/printing and heavy manufacturing groups tended to be larger than the other categories, and relatively more loans in 1997 tended to be to borrowers with larger credit relationships (i.e., over \$1 million).

Table 4
Sample Characteristics: Facility Size

	1995		1997	
	# of Loans	Average Facility Size (\$MM)	# of Loans	Average Facility Size (\$MM)
Heavy Manufacturing	68	22.4	74	10.8
Communications/Printing	82	16.0	77	21.4
Wholesalers of Durables	66	8.3	66	4.1
Residential Construction	33	1.6	40	3.0
Office-Related	41	5.8	49	8.1

Table 5
Sample Characteristics: Credit Relationship Size by Category
Number of Loans

	1995			1997		
	>\$100k	\$100k- 1 MM	>\$1MM	>\$100k	\$100k- 1 MM	>\$1MM
Heavy Manufacturing	6	28	34	5	23	46
Communications/Printing	5	26	51	2	22	53
Wholesalers of Durables	3	31	32	4	30	32
Residential Construction	1	16	16	0	20	20
Office-Related	6	16	19	4	16	29
Total of Above	21	117	152	15	111	180
<i>Memo: Shared National Credits</i>			47			42

Although the total number of loans reviewed is that contained in the tables above, in many cases examiners were not able to obtain responses to all codesheet items. As a result, for any given area of analysis (e.g., collateral requirements or prevalence of guarantees) the number of responses may be less than the total number of loans reviewed. In the tables that follow, the number of loans for which responses could be drawn will be identified, so that the reader will be able to evaluate the degree of coverage directly. In two cases -- projected debt-to-worth and debt service coverage ratios -- the number of responses was much smaller than the number of loans reviewed.

III. OVERALL CHANGES IN LENDING BETWEEN 1997 AND 1995

A. PRICING

Interest Rates on Loans: All institutions commented that competitive pressures have been very strong, and cited competition most frequently as the reason for narrower pricing. One banker noted, "In 1995 there was some gravy in the pricing, but everything is being priced 'at market' now." Bank management and credit officers generally reported that spread compression has been most significant in the syndicated loan market, and somewhat less evident in small-business and middle-market lending. While all of the banks stressed that competition on pricing has intensified, there were strong indications -- based on discussions with the bankers -- that some institutions have priced with greater aggressiveness than others.

Competition from investment banks was cited by nearly all of the banks as a critical source of pressure. Foreign banks do not seem to have been a source of new pressure; in the case of Japanese banks, this may in part reflect a “pulling back” from aggressive lending as a result of pressures on the financial health of the foreign bank’s parent entity (e.g., from turmoil in Asian economies and financial markets).

Codesheet data on the pricing characteristics of the loans reviewed tends to confirm these reports, revealing significant downward pressure on loan pricing through two mechanisms, namely, *decreases in the contractual spreads* over the base rate, and in *the choice of the base rate* itself. (See Table 6.)

Table 6
Spreads on Variable-Rate Loans (basis points)

	1995				1997			
	# of Var. Rate Lns	Sprd to Prime	Sprd to Libor	% Libor	# of Var. Rate Lns	Sprd to Prime	Sprd to Libor	% Libor
Heavy Manufacturing	58	88	216	22%	64	71	177	44%
Communications/Printing	74	91	142	47%	66	85	186	50%
Wholesalers of Durables	62	81	181	23%	60	84	173	22%
Residential Construction	33	97	n/a	0%	39	70	188	5%
Office-Related	23	79	180	22%	29	58	202	38%
Total of Above	239			26%	247			33%
<i>Memo: Key Rates (%)</i>								
<i>Average Prime</i>	8.74				8.50			
<i>Average LIBOR</i>	5.75				5.65			
<i>Difference</i>	2.99				2.85			

First, the spread over the base or reference rate appears to have decreased in heavy manufacturing and the two commercial real estate groups; for these categories, spreads on prime-based loans fell by roughly 20 basis points between the two periods, while spreads on LIBOR-based loans decreased by 40 basis points for heavy manufacturing. This trend is not universal, however, as pricing spreads for LIBOR-based loans appear to have *increased* in communications/printing and office-related (by roughly 40 basis points and 20 basis points, respectively).

Second, as also shown in Table 6, loans to heavy manufacturing and commercial real estate were twice as likely in 1997 to be linked to LIBOR (or another money market rate) rather than prime than in 1995. The average loan spread over LIBOR is much less than the spread between prime and LIBOR, so that borrowers able to negotiate LIBOR-based pricing can apparently find themselves with significantly lower loan interest rates. Using figures from Table 6 for 1997 in the heavy manufacturing group, for example, a typical LIBOR-based borrower would pay some 180 basis points less than a typical prime-based borrower. At first blush, this might suggest that banks were pricing less aggressively. More likely, however, is that the stronger prime-based borrowers in 1995 become weaker LIBOR-based borrowers in 1997, particularly in the office-related financing group. Under this scenario, spreads on LIBOR-based loans to these weaker borrowers might widen, but not by enough to maintain the overall asset yield previously obtained in prime-based lending.

At the time that banks provided the electronic listing of loans meeting the project selection criteria, they were also asked to provide information -- if possible -- on the size of the overall credit exposure to each borrower. Surprisingly, average spreads over *prime* did not appear to be much different for loans involving smaller credit relationships (i.e., loan exposure between \$100,000 and \$1 million). (See Table 7.) This result could be interpreted as reflecting that these loans were all drawn from the same risk grade, and thus were priced similarly. There was, however, an important difference in smaller loans with respect to the base rate chosen. LIBOR-based pricing was nearly non-existent in the 1995 sample for the smaller loans, but occurred more frequently in 1997 (11% of smaller loans). This increase came almost exclusively in the communications and printing group. Still, LIBOR-based pricing was much less frequent for the smaller relationships when compared with borrowers with credit relationships of over \$1 million, for whom nearly half of loans were LIBOR-based.

Table 7
Loan Pricing by Relationship Size \$100K-\$1MM

	1995				1997			
	# of Var. Rate Lns	Sprd to Prime	Sprd to Libor	% Libor	# of Var. Rate Lns	Sprd to Prime	Sprd to Libor	% Libor
Heavy Manufacturing	20	83	200	5%	12	105	263	17%
Communications/Printing	19	82	n/a	0%	17	75	175	29%
Wholesalers of Durables	27	83	n/a	0%	26	81	185	4%
Residential Construction	15	98	n/a	0%	18	82	n/a	0%
Office-Related	5	60	n/a	0%	9	60	205	11%

One apparent change in pricing terms is an increase in the portion of loans with performance-based pricing, or "grid" pricing, whereby spreads vary with the financial performance of the borrower according to a contractual schedule in the loan agreement. (See Table 8.) Grid pricing became *much more* common in 1997 for the heavy manufacturing group (31% of loans versus 12% in 1995) and *somewhat more* common for the wholesalers group (18% of loans versus 11% in 1995). Although present in more than 40% of the loans in the communications and printing group, there was a *decrease* in the frequency of such pricing terms between 1995 and 1997. Grid pricing does not seem to have reached loans in the two commercial real estate categories.

Table 8
Prevalence of Performance-Based Pricing

	1995			1997		
	# of Var. Rate Loans	# with Grid Pricing	% with Grid Pricing	# of Var. Rate Loans	# with Grid Pricing	% with Grid Pricing
Heavy Manufacturing	58	7	12%	64	20	31%
Communications/Printing	74	35	47%	66	27	41%
Wholesalers of Durables	62	7	11%	60	11	18%
Residential Construction	33	0	-	39	0	-
Office-Related	23	1	4%	29	0	-
Total of Above	239	45	19%	247	52	21%

Loan Fees: Management and lenders interviewed for this exercise indicated that there has been downward pressure on loan fees, particularly for syndicated loans. Fees themselves were reported to be more common for larger and LIBOR-based loans, although they were clearly not large enough to offset the lower overall yield on these loans. Thus the greater proportion of LIBOR-based loans may in part explain why fees tended to appear more frequently in 1997 than in 1995. The banks indicated that real estate loan fees in particular may have been a bit lower in 1997.

Among the loans reviewed by examiners, loan fees of any type were present in fewer than half of the loans. When fees were present, origination fees were most common, especially in the real estate groups, while commitment fees on undrawn balances were nearly as common as origination fees for the three C&I loan categories. (See Table 9.) Origination and commitment fees were 6 to 10 basis points lower in 1997 than in 1995.

Table 9
Loan Fees

	1995					1997				
	Total # of Loans	Fee Type				Total # of Loans	Fee Type			
		Origin.	Drawn	Undrn.	Other		Origin.	Drawn	Undrn.	Other
<i>Number of loans</i>										
Heavy Manufacturing	68	11	1	12	5	74	28	0	17	8
Communication/Printing	82	26	2	23	6	77	32	3	20	8
Wholesalers of Durables	66	11	2	10	7	66	19	0	10	5
Residential Construction	33	29	0	0	3	40	28	0	2	3
Office-Related	41	23	0	1	6	49	30	0	2	7
<i>Average Fee (As % of Facility)</i>										
Heavy Manufacturing		1.40	*	0.58	1.49		0.39		0.39	1.44
Communication/Printing		0.66	*	0.39	1.15		0.60	*	0.37	0.70
Wholesalers of Durables		0.67	*	0.35	0.39		0.57		0.27	0.27
Residential Construction		0.89			*		0.87		*	*
Office-Related		0.77		*	0.54		0.63		*	0.38

* -- Not shown, fewer than five observations.

Key: "Orig." is origination fee; "Drawn" is annual fee on balances actually drawn; "Undrn" is annual fee on committed but undrawn balances under a facility; "Other" includes all other types ranging from field audit fees to filing fees to equity "kickers".

Specifically with regard to asset-based lending, in which the lender agrees to extend credit based on a closely monitored percentage of the borrower's accounts receivable and/or inventory, fees are typically imposed to cover the bank's costs in monitoring and auditing this collateral. Reviews of the individual loans indicate that monitoring or field audit fees were a bit lower in 1997 and that the frequency with which field audits were conducted was also more negotiable in 1997 than in 1995.

Overall Assessment of Change in Pricing and Profitability: The evidence above points to a significant decline in the yield received by banks, but does not provide a clear indication as to whether yields were adequate to sustain the long-term risk of these loans. Given the time constraints imposed on this exercise, it was not possible to explore this issue directly. However,

examiners were able to observe how the banks treated pro forma profitability in loan approval documents.

Loan approval documents at nearly every bank included some form of customer relationship profitability analysis, analyzed on the basis of return on assets, return on equity, or a formal risk-adjusted return on capital (RAROC). Profitability analysis was oriented to the entire banking relationship with the customer; thus a sufficiently attractive non-credit relationship could offset the negative effect of an “inadequately” priced loan. (In a limited number of cases, loan-only profitability was reported in conjunction with the overall relationship profitability.) Such analysis did not reveal any approved loan that failed to meet minimum profitability requirements, at least among the loans reviewed for this exercise.

In addition, although there were various enhancements made to profitability analysis at some institutions, there was no evidence that minimum profitability standards changed at any of the banks between 1995 and 1997. The examination teams did not analyze the profitability standards themselves, and thus could not address the overall adequacy of these targets, nor whether these profitability standards themselves should have changed between the two periods. Given the approaches used at these banks, the evidence noted by the examiners in this exercise is consistent with an interpretation that, although loan spreads have tightened significantly, pricing changes have not been large enough that loans *approved* in 1997 might have been *rejected* in 1995 on the basis of profitability.

B. NON-PRICE TERMS

Management and lenders at all institutions reported some easing of covenant and guarantee requirements in 1997 relative to 1995, although this easing was generally characterized as modest. There was evidence of this easing in the loans reviewed for this exercise, although perhaps less than has been suggested by industry and press sources. Moreover, in the judgment of the examiners, the negative implications of easier terms and requirements appear to be largely offset by improvements in the (current) financial condition of many borrowers, or otherwise did not detract materially from the quality of individual loans. One instance of the latter would be where covenants that were largely redundant were eliminated. One example would be eliminating a requirement that the borrower maintain a certain minimum dollar amount of net worth while a debt-to-worth covenant remains in force; capital is constrained under either situation.

For larger credits, bank management and lenders reported that the most common form of easing was for the degree of “tightness” in the covenants to be relaxed, that is, made easier for the borrower to achieve. In some cases, for those borrowers whose performance had improved between 1995 and 1997, this easing came in the form of concessions that are modest when compared with the degree of improvement in the borrower’s performance. For smaller credits, some release of guarantees was the most frequently cited channel of easing.

Maturity: There was evidence of modest maturity extension across all categories except office-related commercial real estate. (See Table 10.) Loans to the heavy manufacturing and

residential construction groups lengthened by more than a full year, while loans to wholesalers and office-related barely changed. Loans to the communication group lengthened as well, by about six months.

Table 10
Maturity of Loans

	1995		1997	
	# of Loans	Average Maturity (Years)	# of Loans	Average Maturity (Years)
Heavy Manufacturing	63	2.71	71	3.94
Communications/Printing	82	4.57	68	4.98
Wholesalers of Durables	65	1.64	64	1.79
Residential Construction	32	2.20	37	3.30
Office-Related	38	5.05	47	4.83

Guarantees: Although some easing was evident in office-related commercial real estate, in contrast communications and printing loans were somewhat more likely to be guaranteed in 1997 than in 1995. Slight increases were also evident for heavy manufacturing and residential construction loans. In total, the codesheet data provides no indication of change in the incidence of guarantees. (See Table 11 below.)

Table 11
Loan Guarantees

	1995		1997	
	# of Loans	% Guaranteed	# of Loans	% Guaranteed
Heavy Manufacturing	68	69%	74	72%
Communications/Printing	81	67%	77	74%
Wholesalers of Durables	66	77%	66	77%
Residential Construction	33	76%	40	80%
Office-Related	41	78%	49	67%
Total of Above	289	72%	306	74%
Memo: Percent of guaranteed loans for which guarantor condition was formally analyzed		64%		73%

Essentially all guarantees were made by the owner or parent of the borrowing entity. Notably, although the banks generally verified a guarantor's outside net worth, it was more likely in 1997 than in 1995 that the financial condition of the guarantor would be formally analyzed. For smaller credits, the most common form of easing reported by bankers was the release of guarantees, usually involving an individual owner (or partners) rather than a parent company.

Collateral: Certain collateral requirements appear to have been relaxed in 1997, although the degree of change appeared to be modest. (See Table 12.) Slightly higher loan-to-value ratios were evident in the heavy manufacturing and communication/printing groups, while the share of unsecured loans doubled in the heavy manufacturing group. Lower loan-to-value ratios appear to have prevailed for wholesalers in 1997, but when certain unusual loans at one bank are excluded, this change disappears.

Table 12
Collateral Requirements

	1995				1997			
	Total Loans (#)	Collateralized Loans			Total Loans (#)	Collateralized Loans		
		#	%	LTV		#	%	LTV
Heavy Manufacturing	56	44	79%	61%	59	34	58%	65%
Communication/Printing	52	19	37%	63%	55	20	36%	65%
Wholesalers of Durables	53	30	57%	67%	55	35	64%	58%
Residential Construction	26	24	92%	73%	29	28	97%	72%
Office-Related	37	34	92%	71%	42	42	100%	69%
Percent of all collateralized loans for which valuations were based on external appraisals	44.9%				43.5%			

In addition to this statistical evidence, examiners observed indications of relaxation as well while reviewing individual loans. For example, there were cases of shifting to “softer” collateral for a given borrower (e.g., from current assets to stock in the entity, or from a formal borrowing base where the bank controls accounts receivable to merely filing a lien on those accounts receivable). When this shift did occur, it was usually done in connection with stronger financial performance on the part of the borrower. Collateral analysis for some communications loans was difficult, since lenders are unable to take a lien on an FCC license; this in part accounts for the relatively low percentage of communications and printing loans for which there were collateral requirements.

There was little overall indication of change in asset-based lending (i.e., secured lending where the advances are linked directly to accounts receivable and inventory, usually involving field audits and collection of accounts receivable by the bank). (See Table 13.) In the heavy manufacturing group, the maximum advance rate against the value of the assets rose from 77% to 79%, while the frequency of asset-based loans diminished from 31% of the loans to only 22% in 1997. The latter is consistent with verbal indications from bankers that some borrowers were being released from borrowing base arrangements. Otherwise, the frequency of such loans increased for the communications/printing and wholesalers groups.

Table 13
 Formal Asset-Based Borrowing
 Maximum Advance Rate on Borrowing Base

	1995				1997			
	Total Loans (#)	Asset-Based Loans			Total Loans (#)	Asset-Based Loans		
		#	%	Adv. Rate		#	%	Adv. Rate
Heavy Manufacturing	68	21	31%	77%	74	16	22%	79%
Communications/Printing	82	8	10%	79%	77	10	13%	80%
Wholesalers of Durables	66	28	42%	79%	66	33	50%	79%
Commercial Real Estate	n/a				n/a			

Covenants: Loan covenants can contribute to the overall quality of the credit -- by providing incentives for the borrower to assure that its financial performance remains above certain minimum levels -- and to the ability of the lender to monitor the condition of the borrower. Examiners observed that the level at which loan covenants were set, in general, was only slightly easier in 1997 than in 1995.

Two countervailing forces appeared to be at work, according to comments from bankers. On the one hand, borrower financial performance improved between 1995 and 1997, allowing for tougher covenants as a "starting point". On the other hand, the bankers indicated that the level at which covenants were set was sometimes subject to competitive pressure.

Bankers reported that, in general, the number of covenants on a given loan has tended to fall over time, with the covenants that remain being increasingly focused on cash flow and debt service coverage. That is consistent with the impression of the examiners, who observed that the Federal Reserve has been emphasizing the importance of such cash flow covenants for some time. In specific loans for which covenants had been eliminated, there was a general sense among the examiners that these covenants had been unnecessary, duplicative, or of minor significance.

In contrast, statistics from the loans reviewed for this exercise indicate that there tended to be more covenants in 1997 than in 1995. (See Table 14.) Conclusions should be very tentative, however, since in 40 to 50% of loans the approval documentation did not clearly indicate which financial covenants, if any, were part of the final loan contract. Discussions with bank management and lenders, and the experience of the participating examiners, suggest that it would be extremely unusual for such loans to have had no financial covenants. On the contrary, there were strong indications that each bank may have a "usual" set of covenants for each type of loan, although as an informal practice rather than part of written loan policy. As such, the

covenants may be noted in loan approval documents only if one or more covenants deviate from these accepted norms.

Table 14
Covenant Frequency, All Loan Types

	1995		1997	
	"Yes" (# of Loans)	"Yes" as % of "Knowns"	"Yes" (# of Loans)	"Yes" as % of "Knowns"
Material adverse change	75	58%	85	63%
Negative pledge	81	57%	90	63%
Working Capital	36	25%	41	27%
Minimum Net Worth	63	40%	66	41%
Leverage/Debt-to-Worth	74	46%	85	62%
Cash Flow Coverage	85	54%	103	62%
Cross-default	69	52%	77	56%
Cash Flow/Senior Debt	30	23%	33	24%

Note: "Knowns" are those loans for which covenants could be identified.

Subject to the above qualifications, the frequency with which individual covenant types were present differed across the five loan/borrower types. In general, loans to wholesalers tended to contain any given covenant least frequently. Loans to heavy manufacturers included required minimum debt-service coverage ratios in 71% of the loans for which covenants could be identified in 1997, up from 66% in 1995; similarly, the proportion of loans in the office-related commercial real estate category rose from 21% in 1995 to 68% in 1997. Leverage and debt-service coverage covenants were much more prevalent in loans to the wholesaling group in 1997; leverage covenants were present 57% of the time in 1997, up from 39% in 1995, while debt-service coverage covenants were present 53% of the time in 1997, up from 34%.

Moreover, five individual covenant types -- material adverse change, negative pledge of assets, leverage test, cash flow/debt service coverage ratio test, and cross-default provisions -- were present in more than half of the loans for which covenants could be identified. This result did not hold for leverage ratio tests in 1995, and indeed all five of these covenant types appeared more frequently in 1997 than in 1995. These findings appear to differ from what the banks had indicated, since it suggests that more covenants, rather than fewer, would be expected among the 1997 loans.

Examiners observed specific cases at nearly every institution in which terms and requirements were *tightened* in 1997 in response to unfavorable developments in the borrower's condition or market, particularly in communications lending.

C. UNDERWRITING STANDARDS

In addition to the price and non-price terms of the loan contract, it is important to assess whether the standards of an acceptable credit (or, alternatively, the characteristics of a typical credit within the appropriate internal risk grade) have changed. Such standards often include certain key financial ratios that reflect the ability of a borrower to service its debt and other obligations, and the ability of the borrower's balance sheet to sustain adverse developments in operating performance. Other non-financial considerations include the experience of the borrower's management, the primary source of repayment, and access of the borrowers to other sources of liquidity. Management and lenders at each of the institutions indicated that these standards had not changed appreciably since 1995.

As one way to shed light on these standards, examiners were asked to record certain elements of the borrower's characteristics or performance, so that "average" characteristics could be identified. If these averages have deteriorated, that would provide an indication that standards had softened; however, an improvement in the averages may not mean that standards had toughened. In particular, that some borrowers -- including long-term relationship customers -- have improved their performance does not rule out that banks would be willing to make more marginal loans in that period as well.

Review of codesheet data on the loans analyzed for this exercise do not -- with one exception -- reveal any decline in non-financial standards for an acceptable credit between 1995 and 1997. Examiners characterized roughly 95% of the borrowers reviewed as having "extensive experience" in the activity being financed by the loan, across all five loan types. The single exception was with office-related financing, for which a significantly larger proportion (91%) had extensive experience in 1997 than in 1995 (79%). Some 83% of loans made in 1997 were to be repaid from operating revenues, as opposed to asset sales or refinancing.

Borrowers were slightly more likely to have public debt ratings and/or be publicly traded in 1997 than in 1995. Overall, about 10% of the borrowers were publicly traded in 1995, compared with 7% in 1995; those with rated debt rose slightly, from 7% of loans in 1995 to 8% of loans in 1997.

In order to identify potential changes in underwriting standards, for certain of the loans examiners were able to obtain projected debt service coverage and debt-to-worth ratios, as one indication of the financial performance the bank might require to extend a loan. (See Tables 15 and 16.) These projections provide some indication that lending standards were relaxed for the communications and printing group between 1995 and 1997. For all other groups, the typical ratios were stronger in 1997 than in 1995, consistent with a general trend toward improved firm financial performance (with a robust economy) during that period. These indications should be

treated as very tentative, however, given the small number of loans for which this information could be gathered.

Table 15
Projected Borrower "Year One" Debt Service Coverage

	1995		1997	
	# of Loans	Coverage (times)	# of Loans	Coverage (times)
Heavy Manufacturing	20	2.15X	28	2.74X
Communications/Printing	37	2.73X	31	1.78X
Wholesalers of Durables	14	2.72X	21	3.48X
Residential Construction	2	*	4	*
Office-Related	19	1.30X	39	1.36X

* -- Indicated sample size was five or fewer, too small for meaningful average.

Table 16
Projected Borrower "Year One" Debt-to-Worth Ratio

	1995		1997	
	# of Loans	Debt to Worth (times)	# of Loans	Debt to Worth (times)
Heavy Manufacturing	15	4.29X	18	3.39X
Communications/Printing	14	2.99X	23	3.54X
Wholesalers of Durables	14	2.10X	21	4.50X
Residential Construction	2	*	5	*
Office-Related	2	*	4	*

* -- Indicated sample size was five or fewer, too small for meaningful average.

In general these limited comparisons should be interpreted as showing that many of the bank's "usual" borrowers, including long-term relationship customers, were performing at a high level (in the context of a favorable economy) in 1997 as compared with 1995; as such, these comparisons would not reveal whether the bank became more willing to extend credit to borrowers with much weaker financial performance. It is especially important to note here that the data in Tables 15 and 16 reflect only those loans for which projections were available, and

thus are more reflective of syndicated and acquisition financing transactions than to other types of loans.

The lower average interest coverage ratio in the communications and printing group, however, provides a more compelling indication that these banks had a greater appetite for risk-taking in 1997 in lending to this group. Moreover, other codesheet data cited earlier for loans in the communications and printing group -- including higher spreads over base rates, tighter covenants, and increased frequency of guarantees and collateral -- suggest that banks have taken steps to tighten lending terms in response to the increased risk of the loans.

Examiners observed that, when comparison information was available, individual borrowers often showed improved condition in 1997 compared to their own condition in 1995.

D. OVERALL ASSESSMENT OF LENDING

In addition to collecting data describing the details of the loan contract and the borrower, the exercise was designed to provide some summary indication of the overall quality of credits being approved at each institution in each of the two periods. To provide this indication, each examiner was asked to rank all of the loans he/she reviewed at each institution from strongest to weakest, based on the financial ability of the borrower to repay its debts, regardless of whether the loan was made in 1995 or 1997. Since each examiner reviewed loans from a single category at each bank, and since loans were selected to come from the same risk grade and borrower/loan type, this rank ordering provides meaningful information on the degree of change between 1995 and 1997. To simplify the ranking procedure, examiners were asked to distribute the loans equally into four categories (ranging from "Strongest" to "Least Strong"), where each ranking category has no inherent meaning other than to describe rank order. To avoid trivial results, rankings were done only if there was a full (i.e., ten loans in each period) or nearly full sample for the bank in category being reviewed.

Critical to the interpretation of these results is whether the loans were tightly distributed around the "typical" degree of quality in each case, or alternatively whether there was a dramatic difference between the strongest and least strong loans being ranked. As part of each ranking, examiners were asked to characterize that degree of difference. Almost without exception, examiners noted that the difference between the "Strongest" and "Least Strong" loans was small; that is consistent with their finding that overall loan quality did not change significantly between 1995 and 1997 given a continuing favorable economy and the resulting stronger financial performance of many borrowers. *Thus, the findings which follow describe subtle differences -- shades of gray rather than black and white -- that would be difficult to identify at any single institution.*

Ranking Results: Specifically, ranking results are reported in three ways for each loan type:

- The percentage of loans for each year falling into the upper half of ranked loans (including the “Strongest” quartile and the quartile just below “Strongest”);
- The percentage of loans for each year falling into the “Strongest” category; and
- The percentage of loans for each year falling into the “Least Strong” category.

Thus, if loans made in 1997 were more likely to be in the “Upper Half” or “Strongest” categories than loans made in 1995, it would suggest that loans were somewhat stronger in 1997. In contrast, if loans made in 1997 were more likely to be in the “Least Strong” category than those made in 1995, it would suggest that loans were somewhat weaker in 1997.

This simple analysis is not only intuitively attractive, but also lends itself to some degree of statistical testing, thus allowing for some characterization of the degree of confidence in any finding of improvement or deterioration. Where applicable, ranking results reported below will also indicate those findings that appear to be statistically significant.²

Financial Ability of Borrowers to Repay Their Debts: Ranking results suggest that the typical borrower was a bit less strong relative to its debt obligations in 1997 than in 1995. (See Table 17, upper panel.) To ease interpretation, Table 17 reports differences as positive if 1997 loans are stronger than 1995 (i.e., improvement since 1995), and negative if the reverse holds (i.e., deterioration since 1995).

As Table 17 shows, the results vary significantly across industry groups, both in direction and magnitude.

² For each category of loans, loans reviewed for the two periods were treated as being drawn from two populations that are similar except (potentially) for the characteristic being ranked. Standard tests were constructed to test whether the likelihood that any given loan will fall into one or more ranking categories is the same in the two periods, where differences in this likelihood within a given ranking category can be treated as a Bernoulli variable. The ranking data allowed for three different forms of tests to be applied, based on the likelihood that a given loan would fall into the upper half of the ranking categories (versus the alternative that it would fall into the lower half), the likelihood that a given loan would fall into the “Strongest” category (versus the alternative that it would fall into one of the other three categories), or the likelihood that a given loan would fall into the “Least Strong” category (again versus the alternative that it would fall into one of the other three). Standard techniques were used to perform these tests.

Table 17
Summary Results of Ranking

	% in Upper Half			% in "Strongest"			% in "Least Strong"		
	1995	1997	Diff.	1995	1997	Diff.	1995	1997	Diff.
<i>Financial Ability to Repay</i>									
Heavy Manufacturing	52.1%	46.5%	-5.6%	26.8%	17.3%	-9.4%	25.4%	26.7%	-1.3%
Communications/Printing	52.4%	45.2%	-7.1%	29.8%	22.1%	-7.7%	21.4%	29.9%	-8.4%
Wholesalers of Durables	52.7%	47.3%	-5.5%	27.3%	23.6%	-3.6%	20.0%	29.1%	-9.1%
Commercial Real Estate	43.4%	66.0%	22.6%	20.8%	25.0%	4.2%	24.5%	18.3%	6.2%
<i>Underwriting Rigor</i>									
Heavy Manufacturing	54.9%	46.5%	-8.5%	26.8%	20.0%	-6.8%	19.7%	28.0%	-8.3%
Communications/Printing	46.4%	51.2%	4.8%	20.2%	31.2%	10.9%	22.6%	26.0%	-3.4%
Wholesalers of Durables	38.2%	60.0%	21.8%	27.3%	21.8%	-5.5%	27.3%	23.6%	3.6%
Commercial Real Estate	50.9%	62.3%	11.3%	17.0%	28.3%	11.4%	22.6%	18.3%	4.3%

Notes: Commercial Real Estate combines Residential Construction and Office-Related.

*Difference column showing **negative** indicates that 1997 **deteriorated** when compared with 1995.*

Difference shown in italics indicates significantly different from zero at 90% confidence level.

Borrowers in the heavy manufacturing, communications/printing, and wholesaling groups were all less likely to be in the "Upper Half" and "Strongest" categories in 1997, with differences hovering between 1 and 1.5 standard deviations. These borrowers were also more likely to be in the "Least Strong" rating category in 1997 as well. Among these results, the reduced likelihood of heavy manufacturing loans to be placed into the "Strongest" category was significant at the 90% confidence interval. Taken together, these findings suggest that banks were taking slightly greater risk in their lending to these groups in 1997.

Commercial real estate borrowers, in contrast, were significantly more likely to be ranked in the "Upper Half" in 1997 than in 1995, as well as more likely to be in the "strongest" and less likely to be in the "Least Strong" categories. This may be attributable to the continuing recovery in real estate markets and vacancy rates between 1995 and 1997, from the depths of the early-90s oversupply. The difference of 22.6% for the "Upper Half" is significant beyond the 99% confidence level.

It is important to emphasize that even the statistically significant findings describe relatively modest changes in lending posture. There were only a small number of categories, and only at a few banks, where examiners characterized the differences between "Strongest" and

“Least Strong” as being significant or dramatic. Thus even the change in real estate lending, while “real”, is not a shift that examiners considered to be “dramatic”.

Rigor of the Underwriting Process: By all indications, the underwriting process for ranked loans in most cases showed signs of strengthening between 1995 and 1997. (See again Table 17, lower panel.) This is generally consistent with the observation that many of the institutions had enhanced important elements of their credit analysis and loan approval process.

Among the loan types, the underwriting process for commercial real estate lending appears to have been much stronger in 1997. The underwriting process for communications and printing loans also appears to have been stronger in 1997 than in 1995: in particular, 1997 loans were significantly more likely to be in the “Strongest” category. Similarly, the underwriting process for loans to wholesalers was much more likely to be in the “Upper Half” for 1997, although results for “Strongest” and “Least Strong” were less pronounced.

In contrast, the underwriting process for heavy manufacturing credits appeared to be less strong in 1997 than in 1995: specifically, loans in this group were significantly less likely to be in the “Upper Half” or “Strongest” categories, while more likely to be “Least Strong”.

IV. “BENCHMARK” OF UNDERWRITING PROCESS

A. LOAN APPROVAL DOCUMENTATION AND PROCESS

Overall Assessment: In the judgment of the examiners, nearly all of the institutions currently provide internal management with information that is generally adequate to assess the risk being taken on each loan; even so, much improved documentation and approval systems were in the process of being introduced late in 1997.

For some of the institutions, examiners observed that the degree of information provided formally in the approval process diminished substantially for loans of less than \$500,000 to \$1 million. In some cases this was associated with the use of credit scoring models for small business loans, although both banks required additional analysis for loans beyond a threshold level.

All but the largest institutions utilize some combination of individual credit authorities and a formal committee structure; the largest have no committee structure.

Enhancements to Approval Process: Several of the institutions materially enhanced key elements of their loan approval and documentation during the period. These enhancements included

- Introduction or enhancement of requirements for formal credit department approval or “concurrence” of new loans, as well as efforts to bring credit professionals into the lending process early in the negotiation process. Both

measures increase the ability of credit staff to influence both the credit decision and the structure of loans that are made.

- More detailed risk rating systems, allowing the bank to better differentiate among the degree of credit risk currently in the portfolio and in a new transaction. In some cases, however, the bulk of loans continue to fall into a single category, making such analysis much less effective.
- Standardization and enhancement of required supporting commentary and financial analysis in loan approval documents. Although it cannot guarantee that good credit decisions are made, improved and more standardized analysis allows both lenders and outsiders to the process -- including directors and supervisors -- to better understand the risks being taken.
- Introduction of new analytical software that enhances or makes more efficient the credit analysis process. In most cases this was accomplished by acquiring a new (or newer) version of spreadsheet analysis package, but in at least one case this was custom-developed platform that requires credit analysts to address a large number of standard elements of credit analysis, while also providing on-line access to reference information including economic forecasts by industry and Robert Morris Associates material.

B. PROJECTIONS/ALTERNATIVE OUTLOOKS

Loan policies at several of the institutions call for formal projections on all loans meeting certain criteria related to tenor, size, and/or risk grade. Formal projections were generally present in approval documents or credit files for acquisition loans or other long-term loans, particularly if the loan was part of a syndication. Projections were also included in the small number of some asset-based lending deals where fixed assets were also included in collateral pool; in these cases, the loans typically had relatively aggressive advance rates.

Otherwise, formal financial projections were rarely included in loan approval documentation, except at those institutions most active as agents in loan syndications. At other banks, projections were only in evidence for participation in syndicated loans, in which case the banks generally included the projections provided by the lead agent. Projections were less commonly found among loans extended to long-term relationship customers and "stable" firms. Bank management and lenders generally believed that formal projections are not that important for short-tenor loans (even for ongoing relationships) and loans for certain purposes (e.g., asset-based lending where bank takes control of the borrower's accounts receivable).

Overall, formal projections were evident for 29% of the loans in 1997, up slightly from 22% in 1995. Projections were more common in 1997 for loans to heavy manufacturers and office-related commercial real estate. When included, projections were most often keyed to (borrower's) "management case", but agent banks were more likely to utilize a bank-developed scenario as the basis for analysis.

Alternative projections (representing “stress” or “downside” conditions) were even more rare, appearing only when they were absolutely “needed”. When alternative scenarios were present, they typically did represent a significant “shock” to the management or base case scenario. Most often these stress scenarios involved rising interest rates on leveraged transactions, but shocks to revenue growth were also evident. Examiners believed that when these alternative projections were present, they were not adequate to reveal the risk of the loan in one out of ten cases. It should be noted that there were also a relatively small number of cases for which alternative projections were not included in loan approval document or credit file, but reference was made to them in the text of the loan approval document.

There are alternative approaches to the use of formal financial projections, but the examination teams observed that such tools were used only rarely. One alternative to projections, the use of standard reference (or guidance) financial ratio thresholds as formal underwriting standards, was not in evidence. There were cases in which formal ratio tests are incorporated into the assignment of an internal risk grade, for example, as a table of guidance ratios used in assigning risk ratings. Another alternative or supplement to financial projections is to use formal bankruptcy scoring or other default-probability modeling. This too was exceeding rare in the loan approval documents reviewed for this project, evident only in a few loans. This is somewhat surprising, since some of the institutions had introduced complex models for assessing *portfolio* credit risk that make use of some of these same tools.

In the absence of formal financial projections or other such tools, it is clear that commercial lending continues to be a business that is judgment-oriented and experience-based. This process is typically keyed to, among other things, certain key financial ratios such as debt service coverage or leverage that are in turn keyed to the borrower's current performance. These ratios indicate the degree of “cushion” in the borrower's performance available to cover unforeseen future events. These standards may be individualized to particular borrowers, and are not written down in policies or other documents. In short, informal ratios (e.g., for residential construction, coverage ratio of 1.3 times debt service) are used as “rules of thumb” in the process, are closely linked to the borrower's current performance, and may indeed migrate over time. The reviews undertaken for this exercise were only able to identify or quantify these rules of thumb in a tentative manner, with some indication that the standards for adequate cash flow coverage have fallen for communications and printing borrowers over the past two years. (See again Table 16.)

Such rules may be embedded in other elements of the underwriting process, for example, covenants and collateral requirements, although in many cases covenants appeared to be tightly linked to the borrower's current level of performance. In a similar vein, such rules may be embedded in “grid” pricing and covenants -- that is, where spreads and covenant thresholds on a loan can vary over time with the performance of the borrower. Grid pricing and covenants were more common in 1997 for the loans reviewed for this exercise. Such grids were commonly “two-way” grids, that is, allowing for terms to become more favorable or less favorable to the borrower than at the day the loan closes. Grids were commonly used as a “carrot” in some communications loans at one institution, especially if a borrower is in the process of completing or has just completed an acquisition. Such grids clearly provide incentives for the borrower to

perform well, but it is unclear how much protection grids provide to the lender. Grids also can head off the need to renegotiate terms with a strong-performing borrower in the future.

By and large, the assessment of possible stress conditions was informal and undocumented, if performed at all. *This means that approving authorities (up to and including senior management and the board) may not in some cases have formally received adequate information on the downside risks associated with each transaction.*

Industry analysis was typically included in approval documents for several of the institutions. In some cases in which loan approval documents did not provide formal projections, there were indications that detailed industry analysis had been done, including some formal (but limited) forward-looking analysis.

C. CHARACTERISTICS OF THE INDIVIDUAL APPROVAL PROCESSES

The loan approval process at each institution has its own characteristics. Nonetheless, the loan approval processes at the banks can be grouped into four “clusters” that help to illuminate the range of current practice in making loans. Each cluster is considered in turn below.

First, there were processes that are the least rigorous, and least well-documented, of those reviewed here. In certain respects, examiners considered these to be more like the kind of process one would expect to see at a community bank rather than in a large banking organization. Although informal reviews, such as loan committee meetings, were described as intensive, the written documentation of the credit decision was typically quite thin, and supporting financial analysis was minimal or non-existent. The review teams did note in these cases that there were signs of improvement between 1995 and 1997.

Second, there were processes that can be characterized as more thorough, with strong and formal documentation and analysis requirements. These institutions have also enhanced their approval documents and introduced more standardized financial analysis, but were unable to systematically track loan policy exceptions, which in some cases were quite prevalent. These institutions did not incorporate detailed independent analysis of many participations in syndicated loans. Internal risk rating systems include several pass categories, but most loans fell into a single pass grade. Credit staff is consulted during the underwriting process, but is not required to formally approve a transaction as a condition of final approval. These institutions have aggressively pursued lending to REITs, although to different degrees.

Third, there were processes having strong and formal documentation together with an intensive and highly structured financial analysis on each borrower. All have detailed standard formats for loan approvals that often include financial projections and comparisons with industry norms, along with extensive narrative identifying key issues for each credit. Among the tools observed were automated forms for credit analysts that prompts for a significant number of specific elements of financial analysis. Participations in syndications generally received the same degree of independent scrutiny as other loans, unlike the banks falling into the first two groups above. Among other tools observed were very detailed loan policies that provide clear guidance

on requirements for analysis and approval, and in the case of real estate lending, articulate formal “guidance” underwriting standards/financial ratios (such as debt service coverage). Nearly all of these institutions formally track loan policy exceptions by organizational units. Credit staff generally must “sign off” or concur with a transaction before it can be approved.

Finally, there were processes that are also intensive and well-documented, but are more oriented to initiating large syndicated credits. Policies are more general, involving a great deal of discretion. Independent credit staff is closely involved in the development of each transaction, however, and must sign off on the transaction. For those loans that are syndicated, staff from syndications must also sign off. Standard formats that resemble syndication packages are common. Financial projections and alternative scenarios are thus much more common than at the other institutions. The key credit control in both institutions is the authority of independent, experienced, and influential credit staff. The key source of pressure, however, is that transactions must be developed and processed quickly in order to facilitate the syndication process. In contrast, institutions in the third group above are somewhat more deliberate in their analysis and review.

There was no evidence of significant changes in loan policies that would represent easing at any of the institutions, except for rapid increases in the internal concentration limits on REIT lending at a small number of institutions. Similarly, there was no evidence of major increases in loan policy exceptions at any institutions. Approval documents indicate whether the loan is an exception to policy at about half of the institutions. There were indications of higher incidence of exceptions at a few of the institutions in 1997, but in general there was no indications of significant numbers of loan policy exceptions at the institutions in either 1995 or 1997.

The ability to track and report exceptions formally to top management and/or directors varied widely as discussed above. Some institutions were particularly thorough in tracking and reporting their loans that are exceptions to written policy. Their reporting was oriented to promoting accountability, with exceptions being reported in great detail to the board of directors (by lending unit and by type of exception). This reporting is currently based on the number of loans, rather than the dollar value of these loans, but the latter is being considered.

V. SUMMARY FINDINGS BY LOAN/BORROWER TYPE

A. FINDINGS FOR HEAVY MANUFACTURING

A large portion of these loans were asset-based (i.e., advances against a borrowing base whose liquidation through the asset conversion cycle would repay the loan) or collateralized by accounts receivable and/or inventory. Some factoring loans were also present. Only a few were syndicated loans, and these were generally unsecured.

All but one of the institutions experienced declining spreads. Covenants were loosened somewhat at most institutions in 1997 as compared with 1995, although there were fewer instances of loosening of covenants on syndicated credits. As noted earlier, there were some indications of taking "softer" collateral positions in 1997, (i.e., instead of taking a lien on company's assets, taking a lien on stock in the company).

In general, as discussed above, there were some indications of a greater appetite to take risk in heavy manufacturing lending at more than half of the institutions, while there were no such indications at the others. In many cases this greater appetite was reflected in modest easing (or increasing) advance ratios against collateral..

B. FINDINGS FOR COMMUNICATIONS AND PRINTING

These loans carried the highest (most favorable) pricing of the categories reviewed for this exercise. They were also the loans involving the most significant risk-taking among the loans reviewed for this exercise, and this became somewhat more pronounced in 1997. Some deals were to borrowers generating negative cash flow, a condition that was projected to continue for a year, two years, or more. The loans sampled in this category for the exercise were typically acquisition financing. Most involved cable TV systems, TV/Radio stations, or wireless/cellular communications firms, although some loans involving the printing and publishing industry were noted as well. In such acquisition deals, reduction of overhead expense was often planned to be a critical source of improved cash flow in the new entity. The best-analyzed of these loans included alternative financial projections that included "stress tests" of these overhead reductions and other key determinants of the borrower's financial performance. The diversity of loan types within this grouping -- that is, among the various types of communications firms, and between communications firms and printer/publishers -- made some comparisons difficult.

Generally these loans were analyzed and underwritten with a clear focus on expected future cash flow, with extensive covenants, with little analysis of the balance sheet. This was equally true for 1995 and 1997 loans. In some cases, however -- especially in loans to communications firms -- balance sheet analysis would not be likely to add much to the credit analysis; for example, the principal asset of these firms may be illiquid, representing either an FCC license (which cannot be pledged) or extensive infrastructure.

There were indications in a few loans in this category, based on examiner comments, that debt financing was being provided where equity might be more appropriate. There were individual cases that seem to indicate extraordinary eagerness to make these loans. One syndicated loan to a borrower with a public debt rating of CCC was oversubscribed. In other cases, the bank also took a junior position or an equity kicker in the deal.

"Grid" pricing was more prevalent in 1997 at many of the banks reviewed. Pricing spreads were thinner in 1997 at most of the banks, especially among the printing and publishing firms. As in other areas, there was some migration to LIBOR-based rather than Prime-based pricing between 1995 and 1997, contributing to lower overall asset yields on these loans.

To be sure, the communication and printing loans reviewed for the exercise also included cases in which terms of lending were *tightened* (made less favorable to the borrower) during renewals in 1997 due to unfavorable developments at the borrower or in the borrower's marketplace.

Nonetheless, there were several indications -- slightly increased pricing, less liberal collateral requirements, more prevalent guarantees and decreasing projected cash flow coverage, among others -- that *some borrowers may be at or near the boundaries of prudent expansion*, and that banks are accordingly taking steps to offset the increased risk by introducing more restrictive loan terms.

C. FINDINGS FOR WHOLESALERS OF DURABLES

These loans were mostly to middle-market firms, predominantly secured or even formally asset-based; advance rates typically ranged between 70 and 80% on accounts receivable, and from 50% to 60% on inventories. In general, lending to wholesalers was most prominent in the regional institutions, although this finding was not without exception.

In reviewing loans, examiners saw direct evidence of banks bidding business away from competitors with loan pricing. In one institution, the sample included six "take-away" deals with a decrease in spreads of 25 basis points or more, and some concessions on other terms, relative to the borrower's previous lender. There were indications of such competition elsewhere, but less dramatic in degree. This tendency was reflected in the codesheet data; there was some evidence of reduction in the spread being paid over the reference rate, and other cases where prime-based became LIBOR-based.

There were also a small number of cases in which banks eliminated a requirement for field audits of collateral, where this decision was based on improvement in the financial condition of the borrower. Average maturity was essentially unchanged between the two periods, and generally there was a slight tendency to easier -- and fewer -- covenants.

Loans to wholesalers were typically guaranteed by the firm's owner. The banks generally would attempt to verify outside net worth, but the guarantor was typically not subjected to a full financial analysis. Although at one institution 3 years of tax returns were required in all cases,

providing impetus to thorough review of the guarantor, examiners noted that a detailed financial analysis of an owner may not prove to be illuminating if the bulk of the owner's assets are tied to the borrowing firm.

D. FINDINGS FOR COMMERCIAL REAL ESTATE

The examination teams reviewed both office-related and residential construction, although in the latter case financing of lot development appeared more commonly than did actual home construction. Samples tended to be rather thin, and in general the banks with such loans had at least some difficulty identifying loans by property type when providing sampling information. Some institutions had little or no loan exposure in these categories, while others had no difficulty in quickly identifying these types of loans.

Loan pricing on residential construction loans tended to be thinner in 1997, as did fees. Loan-to-value (LTV) ratios on residential construction loans tended to be a bit higher in 1997, with a slight increase in the number of LTV-related exceptions as well. There was no evidence of change in the covenants present in these loans, including the number of unsold or speculative ("spec") single-family homes allowed to be built on residential construction loans. In addition to extensions of final maturity (as discussed earlier), the amount of amortization was generally reduced in 1997. For example, a 1995 loan maturing in five years might require amortization of principal as if the loan were a 25-year loan, with the balance due at the end of five years; in 1997, a similar loan might require amortization as if it were a 30-year loan. There was no indication of any material change in the capitalization rates being used for in-house valuation of income-generating properties (remaining between 8.5-10% in both 1995 and 1997); manipulation of "cap rates" was common in the 1980's real estate boom.

Overall, examiners believed that debt service coverage of these loans was generally good, and significant (and adequate) owner's equity was present in these transactions. There was very little financing of speculative activity at all, although there were multiple indications that "spec" financing (especially of office-related properties) was being done by other parties, especially in Texas.

Where loan exceptions occurred, they appear to have been related to loan-to-value (LTV) ratios in excess of internal policy standards, or to environmental aspects of the bank's loan policy. There was some increase in LTV-related exceptions in 1997, as well as some increase in the appetite for environmental-related exceptions that may have been related to changes in legal standards.

E. REAL ESTATE NOTE -- LENDING TO REITS

In the process of conducting these reviews, examiners detected a shift in the composition of real-estate-related lending by some banks. There were relatively few real estate loans made to finance single-asset residential construction or office properties at many of the institutions, particularly given the continuing attractive economy. To a large extent, this appears to represent

a reluctance to get into the kind of lending that created problems for the industry during the last credit cycle. Reflecting this lack of appetite, one institution will not make commercial real estate loans that would carry its lowest pass grade, in marked contrast to its practice for other commercial loans.

However, lending to real estate investment trusts (REITs) has grown rapidly at several of the institutions. For more than half of these banks, credit exposure to REITs doubled during 1997. In general, this exposure is concentrated in a relatively small number of REITs, ranging from a handful to about twenty.

Pricing is typically very competitive on these transactions. These loans are typically unsecured, although generally requiring a "negative pledge" on assets (i.e., a commitment not to pledge these assets as collateral for other transactions) and limitations on the types of properties the REIT may acquire or develop (e.g., raw land, office, hotels). Institutions did report that a small portion of their exposure to REITs was collateralized, which bank lenders characterized as lending to lower-quality REITs. There are indications that some of these REITs are engaged in limited "spec" construction, and the banks appear to be monitoring that behavior.

Most of these loans are participations in syndicated credits. Loan Pricing Corporation recently reported the total volume of syndications for REITs grew by more than 200% in 1997.. Bank management and lenders emphasize that these are "not the REITs of the 1970s". These REITs generally have significant equity (e.g., debt to worth of one-to-one or better), have diverse operations across property types or geographic areas of the country, generate operating revenues, and have ready access to capital markets. Although a downturn in the property market would undoubtedly hurt REITs, the banks believe that financial strength and resilience would allow them to continue to meet their debt obligations. The regional banks active in REITs emphasized that they were avoiding certain types of REITs that presented an unattractive risk profile due to excessive growth and acquisition of riskier property types (e.g., casinos), among other reasons.

Because of their unusual characteristics, lending to REITs has generated a set of special lending practices, including multiple covenants relating to the estimated value of the properties that with periodic reassessment of the present value of owned properties based on up-to-date financial performance. In some cases the institutions have developed substantial internal reference materials dedicated to underwriting credits to REITs.

VI. POSSIBLE AREAS OF SUPERVISORY ATTENTION

Although in general examiners found that the quality of the "typical" loan made in 1997 was not significantly lower than that made in 1995, the findings of this exercise suggest certain areas for which there might be cause for further supervisory attention. Specifically, this exercise has raised issues that are pertinent to evaluating lending and credit risk management processes at banking organizations. This section summarizes these issues.

A. LENDING ACTIVITY GENERALLY

1. *Continuing evidence of intensifying competition to lend.* This competition continues to come from both other banks and nonbank lenders, including investment banks. Competition from investment banks was specifically cited as a concern by at least three institutions, and leads to loans that are typically participated back to regional banks as well as other participants.
2. *It remains unclear how well banks are "pricing to risk".* Although "grid" pricing is somewhat more common than in 1995, banks are getting significantly lower returns than in 1995 on loans of at best comparable quality. Examiners observed that the presence of a formal risk-adjusted return on capital (RAROC) or other similar process seems to increase the degree of pricing discipline, especially in terms of linking pricing to risk.
3. *Particular appetite among banks to take greater risk in communications lending,* including a limited number of cases in which debt financing is being provided when equity would be more appropriate.
4. *Indications that banks are not being given enough time to analyze syndicated deals,* especially when these loans are to investment-grade borrowers. This concern was specifically mentioned by several banks. Whether or not adequate time is being provided, it is clear that these syndications continue to sell out quickly.
5. *Lending to REITs,* given the pace of growth of REIT assets and the growth of "specialty REITs". While these appear to be very different from the REITs of the 1970s, they are also very different from lending to individual developers/partnerships. The findings of this exercise with respect to REITs suggest that examiners may need to be better informed with regard to sound practices in lending to "today's REITs". In particular, examiners need to increase their understanding of the extent to which the risks associated with credit exposure to REITs are affected by conditions in commercial property markets.

B. LOAN APPROVAL PROCESS SPECIFICALLY

1. *Inadequate credit analysis and approval documentation,* which was a particular issue at a small number of institutions but appeared occasionally at other institutions as well. There was a tendency for some banks not to perform a detailed independent credit analysis of participations in syndicated credits.
2. *Limited use of financial projections or other "forward-looking" tools in the loan approval process.* Informal and judgmental analysis is common, but can be too closely linked to the borrower's current financial performance. Formal analysis of conditions unlike the present, even as "stress tests", improves the ability to evaluate and communicate the risks of individual loans within the bank and to bank supervisors.

3. *Inadequate internal controls in the use of credit scoring in small business lending at one institution.*
4. *Potential inadequacies in the internal credit risk rating systems, especially excessively broad categories, at some of the institutions. This is an area for which a System initiative is already underway.*
5. *Indications of modestly higher levels of policy exceptions at some institutions.*

VII. "SOUND PRACTICES": OPPORTUNITIES FOR IMPROVEMENTS

The counterpart of the supervisory issues highlighted above are the sound practices demonstrated by one or more of the institutions reviewed here in one or more areas. Each of the institutions reviewed could benefit from adopting one or more of the practices described below.

A. LENDING ACTIVITY GENERALLY

1. *Management information systems that provide clear indications of changes in lending stance and types of exposure, including the ability to report commercial real estate exposure by the general type of property being financed.*
2. *Formal tracking and reporting of exceptions to loan policies, by type of exception and organizational unit originating the loan. Management and directors can thus have a clear sense of the effectiveness of the policies they approve.*
3. *Complete and centralized credit files that contain all key documents, including complete loan approval packages, to support inquiries and to avoid undue reliance on files maintained by individual loan officers.*

B. LOAN APPROVAL PROCESS SPECIFICALLY

1. *Use of projections and other forward-looking tools to analyze fully the key risks facing the loan.*
2. *Presentation of multiple projections, including a "management" or "best" case, an independent "base case", and "worst" or "stress" case(s) where the last evaluate significant negative developments in the key performance drivers of the loan.*

3. *Integration of other tools* into the credit analysis and loan approval process, including bankruptcy scoring and other default-modeling systems; not used often, but many have plans to investigate their use.
4. *Formal requirement for credit staff "concurrence" or approval* of transactions, not merely "consultation".
5. *Early credit department involvement* in the development of the loan transaction, allowing ability both to influence the outcome of negotiations and to react to a loan that may have problems before the transaction develops too much "momentum". The process should be administered properly to assure that credit staff retains its independence from the lending function.
6. *Independent analysis and review of internal risk ratings* assigned to new loans.
7. *When credit scoring is used for small business lending*, careful implementation and strict adherence to sound policies regarding when an acceptable credit score is sufficient for approval and when additional supporting analysis is required.
8. *Clear statement in loan policies of minimum covenant requirements* to be imposed for specific loan types.
9. *Establishment of "guidance minimums" for financial performance ratios/ underwriting tandards* where possible for certain types of loans or borrowers.