
◆ Regional Outlook ◆

FEDERAL DEPOSIT INSURANCE CORPORATION

FIRST QUARTER 1998

FDIC SAN FRANCISCO REGION



DIVISION OF
INSURANCE

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In Focus This Quarter

◆ **Y2K**—Preventing the Year 2000 (Y2K) computer problem is becoming ever more costly as the time and resources left to do so disappear. Equally costly, according to some estimates, will be the litigation that follows in the problem's wake. A failure to address Y2K exposures immediately and successfully may amount to a gamble backed by the value of the bank franchise and the officers and directors who run it. *See page 3.*

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◆ **Trends in Commercial Real Estate Loan Pricing and Underwriting**—An abundant supply of financing is placing pressure on commercial real estate loan pricing and underwriting standards. Underwriting standards are being increasingly influenced by the rapid growth in commercial mortgage-backed securities and real estate investment trusts. While many within the industry believe that broader public funding of commercial real estate projects will lead to greater market transparency and improved underwriting discipline, there are a number of unique risk considerations related to the rapid growth and continuing development of these alternative funding sources. *See page 7.*

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◆ **Total Return: A Useful Tool for Monitoring Investment Portfolio Risk**—The Federal Financial Institutions Examination Council is rescinding the 1991 policy that required "high-risk" testing for mortgage derivative products and has released for comment a policy encouraging risk management across all types of instruments on an investment portfolio basis. Total return, a concept that includes fluctuations in market value, is a useful tool for measuring the performance of an investment portfolio and providing information about market risk at the portfolio level. *See page 13.*

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By Catherine I. Phillips-Olsen, Roger Stephens

The **Regional Outlook** is published quarterly by the Division of Insurance of the Federal Deposit Insurance Corporation for the following eight geographic regions:

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Y2K: Banking in the twenty-first century may provide grand new opportunities—but you have to get there first

- As a result of a three-decades-old programming convention, January 1, 2000, may find some computer systems unable to function correctly, if at all. Links within and between systems and organizations make the problem a complex one.
- Cures are expected to be difficult and costly. If those cures fail, litigation could be equally costly, and much of it may be aimed at directors and officers.
- Accordingly, senior bank management should be actively involved in making sure the cure takes place. A failure to do so amounts to a gamble backed by the value of the bank franchise and those who run it.

Complex Problem, Complex Cure

By now the story is well known. At midnight on December 31, 1999, computer systems that process dates using only the last two digits of a year will cease to function correctly, if at all. Equipment that contains embedded systems—chips or circuitry designed to perform specific functions—also may fail. And the problem is pervasive. It lies within systems and between systems, in both software and hardware. The large number of ways dates are used, the number of places they can occur, and the number of creative ways for naming them confounds an accurate assessment.

Fixing the Year 2000 (Y2K) problem will require considerable time and effort. Computers and applications must be inventoried, examined for date usage, corrected where necessary, and then tested—not just by themselves but in combination with every other system with which they interact. This includes not only a bank's own systems but also those of its servicers, correspondents, customers, vendors, and trading counterparties. Moreover, there are a variety of ways to address the problem, ranging from expanding date fields to four digits to simply subtracting 28 years from every date before processing—any of which could introduce new incompatibility problems when systems that have been

fixed in different ways attempt to interact.¹ And because not all systems can be corrected at once, interfaces or bridges between corrected and uncorrected systems also must be developed to maintain business system continuity. Most important, it must all be done *before* the non-negotiable deadline of December 31, 1999.

For bank management, there are two ways to find out how serious the problem will be. The first is to commit resources to determining just how exposed the bank's systems are—the first concrete step in actually solving the problem. The second is to gamble the franchise by doing little or nothing and letting the century date change provide the ultimate stress test.

Costs

The costs of a cure are many. First, there are the costs of actually finding and fixing the problem. Estimates of this cost have ranged widely, although the *Gartner Group's* estimate of \$300 to \$600 billion worldwide is the most widely quoted. Using a different approach, *Software Productivity Research (SPR)* places the global number at over \$1.3 trillion, including a \$176 billion slice for the United States alone. Then there are the estimated costs of litigation. At the low end, SPR places them at \$300 billion globally and projects that fully one-third of that amount will be generated in the United States. At the high end, the *Giga Information Group* sees a much more litigious future—estimating that Y2K-related legal costs could exceed \$1 trillion.

Significant opportunity costs may accrue as well, and the degree to which Y2K-related outlays fail to provide

¹ Every 28 years the same combination of dates and days recurs. Subtracting 28 years from a date before processing and then adding them back upon output has been suggested as a temporary but partial remedy because it permits applications to continue measuring time by subtracting two-digit years from each other. *Windowing* is another partial correction whereby some two-digit years—say those less than “50,” for example—are assumed to be preceded by “20” (thus “49” becomes “2049” in date calculations) while the remainder are assumed to be preceded by a “19” (thus “50” becomes “1950”). Both approaches only delay the need for permanent corrections.

more efficient or functional systems will serve as a starting point for measuring the value of technology investments forgone. These forgone improvements will be especially costly for institutions that have started their repairs too late. They may find not only that the time for system improvements and upgrades has slipped away, but that they have insufficient time for anything beyond a patchwork solution that will continue to cost them beyond the year 2000.

At the macro level, the tally of potential Y2K costs includes declining stock values, business failures, and recession. **J.P. Morgan** has estimated that as much as 40 percent of organizations' remediation costs have not been accounted for in their information technology budgets, presumably indicating that many firms will see their share value erode as the costs of Y2K fixes and related losses are priced into their future earnings. The cost of *not* being Y2K compliant might be substantial as well. According to the **Gartner Group**, as many as one in two firms may discover just how substantial as they head into 1999 with even their most *mission-critical* systems unfixed. The potential for these firms to fail looms large among the factors that have led Edward Yardeni, chief economist at **Deutsche Morgan Grenfell**, to assign a 40 percent chance of recession in the year 2000. Peter de Jager, a consultant who also has commented extensively on Y2K issues, went even further, suggesting that 1 percent of all businesses would fail because of Y2K problems. Whatever the eventual number, many of these businesses will also be bank borrowers.

Systems and Systemic Risks

More immediate than the risk of borrower failures is the risk that a bank's own systems may fail. Banks are heavily dependent on software applications that employ dates. Among other things, they use them for calculating interest paid or due and for managing the horizons of their assets and liabilities. If these applications begin returning erroneous calculations, bank operations could be seriously disrupted.² If they fail altogether, the bank's

² For example, interest due from borrowers for a one-year period beginning in 1999 and ending in 2000 might be calculated not as one year's interest *due* but rather as nearly one century of interest *payable* ($00 - 99 = -99$) if only the last two digits of the year are used in the calculation. Similarly, any other time calculation that straddles the century date change might return answers wrong in both size and sign.

credibility—and hence its franchise value—can be substantially damaged or even irrevocably lost.

The solution is often described in software terms, but executable software is not the only problem. Correcting software to process four-digit years does little good if bank databases that store the critical information about who owes what to whom and when still store them in two-digit form. Hardware is another critical area. Nearly all electronic devices have embedded, permanently programmed chips that can be difficult to find because the functions they perform are not always apparent. This situation could lead to a host of nuisances, with automated teller machines, point-of-sale terminals, bank vaults, check and credit card processing equipment, and even building systems succumbing to the Y2K problem.

This dependence on external components and services creates a systemic exposure as well. The substantial efficiencies that now exist in transmitting payments among and between banks and borrowers are a direct result of technology. Servicers and clearinghouses fulfill computer-intensive intermediary roles in this high-velocity business—pooling payments from those who owe and redistributing them among those to whom they are due. Anything that interrupts these flows can have a substantial impact on the ability of banks to settle with their customers and with each other. Accordingly, both the Bank for International Settlements and the U.S. Federal Reserve are concerned about the Y2K threat for two reasons—first because it can interrupt the operations of systems dedicated to making interbank payments and second because it can interrupt the operations of the individual participants and generate a liquidity shock that could cause other institutions to fail.



Unfortunately for banks, even a fully successful, industry-wide Y2K fix will not completely mitigate their risk. The year 2000 story is simply too dramatic and lends itself too well to sensationalism. Therefore, in addition to managing the cure, bankers will have to manage the perceptions of their customers and of the public at large—a considerable challenge given that a loss of confidence by a small number of customers could precipitate liquidity problems for institutions even in the absence of a genuine threat.

Liability in the Executive Suite

It bears frequent repeating that Y2K is a business problem and not just a technical one. Its intricacies go beyond those of the systems themselves and extend into the labyrinth of business relationships and fiduciary obligations that bind directors and officers—and the assorted attorneys, auditors, consultants, and service providers who assist them—to their banks. Through this network could pass liability and litigation that could be several times the cost of fixing the problem itself. And although the problem may have had a technical origin, claims would likely be directed against those with deeper pockets who jointly and severally, it will be argued, should have corrected or disclosed the institution's Y2K exposures.

While the bank failures of the late 1980s and early 1990s are often attributed to unforeseen economic

events, it will be difficult to assert such a defense for a failure to address the Y2K problem. It is simply too visible and offers too much advance notice. This is one reason why the potential potency of Y2K litigation should be taken seriously. Moreover, placing the blame, no matter how well deserved, at the feet of vendors and consultants may offer little protection. The Federal Financial Institutions Examination Council (FFIEC) has indicated that senior bank management should be fully aware of their vendors' progress and develop contingency plans should those vendors fail.³ This pronouncement has elevated the standard for prudent Y2K actions in such a way as to make imperative the active involvement of top bank management in both solving

³*Safety and Soundness Guidelines Concerning the Year 2000 Business Risk*, December 1997. The full text is available on the FFIEC website at www.ffiec.gov.

Managing the Y2K Process

On May 5, 1997, the Federal Financial Institutions Examination Council—an interagency group composed of the Federal Deposit Insurance Corporation, Federal Reserve, Office of the Comptroller of the Currency, Office of Thrift Supervision, and National Credit Union Administration—released a statement on Year 2000 project management awareness that included an outline of the Y2K management process. That outline identified five phases that each financial institution would have to navigate in identifying and fixing its Y2K exposures:

Awareness. Before Y2K exposures can be fixed, they must be seen as problems. Creating awareness, however, is not easy because the pervasiveness of components and intersystem links that can harbor or pass the problem create complexities that are neither intuitive nor easily quantified. However, it is critical that senior managers understand the problem and fully support the commitment of resources to fixing it.

Assessment. In this phase, all information systems, electronic equipment, and building systems must be evaluated for specific Y2K exposures. Remediation plans must then be devised. In addition to plans for fixing the problem, contingency plans will be needed as a precaution against unforeseen Y2K failures originating from both within and outside the bank.

Renovation. Renovation includes not only fixing the problem internally but monitoring the efforts of customers, counterparties, vendors, and service providers. The prudent execution of due diligence and best practices at this stage will provide a measure of confidence that exposures have been addressed. It will also provide a measure of protection from liability claims should problems nevertheless emerge.

Validation. Validation means testing how a bank's systems will respond on their own as well as when connected with those outside the bank. The FFIEC believes that one full year should be available for testing and correcting problems that either remain or are introduced by the renovation process. Accordingly, institutions should plan on completing the previous three phases by the end of 1998.

Implementation. Testing corrected systems to ensure their compliance does not complete the process. The final step is to gain acceptance by the users as to the ability of the system to satisfy business requirements. A failure at this stage will require further correction or the implementation of contingency plans.

For the full text of this and other FFIEC guidance, see the FFIEC website at www.ffiec.gov.

the problem and ensuring that the franchise will be protected if one or more of those solutions fail.

Betting the Franchise

The FFIEC has divided Y2K remediation into five phases—awareness, assessment, renovation, validation, and implementation (see Inset 1, page 5). As a benchmark for progress, the FFIEC has indicated that the validation phase—the phase in which testing of Y2K fixes is conducted—should be well under way for all banks by the end of 1998. This leaves less than a year for laggards to complete the first three phases. Banks that are not devoting adequate resources to identify and address their exposures need to be aware that the consequences of delay or inaction could be severe. The bank supervi-

sory agencies, Congress, and the financial markets are taking the risk to heart. So too are attorneys intent on sharing in what has been described as potentially the most expensive litigation in history.

Insurance companies are concerned as well, as evidenced by extremely high Y2K policy premiums or outright refusal to write Y2K coverage. Thus, any business interruptions and liability that emerge may have to be financed from the bank income statement and balance sheet. As such, a bet that Y2K will not be a problem might well amount to a gamble backed by the bank franchise and those who run it. (See Inset 2 below for additional sources of information.)

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For Further Information

Further information on the Y2K problem can be obtained from banking regulatory agencies at the websites shown below.

Federal Deposit Insurance Corporation (FDIC)	www.fdic.gov
Federal Financial Institutions Examination Council (FFIEC)	www.ffiec.gov
U.S. Federal Reserve Board of Governors	www.bog.frb.fed.us
National Credit Union Administration (NCUA)	www.ncua.gov
Office of the Comptroller of the Currency (OCC)	www.occ.treas.gov
Office of Thrift Supervision (OTS)	www.ots.treas.gov

The following websites contain additional information concerning the Y2K problem. Their inclusion here does not serve as an endorsement by the FDIC of any information contained therein.

Market Partners Inc.— <i>Year 2000 Resources for Banks</i>	www.marketpartners.com
Gartner Group— <i>Technology Consultant</i>	www.gartner.com
Software Productivity Research (SPR)— <i>Technology Consultant</i>	www.spr.com
De Jager LLC (Peter de Jager)— <i>Technology Consultant</i>	www.year2000.com
Giga Information Group— <i>Technology Consultant</i>	www.gigaweb.com
Y2K LLC (Williams, Mullen, Christian & Dobbins)— <i>Attorneys</i>	www.Y2K.com
Economics Network (Dr. Edward Yardeni)— <i>Economist</i>	www.webcom.com/yardeni

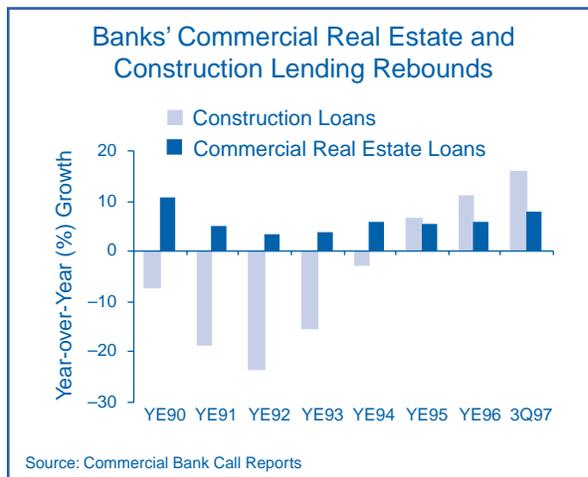
Trends in Commercial Real Estate Loan Pricing and Underwriting

- An abundant supply of capital is placing significant pressure on commercial real estate loan pricing.
- Considerable evidence suggests that a large percentage of insured institutions are easing commercial real estate and construction lending underwriting standards.
- The rapid rise in commercial mortgage-backed securities and real estate investment trust funding could change the way banks underwrite commercial real estate loans and have important effects on their competitive position in the lending markets.

As reported in last quarter's *Regional Outlook*, banks provided the largest share of funding for commercial real estate during 1995 and 1996 compared with all other financing sources (see *Strong Demand and Financial Innovation Fuel Rebounding Commercial Real Estate Markets*). Chart 1 shows that banks' commercial real estate and construction lending continues to increase and that year-over-year growth rates in these two loan categories are accelerating. At the same time, however, alternative funding sources in the form of commercial mortgage-backed securities (CMBS) and real estate investment trusts (REITs) are also experiencing significant growth. *Commercial Mortgage Alert* reports that \$26 billion in CMBS was issued through September 1997, up from \$17 billion for the same period in 1996. The same publication projects that CMBS issuance will top \$40 billion during 1997, compared with last year's record issuance of \$29.8 billion. Measures of REIT activity also indicate impressive growth. According to the *National Association of Real Estate Investment Trusts*, REITs issued \$26.3 billion in equity through October, compared with \$12.3 billion for all of 1996. In addition, REIT market capitalization rose \$50 billion (64 percent) through the first nine months of 1997.

While it is good news to borrowers, the abundance of capital for commercial real estate projects raises the often-quoted concern that "too much money is chasing too few deals." Market observers worry that fierce competition and an excessive supply of financing are lead-

CHART 1

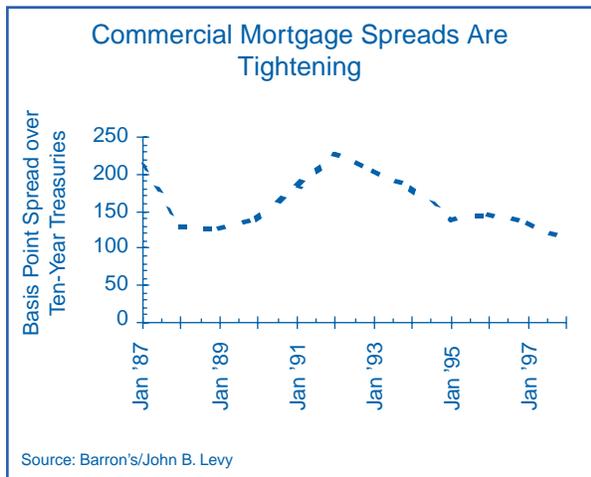


ing to both inadequate loan pricing relative to risks borne by lenders and looser loan underwriting standards. This article examines current trends in commercial real estate loan pricing and loan underwriting. It also explores the possible influences of CMBS and REITs on loan underwriting practices and commercial real estate markets.

An Abundance of Capital Has Placed Significant Pressure on Commercial Real Estate Loan Pricing

Chart 2 (next page) shows that prime-graded commercial mortgage spreads have steadily declined since 1992 and are now at levels not seen since the real estate boom years of 1988 and 1989. At 113 basis points above ten-year treasuries, current spreads on ten-year commercial mortgages are only slightly higher than A-rated ten-year industrial corporate bonds, which traded at spreads of 66 basis points over comparable-term treasuries as of September 1997. Some property sectors have experienced more narrowing of spreads than others. *American Council of Life Insurance (ACLI)* data show that mortgage spreads relative to treasuries compressed 31 basis points for industrial, 22 basis points for hotel, 21 basis points for retail, 11 basis points for multifamily, and 10 basis points for office real estate from March 1996 to March 1997. Moreover, because of continuing downward pressure, current pricing varies little across

CHART 2



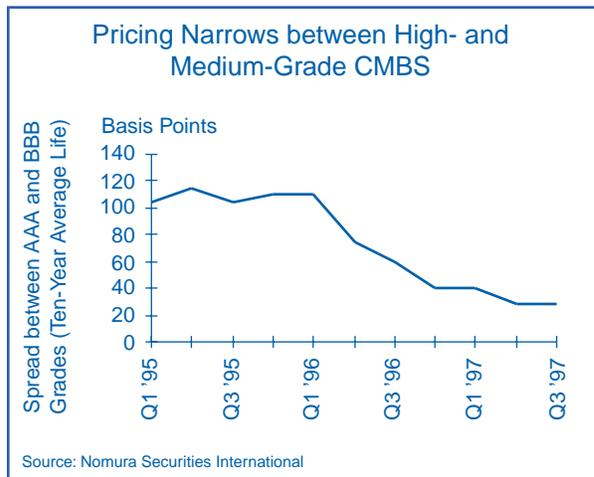
the quality spectrum. For instance, Chart 3 indicates that spreads between AAA- and BBB-rated CMBS have narrowed considerably since year-end 1995, from 110 basis points to a scant 28 basis points.

It seems likely that competitive factors will continue to place pricing pressure on lenders. The relatively recent entrance of Wall Street firms into the financing arena via conduits is a striking example of just how competitive the market for commercial real estate financing has become.¹ Conduits are rapidly becoming the dominant issuer of CMBS and underlie much of the rapid growth in CMBS noted above. Through the first nine months of 1997, *Commercial Mortgage Alert* reported that conduits accounted for 50 percent of total CMBS issuance, compared with 30 percent during the same period in 1996.

Many industry participants see conduits and REITs as significant and increasing competitive threats to traditional lenders. For example, a recent issue of *Commercial Real Estate South* discussed the continuing expansion of conduit business into a much wider range of property and credit quality types. This publication noted that conduits have a particular incentive to aggressively pursue higher quality loans in order to strengthen pools that contain weaker credits. Such aggressiveness threatens to squeeze banks' profit margins on low-risk deals, which might give banks an incentive to pursue lower quality credits. Given their focus on larger credits, conduits presently pose a competitive threat primarily to larger lenders. However, the

¹ Conduits are entities created to originate mortgage loans for distribution to investors in the secondary market.

CHART 3



rapid growth of capital within the industry may eventually force larger lenders to target smaller markets, which would in turn increase competition at the regional or local community level. While their influence is less direct, the growing use of REITs to finance commercial real estate projects also places pressure on loan pricing spreads, since lenders must compete for a smaller pool of customers. With their access to a seemingly limitless source of public funding, REITs could pose a particular threat to community bankers by dominating certain geographic markets or property sectors.

Narrowing pricing spreads raise concerns over whether lenders are being adequately compensated for the operational, funding, credit, and market risk inherent in originating, servicing, and holding commercial real estate loans. More important, tightening spreads raise prospects that lenders will ease other loan terms and relax loan standards to the extent that they are unable to differentiate their product based solely on price. While such easing may enable lenders to retain business in the face of stiff competition, imprudent underwriting could ultimately lead to higher loan losses than would otherwise be the case in the event of a downturn in commercial property markets.

Are Commercial Real Estate Loan Underwriting Standards Becoming Looser?

Most industry experts have argued that the memory of the real estate downturn of the late 1980s and early 1990s keeps lenders from becoming overly aggressive in making commercial real estate loans despite the abundance of funding alternatives currently available to

borrowers. These experts point out that today's loan-to-value (LTV) ratios are lower than they were at the peak of the last real estate boom, that lenders are concentrating more on obtaining adequate debt-coverage ratios, and that lenders are requiring borrowers to bring more cash equity to the table. One might also argue that practices have improved and become much more uniform with the implementation of regulatory appraisal standards and the adoption of interagency guidelines for real estate lending policies. Rating agencies impose additional guidelines and standards as lenders originate loans for possible sale into the secondary markets.

While information about specific quantitative underwriting criteria applied to new loan originations by commercial banks is not readily available, some sense of industry trends may be gleaned from competitors' practices. For example, the *ACLI* performs a quarterly survey of underwriting criteria for commercial real estate loan commitments originated by major life insurance lenders. The *ACLI*'s second quarter 1997 survey indicated that new commitments (total volume of \$4.1 billion) had a weighted average LTV for all property types of 66 percent and a weighted average debt-coverage ratio (DCR)² of 1.6 times. These figures compare favorably to an LTV ratio in late 1989 approaching 75 percent and a DCR just under 1.3 times.

ACLI data suggest that recent commercial mortgage originations are better supported by borrower equity and property cash flows than they were in the late 1980s. It is important to recognize, however, that LTV and DCR ratios are driven largely by market conditions and expectations. Property valuations take into account recent sales and expected cash flows, and cash flows available to service debt are based on projected net operating revenues, which often incorporate projected increases in rents and other revenue sources. In other words, the overwhelmingly favorable conditions in today's real estate markets may also be a factor in the improved LTV and DCR ratios. Keeping in mind the cyclical nature of real estate, one can easily see how a shift from today's positive outlook to a more pessimistic outlook might result in a sharp reversal in these commonly cited ratios.

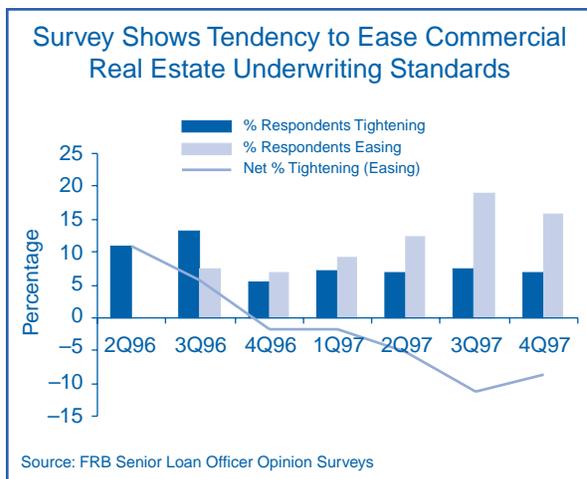
Notwithstanding these quantitative considerations, there are indications that banks are easing commercial

² The debt-coverage ratio measures annual net operating income generated by a property relative to annual principal and interest payments due on the underlying loan.

real estate underwriting standards. This evidence, derived from industry and examiner surveys conducted by the three banking agencies, includes the following observations:

- In the *Office of the Comptroller of the Currency's (OCC's) 1997 Survey of Credit Underwriting Practices*, OCC examiners reported eased commercial real estate lending standards in 38 percent of banking companies surveyed. For comparison purposes, the 1996 survey reported eased standards in 16 percent of banking companies surveyed. Among institutions with eased lending standards in the 1997 survey, examiners noted a 75 percent incidence of reductions in loan fees or rate spreads, a 43 percent incidence of eased guarantor requirements, and a 29 percent incidence of lower collateral requirements. Examiners cited competitive factors and a change in economic outlook as the main reasons for changes in underwriting standards.
- Chart 4 summarizes current and historical results of the *Federal Reserve Board Senior Loan Officer Opinion Survey* for responses to the question of whether bank credit standards for approving applications for commercial real estate loans have eased, tightened, or remained unchanged. These survey results show that banks have had a tendency to ease underwriting standards since the fourth quarter of 1996. This tendency appears to have become stronger through the third quarter 1997 survey but moderated somewhat in the most recent survey. The most recent survey showed that large banks (over \$15 billion in assets) were much more likely to indicate easing commercial real estate standards than

CHART 4



smaller banks. Specifically, 21 percent of large banks reported easing standards, while only 3 percent reported tightening standards. In comparison, only 9 percent of smaller banks reported easing standards, while 13 percent reported tightening standards.

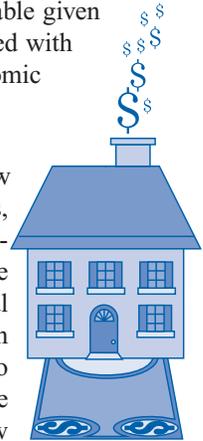
- Results from the *FDIC Report on Underwriting Practices* indicate possible easing of standards for construction and development (C&D) loans at FDIC-supervised banks. A comparison of examiner responses for the third quarter 1997 survey (covering examination reports filed from April through September 1997) with responses for the third quarter 1996 survey leads to the following observations³:
- The percentage of banks frequently or commonly originating C&D loans tied to speculative projects (that is, projects lacking meaningful preleasing or presales, or loans without a formal take-out commitment for permanent financing following completion of construction) rose markedly, from 11 percent to 29 percent.
- The percentage of banks frequently or commonly granting C&D loans without considering alternative repayment sources other than income generated by the project being financed rose significantly, from 8 percent to 20 percent.
- The percentage of banks frequently or commonly basing C&D loans on unrealistic appraisals rose from 5 percent to 11 percent.
- The percentage of banks frequently or commonly funding or deferring interest payments during the term of construction loans rose from 7 percent to 15 percent.

Much of the commentary in recent issues of various trade journals echoes the results of these regulatory surveys.⁴ In brief, many industry participants are seeing a higher incidence of (1) banks funding construction loans without preleasing commitments on major portions of rentable space, (2) banks easing LTV ceilings, (3)

³ The authors of this survey note that comparisons of survey results across time periods must be interpreted with caution since the survey samples are dictated principally by examination scheduling factors. As a result, sample populations may be materially different from one period to another.

lenders curtailing reserve requirements for such items as tenant improvements and insurance, and (4) nonrecourse lending. Some industry participants have also noted the increasing acceptance of “trended rents,” whereby property valuations are based on positive rent projections extrapolated several years into the future. Of course, these trended rents will hold true only if economic circumstances remain favorable for extended periods—an assumption that may not be reasonable given the cyclical nature of real estate coupled with the advanced age of the current economic expansion.

With a combination of relatively low interest rates, rising real estate prices, and an expanding economy, it is perhaps not too surprising that some lenders have eased commercial real estate underwriting standards. Such easing may be a natural response to improved confidence in the real estate markets. However, indicators that show loosening standards may also be warning flags that lenders have succumbed to tighter pricing and competitive pressures. To avoid losses like those sustained by banks during the last real estate downturn, prudent lenders will refrain from incorporating unrealistic expectations into their lending practices.



CMBS Could Change the Way Lenders Underwrite Loans

Much as residential mortgage lending standards were shaped by the advent of mortgage-backed securities, CMBS promise to change the way banks underwrite and service commercial real estate loans. For instance, lending terms and practices could become increasingly standardized as lenders attempt to improve the liquidity and marketability of their commercial mortgage portfolios. Banks that choose to deviate from these emerging standards will sacrifice flexibility in terms of their ability to manage portfolio risks and respond rapidly to liquidity demands.

The ability to securitize commercial real estate loans also may fundamentally alter the way lending decisions

⁴ See, for example, *Commercial Real Estate South*, “Public Markets Fuel Financing Glut” (October 1997); *Midwest Real Estate News*, “Wall Street and Main Street Squeeze Lenders” (October 1997); and *Commercial Property News*, “Michelson, Greenland Seize Low CMBS Spreads” (1 May 1997).

are made. Before the development of CMBS markets, loan approval was essentially a binary, good-or-bad, accept-or-reject decision whose primary focus was on the credit risk inherent in a single asset. In contrast, the most important elements in CMBS are deal structure, price execution for multiple tranches, credit enhancements, and portfolio composition. Here, the loan originator is more likely to use a portfolio approach in making credit decisions: That is, how will this loan enhance the expected return and risk diversification of the overall pool?

External rating agencies will become increasingly important as CMBS markets expand, since these agencies' guidelines will effectively dictate the underwriting standards applied to securitized loans. While such standardization could arguably improve market discipline and loan performance disclosure, there are several potential risks to consider as the CMBS markets evolve:

- While rating agencies do incorporate qualitative considerations into their analysis, issue ratings and credit enhancement level decisions are driven primarily by *quantitative* factors, namely debt service coverage and expected loss levels. Moreover, most of the *qualitative* factors the agencies consider involve an analysis of portfolio balance and pool diversification. Hence, weak or poor qualitative standards (for example, lack of alternative repayment sources or minimal borrower equity in the project) applied to individual loans within the pool may receive only secondary consideration. A quantitative perspective also ignores such immeasurable factors as borrower "character" and the existence of long-standing lender-borrower relationships.
 - Rating agencies cannot be relied upon as a backstop to unsound underwriting practices. While they generally review a substantial volume of the loans within a pool, typically the largest individual credits, they are not practically able to review every credit in the securitization. Some within the industry have even suggested that investment bankers commonly move one problem property, discovered through one agency's sample, into pools reviewed by another agency in the hope that it will not be sampled.
 - Competition among the rating agencies could become a factor in the underwriting process. This "shopping of the agencies" could result in continual pressure for rating agencies to ease their underwriting guidelines.
- In theory, bank-issued CMBS transfer much of the underlying credit risk associated with commercial real estate lending to investors. However, like other types of asset securitization, CMBS raise concerns over the degree to which banks will voluntarily absorb investor losses. Bank issuers may be more likely than nonbank issuers to provide voluntary support to poorly performing CMBS for at least two reasons: A tarnished reputation in one aspect of a bank's operations could carry over to other business activities like deposit taking and borrowing due to a bank's broad brand name association within the marketplace; and banks often have greater financial resources than nonbanks with which to support securitization activities.

Because the rapid growth in CMBS has been a relatively recent phenomenon, current underwriting guidelines applied by the rating agencies to CMBS have not been tested during a cyclical downturn in real estate prices. It remains to be seen how the market will react to rising loan losses that result in investor losses.

Will Increased Public Funding through CMBS and REITs Improve Market Discipline?

Many contend that the increased transparency brought to the market by CMBS will temper cyclical swings in real estate values. This viewpoint argues that investors will serve as a constraint against the natural tendency to overbuild commercial real estate during boom periods, since less funding will be allocated to segments of the market where excess capacity exists. This viewpoint presupposes that the investing public is sophisticated enough to recognize when markets are out of balance and when projects are economically infeasible. In this sense, CMBS shift much of the burden of monitoring credit quality standards and credit performance from lenders to public investors.

In contrast, others have argued that lenders are much better suited than investors to make judgments about credit quality standards and project feasibility. This line of reasoning suggests that the increase in public ownership of property through CMBS and REITs could actually reduce market discipline, since the most sophisticated participants with access to the best information (that is, lenders) may come to have less at stake in making prudent credit decisions. Of course, excessive losses attributable to any one CMBS issuer might lead to differentiation in pricing based on investors'

perceptions of the quality of underwriting applied by specific issuers.⁵

Putting market efficiency arguments aside, the sheer volume of REIT and CMBS activity causes some concern over the extent to which such financing is driving property valuations. With such an abundance of capital flowing into the commercial real estate market, it is perhaps easy to see why lenders might opt to ease standards rather than lose business. However, to the extent securitization activities are driving decisions in today's commercial real estate markets, lenders might wish to consider how property values would react if the availability of such financing were sharply diminished. The most recent real estate downturn provided a ready example of how tighter credit availability compounded the effects of declining commercial property values by limiting the ability of lenders to sell distressed properties. While there may not be consensus on whether CMBS and REITs will temper cyclical price swings, the underwriting standards and practices evolving in response to these financing vehicles will likely play a crucial role in determining the magnitude of losses experienced by investors and banks during the next downturn in commercial property values.

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Selected Articles for Further Reading

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"CMBS Issuance Seen Topping \$40 Billion." *Commercial Mortgage Alert*. 10 November 1997. p. 1.

Fitch Investor Services, Inc. "Commercial Mortgage Stress Test." *Fitch Research: Structured Finance Special Report*. 8 June 1992.

Office of the Comptroller of the Currency. *Advisory Letter 97-3: Credit Underwriting Standards and Portfolio Credit Risk Management*. 3 March 1997.

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⁵ The evolution of the credit card securitization markets is one example of how investors now differentiate between issuers in terms of pricing.

Total Return: A Useful Tool for Monitoring Investment Portfolio Risk

- **The Federal Financial Institutions Examination Council (FFIEC) is replacing the 1991 policy that contained a specific “high-risk test” for mortgage derivative products (MDPs) held by insured institutions with a policy that encourages risk management across all types of instruments on an investment portfolio basis.**
- **A good way to start measuring portfolio risk is by monitoring an appropriate measure of return.**
- **Total return, a concept that includes fluctuations in market value, is a more appropriate tool than simple yield for measuring the performance of an investment portfolio, especially one that contains bonds with embedded options.**

The Federal Financial Institutions Examination Council (FFIEC) has released for comment a new Joint Agency Policy Statement on Investment Securities and End-User Derivatives Activities that will replace a statement issued February 3, 1992. While much of the content of the former statement has been retained, the section requiring specific “high-risk” testing for mortgage derivative products (MDPs) has been eliminated. The “high-risk” test applied specifically to bonds collateralized by residential mortgage pass-through certificates or whole loans but that distributed cash flows to bondholders on a basis other than pro rata.¹

The goal of the original policy statement was to deter banks from investing in products that presented risks that they were not able to adequately monitor and control. MDPs were singled out because of their rapid growth, nontraditional and potentially risky nature, and common use by insured financial institutions. The new policy states that, as a sound management practice, institutions should conduct prepurchase and ongoing analysis of all their investments at a level appropriate to the size and complexity of those holdings.

¹ A security was deemed “high risk” if it exhibited any of the following characteristics: (1) it had a weighted average life of more than ten years; (2) its average life extended by more than four years or shortened by more than six years from a 300 basis point parallel shift in rates; (3) its price changed by more than 17 percent given a 300 basis point parallel shift in rates.

The policy change is in part a response to increasing bank investment in securities that have complex cash flows analogous to MDPs but that escaped the analysis requirement of the previous policy. Mortgage index amortizing notes are an example of popular bank investments that potentially exhibit all the risks of MDPs but were not subject to the testing requirement of the soon-to-be rescinded policy because they are not collateralized by mortgages. Callable agency and “step-up” bonds are popular bank investments because they offer a slightly larger spread to Treasury than noncallable agency securities, and they were not subject to the “high-risk” test under the old policy. However, the additional yield offered on these kinds of securities compensates the investor for assuming additional risk. Appropriately measuring portfolio return can enhance the ability to monitor the extent to which these kinds of securities put future earnings at risk.

Total Return Analysis Is a Useful Tool for Analyzing Risk at the Portfolio Level

Total return analysis is a basic but useful tool that can alert management to the level of certain risks in an investment portfolio. It can also provide information that is useful for validating the assumptions used in more sophisticated models. Total return is calculated from three components: beginning price, income and reinvested cash flow, and ending price (market value) at a horizon date. Total return incorporates the change in the market value of the investment, resulting in a more comprehensive measure of performance than other measures that ignore such changes. Monitoring total return on a portfolio basis can provide institutions with important information about the risks inherent in the portfolio and how these risks may be changing over time.

In two articles in the *ABA Banking Journal*,² Nicholas Betzold and Richard Berg convincingly dispute the

² The articles were published in December 1996 and April 1997. Reprints of the articles are available at the *ABA Banking Journal* website at <http://www.banking.com.aba/backissues.htm>.

view that if the investment strategy is to buy and hold to maturity, total return is not relevant. Consider the following example. In 1990, Bank A purchases a seven-year security yielding 8.83 percent that is callable after three years. At the same time, Bank B buys a non-callable seven-year agency security yielding 8.53 percent. For three years, Bank A's bond yields 30 basis points more than Bank B's. However, from 1990 to 1993, interest rates fell almost 300 basis points. Bank A's bond would likely be called, forcing the bank to reinvest at a significantly lower rate for the remaining four years of the seven-year investment horizon. Over the seven-year horizon, Bank A could expect an average yield that is about 150 basis points less than Bank B's.



From the yield perspective, Bank A enjoyed three years of superior performance. However, during those three years, monitoring total return might have revealed a less favorable but more accurate picture of Bank A's performance relative to Bank B's. Here is why: As

rates fell from 1990 to 1993, bonds gained in value. However, as rates fell, the market value of the callable security would have gained incrementally less than the noncallable bond because each downward tick in rates increased the expectation that the bond would be called, and the higher coupon would be earned over a shorter period. In contrast, the noncallable security's market value would have enjoyed the full benefit of the falling rate environment because its maturity and cash flows are fixed.

The disparate change in the market value of the two bonds reflects the fact that Bank A, in essence, sold a call option to the bond issuer. The issuer bought the right to repurchase the debt at par after three years. Bank A was compensated for selling this right to the issuer with increased yield. In the example, the issuer's option to call the bond would have gained value as rates fell. The increasing positive value of the call option to the issuer represents an increasing negative value to the bondholder and erodes the value of the bond.

Step-up bonds present reinvestment risk similar to that of generic callable bonds, but with the added complexity of a coupon that rises, usually annually, if the bonds are not called. Total return analysis would similarly

reveal adverse changes in the value of the embedded call options and the extent to which the additional coupon is compensating for call risk.

UBPR Yield

Bank management often uses the portfolio yield that is calculated in the Uniform Bank Performance Report (UBPR) to assess performance of the bank's securities portfolio against its peers. This yield measure is calculated by dividing annualized book income on a tax equivalent basis (plus or minus amortization or accretion of any premium or discount) by the amortized cost of the securities. This measure of present yield says little about potential future yield and the extent to which, because implicit options have been sold, the latter has been put at risk for the sake of the former.

Total return measures the risk-adjusted return of a portfolio more closely than yield because it incorporates changes in reinvestment risk over time. *Ultimately, a portfolio manager who earns total returns consistently higher than average will earn more in terms of simple yield. Conversely, a manager who earns less in terms of total return will eventually find an unfavorable reinvestment environment that will erode reported yield.*

The popularity of using yield to gauge the performance of bank securities portfolios may be due to the convenient presentation of bank peer portfolio yields in the UBPR. Some managers may be reticent to evaluate portfolio performance using total return without a peer-like benchmark for calibrating total return expectations.

Betzold and Berg have devised an investment portfolio index (introduced in the April 1997 *ABA Banking Journal*) that is designed to track the total return of a typical bank portfolio composed of the same percentages of investment sectors as the average bank. The portfolio on which the index is based is rebalanced monthly as principal pays down, and it is rebalanced quarterly to reflect the latest Call Report data on portfolio allocations. Table 1 depicts the investment weighting of the index as of December 31, 1996, based on September 30, 1996, Call Report data.

According to Betzold and Berg, this index produced total returns that closely approximated those of the actu-

In Focus This Quarter

al median bank total portfolio measured by Call Report data from 1993 through third quarter 1997.³ They concluded that their index seems to provide a reasonable proxy for the total return of the “average” bank investment portfolio.

Chart 1 shows the performance of the index so far this year.⁴ Changes in the index value over time can be translated into total returns that approximate the median bank portfolio’s total return. For example, the annualized total return for the index from year-end 1996 through third quarter 1997 was 6.72 percent and is calculated as follows:

Calculate the bond equivalent semiannual yield and express the semiannual bond equivalent yield as an effective annual yield.

$$6.72\% = 100 \left[\left(\frac{105.00}{100.00} \right)^{\frac{4}{3}} - 1 \right]$$

The performance of the index for 1997 suggests that banks’ total investment portfolio returns were highly negatively correlated with changes in the five-year Treasury rate (see Chart 2). This finding indicates that changes in total return from period to period can provide useful information about the level of a portfolio’s interest rate sensitivity. As emphasized above, these changes in total return over time include the effects of changes in market value of any call options on a bank’s investment securities and hence provide information about the degree to which future income is at risk.

Given the increasing level of optionality embedded in the average bank securities portfolio—even if it arises solely from callable agency debt and “step-up” structured notes—yield should not be the sole measure of overall portfolio performance. Total return analysis is an appropriate supplement that gauges the risk-return characteristics of an investment strategy that involves selling implicit options.

Allen Puwalski, Senior Financial Analyst

³ While the Call Report does not contain the information necessary to compute total return precisely, the authors computed an estimate using the reported yield and market value data.

⁴ The index is published monthly in the *ABA Banking Journal*.

TABLE 1

COMPOSITION OF BETZOLD BERG INDEX DECEMBER 31, 1996	
SECURITY TYPE	PERCENT OF INDEX
TREASURIES	24.52
AGENCIES	24.38
MUNICIPAL BONDS	12.26
FIXED-RATE MORTGAGE OR MORTGAGE-RELATED PRODUCTS	19.93
OTHER SECURITIES	6.09
ADJUSTABLE-RATE SECURITIES	13.00

SOURCE: BANK AND THRIFT CALL REPORTS, SEPTEMBER 30, 1996

CHART 1

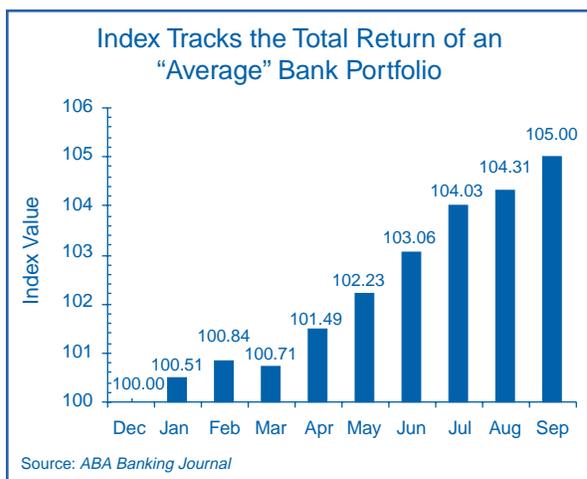
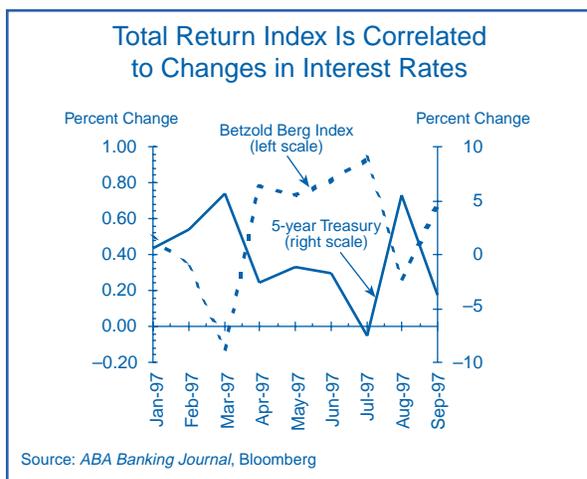


CHART 2



The San Francisco Region's Larger and More Diverse State Economies Tend to Closely Follow the National Economy

- Over the past year, the San Francisco Region recorded the fastest employment growth of the eight FDIC Regions.
- Nevada, Utah, Washington, Arizona, Oregon, and California, states that generally expand when the national economy does, are all growing much faster than the nation as a whole.
- States in the Region with more diverse economies tend to be expanding more rapidly than states that have less diverse economies, especially those that are more dependent on natural resource-based industries.
- Nevada, the Region's least diverse economy, is the fastest-growing state in the nation because of strong growth in gaming, tourism, and construction. However, the state's heavy dependence on these industries continues to warrant close monitoring.

The San Francisco Region's Expansion Keeps on Rolling

The San Francisco Region, fueled by strong job growth in the Region's larger states, continues to outpace the nation and the other seven FDIC Regions. Total non-farm payroll employment for the Region grew by 669,000, an increase of 3.0 percent over the 12-month period ending October 1997. Over the same period, the nation's employment grew at a 2.1 percent annual rate. Performance across the Region's states is as follows:

- *Outperforming*—The Region's six fastest-growing states are **Nevada, Arizona, Utah, Washington, Oregon, and California** (listed in order of employment growth rates). These states, which are the most populous states in the Region, added jobs at a very fast pace, 2.7 percent or better, over the past year.
- *Lagging*—**Idaho, Montana, and Alaska** (ranked by growth rates) all grew more slowly than the nation over the 12 months ending October 1997. Just two years ago, Idaho and Montana were among the nation's fastest-growing states.
- *Weak*—**Wyoming and Hawaii** ranked forty-ninth and fiftieth, respectively, in job growth over the past year. While Wyoming reported a small increase in employment, Hawaii reported a slight loss.

Key Relationships between State and National Employment Growth

This article examines several factors that may help to explain why the Region's six most populous states tended to outperform the least populous states over the past year. The analysis focuses on three factors:

- The historical correlation between a state's employment growth rate and the national employment growth rate;
- The diversity of state economies compared with the national economy; and
- The health of key industrial sectors in a state.

Understanding these three factors may provide insights into both current and future state-level economic performance. Consequently, it is important to review these indicators because of their potential relationship to state-level economic conditions, which in turn play an important role in state-level banking industry performance, especially for community banks. In addition, these three factors may be useful for analyzing state economic trends in the event of a downturn in the national economy.

While few economists are predicting a downturn in the U.S. economy in the near future, the recent disturbances in the financial markets both at home and abroad have given rise to concerns about the path the national economy will take over the next several years. Within the Region, which has a large share of U.S. high-technology manufacturing, the slowdown in high-tech exports to Asia in 1997, combined with the weakened economic conditions of key trading partners like South Korea, already has resulted in slightly lower estimates of growth for California's economy in 1998. States like Hawaii and Nevada, with a heavy dependence on tourism, also could be susceptible to reduced travel and spending by Asian tourists.

Measuring the Linkage between State and National Employment Growth

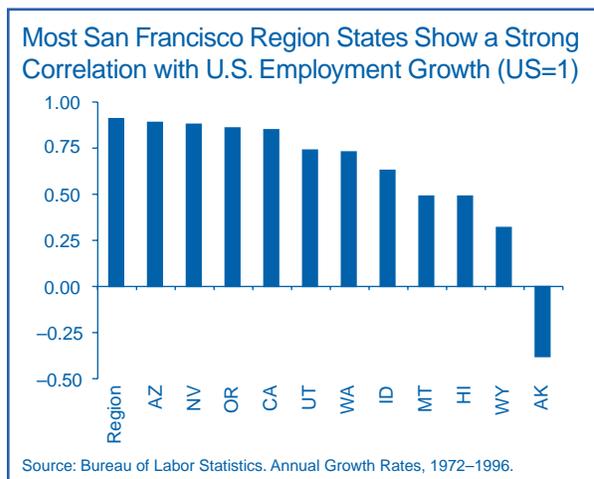
Clues to state-level economic behavior can be found by correlating past state economic performance with national economic trends. One way to quantify this relationship is to compare the correlation, or comovement, over time between the employment growth rates for the nation and for the Region (or a state). This measure, or correlation coefficient, for a series like nonfarm payroll employment growth rates, can be used to evaluate the strength of the relationship. The measure also shows whether the relationship is positive or negative. A correlation coefficient of 1 indicates that a Region's employment growth rate is perfectly positively correlated with that of the nation, meaning that when the nation's economy moves up (or down) the Region follows that movement. Conversely, a correlation coefficient of -1 indicates perfect negative correlation, such that when the nation's economy improves, the Region's economy worsens. A correlation coefficient of zero indicates that there is no statistical relationship between movements in employment in the nation and the Region.

Over the past 25 years the San Francisco Region's employment growth rate has been fairly closely correlated with that of the nation, as shown in Chart 1. The correlation coefficient for the Region's and the nation's employment growth rates over the 25-year period was 0.91. Moreover, as shown in Chart 2, the Region's employment growth rate correlated more closely with the national employment growth rate than did that of any individual state in the Region.

CHART 1



CHART 2



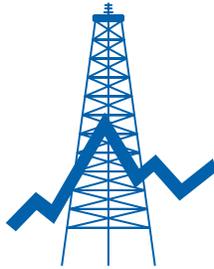
Larger States in the Region Generally Follow the National Economy More Closely than Smaller States

Employment growth rates in Arizona, Nevada, Oregon, California, Utah, and Washington (ranked from highest to lowest) all exhibited a high degree of correlation (above .70) with the national employment growth rates over the 25-year period. These states also are the most populous in the Region; in 1996 their populations ranged from 1.6 million in Nevada to 31.9 million in California. As indicated in Chart 2, these more populous states show a much closer relationship to the nation's employment growth pattern than do the five least populous states (populations ranging from 500,000 to nearly 1.2 million).

The employment growth rates in three of the least populous states, Idaho, Montana, and Hawaii, do show a

modest positive relationship to employment growth rates for the nation. However, movements in Alaska and Wyoming show only a weak correlation with national employment growth rates. These two states are heavily dependent on natural resource-based employment, and they both have a large share of government jobs. Employment growth rates in these two sectors typically do not show a close correlation with national rates.

Alaska's relationship to national employment growth after the oil crisis of the early 1970s is especially unusual. Alaska is the only state in the Region that exhibited a negative correlation with national employment growth over the past 25 years.



This means that as the nation's economy lost jobs, Alaska's economy tended to add jobs. Alaska is a major oil producer; consequently, it benefits from high or rising oil prices, conditions that dampen economic performance in most of the nation.

Implications: The six most populous states tend to move in tandem with the national economy, and they are currently among the six fastest-growing states in the nation. *Their strong relationship to the national economy suggests that the economies of Arizona, Nevada, Oregon, California, Utah, and Washington (ranked by their correlation to the national economy) are likely to continue to follow national conditions.* Despite this tendency, it is clear that state economies do not always follow the national economy. Within the Region, even the states with a high correlation to the national economy occasionally follow their own economic cycles, such as Arizona's real estate-induced slump in the late 1980s or California's extended recession in the early 1990s.

The five least populous states (ranked by their correlation to the national economy), Idaho, Montana, Hawaii, Wyoming, and Alaska, are not as closely linked to the national economy as more populous states. These states are more likely to experience their own upturns and downturns. Present conditions in these states do not reflect the strong national economy; rather, their employment growth ranges from weak compared with the nation (Idaho, Montana, and Alaska) to little or no growth (Wyoming and Hawaii). *These five states are not closely linked to the national economy, so we should examine other factors, like economic diversity and the health of key industries, to understand their current*

*economic performance and their future prospects. Finally, since these states often do not closely follow national economic trends, we might expect that the performance of their community banks may not closely follow U.S. banking industry performance either (see **Regional Banking Conditions**).*

The San Francisco Region Has a Diverse Economic Base

A second key factor in explaining economic trends at the state level is economic diversity. Diversity can be measured and used to compare a state or region's industrial structure with that of the nation. Diversity may help explain why some states are more likely than others to follow national economic trends. Generally, we expect states that are more diverse, or that have an industrial composition more like the nation's, to move more closely with the national economy.

A diversity index (Index) developed by the FDIC's *Division of Insurance* is a useful tool for evaluating the diversity of a state or region's economy compared with the nation. The Index is derived from sectoral earnings data published by the Bureau of Economic Analysis. It measures the differences between the share of state-level earnings for key sectors of a state economy and the share of earnings for those sectors at the national level. The Index also takes into account the relative sizes of the various sectors. Higher index values show greater diversity relative to the national economy. A state or region that has the same share of earnings for each sector of the economy as the nation will have the maximum diversity rating, 100. A state with large differences in industrial sectors from the national economy will have a low diversity rating.

The diversity of the San Francisco Region's economy as a whole is quite high. It ranked highest among all eight FDIC Regions in diversity with a rating of 92, well above the average of 87 for all the Regions. Even the Chicago Region, which has the lowest rating (82), is relatively diverse compared with most states.

States Are Much Less Diverse than the Regions

State diversity index values or ratings vary much more widely than do the ratings for the much larger FDIC Regions. The average index value for all 50 states and

the District of Columbia was just under 70 for 1996. Individual state diversity ratings ranged from 16 for the District of Columbia, the least diverse area, to 93 for Illinois, the most diverse. In the San Francisco Region, shown in Chart 3, the range ran from 21 in Nevada to 90 in Utah, the fifth most diverse state economy in the nation.

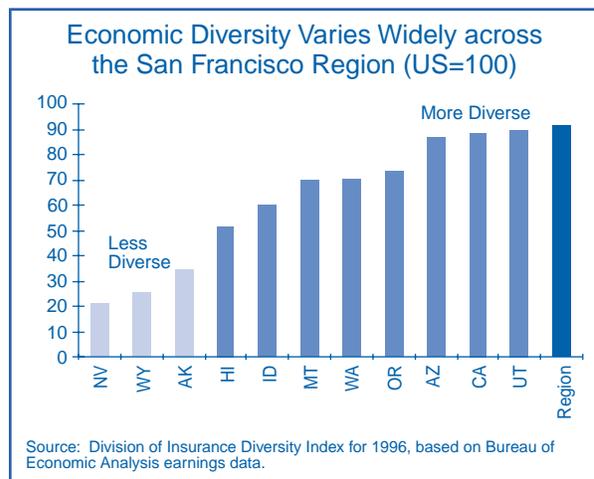
Utah, California, and Arizona, with diversity index values ranging between 86 and 90, are among the most diverse economies in the nation. Furthermore, over the past 25 years both Utah's and Arizona's economies have become significantly more diverse as these states have expanded their service sector, increased their manufacturing base, and reduced their dependence on natural resource-based industries. In contrast, California's diversity rating has not changed significantly in the past decade, despite the ongoing restructuring in the state from defense-related manufacturing toward services.

Three other states in the Region, Oregon, Washington, and Montana, have diversity ratings around 70, close to the average rating for all the states. The economies of these three states also have become more diverse since the early 1970s, when all three were much more dependent on natural resource-based industries. Of the three, only Montana remains heavily dependent on natural resources. More than 6 percent of Montana's 1996 earnings were generated from agriculture, forestry, and extractive industries, more than double the share for the nation.

Idaho, with a diversity rating of 60, and Hawaii, with a rating of 50, are less diverse than the typical state. Idaho's diversity rating has improved in recent decades as the state has expanded its manufacturing base and reduced its reliance on natural resources and agriculture. Unlike Idaho, Hawaii's diversity rating has not changed significantly from 25 years earlier. The lack of diversity in Hawaii's economy results from the state's heavy dependence on the tourist trade, which by some estimates accounts for approximately one of every four jobs in the state.

The economies of Alaska and Wyoming, with Index ratings of 35 and 25, respectively, are among the least diverse of all the states. These states rely heavily on natural resource-based industries like oil and mining, and both have large governmental sectors (accounting for over 25 percent of state employment, versus 16 percent for the nation). Furthermore, both states were less

CHART 3



diverse in 1996 than they were in the early 1970s. This trend runs counter to the national trend toward greater diversity among states.

While Nevada's population doubled from 1979 to 1995, its economic base has not become more diverse, and it continues to be the least diverse of any state in the Region or the nation. Nevada is very dependent on tourism, defined here to include gaming, lodging, eating and drinking, air transport, and recreational employment. These industries account for over one-third of all jobs in Nevada, far above the national average. In addition, construction accounts for almost 10 percent of all jobs, about twice the national average.

Industrial Health Also Matters

The health of key industries is a third factor in a state's economic well-being. Similar levels of economic diversity do not necessarily translate into similar economic performance, because the health of key industries or industrial sectors may vary from state to state. For example, in 1997 two states with similar diversity ratings, Washington and Montana, experienced vastly different economic conditions. Fueled by an upswing in aerospace manufacturing employment, Washington's economy is accelerating; it is now one of the fastest-growing states in the nation. In comparison, Montana's economy is slowing and lags behind the nation in job growth. Montana has only a small manufacturing sector, and its large mining sector is weak. The contrast between these two states illustrates the important role

the composition of a state's economy can play in its health.

A comparison of Montana and Nevada further illustrates the importance of key industries to a state's performance. They are the only states in the Region where diversity was not consistent with economic performance over the past year. Among the group of diverse states, only Montana is lagging behind the nation in job growth. As was noted earlier, it is heavily dependent on both the natural resources sector and government jobs, two areas that have been weak relative to the overall economy. In contrast, Nevada's economy is the least diverse of all 50 states, yet it is booming. Nevada has a heavy concentration in tourism and construction, industries that have been expanding. Nevada's lack of diversity is presently a factor in its rapid growth, again illustrating the importance of the health of key industries at the state level.

Unlike larger interstate banks, community banks operating in state or local markets will find their performance closely linked to state or local market conditions. Thus, in states that are not closely linked to the national economy, community bank performance likely will reflect state and local economic conditions. The situation in Hawaii illustrates this point. In spite of the national recovery, Hawaii has been in a recession for several years. Through the third quarter of 1997, Hawaii's community banks (assets under \$1 billion) recorded a year-to-date return on assets (ROA) of only 0.81, well below the 1.35 ROA the Region's community banks posted over the same period.

Implications: Correlation with the national economy, the diversity of the industrial base, and the health of key industry sectors provide useful information about this Region's state economies. The economies of California, Washington, Arizona, Oregon, Utah, and Nevada correlate much more closely with national economic conditions than do those of the Region's less populous states. Aside from Nevada, the Region's most populous states

have more diverse economies than the less populous states. In the event of a national downturn, the historical record suggests that these states likely would follow the national economy.

Diversity and industrial composition also are important for analyzing a state's economic condition and potential risks. Nevada's economy is the least diverse in the Region, yet it tends to move closely in line with the national business cycle. Still, Nevada faces an additional downside risk because its economy is heavily concentrated in tourism and construction, two cyclical sectors. A slowdown in the national economy, the state's huge gaming industry, or its large gaming-dependent construction sector probably would weaken Nevada's economy more than it would that of other states. *Moreover, this is an area of concern because Nevada's booming economy has led to the formation of a number of new banks, the rapid expansion of many smaller banks, and an increase in community banks' exposure to construction and commercial real estate lending.*

Finally, Hawaii's ongoing recession illustrates the potential for the Region's less populous states to follow their own business cycles in spite of a strong national economy. Hawaii, Idaho, Montana, Alaska, and Wyoming are less likely than the more populous states to closely follow the national economy. These states either rank low on diversity (Hawaii, Idaho, Alaska, and Wyoming) or are relatively heavily dependent on natural resource-based industries or agriculture, or both (Idaho, Alaska, Wyoming, and Montana). *An added risk in these states is that downturns are less likely to coincide with a national recession than they are in the Region's larger states. This fact may have implications for the banks in these states, because a weak state economy normally will be reflected in the performance of community banking institutions, as currently is the case in Hawaii.*

Gary C. Zimmerman
Regional Economist

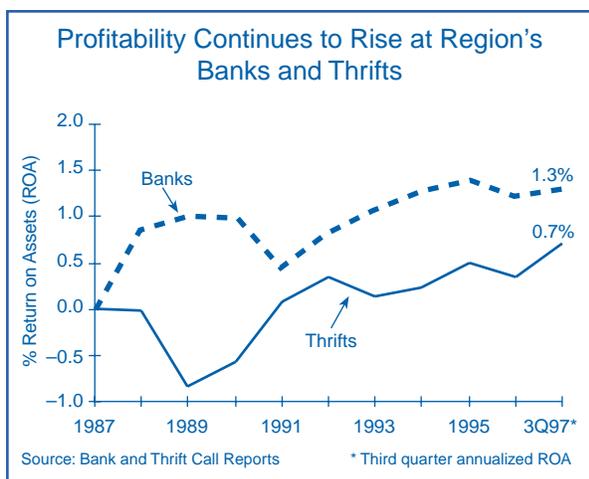
Regional Banking Conditions

- Reported earnings, asset quality, and capital remained strong for most banks and thrifts in the San Francisco Region during the third quarter of 1997.
- Declining loan loss reserve levels for community banks in certain states and metropolitan statistical areas raise concerns because of increasing concentrations of risky assets held by these institutions.
- Increasing reliance on volatile funding sources underscores the importance of sound liquidity management practices.

Supported by a strong economy in most of the San Francisco Region, insured financial institutions reported solid performance in the third quarter of 1997. Return on assets (ROA) at the Region's banks and thrifts continues to trend upward, as shown in Chart 1. During the past 12 months, the asset-weighted Tier 1 capital ratio climbed from 7.44 percent to 7.65 percent. Reported asset quality is characterized by a low and declining ratio of past-due and nonaccrual loans, which now approximates only 2 percent of total loans.

Although overall trends for the Region's insured institutions appear favorable, performance within each of the 11 states varies, particularly among community banks (defined here as non-credit-card banks with total assets of less than \$1 billion). In the aggregate, community banks in some of the Region's fastest growing states—**Arizona, Nevada, Oregon, Utah, and Washington**—report ROAs above 1.30 percent. ROAs at community banks in **Alaska, Idaho, and Wyoming** also exceed 1 percent, and operating income has improved despite a slowdown in employment growth rates in these states.

CHART 1



Conversely, community banks in some states and metropolitan statistical areas (MSAs) whose economies are less diverse or whose major industries have slowed down performed less well during the third quarter of 1997 (see *The San Francisco Region's Larger and More Diverse State Economies Tend to Closely Follow the National Economy*):

- Community banks in **Hawaii**, one of the Region's less populous states, continue to underperform both the Region and the nation as a result of the state's lingering recession. ROA for these banks is the lowest in the Region at 0.81 percent, and the ratio of past-due and nonaccrual loans to total loans is the highest in the Region at 6.28 percent. Although profits at these institutions are up slightly, reserve coverage of noncurrent loans (loans 90 days or more past due plus nonaccrual loans) remains extremely low at 41 percent. If provisions were made to bring the loan loss reserves more in line with the Region and nation, profits and Tier 1 capital would decline. Prospects for a near-term economic recovery in Hawaii remain tenuous, in part owing to the recent events in Asia (see *The San Francisco Region's Larger and More Diverse State Economies Tend to Closely Follow the National Economy*).

- Year-to-date ROA for community banks in **California** was 1.07 percent through September; however, performance varied throughout the state. While, in aggregate, ROAs for the community banks in the Los Angeles MSA remained above 1 percent for the third consecutive quarter after almost a decade of low and negative returns, banks in some other MSAs are showing signs of weakness. For example, community banks as a whole are underperforming, with ROAs of 0.85 percent or less in the following large California MSAs: **Vallejo-Fairfield-Napa, Stockton-Lodi, and Riverside-San Bernardino**.

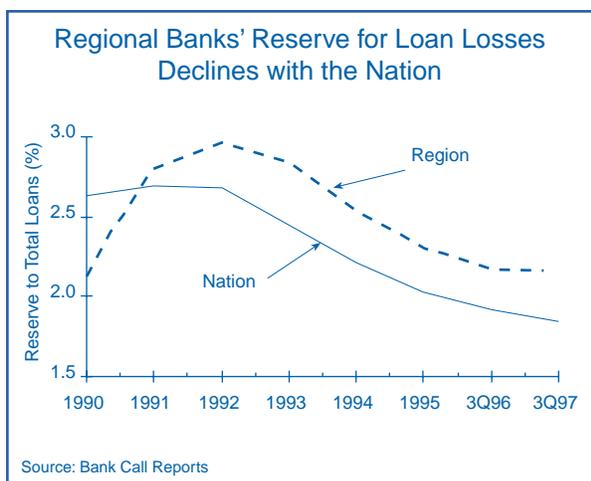
More than 50 percent of the institutions in these MSAs reported subpar ROAs, typically caused by higher provisions for loan losses. Most of these institutions had higher levels of past-due loans, and many also had above-average exposure to higher risk assets relative to their peers.

- Although reported profits at community banks in **Montana** are healthy, some asset quality deterioration is becoming evident. Past-due and nonaccrual loans have hovered above 3 percent of total loans for the past four quarters. In addition, reserve coverage of noncurrent loans dipped to 95 percent from 139 percent during the same period. Higher levels of problem assets may be a reflection of the state's slow employment growth and weak natural resources sector.

Reserves for Loan Losses Slip at Some Institutions

While profits are generally strong at the Region's banks, their first line of defense against loan losses—the allowance for loan and lease losses (ALLL)—has declined as a percentage of total loans in every year since its 1992 peak. This decline took place during a period of strong postrecession economic growth in much of the Region. Although, as shown in Chart 2, the ALLL decline of 80 basis points for the Region's banks parallels the national decline, the relative adequacy of ALLL levels for some of the Region's banks warrants closer review. In particular, the ALLL levels and trends vary significantly among community banks in different locations around the Region. The differences in ALLL

CHART 2



levels are a reflection of differing economic growth patterns, market conditions, and bank portfolios.

Community Banks Exhibit Risky Trends in Certain States and MSAs

The ALLL for community banks in the Region is generally in line with national averages. However, community banks in some states in the Region are raising concerns because of rapid loan growth and an assumption of greater lending risks in recent years. Oregon, Washington, and Nevada, for example, have recorded strong loan growth in recent years and have some of the highest concentrations of construction and commercial real estate lending, measured as a percentage of total assets, in the Region. Despite the increase in risk profiles, the overall level of reserves to loans in all three states has declined below the Region's average of 1.68 percent for similar-size banks with lower risk profiles (see Table 1).

Banks in several MSAs in the fastest growing states in the Region are some of the most heavily exposed to construction and commercial real estate lending, yet have lower loan loss reserves than other community banks in either the nation or the Region. These MSAs are **Eugene** and **Salem** in Oregon; **Olympia** and **Seattle** in Washington; and **Reno** in Nevada. In aggregate, banks in each of these MSAs hold about 30 percent of their assets in commercial real estate and construction lending while the reserves to total loans ranged from 0.99 percent to 1.30 percent. These reserve levels are significantly lower than for similar-size banks with lower risk profiles in both the Region and the nation (see Table 1).

Hawaiian community banks also raise concerns because of their very low ratio of reserves to noncurrent loans. This ratio has moved down from 183 percent in 1990 to only 41 percent as of the third quarter of 1997, far below averages for the nation and the Region. The low coverage ratio is noteworthy because, while more than half the noncurrent loans are in one- to four-family residential mortgages, median residential home sale prices in Hawaii continue to decline and have dropped approximately 20 percent from their peak in the third quarter of 1990.

Implications: Community banks in several rapidly growing states have reduced reserve coverage levels to well below averages for both the Region and nation. These lower levels of reserves raise concerns that loss

TABLE 1

COMMUNITY BANKS ¹ ALLL LAGS IN SEVERAL HIGH-GROWTH AREAS				
STATE MSAs ²	ALLL	% TOTAL ASSETS		
		COMMERCIAL REAL ESTATE LOANS	CONSTRUCTION LOANS	TOTAL COMMERCIAL REAL ESTATE AND CONSTRUCTION LOANS
OREGON	1.14%	17	9	26
EUGENE	0.99%	19	14	33
SALEM	1.30%	21	9	30
WASHINGTON	1.14%	16	8	24
OLYMPIA	1.05%	19	10	29
SEATTLE	1.26%	17	11	28
NEVADA	1.60%	17	11	28
RENO	1.23%	18	14	32
REGION	1.68%	19	5	24
OTHER REGION ³	1.84%	19	4	23
NATION	1.41%	11	3	14

¹ NON-CREDIT-CARD BANKS WITH ASSETS < \$1.0 BILLION
² FAST-GROWING MSAs WHERE COMMUNITY BANK ASSETS IN THE AGGREGATE SUM TO MORE THAN \$500 MILLION, ALLL IS BELOW 1.68 PERCENT, AND COMMERCIAL REAL ESTATE AND CONSTRUCTION LOANS TO TOTAL ASSETS ARE GREATER THAN 28 PERCENT
³ REGION EXCLUDING OREGON, WASHINGTON, AND NEVADA
 SOURCE: SEPTEMBER 30, 1997, BANK CALL REPORTS

provisions may be inadequate, particularly at rapidly growing banks that appear to be assuming greater lending risks. Hawaii is another area of concern because the reserve coverage of noncurrent loans has been reduced to levels significantly below that of similar-size banks in both the nation and the Region.

Funding Structure Shifts at Region's Banks

With the rebound in the Region's economy, loan growth has accelerated. Historically, insured institutions—especially small community banks—have funded loan growth with core deposits (demand, regular savings, NOW, money market accounts, and certificates of deposit under \$100,000) because of the stability and cost-effectiveness of these instruments compared with other funding sources. However, as shown in Chart 3, the Region's loan growth has outpaced core deposit growth since 1993. To fund the increase in loan growth, banks and thrifts have used other, potentially more volatile funding sources.

Weak growth in core deposits appears to be caused by several factors. Banks have faced stiff competition from other types of financial service companies, especially mutual funds that have been generating returns well above the interest rates banks have been paying on

deposits. Credit unions also actively compete for consumer deposits and generally offer higher interest rates than banks or thrifts.

As a result of these competitive forces, the Region's institutions appear to have altered their funding strategies. To retain customer relationships, some larger banks have begun offering a wider array of investment products, including annuities and money market mutual funds. For example, Chart 4 (next page) shows that bank

CHART 3

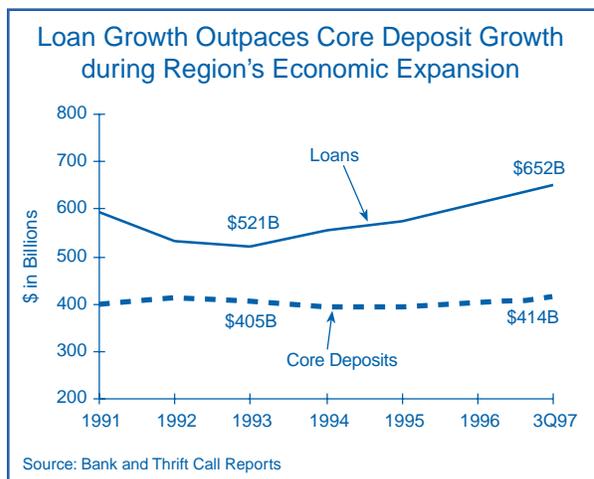
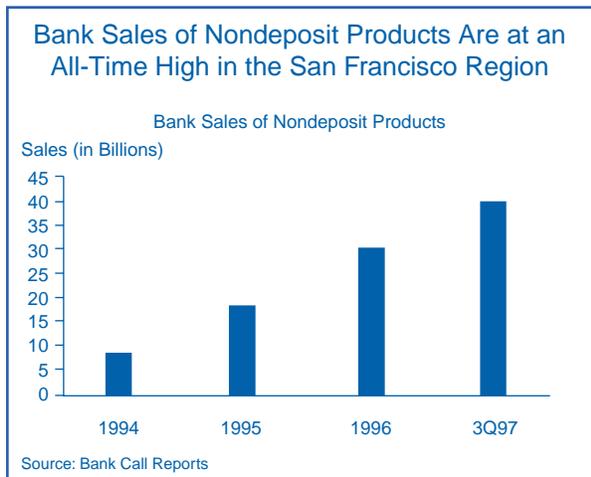


CHART 4

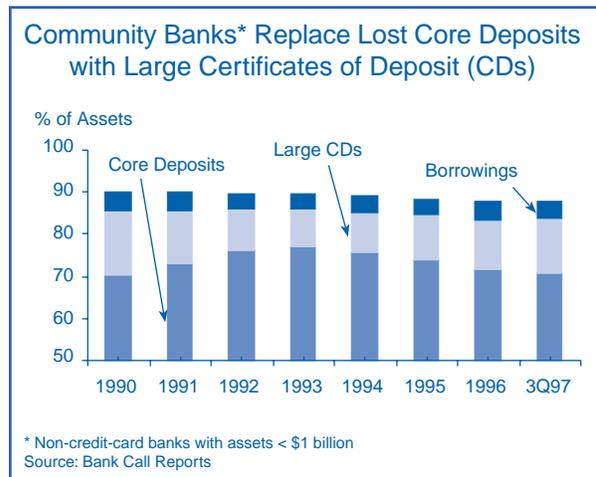


sales of nondeposit products for the third quarter of 1997 were more than four times those of the fourth quarter of 1994. Often these funds are placed under the bank's own management. In addition, a number of banks are sweeping accounts that shift balances from NOW and other deposit accounts into the bank's own money market accounts. Doing this eliminates the bank's need to hold non-interest-bearing reserves with Federal Reserve Banks.

In addition to their efforts to retain funds, banks and thrifts in the Region have increased their reliance on potentially more volatile funding sources to offset the slow growth of core deposits. They are relying more on noncore funding such as large-denomination time deposits, foreign deposits, and borrowings. These more volatile funding sources had climbed from less than 15 percent of assets in 1992 to almost 25 percent of assets as of September 1997. Large institutions (those with over \$1 billion in assets) have augmented their funding primarily through the use of foreign deposits and other borrowed money. However, at community banks, most of the increase in volatile funds has been in time deposits of \$100,000 or more. These large time deposits now fund 13.1 percent of total community bank assets for the Region, up from 9.6 percent at year-end 1994 (see Chart 5).

The ongoing funding shift appears to be putting some strain on insured institutions' net interest margins. Large banks in the Region have seen their net interest margins decline from a high of 5.1 percent in 1992 to

CHART 5



4.5 percent as of September 30, 1997. The squeeze on net interest margins at the Region's community banks began in 1991. Net interest margins at these institutions edged down from 5.8 percent in December 1989 to 5.4 percent in the third quarter of 1997.

Implications: The sustained period of low interest rates over the past several years has caused both individuals and corporations to shift balances from core deposits into higher yielding investments and noninsured investment products. This trend is likely to continue as long as a wide differential exists between the yields on these investment alternatives and the rate banks are willing to pay for deposits. Some banks, mostly the larger ones, have been able to retain interest-sensitive funds by offering their own mutual fund and annuity products.

The increased reliance on potentially more volatile funding sources, especially for community banks with limited access to the capital markets, may increase the risk profile of some institutions. In addition, the erosion of a core deposit base underscores the need for sound asset-liability management caused by increased interest rate sensitivity resulting from shorter maturities, increased potential for liquidity problems, and increased pressure on net interest margins.

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