

FDIC Banking Review

Fall 1991
Vol. 4, No. 2

Table of Contents

Early Corrective Action For Troubled Banks

by *George E. French*

page 1

Data pertinent to the operation of the supervisory system for U.S. commercial banks are presented in this paper. Supervisors generally identify banks' problems well in advance of failure, and influence banks' dividend payments and capital injections in the "correct" direction. The author concludes, however, that improvements are possible in forcing realistic loss recognition, limiting dividend payments and resolving troubled institutions earlier.

Bank Dividend Patterns

by *David K. Horne*

page 13

Commercial bank dividends increased substantially during the 1980s, both in absolute dollars and as a proportion of earnings. The historical trend of dividend payments, and their distribution across the banking industry, are examined in this paper. A number of factors appear to influence dividend distributions. The impact of these factors, with particular emphasis on equity capital, is analyzed using a statistical model. The effects of dividend restrictions are discussed also.

A Framework For Analyzing Deposit Insurance Pricing

by *Christine E. Blair and Gary S. Fissel*

page 25

The question of whether to revise the current system of flat-rate deposit insurance premiums in favor of a risk-based system is addressed. While there is general agreement that relating an insured bank's premium to the risk it poses to the insurance fund would be desirable, the information-intensive nature of the intermediation process in which banks specialize makes risk measurement a difficult task. An overview of alternative methods for establishing risk-based premiums is presented, followed by a discussion of the arguments for and against risk-based premiums.

Recent Developments Affecting Depository Institutions

by *Benjamin B. Christopher*

page 39

This regular feature of the *FDIC Banking Review* contains information on regulatory agency actions, state legislation and regulation, and articles and studies pertinent to banking and deposit insurance issues.

Chairman
William Taylor

Division of Research
and Statistics,
Director

Wm. Roger Watson

Editor

George E. French

Editorial Committee

Frederick S. Carns

Gary S. Fissel

Arthur J. Murton

Administrative Manager

Detta Voesar

Editorial Secretary

Cathy Wright

Design and Production

Graphics and Distribution Unit

The views expressed are those of the authors and do not necessarily reflect official positions of the Federal Deposit Insurance Corporation. Articles may be reprinted or abstracted if the *Review* and author are credited. Please provide the FDIC's Division of Research and Statistics with a copy of any publications containing reprinted material.

Single-copy subscriptions are available to the public free of charge. Requests for subscriptions, back issues or address changes should be mailed to: *FDIC Banking Review*, Office of Corporate Communications, Federal Deposit Insurance Corporation, 550 17th Street, NW, Washington, DC, 20429.

Early Corrective Action For Troubled Banks

by George E. French*

In order for proposals to reduce deposit insurance costs through improved bank supervision to be effective, it is necessary that: i) supervisors identify banking problems early enough to be able to affect insurance costs; ii) supervisors have the capability and willingness to affect bank behavior in ways that will reduce insurance costs; and iii) the current supervisory mechanism can be improved. This paper examines data pertinent to these questions and evaluates proposals to improve the supervisory process in light of the information presented. While there are aspects of bank supervision that can be improved, claims for massive and costless reductions in insurance costs through "early closure" appear overblown. Nevertheless, it is argued in this paper that an early-closure policy that allows for limited supervisory exceptions would represent an improvement over the current system.

Events in the 1980s demonstrated the potential costs of deposit insurance, as the insolvency of hundreds of savings and loan associations precipitated the bankrupting of the Federal Savings and Loan Insurance Corporation, and the Federal Deposit Insurance Corporation began incurring unprecedented losses. Many observers have attributed a large part of the

blame for these losses to inadequate supervision.

Recent deposit insurance reform proposals would reduce the discretion available to bank supervisors, in order to correct their supposed lack of willingness to use their authority aggressively. The proposals typically require earlier closure or other supervisory sanctions; which sanctions to use would be based on a bank's capital ratio.

The potential for bank supervision to play an important role in controlling deposit insurance costs should be evaluated in light of evidence on how supervisors have influenced bank behavior. This paper presents information on the operation of the commercial bank supervisory system in terms of detection and disclosure of banking problems, influence over bank dividends and capital injections, and recovery rates of undercapitalized banks. Areas where the system could be improved are identified based on this information.

Detection and Disclosure of Problems

This section presents evidence relevant to two general questions. First, do bank supervisors do a good job of ensuring the integrity and accuracy of banks' financial statements? Second, are bank supervisors able to detect

bank problems early enough to take actions that might reduce the probability of loss to the insurance funds?

Accuracy of Financial Statements

In terms of sheer man-hours, the most important activity of bank supervisors is to examine banks. Among the most important goals of examinations are to detect banking practices that pose a high risk to the deposit insurance funds, and to ensure that banks' financial statements fairly present their financial condition. A bank's uninsured depositors, other general non-deposit creditors and current and potential equity holders have an interest in obtaining accurate information about the financial condition of the bank. The deposit insurer and primary supervisory authority also have such an interest. Bank management or other bank insiders, however, may sometimes have an interest in painting an overly optimistic picture of a bank's financial condition.

Incentives to overstate bank income and net worth may arise from a desire to maintain low-cost deposits or other funding sources, to attract capi-

*Chief, Financial Markets Section, Division of Research and Statistics, Federal Deposit Insurance Corporation. This paper could not have been completed without the invaluable research assistance of Kenneth Walsh.

Table 1
Financial Reporting and the Examination Process
1984-1990

1990 4th Quarter	Examined	Not Examined
Number of Banks	2,368	10,479
Beg. Allowance	1.01	0.89
(Net Charge-offs)	(0.21)	(0.14)
Provision	0.23	0.18
Ending Allowance	1.03	0.93
1989 4th Quarter		
Number of Banks	2,899	10,312
Beg. Allowance	0.93	0.87
(Net Charge-offs)	(0.23)	(0.15)
Provision	0.25	0.17
Ending Allowance	1.00	0.90
1988 4th Quarter		
Number of Banks	2,782	10,813
Beg. Allowance	0.99	0.86
(Net Charge-offs)	(0.28)	(0.14)
Provision	0.29	0.18
Ending Allowance	1.01	0.89
1987 4th Quarter		
Number of Banks	2,685	11,465
Beg. Allowance	0.95	0.84
(Net Charge-offs)	(0.33)	(0.19)
Provision	0.36	0.22
Ending Allowance	0.99	0.88
1986 4th Quarter		
Number of Banks	2,302	12,330
Beg. Allowance	0.95	0.76
(Net Charge-offs)	(0.55)	(0.28)
Provision	0.60	0.32
Ending Allowance	0.99	0.81
1985 4th Quarter		
Number of Banks	1,806	12,544
Beg. Allowance	0.84	0.68
(Net Charge-offs)	(0.56)	(0.28)
Provision	0.65	0.35
Ending Allowance	0.93	0.74
1984 4th Quarter		
Number of Banks	1,735	12,679
Beg. Allowance	0.70	0.58
(Net Charge-offs)	(0.40)	(0.22)
Provision	0.48	0.28
Ending Allowance	0.80	0.64

Note: T-statistic for difference in means is significant at the one percent level for all elements of the table.

Source: FDIC.

tal, and to avoid supervisory sanctions. In particular, the amount of dividends a bank may pay to its owners is constrained by reported net income and undivided profits.¹ Bank management may sometimes have an incentive to conceal or minimize problems in order to maximize compensation or to attract job offers from other firms. Finally, there would be an obvious incentive for the involved parties to conceal any fraudulent or abusive insider transactions.

Whether bank supervisors force adequate disclosure of financial information is an empirical question. Data on the allowance for loan losses, net charge-offs and provisions for losses are presented in Table 1 for banks that were, or were not, examined during the fourth quarter of each year from 1984 through 1990. Consistently, banks that were examined had higher loss provisions and higher charge-offs than those that were not examined; in some years both provisions and charge-offs were almost twice as much for the examined banks as they were for the unexamined banks. As discussed below, this may be largely due to the fact that banks that are examined are often in worse financial condition than unexamined banks.

To properly interpret the figures in Table 1, it is important to understand how supervisors have dealt with the issue of loss recognition. Examiners classify certain bank assets as "substandard," "doubtful," and "loss." For internal analysis purposes, supervisors write off all "loss" assets and a percentage of "doubtful" assets,² and recommend the bank to do the same. Generally the bank concurs. In addition to these charge-offs for uncollectible loans, banks are required under generally accepted accounting principles (GAAP) to set aside an allowance

¹ For further details see David Horne, "Bank Dividend Patterns," *FDIC Banking Review*, this issue.

² The FDIC writes off 50 percent of doubtful assets; the OCC and the Federal Reserve are flexible in their approach.

Table 2
Bank-Failure Costs to the FDIC
(\$ in Millions)

Year and Transaction Type	No.	Total Assets	Assets Retained by FDIC	Assets Acquired ¹	FDIC Loss Reserve ²	Reserve/Assets
1987						
Payoff and Liquidation	11	\$ 350	\$ 348	\$ 2	\$ 122	35.0%
Insured-Deposit Transfer	40	2,223	1,251	972	660	29.7%
P&A - "Clean Bank"	114	3,764	1,630	2,135	1,124	29.9%
P&A - "Whole Bank"	19	584	70	514	84	14.3%
1988						
Payoff and Liquidation	6	\$ 136	\$ 135	\$ 0	\$ 50	37.2%
Insured-Deposit Transfer	30	1,271	589	682	429	33.8%
P&A - "Clean Bank"	54	1,490	655	835	472	31.7%
P&A - "Whole Bank"	70	3,665	167	3,497	545	14.9%
1989³						
Payoff and Liquidation	7	\$ 483	\$ 483	\$ 0	\$ 244	50.5%
Insured-Deposit Transfer	22	1,627	1,007	620	582	35.8%
P&A - "Clean Bank"	58	3,025	1,158	1,867	869	28.7%
P&A - "Whole Bank"	31	1,072	123	949	215	9.9%
Large Banking Organization ⁴	9	\$75,874	N/A ⁵	N/A	\$8,435	11.1%

¹ This column gives the amount of the failed bank's assets purchased by the acquiring entity.

² As of September 30, 1989.

³ Includes only failures occurring prior to September 30, 1989.

⁴ The Bowery Savings Bank, First National Bank & Trust Co. (OK), BancTexas, Syracuse Savings Bank, First City Bancorporation, First Republic Bank, MCorp, Texas American Bancshares, and National Bancshares Corporation (TX). These banks were resolved during the period 1985 - 1990.

⁵ In some of these transactions, assets can be put to the FDIC at the discretion of the acquirer, so the distinction between retained and acquired assets becomes less meaningful.

Note: Reprinted from *Modernising the Financial System: Recommendations for Safer, More Competitive Banks*, U.S. Department of the Treasury, February 1991, following p. X-15. Source: FDIC.

for loan and lease losses (ALLL) that is adequate to cover estimated future losses imbedded in the loan portfolio.³

Until year-end 1990, the ALLL was part of the bank's regulatory ("primary") capital. A loss provision,⁴ although a charge to net income, did not affect the bank's regulatory capital position and did not necessarily result in any adverse enforcement action.⁵ Moreover, the nature of the examination process is such that banks that are targeted for examination tend to be in worse financial condition than those not examined, and are therefore more likely to have high loan-loss provisions. The higher loss provisions by examined banks therefore are not necessarily the result of examiner pressure, but may reflect the fact that

banks in poor financial condition are examined more frequently.

The operation of the bank financial reporting process and accompanying supervision have attracted criticism. The General Accounting Office (GAO) recently has claimed that there are serious deficiencies in bank financial reporting.⁶ The GAO sampled 39 banks that failed in 1988 and 1989 and found substantial overstatement of asset values.

As a result of the asset valuations FDIC prepared after these banks failed, loss reserves increased from \$2.1 billion to \$9.4 billion. A major portion of the \$7.3 billion deterioration in asset values was not previously reported because deficiencies in GAAP allowed bank management to unduly delay the recognition of losses

and mask the need for early regulatory intervention that could have minimized losses to the Bank Insurance Fund.⁷

There is little doubt that for financially troubled banks, loan losses

³ For further information see Financial Accounting Standards Board statement No. 5, *Accounting for Contingencies*, and American Institute of Certified Public Accountants, *Auditing the Allowance for Credit Losses of Banks*, 1986.

⁴ A provision for loan losses is a "flow" item; the allowance for loan losses is the corresponding "stock." Thus, a loss provision is an addition to the bank's allowance, and a loan charge-off reduces the allowance.

⁵ Under capital requirements effective January 1, 1991, the ALLL is not eligible for inclusion in Tier 1 ("core") capital. Loss provisions thus will have the potential to bring a bank out of compliance with capital standards, so that banks may become much more reluctant to add to the ALLL.

⁶ U.S. General Accounting Office, *Failed Banks: Accounting and Auditing Reforms Urgently Needed*, April 1991.

⁷ *Ibid.*, p.5.

often are far greater than are reported on financial statements. Data on the FDIC's costs of resolving bank failures from 1987 to 1989 are presented in Table 2. Depending on the type of transaction and the size of the bank, the FDIC's average costs have ranged from ten percent to 51 percent of failed-bank assets.

It must be noted that some of the losses incurred in bank failures are incurred because of the failure itself and do not signify overly optimistic reported asset values. When an institution enters conservatorship or bridge bank status there may be deterioration in franchise value as a result of the loss of low-cost core deposits and the departure of the best customers and personnel in search of more permanent relationships with other firms. Acquirers' bid proposals reflect the cost of asset reviews, transferring titles to assets, merging the failed institution into their own organization and, especially, for bearing risk. Finally, there may be a loss of efficiency resulting from government liquidation of assets as opposed to private-sector liquidation.

In short, there are good reasons to believe that the value of a bank as a going concern is greater than its liquidation value. Unfortunately, there is no good measure of this difference, so it is difficult to tell how much of the shortfall between the book value of failed-bank equity and the FDIC's subsequent costs is due to this "liquidation differential" and how much is due to overly optimistic reported asset values. To ascribe the FDIC's substantial failure-resolution costs entirely to liquidation costs is implausible, however. It is more likely that in most failed-bank cases a substantial amount of loss was imbedded in the institution but not recognized on the financial statements.

One could conclude that the supervisory system has not been entirely effective in forcing loss recognition by troubled banks. As stated by the GAO, in part this is probably due to

Table 3
Reported Equity Capital for Failed Banks in 1989
1982 (H2) - 1988 (H2)

Period	Number Reporting	Percent of Banks with Equity <5.5%	Mean Equity Capital/Assets
1982 (H2)	149	7%	0.094
1983 (H1)	158	8	0.102
1983 (H2)	167	8	0.097
1984 (H1)	176	6	0.099
1984 (H2)	189	10	0.101
1985 (H1)	195	8	0.096
1985 (H2)	199	13	0.089
1986 (H1)	202	17	0.080
1986 (H2)	205	37	0.065
1987 (H1)	206	43	0.060
1987 (H2)	206	68	0.045
1988 (H1)	206	85	0.029
1988 (H2)	194	94	-0.011

Source: Board of Governors of the Federal Reserve System. Reprinted from *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*, U.S. Department of the Treasury, February 1991, following p. X-3. "H1" denotes June 30th Call Report data, and "H2" denotes December 31st Call Report data.

the leeway given to banks by GAAP, which allows them to establish loss reserves for problem assets based on the assumption that asset sales will occur under "normal market conditions" rather than current market conditions.

Early Identification of Problems

Apart from the question whether supervisors have forced the accounting recognition of banking problems is the question whether they become aware of problems early enough to reduce expected costs to the insurance fund. Data pertinent to the question of how early problems are recognized by supervisors are presented in this section.

Publicly reported financial data on banks that failed in 1989 are presented in Table 3. The data indicate that in the years prior to failure, the failed banks' reported equity capital ratios began to decline. The mean equity capital-to-assets ratio for the failed banks in the sample declined steadily from 10.1 percent in the second half of 1984 to -1.1 percent in the

second half of 1988, just prior to failure. Similarly, the percentage of the failed banks not meeting a 5.5 percent equity ratio⁸ increased from eight percent in the first half of 1985 to 94 percent in the second half of 1988. In general, then, most of the failed banks in the sample were identifiable as undercapitalized prior to their failure.

Some of the failed banks, however, continued to report financial data that indicated that they were well-capitalized until relatively shortly before they failed. Thus, for example, 32 percent of the banks that failed in 1989 reported equity ratios exceeding 5.5 percent as recently as the second half of 1987; six percent of the failed banks reported equity exceeding 5.5 percent as recently as the second half of 1988. It is very likely that many of these banks had incurred economic losses that were not reflected in their financial statements and that had not

⁸ The regulatory capital requirement for banks throughout much of the 1980s was 5.5 percent primary capital and 6.0 percent total capital. These capital measures include loan-loss reserves, however, which are not included in equity capital.

Table 4
**Examination Data for 347 Failing Banks
 1-1-89 through 9-30-90¹**

CAMEL Rating	Months prior to failure that bank first achieved CAMEL rating								Totals
	Never	< than 6	6 to 12	12 to 18	18 to 24	24 to 30	30 to 36	> than 36	
5	11	87	79	82	37	18	14	19	347
4 or 5	3	12	26	40	45	58	42	121	347
3, 4, or 5	0	2	5	15	32	46	46	201	347

¹ Includes all commercial and BIF-insured savings banks failing between 1-1-89 and 9-30-90. Banks receiving assistance are not included. The figures in this table include both CAMEL ratings assigned through the examination process and through other means.

Note: Reprinted from *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*, U.S. Department of the Treasury, February 1991, following p. X-3.

Source: FDIC.

been detected in the examination process.

Supervisors' examination ratings are a source of information about banks that is not publicly available. It will be useful to analyze how early the examination process identified banks that eventually failed as posing a threat to the Bank Insurance Fund (BIF). Examination data on the 347 commercial banks and BIF-insured savings banks that failed between January 1, 1989 and September 30, 1990 are presented in Table 4. The data tabulate the time prior to failure that banks were first identified as "problem banks." A "problem bank" is a bank that is assigned a CAMEL rating of "4" or "5" on a scale from one to five, with five being the worst.⁹ A CAMEL rating of "5" is intended to indicate a bank that has a high probability of failure within the next 12 months, and a CAMEL rating of "4" is intended to indicate a bank that has problems which are sufficiently severe that, if not corrected, the viability of the bank would be threatened.

Table 4 indicates that 35 percent of these banks had been identified as problem banks more than three years prior to their failure, and 64 percent had been identified as problems more than two years prior to their failure. Only three banks were never identified as problem banks, and only 12 of the 347 were first identified within six months of their failure.

All but seven of the 347 failed banks had received a CAMEL rating

of "3" more than one year prior to their failure. Three-rated banks generally receive increased supervisory attention and frequently are subject to enforcement actions. Thus, problems at the failed banks generally did not go undetected even at those banks that were not officially designated as "problem banks." In this regard, there are "good 3s" and "bad 3s" as reflected by the ratings assigned to the individual components of the CAMEL acronym. In addition, one must consider the possibility that the "3" rating was correct but that subsequently the bank developed problems that led to its failure. In general, however, the use of a "3" rating shortly before failure, as opposed to a "4" or "5," indicates that the examination process had not detected the severity of the problems.

What are the implications of these figures for the ability of supervisors to take early steps to reduce potential insurance losses? Clearly, in most cases there was ample lead time during which the supervisors had been alerted that problems existed. By and large, supervision and/or the reported financial data appear capable of identifying banks that are potential losses to the insurance funds.

It is also apparent that there are some cases in which problems go undetected, either in terms of reported capital levels, examination ratings, or both. Banks may fail to reserve adequately for loan losses because of misguided optimism or deliberate misrepresentation, and this under-

reserving will result in overstated reported capital levels. The examination process may fail to detect this misstatement of capital for two reasons. First, some banks might not have been examined frequently. That is, the reason a bank is first identified as a "problem bank" less than six months prior to its failure might be that it had not been examined for some time. An alternative explanation is that some examinations may fail to detect problems.

Table 5 presents information that is pertinent to this issue. The results of examinations that were performed at various times prior to failure are presented for the 347 banks that failed in 1989 and the first three months of 1990. For every time period considered, the majority of banks examined are identified as problems. In a few cases, however, the examinations appear to have failed to identify problems. Thus, for the 347 banks that eventually failed, there were 165 examinations conducted between 18 and 24 months prior to failure. Thirty-four of these examinations resulted in a CAMEL rating of "3" and six examinations resulted in a rating of "2." Similarly, of the 197 examinations conducted between 12 and 18 months prior to failure, 17 resulted in ratings of "3" and six resulted in ratings of "2."

⁹ CAMEL is an acronym for capital, asset quality, management, earnings and liquidity. Each of these five components is rated by the examiner and a composite rating, the CAMEL rating, is assigned.

Table 5
Examination Data for 347 Failing Banks
1-1-89 through 9-30-90¹

Time Prior to Failure	CAMEL RATING						No. of Exams
	0 ²	1	2	3	4	5	
Less than 6 months	23	0	0	1	0	55	79
6 to 12 months	3	0	1	0	20	103	127
12 to 18 months	0	0	2	17	68	110	197
18 to 24 months	0	0	6	34	85	40	165
24 to 30 months	0	0	10	47	81	27	165
30 to 36 months	0	0	23	43	55	12	133

¹ Includes all commercial and BIF-insured savings banks failing between 1-1-89 and 9-30-90. Banks receiving assistance are not included. Does not include visitations and other supervisory information.

² Indicates that the exam was never completed.

Note: Reprinted from *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*, U.S. Department of the Treasury, February 1991, following p. X-4

Source: FDIC.

Thus, there are a few cases where a bank that was thought to pose little immediate threat to the insurance fund turned out to be unsalvageable. The greater the extent to which the depth of problems is not recognized, the less possible it becomes to take early corrective action. The data presented in this section, however, suggest that in most cases, the problems of failed banks had been identified several years prior to failure.

Supervisory Effect on Bank Behavior

Supervisors influence bank behavior in ways that are difficult to quantify. These include the deterrence of fraud and insider abuse, and the encouragement of sound underwriting standards and operating policies. There are other observable kinds of bank behavior that one would expect bank supervisors to influence. Information on bank dividend payments and capital injections is presented below.

Dividend Restrictions

Data on dividend payments by U.S. commercial banks from 1986 through 1990 are presented in Table 6. Seventy-one percent of U.S. commercial banks paid dividends in 1990. Dividend payments by banks paying dividends averaged between 49 percent and 226 percent of net income

over this period (some banks paying dividends had negative net income). In aggregate, dividend payments have not fluctuated as much as bank income. Thus, in 1986, bank net income was more than double aggregate dividend payments, while in 1987 dividends were more than double net income.

In general, patterns of dividend payments appear consistent with the view that bank supervisors limit dividends paid by weak banks. Evidence is presented in Table 7. On average, banks with the best safety-and-soundness rating (CAMEL "1") paid the highest dividends relative to assets, and banks with successively worse ratings paid successively lower dividends relative to assets. This is true in every year from 1984 through 1990. For a more complete analysis of the interaction of dividends with earnings and capital, see Horne (1991).

These figures do not prove that the lower dividend payments of weaker banks were the result of supervisory influence rather than bank management decisions. However, as stated above, "5"-rated banks are those which in the supervisor's judgment have a high probability of failing within one year. It is likely that the overwhelming incentive for owners of such banks is to pay out as much as

possible in dividends. It seems highly probable that the low levels of dividend payments in problem banks are the direct result of supervisory pressure. In general, bank supervisors appear to be limiting dividend payments by weak banks.

On the other hand, as reported by Gilbert (1991), Horne (1991), and U.S. Department of the Treasury (1991), undercapitalized banks sometimes have been permitted to pay dividends. In 1990, for example, 14 banks with equity ratios between zero and three percent, with an average return on assets (ROA) of -4.41 percent, paid dividends amounting to 19 basis points of assets. Moreover, the Treasury report points out that the undercapitalized banks that paid dividends tended to be much larger than the undercapitalized banks that did not pay dividends. As indicated in Table 6, of the 166 banks with equity ratios between zero and three percent at year-end 1990, the 152 banks that did not pay dividends had an average size of \$144 million, while the 14 banks that paid dividends had an average size of \$1.7 billion. This pattern recurs in every year for which data were collected, namely 1986-1990. One explanation may be that small banks rely more on salaries and fees to upstream cash to their owners; another possibility is that the exercise of supervisory discretion has tended to favor large banks in the payment of dividends.

There is little justification for permitting undercapitalized banks to pay dividends. If a banker has not maintained enough capital to meet supervisory requirements, it is difficult to argue that he or she should be able to take capital out of the bank. Funds paid out in dividends increase the FDIC's cost, dollar-for-dollar, in the event of a failure. Some argue that undercapitalized banks should be permitted to pay dividends to enable them to attract capital or service holding company debt. This argument seems misguided. If the set of circumstances in which banks are permitted to pay dividends is reduced, then

Table 6
Dividend Payments by U.S. Commercial Banks
(\$ in Millions)

Year	Not Paying Dividends				Paying Dividends						All Banks	
	Capital Ratio Range	No.	Assets	Avg. Size	No.	Assets	Avg. Size	Equity to Assets	Avg. ROA	Dividends to Assets	No.	Assets
1990	<=0%	44	\$ 17,371	\$ 395	4	\$ 858	\$ 217	-1.66%	-9.67%	0.16%	48	\$ 18,239
	0-3.0%	152	21,909	144	14	24,329	1,783	2.60	-4.41	0.19	166	46,238
	3.0-4.5%	191	38,000	199	45	172,486	3,833	4.04	-1.22	0.24	236	210,486
	4.5-6.0%	505	489,036	968	482	981,329	2,036	5.29	0.46	0.48	987	1,470,365
	>6.0%	2,653	291,957	110	8,265	1,351,831	163	7.81	1.07	0.64	10,909	1,643,788
	All	3,545	858,273	242	8,801	2,530,843	288	6.52	1.02	0.54	12,346	3,389,116
1989	<=0%	79	\$ 23,249	\$ 294	3	\$ 188	\$ 63	-6.38	-12.23	0.18	82	\$ 23,437
	0-3.0%	163	16,604	102	18	84,727	4,707	2.52	-2.64	0.35	181	101,331
	3.0-4.5%	212	98,814	466	50	259,320	5,186	4.21	-0.38	0.28	262	358,134
	4.5-6.0%	526	103,759	197	502	1,108,559	2,208	5.10	0.38	0.42	1,028	1,212,318
	>6.0%	2,606	233,255	90	8,546	1,370,465	160	7.68	1.07	0.60	11,152	1,603,720
	All	3,586	475,661	133	9,119	2,823,259	310	6.19	0.55	0.49	12,705	3,298,920
1988	<=0%	98	\$ 19,274	\$ 197	6	\$ 1,910	\$ 318	-3.77	-9.90	0.26	104	\$ 21,184
	0-3.0%	234	24,767	106	19	23,620	1,243	2.70	-0.06	0.08	253	48,387
	3.0-4.5%	216	204,027	945	63	75,239	1,194	4.15	0.59	0.46	279	279,266
	4.5-6.0%	581	197,645	340	542	1,202,787	2,219	5.37	0.99	0.49	1,123	1,400,432
	>6.0%	2,839	205,130	72	8,522	1,176,484	138	7.75	1.06	0.58	11,361	1,381,614
	All	3,968	650,843	164	9,152	2,480,041	271	6.43	0.99	0.53	13,120	3,130,884
1987	<=0%	72	\$ 9,136	\$ 127	5	\$ 794	\$ 159	-4.03	-11.71	0.10	77	\$ 9,930
	0-3.0%	242	13,903	57	30	102,810	3,427	2.45	-2.34	0.24	272	116,713
	3.0-4.5%	277	136,229	492	87	356,322	4,096	3.74	-1.06	0.29	364	492,551
	4.5-6.0%	642	108,166	168	597	982,631	1,646	5.20	0.10	0.38	1,239	1,090,797
	>6.0%	3,178	251,343	79	8,564	1,033,060	121	0.78	0.96	0.53	11,742	1,284,403
	All	4,411	518,776	118	9,283	2,475,618	267	5.97	0.19	0.43	13,694	2,994,394
1986	<=0%	68	\$ 3,408	\$ 50	4	\$ 188	\$ 47	-1.06	-7.45	0.41	72	\$ 3,596
	0-3.0%	182	17,107	94	30	2,553	85	1.84	-4.11	0.27	212	19,660
	3.0-4.5%	256	121,757	476	83	142,545	1,717	4.27	0.24	0.21	339	264,302
	4.5-6.0%	797	154,944	194	894	1,357,403	1,518	5.27	0.67	0.29	1,691	1,512,347
	>6.0%	3,164	190,419	60	8,710	950,350	109	7.76	0.96	0.51	11,874	1,140,769
	All	4,467	487,637	109	9,721	2,453,038	252	6.17	0.75	0.37	14,188	2,940,675

Source: FDIC.

Early Corrective Action For Troubled Banks

some banks' cost of capital may increase, but this is an appropriate result of reducing the degree to which owners can shift bank-failure costs to the FDIC. Similarly, while there may be legitimate concerns about the effect on financial markets of defaults of holding company commercial paper, financial support of a holding company generally should be of less interest to supervisors than maintaining capital adequacy in the insured bank.

Capital Injections

One of the most important functions of bank supervisors is to monitor and enforce compliance with capital standards. In part, this involves the prevention of dividend payments and other capital distributions by undercapitalized banks, as discussed in the previous section. In addition, one would expect supervisors to put greater pressure on undercapitalized banks to seek outside capital. Data presented in this section suggest that this pressure exists and has had an effect.

Information on the sources of changes in banks' equity capital, for each year from 1984 through 1990, is presented in Table 7. Capital injections increase equity, and dividend payments reduce it. Net income represents the effect of the bank's past investment decisions and cannot be influenced by today's supervisory pressure. Therefore, as emphasized by Dahl and Shrieves (1989), the gross change in bank capital from one period to the next, which includes net income, can be a highly misleading indicator of the influence of supervisors on bank capital.

Table 7 indicates that bank supervisors have influenced capital injections in the "correct" direction. In each year from 1984 through 1990, banks with the worst safety rating (CAMEL "5") had capital injections ranging between three and nine times larger than the safest banks (CAMEL "1"). Moreover, the size of the capital injection is a steadily increasing function of the CAMEL rating; succes-

Table 7
Capital Accounts for Commercial Banks by CAMEL Rating

Year	CAMEL RATING				
	1	2	3	4	5
1990					
Number of Banks	2,622	6,781	1,728	788	252
Beg. Equity	10.27	8.33	7.53	6.40	4.36
Capital Injections ¹	0.13	0.34	0.43	0.51	0.64
(Dividends) ²	(0.99)	(0.47)	(0.24)	(0.08)	(0.03)
Net Income ³	1.44	0.82	0.14	(0.78)	(2.67)
Ending Equity	10.87	9.02	7.86	6.03	2.29
1989					
Number of Banks	2,738	7,067	1,687	776	258
Beg. Equity	10.32	8.35	7.32	6.35	3.72
Capital Injections	0.10	0.32	0.37	0.54	0.69
(Dividends)	(0.92)	(0.61)	(0.25)	(0.10)	(0.03)
Net Income	1.29	0.94	0.33	(1.00)	3.86
Ending Equity	10.79	9.00	7.78	5.79	0.48
1988					
Number of Banks	2,812	7,034	1,851	920	293
Beg. Equity	9.93	8.11	7.31	6.26	4.39
Capital Injections	0.13	0.36	0.38	0.49	0.85
(Dividends)	(0.69)	(0.42)	(0.21)	(0.10)	(0.03)
Net Income	1.25	0.83	0.19	1.09	(5.26)
Ending Equity	10.62	8.88	7.67	5.56	(0.05)
1987					
Number of Banks	2,899	7,055	2,087	1,101	292
Beg. Equity	9.67	8.14	7.63	6.77	5.11
Capital Injections	0.12	0.35	0.27	0.60	1.11
(Dividends)	(0.55)	(0.43)	(0.20)	(0.12)	(0.03)
Net Income	1.13	0.75	(0.02)	(1.54)	(5.08)
Ending Equity	10.36	8.81	7.68	5.72	1.11
1986					
Number of Banks	3,173	7,006	2,197	1,280	243
Beg. Equity	9.36	8.09	7.68	7.13	6.42
Capital Injections	0.26	0.27	0.28	0.60	0.75
(Dividends)	(0.54)	(0.54)	(0.21)	(0.11)	(0.05)
Net Income	1.13	0.75	(0.10)	(1.74)	(5.31)
Ending Equity	10.21	8.56	7.64	5.87	1.80
1985					
Number of Banks	3,777	6,938	1,958	1,047	179
Beg. Equity	9.29	7.78	7.68	7.19	6.77
Capital Injections	0.23	0.45	0.28	0.80	1.85
(Dividends)	(0.67)	(0.37)	(0.24)	(0.14)	(0.05)
Net Income	1.20	0.77	0.09	(1.39)	(5.16)
Ending Equity	10.08	8.66	7.82	6.47	3.41
1984					
Number of Banks	4,370	6,866	1,489	627	111
Beg. Equity	8.93	7.63	7.35	7.20	6.36
Capital Injections	0.34	0.50	0.29	0.67	1.46
(Dividends)	(0.48)	(0.35)	(0.23)	(0.13)	(0.07)
Net Income	1.19	0.80	0.14	(1.47)	(4.36)
Ending Equity	9.99	8.58	7.56	6.27	3.36

Note: All figures except those for the number of banks are expressed as a percentage of assets, and are simple averages of the percentages for individual banks.

¹ Capital injection represents the sum of capital stock transactions, capital contributed through mergers, and capital transactions with parent holding companies.

² Dividends are the sum of dividend payments on common stock and preferred stock.

³ Net income represents net income as reported on the "Call Report" plus the change in net unrealized loss on marketable equity securities.

Source: FDIC.

sively weaker banks have successively larger capital injections.

It could be argued, as in Dietrich and James (1983), that the higher capital injections of weaker banks had nothing to do with supervisory pressure but were simply the result of optimizing choices by the banks and the equity markets. Such an argument is largely one of semantics and seems unconvincing. Troubled banks issuing capital do so at significant dilution to existing shareholders and may face their wrath. Even if pressure to raise capital comes from the bank itself or from uninsured depositors or creditors, this presumably reflects a desire to avoid closure or other sanctions. If so, the capital injection is arguably a result of the operation of the supervisory system.

The data presented in this section suggest that supervisors generally influence bank dividends and capital injections in a manner that reduces the expected cost to the insurance funds. Discussion of other aspects of bank behavior is beyond the scope of this paper. Gilbert (1991), for example, reports instances of undercapitalized banks that were permitted to grow rapidly, or had their highest levels of loans to insiders, while undercapitalized. Such instances, and those reported here and in Horne (1991) of dividend payments by undercapitalized banks, serve to emphasize that bank supervision is not perfect. Proposals to improve supervision are reviewed in the next section.

“Early Corrective Action” Proposals to Strengthen Bank Supervision

It frequently is argued that regulators do not close banks soon enough. The substantial losses incurred by the FDIC on banks that had been reporting zero positive book capital prior to failure are taken as evidence that banks should be closed either while they still have positive book capital or when the “market value” of capital reaches zero. Earlier closure could reduce insurance costs in three ways.

First, banks that fail would have more capital and more franchise value. Second, because banks would be closed sooner the moral hazard inherent in the continued operation of an undercapitalized bank would be curtailed to some extent. Finally, the prospect of earlier closure could induce bank owners to hold more capital and operate more prudently.

The prospects for reducing insurance costs through early closure or other supervisory action depend upon a number of the factors discussed in this paper. A prerequisite for reducing insurance costs through early corrective action is, clearly, for supervisors to be able to detect bank problems early enough to affect expected failure costs. The data presented in this paper indicate that this prerequisite is met. Most bank failures were identified as problem banks between one year and three years prior to failure, and experienced depletion of reported capital. Thus, there generally is ample lead time prior to failure when action can be attempted to reduce expected costs to the insurance funds.

Another prerequisite for effective early corrective action is that supervisors must be willing and able to influence bank behavior in ways that will reduce expected insurance costs. The data presented in this paper indicate that this prerequisite is satisfied, although imperfectly, with respect to bank dividends and capital injections. Supervisors have restricted dividend payments by weak banks. In addition, weak banks tend to have larger injections of new capital than strong banks, probably in an attempt to avoid supervisory sanctions and closure.

Finally, proposals to improve supervision assume that the current system could be changed in a manner that would reduce insurance costs while preserving the financial-intermediation-role banks currently perform.¹⁰ If we take as given that the lending function of banks is not to be drastically reduced, the question is

whether there are “early corrective actions” that can be taken to reduce insurance costs as compared with the current system. Some recent proposals to improve bank supervision are discussed in this section, namely mandatory supervisory sanctions based on capital “tripwires,” and the related concepts of “market-value accounting” and early closure.

Capital Tripwires

Under these proposals,¹¹ banks with the highest reported capital ratios would be allowed expanded affiliation authority and other perquisites, while banks with successively lower capital ratios would become subject to increasingly severe dividend and operating restrictions. These proposals aim to reduce supervisory discretion, which is said to result in too much forbearance to troubled banks.

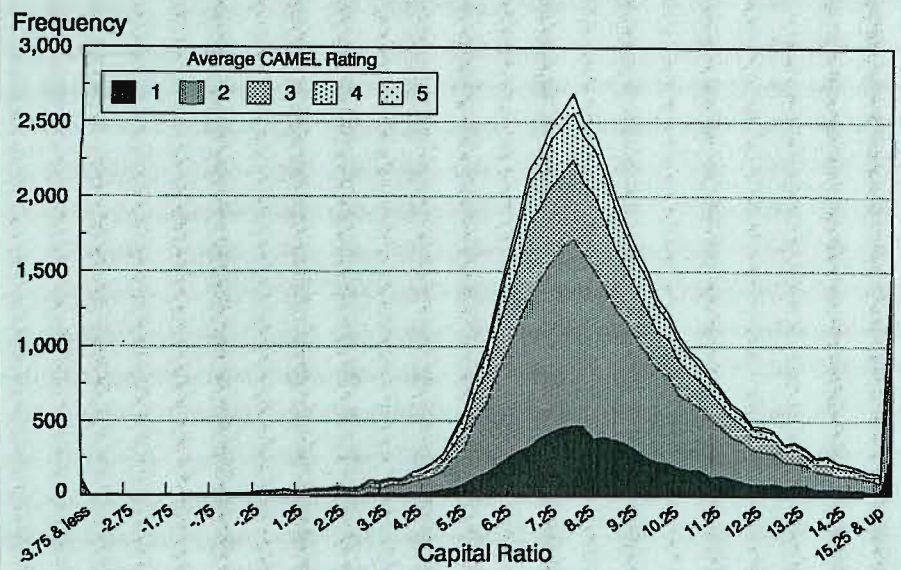
Reported capital ratios are a highly imperfect measure of bank risk. Figure 1 presents data on the distribution of capital ratios for banks of each CAMEL rating. It is evident that there are numerous “well-capitalized” banks which are in fact “problem banks” (CAMEL “4” and “5”). The capital ratios prevailing in the banking industry are low enough that even the most well-capitalized banks can have their capital wiped out quickly through imprudent lending and investments.

Given the record of bank supervisors, there is room for reasonable people to differ on the desirability of rules *versus* supervisory discretion. Much depends on the specific rules being considered. For example, a mandatory prohibition on dividends or rapid growth for an undercapitalized bank

¹⁰ It has been argued by Diamond and Dybvig (1983) and others that the economic value created by banks and similar depository institutions is in intermediating between the needs of savers and other economic agents for a highly liquid, demandable debt instrument and the needs of borrowers to invest in longer-term, illiquid projects. This type of financial intermediary is intrinsically susceptible to deposit runs. Deposit insurance is a way to overcome the market failure of bank runs.

¹¹ See *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*, U.S. Department of the Treasury, February 1991, pp. 37-41.

Figure 1
Distribution of Capital/Asset Ratios
by Average CAMEL Rating



might be expected to do little harm and may reduce expected insurance costs. In general, however, given the multidimensional nature of bank risk, an extensive and rigidly prescribed list of actions that must be taken based on one element of the bank's risk profile is probably undesirable. It should be noted that rigid rules could even have the perverse effect of making it more difficult to impose sanctions on banks which, although in technical compliance with capital requirements, are in fact unsafe and unsound. Figure 1 indicates that there are many such banks.

"Market-Value Accounting"

It often is argued that banks should be closed when their market value reaches zero. Generally, such discussions do not define the term "market value." This is difficult because many bank loans are highly illiquid, due to differences in information about the borrower between the bank and the potential buyer of the loan.¹² Presumably, a market-value closure rule would require closing a bank if the estimated current liquidation value of its assets is less than the value of liabilities.

In view of the large observed difference between the book value of

failed-bank assets and subsequent liquidation proceeds, a liquidation-value closure rule would require the closure of many banks with substantial book capital. If this closure rule worked as intended, the insurer would not bear most of the costs of bank failures. Instead, the deadweight costs of failures would be borne by the banking system and by society. If deadweight costs are substantial, the liquidation-value closure rule would, by definition, result in the closure of banks that are viable on a going-concern basis. Over time, presumably this would result in a drastic reduction in the lending function of banks, because of the potentially substantial penalties imposed by the insurer on the holding of portfolios of illiquid loans.

A discussion of the role of banks in the economy is beyond the scope of this paper. However, prior to implementing a closure rule based on liquidation values it would be important to consider this issue seriously. If banks create economic value by intermediating between highly liquid deposits and productive but illiquid loans, as argued by Diamond and Dybvig (1983), then to the extent this

function is inhibited there would be some loss of economic efficiency.

Early Closure

Earlier closure could reduce insurance costs indirectly, by curtailing the moral hazard inherent in the continued operation of undercapitalized banks and inducing healthy banks to operate more prudently. In addition, it has been claimed that there would be substantial direct savings from closing banks when they still have capital. Most discussions of early closure, however, do not discuss the possibility that the direct savings may be insubstantial in many cases, or mention the potential costs of an early-closure policy.

Direct savings from early closure would be limited to the extent that losses in failed banks were locked in while the bank appeared well-capitalized. There may appear to be a gradual deterioration of net worth, but in reality this may only reflect a gradual and belated recognition of the effects of past decisions. Most bank failures are caused by imprudent underwriting standards coupled with lack of diversification. Such banks are highly susceptible to regional or industry-wide economic shocks. There is likely to be very little direct savings associated with closing these banks earlier. Once the bad loans are made, the loss belongs to the insurer regardless of when the bank is closed. In cases like this, the *direct* savings from early closure will result primarily from the fact that a larger pool of uninsured depositors and creditors are available to share the FDIC's losses. These savings typically are of second-order importance compared to the direct loss on assets in the failed bank.

Second, it is worth pointing out that implementing a "mandatory early-closure policy" might simply

¹² For publicly traded banks or bank holding companies, the market value of the shares of a troubled firm may overstate economic net worth because of corporate limited liability. Because the value of shares cannot become negative, arbitrageurs may purchase for a positive price the shares of a firm whose expected value is negative.

Table 8
Recovery Rates for Banks with 0-2 Percent Tier 1 Equity Ratios

	Banks with 0-2 Percent Tier 1 Equity ¹ at Year-end	Failed or Assisted	"Problem" Banks ²	Unassisted Mergers	Recovered as of 12-31-90
1985					
Number	82	45	14	9	14
Assets 12-31-85 (\$ Millions)	\$27,762	\$4,301	\$16,505	\$511	\$6,445
1986					
Number	152	90	19	14	29
Assets 12-31-86 (\$ Millions)	\$39,201	\$17,715	\$18,018	\$976	\$2,492
1987					
Number	168	93	39	19	17
Assets 12-31-87 (\$ Millions)	\$72,452	\$30,361	\$19,369	\$684	\$22,038

¹ For purposes of this analysis, Tier 1 capital is common stockholders' equity minus all intangibles except purchased mortgage-servicing rights, where these mortgage-servicing rights may not exceed 50 percent of Tier 1 capital. Assets were not risk-adjusted and did not include intangible assets excluded from Tier 1.

² CAMEL rating of "4" or "5" as of October 7, 1991.

Source: FDIC.

cause the exercise of supervisory discretion to be pushed one step farther back, to the examination process. Thus, if requiring a write-down or reserve for certain bank assets will push its book capital below the critical level that would force its reorganization, supervisors are likely to take a very hard look at the advisability of requiring such write-downs. Alternatively, supervisors simply might elect to postpone examining a particular bank. The result may be to reduce the integrity of banks' financial statements.

Finally, there are considerable deadweight costs¹³ associated with reorganizing or liquidating a bank. Any policy that results in the closure of banks that need not otherwise have been closed will be beneficial only if the savings associated with closing nonviable banks earlier exceeds the extra deadweight costs of closing viable banks unnecessarily. Thus, the exercise of supervisory forbearance in the closure process may be the result not of kowtowing to the banking industry or other perverse regulatory incentives, but of a rational calculus of cost minimization.

As discussed earlier, closure costs include the administrative cost to the

FDIC of structuring transactions, costs to the acquirer of merging the troubled bank into its organization and, especially, costs acquirers must incur for asset reviews and the discounts they will demand to buy assets of uncertain quality. It is sometimes argued that this last category of cost can be reduced sharply by providing the acquirer with ongoing protection against losses on acquired assets. Such arrangements have their own costs, however. There are costs associated with monitoring these agreements, and the loss protection given acquirers may limit their incentives to do a good job managing the acquired problem assets. Finally, FDIC removal and liquidation of the problem assets would result in administrative costs and liquidation losses.

Some perspective on the additional deadweight costs associated with an early-closure policy may be gained from Table 8. The recovery rates for banks falling between zero and two percent Tier 1 capital¹⁴ at the end of 1985, 1986 and 1987 are presented. More recent data are not presented, based on an arbitrary judgment by this author that at least three full years of operation were nec-

essary to make a reliable judgment about the status of banks that had been undercapitalized.

Consider a rule requiring the closure of any bank with less than two percent Tier 1 capital. Table 8 shows that most of the undercapitalized banks that would have had to be closed under this early-closure rule were in banks that had either failed or were on the "problem bank" list by mid-1991. A considerable portion of these assets were in problem banks. For example, of the \$28 billion in assets in solvent banks with less than two percent equity at year-end 1985, only \$4.3 billion were in banks that subsequently failed or were assisted, but \$16.5 billion were in problem banks at mid-1991. For banks that were undercapitalized at year-end 1986, recovery rates were even lower: \$36 billion out of \$39 billion in assets of undercapitalized banks were in

¹³ The term "deadweight costs" is not restricted to the technical sense of a wasting of society's economic resources, but includes wealth transfers from the insurer to investors in failing banks or bank assets.

¹⁴ For purposes of this analysis, Tier 1 capital is common stockholders' equity minus all intangible assets except purchased mortgage-servicing rights, where these mortgage-servicing rights may not exceed 50 percent of Tier 1 capital.

failed or problem banks by mid-1991.¹⁵

This evidence suggests that, in general, banks that reach very low levels of book capital do not recover from their difficulties. Therefore, the additional deadweight costs of an early-closure policy would not be expected to be substantial. There may be some cases, however, in which an undercapitalized bank is viable. Because these banks are the exception, supervisors' failure to close or otherwise resolve an undercapitalized institution should be the exception as well. A process in which undercapitalized banks are

¹⁵ Gilbert, (1991) reports higher recovery rates for solvent but undercapitalized banks. The difference is attributable to our criterion that excludes problem banks from the list of recovered banks.

closed or resolved in the normal course of events, but in which exceptions can be made through explicit supervisory estimations of viability, may strike the correct balance between rules and discretion.

Conclusions

Supervisors generally are able to detect bank problems well in advance of failure. They appear able to affect bank behavior by limiting dividend payments and encouraging capital injections by undercapitalized banks. Improvements appear possible in forcing realistic reported asset values and further limiting dividend payments by undercapitalized institutions.

Claims for massive and costless reductions in insurance costs through "early closure" appear overblown. Much of the loss in failed banks may be locked in prior to any observed deterioration in capital. However, most banks that were undercapitalized between 1985 and 1987 have not recovered. This suggests that additional deadweight costs arising from needless bank closure are not an overwhelming argument against an early-closure policy. An early-closure policy that allows for exceptions based on explicit supervisory findings of viability may strike the right balance between rules and discretion, and would likely lead to improved incentives toward prudent banking and lower deposit insurance costs.

REFERENCES

- Dahl, Drew and Ronald E. Shrieves. "The Impact of Regulation on Bank Equity Infusions." *Journal of Banking and Finance* 14 (December 1990):1209-28.
- Diamond, Douglas W. and Philip H. Dybvig. "Bank Runs, Deposit Insurance, and Liquidity." *Journal of Political Economy* 91 (June 1983):401-19.
- Dietrich, J. Kimball and Christopher James. "Regulation and the Determination of Bank Capital Changes: A Note." *The Journal of Finance* 38, No. 5 (1983):1651-58.
- Gilbert, R. Alton. "Supervision of Undercapitalized Banks: Is There a Case for Change?" *Federal Reserve Bank of St. Louis Review* (May/June 1991):16-30.
- Horne, David. "Bank Dividend Patterns." *FDIC Banking Review* 4 (Fall 1991): 13-24.
- U.S. Department of the Treasury. Interagency Study. *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*. Washington, DC: U.S. Department of the Treasury, February 1991.
- U.S. General Accounting Office. *Failed Banks: Accounting and Auditing Reforms Urgently Needed*. GAO/AFMD-91-43.

Bank Dividend Patterns

by David K. Horne*

The 1980s were the most tumultuous decade for commercial banking in the United States in the last 50 years. From just ten commercial bank failures in 1980, the number of failures rose to over 200 banks annually from 1986 to 1989. Other indicators reflect a pattern of problems likely to plague the banking sector for several years. For example, noncurrent loans and leases and other real estate owned reached almost \$100 billion in 1990, equivalent to 2.9 percent of banks' total assets. This figure was up substantially from a rate of 1.87 percent of assets in 1985.

Despite such problems, bank dividends have climbed steadily since 1980. High dividend distributions have led to concern that banks are not retaining sufficient earnings to maintain adequate capital levels. Dividend distributions by undercapitalized banks in particular have precipitated a number of proposals to restrict dividends of such banks. This paper examines the dividend patterns of banks, with emphasis on undercapitalized banks. The desirability of dividend restrictions also is discussed.

* David K. Horne is an economist in the FDIC's Division of Research and Statistics. The author is grateful to Arthur Murton, Gary Fissel, George French, Donald Inscoc, Kevin Brown and Seth Epstein for helpful discussion and comments and to Kenneth Walsh for research assistance.

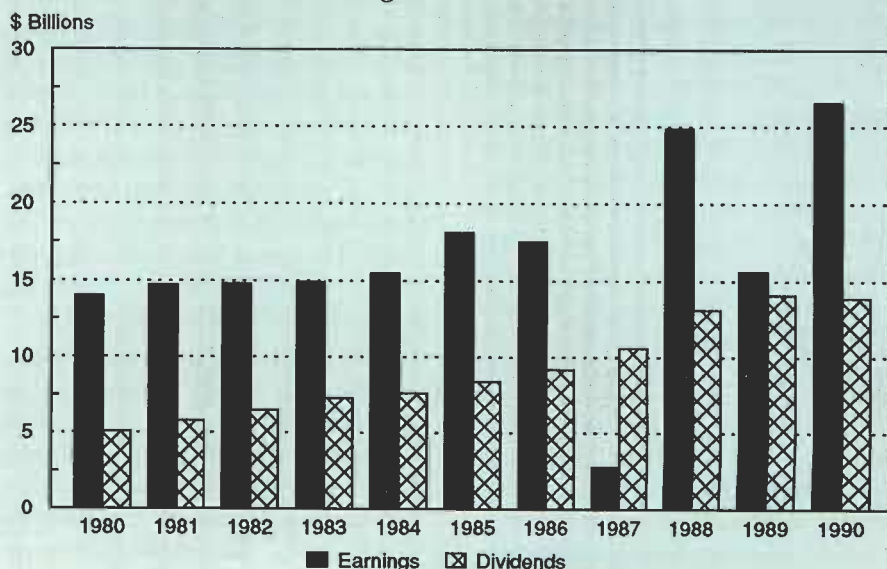
The paper begins with an investigation of trends in commercial bank dividends from 1980 to 1990. The most recent data are examined in more detail to analyze the variation of dividends across banks, with emphasis on bank dividends as a function of bank capital. To illustrate the impact of capital, earnings and other variables on dividends, simulations based on a regression model of bank dividends are presented. Emphasis is placed on undercapitalized banks. The empirical analysis is followed by a discussion of dividend restrictions and their impact on the ability of banks to raise

capital. A brief discussion of policy implications concludes the paper.

Trends in Commercial Bank Dividends

Annual cash dividends on common stock relative to net earnings between 1980-1990, for FDIC-insured commercial banks, are illustrated in Figure 1. Dividends on preferred stock, not included in this analysis, amount to approximately three percent of net earnings. For discussion purposes, it may be useful to separate the historical series into two periods. The early 1980s were profitable for most com-

Figure 1
Net Earnings and Cash Dividends



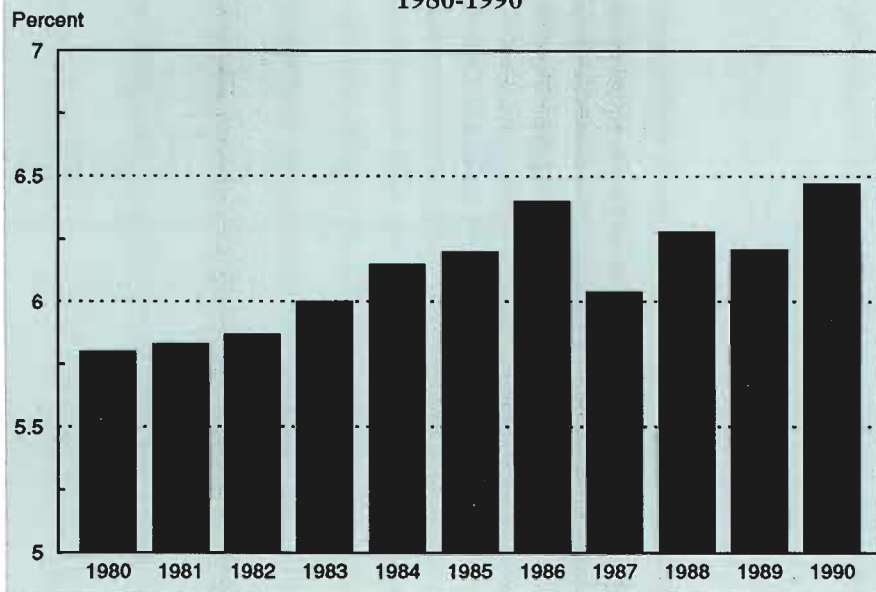
mercial banks. Industry aggregate net earnings rose steadily from \$14.0 billion in 1980 to \$18.1 billion in 1985, followed by a slight decrease to \$17.5 billion in 1986. Subsequently, bank earnings exhibited substantially more volatility.

Dividend distributions increased each year from 1980 through 1986, both in absolute dollars and as a percentage of net earnings. In 1980, for example, banks distributed a total of \$5.1 billion in dividends, or 36 percent of earnings. By 1986, dividends had risen to \$9.2 billion and represented over 52 percent of income. Unlike earnings, however, dividends continued to increase steadily to reach \$14.0 billion, equivalent to 89 percent of aggregate earnings, in 1989. In 1990 the dividend-earnings ratio fell for the first time in the decade (to 84 percent) as a consequence of a small decrease in dividends in conjunction with a moderate rise in income compared to the prior year.

Aggregate dividends generally have not exceeded earnings (with the exception of 1987, when the largest banks contributed to provisions against loans to less-developed countries). Banks generally retained sufficient earnings to contribute to higher capital levels. In fact, capital increased from \$107.6 billion in 1980 to \$219.9 billion in 1990, while assets also increased during the period. Equity capital ratios (aggregate equity capital to total assets) are presented in Figure 2. Despite increasing dividend-earnings ratios during the period 1980 to 1990, equity capital ratios displayed a positive trend. Equity capital ratios fell only in two years: 1987 and 1989. However, the capital ratio in 1990, almost 6.5 percent, was considerably higher than the 5.6 percent capital ratio held by commercial banks in 1980.

The trend in capital ratios illustrated in Figure 2 indicates that the commercial banking industry, as a whole, achieved a stronger capital base in recent years despite the vola-

Figure 2
Equity Capital Ratios: FDIC-Insured Commercial Banks
1980-1990



tility of earnings. However, the reported capital ratios do not reflect banks' liabilities stemming from depletion of the Bank Insurance Fund. It has been estimated that approximately \$30 billion are required to replenish the Fund, given the losses to date.¹ If the 1990 industry capital of almost \$220 billion were decremented for this implicit liability, the adjusted aggregate capital ratio would fall to 5.6 percent, equivalent to the equity ratio value in 1980 and a substantial fall from the 1986 ratio of 6.2 percent. Capital is not adjusted in this manner because deposit insurance premiums are to be assessed against future earnings in order to replenish the Fund. Moreover, reported capital ratios do not reflect off-balance-sheet assets. As off-balance-sheet activity has grown, the protection provided by reported capital ratios has decreased. Risk-based capital standards are intended to ensure that capital requirements cannot be subverted by moving bank assets off the balance sheets.

The steady rise in dividend distributions may reflect several factors. The returns from capital investments in banking have declined during the 1980s. In 1980 the return on equity capital (net income as a percent of equity capital, denoted ROE) was ap-

proximately 13 percent based on aggregate annual statistics. The ROE had fallen to approximately ten percent by 1986 and declined further to 7.7 percent by 1990. The decline in ROE would be expected to provide a disincentive for banks to retain earnings in order to finance additional investments. High dividends might also reflect an effort by banks to restrict the growth of capital relative to assets, thus shifting the increased risk of bank failure to creditors and the FDIC.

The aggregate statistics obscure substantial variations in both earnings and dividends at the individual bank level. Not all banks paying dividends, for example, are either profitable or adequately capitalized. Of the 12,338 FDIC-insured commercial banks reporting at year-end 1990, 1,598 were unprofitable. Of these, 361 distributed some amount of cash dividends on common stock. Of the 10,740 commercial banks reporting positive earnings, 21 percent paid no cash dividends, 69 percent paid dividends

¹ If the desired level of reserves was \$1.25 per \$100 of insured commercial bank deposits, for example, the target level of reserves would be just over \$33.1 billion on \$2,650 billion of deposits. Given current reserves of the Bank Insurance Fund, \$4.5 billion, an additional \$28.6 billion would be required under these assumptions.

that were less than earnings, and 10 percent paid dividends that exceeded earnings.

Because particular interest is often accorded unprofitable banks that distribute dividends, a brief examination of the 361 banks in this category may be illustrative. As a group, these banks lost \$3.3 billion in 1990, but paid out a total of \$771 million as cash dividends on common stock. The mean year-end equity capital ratio for these banks was 6.9 percent; this ratio ranged from -3.1 percent to 29.6 percent. The mean level of assets for banks in this group totalled just under \$1 billion. These numbers suggest, on average, that equity capital during the year for this group of banks was sufficient to finance both losses and dividends. However, a number of banks in this group exhibited capital ratios considerably below average; some were insolvent by year-end. Dividend distributions by unprofitable banks in 1990 were modest in comparison with the previous year. In 1989 a total of 322 commercial banks paid \$1.7 billion in dividends while sustaining losses of \$6.7 billion.

A high dividend-to-earnings ratio may not necessarily be a cause for concern. Earnings in recent years have exhibited considerable volatility. Regular dividends, in contrast, have been more stable. Managers may tend to set a relatively conservative level of dividends to avoid the need to rescind declared dividends. In a year of below-average earnings, such as 1987, dividends will appear high relative to earnings as banks choose to maintain regular dividends. In a long-term perspective, in contrast, the same level of dividends may appear to be conservative. If sufficient retained earnings exist to finance dividends when earnings are poor, maintaining dividends will have a limited adverse impact on the bank's financial condition. Moreover, the ability to maintain dividends when earnings fall is a

² Lintner (1956) documents such dividend considerations for corporate management.

Table 1
Bank Cash Dividends by Equity Capital Ratio

Capital Ratio (K) (Percent)	Number Paying Dividends*	Total Dividends** (\$000)	Total Capital** (\$000)	Total Earnings** (\$000)
1990				
K<0	3/36	\$ 1,194	\$ -10,387	\$ -56,230
0≤K<3.0	10/155	43,918	467,217	-698,140
3≤K<6.0	526/1,222	5,091,865	62,316,196	4,555,424
K≥6.0	8,257/10,925	8,620,376	124,424,408	13,781,961
1989				
K<0	3/83	\$ 343	\$ -10,890	\$ -23,472
0≤K<3.0	18/182	297,008	1,694,544	-2,239,125
3≤K<6.0	556/1,294	5,397,214	73,891,256	3,177,747
K≥6.0	8,545/11,148	8,263,660	127,463,615	14,650,086

* Computed to all banks in this capital group.

** Calculated only for banks paying dividends.

major incentive for banks to retain earnings.

A bank's equity capital may provide a better description of its financial condition and ability to sustain dividends than does current income. An adequately capitalized bank with poor earnings may finance dividend distributions by depleting its equity capital. An undercapitalized bank, in contrast, would be expected to undertake efforts (including reducing or eliminating dividends) to boost capital. Thus, from a policy perspective, the variation of dividends with respect to capital is of particular interest. A description of dividend behavior across different capitalization rates is provided below.

Examination of 1990 data from the Reports of Condition and Income (Call Reports) reveals that of 36 commercial banks which were reported to be insolvent at year-end, three paid dividends on common stock at some time during the year (see Table 1). Dividends for the three banks totalled approximately \$1.2 million, despite total losses of \$56.2 million for these same banks. Another 155 banks reported positive equity capital ratios below three percent. Ten of these banks paid \$43.9 million in dividends

while experiencing losses of \$698.1 million as a group. In comparison, adequately-capitalized banks (the term is used here simply to denote equity capital of at least six percent of assets) were more likely to pay dividends, but their earnings exceeded total dividends by a considerable margin. Of those adequately-capitalized banks which paid dividends, dividends amounted to 63 percent of earnings.

The numbers in Table 1 demonstrate that undercapitalized banks have been permitted to distribute dividends, in some cases even while sustaining losses. Under these conditions, capital erosion is accelerated and the probability of subsequent bank failures increases. To the extent that excessive dividend distributions result in additional bank failures, or higher losses for banks that are closed, additional failure-resolution costs are imposed on the FDIC. Bank dividends are restricted under some circumstances, although the data presented in Table 1 suggest that these restrictions do not appear to be completely effective in preventing dividend distributions by banks that do not meet regulatory capital standards.

Closer examination of the quarterly Call Report data for the under-

capitalized banks reveals that, in many cases, dividends were distributed earlier in the year when banks reported adequate amounts of capital. Generally, most of the total annual dividends were declared by the third quarter, and sometimes earlier. Many of these banks reported adequate equity capital in the first several quarters, as recognition of losses was postponed until later in the year. On a quarterly basis, therefore, only a small number of undercapitalized banks appear to distribute dividends. However, major provisions for losses are likely to be anticipated to some degree by bank management. Bank management has flexibility over the timing of dividends and loss recognition. When dividends are desired, there is incentive to delay large increases to reserves for nonperforming loans until the end of the year, which inflates the real equity value of the bank earlier in the year. Thus, while the use of annual data may tend to overstate the frequency with which undercapitalized banks pay quarterly dividends, analysis of dividends by quarter is likely to underestimate the propensity to distribute dividends by banks that are functionally undercapitalized.

The pattern of dividend distributions varies from year to year. Table 1 includes data for 1989 and 1990.³ The 1990 data may be of particular interest to the extent that the earnings and dividends experienced in that year are similar to the levels attained in 1984-1986, a period of relative earnings stability. When earnings are temporarily depressed, as in 1987, dividend distributions exhibit a very different pattern. The numbers in Table 1 suggest that adequately-capitalized banks tend to pay higher dividends. These banks also are likely to be more profitable, and higher earnings tend to be associated with larger dividends, other things equal. To investigate dividend payout patterns in more de-

tail and to identify the separate impacts of earnings and capital on dividend distributions, a dividend model was estimated using a regression framework. The empirical dividend model is discussed in the next section.

Bank Dividend Model

The cross-tabulations presented in the prior section indicate a relationship between earnings, capital, and cash dividends on common stock. However, to obtain more precise measures of the separate effects of these and other factors on commercial bank dividends, we estimated a dividend model using a multivariate regression technique. The advantage of this approach is that it permits measurement of the size of the impact of each individual factor, holding constant the remaining factors. Variables of particular interest thought to influence dividend distributions include earnings, equity capital, charter type, and bank holding company affiliation. A brief explanation of the model specification is provided below, followed by a discussion of the results and an example to illustrate the impact of individual factors.

The general form of the model can be specified as

$$y_i = \beta_0 + \sum_{k=1}^5 \beta_k x_{ki} + \beta_6 x_{1i} + u_i, \quad (1)$$

where y_i denotes dividends/assets for bank i , x_1 denotes earnings/assets, and the other explanatory variables ($x_2 - x_5$) include equity capital/assets, national bank status, state member bank status, and bank holding company affiliation. The error term is denoted u_i . A switching variable, d , is a dummy variable which takes a value of zero for banks with less than three percent equity capital and a value of one for the remaining banks with at least a three percent capital ratio. The earnings coefficient for banks with at least three percent capital is therefore the sum of the coefficient for total earnings plus the coefficient for the restricted earnings term, calculated as

$(1 + \beta_6)$. This specification permits a different earnings effect for banks that are undercapitalized *versus* the remaining banks, under the assumption that a larger portion of earnings might be retained by undercapitalized banks to augment inadequate capital levels.

The dependent variable in the model is dividends as a ratio of assets. Explanatory variables include earnings, an interactive earnings variable, and capital, all deflated by assets. National bank, state member bank and bank holding company affiliation are included as dummy variables. A summary of results is provided in Table 2. The influence of earnings and capital can be interpreted as the dollar change in dividends expected to result from a \$1 change in each explanatory variable. The effect of the dummy variable must be interpreted as affecting the dividend-asset ratio. Thus, the coefficient of .0235 implies that national banks would be expected to distribute more dividends than state nonmember commercial banks, amounting to .0235 percent of bank assets.

Table 2
Variable Effects

Variable	Impact
Earnings	.1284
Earnings ($\geq 3\%$ capital)	.1174
Capital	.0223
National Bank	.0235
State Member Bank	-.0528
Bank Holding Company	.2900

The model is estimated using a tobit estimation technique to correct for censoring of the dividends. Estimation of the dividend model specified in equation 1 is discussed at length in Horne (1991). Approximately one fourth of the banks paid no dividends, and of course negative dividends are not observed. Application of standard least squares estimation may generate biased and inconsistent parameter estimates

³ Data on dividend payments by banks across different capital ratios are provided for 1986-1989 in U.S. Department of the Treasury (1991), pp. X12-X14.

under these conditions (*e.g.*, Maddala (1983) or Judge *et al.*, (1985)). All the variables included in Table 2 are statistically significant at the probability level of .01.

The data are derived from 1990 year-end Call Reports of FDIC-insured commercial banks. The final sample includes 12,009 commercial banks with mean assets of \$280 million. Mean dividends are 0.43 percent of assets, earnings amount to 0.67 percent of assets, and capital amounted to 8.83 percent of assets. Approximately 32 percent of the banks in the sample are national banks, and eight percent are state Federal Reserve member banks. Almost 72 percent are affiliated with a bank holding company.

cific values of each attribute are provided in Table 3.

A bank with the attributes described above would be expected to distribute about \$920,000 in dividends. This base case comprises the first row of Table 3. Moving down the table, a national bank with similar characteristics would be expected to distribute \$1.037 million in dividends, \$117,000 more in dividends than the amount associated with the base case. A state member bank with similar characteristics would distribute considerably less, while a bank affiliated with a bank holding company would distribute almost \$2.4 million, more than double the dividends distributed by a similar unaffiliated bank.

parent holding company. In addition, as bank capital becomes inadequate such banks need not raise capital directly but may obtain transfers from the holding company, which in turn may have easier access to the capital markets.

When earnings fall by \$850,000 (consistent with a decrease in the ROA from 0.67 to 0.50, holding everything else constant), dividends are expected to fall by approximately one quarter of the change in earnings, or \$209,000. Dividends would be expected to increase similarly as earnings rise. If capital were less than three percent, dividends would be less sensitive to earnings, falling in this case by approximately \$109,000.

Table 3
Dividend Projections

Attribute	Dividend (\$000)	Change (\$000)
Base	\$ 920	—
National Bank	\$1,037	\$ 117
State Member	\$ 656	\$ -264
Bank Holding Company	\$2,370	\$1,450
Return on Assets = 0.50	\$ 711	\$ -209
Capital Ratio = 4.0	\$ 381	\$ -539

To illustrate the impact of changes in the explanatory variables in the model, projected dividends based on the adjusted tobit coefficients are provided in Table 3 for a hypothetical bank. This presentation illustrates the impact of each variable on dividends, holding other factors constant. The hypothetical bank (the base case) is assumed to have the following attributes to simplify the comparisons: total assets of \$500 million, earnings of \$3.35 million (0.67 percent return on assets), and a capital ratio of 8.83 percent. It is also assumed that the bank is a state nonmember commercial bank which is not affiliated with a bank holding company. The expected dividends resulting from spe-

The large impact of class and holding company affiliation is surprising, and it is not clear how to account for the size of these effects. Differences in supervisory policies among regulatory agencies might account for some differences in dividend patterns. In addition, class and holding company affiliation may be correlated with variables that have been omitted, such as distribution of ownership, control of investors, type of business or geographic location. Banks affiliated with bank holding companies might be under pressure to continue dividends to service holding company debt. Banks affiliated with holding companies may also tend to pay higher dividends because of tax advantages associated with dividends paid to the

Capital also influences dividend distributions. High levels of capital may provide the resources to finance current dividends, even when earnings are low. All other things constant, increased capital reduces returns on equity, providing incentive to reduce capital by distributing additional dividends. Alternatively, when bank capital is inadequate, investors face a higher probability of bank failure. The ability to issue debt and equity securities is also limited when a bank is undercapitalized, and those securities that are issued are likely to cost

⁴ Examination of the data revealed a small number of atypical banks (such as nonbank banks), with capital ratios of up to 100 percent and extraordinary dividend distributions relative to assets. Some of these banks had negligible deposits; some observations represent the liquidation of credit-card banks that were upstreaming the proceeds to the holding companies as dividends. These outliers had an inordinate impact on the initial ordinary least squares estimates. The estimation problem was eliminated by deleting a small number of observations representing banks with capital ratios exceeding 30 percent.

⁵ The tobit coefficients reflect the impact of the explanatory variables on a latent or unobserved variable that may be interpreted as "potential" dividends. For policy purposes, the effect of interest concerns observed (positive) dividends. Thus, the effects illustrated in Table 2 are generated from the tobit coefficients which have been adjusted for the probability of observing positive dividends (*e.g.*, Maddala (1983)).

⁶ Advantages associated with bank holding company affiliation are discussed in Pozdena (1988).

⁷ Given a capital ratio of at least three percent, the earnings effect is $(.1284 + .1174)$, or just under 25 percent of the total change in earnings. When the capital ratio is below three percent, the coefficient of .1284 is applied to the change in earnings.

more in terms of higher debt costs or lower equity prices. In addition, bank regulators encourage banks to increase capital and may impose a variety of sanctions that ultimately raise costs and limit the flexibility of management. Thus, the impact of changes in capital on dividends is likely to depend upon whether a bank is adequately capitalized.

The level of capital has a direct effect on dividend distributions, holding other things constant. Banks with higher capital ratios distribute larger dividends. In addition, capital has an interactive effect with earnings, in that the portion of earnings distributed as dividends is smaller for banks with capital ratios less than three percent. The direct effect is indicated in the final row of Table 2 where capital falls from 8.83 percent to four percent of assets, resulting in a \$539,000 dividend decrease.

The observation that banks reduce dividend distributions when capital is insufficient to meet regulatory standards may be interpreted as weak evidence that such requirements are effective. However, banks are likely to incur costs as investors respond to capital deficiencies, providing another incentive for undercapitalized banks to augment their capital. Such banks may be required to offer higher yields on subordinated debt, pay higher rates on certificates of deposit, and also may experience an outflow of uninsured deposits. Owners also may desire to raise capital levels to avoid potential bankruptcy costs. To avoid such costs, undercapitalized banks may reduce dividends to accumulate additional capital. Evidence that undercapitalized banks reduce dividends, taken by itself, cannot be interpreted as an unambiguous indication of regulatory effectiveness.

The results of the empirical analysis suggest that, although lower capital is associated with decreases in dividends, undercapitalized banks are permitted to distribute dividends.

The amount of dividends distributed by undercapitalized banks tends to increase as earnings rise, holding capital constant. If distributions are financed by bank earnings, potential capital is dissipated. When earnings are insufficient to cover dividends, the decline in equity capital is exacerbated by any distributions. Capital standards are a primary requirement for permission to receive a charter, to operate, and to qualify for deposit insurance. Permitting distributions by undercapitalized banks therefore represents a type of capital forbearance.

Dividend distributions by weak or failing banks have led to proposals to restrict the dividends of undercapitalized banks. In the following section the issue of dividend restrictions and the implications of such a policy on the ability of banks to raise capital are discussed. The primary justification for permitting such distributions has historically been that such restrictions impair the ability to raise capital.

The Impact of Dividend Restrictions

The recent spate of bank failures has led to a renewed emphasis on capital standards. Bank regulatory agencies have reached agreement on new leverage requirements. Moreover, risk-based capital requirements have been implemented. Despite these new standards, bank regulators have been criticized for not pursuing forceful enforcement actions in response to unsafe banking practices (e.g., GAO (1991a)). Dividend distributions by banks with inadequate earnings were specifically cited by the General Accounting Office (GAO) as one cause of capital erosion for a sample of undercapitalized banks. The dividend frequencies presented in Table 1 and dividend model performance estimates illustrated in Table 2 provide additional confirmation of this source of capital forbearance by bank regulators. Dividend distributions by undercapitalized banks shift additional risks to the Bank Insurance Fund, ultimately increasing failure-resolution

costs. The GAO has proposed more forceful and predictable regulatory policies, including mandatory or "tripwire" policies imposing automatic implementation of various restrictions in response to unsafe operating procedures (GAO (1991b)). One such policy would prohibit dividends when capital is insufficient to meet regulatory standards.

The primary justification for maintaining a flexible policy regarding dividend distributions by undercapitalized banks has been that, under certain circumstances, continuation of dividends may facilitate the raising of capital. This is consistent with the observation by GAO that "Regulators clearly did not want to take an enforcement action that they believed would potentially damage the bank's ability to attract capital through injections, stock offerings, mergers, or acquirers" However, the relationship between dividends and the ability to raise capital is not clear. In this section, the theoretical and empirical bases that have been used sometimes to justify this policy of capital forbearance are examined.

A reduction in dividends could inhibit the ability of banks to raise capital if the change in dividend reduced the desirability of bank stock. There is substantial empirical evidence regarding the relationship between unanticipated changes in dividends and corporate stock prices. Unanticipated increases in dividends tend to result in increased prices and positive abnormal returns, while unexpected reductions or omissions generally depress returns. The expected impact of such dividend restrictions on stock price, however, depends upon the mechanism by which dividends affect price. Several theories most relevant to the issue of bank dividend restrictions are discussed below.

In a world with no taxes, zero transactions costs, and perfect capital mar-

⁸ Capital falls by 4.83 percent of assets, or \$24.15 million based on assets of \$500 million. Dividends fall by .0223 of this amount, or approximately \$539,000.

⁹ GAO (1991b), p.8.

kets, a firm's dividend policy will not affect its market value. This conclusion is the "dividend irrelevance proposition" derived by Miller and Modigliani (1961). Investor net worth is independent of whether earnings are distributed in the form of cash dividends or retained by the firm. Investors would be indifferent between receiving capital gains and dividends because any dividend policy of the firm can be duplicated exactly through equity transactions. If investors desire to increase cash balances, they can sell a fixed portion of their equity holdings.

Such idealized assumptions are not realized in practice. Given taxes and transactions costs, investors may not be indifferent to dividend policies. Cash dividends generally are taxed at higher effective rates. Alternative methods of distributing dividends, such as share repurchases or financing the acquisition of other firms, may generate lower tax liabilities compared to cash dividends. A number of alternative distributions to shareholders have become increasingly popular in recent years (Bagwell and Shoven (1989)). However, some categories of investors may have reasons to prefer cash dividend income. Corporations, for example, realize tax advantages from dividend income. Endowment funds may be restricted to spending dividend and interest income. Investors such as retirees who rely upon their assets to finance expenditures may prefer high-dividend stocks to avoid transactions costs of equity sales. Bank stocks, which have traditionally been considered high-yield investments, may attract such an investor clientele.

There are several reasons why an unanticipated decrease in bank dividends may depress bank stocks and result in abnormal returns as a result of such an announcement. If management possesses superior knowledge regarding the earnings prospects of a firm, then the level of dividends may be used to signal these prospects to the market (*e.g.*, Ross (1977),

Bhattacharya (1979), Miller and Rock (1985)). Stock prices would be expected to move in the same direction as dividends to the extent that dividend movements are thought to provide new information regarding earnings projections. Thus, a reduction in dividends might be expected to have an adverse impact on share values as investors interpret the policy change to indicate lower earnings expectations of management. A number of studies demonstrate the impact of dividend announcements on prices after controlling for earnings announcements. Dividend cuts and omissions appear to have a particularly marked impact. Several studies (*e.g.*, Healy and Palepu (1988) and Manakyan and Carroll (1990)) test the relationship between dividend announcements and subsequent earnings directly, and find that announcements of dividend initiations and omissions predict earnings. Small price responses to subsequent earnings announcements imply that investors use dividend announcements to form their expectations of future earnings.

The impact of a dividend reduction might be greater for banks with relatively higher dividend distributions than for firms with lower dividend yields if the marginal investor in bank stocks prefers dividends relative to capital gains. This would be consistent with a clientele effect. Bajaj and Vijh (1990) provide evidence that changes in dividends have a greater impact on prices for those stocks with high dividend yields. They argue the price adjustment may be separated into two components. First, a decrease in dividends may signal lower earnings to investors, which would result in lower prices, other things constant. This is consistent with the signaling effect. The second component of price adjustment, the clientele effect, may work in either direction depending upon the preferences of the marginal investor. If the marginal investor in a particular stock prefers a relatively high dividend

yield, the announcement of a lower dividend yield would reduce the value of this stock relative to other stocks at the margin, placing further negative pressure on its price. If such a clientele effect were to influence prices, bank stock prices might be more sensitive to changes in dividend policies than other nonbank firms.

The signaling aspect of dividend changes is eliminated if dividend levels are determined exclusively on the basis of observable information, because no new information would be revealed by a suspension of dividends. Thus, automatic dividend restrictions based upon capital ratios, which are widely available, should not lead to lower equity prices in response to a signaling effect because information asymmetries would not exist. However, some price adjustment on the basis of a clientele effect might result, although this effect may be considered somewhat tenuous.

Although dividend restrictions based on observable criteria would eliminate the signaling response of stock prices, signaling may be partially responsible for the capital forbearance or "flexibility" demonstrated by bank regulators in the past. Much internal information, such as bank CAMEL ratings and informal regula-

¹⁰ Although the current nominal tax rates on capital gains and dividend income are equivalent, the effective rates may vary. Taxes on capital gains may be deferred until the gains are realized. Moreover, in some circumstances capital gains may be avoided by passing assets through estates or by using gains to offset capital losses from other sources.

¹¹ Miller and Modigliani (1961) and Black and Scholes (1974) discuss investor preferences for high-yield stocks.

¹² Examples of this literature include Aharony and Swary (1980), Asquith and Mullins (1983), Brickley (1983), Dielman and Oppenheimer (1984), and Kalay and Loewenstein (1985).

¹³ Examples include Healy and Palepu (1988) and Ghosh and Woolridge (1988).

¹⁴ As Bajaj and Vijh note, "there seems to be no consensus on the clientele hypothesis" (p. 194). A clientele effect under these circumstances would be eliminated if investors could fully adjust their portfolios. A decrease in dividends relative to capital gains may reduce the value of the stock to investors with preference for high dividend yields, but the stock should become more attractive to investors desiring capital gains. Litzenberger and Ramaswamy (1980, 1982) suggest that short-sale and margin restrictions may limit the ability of investors to fully adjust their portfolios and thus generate a clientele effect.

tory actions in response to unsafe banking practices, is not available to the public and therefore is not observed by potential investors. However, investors may observe that a particular banking institution, despite inadequate capital, is permitted to continue distributing dividends. Under these circumstances, investors might conclude that, despite the current capital deficiency, both management and bank regulators (who presumably monitor undercapitalized banks closely) believe the bank's financial condition is adequate to support such dividends. Thus, under the current system, regulators may permit continued dividends in order to signal investors that the bank is likely to be viable with an infusion of capital. Interruption of dividends could be interpreted by investors as a signal that regulators possess additional negative information regarding the financial condition of the bank.

Regulators might be reluctant to prohibit dividends if such a policy were thought to inhibit new investment. By attracting new capital, bank regulators shift some of the risk and potential failure-resolution costs to investors. However, if dividend restrictions were determined on the basis of an objective measure, such as equity capital, this potential source of signaling would be eliminated.

Dividend restrictions may have an indirect impact on share value by influencing the probability that the undercapitalized bank will survive. Undercapitalized banks have a very high probability of failure, an attribute that may dominate the market valuation. Once a firm is closed, both current and future dividends are eliminated. Moreover, in the event of bank failure, investors rarely recover any residual value because (a) bankruptcy costs can be substantial, and (b) *equity capital measured according to generally accepted accounting principles (GAAP)* is likely to overstate the value of the bank. A dividend restriction would eliminate current dividends if capital were inad-

equate. But once capital standards were met, dividend distributions could be resumed. The dividend restriction is intended to encourage an increase in capital through retained earnings, and may be perceived as increasing the probability of survival.

The sum of the direct and indirect effects of dividend restrictions on share value, given the previous discussion, is ambiguous, but is also likely to be relatively small under most conditions. The exception may be where bank failure is imminent, in which case the value of the bank may be entirely dependent upon the amount of dividends that may be distributed before the bank is closed. Permitting undercapitalized banks to distribute dividends creates a moral hazard problem: the incentives to declare dividends are greatest for banks with the highest probability of failure. When bank failure is imminent, investors have incentives to exaggerate the financial condition of the bank, delay bank closure, and distribute as much capital as possible in the form of dividends. The moral hazard problem is exacerbated by the fact that regulatory net worth, as measured under GAAP, typically would substantially exceed the going-concern value of an undercapitalized bank. This difference in value may be exacerbated by recognizing gains on the sale of selected assets and holding other assets that have depreciated more rapidly. When GAAP net worth reaches zero, the liquidation value of the bank can be substantially negative.

The discussion of dividend restrictions has focused primarily on bank equity. However, restrictions on dividends would be expected to have an unambiguously positive effect on the value of bank debt. Dividend restrictions are a normal part of bondholder covenants to protect the interest of the bondholders. To the extent that dividend restrictions reduce the risks associated with debt instruments, the costs of debt should fall, other things constant. Therefore, dividend restric-

tions should facilitate the ability of banks to issue subordinated debt.

Dividend restrictions on common stock should also have an unambiguously positive effect on the value of preferred equity, although the size of the effect may be small. Any reduction in the distributions to common stockholders increases the amount of capital available to satisfy competing claims on bank assets. Restrictions on preferred stock dividends have also been proposed. The impact on preferred equity value would be similar in nature to the effect of dividend restrictions on common stock: the loss in value associated with the current dividend foregone would be at least partly offset by the impact of increased capital on the probability of survival and thus the probability of continued dividend payments in the future. The dynamics are slightly different with respect to preferred stock, because normally the dividends on preferred stock continue to accrue. Actual distribution would occur only if the bank subsequently achieved adequate capitalization. Otherwise, upon bank closure the accrued funds would be available to satisfy the claims of creditors.

These theoretical considerations suggest that dividend restrictions should not affect the ability of a bank to raise capital. Limited empirical evidence supports this conclusion. To investigate the relationship between dividends and the ability to raise capital, a sample of undercapitalized banks was analyzed. At the end of 1986, 301 commercial banks exhibited capital ratios of three percent or less. These banks were tracked through 1989. Of these, just over half (161) failed. Surviving banks generally accumulated capital from retained earnings, contributions from the parent holding company, security issues, or some combination of these methods. Ability to retain earnings was limited; most banks experienced losses over the three years. Only 48 banks in the sample experienced positive earnings on average over the

three subsequent years. Forty-seven banks received some aid from the parent holding company, and 56 raised capital by issuing some type of securities. It is also interesting to note the relative amounts of capital raised by the different approaches over the three years. For the banks that survived, approximately \$161 million were raised by issuing securities, compared to \$342 million in transfers from the parent holding company. For these same surviving banks, \$95 million were paid out in dividends from 1987 to 1989.

Most undercapitalized banks did not distribute any cash dividends during the three years. Between 1987 and 1989, only 26 banks in the sample distributed dividends. Of these 26 banks, only one failed, which suggests that banks paying dividends were likely to be in better condition than the average bank in the sample. Moreover, the bulk of the dividends that were paid out were distributed by banks after sufficient capital had already been raised to meet requirements. It is interesting that of the 56 banks that issued securities to raise capital, only ten of these distributed any dividends over the three-year period. Similarly, of the 47 banks that received funds from the parent holding company, only 12 distributed dividends.

This sample is relatively small, and one should generalize to other years with caution. However, the evidence suggests that undercapitalized banks can attract capital without distributing dividends. Even after recapitalization, few of the surviving banks restored dividends within the time horizon. Under these conditions, it seems unlikely that a dividend restriction would have had much impact on the recapitalization process.

Several other papers report similar findings using larger samples of undercapitalized banks. Gilbert (1991) examined banks that did not meet primary capital requirements (5.5 percent of assets) for five or more consec-

utive quarters during the period 1985 to 1989. By the end of 1989, the recovery rate for banks paying dividends exceeded the rate for those not paying dividends, although the difference in rates was not found to be statistically significant. Gilbert concluded that these results "do not provide empirical support for the view that mandatory constraints on the behavior of undercapitalized banks will reduce the bank failure rate."¹⁵

Dahl and Spivey (1991) also analyzed banks that were undercapitalized, using observations from 1981 to 1988. Recovery time (where recovery is assumed when primary capital requirements are met) is modeled in a regression framework as a function of annual changes in assets, earnings, dividends and equity issues. Dahl and Spivey found only the equity issue variable significant in influencing recovery. Based on the lack of a statistically significant dividend effect, the authors concluded that: "The insignificance of dividend policy on recovery fails to provide empirical support for the popular notion that dividend restrictions on banks which are undercapitalized, or unprofitable, would reduce losses for deposit insurers. In fact, such restrictions may be counterproductive to the extent that 'lower dividends make it harder for (bankers) to raise equity at exactly the time they're facing tougher regulatory requirements for capital.'"¹⁶

Dividend restrictions may reduce the FDIC's costs even if the number of bank failures were not reduced. For banks that do eventually fail, dividend restrictions eliminate an additional source of capital impairment. Other things equal, the more capital that is available when the bank fails, the lower the costs to the deposit insurer. Lack of statistical significance in a bank recovery model does not imply that dividend restrictions would generate no cost savings, much less that this policy would be counterproductive.

Moreover, methodological problems with these analyses cast some doubt on the validity of the conclusions concerning the effect of dividends on bank recapitalization. The banks in the best relative financial condition, which are therefore most likely to recover from capital deficiencies, are also those banks most likely to continue dividend distributions. This factor could be responsible for a positive correlation between dividends and recovery. It would be inappropriate to conclude from such evidence that dividend increases therefore contribute to recapitalization. The dividend model discussed in this paper demonstrates the positive impact of capital and earnings on dividends. Because no correction is made for this source of sample selection, the results of Gilbert and Dahl and Spivey regarding the role of dividends on bank recovery should be interpreted with caution.

The contribution of dividends on the ability of banks to issue equity was not investigated directly by Dahl and Spivey, although the authors estimated a model of bank equity issues. Equity issues are specified as a function of bank capital and other variables, similar to Dahl and Shrieves (1990). Unfortunately, this model is also subject to specification problems. Observed equity issues reflect both market demand for bank equity by investors and supply of equity by banks. It is not possible to identify in the econometrics sense either supply or demand by applying least squares to a single-equation model.¹⁷ In analyses that include all banks, given the relatively large number of adequately-capitalized banks compared to undercapitalized banks, one would expect the supply effect to dominate: well-capitalized banks have little incentive to issue equity, while banks

¹⁵ Gilbert, p. 8.

¹⁶ Dahl and Spivey, p. 13, citing the *Wall Street Journal* (December 19, 1990, p. 3).

¹⁷ In a simultaneous-equation framework, capital is likely to influence both demand and supply of equity. Estimation of the structural equations by ordinary least squares yields inconsistent estimators of the regression parameters.

with less capital desire to issue equity. Under these circumstances, more equity issues would be observed as capital falls. Alternatively, in analyses restricted to undercapitalized banks, given that these banks are likely to desire additional equity, observed equity issues may be constrained primarily by investor demand for bank equity. Investors are likely to be wary of investing in those banks experiencing the greatest capital deficiencies. One would expect to observe the frequency of equity issues to rise with capital based on analysis of undercapitalized banks. Thus, it is not surprising that equity issues are positively related to bank capital of undercapitalized banks, as in Dahl and Spivey, but negatively related to capital when applied to all banks, as in Dahl and Shrieves. Dahl and Spivey attribute the different capital effects to changing incentives, suggesting that the most undercapitalized banks choose not to raise capital in response to "greater incentives to engage in risk-taking behavior."

In short, results from the analyses of undercapitalized bank samples must be interpreted with caution. Casual observation suggests that many banks that are successful in issuing equity do not distribute dividends; dividend distributions do not appear to be a prerequisite for equity issues. Unfortunately, conclusions regarding the role of dividend restrictions on recapitalization or equity issues based on Dahl and Spivey should be regarded with some skepticism. We now turn to the issue of current dividend restrictions.

The Office of the Comptroller of the Currency (OCC) and the Federal Reserve impose some objective restrictions on dividend distributions. National and Federal Reserve member banks face two primary restrictions on dividends under Sections 56 and 60 of the National Bank Act. The first, a capital limitation, limits dividends to undivided profits on hand (12 U.S.C. 56). Undivided profits are synonymous with accumulated re-

tained earnings. This capital limitation must be met before dividends are distributed. The earnings limitation restricts dividend payments to net profits in the current year in addition to net profits retained from the previous two years (12 U.S.C. 60). If a bank does not meet the earnings limitation, dividends may be distributed only with permission from the primary regulator. The dividends of state non-member banks are regulated by the states, of which some impose restrictions similar to those of Sections 56 and 60. In contrast, the FDIC does not impose specific quantitative dividend restrictions, unless deposit insurance assessments are in default, although dividends may be restricted on safety-and-soundness grounds by cease-and-desist orders or other enforcement actions.

Sections 56 and 60 do not explicitly prohibit dividends by undercapitalized banks, although changes in the treatment of the allowance for loan and lease losses make such distributions more difficult. Until recently, the allowance for loan and lease losses could be added to undivided profits, weakening the capital limitation. Similarly, banks were permitted to add the provisions for loan and lease losses to reported net income for the purpose of meeting the earnings limitation. The OCC and the Federal Reserve no longer permit these adjustments to undivided profits or net income.

The policy of permitting undercapitalized banks to continue to distribute dividends is difficult to justify on either theoretical or empirical grounds. Such dividend distributions reduce capital further and shift additional risks to creditors and the FDIC. Allowing such dividends creates a moral hazard problem because owners have the most incentive to distribute dividends when bank failure is imminent. There is no evidence to suggest that reduced dividends either limit the ability of undercapitalized banks to raise capital or reduce the

time to recover from capital deficiencies.

The impact of dividend restrictions, however, may be limited as a consequence of the ability of management to allocate dividends and provisions for loan and lease losses over time. Dividends are generally declared over the first two to three quarters, whereas provisions for losses are commonly taken in the final quarters. The majority of banks that were undercapitalized by year-end, and which distributed dividends during the year, declared their dividends in the early quarters when regulatory capital was reported to be adequate. Implementation of dividend restrictions may have a limited impact on dividend distributions, and could result in greater delays in recognizing losses to protect desired dividend distributions. Therefore, automatic dividend restrictions based on capital will be ineffective if reported capital does not adequately represent the financial condition of a bank.

Conclusions

Commercial bank dividends on common stock increased steadily over the 1980s, from \$5.1 billion in 1980 to \$14.0 billion in 1989, substantially exceeding the growth of earnings. The rise in dividends relative to earnings has led some observers to characterize bank dividend distributions as excessive. On the basis of equity capital ratios, such concerns might appear to be unwarranted. Earnings exceeded dividends in each year but one, and equity capital increased relative to assets. The aggregate equity capital ratio in 1990, for example, reached almost 6.5 percent, compared to 5.6 percent in 1980. However, the aggregate statistics conceal two problems. First, reported equity capital is overstated to the extent that the banking industry is considered liable for the shortfall in the Bank Insurance Fund. Although not reported on bank balance sheets, from an economic per-

¹⁸ Dahl and Spivey, p. 16

¹⁹ An overview of dividend restrictions is provided in Conner and DeWitt (1991).

spective the Fund deficit may be regarded as an industry liability. If reported equity capital were adjusted for this source of implicit liability, equity capital on an adjusted basis would appear to have fallen in recent years. As a consequence, more risk has been shifted to the FDIC.

Second, the aggregate numbers conceal substantial variation in dividends across banks with different capital rates. A large number of banks, including some undercapitalized banks, distribute dividends that may

exceed annual earnings by a considerable margin. In 1989, for example, some 322 commercial banks that were undercapitalized by year-end paid \$1.7 billion in dividends during the year, while as a group these banks sustained losses totalling \$6.7 billion. Such practices raise valid public-policy concerns. Although the adverse impacts of capital erosion are well-known, analyses of individual-bank data indicate that dividend distributions by undercapitalized banks are not uncommon.

Automatic dividend restrictions may be useful to prevent further erosion of equity capital in banks not meeting capital requirements. Restrictions based on objective, observable criteria would eliminate the negative repercussions normally associated with the signaling aspect of decreased dividends. Both theoretical considerations and limited empirical evidence indicate that such restrictions are not likely to inhibit a bank's ability to raise capital.

REFERENCES

- Aharony, Joseph and Itzhak Swary. "Quarterly Dividend and Earnings Announcements and Stockholders' Returns: An Empirical Analysis." *Journal of Finance* 35 (March 1980): 1-12.
- Asquith, Paul and David Mullins, Jr. "The Impact of Initiating Dividend Payments on Shareholders' Wealth." *Journal of Business* 56 (January 1983): 77-96.
- Bagwell, Laurie Simon and John B. Shoven. "Cash Distributions to Shareholders." *Journal of Economic Perspectives* 3 (Summer 1989): 129-40.
- Bajaj, Mukesh and Anand M. Vijh. "Dividend clienteles and the information content of dividend changes." *Journal of Financial Economics* 26 (August 1990): 193-219.
- Bhattacharya, Sudipto. "Imperfect information, dividend policy, and 'the bird in the hand' fallacy." *Bell Journal of Economics* 10 (Spring 1989): 259-70.
- Black, Fischer and Myron Scholes. "The Effects of Dividend Yield and Dividend Policy on Common Stock Prices and Returns." *Journal of Financial Economics* 1 (May 1974): 1-22.
- Brealey, Richard A. and Stewart C. Myers. *Principles of Corporate Finance*. Third Edition. New York: McGraw-Hill Co, 1988.
- Brennan, Michael J. and Anjan V. Thakor. "Shareholder Preferences and Dividend Policy." *Journal of Finance* 45 (September 1990): 993-1018.
- Brickley, James A. "Shareholder Wealth, Information Signaling and the Specially Designated Dividend." *Journal of Financial Economics* 12 (August 1983): 187-209.
- Conner, Frank M. III and Wayne K. DeWitt, Jr. "An Analysis of New Limitations on Bank and Thrift Dividend Payments." *BNA's Banking Report* 50 (April 15, 1991): 700-06.
- Dahl, Drew and Ronald E. Shrieves. "The Impact of Regulation on Bank Equity Infusions." *Journal of Banking and Finance* 14 (December 1990): 1209-28.
- Dahl, Drew and Michael F. Spivey. "Moral Hazard, Equity Issuance and Recoveries of Undercapitalized Banks." Conference on Bank Structure and Competition, Chicago, 1991.
- Dielman, T. E. and H. R. Oppenheimer. "An Examination of Investor Behavior during Periods of Large Dividend Changes." *Journal of Financial and Quantitative Analysis* (June 1984): 197-216.
- Gilbert, R. Alton. "Supervision of Undercapitalized Banks: Is There a Case for Change?" Conference on Bank Structure and Competition, Chicago, 1991.
- Ghosh, Chinmay and J. Randall Woolridge. "An Analysis of Shareholder Reaction to Dividend Cuts and Omissions." *Journal of Financial Research* 11 (Winter 1988): 281-94.
- Gupta, Manak C. and David A. Walker. "Dividend Disbursal Practices in Commercial Banking." *Journal of Financial and Quantitative Analysis* 10 (March 1971): 733-46.
- Healy, Paul M. and Krishna G. Palepu. "Earnings Information Conveyed by Dividend Initiations and Omissions." *Journal of Financial Economics* 21 (September 1988): 149-75.
- Horne, David K. "Capital Constraints on Bank Dividends." Working Paper, Federal Deposit Insurance Corporation, Washington, DC, 1991.
- Huberman, Gur. "External Financing and Liquidity." *Journal of Finance* 39 (July 1984): 895-910.

- Jensen, Michael C. and William H. Meckling. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics* 3 (October 1976): 305-60.
- Judge, George G., W. E. Griffiths, R. Carter Hill, Helmut Lutkepohl, and Tsoung-Chao Lee. *The Theory and Practice of Econometrics*. Second Edition. New York: John Wiley and Sons, 1985.
- Kalay, Avner and Uri Loewenstein. "Predictable Events and Excess Returns: The Case of Dividend Announcements." *Journal of Financial Economics* 14 (September 1985): 423-49.
- Kim Yong Cheol and René M. Stulz. "The Eurobond Market and Corporate Financial Policy." *Journal of Financial Economics* 22 (December 1988): 189-205.
- Lintner, J. "Distribution of Incomes of Corporations Among Dividends, Retained Earnings, and Taxes." *American Economic Review* 61 (May 1956): 243-69.
- Litzenberger Robert and Krishna Ramaswamy. "Dividends, Short Selling Restrictions, Tax-Induced Investor Clienteles and Market Equilibrium." *Journal of Finance* 35 (May 1980): 469-82.
- Litzenberger Robert and Krishna Ramaswamy. "The Effects of Dividends on Common Stock Prices: Tax Effects or Information Effects?" *Journal of Finance* 37 (May 1982): 429-43.
- Litzenberger Robert and Krishna Ramaswamy. "The Effects of Personal Taxes and Dividends on Capital Asset Prices: Theory and Empirical Evidence." *Journal of Financial Economics* 7 (June 1979): 163-95.
- Mayne, Lucille S. "Bank Dividend Policy and Holding Company Affiliation." *Journal of Financial and Quantitative Analysis* 15 (June 1980): 469-80.
- Maddala, G.S. *Limited-dependent and qualitative variables in econometrics*. New York: Cambridge University Press, 1983.
- Manakyan, Herman and Carolyn Carroll. "An Empirical Examination of the Existence of a Signaling Value Function for Dividends." *Journal of Financial Research* 13 (Fall 1990): 201-10.
- Miller, Merton H. and Franco Modigliani. "Dividend Policy, Growth, and the Valuation of Shares." *Journal of Business* 34 (October 1961): 411-33.
- Miller, Merton H. and Kevin Rock. "Dividend Policy under Asymmetric Information." *Journal of Finance* 40 (September 1985): 1031-51.
- Miller, Merton H. and Myron S. Scholes. "Dividends and Taxes: Some Empirical Evidence." *Journal of Political Economy* 90 (December 1982): 1118-41.
- Modigliani, Franco and Merton H. Miller. "The Cost of Capital, Corporate Finance and the Theory of Investment." *American Economic Review* 48 (June 1958): 261-97.
- O'Keefe, John. "The Texas Banking Crisis: Causes and Consequences, 1980-1989." *FDIC Banking Review* 3 (Winter 1990): 1-34.
- Pettit, R. Richardson. "Taxes, Transactions Costs and the Clientele Effect of Dividends." *Journal of Financial Economics* 5 (December 1977): 419-36.
- Pozdena, Randall Johnston. "Banks Affiliated with Bank Holding Companies: A New Look at Their Performance." *Economic Review*, Federal Reserve Bank of San Francisco (Fall 1988): 29-40.
- Ross, Stephen A. "The determination of financial structure: the incentive-signaling approach." *Bell Journal of Economics* 8 (Spring 1977): 23-40.
- Spong, Kenneth. *Banking Regulation: Its Purposes, Implementation, and Effects*. Third Edition. Federal Reserve Bank of Kansas City, 1990.
- U.S. Department of the Treasury. Interagency Study. *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*. Washington, DC: U.S. Department of the Treasury, February 1991.
- U.S. General Accounting Office. *Bank Supervision: Prompt and Forceful Regulatory Actions Needed*. GAO/GGD-91-69. Washington, DC (1991a).
- U.S. General Accounting Office. *Deposit Insurance: A Strategy for Reform*. GAO/GGD-91-26, Washington, DC (1991b).
- Watts, Ross. "The Information Content of Dividends." *Journal of Business* 46 (April 1973): 191-211.

A Framework For Analyzing Deposit Insurance Pricing

by Christine E. Blair and Gary S. Fissel*

One facet of the current debate on deposit insurance reform concerns the desirability and feasibility of a risk-based deposit insurance system. Under such a system, the deposit insurance assessment would be related to the degree of risk that an insured institution poses to the deposit insurance funds administered by the Federal Deposit Insurance Corporation (FDIC). The question of whether to revise the current system of flat-rate deposit insurance premiums in favor of a risk-based system is not new.¹ However, the recent losses incurred by the deposit insurance funds for thrifts and commercial banks have given this issue a renewed urgency.

Under the current flat-rate deposit insurance system, all FDIC-insured depository institutions are assessed at the same rate for their deposit insurance coverage.² These premiums are invariant to the level of risk that a bank poses to the insurance funds.³ The system of flat-rate premiums has been criticized for encouraging excessive risk-taking by insured institutions and inequitably distributing the burden of insurance losses among banks. The current flat-rate system allows a bank to increase the risk in its portfolio without incurring any additional insurance premium expense. Moreover, it is argued that "high-risk" institutions are receiving a subsidy on their deposit insurance coverage at the expense of "low-risk" institutions. These considerations

would support a system in which institutions with riskier portfolios would be assessed a higher premium for their deposit insurance coverage.

On this basis, it is argued that a system of risk-based premiums could alleviate some, if not all, of the subsidies and inequities associated with the current flat-rate system. If so, risk-based premiums would represent a major step toward a more equitable and efficient banking system. However, it also must be determined whether it is possible to design a practical risk-based system that will achieve these goals.

The purpose of this paper is to examine the conceptual framework of deposit insurance pricing. First, several important issues concerning de-

* The authors are financial economists in the FDIC's Division of Research and Statistics. They would like to thank George French and Frederick Carns for their useful comments and suggestions, and Lynn Nejezchleb for his contributions to this paper.

¹ Over the past decade, the banking and thrift industries, their regulators, and the Congress have been engaged in an ongoing discussion of the desirability and feasibility of a risk-based deposit insurance system. Risk-based premiums have been examined as part of the studies required of the banking agencies under the Garn-St Germain Act of 1982. These include the FDIC's *Deposit Insurance in a Changing Environment* and the Federal Home Loan Bank Board's *Agenda for Reform*. As well, risk-based deposit insurance has been examined by the U.S. General Accounting Office's staff study *Deposit Insurance: Analysis of Reform Proposals* (September 1986) and the Working Group of the Cabinet Council on Economic Affairs' *Recommendations for Change in the Federal Deposit Insurance System* (January 1985). More recently, risk-based deposit insurance was considered in the FDIC's *Deposit Insurance for the Nineties: Meeting the Challenge* (January 1989)(see Chapter 3, "Deposit Insurance Pricing"). The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) mandated the FDIC to study and report to the Congress on the desirability and feasibility of a risk-based deposit insurance system. The report, *A Study of the Desirability and Feasibility of a Risk-Based Deposit Insurance System*, was submitted to the Congress in December 1990. As well, the topic was covered in the FIRREA-mandated, interagency study of deposit insurance reform that was directed by the Department of the Treasury, *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks* (February 1991).

² The deposit insurance systems of other industrialized countries have premium structures that fall into two categories. One approach, similar to the current U.S. premium structure, assesses an insured institution at a flat rate of its deposit base. The other approach involves the assessment of participating institutions based on losses to the insurance fund during the year, with some ceiling on an institution's contribution. France and Italy use this approach. There are other countries whose approach to funding their deposit insurance systems integrates elements from each of these two approaches. For example, Britain's premium structure requires some initial contribution from its insured institutions, with further assessments being called when necessary.

³ From this point on, unless otherwise stated, the term "bank" will refer to any insured depository institution.

posit insurance are considered. Next, an overview of several alternative methods for establishing risk-based premiums is presented, followed by a discussion of the advantages and disadvantages of these approaches to the so-called "pricing problem." The paper concludes with a few summary comments.

Issues Regarding the Pricing of Deposit Insurance

Mispricing and Risk-Taking

A deposit insurance pricing mechanism that fails to account for the risk that an insured institution poses to the insurance fund potentially has two undesirable effects: (i) the subsidization of high-risk banks by low-risk banks for deposit insurance coverage and (ii) the provision of incentives for increased risk-taking by banks.

Premiums as a Subsidy or Tax. A fundamental principle of pricing in most insurance settings holds that an insured who poses a greater financial risk to the insurer per dollar of coverage should be assessed at a higher rate than an insured who poses a lesser risk. In a setting in which all insureds pay the same rate and the insurer receives sufficient revenues to cover costs, the low-risk insureds are paying for part of the benefit that is received by the high-risk insureds. This is true under the current flat-rate premium structure for deposit insurance: banks that pose less risk to the insurance fund, because they are well-capitalized and hold assets and liabilities that are not excessively risky, subsidize the deposit insurance coverage of high-risk banks.

Moral Hazard. Mispriced deposit insurance most often is discussed in terms of its implications for the risk-taking behavior of depository institutions. The current flat-rate system has been alleged to create incentives for banks to increase their portfolio risk. Market participants normally are confronted with a risk/return trade-off: higher yields can be obtained only at

the expense of greater risks. Specifically, in the absence of deposit insurance, the gains that stockholders may realize from moving to riskier positions would be limited by depositors, who would demand additional compensation for increased risk-taking by the bank.

With deposit insurance, insured depositors hold an asset whose value is independent of the solvency position of the bank, and so no credit-risk premium is required by these depositors. Moreover, under a flat-rate premium structure, banks' insurance costs will be the same regardless of their risk positions. As a result, banks may take on additional risk without having to pay higher interest rates on deposits or higher insurance premiums. The risk/return trade-off has been altered such that the price of assuming greater risk has been reduced and, consequently, the bank has an incentive to move to a riskier position.

After granting insurance, the insurer must guard against actions taken by the insured that would increase the insurer's potential loss. The significance of this "moral hazard" problem depends on the extent to which the insured has incentives to take actions that increase his or her risk and the extent to which these actions are unobservable by the insurer.⁴ In many insurance settings, moral hazard is controlled by making the insurance payout contingent on the insured party acting in a specified manner. For example, an insurance company will not pay off on fire damage if the insured party commits arson. However, payouts to depositors contingent on bank behavior may not be desirable, since it would reintroduce the problem of bank runs. Alternatively, the moral hazard problem may be dealt with by monitoring bank behavior, for example, through examinations, and imposing penalties on managers and owners when undesirable behavior is observed.

Countervailing Factors

There are factors apart from the pricing of deposit insurance that can limit the degree of risk-taking by insured institutions — that is, the moral hazard problem.

Market Discipline. To the extent that uninsured liabilities are at risk, these debt holders will exert some discipline on bank risk-taking. In addition, the owners of an institution have an important stake in its survival. Provided that they have invested sufficient capital and are sufficiently risk-averse, owners would be expected to place limits on management's risk-taking activities. Thus, even under the current flat-rate system, the market discipline imposed by uninsured creditors and owners can limit the risk-taking behavior of institutions.

Regulatory Discipline. In practice, a bank's risk-taking also can be limited by costs imposed by the regulatory oversight of its activities. Regulators periodically examine banks to determine if they are being operated in a safe-and-sound manner, and undesirable behavior is penalized through issuance of cease-and-desist orders, removal of bank officers or directors for certain violations, and the levying of fines. In addition, regulations prevent insured institutions from engaging in certain financial activities and set minimum capital requirements. These regulations and supervisory sanctions limit the ability of banks to engage in overly risky activities and represent an implicit cost of deposit insurance. To the extent that these implicit costs vary with the riskiness of the bank, they may perform the same function as a system of risk-based premiums and constrain risk-taking.

⁴ Moral hazard refers to a situation where an agent cannot be perfectly monitored by a principal, and has an incentive to act contrary to the interests of the principal.

General Problems in Pricing Bank Risk

The pricing of bank risk is difficult for the insurer primarily because of the problems of accurately measuring the risk that each bank poses to the insurance fund.

Ex Ante vs. Ex Post Risk. Nearly all insurance settings are characterized by asymmetric information concerning the insured's risk type, *i.e.*, the insured possesses better information about his or her risk type than does the insurer. For example, automobile drivers know their own driving patterns and behavior better than the insurer and, if they were honest with themselves, could better assess their own risk than could the insurer. However, high-risk drivers have incentives to hide their true risk characteristics and to pose as low-risk types. Insurers attempt to bridge the information gap by using actuarial information to make judgments about a driver's risk type based on age, sex, or other observable characteristics. This type of information can be gathered by the insurer prior to any outcomes that are covered under the insurance contract being observed. This is referred to as *ex ante* information. In addition, the insured's driving record (traffic tickets, accidents, *etc.*) can be used to obtain information about the driver's risk type. This information is available to the insurer only after outcomes that are covered under the insurance contract are observed, and is referred to as *ex post* information. Of course, even with this information the insurer will not know the driver's true risk type with certainty.

Although automobile insurance differs from deposit insurance in many respects, the example illustrates the general problems associated with asymmetric information. Just as in the case of drivers, banks possess more information about their risk type than does the FDIC. Moreover, determining a bank's risk type *ex ante* is arguably more difficult than in most insurance settings. A major function of banks is to assess the risks

of lending to borrowers for whom there is little information on their economic condition and prospects.⁵ Thus, banks specialize in obtaining information about the very events, credit risks, that are most likely to result in a loss to the insurer. Because of this specialized knowledge, the *ex ante* information gap between the insurer and the insured is perhaps larger than in most other insurance settings, and is one of the most important reasons for the inability to find good *ex ante* measures of risk.

While there are steps that the insurer could take to increase the information concerning the risks of specific institutions, at some point the costs of acquiring this information become prohibitive. On the other hand, the use of *ex ante* measures that are not based on information that is specific with respect to an institution's credit risks or other portfolio risks would likely be ineffective and, more importantly, potentially influence risk-taking behavior and credit allocation in undesirable ways. Therefore, while *ex ante* measures of risk are conceptually preferable, most proposals for risk-based premiums have used *ex post* measures of risk.

Adverse Selection. Asymmetric information regarding the insured's risk type results in two problems for the insurer: (i) controlling the insured's risk-taking once insurance is granted, *i.e.*, the moral hazard problem discussed above; and (ii) correctly classifying the insured's risk type, sometimes referred to as the "adverse selection" problem. The insured is assumed to know its risk type while the insurer must make a judgment about the insured's risk type. In an insurance setting where the cost of insurance increases with the risk of the insured, the insured has an economic incentive to appear as a lower-risk client to the insurer.

The insurer can reduce the adverse-selection problem by obtaining more information about the client. Of course, the benefits of greater infor-

mation, such as more appropriately priced insurance, would have to be weighed against the costs of the additional resources needed to obtain the relevant information. Another solution is to offer "incentive-compatible" contracts.⁶ For example, automobile insurers offer varying amounts of deductible insurance in combination with different premium rates. If a driver feels that he or she is a particularly safe driver, he or she probably will opt for a relatively high-deductible, low-premium contract, and *vice versa* for a high-risk driver. By allowing insurance contracts to vary by more than one characteristic, for example, price and coverage, the incentive-compatible contract is designed to induce insureds to signal their true risk type.

An incentive-compatible deposit insurance contract could involve offering banks the choice of various price/capital combinations. Banks that choose higher capital levels would pay lower insurance premiums, and *vice versa*. The idea is that obtaining additional capital would be less expensive for low-risk banks than for high-risk banks. Thus, low-risk banks would prefer to select a high-capital/low-premium combination, while the opposite would be true for high-risk banks. The goal would be to establish the deposit insurance contract that results in a more accurate relationship between insurance premiums and risk.

Estimating Long-Run Bank-Failure Costs. In banking, it may be difficult for the insurer to determine when the premium revenues from a particular risk group of banks are sufficient to cover their expected failure costs. In casualty insurance, this is relatively easy because the events being insured against are independent events that are fairly evenly distributed over time. As a result, an automobile in-

⁵ See Goodhart (1987), p.86, for a discussion of this issue.

⁶ The term incentive-compatible means that there are incentives for the insureds to choose the premium/attribute combination that is appropriate for their risk class.

surer will learn quickly whether the premium revenues are sufficient to cover the long-run costs of any risk category. However, bank failures are not evenly distributed over time. Instead, they tend to be associated with the business cycle or economic shocks. Consequently, the setting of premium rates for different risk groups so that the long-run revenues are sufficient to cover the long-run costs of each risk category is more difficult.⁷

Proposals for Risk-Based Premiums

There is widespread acceptance that a flat-rate premium structure, by itself, creates perverse incentives toward greater risk-taking and penalizes more-conservatively-run institutions. There is less agreement whether a more explicit risk-related pricing system could be developed that would be a significant improvement over the current system. A number of proposals for establishing risk-related premiums have been made; each has advantages and disadvantages when compared to the current system. These proposals generally can be categorized into those that try to incorporate the market's assessment of bank risk and those that rely on the public insurer's assessment of risk.

Market-Based Risk Assessments

One line of reasoning argues that the pricing of deposit insurance could be improved if deposit insurance were assessed at a rate equivalent to the risk premium required by the market for bearing the same risk of loss as the federal insurer. The success of this pricing approach depends, in large part, on whether an accurate measure of this market-based risk premium can be obtained. Several approaches that rely on the use of market information to price deposit insurance are

found in the literature, including: (i) the risk premium required by the market on uninsured deposits; (ii) the use of integrated systems of public and private insurance; and (iii) option pricing theory.

Interest Rates on Uninsured Deposits. Because deposit insurance provides explicit coverage for deposits of \$100,000 or less, leaving uninsured those deposits greater than \$100,000, it has been proposed that deposit insurance premiums could be determined from the market rates paid on uninsured deposits (Peltzman (1972), Thomson (1987)). Fundamental to this approach is the idea that depositors will demand a risk premium if they perceive that their uninsured deposits are at risk. Since depositors could place their uninsured funds in an alternative investment with the same level of risk, they should demand a risk premium commensurate with the bank's risk.

Thomson (1987) shows that under certain conditions the risk premium paid on uninsured deposits can be used to provide, at a minimum, a benchmark or lower bound for the fair-value deposit insurance premium. Specifically, "if banks are closed when they are found to be insolvent and if uninsured depositors and stockholders bear their full share of losses, then the fair value of the deposit guarantee on \$1 of insured deposits is the risk premium paid on \$1 of uninsured deposits."⁸ This result is based on conditions that are somewhat restrictive, assuming, among other things, efficient, frictionless markets and the issuance of unconditionally uninsured deposits.⁹

In practice, due to the existence of market imperfections, the observed risk premium would be expected to be a lower bound for the "true" premium. Notably, investors may per-

ceive that depositors of large banks will not be allowed to suffer losses. This expectation of *de facto* coverage for uninsured deposits may obviate the need for uninsured depositors to demand an appropriate risk premium, especially in the case of large banks. Also, if insurance premiums were based on the market rates paid on uninsured deposits, riskier banks would have an incentive to parcel large, otherwise uninsured, deposits into multiple insured accounts. Consequently, the observed risk premiums would not reflect the full range of bank riskiness that ideally would be captured in a risk-based deposit insurance assessment.

Given *de facto* coverage of uninsured deposits and the presence of market imperfections, it is likely that the rate paid on uninsured deposits would be a lower bound for the desired risk premium. As well, it may be both impractical and impracticable to isolate the "true" premium, *i.e.*, the risk factor, from the rate differential that is observed.¹⁰

⁷ Some sort of *ex post* settling-up or extended liability schemes could be termed incentive-compatible as well. These schemes would expose stockholders and management to more of the downside risk associated with alternative investment strategies and their implementation would not depend on accurate actuarial information.

⁸ Thompson (1987), p. 529.

⁹ The assumptions of the model include: the semi-strong form of the efficient-markets hypothesis and the dissemination of adverse information concerning insured banks; the absence of transaction costs and indivisibilities in deposit and insurance markets; the absence, at the margin, of external social benefits from deposit insurance; the absence of supervisory forbearance for insolvent banks; and the issuance of some uninsured deposit liabilities. Given these assumptions, the fair value of deposit insurance will be equivalent to the market's risk premium on uninsured deposits. When the assumption of timely closure is relaxed (allowing supervisory forbearance) the model yields a lower-bound estimate for the fair value of deposit insurance.

¹⁰ In addition, some uninsured depositors may feel that they always will have sufficient warning to withdraw their funds prior to failure. If so, risk premiums on these deposits may not be appropriate for setting insurance premiums.

Integrated Systems of Public and Private Insurance — Coinsurance and Reinsurance. Some combination of public and private insurance has been suggested as a way to overcome the shortcomings associated with purely public or private deposit insurance systems.¹¹ It is argued that this integration of public and private sectors would create an insurance structure in which the comparative advantages of government and the marketplace would be utilized — the government's ability to handle externalities and the market's ability to assess and price risk. In order to achieve this goal, the integrated system must be structured so that the private insurers face the same risk of loss as does the federal insurer. Coinsurance and reinsurance schemes are two approaches to this integration.^{12,13}

Under one such proposal (Baer (1985)), deposit insurance coverage and its pricing would be separated in a coinsurance scheme. Government would determine which classes of deposits are to be insured and would provide most of the insurance coverage, while private insurance companies would determine insurance prices. Thus, for any given bank, some relatively small percent of de-

posits would be insured directly by the private insurer and the remainder would be insured by the federal insurer. A bidding process among private insurers would determine the deposit insurance premium that would be assessed on deposits insured by the public and private insurer alike. In order to protect the private insurer's solvency and, in turn, eliminate insured depositor runs and reduce the private insurer's incentive to gamble on the bank's recovery, private insurers would be required to fully collateralize their maximum loss exposure with short-term Treasury securities. Some terms of the private insurance contract, such as the risk premium, could be renegotiable; however, a non-cancellation clause would prohibit the private insurer from canceling a contract unless the insured bank was able to find another carrier. In the event that none is found, the bank would be declared insolvent and resolved by the insurer.

More recently, the use of private reinsurance has been suggested as a way to integrate the respective abilities of the public and private insurers. Deposit insurance pricing would be based on a market assessment of the risk that the bank poses to the public

insurer, determined in this case by private reinsurers. The basic concept is to create a risk-sharing system under which a small percentage of the public insurer's risk that a covered depository institution will fail is reinsured with a qualified private reinsurer. In effect, this procedure elicits a "market price" on which the covered bank's total premium assessment can be based. An example of the reinsurance approach to deposit insurance pricing can be found in recently proposed legislation, the "Deposit Insurance Reform Act of 1991" (S. 261).¹⁴

Thus, the integration of public and private insurance through a reinsurance scheme would incorporate the private sector into the pricing and monitoring aspects of deposit insurance and, importantly, would place an independent source of private capital at risk. The success of such a system could result in better pricing and earlier detection of problems. As a market-information approach to pricing deposit insurance, the use of reinsurance is premised on the private reinsurers' ability to accurately assess and value the underlying, inherent risks in a timely and cost-effective

¹¹ A purely private system of deposit insurance has been advocated as an alternative to the current public system. (See, e.g., Short and O'Driscoll (1983). Ely (1990) and Ely and Wallison (1990) develop a private deposit insurance system based on private-sector cross-guarantees.) Proponents argue that a competitive private system would overcome much of the deposit insurance mispricing associated with the current system. However, the existing evidence on private insurance reveals the inadequacies of a purely private system. Historically, private insurance systems have been unable to handle systemic problems. Notably, the state-sponsored insurance funds have been unable to protect depositors and, in turn, the financial system during periods of crisis. As well, unless deposit insurance contracts are long-term in nature and include non-cancellation clauses, the problem of intertemporal adverse selection would likely arise. That is, banks would choose to be insured only during times when they expected a high probability of default, and private insurers would choose to insure banks only if the insurance contract included a cancellation clause. Note also with private insurance, depositors still would need to monitor the health of the private insurer. Thus, even in the absence of the systemic-risk problem, private insurance would generate a new set of adverse selection/moral hazard problems.

¹² While the term coinsurance sometimes is employed to describe risk-sharing between depositors and the deposit insurer, it is used here to describe risk-sharing between public and private insurers of deposits. Under a coinsurance scheme, private insurers would directly insure bank deposits.

¹³ Reinsurance is insurance by one insurer of another insurer's risk exposure. It commonly is used in the insurance industry to spread risk and expand capacity. That is, reinsurance is used to minimize the threat of systemic risk and increase the amount of insurance that an insurer is allowed, under state regulation, to write. For the purposes of deposit insurance, the ability of the reinsurer to accurately underwrite risk and thereby price the risk to the public insurer is emphasized rather than the reinsurer's risk-sharing capabilities.

¹⁴ Introduced by Senator Dixon on January 24, 1991, this reinsurance approach is designed explicitly for large banks. In the proposed legislation, covered depository institutions are defined as follows: (i) a bank or thrift that is part of a bank or S&L holding company with over \$1 billion in assets; (ii) a bank or thrift that is not part of a holding company, but that has over \$1 billion in assets; and (iii) any smaller bank that either directly or through a holding company is exercising insurance, security, real-estate, or investment powers. Banks that are not covered would be subject to a simplified, partial risk-based premium system.

Eligible reinsurers would be "qualified" insurance companies, as determined by criteria established by the public insurer subject to state insurance laws and regulations. In order to help ensure adequate capacity, bank holding companies would be allowed to establish insurance affiliates for reinsurance purposes. However, a reinsurer would not be able to offer reinsurance to any of its affiliated banks.

In order to determine the reinsurance premium and to determine the extent of the reinsurer's access to relevant bank documents, a covered bank would negotiate directly with qualified private reinsurers. The proposed legislation requires that reinsurers be granted access to Reports of Condition and examination reports. Reinsurance coverage would be written for up to ten percent of the covered bank's losses in the event of failure. In turn, the private reinsurer would bill the FDIC for the reinsured risk. The FDIC then could use this price as a basis for the covered bank's entire premium, including the remaining risk that is not being reinsured. The FDIC also could adjust its part of the premium so that the total revenue flowing to the FDIC is sufficient to maintain the insurance fund target reserve.

Reinsurance agreements would have a specified maximum contract length, and would include an allowance for periodic premium adjustments, subject to an appropriate cap. The agreements also would provide an option for the covered bank to terminate coverage with one reinsurer and obtain coverage with another reinsurer. As well, the agreements provide that the FDIC terminate the insured status of any covered bank that fails to obtain reinsurance within two years.

manner. However, its implementation may present practical difficulties.

The degree to which reinsurers should be supervised by the public insurer, in addition to existing state insurance regulations, is another concern. For example, the monitoring of the reinsurers' capital adequacy would be necessary. Prices established by reinsurers would be meaningful only if the reinsurers are at risk for the full amount of their potential losses; with inadequate reinsurer capital this would not be the case. The monitoring of the capital adequacy of a large group of private insurers or reinsurers may be just as difficult as monitoring bank capital.

The success of this approach depends on there being sufficient capacity in the reinsurance market. Capacity, in turn, depends on profitability. Observation of the directors' and officers' (D&O) liability insurance market during the past decade raises concerns regarding a sustainable and adequate market capacity, and of a reinsurance market itself.¹⁵ Specifically, how can it be ensured that a reinsurance market wouldn't collapse as did the D&O liability insurance market in the mid-1980s? The possibility of a market collapse could generate systemic-risk concerns and be unacceptable from a public-policy perspective. How fast a reinsurance market will develop, its ultimate size, and its stability are not clear at this time.

The question of adequate capacity also raises concerns regarding the appropriateness of the public insurer's use of the reinsurers' prices to set its premiums. To ensure adequate capacity to absorb losses, it may be necessary to include a cap on reinsurers' liability. In turn, this means the reinsurer is not sharing *pro rata* in all losses. The premium set by the reinsurer therefore may be too low from an actuarial standpoint.

Reinsurance, as an integrated approach to deposit insurance pricing, is a market-based pricing method that is

intended to create an insurance structure in which the government's ability to handle the risk of systemic failure, and the market's ability to assess and price risk, are combined. The success of this approach depends, in part, on the development of a sustainable, adequately capitalized market for this particular insurance line. More fundamentally, its success hinges on the private insurers' market-price being an appropriate basis for a risk-based deposit insurance premium. Whether this approach is a viable method of pricing deposit insurance cannot be determined without further investigation and study.

Option Pricing. Option pricing theory, which has become a standard valuation methodology in finance, has been suggested as a method of determining the value of deposit insurance to a bank. In application, the method of option pricing theory could be employed by various parties interested in valuing deposit insurance, such as the federal insurer or a private insurer or reinsurer. Option pricing theory is discussed here as a pricing method employed by the public insurer.

In this application of option pricing theory, an analogy is drawn between the value of the deposit insurance guarantee and a put option. Options, as financial contracts, have been popular because they confer on the holder the right, but not the obligation, to buy or sell specified property at a fixed price on or until some future date. There are two basic types of option contracts. The call option gives the holder the right to buy an asset at a specified price, called the exercise or strike price, on or before some future date. The put option, in contrast, gives the holder the right to sell an asset at the exercise price on or before some future date.

The value of the put option at maturity depends on the current value of the underlying asset relative to the contract's exercise price. If, at the option's expiration or maturity date, the asset price is greater than the ex-

ercise price, the option is not worth exercising and therefore the value of the option is zero. In this case, the put is termed "out-of-the-money." However, if the asset price is less than the exercise price, the option is termed "in-the-money." It will be exercised, because the asset can be sold at a price that is greater than the asset's current market value. The option holder will realize a profit equal to the difference between the exercise price and the asset price. Therefore, the value of the put option at maturity is equal to the maximum of the difference between the exercise price and the asset price, or zero. It follows that the value of an option prior to its maturity or expiration date will depend on the probability of the option being in-the-money.

Merton (1977) was the first to apply option pricing theory to the problem of determining the value of deposit insurance to a bank. In particular, Merton draws an analogy between the value of the deposit insurance guarantee and a European put option, *i.e.*, an option that can be exercised only at its maturity or expiration date.¹⁶ Merton assumes that banks are examined annually, in which case the examination date determines the maturity date of the put option. If at the examination time the value of the bank's assets, less its uninsured liabilities, are less than the strike or exercise price of the option, as measured by the value of its insured deposits, the option is termed in-the-money and will be exercised. Specifically, the bank will be closed and the insurer will make up the difference between the value of the assets and the strike price, *i.e.*, insured depositors will be made whole.¹⁷

¹⁵ Romano (1989) provides an analysis and discussion of problems that occurred in the market for D&O liability insurance during the 1980s.

¹⁶ American options, on the other hand, may be exercised at any time up to and including the maturity date.

¹⁷ The concept of deposit insurance as a put option could be broadened to cover all deposits, both insured and uninsured, in the event of an insolvency or a failure.

Merton argues that the deposit insurance guarantee is analogous to a put option since it allows the bank to sell, or put, its assets to the insurer at a price equal to its insured deposits. The deposit insurance guarantee is of value in that it protects insured depositors from losses and thereby allows the bank to attract deposits at a risk-free rate. It is argued that this guarantee can be priced or valued explicitly using a formula derived from option pricing theory.

Using the option pricing framework developed by Black and Scholes (1973), Merton derives an option pricing formula for valuing deposit insurance. When the option pricing framework is applied to the problem of pricing deposit insurance, the relationship between the value of the put, which represents the value of deposit insurance to the bank, and the probability of insolvency is underscored. Notably, changes in the capital position of the bank lead to changes in the value of the deposit insurance contract. For example, if the value of the bank's assets were to decrease relative to the value of its liabilities, the value of the put and deposit insurance to the bank's owners would increase. Similarly, an increase in the variability or volatility of the bank's return on assets would increase the probability of insolvency which would be reflected in an increase in the value of the put and deposit insurance to the bank's owners.

Assuming the validity of the analogy between deposit insurance pricing and the valuation of put options, the feasibility of using option pricing theory to price deposit insurance depends on the ability of the insurer to adequately measure the return volatility of bank assets in a timely manner. This requires considerably more information than is available for most banks and, therefore, would be difficult to implement for most institutions.

In order to provide estimates of the value of deposit insurance for all

banks, some estimate of asset returns and their volatility over time must be made. Studies that have used option pricing to estimate the value of deposit insurance have typically relied on changes in an institution's stock price over some historical period to estimate returns and their volatility. But these estimates are based on historical returns and do not necessarily represent the returns that an institution expects to receive based on its current investment decisions. To the extent that expected returns deviate from historical returns, the option price will be incorrect. Merton's option pricing formula assumes the security price follows a Brownian motion. Because bank asset values may not follow this pattern, the formula may be inappropriate.

As Pyle (1983) and Marcus and Shaked (1984) point out, small errors in the estimation of the value of assets or their volatility can have major effects on the value of the option contract — that is, the insurance premium. Even if the volatility of asset values could be measured correctly, minor changes in this measure would have a significant effect on the option value of deposit insurance; this is particularly true of banks that are close to insolvency. Moreover, Ronn and Verma (1986) note that the estimated values of the deposit insurance premiums are sensitive also to policy parameters that capture the behavior of regulators such as the degree of deterioration in a bank's assets that occurs before the FDIC closes the bank or the frequency of audits of the bank. Nevertheless, while the magnitudes of the premiums fluctuate greatly for small shifts in these parameters, the ordinal rankings of the premiums are relatively robust. A further difficulty is knowing the appropriate closure rule. If assumptions concerning closure rules are wrong, the value of the put may be in substantial error.¹⁸

Another practical problem with using the option pricing model is that stock-market information is available

only for the largest banking organizations. While a proxy for stock prices can be estimated, it is not clear how well this kind of estimation technique would work. Moreover, where stock-price information is available, it only is available for the holding company and not for individual banks.

Overall, the assumptions and informational requirements of the option pricing model present problems that may prevent it from being a practical approach to pricing deposit insurance.

Nonmarket-Based Risk Assessment

If it were not possible or when it is undesirable to utilize the market's assessment of bank risk, the federal insurer would be left with the task of developing its own method(s) for assessing risk. An important distinction among the nonmarket approaches is whether they measure risk *ex ante* or *ex post*. The former attempts to measure the inherent risk of banking activities regardless of the institution's current performance, while the latter measures risk after it has materially affected the performance of the institution. As indicated earlier, while *ex ante* measures are conceptually preferable, most proposals have used *ex post* measures due to the difficulty of measuring risk *ex ante*.

Asset Risk Baskets. This approach attempts to measure risk in an *ex ante* fashion by classifying assets into broad categories according to their perceived credit risk and attaching risk weights to these categories. This is the approach taken under the risk-based capital guidelines that have been approved by the bank regulatory agencies. Under these guidelines, a bank is required to hold capital against the total risk-adjusted stock of assets, including off-balance-sheet assets. For example, any commercial loan on a bank's balance sheet carries

¹⁸ Brickley and James (1986) provide some empirical evidence on this point. They show that for the S&L industry during the early 1980s, the assumption that closure would occur at the point of insolvency resulted in an understatement of the option value of deposit insurance. Insurance would have been underpriced with this assumption.

a risk weight of 100 percent. This means that the risk-adjusted stock of a bank's commercial loans would be equal to 100 percent, multiplied by the book value of its commercial loans. In the same way, other asset categories, with their own risk weights, would be converted from their book values to risk-adjusted values.

It would be possible, although not necessarily desirable, to devise a risk-based premium system using the same approach. The measurement of risk under this system may be questioned on the grounds that it simply attaches risk weights to individual asset types, while ignoring the composition of assets within the entire portfolio. Furthermore, an institution would be able to increase the risk in its portfolio, without a corresponding increase in its risk measure, by moving to the risky end of each asset category and by having concentrations of assets in particular industries or regions. Such problems underscore the difficulty in finding acceptable *ex ante* measures of risk.

Ratings Based on Examination Information. It has been suggested that information derived from the regulatory agencies' onsite examinations could be used as a basis for risk-related premiums. As a result of the examination process, each bank is assigned an overall rating from 1 to 5 (5 being the worst) based on the bank's financial condition. This rating is commonly referred to as the CAMEL rating and is derived from the examiner's evaluation of a bank's capital adequacy, asset quality, management, earnings and liquidity.¹⁹ The examination information embodied in a CAMEL rating can be considered an *ex ante* measure of risk since the examiner's purpose is to determine whether the bank is being operated in a safe-and-sound manner, and to evaluate the institution as a "going concern" based on its policies, practices and performance. A major argument in favor of using information derived from examinations is that it may contain inside information on a bank's operations

that is not obtainable from inspection of the bank's financial statements.

A major objection to using examination ratings as the sole basis for assigning risk premiums is that it could have a negative impact on the examination process. Because of the financial stakes involved with basing premiums on examinations, extreme care would need to be taken to ensure the application of uniform standards and procedures for rating banks. With greater reliance on rules and procedures for assigning premiums, an important attribute of onsite examinations — examiner discretion — may be lost. Furthermore, basing premiums on examinations introduces an adversarial relationship into the examination process, and the flow of information that normally occurs during an examination probably would be reduced. While the examination process can have an adversarial aspect, the purpose also is to provide useful information to bank management and regulators about the soundness of the bank's operation and how it may be improved. Increasing the financial stakes of the examination outcome could lessen the extent to which an examination would serve this purpose.

Failure-Prediction Models. Some proposals for risk-related pricing schemes have been based on information provided by bank-failure-prediction models.²⁰ Failure-prediction models utilize historical information to determine the importance of various financial variables in predicting the success or failure of an institution. Those financial variables (*e.g.*, measures of nonperforming loans, earnings, capital levels, *etc.*) that have been consistent predictors of past failures can then be used as a basis for a risk-related pricing system. More recently, these types of models have been modified to estimate each bank's "expected" insurance cost, equal to the bank's estimated probability of failure, multiplied by the FDIC's average cost when a bank fails. The

expected cost then can be used as a basis for the insurance premium.²¹

Not surprisingly, the financial variables that prove to be most successful in predicting failures are primarily *ex post* measures of risk and, consequently, the predictive power of these models declines rather rapidly when predicting failure much beyond a year. In a study by Hirschhorn (1986), the financial variables that did the best job of replicating the FDIC's problem-bank list included variables describing a bank's capital level, its earnings performance, and the quality of its loans. Using a model based on December 1983 Call data and limiting the designation of high-risk banks to roughly 20 percent of all banks,²² the model classified about 90 percent of all failures in 1984 as high-risk banks. However, using the same model about 60 percent of the failures in 1985 were classified as high risk. This profile is common in failure-prediction models, and illustrates the difficulty in detecting and pricing risk in a timely manner.²³

Adjusted Capital Approach. This approach would use a depository institution's capital-asset ratio, adjusted for some measure of asset qual-

¹⁹ The Office of Thrift Supervision has a comparable rating system for the thrifts it regulates.

²⁰ Failure-prediction models can be used for several purposes. Many failure-prediction or problem-bank-identification models have been designed primarily as early-warning systems. Early-warning systems assist regulators in identifying potential problems and in better allocating supervisory resources to deal with these problems. Some failure-prediction models also have been designed for the purpose of identifying the causes of past failures, rather than for predicting future behavior (Pantalone and Platt (1987)).

²¹ See Avery, Hanweck and Kwast (1985).

²² Once the parameters of the failure-prediction model have been estimated using historical data, the number of institutions that will be designated as high risk can be varied by simply changing the probability of failure threshold. The threshold level is the dividing line between what would be considered a high-risk bank (or alternatively a potential failure or a problem bank) and a low-risk bank. By lowering the threshold level one can increase the number of actual failures that are designated as high risk, but only at the cost of designating more nonfailures as high risk.

²³ Another factor limiting the accuracy of these estimates is the fact that some banks' Call Report data underestimate the true extent of their problems. Perhaps assessing banks penalties when examinations reveal that they have underreported problems would partially solve this problem.

ity and/or other performance measure(s), as the basis for the institution's deposit insurance assessment rate. One such proposal can be found in FDIC (1983), Chapter II. Capital is important to the federal insurer because it provides a protective cushion against adverse changes in an institution's asset quality and earnings. Also, the more wealth that owners or stockholders have at stake in the long-term profitability of the bank, the greater is their incentive to ensure that the institution is run in a safe-and-sound manner. Along with capital, the riskiness of a bank's portfolio, as measured by its asset quality, is an important aspect of the total risk that a bank poses to the insurance fund. It is this direct relationship between more capital and better asset quality, and a lower probability of failure which serves as the foundation for the adjusted capital approach.

The adjusted capital measure attempts to quantify the risk that a bank poses to the insurance fund. This measure is derived by adjusting capital for some measure of asset quality, and dividing by total assets. Three issues must be addressed in formulating an adjusted capital ratio: (i) the definition of capital; (ii) the adjustment(s) to capital; and (iii) the definition of total assets. The first issue concerns what should be included in the capital measure (*i.e.*, common equity, allowances for loan losses, subordinated debt, *etc.*). With regard to the second issue, the adjustment to capital could be based on the industry's historical relationship between non-performing assets and charge-offs, with this relationship then applied to each institution's current level of such assets. The third issue concerns whether to include some or all of the "off-balance-sheet" assets in the definition of total assets.

Ex Post Settlement. This proposal for risk-related premiums involves an *ex post* settlement for failed banks.²⁴ As

a condition for receiving federal insurance, banks could be required to establish an escrow account with the FDIC, or bank shareholders could be legally subject to extended liability. In the event of a failure, *ex post* penalties could be assessed depending on the insurer's actual loss experience. Extended liability would expose the bank's owners or stockholders to an extended set of negative outcomes resulting from its investment behavior and thereby lower its expected return, rather than limiting the set of negative outcomes to their initial equity investment.

A general problem with these proposals is that they may result in increased costs for all commercial banks regardless of their current risk position. Extended liability for stockholders will increase the costs of retaining and attracting capital, because stockholders will demand additional compensation for the increase in their potential losses should the bank fail.²⁵ Requiring banks to maintain escrow accounts is equivalent to increasing capital requirements, while restricting the earnings potential of the added capital. Although these proposals have the potential to reduce the incentives toward risk-taking, they also have the potential to significantly increase banks' cost of capital, regardless of the actual risk position of individual banks, and could overly restrict the growth of the banking industry relative to other financial-service providers.

Multi-Test Risk-Based Pricing Schemes. Some suggestions for structuring a risk-related system combine some of the previously mentioned approaches. For example, statistical models utilizing Call Report data could be used to estimate the risk of failure or the expected cost to the FDIC. Premiums based on these estimates could be double-checked by noting the rates paid on uninsured deposits or other uninsured debt, by comparing them to the most recent

CAMEL rating, or by using option pricing techniques. Further, depending on the size of an institution, different risk-classification techniques might be used in order to improve risk measurements. Although potentially more complicated, a multi-test risk-based pricing scheme could instill greater confidence in the regulator's risk assessments, and minimize instances of serious mismeasurement of an institution's risk.

Arguments For and Against Risk-Based Premiums

The Use of Market Information

Conceptually, the advantage of utilizing market information is that it represents the assessment of numerous individuals who have a financial stake in correctly assessing bank risk. However, the use of certain types of market information may be inconsistent with the manner in which the public insurer resolves bank failures. Consider, as an example, a closure policy that sometimes protects uninsured depositors against their full share of losses in the event of a bank failure. Such a policy precludes the use of uninsured deposit rates as an accurate measure of the value of the deposit insurance guarantee. This closure policy also would be inconsistent with the business practices of a private insurer, in spite of the fact that under certain circumstances public-policy concerns regarding systemic risk may warrant protecting uninsured depositors.

A more fundamental question is whether the market's assessment of individual banking risks is measurably better than information derived from other sources that potentially are available to regulators. A major reason why borrowers obtain loans from in-

²⁴ See Benston, *et al.*, (1986) and Merrick and Saunders (1985).

²⁵ This problem is accentuated by the fact that extended liability is not a feature of other businesses.

intermediaries rather than issue marketable securities is that public information on their economic condition and prospects is extremely limited and expensive.²⁶ To some extent, the very existence of banks is explained by the inability of markets to act as efficient devices for valuing these loans. If this is the case, we should not expect markets to be particularly efficient at evaluating credit risks in individual banks.

The Use of Nonmarket Information

If market information is not used in setting insurance premiums, then it should be recognized that an alternative risk-related scheme amounts to a set of administratively determined prices, either explicit or implicit. The question then turns on how accurately we believe regulators can price risk.

There have been two major criticisms of basing risk-based premiums on *ex post* measures of risk. First, it is argued that if risk is recognized by a premium system only after an institution's asset quality has deteriorated, then the premium structure has not served its purpose of inhibiting risk-taking.²⁷ This argument, however, fails to recognize that after-the-fact penalties may still provide some deterrent effect. While the best approach may be to levy a higher premium for a higher level of risk regardless of the assets' current performance status, if a lender knows that a premium penalty will be charged for poorer asset quality, the lender will be forced to internalize this cost into the lending decisions, thereby limiting excessive risk-taking.²⁸

The second criticism of *ex post* measures of risk is that they will penalize banks when they can least afford it, *i.e.*, when they have encountered difficulty. A deterioration in asset quality diminishes a bank's earnings and puts pressure on its capital buffer. A premium penalty which is based on some measure of asset quality will further strain both earnings and capital. While this pre-

mium cost is internalized by the lender, the premium charge must not be so large as to threaten the viability of an otherwise sound institution. In addition, credit quality typically declines during an economic downturn. Increasing premiums during an economic downturn could further aggravate banking problems.

In sum, any use of nonperforming assets as a measure of risk must balance the need to impose penalties to deter excessive risk-taking against the possibility that excessive penalties may aggravate banking conditions when banks are already in a weakened condition. Realistically, the use of *ex post* risk measures constrains the size of the penalty that could be levied against a high-risk bank. If risk could be detected before a bank's performance has deteriorated, a relatively heavy penalty could be levied that may alter its behavior without jeopardizing its existence. However, levying a large penalty against a bank that is already performing poorly would probably ensure its eventual failure. Such a punitive policy would be analogous to an early-closure rule.²⁹ For an undercapitalized bank, the insurer could levy an assessment rate that would be large enough to transfer the remaining capital from the bank into the insurance fund. While an early-closure policy could be integrated into a risk-based deposit insurance premium policy, the discussion of the issues associated with early closure is beyond the scope of this paper.

It was indicated earlier that the current system of supervision may act as a system of implicit risk-based premiums. To the extent that this is true, implicit and explicit risk-based premiums are complementary in that they have the common purpose of affecting the behavior of banks so that they operate in a more safe-and-sound manner.³⁰ For example, a bank which has instituted policies and practices that have led to poor capital adequacy, deteriorating asset quality or excessive loan concentrations, can be persuaded to change these practices by

charging them higher insurance premiums, or more stringent supervisory oversight of the bank's activities.

While explicit and implicit risk-based pricing schemes share a common objective and could work well together, there are operational differences in the two approaches. One of the more important differences is considered here. From the regulator's perspective, implicit pricing offers advantages in the form of greater flexibility and discretion. For many of the current forms of implicit pricing, such as Memorandums of Understanding and enforcement actions resulting from the examination process, regulators have considerable discretion in tailoring sanctions and solutions to individual cases. On the other hand, the institutions that are regulated sometimes view regulatory discretion as subjective or even arbitrary. From this perspective, explicit pricing rules would offer greater uniformity among banks. Therefore, a properly constructed combination of explicit and implicit risk-based pricing schemes would have the advantages of both, that is, explicit rules that would apply across the board while maintaining regulatory discretion.

Conclusions

Deposit insurance premiums have been assessed at a flat rate since the inception of deposit insurance in 1933. While there is general agreement that relating an insured bank's premium to the risk it poses to the insurance fund is a good idea concep-

²⁶ Of course, this will vary from bank to bank. Some banks, particularly large banks, may make a considerable amount of loans to corporate borrowers for which markets generally possess a considerable amount of information, or some banks may have portfolios that are weighted more heavily with marketable securities or loans that are more easily evaluated by markets, such as mortgages.

²⁷ See Horvitz (1983).

²⁸ This deterrence could take the form(s) of the lender holding higher capital levels and/or holding a less risky portfolio.

²⁹ An early-closure policy typically refers to the case in which a bank would be closed by regulators when its capital stock is minimal but above zero.

³⁰ As stated above, an explicit premium has the additional objective of having riskier institutions pay the insurance fund a higher fee that is more commensurate with the risk to which they expose the fund.

tually, the information-intensive nature of the intermediation process in which banks specialize makes risk measurement a difficult task.

In a 1983 study, *Deposit Insurance in a Changing Environment*, the FDIC proposed an approach for risk-based deposit insurance premiums that was based on a bank's capital position, adjusted for performance measures that could affect its capital position. The adjusted capital approach contained

herein is similar to this earlier FDIC proposal. These capital-based approaches rely upon the most useful measure of a bank's risk to the insurance fund — capital. Overall, we believe this capital-based proposal to be the most promising approach that is currently available for a risk-based premium system.

A risk-based deposit insurance premium system is not a panacea for the problems facing the banking sys-

tem and it should serve as a complement to, not a substitute for, vigilant supervision and adequate capital. Nevertheless, a risk-based premium system would mitigate the subsidy provided to high-risk banks that exists under the current flat-rate premium system, and it would give all insured depository institutions a financial incentive to control risks.

SELECTED BIBLIOGRAPHY

- Avery, Robert, Gerald A. Hanweck, and Myron L. Kwast. "An Analysis of Risk-Based Deposit Insurance for Commercial Banks." In Federal Reserve Bank of Chicago *Proceedings of a Conference on Bank Structure and Competition*, pp. 217-50. Chicago: n.p., 1985.
- Baer, Herbert. "Private Prices, Public Insurance: The Pricing of Federal Deposit Insurance." Federal Reserve Bank of Chicago *Economic Perspectives* (September/October 1985):45-57.
- Benston, George J., Robert A. Eisenbeis, Paul M. Horvitz, Edward J. Kane, and George G. Kaufman. *Perspectives on Safe and Sound Banking: Past, Present, and Future*. Cambridge, MA: MIT Press, 1986.
- Bierwag, Gerald O. *Duration Analysis: Managing Interest Rate Risk*. Cambridge, MA: Ballinger Publishing Company, 1987.
- Black, F., and M. Scholes. "The Pricing of Options and Corporate Liabilities." *Journal of Political Economy* 81 (May 1973):637-59.
- Brickley, James A., and Christopher M. James. "Access to Deposit Insurance, Insolvency Rules and the Stock Returns of Financial Institutions." *Journal of Financial Economics* 16 (1986):345-71.
- Ely, Bert. "Making Deposit Insurance Safe Through 100% Cross-Guarantees." (Preliminary Draft.) Alexandria, VA: n.p., 1990.
- Ely, Bert, and Peter J. Wallison. "The Supplementary Deposit Protection System: A Proposal for Deposit Insurance Reform." (Unpublished Draft.) Alexandria, VA and Washington, DC: n.p., 1990.
- Federal Deposit Insurance Corporation. *A Study of the Desirability and Feasibility of a Risk-Based Deposit Insurance Premium System*. Washington, DC: Federal Deposit Insurance Corporation, 1990.
- Federal Deposit Insurance Corporation. *Deposit Insurance for the Nineties: Meeting the Challenge*. (Unpublished Draft.) Washington, DC: Federal Deposit Insurance Corporation, 1989.
- Federal Deposit Insurance Corporation. *Deposit Insurance in a Changing Environment*. Washington, DC: Federal Deposit Insurance Corporation, 1983.
- Federal Deposit Insurance Corporation Assessment Act of 1990. Pub. L. No. 101-508, 104 Stat. 1388.
- Federal Home Loan Bank Board. *Agenda for Reform: A Report on Deposit Insurance Reform*. Washington, DC: Federal Home Loan Bank Board, March 1983.
- Financial Institutions Reform, Recovery, and Enforcement Act of 1989. Pub. L. No. 101-73, 103 Stat. 183.
- French, George E. "Measuring the Interest-Rate Exposure of Financial Intermediaries." *FDIC Banking Review* (Fall 1988):14-27.
- Furlong, Frederick T. "Changes in Bank Risk." Federal Reserve Bank of San Francisco *Weekly Letter*, 25 March 1988.
- Furlong, Frederick T., and Michael C. Keeley. "Bank Capital Regulation and Asset Risk." Federal Reserve Bank of San Francisco *Economic Review* (Spring 1987):20-40.
- Goodhart, C.A.E. "Why Do Banks Need a Central Bank?" *Oxford Economic Papers* 39 (1987):75-89.
- Goodman, Laurie S., and S. Shaffer. "The Economics of Deposit Insurance: A Critical Evaluation of Proposed Reforms." *Yale Journal of Regulation* 2 (1984):145-62.
- Hirschhorn, Eric. "Developing a Proposal for Risk-Related Deposit Insurance." Federal Deposit Insurance Corporation *Banking and Economic Review* 4 (September/October 1986):3-10.
- Horvitz, Paul. "The Case Against Risk-Related Deposit Insurance Premiums." *Housing Finance Review* 2 (July 1983):253-63.
- Maisel, Sherman J. *Capital Adequacy in Commercial Banks*. Chicago: The University of Chicago Press, 1981.
- Marcus, Alan J., and Israel Shaked. "The Valuation of FDIC Deposit Insurance Using Option-Pricing Estimates." *Journal of Money, Credit and Banking* 16, 4 (November 1984, Part 1):446-60.
- Merrick, John J., and Anthony Saunders. "Bank Regulation and Monetary Policy." *Journal of Money, Credit and Banking* 17 (November 1985, Part 2):691-717.
- Merton, Robert C. "An Analytic Derivation of the Cost of Deposit Insurance and Loan Guarantees: An Application of Modern Option Pricing Theory." *Journal of Banking and Finance* 1 (June 1977):3-11.
- Pantalone, C. C., and M. B. Platt. "Predicting Commercial Bank Failure Since Deregulation." Federal Reserve Bank of Boston *New England Economic Review* (July/August 1987):37-47.

- Peltzman, Sam. "The Costs of Competition: An Appraisal of the Hunt Commission Report." *Journal of Money, Credit and Banking* 4 (November 1972):100-4.
- Pyle, David H. "Pricing Deposit Insurance: The Effects of Mismanagement." Working Paper, Federal Reserve Bank of San Francisco, October 1983.
- Romano, Roberta. "What Went Wrong with Directors' and Officers' Liability Insurance?" *Delaware Journal of Corporate Law* 14 (1989):1-33.
- Ronn, Ehud I., and Avinash K. Verma. "Pricing Risk-Adjusted Deposit Insurance: An Option Based Model." *Journal of Finance* 41 (September 1986):871-95.
- Short, Eugenie D., and Gerald P. O'Driscoll, Jr. "Deregulation and Deposit Insurance." Federal Reserve Bank of Dallas *Economic Review* (September 1983):11-22.
- Thomson, James B. "The Use of Market Information in Pricing Deposit Insurance." *Journal of Money, Credit and Banking* 19 (November 1987):528-37.
- U.S. Congress. Senate. Deposit Insurance Reform Act of 1991. 102st Cong., 1st sess., S.261. January 24, 1991.
- U.S. Department of the Treasury. Interagency Study. *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*. Washington, DC: U.S. Department of the Treasury, February 1991.
- U.S. Department of the Treasury. The Working Group of the Cabinet Council on Economic Affairs. *Recommendations for Change in the Federal Deposit Insurance System*. Washington, DC: U.S. Department of the Treasury, January 1985.
- U.S. General Accounting Office. Staff Study. *Deposit Insurance: Analysis of Reform Proposals*. Washington, DC: U.S. General Accounting Office, September 1986.

Recent Developments Affecting Depository Institutions

by Benjamin B. Christopher*

Regulatory Agency Actions Federal Deposit Insurance Corporation Capital Maintenance Rules

The FDIC adopted final amendments, effective June 19, 1991, to its capital maintenance regulations, deleting references to "primary capital" and "secondary capital." In place of these deleted terms, "Tier 1 capital" and "Tier 2 capital" are utilized.

The final amendments changed the level of capital (from three percent to two percent) at which an insured depository institution is deemed to be in an unsafe or unsound condition under Section 8(a) of the FDI Act. The "unsafe or unsound condition" test is now based solely on Tier 1 capital.

Insured institutions may no longer include allowances for loan and lease losses in their leverage capital calculations, and references to those allowances are deleted. *FR, 5/20/91, p. 23010.*

Capital Order Upheld

In respect to a capital directive issued by the FDIC, a U.S. court of appeals in New Orleans ruled that a bank is not entitled to an agency hearing or court review because issuance of the directive is within FDIC discre-

tion as a matter of law (*FDIC v. Bank of Coughatta*, 5/13/91). The court rejected the bank's argument that the lack of review by the agency or courts violates the Administrative Procedure Act, or due process guarantees under the Fifth Amendment. *BBR, 5/20/91, p. 978.*

Insider Transactions

The FDIC proposed a new part to its regulations that would: 1) provide that business dealings (other than extensions of credit) between an insured nonmember bank and its directors, executive officers, principal shareholders, and their related interests ("bank insiders") must meet an arm's-length standard, 2) require that covered business dealings exceeding a certain aggregate amount be approved by the bank's board of directors in advance, 3) require bank insiders to disclose their conflicts of interest, 4) provide for certain recordkeeping requirements, 5) require the bank's board of directors to adopt written guidelines governing covered business dealings, and 6) prohibit insured nonmember banks from investing in real estate in which any bank insider has an equity interest. *FIL-43-91, FDIC, 8/15/91; FR, 8/18/91, p. 37673.*

Proposed Limits on Golden Parachutes

The FDIC issued a proposal intended to prevent insured banks and savings associations from entering into excessive or inappropriate compensation arrangements with employees and directors, among them certain "golden parachute" payments. The proposal is aimed at stopping abuses when: 1) a troubled institution makes a large cash payment to an executive officer when that individual resigns, and 2) an institution either reimburses or pays "up front" for liabilities or legal expenses which an officer, director or employee incurs in connection with an administrative or civil enforcement action. Anti-fraud legislation enacted by Congress last year authorized the FDIC to prohibit or limit "any golden parachute payment or indemnification payment."

The proposal generally would prohibit golden parachute arrangements by an institution that is insolvent, in conservatorship or receivership, rated "4" or "5" on the interagency five-

*Benjamin B. Christopher is a financial economist in the FDIC's Division of Research and Statistics.

Reference sources: *American Banker* (AB); *Wall Street Journal* (WSJ); *BNA's Banking Report* (BBR); *Federal Register* (FR); Commerce Clearing House Inc., Electronic Legislative Search System (ELLS).

point rating scale for financial soundness, or that is subject to a proceeding to terminate deposit insurance. Exceptions would be permitted if a golden parachute were used to: 1) attract a new manager to improve the institution's condition, provided the institution obtains the written consent of its primary federal regulator and the FDIC; 2) provide financial assistance to staff losing their jobs in a cost-cutting move, and in this connection, the proposal would limit the maximum severance benefit and require 30 days' prior notice to the primary regulator and the FDIC before paying a senior executive; and 3) supplement traditional retirement benefits for senior executive officers through certain deferred compensation plans.

The proposal also would ban any insured institution from making indemnification payments to an employee prior to a final order clearing the individual of any charges, unless the institution's board satisfies six criteria indicating that the payment or reimbursement is reasonable.

The FDIC is particularly interested in comments on whether the plan would appropriately balance the needs of the insurance funds with the needs of institutions to attract and retain qualified directors and managers. *PR-141-91, FDIC, 9/24/91; FR, 10/7, p. 50529.*

Appraisals

The FDIC issued a proposal, similar to those being developed by other federal bank regulators and the RTC, that would decrease the number of transactions requiring an appraisal prepared by a certified or licensed appraiser, thereby reducing the costs of these transactions. If adopted, the proposed amendments would: 1) raise the threshold to \$100,000 from \$50,000 for transactions covered by the regulation, 2) permit the use of appraisals made for loans insured or guaranteed by an agency of the federal government, and 3) clarify that the appraisal requirements do not

apply to mineral rights, timber rights or growing crops.

Transactions below the \$100,000 threshold would remain subject to active federal supervision. Any transaction not covered by the regulation would be supported by an appropriate estimate of value prepared in accordance with the FDIC guidelines for Real Estate Appraisal Policies and Review Procedures. *FIL-48-91, FDIC, 9/20/91; FR, 9/17, p. 47035.*

Enforcement Actions Made Public

The FDIC released a list of orders of administrative enforcement actions taken against banks and individuals in August 1991. A total of 46 final orders were processed, among which were 15 cease-and-desist orders, nine Call Report penalties, and eight removal and prohibition orders.

The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) requires federal banking agencies to make available to the public any final enforcement orders issued, modified or terminated subsequent to FIRREA's enactment on August 9, 1989. In January 1990, the FDIC made public a list of orders issued up to that time, and subsequently has released the list each month.

Generally, orders of enforcement actions are issued with the intent of putting a stop to unsafe or unsound practices. The orders are terminated when the appropriate corrective action is taken or the institution closes. If an individual or institution does not consent to such orders, a full administrative hearing is held. *PR-122-91, FDIC, 8/22/91; PR-124, 9/27.*

Disclosure of CRA Examinations

The FDIC adopted a final rule, making permanent a temporary rule effective July 1, 1990, to implement changes in the Community Reinvestment Act (CRA) contained in FIRREA relating to the disclosure of CRA evaluations.

A financial institution examined for compliance with the CRA on or after July 1, 1990 is required to: 1) make its most current CRA performance evaluation, but not the examination report, available to the public within 30 business days of its receipt from the FDIC, 2) place the evaluation, at a minimum, in the institution's CRA public file located at the head office and a designated office in each local community, 3) notify the public, at each deposit facility, of the availability of the evaluation within 30 business days of receipt of the first evaluation, and 4) provide a copy of its current evaluation to the public upon request. *FIL-39-91, FDIC, 7/25/91; FR, 6/12, p. 26903.*

Increase in Assessment Rate Adopted

The FDIC increased the assessment rate to be paid by members of the Bank Insurance Fund (BIF) from 19.5 cents to 23.0 cents per \$100 of deposits, applicable to the assessment due in the second half of calendar year 1991, and to subsequent assessments. The new rate is being set in compliance with FIRREA, which requires the FDIC to increase the BIF's reserves to \$1.25 per \$100 of insured deposits within a reasonable time period. *PR-65-91, FDIC, 4/30; FR, 5/7, p. 21064.*

Midyear Financial Results

The BIF amounted to \$4.5 billion as of June 30, 1991, based on preliminary financial statements.

A revised method, which was agreed to in concept by the U.S. General Accounting Office (GAO), was used to determine the BIF's contingent liabilities for losses from future bank failures.

The FDIC, in accordance with generally accepted accounting principles (GAAP), recognizes as a liability estimated losses from banks that have not failed but are likely to close. Preliminary figures for year-end 1990 showed the BIF had declined 37 percent from the previous year, to \$8.4 billion, based in part on a \$3.4 billion

contingent loss liability related to bank failures that either occurred in early 1991 or were expected to occur during the year. However, after audit review by the GAO, the amounts were adjusted to reflect a larger loss liability for expected 1991 failures.

Under the new methodology, in general, contingent losses will be recognized for troubled but still operating institutions that meet one of two conditions: 1) that the institution be "equity insolvent," meaning that its equity under GAAP was zero or less, based on the most recent financial report filed with bank regulators; or 2) that the institution is not technically equity insolvent but its earnings trend and other financial attributes indicate that the institution is, "in substance," equity insolvent.

Using this methodology, contingent losses at year-end 1990 were \$7.7 billion — about \$4.3 billion above what the FDIC originally determined, and the BIF balance was \$4.0 billion. The preliminary BIF balance at midyear 1991 was \$4.5 billion.

PR-123-91, FDIC, 8/23.

April Survey Finds Improvement in Real Estate Markets

Respondents to the FDIC's *Survey of Real Estate Trends*, polled during the first three weeks of April, believed that real estate markets, on balance, have strengthened in the past six months. The national composite index of real estate trends stood at 61. Values of the index above 50 mean that more respondents believe conditions are improving than declining, while values below 50 mean more are seeing a decline than an improvement. For the first of the FDIC's planned semiannual surveys of real estate market trends, nearly 500 senior examiners and liquidators from the federal bank and thrift supervisory agencies and the RTC were interviewed.

The strongest regional responses that market conditions are improving came from the West and South, while

in the Northeast the negative responses outweighed positive ones. Respondents from all regions were less favorable about conditions in commercial real estate.

More than half of all the respondents said banks have become less active lenders for construction of commercial properties, and only nine percent saw more activity. For residential construction lending, slightly over one-third believed banks had cut back, while 22 percent reported that banks were more active. *Survey of Real Estate Trends, FDIC, April 1991.*

The next *Survey* will be based on information being collected for the period of mid-October.

Resolutions of Bank and Thrift Failures in New Hampshire

The FDIC approved the assumption of deposits and certain other liabilities of seven New Hampshire banks closed by their respective chartering authorities. It was determined that a deposit assumption would be less costly to the insurance fund than a payout of only insured deposits.

Four commercial banks closed are to reopen as branches of the \$1.25 billion-deposit First NH Bank, Concord, and three savings banks closed are to reopen as branches of New Dartmouth Bank, a newly chartered bank to be headquartered in Manchester. The estimated cost to the BIF from the four commercial bank failures is approximately \$342 million, and from the three savings bank failures, approximately \$624 million.

Chairman L. William Seidman said "an infusion of public and private sector funds . . . [in the transactions] . . . will result in a New Hampshire banking system better positioned to meet the credit needs of the area's businesses and consumers, and better able to weather future economic storms."

The transactions are unusual for several reasons. First, instead of marketing the failed banks individually to potential purchasers, the FDIC pack-

aged the four commercial banks as one franchise for sale and placed the three savings banks into another franchise for sale. Other noteworthy elements of the transactions include:

- * A "shared equity" feature whereby the FDIC will temporarily infuse cash into First NH Bank and Dartmouth Bank by agreeing to a short-term purchase of perpetual preferred stock of the two institutions.
- * A "loss sharing" component whereby the acquiring bank will retain ownership of the failed banks' problem residential mortgages and other consumer loans, and will be reimbursed by the FDIC for most, but not all, of the future losses.
- * The establishment of a "separate asset pool" for the failed banks' classified assets, repossessed real estate, subsidiaries and unwanted bank premises. This pool will be owned by the FDIC and managed by a third party under FDIC supervision. *PR-150-91, FDIC, 10/10/91.*

Public Hearings on Possible Terminations of Insurance

The FDIC announced the scheduling of separate public hearings to be held before administrative law judges in Texas to determine whether the agency should terminate the insured status of three unaffiliated Texas banks: First State Bank of Marlin; Gladewater National Bank, Gladewater; and First National Bank of Dayton, Dayton. Federal banking agencies are required under The Comprehensive Thrift and Bank Fraud Prosecution and Taxpayer Recovery Act of 1990 to open to the public any such proceedings held after November 30, 1990. *PR-149-91, FDIC, 10/8/91.*

Restrictions on S&Ls Converting to Banks

The FDIC adopted a rule, effective June 5, 1991, under which any federally insured savings and loan as-

sociation (S&L) that converts to a state-chartered bank, whether it is a savings bank, commercial bank or some other form of bank, and retains its membership in the Savings Association Insurance Fund (SAIF) will continue to be subject to restrictions and notice requirements imposed on S&Ls by FIRREA. In addition to FIRREA's prohibition on junk bond investments, these restrictions include limits on loans to one borrower and prohibitions on loans to affiliates engaging in certain high-risk activities. The law also requires prior notice to the FDIC before establishing subsidiaries or conducting a new activity in an existing subsidiary.

SAIF member national banks are not covered by this rulemaking because these institutions already are subject to rules that, with minor exceptions, are comparable to or tougher than the limits in the FDIC rule.

PR-66-91, FDIC, 4/30/91; FR, 5/6, p. 20521.

SAIF-to-BIF Fees

For deposits being transferred from the SAIF to the BIF, beginning July 1, 1991 the entrance fee will be based on the most recent end-of-quarter ratio of the net worth of the BIF, unaudited, to aggregate domestic deposits in BIF-insured banks. Previously, the entrance fee was calculated from year-end deposits and audited FDIC statements. The entrance fee would be 28 basis points (.0028) based on March 31, 1991 data.

The BIF-to-SAIF conversion fee continues to be one basis point (.0001). *FR, 7/1/91, p. 29893.*

Fair Housing

The FDIC proposed to amend its regulations to achieve conformity with the Home Mortgage Disclosure Act (HMDA), as amended by FIRREA, and as implemented by Regulation C of the Federal Reserve Board which requires certain insured state nonmember banks (among others) to maintain information on home loan applications in a register format. The FDIC requires the reporting of

similar information on its loan log-sheets. The proposal would eliminate duplicative reporting, enabling the banks to maintain a HMDA register in the Reg. C format by recording data as to race or national origin, sex, and income for all applicants, and entering all required information on the register within 30 calendar days after final disposition of the loan application. Another advantage under the proposal is that the HMDA register format provides more detailed data in some respects. *FR, 5/13/91, p. 21335.*

Security Devices and Procedures

The FDIC revised its requirements for minimum security devices and procedures, largely to give institutions additional flexibility to select appropriate security devices, especially in light of rapidly changing technology. The new rules are effective May 3, 1991.

Each bank's board of directors must designate a security officer to administer a written security program, which must, at a minimum, provide for specific devices for cash security, vault-area lighting, an alarm system, and certain locks. Several specific requirements for security devices in the existing rule are eliminated, and the selection of others is left to the discretion of the security officer and the bank's board of directors. The current requirement for an annual report on security compliance to the FDIC is eliminated. Instead, the revised rule requires the security officer to report to the bank's board of directors on the operation and effectiveness of the program at least annually. *FIL-18-91, FDIC, 4/29/91.*

Agencies Adopt Uniform Rules of Practice and Procedure

As required under Section 916 of FIRREA, the FDIC, the Office of the Comptroller of the Currency (OCC), the Federal Reserve Board (FRB), the Office of Thrift Supervision (OTS), and the National Credit Union Administration (NCUA) have

each adopted a final rule intended to standardize procedures for formal administrative actions and to facilitate administrative practice before the agencies. *FR, 8/8/91, p. 37762; 8/9, pp. 37968, 38024, 38048; 8/12, p. 38302.*

Report of D&O Liability Insurance

A report was released, pursuant to a requirement of FIRREA, that the FDIC, together with the Secretary of the Treasury and the Attorney General, conduct a comprehensive study of directors' and officers' liability insurance and depository institution bonds, and the availability of such insurance for directors and officers of insured depository institutions.

The study includes, as mandated: 1) consideration of state laws limiting liability for directors and officers; 2) the effect of contractual provisions limiting insurance coverage when an institution is placed in receivership or conservatorship; 3) provisions limiting coverage when a claim is made by the FDIC; and 4) provisions limiting claims made by one insured against another insured. Also, it considers the need for such insurance or bonds and the effect any change in any of the above conditions or terms may have on the future availability of such insurance, and the ability of depository institutions to attract qualified officers and directors. *Report on Directors' and Officers' Liability Insurance and Depository Institutions Bond Pursuant to Section 220(b)(3) of FIRREA, September 13, 1991.*

Credit Standards Advisory Committee Meeting

The bank and thrift regulatory agencies issued a notice of a public meeting of the Credit Standards Advisory Committee, to be held in late October.

The Committee, which was established by Section 1205 of FIRREA, will review, monitor, and make recommendations concerning the credit standards and lending practices of insured depository institutions and the supervision of such standards and

practices by the federal financial institution regulators. At its first meeting in July 1991, the Committee formed three working groups to look at practices and policies relating to consumer loans, commercial and industrial loans, and real-estate loans.

FR, 10/11/91, p. 51392.

Suit Against Accounting Firm Is Dismissed

A federal judge in Dallas dismissed a suit filed by the FDIC against Ernst & Young for audits prepared of Western Savings Association, which failed in 1986. The suit charged that Western suffered losses because its board relied on faulty audits prepared in 1984 and 1985 by Ernst & Young's predecessor firm, Arthur Young & Co. The court found that the FDIC had failed to show that faulty audits had caused losses at the institution. *WSJ, 10/2/91, p. B5; BBR, 10/7, p. 571.*

Resolution Trust Corporation and Oversight Board

Negotiated Sales for Commercial Assets

The RTC described two basic marketing structures it may utilize for negotiating sales of large pools of hard-to-sell assets. One approach involves soliciting investor interest on structured pools of RTC commercial assets. In practice, the RTC would advertise base-line characteristics of the pool, such as the size of the portfolio and the type of assets. Based on investor response, the RTC then would select the best proposal and negotiate a final sale. In the alternative approach, the RTC would construct a portfolio containing widely marketed assets, and solicit offers for the portfolio. The RTC then would select the best offer and negotiate final sales terms.

As part of both transactions, investors would be prequalified as purchasers by a third party who would determine their financial capacity and capabilities to manage and enhance the values of the assets being sold. Investors would have the opportunity

to make cash offers or request any type of financing available from the RTC, including conventional or cash-flow financing. *PR-174-91, 5/21, RTC.*

The RTC adopted a policy statement, effective May 21, 1991, enabling the agency to negotiate sales of \$100 million or more of hard-to-sell assets under either of two conditions: 1) the specific asset pool, or criteria for identifying an asset pool, has been advertised and proposals have been widely solicited, 2) the present-value sales price exceeds the sum of the minimum acceptable sale prices for the individual assets. *FR, 7/10/91, p. 31451.*

In a pilot program, the RTC will competitively solicit and select purchase offers for portfolios of qualified assets, with total authorized sales of up to \$8.0 billion (net present value of expected proceeds).

RTC financing may be offered to qualified purchasers of these portfolios, and such financing may include performance-based cash-flow obligations, in addition to other types of financing which have been authorized by the Oversight Board. The RTC will reserve a position to share in any upside asset appreciation upon sale or refinancing, where appropriate. Any RTC financing provided under this pilot will be counted toward the current \$7 billion seller-financing ceiling established by the Oversight Board. "*Policy Statement: Marketing of Asset Portfolios,*" *DRAFT, RTC, 9/10/91.*

Policy on Sale of Real Estate

The RTC liberalized its real-estate pricing policy to provide a more flexible approach for adjusting prices quickly in response to local market conditions, while ensuring that RTC property sells at true market value.

Formerly, real-estate prices could be reduced by only 20 percent if a sale did not occur after nine months. The practical effect of this policy has been that offers lower than 80 percent of appraised value could not be accepted until a new appraisal was ordered,

supporting the lower price. Under the new policy the RTC would not have to incur the expense of ordering a new appraisal or delay acceptance of an offer until a new appraisal is completed. The RTC will rely on qualified real-estate professionals to ensure that properties are adequately exposed to the marketplace and sold at market values. *PR-113-91, RTC, 3/26/91.*

Expedited Contracting Procedures for Auctions of Small Assets

The RTC adopted new standardized, competitive contracting procedures, designed to speed up the process of selecting locally-based auctioneers to sell some of the agency's assets. The new procedures will apply to auctions of real-estate properties that are expected to sell at \$1.5 million or less and furniture, fixtures and equipment valued at \$500,000 or less. Elements of the new procedures include simplified proposal requirements; streamlined proposal review by field program and contracting personnel; and execution of an abbreviated, pre-approved standard agreement to be signed by contracting personnel in the field. *PR-167-91, PRT, 5/16.*

Restrictions on Certain Persons from Buying RTC Assets

The RTC has approved a proposed regulation wherein the RTC will not sell any asset of an association to an individual or entity whose key official(s) participated in transactions resulting in a substantial loss to that association, has been removed or barred by a federal regulatory agency from participating in the association's affairs, or has misused the association's funds. In addition, the RTC will not provide seller financing to a person or entity who defaulted on obligations of more than \$1 million to a savings association and had engaged in fraud in connection with those obligations. A cash sale in this circumstance, however, would not be prohibited.

The restrictions would be lifted if, in the course of an asset's sale or transfer, the purchaser or transferee's obligations to the savings association or to the RTC were resolved or settled. The RTC also intends to limit the possible retroactive effect of this proposal. Prospective asset purchasers will be required to self-certify that they are not barred from purchasing assets. *PR-437-91, RTC, 10/2/91; FR, 10/9, p. 50829.*

Collateralized Bond Obligation Transaction Is Completed

The RTC completed its first collateralized bond obligation (CBO) transaction, this involving 25 institutional investors worldwide in a private placement sale. The RTC recovered \$194.5 million from the transaction. High-yield bonds from portfolios of 15 RTC conservatorship and receivership institutions serve as the collateral for the CBO. The portfolios of high-yield bonds, with a total par value of \$253 million, include 62 bond issues from companies in 27 different industries.

The RTC created a unique structure for its first CBO in order to minimize risk. If the quality of any of the high-yield bonds backing the CBO declines significantly, the bonds will be sold and the proceeds will be used to pay down the CBO notes. Any surplus cash flows from the collateral not required to pay principal and interest on the CBO notes will be returned to the RTC. *News Release, RTC, 10/8/91.*

Offerings of Mortgage-Backed Securities

The RTC scheduled four offerings of mortgage pass-through securities totalling about \$2 billion, including the first offering led by a minority-owned underwriting firm. The mortgages backing the offerings are performing and generally do not conform to Fannie Mae's or Freddie Mac's standards. By securitizing non-conforming mortgages, the RTC can produce a more marketable asset, sig-

nificantly improving cash recoveries for the taxpayer.

In April 1991, the RTC filed a shelf registration statement with the Securities and Exchange Commission for the sale of \$4 billion of mortgage pass-through securities backed by mortgages from RTC conservatorship and receivership institutions. In September, the RTC filed for the sale of an additional \$10 billion of such securities. There have been 12 previous takedowns from the RTC's \$14 billion shelf totalling about \$5.1 billion. *PR-451-91, RTC, 10/15/91.*

Disclosure of Asset Sales Information

The RTC expanded its policy on public disclosure of asset sales information. The information to be disclosed following the settlement of all sales transactions will consist of the asset sales price, the purchaser's identity, the losing bidders' identities and the losing bid amounts. The losing bidders' identities, however, will not be linked to their bid amounts, with an exception concerning information on securities sales. This information will be disclosed thirty days after settlement. This policy will affect only those securities transactions occurring after the date of publication of this notice. *FR, 9/27/91, p. 4921.*

Contractor Ethics

The RTC adopted procedures to provide for the suspension and/or exclusion of contractors from RTC contracting and/or the rescission of RTC contracts to ensure ethical integrity and full compliance with all applicable statutory requirements. The RTC's notice serves to alert all current and prospective contractors that the procedures are available for inspection and copying by the public. *FR, 4/25/91, p. 19130.*

Oversight Board's Minority and Women Contracting Outreach Program

The Oversight Board (OB) issued a final rule establishing an outreach program, as required by FIRREA, for

maximizing the participation of minorities and women, and firms owned by them, in the agency's contracts. The OB set up a minority and women outreach program for the Board's contracting in July 1990, and issued a proposed rule in June 1991.

The final rule, effective October 7, 1991, includes in part: 1) identification of minority- and women-owned firms capable of providing goods and services to the OB; 2) certification of identified firms; and 3) guidelines for the solicitation and award of contracts that promote the participation of minority- and women-owned firms in OB contracting and the performance of contracts.

The OB's outreach program for its contracting activities does not apply to the RTC, which is required by FIRREA to establish its own separate outreach program (see below). *FR, 9/6/91, p. 43997.*

RTC Minority- and Women-Owned Business Contracting Program

The RTC requested comments on an interim final rule, issued pursuant to a requirement in FIRREA, under the agency's program to identify, promote and certify eligible firms for inclusion in its contracting activities.

The interim final rule is concerned only with the outreach portion of the RTC's program, that is, to ensure maximum participation by minority- and women-owned businesses in the competitive process for RTC contracts. It does not address the use of bonuses, preferences, or other devices used in evaluating offers to perform contracts. In those matters the RTC will continue to follow current policies and procedures, however, comment is being sought on those issues. *FR, 8/15/91, p. 40484.*

Affordable Housing Disposition Program

The RTC adopted temporary amendments to its rule for the AHDP, implementing the RTC Funding Act of 1991, which, among other things, 1)

expands the RTC affordable housing program to include, as eligible residential properties, single-family properties held in conservatorship and 2) allows the RTC to sell eligible single-family properties to qualifying families, nonprofit organizations and public agencies without regard to minimum sales price.

By this action the RTC can help satisfy the demand for affordable housing in regional markets where the RTC has a large inventory of single-family homes. By making houses immediately available through marketing events, and selling absolute, with no established reserve price, the RTC will avoid further deterioration of the existing inventory of eligible properties while expanding the range of households who can become homeowners through the disposition of assets of failed S&Ls. Important also is the reduced holding costs associated with these properties.

FR, 6/4/91, p. 25352.

Court Bars Suits Against Regulators in Management of S&Ls

The U.S. Supreme Court unanimously ruled, in the case of *U.S. v. Gaubert*, that federal regulators cannot be sued for damages for losses that the regulators are alleged to have caused in the management of a savings institution.

The Court rejected a finding by a federal appeals court in New Orleans that a provision of the Federal Tort Claims Act that bars liability if the government employees are performing "discretionary" functions does not apply to day-to-day management of the institution. *WSJ, 3/27/91, p. A3.*

Operations Update

There were 166 conservatorships under the RTC's management as of July 31, 1991, holding \$73 billion in assets. Cash and securities comprised 29 percent of the total, performing 1-4 family mortgages and other performing loans 44 percent, delinquent loans

ten percent, real estate ten percent, and other assets seven percent.

Also under the RTC's jurisdiction were 467 receiverships, resulting from the resolution of thrifts since the RTC's inception in August 1989, with \$83 billion in assets (excluding nearly \$6 billion in cash and liquid assets available for payments of expenses and dividends to creditors). In the receiverships, all assets other than cash, securities, and performing 1-4 family mortgages represented 74 percent of the total. Thirty-seven percent of the total assets were real estate and delinquent loans.

Sales and principal collections in conservatorships and receiverships and assets passed to acquirers of resolved thrifts since August 1989 totaled \$179 billion as of July 31, net of putbacks. This total represents 54 percent of the aggregate assets of the 633 institutions taken over by the RTC at the time they came under its control. In asset categories, the RTC had disposed of \$81 billion in securities, \$70 billion in mortgages, \$15 billion in nonmortgage loans, \$6 billion in real estate, and \$7 billion in other assets. *RTC Review, RTC, 7/91.*

Operating losses at savings associations in the RTC conservatorship program as of June 30, 1991 rose to \$728 million in the second quarter, from \$596 million in operating losses by the same institutions in the preceding quarter. The increase was due largely to losses on assets sold in subsidiaries of two large institutions. Total losses reported by those institutions in the second quarter amounted to \$1.6 billion, up by \$0.1 billion from the first quarter. Over one half of the second-quarter loss reflected noncash charges to recognize prior losses on assets, including net provisions for losses on assets, net losses on the sale of assets, the write-down of goodwill, and other adjustments in asset values. *PR-402-91, RTC, 9/13/91.*

Federal Reserve Board

Supervisory Definition of Highly-Leveraged Transactions

The FRB, OCC, and the FDIC requested public comments on the supervisory definition of highly-leveraged transactions (HLTs). Under the common definition established in 1989, a bank or bank holding company is considered to be involved in an HLT when credit is extended to or investment is made in a business where the financing transaction involves the buyout, acquisition, or recapitalization of an existing business and *one* of certain criteria are met. The criteria are: 1) the transaction results in a liabilities-to-assets leverage ratio higher than 75 percent, or 2) the transaction at least doubles the subject company's liabilities and results in a liabilities-to-assets leverage ratio higher than 50 percent, or 3) the transaction is designated an HLT by a syndication agent or a federal regulator.

In their reviews, the three agencies will address concerns regarding the designation, reporting and delisting of HLTs. Also, some borrowers have indicated that the HLT designation is viewed as a criticism of credit quality by analysts, bankers and investors, even though the HLT designation does not imply supervisory criticism.

The FRB began collecting HLT data on the Consolidated Financial Statements for Bank Holding Companies in September 1990, and collection of HLT data began in banks' Call Reports in March 1991. *Press Release, FRB, July 3, 1991; FR, 7/10, p. 31464.*

International Banking Operations

The FRB revised its Regulation K to permit U.S. banking organizations to expand the scope of their international activities. The revisions will, in part, expand the existing authority to engage in underwriting and dealing in equity securities outside the U.S.; permit Edge corporations to provide domestic banking services, including

loans, to foreign persons and governments; and expand the range of permissible activities for U.S. banking organizations abroad to include futures commission merchant activities and life insurance underwriting.

Some of the revisions were effective immediately, and others were to become effective on May 24, 1991. *Press Release, FRB, 4/19/91; FR, 4/29, p. 19549; AB, 3/28, p. 2.*

Debt and Equity Underwriting Approved

The FRB granted approval for the \$3.4 billion-asset Dauphin Deposit Corporation, Harrisburg, Pennsylvania to underwrite corporate debt and equity through the purchase of an investment firm in Lancaster. The firm is a major regional underwriter of municipal bonds.

Thus far only two other domestic banking companies, the securities units of Bankers Trust New York Corporation, and J.P. Morgan & Co., have received such permission. Analysts believe that the firms most likely in the near term to go into these activities are certain profitable "super-regionals" that have securities subsidiaries with limited nonbanking powers. Firms of Dauphin's size are unlikely entrants because of the ten percent limit that the FRB has put on the revenues that the securities subsidiary can derive from new underwriting activities. *AB, 7/8/91, p. 2.*

Purchase of Bank of New England Subsidiaries Approved

The FRB approved the acquisition of three failed Bank of New England subsidiary banks by Fleet/Norstar Financial Group. The three banks had \$22 billion in assets and \$16.8 billion in deposits when they were closed. Fleet, having been selected by the FDIC as the winning bidder for the failed banks, as a bank holding company also required the FRB's approval for the transaction.

Though the proposed acquisition involved failed banks, the FRB used

a competitive factors analysis. Banking markets in Maine, Connecticut, and Massachusetts were directly affected, and in five markets issues arose over possible anticompetitive effects. The U.S. Justice Department said the FRB should adopt a different method for analyzing the effects of acquisitions on relevant banking markets. The FRB treated savings institutions as full competitors with commercial banks, thus tending to reduce the measures of market concentration. Under the Justice Department's merger guidelines, a banking market for which the Herfindahl-Hirschman Index is above 1800 is considered to be highly concentrated. The FRB said that the lessened competition as indicated by the concentration indexes being increased to levels above Justice's guidelines is outweighed by the substantial public benefits that would result.

In a bank acquisition case earlier this year in which the FRB and Justice differed on the antitrust aspects, Justice sued to block the merger. The case was settled in March after the acquiring bank, First Hawaiian, Inc., agreed to several divestitures. *BBR, 7/8/91, p. 37.*

A suit brought by the Department of Justice challenging Fleet/Norstar's acquisition of a former Bank of New England subsidiary (New Maine National Bank of Portland) was settled when Fleet/Norstar agreed to give up branches in three banking markets in Maine. Justice said the State of Maine agreed to forego a separate antitrust suit as a result of the proposed settlement. *BBR, 7/15, p. 107.*

Court Says Citicorp Subsidiary Can Sell Insurance

A U.S. court of appeals (Second Circuit of New York) ruled that Citicorp can sell and underwrite insurance through a subsidiary of its Delaware-chartered bank, as permitted under Delaware law. The court rejected the FRB's argument that the Bank Holding Company Act prohibits

state-chartered bank subsidiaries from engaging in activities, including insurance, that are not closely related to banking. The court noted that it had determined previously that the BHC Act does not prohibit a bank owned by a holding company from selling insurance.

Banking Commissioner K. H. Ellis of Delaware said Citicorp and Chase Manhattan are the only two companies thus far that have applied for and received approval to expand their insurance activities under the state's law. *AB, 6/11/91, p. 1.*

Merger Rejected on CRA Grounds

The FRB denied an application by the \$629 million-asset First Interstate BancSystem of Montana, Inc., Billings, to merge with the \$280 million Commerce BancShares of Wyoming, Inc., Sheridan. The merger would be a corporate reorganization of two bank holding companies that are under common ownership and control. The FRB found inadequacies in the CRA performance of First Interstate Bank of Colstrip, Montana, noting also that the bank had received a less than satisfactory CRA rating from its primary regulator, the FDIC, in its two most recent CRA examinations. There is no indication, the FRB said, that the reorganization would result in any other benefits to the convenience and needs of the communities served by the companies involved that would outweigh the adverse CRA performance record of Colstrip. *Press Release, FRB, 10/7/91.*

Tiered Pricing in Check-Collection Services

The FRB modified its criteria for offering a tiered pricing structure in the Federal Reserve's check-collection service. Among the modifications are those to allow tiered pricing in all collection zones, and for more than two tiers of prices where justifiable cost differences exist. The changes will enable Federal Reserve Banks to set fees that more precisely reflect their costs of collecting checks drawn

on paying banks within a given check-collection zone. These costs are generally based on the location of, and volume of checks presented to, each endpoint. Effective: January 1, 1992. *Press Release, FRB, 5/9/91; FR, 5/14, p. 22168.*

Electronic ACH Adopted

The FRB will require, starting July 1, 1993, all depository institutions that originate or receive commercial automated-clearinghouse transactions through the Federal Reserve to do so by electronic means. Effective January 1, 1992, ACH paper output fees and tape input and output fees will be substantially increased. *FR, 6/19/91, p. 28157; ABA Bankers Weekly, 6/18, p. 10.*

Study on Mortgage Lending

An article by FRB staff members indicates that significant differences exist in loan approval rates among different racial/ethnic groups, with denial of credit more likely for black and Hispanic applicants than for white applicants.

The report utilized data which were recently released by the Federal Financial Institutions Examination Council (FFIEC) relating to 1990 mortgage lending activity in metropolitan areas across the nation. Nationwide aggregates from preliminary data, which for the first time contain information about the race and national origin of loan applicants, also were announced.

Federal Reserve Governor John P. LaWare, Chairman of the FFIEC, described the statistics as "worrisome," and said the new data will be used by the regulators as an additional tool to ensure compliance with community reinvestment and fair lending laws.

The article gives an overview of the Home Mortgage Disclosure Act (HMDA) reporting system, describes analytical studies based on geographic data available under the old system, and discusses some potential uses of the new data. It also cautions that, given certain limitations of the HMDA data, the lending patterns re-

flected by the HMDA statements alone cannot establish whether lenders are treating applicants fairly and on a nondiscriminatory basis. Foremost among the limitations is a lack of information in the HMDA data about factors important in determining the creditworthiness of applicants and the adequacy of collateral offered as security for their loans. *Press Release, FFIEC, 10/21/91; "Home Mortgage Disclosure Act: Expanded Data on Residential Lending," Federal Reserve Bulletin, November 1991, pp. 859-881.*

Office of the Comptroller of the Currency

Guidelines for Asset Management Services

The OCC issued guidelines to be followed by national banks in managing assets for other banks, savings associations, and the RTC or the FDIC. The guidelines are concerned with procedures for keeping control over assets, and identifying risks that are involved in asset management. Numerous risks are identified. Among the practices for maintaining control of assets are board-approved written policies and procedures, having documentation for a sufficient audit, and a formal written agreement outlining the responsibilities of all parties.

In managing assets, banks should take steps to protect against conflicts of interest, such as may arise from granting loans on preferential terms to facilitate the sale of any managed asset, and granting subcontracts to individuals or entities that have a loan that is being managed by the bank. *BC-254, 6/14/91, OCC; BBR, 7/15, p. 89.*

Civil Money Penalties

The OCC revised its policy governing the assessment of civil money penalties (CMPs) to provide clear guidance to the agency's national bank examiners, national banking institutions, and their institution-affiliated parties, and to take into account changes in the agency's CMP authority mandated by FIRREA.

The revised policy provides that the OCC may assess CMPs to deter,

and/or encourage correction of, violations of law, regulations, orders, conditions imposed in writing and formal agreements, reckless or unsafe banking practices, and breaches of fiduciary duty. The OCC may use its CMP authority as deemed appropriate to achieve these objectives. A new matrix is outlined to be used by examiners for determining the level of fees to be imposed for violations. *Banking Issuance No. 253, OCC, 4/8/91; BBR, 4/22, p. 739.*

Money Penalty for Securities Violations

The OCC imposed a CMP of \$5,000 against the president of a national bank in Louisiana for violations of rules related to securities offerings. Authorized under FIRREA, it was the agency's first use of the CMP for such violations. The violations included a public offering in 1989 and 1990 of bank stock with an offering circular that the OCC did not clear in advance, and offerings of stock in excess of the amount authorized. The bank, as directed by the OCC, subsequently rescinded the stock offerings and returned the funds to investors. *BBR, 5/20/91, p. 986.*

Enforcement Actions

The OCC announced on August 14, 1991, that it would begin issuing monthly news releases to disclose enforcement actions taken against national banks and bankers. Information on OCC enforcement actions had previously been available only through OCC publications. The 33 enforcement actions disclosed in the initial release included six cease-and-desist orders, 16 formal agreements, eight CMPs, and three removal actions against individuals. *New Release, 91-59, OCC, 8/14/91.*

Appraisals

Under proposed changes to the OCC's appraisal rule adopted in August 1990, regulated institutions would not be required to obtain appraisals by certified or licensed appraisers for real-estate-related financial transactions having a value,

as defined in the rule, of \$100,000 or less. The proposed changes also would: 1) permit regulated institutions to use appraisals prepared for loans insured or guaranteed by an agency of the federal government if the appraisal conforms to regulations or other written requirements of the federal insurer or guarantor, and 2) clarify certain definitions. Comments are solicited on all aspects of the proposed rule. *FR*, 8/28/91, p. 42546.

Community Reinvestment Act

The OCC amended its CRA regulations to implement provisions of FIRREA. The final rule requires national banks to place their CRA Performance Evaluation in their public comment file within 30 business days of receipt from the OCC. Among the requirements is that national banks must make the evaluation available for public inspection and provide copies of the evaluation, upon request, to interested parties.

The three other federal bank and thrift regulatory agencies have issued a similar rule. *FR*, 6/12/91, pp. 26899, 26901, 26903, 26904.

Lease Financing

The OCC issued a final rule on lease-financing transactions which integrates the OCC's current Interpretive Ruling, consolidating the agency's substantive lease-financing regulations, and clarifying the two types of lease-financing authority available to national banks. These are the specific authority contained in the Competitive Equality Banking Act, and authority in other banking law as an activity incidental to banking. *FR*, 6/20/91, p. 28314.

Lending Limits

The OCC adopted a final rule, effective August 6, 1991, which in part provides that a legally binding written loan commitment qualifies as a loan and can be funded during its entire term, even if a bank's lending limit subsequently declines, provided that the commitment, when combined with a borrower's other outstanding

loans and unfunded commitments qualifying as loans, is within the bank's lending limit at the time the commitment is made. *FR*, 8/7/91, p. 37272.

Securitization of Credit-Card Receivables

The OCC granted approval for Household Bank, NA, to establish a subsidiary to facilitate the securitization by the bank of credit-card receivables.

The OCC had not previously ruled on whether it is legal for a national bank to sell or borrow against credit-card receivables through securitization. However, it has approved securitization for other types of bank loans, including mortgage assets, leases, and motor vehicle installment sales contracts. *BBR*, 4/22/91, p. 769.

Title Insurance Ruling Upheld

The OCC's approval for Chase Manhattan Bank, New York, to offer title insurance through two subsidiaries was upheld by the U.S. District Court for the Southern District of New York (*American Land Title Association v. Clarke*). The Court said the sale of title insurance is "incidental to the express power of a national bank to make real estate loans."

Restrictions placed by the OCC on the Chase approval included: 1) the borrower would be under no obligation to use the services of the subsidiary, 2) the borrower's choice of title insurance would not affect the lender's decision on credit, 3) customers choosing the bank's title insurance would not be given preferential treatment, and 4) information would be given to customers on the subsidiaries' services and the relationship between the bank and subsidiaries. *ABA Bankers Weekly*, 9/10/91, p. 1.

Office of Thrift Supervision

Capital Ratio Requirement

The OTS proposed, under a requirement of FIRREA, to amend its minimum regulatory capital regulations by revising the leverage ratio

requirement to be no less stringent than the leverage ratio adopted by the OCC for national banks. The proposed rule would establish a three percent leverage ratio (defined as the ratio of core capital to adjusted total assets) for savings associations in the strongest financial and managerial condition — those with a composite rating of 1 under the MACRO rating system. All other savings associations would be required to maintain leverage ratios of at least four percent. *Transmittal No. 16*, 4/24/91, OTS; *FR*, 4/22, p. 16283.

OTS Upheld on Individual Minimum Capital Requirements

Individual minimum capital requirements (IMCRs) issued by OTS are not subject to court review, the U.S. District Court for the District of Columbia ruled. Injunctive relief sought by Transohio Savings Bank to block OTS from issuing the IMCR was denied. The Competitive Equality Banking Act of 1987 gave banking regulators the original authority to establish IMCRs, and this authority was reaffirmed by FIRREA. *NEWS*, OTS, 8/6/91.

Inclusion of Interest-Rate Risk into Capital Rule Delayed

The OTS will postpone until late 1992 the inclusion of an interest-rate risk component in its thrift risk-based capital rule. The proposal, issued in December 1990, would require the holding of capital against interest-rate exposure equal to 50 percent of the estimated decline in the market value of an institution's portfolio that would result from a 200 basis point swing in interest rates either up or down. The delay will allow OTS to review suggestions for improving the methodology for measuring interest-rate risk, and to field test a revised market-value model for measuring such risk.

The three federal bank regulatory agencies also are studying ways to incorporate interest-rate risk into their

risk-based capital rules. *BBR*, 8/19/91, p. 294.

Qualified Thrift Lender Rule

The OTS issued a final rule, effective July 9, 1991, implementing provisions of FIRREA that require that institutions have a minimum of 70 percent of their portfolio assets in housing-related assets to qualify as thrifts. Previously the required ratio was 60 percent.

Failure to satisfy the QTL requirement means a thrift must either convert to a national bank or be subject to penalties: the thrift cannot open any new branches, must give up investment powers that banks do not presently share, and cannot obtain low-cost loans from any Federal Home Loan Bank.

A thrift can lose its QTL status when its housing-related investments, averaged over a two-year period, fall below the required minimum. The first two-year period started July 1, 1991, when institutions were to begin averaging their qualifying housing investments on a weekly basis and reporting the results to OTS quarterly.

A thrift can count its investment in a subsidiary toward meeting its QTL test if 80 percent of the subsidiary's revenues are derived from domestic residential real estate. *NEWS, OTS*, 91-176, 7/8/91; *FR*, 4/26, p. 19318; 7/9, p. 31061.

Review of Officials'

Appointments

The OTS issued a proposal implementing Section 914 of FIRREA, effective August 9, 1989, enabling the agency to review the qualifications and competence of persons nominated to serve as directors and senior officers of savings associations and their holding companies.

Certain savings associations and savings and loan holding companies must notify the OTS at least 30 days before adding any individual to the board of directors or employing any individual as a senior executive officer. An institution is subject to the

notice requirement if it: 1) has been chartered less than two years in the case of a savings association, 2) has undergone a change in control within the preceding two years, or 3) is not in compliance with the minimum capital requirements applicable to such saving association or is otherwise in a "troubled condition."

The OTS may disapprove the addition or employment of such individuals. The OTS must disapprove if it finds that the competence, experience, character, or integrity of an individual indicate that the appointment would not be in the best interests of the depositors of the savings association or the public. *NEWS, OTS*, 8/5/91; *FR*, 8/5, p. 37162.

Transactions with Affiliates and Loan Limits

The OTS adopted a final rule, which was required by FIRREA, that limits the amount a thrift can invest in affiliates. The rule broadens the circumstances under which a thrift may be required to notify the OTS of transactions with affiliates, and increases mandated recordkeeping on compliance.

Loans by a thrift and affiliates to the same borrower will be aggregated for loans-to-one-borrower purposes, and generally are limited to 15 percent of a thrift's capital and surplus. FIRREA generally applies to savings associations the affiliate-transaction limits that are imposed on commercial banks. Thus, certain covered transactions are limited to ten percent of a thrift's capital and surplus, and the overall amount of a thrift's transactions with all affiliates is limited to 20 percent of its capital and surplus. *FR*, 8/25/91, p. 34005; *BBR*, 7/29, p. 179.

Accounting Standards

The OTS proposed a rule, to implement sections of FIRREA, that would require all savings associations to use accounting standards that are prescribed by OTS for purposes of determining regulatory compliance and reporting. Such standards can be

no less stringent than the accounting standards used by the OCC for national banks. *Transmittal No. 014*, 4/2/91, *OTS; FR*, 3/29, p. 13085.

Thrifts Permitted to Convert to Savings Banks

The OTS gave approvals for 11 savings and loan associations to exit its jurisdiction in order to convert to state-chartered savings banks. The S&Ls are in Pennsylvania, Washington, and Oregon. *AB*, 5/28/91, p. 2.

State savings banks, which generally have broader investment powers than S&Ls, are regulated at the federal level by the FDIC. The FDIC has adopted a rule under which a federally insured S&L that converts to a state-chartered bank, either savings or commercial, and retains membership in SAIF will continue to be subject to restrictions on high-risk activities imposed on S&Ls by FIRREA.

Applications Restructuring Proposed

The OTS proposed a comprehensive regulation that would: 1) eliminate or streamline the existing application or notice requirement for many transactions or activities, 2) establish "standard" and "expedited" application and notice processes that would increase the flexibility of savings associations with satisfactory MACRO, CRA, and Compliance ratings to engage in certain new activities and discourage applications to engage in new activities by associations with lower ratings unless the proposed activity would clearly improve their financial or managerial condition or CRA or Compliance performance, and 3) replace the application requirements on some activities with a notice requirement. *FR*, 8/26/91, p. 41972.

Federal Financial Institutions Examination Council

Policy on Securities Activities

The five member agencies of the FFIEC are seeking additional comment on a proposal, issued in January 1991, on revising the definition of

"high-risk mortgage securities," and to specify that such securities are not suitable investment portfolio holdings for depository institutions. High-risk mortgage securities may only be acquired to reduce an institution's interest-rate risk and must be reported in the trading account at market value or as assets held for sale at the lower of cost or market value. Other products with risk characteristics similar to high-risk mortgage securities may be subject to the same supervisory treatment. Disproportionately large holdings of long-term, zero-coupon bonds are considered an imprudent investment practice. (See this *Review*, Spring/Summer, 1991, p. 48). *FIL-41-91*, 8/6/91, FDIC; *FR*, 8/2, p. 37095.

Licensed Appraiser Deadline Extended

The FFIEC extended from July 1 to December 31, 1991 the effective date when federally regulated depository institutions must use state-certified or licensed appraisers for appraisals in connection with federally related real-estate transactions under Title XI of FIRREA (see this *Review*, Spring/Summer, 1991, p. 49).

The purpose of the extension, the agency said, is to facilitate an orderly, nationwide implementation of the requirements.

In June the FFIEC issued revised guidelines for state certification and licensing of real-estate appraisers, to assist them in establishing effective certification and licensing procedures for real-estate appraisers involved in federally related transactions. *Press Release*, FFIEC, 4/26/91; *FR*, 5/1, p. 20002; 6/6, p. 26088.

Proposal Withdrawn on Return of Loans with Partial Charge-off to Accrual Status

In March 1991 the FFIEC requested comments on a proposal by the four federal bank and thrift supervisory agencies for an accounting change, applicable to the institutions which they supervise, for returning a

partially charged off loan that has been on nonaccrual status to accrual status, without first recovering the partial charge-off or becoming fully current in accordance with the contractual loan terms. After further consideration, the agencies are withdrawing the proposal. The agencies intend to work with the private-sector rulemaking bodies to attempt to develop a consistent and objective accounting treatment with respect to the recognition and measurement of interest income on nonaccrual loans and other loans to borrowers experiencing financial difficulties and other related issues. *FR*, 8/5/91, p. 37214.

Nondiscriminatory Treatment of Real-Estate Appraisers

The FFIEC notified institutions that managements should take steps to ensure that written policies and practices conform with the regulatory agencies' non-discrimination regulations which prohibit financial institutions from excluding appraisers from consideration solely by virtue of their membership, or lack of membership, in any particular appraisal organization.

Regulators require financial institutions to review the qualifications of appraisers to ensure that they are qualified for the assignment for which they are being considered. An institution's loan policies must not favor appraisers from one or more organizations or exclude individuals based on their lack of such membership. *FIL-27-91 (FDIC)*, 5/24.

Electronic Submission of Bank Reports

The FFIEC requested public comment on a proposed timetable under which banks would be required to submit their Call Reports electronically. In general, banks currently have the option of either filing hard-copy (paper) reports or submitting their Call Reports electronically. As proposed by the FFIEC:

- * Beginning with the March 31, 1992, Call Reports, banks with assets of \$100 million or more as of June 30, 1991, would be required to file electronically.
- * Beginning with the March 31, 1993, Call Reports, banks with assets of \$50 million or more as of June 30, 1991, would be so required.
- * Beginning with the March 31, 1994, Call Reports, all banks would be so required.

The proposed timetable would not change the existing deadlines for submitting Call Reports. *FIL-50-91, FDIC*, 10/9; *FR*, 10/4, p. 50334.

National Credit Union Administration NCUSIF Insurance Premium

The NCUA will assess a full premium of 1/12 of one percent of insured deposits, payable by January 24, 1992. Insurance premiums have not been levied since 1984. In 1985, the ratio of the National Credit Union Share Insurance Fund (NCUSIF) to insured deposits exceeded 1.30 percent, and pursuant to the Federal Credit Union Act, a dividend of five percent of insured deposits was paid to credit unions to reduce the ratio to 1.30 percent.

Insurance losses to the NCUSIF will be \$160-170 million in the fiscal year ending September 30, 1991, of which \$120 million represents reserves charged to cover potential losses of three major problem credit unions in Massachusetts. NCUSIF insurance losses per \$1,000 of insured deposits increased to approximately \$.84 in FY 1991, from a five-year average loss of \$.54.

Income to the NCUSIF from the premium will be increased by \$41 million that would be recognized in FY 1991, and \$123 million in FY 1992, for a total of \$164 million, plus a projected \$12 million in annual investment income. The NCUSIF, estimated with the premium to be

about \$444 million at September 30, 1991, amounted to 1.23 percent of insured deposits, and is expected to rise to 1.26 percent on September 30, 1992. Without any premium, the NCUSIF's gross revenue would continue to depend entirely upon its income from investments. The NCUSIF would have showed a net loss for FY 1991 of \$36 million, and a gain of only \$2 million would occur in 1992. The equity ratio would have been 1.20 percent on September 30, 1991, and would fall to 1.18 percent on the same date in 1992. *Board Action Memorandum, NCUA, 8/23/91.*

Real-Estate Lending Guidelines

The NCUA issued guidelines to federally insured credit unions to clarify areas of risk and concern in residential real-estate lending. The agency expects to propose regulatory provisions in this area within the near future.

The NCUA emphasized that credit unions that grant residential real-estate loans should have a written lending policy, which should be reviewed at least annually, and should include at a minimum certain information which is itemized in the guidelines. Also addressed are secondary market activities, asset/liability management, fixed- and adjustable-rate loans, staffing, construction loans, and compliance with consumer protection laws.

Real-estate-secured loans at federally insured credit unions have increased over 137 percent in the last five years. Although growth during 1990 slowed to a nine-percent rate by year-end, over 34 percent of all loans outstanding at federally insured credit unions were secured by residential real estate. *Letter No. 124, NCUA, June 1991.*

Business Loan Rules Adopted

The NCUA amended, effective January 1, 1992, its rules on member business loans that were initially adopted in 1987. The existing rule and increased examination and super-

vision efforts have not been sufficient to stem losses, and changes in the rule are necessary to limit certain high-risk activities. The changes will require greater diversification, revised collateral requirements and overall limits on certain types of lending. In addition, the NCUA's ability to identify and monitor business lending activity will be improved.

Among the revisions are: 1) a limit on loans-to-one-borrower of 15 percent of reserves, less the allowance for loan losses, or \$75,000, whichever is higher; 2) a requirement for quarterly monitoring reports by credit unions with aggregate business loans greater than 100 percent of reserves, and information on loans delinquent 30 days or more; and 3) a requirement that business loans be made for periods consistent with their purpose, security and creditworthiness. Maturity is limited to 12 years for federal credit unions. *FR, 9/25/91, p. 48421; ABA Bankers Weekly, 10/1, p. 4.*

Loan Purchases Requiring NCUA Approval

A final rule will require any NCUSIF-insured credit union to obtain approval from the NCUA Board before either purchasing or acquiring certain loans or assuming or receiving an assignment of certain deposits, shares or liabilities of any credit union not insured by the NCUSIF, of any other financial-type institution, or of any successor in interest to either such institution. Certain credits not subject to the approval process are specified. Effective: August 28, 1991. *FR, 7/29/91, p. 35808.*

Accounting Rule Changes

Real Estate: An issuance in June reaffirms that generally federal credit unions are not permitted to hold "other real estate owned" (OREO) for the production of income. OREO is presumed, therefore, to be held for sale. Revising its policy, the agency states that at foreclosure, OREO should be carried at the lower of cost or fair value. After foreclosure, the carrying amount of OREO held for

sale should not exceed its fair value reduced by the estimated cost to sell the asset. "Cost" and "fair value" are defined in the NCUA's statement.

Accounting Bulletin No. 91-2, NCUA, 6/91.

Income Accrued on Delinquent Loans: Federal credit unions are instructed that, effective immediately, interest should not be accrued on loans three months or more delinquent. Previously, the interest accrual period for delinquent loans was six months. An unchanged policy is that accruals of interest on loans should be reversed when the loan is determined to be a loss or when it becomes 12 months delinquent, whichever occurs first.

Accounting Bulletin No. 91-1, NCUA, 6/91.

State Legislation and Regulation

Interstate Banking

New Jersey: The Department of Banking will allow, effective immediately, participating members of the MAC teller machine network in New Jersey to accept and transmit ATM deposits from cardholders whose accounts are held in Pennsylvania and Delaware financial institutions. Under a reciprocal arrangement, New Jersey MAC cardholders can do these transactions through participating MAC machines in Delaware and Pennsylvania. MAC cardholders in Delaware and Pennsylvania already have been able to carry out these ATM transactions in each other's state.

MAC has over 950 member financial institutions in Delaware, Florida, Maryland, New Hampshire, New Jersey, New York, Pennsylvania, and West Virginia. *AB, 7/12/91, p. 3.*

North Dakota: The Banking Board approved South Dakota and Minnesota as having interstate banking laws similar to the state's law. North Dakota's law, which permits nationwide, interstate banking on a reciprocal basis, became effective on July 1, 1991. South Dakota has previously ruled that North Dakota has an interstate law similar to its own law. *Northwestern Financial Review, 6/8/91, p. 26.*

Rhode Island: The state and other regulators granted approvals that have enabled Shawmut National Corporation to create an interstate bank, by converting its Rhode Island bank subsidiary into branches of Connecticut National Bank.

Only five states — Connecticut, Rhode Island, Delaware, Utah and Wyoming — permit out-of-state acquirers to operate the banks they acquire in the state as branches.

The Bush Administration has proposed, as part of its package of banking reforms, to permit national banks to branch into any state in which the bank's holding company could acquire a bank. After three years, this geographic limitation on interstate branching would cease to exist. *AB, 4/16/91, p. 2; Modernizing the Financial System, U.S. Department of the Treasury, February 1991, pp. 51-52.*

Intrastate Banking

Colorado: Under a bill passed by the legislature, any Colorado bank or thrift would be permitted to acquire another financial institution and convert it to a branch. Beginning July 1, 1993, each Colorado bank or thrift could establish one new branch. Unlimited statewide *de novo* branching would be allowed effective January 1, 1997.

Sixty percent of a banking company's subsidiary banks could be converted to branches during the period from August 1, 1991 to July 1, 1992, and from then until July 1993 another 20 percent could be converted, and finally, after June 30, 1993 all of a company's banks could be converted. *AB, 5/10/91, p. 2.*

State's Thrift and Loans Are Federally Insured

California: All of the 49 California-chartered thrift and loan institutions are now federally insured, a state official said.

The state legislature had set a July 1, 1990 deadline for the thrift and loans to obtain federal insurance. The state's action followed the insolvency

in 1984 of Western Community MoneyCenter, an industrial loan company, whose obligations exceeded the capacity of the private insurer, Thrift Guaranty Corporation, to cover its debts and provide insurance for other thrift and loans covered at that time. *BBR, 4/15/91, p. 698.*

Access to Thrifts' Records Expanded

California: A new law permits stockholders and members, individually or as a group, that hold one percent or more of the voting shares of a savings and loan association, or voting shares worth \$100,000 or more, and have held the shares for at least six months, to make extracts from the registrar, books or minutes for purposes "reasonably related" to their interests. The rights of inspection and extraction are extended to an association's subsidiaries. Certain confidential information is specifically excluded. *BBR, 10/7/91, p. 568.*

Bank Assistance Plan

Connecticut: The legislature passed a bill that would establish the Connecticut Bank Funding Corporation, to buy stock in troubled state-chartered banks to prevent their failure. A recapitalization could require bank management to be removed and shareholders to lose most of their investment. The new corporation could also arrange for mergers of institutions.

The bill provides that up to \$10 million in state funds could be invested in CBFC, and additional funds would be drawn from outside investors. Chairman L. William Seidman said that FDIC officials are discussing with state authorities the question of FDIC participation in the program. *AB, 6/7/91, p. 1.*

New Reporting Rules on Insider Loans

Connecticut: Beginning with second-quarter reports to regulators, state-chartered banks must provide quarterly the amount of loans to their directors and senior officers. More de-

tailed information is required if the total amount of insider loans exceeds 25 percent of the bank's capital, or if loans to a single official represent more than ten percent of capital. Also, a requirement for more information is triggered if insider loans are provided on terms unavailable to other borrowers or if collection of the loans is unlikely. *AB, 4/23/91, p. 7.*

Environmental Liability Is Restricted for Lenders

Illinois: The Governor signed legislation exempting financial institutions from liability for hazardous waste cleanup on property they acquire by foreclosure or other means of credit extension. The institutions are liable for the costs of cleanup only if they exercise "continual or recurrent managerial control that caused the release" of the hazardous materials. *BBR, 9/30/91, p. 517.*

Missouri: Under a new law, effective August 28, lenders are absolved from cleanup costs or any third-party liability when a property is contaminated before the lender takes it under direct control in a foreclosure or receipt of an assignment on a debt. The lender in control of the property continues to have immunity, even if the contamination remains, providing the lender does not "knowingly or recklessly" cause, or allow others to cause, additional pollution. Among other requirements, the lender must make "reasonable efforts" to re-sell the property. *BBR, 9/9/91, p. 364.*

Enforcement Authority

Iowa: The legislature passed a bill giving the Superintendent of Banking additional authority, similar to enforcement powers granted to federal regulators in FIRREA, to remove an officer or director from a state bank, or to require a person affiliated with a state bank to stop participating in the affairs of the bank, if the person has violated a law or regulation. *Northwestern Financial Review, 6/8/91, p. 34.*

Limits on Liability of Attorneys, Accountants

Louisiana: A new law limits the liability of attorneys, accountants, and their firms, who represent federally insured financial institutions. The responsibility of Louisiana-licensed attorneys is limited to that provided under Louisiana's Rules of Professional Conduct, and the duty of certified public accountants is established by GAAP and generally accepted auditing standards. The liability of those professions is limited to the traditional limits of legal or accounting malpractice, "judged under accepted standards within the locality where such attorney or certified public accountant practices." Attorneys or accountants serving as directors or officers of insured institutions must adhere to the same fiduciary standards as other officers and directors. *BBR, 7/29/91, p. 172.*

Banks Can Sell Insurance Under SBLI Laws

Massachusetts: New legislation permits commercial banks to sell life insurance under the state's long-standing savings bank life insurance laws. Previously under these laws the power to sell life insurance was granted only to savings banks in the state. *ABA Bankers Weekly, 1/29/91, p. 6.*

Low-Cost Checking

New Jersey: The Banking Department is seeking comments for a low-cost checking account, as required under state legislation signed in July. The Banking Department must establish by its regulations certain specific account features, among which are the initial amount required to open the deposit account, the maximum allowable minimum balance that may be required to maintain the account, and the maximum monthly fee for maintaining the account. The requirements are likely to be stated in terms of a range of options rather than specific numbers. Also, an institution may seek on an individual case basis the approval of a consumer account

that does not conform to regulations. *BBR, 8/5/91, p. 225.*

FDIC Liability Limited in Open-Bank Assistance

New Hampshire: The Governor is expected to sign a bill that would aid the FDIC in open-bank assistance cases in respect to contingent liability. The measure would extend to these cases the protections to the FDIC under a decision of the U.S. Supreme Court in the case of *D'Oench, Duhme & Co. v. FDIC*, 1942. The Court ruled that the FDIC or the purchasers of failed institutions cannot be sued on the basis of agreements, such as borrowers' transactions, and executive compensation plans, that do not appear on the records of the failed institution. *BBR, 6/3/91, p. 1047.*

Lender Recovery Limited on Foreclosed Property

Texas: A new law permits borrowers having real estate foreclosed to ask a court to determine the "fair market value" of the property on the date of the foreclosure sale. If that value is found to exceed the foreclosure sale price the borrower is entitled to a credit for the difference, to be applied to the amount owed. Factors that may be used to determine "fair market value" are specified.

The law reduces to two years, from four years previously, the period during which a lender may sue for recovery of a deficiency between an unpaid indebtedness and the foreclosure sale price of the real property securing the loan.

The new law applies to foreclosure sales transacted on or after April 2, 1991. *BBR, 4/8/91, p. 648.*

Bank and Thrift Performance

Banks' Earnings Decline

Insured commercial banks in the U.S. earned \$4.6 billion in the second quarter of 1991, a decline of 7.8 percent from the first quarter, and 12 percent from the second quarter a year ago. Higher loan-loss provisioning was the primary reason for the

decline in bank profits. Loan-loss reserves expensed in the second quarter were 15.5 percent higher than in the first quarter, and 26.2 percent above the second quarter of last year. The largest increases in loss provisions occurred at banks in the West and Northeast Regions. Banks in these areas also experienced the largest declines in net income.

For the first six months of 1991, insured commercial banks' net income totaled \$10.3 billion, down by \$1.2 billion, or 10.4 percent, from the first half of 1990. Net interest income was \$3 billion higher than in 1990, while loan-loss reserves provisioned were \$3.1 billion higher, and net non-interest expenses were \$1.7 billion higher. *The FDIC Quarterly Banking Profile, Second Quarter, 1991.*

Bank Failures and "Problem" Banks in 1991

In the first six months of 1991 there were 57 commercial bank failures, well below the 99 for the same period a year ago. However, the average size of banks failing in 1991 — \$475 million — was more than seven times the average size of those failing in the first half of 1990. The number of "problem" commercial banks continues to fall, to 975 at midyear. While this is the lowest number since 1985, the aggregate assets of banks on the "Problem List" have increased above previous quarterly levels.

Aside from the failing banks, there were 190 unassisted mergers in the first half of 1991, compared to 199 in the first six months of 1990. Sixty-one commercial banks were established in the first six months of 1991, the lowest annual rate since 1965 when 115 charters were issued. On June 30, 1991 there were 12,150 insured commercial banks in operation in the U.S., a decline of 190 in the first six months of the year, and 2,050 fewer than at year-end 1986. *The FDIC Quarterly Banking Profile, Second Quarter, 1991.*

Private-Sector Thrifts Continue Profitable

For the first time since 1986 the private-sector thrifts have reported positive earnings in two consecutive quarters. Their net income of \$386.8 million in the second quarter of 1991, although down from \$610.1 million in the first quarter of this year, contrasts with a \$302.1 loss in the second quarter of 1990.

Eighty-five percent (1,875 thrifts) continue to be profitable. These institutions had after-tax income of \$1.4 billion in the second quarter, which was partially offset by losses of \$1.0 billion incurred by the 15 percent (343) that were not profitable. Virtually all of these losses were caused by substantial increases in loan-loss reserves at certain institutions.

Discussing the industry's profitability, OTS Director T. Timothy Ryan cited the government's substantial success in its program to close failing and insolvent thrifts, and the fact that the thrifts' cost of funds (interest on deposits and borrowings) has declined faster than the interest they earn on their loan portfolios.

As of June 30, 1991 there were 2,216 thrifts in the private sector, down by 67 in the quarter. Forty-five institutions were transferred to the RTC during the second quarter. Twenty-four institutions were involved in unassisted mergers or conversions to another type of institution. *NEWS, OTS, 9/5/91.*

Large Increase Last Year in Banks' Foreclosed Property Holdings

Foreclosed real estate held by commercial banks rose 55 percent last year, up from a 22-percent increase in 1989, according to an *American Banker* report. At the year-end, banks' non-current real-estate loans were 27.5 percent of their equity capital, compared to 14.4 percent a year earlier.

Lending by banks on real estate continued to grow in 1990, as their total real-estate loans increased by 8.8

percent, the report said. However, loan growth was down from 12.8 percent in 1989, and from 14.6 average for the five years ending in 1989. The growth of banks' commercial real-estate lending last year declined by a larger amount, to 3.7 percent from 10.6 percent in 1989. Their lending for construction and land development, which is generally their riskiest type of real-estate lending, actually fell in total dollar amount in 1990. While their total loans secured by commercial properties (defined as nonfarm nonresidential properties) rose by 10.4 percent, this was 3.5 percentage points below the rate of growth in 1989. *AB, 5/14/91, p. 1.*

Banks' and Thrifts' CRA Performance Rated

Of nearly 3,200 bank CRA examinations conducted since July 1, 1990 by federal regulators, 9.8 percent of the institutions were found needing improvement. In about 500 thrift examinations by OTS, the percentage was 16.8 percent. Less than one percent of banks, and nearly three percent of thrifts, were found to be in substantial noncompliance. *BBR, 7/22/91, p. 137.*

Credit-Card Loan Growth Slowed in 1990

Bank credit-card loan growth slowed to 2.8 percent in 1990 from 13.7 percent in 1989, at the 100 largest banks in this category of lending, according to the annual *American Banker* survey. The slower growth in card loan outstandings is attributed partly to the effects of the recession, and to some extent to the greater securitization of loans at some banks. While credit-card loans grew by less than three percent, home-equity loans were up by 21 percent at the top-bank group in 1990.

A decline in credit-card usage is evidenced by the amount that the average cardholder is charging, falling from \$2,256 in 1990 to \$2,110 currently. A study of 30 banks found that they lost five percent of their active accounts during the first six months of

1991. At the same time, average revolving account balances have risen from \$1,489 in 1990 to \$1,626 currently. These developments are seen by some analysts as suggesting that a movement to better card loan quality may be occurring.

Net income from card operations at the top banks in the ABA survey aggregated \$9.2 billion in 1990, down two percent from 1989. The decline reflects the lower volume, as well as increases in charge-offs to 3.4 percent of card loans at year-end from 2.9 percent the year before. Credit-card lenders are benefitting, however, in making healthy loans from a favorable interest-rate spread. The industry is undertaking at this time some actions that appear encouraging to expand credit-card activity, such as promoting usage in supermarkets.

The credit-card leader among banking organizations is still Citicorp, with \$19.5 billion in outstandings, including all of its subsidiaries. This total was off by \$3 billion, or 14 percent, from 1989. Among individual banks, Chase Manhattan Bank (USA) of Delaware, with \$10.4 billion, took over the top spot. *AB, 9/10/91, p. 1.*

Agricultural Banks Continue Improved Performance

Farm banks reported improved profitability in 1990, as in each of the three preceding years, according to an *American Bankers Association* report. The banks' return on assets in 1990 of 0.99 percent was far above the 0.4 percent recorded at the bottom of the agricultural recession in 1986.

For farm banks in the U.S., capital rose to over nine percent of assets in 1990, from 8.72 percent in 1986. Asset quality has improved, as evidenced by declines in nonperforming assets. The banks' loan-to-deposit ratios fell by one percentage point in 1990 to 53.7 percent.

Total farm debt, excluding operator households, estimated to be \$134 billion in 1990, was 31 percent less

than the peak level in 1983 and 1.3 percent below 1989.

Agricultural banks, numbering 4,156 in 1990, are defined in the report as having agricultural loans of more than 16 percent of total loans, and total assets less than \$500 million.

ABA Bankers Weekly, 8/6/91, p. 6.

Large-Bank Mergers Planned

BankAmerica Corporation, San Francisco, and Security Pacific Corporation, Los Angeles, agreed to merge. The combined company would have \$194 billion in assets, second in size in the nation to the \$217-billion Citicorp. The banking company would rank first by deposits in Washington, Arizona, and Nevada, second in New Mexico, and in the top five in Oregon, Alaska, and Idaho. *AB, 8/13/91, p. 1.*

Chemical Banking Corporation and Manufacturers Hanover Corporation, New York, will merge, creating a \$135 billion-asset banking company. Following the BofA - Security Pacific merger, Chemical Banking Corp. would be the third-largest banking company in the U.S., with 660 branches in New York, New Jersey, and Texas, of which 70 are expected to be closed. *AB, 7/16/91, p. 1.*

NCNB Corporation, Charlotte, N.C., concluded an agreement with C&S/Sovran Corporation, Atlanta/Norfolk, to merge. The resulting \$118 billion-asset institution, to be named NationsBank, would be the fourth-largest bank holding company in the U.S. The firm will have 1,900 full-service banking offices in nine states and the District of Columbia. *AB, 7/23/91, p. 1.*

Commercial Banks Joining FHLB System

About 265 commercial banks have joined the Federal Home Loan Bank System since 1989. The banks' borrowings from the FHL Banks have totaled over \$1 billion. The majority of these new members were community banks with less than \$100 million in assets; however, several \$1 billion-

plus banks also have joined the System. Prior to enactment of FIRREA only savings institutions were allowed to join the FHLB System. Since the enactment of FIRREA, membership in the \$165 billion-asset FHLB System has fallen from 3,300 institutions to 2,900 due to the loss of savings institutions.

Advantages to commercial banks of membership in the System include having a dependable, alternate source of liquidity. Commercial banks joining the System are required to purchase FHLB stock equal to one percent of their residential mortgage assets, or three-tenths of one percent of total assets, whichever is greater, and must purchase additional stock whenever they borrow from a FHL Bank. Banks receive dividends on their FHLB stock. Under FIRREA, FHL Banks' advances to nonmembers were eliminated. Among FIRREA's requirements for banks joining the System is that they must have at least ten percent of assets in residential mortgage loans. *ABA Bankers Weekly, 7/30/91, p. 4.*

Recent Articles and Studies

Banking System Reform: Core Banks

In these proposals for banking reform, Lowell L. Bryan envisions the creation of a banking system "without artificial boundaries, without wasteful duplication of effort, and with only as much regulation as is needed to create an orderly financial system."

Banks would have to separate their "core banking" activities from their other businesses. The non-core activities would be conducted in other, separately funded subsidiaries which could include investment companies, securities companies, and finance companies, in respect to which the Securities and Exchange Commission would be the regulator.

Deposits would be federally insured only in the core banks. These banks would finance home mortgages, market credit cards, lend to

small businesses to finance accounts receivable, and provide other such traditional banking services. The core banks would be protected by additional restrictions, including 1) pegging the deposit interest rates they could pay to the floating rates on comparable Treasury securities; 2) further restricting loan size, using a sliding scale with a lower percentage-of-capital limit applicable to the larger banks; and 3) imposing more restrictions on banks' real-estate lending, for example, regulators could require that developers provide 30 percent of equity in a project, and for construction loans that the building be 90 percent preleased.

Under the proposal, the core banking industry would become much smaller than the existing industry, and there would be an extensive restructuring across the nation into fewer banking institutions. The return on the deposits that remain in the industry would be improved. In part this would result from the elimination of the overbidding for deposits by weak competitors. Core banks could operate with much less equity capital than is presently needed, and the cost of equity would be less, because banks' earnings would be less volatile and of higher quality than those of the "bundled" commercial banks.

An opponent of the core bank approach (Thomas L. Ashley, *American Banker*, 6/27/91) believes that the rate cap, even with the flexibility provided, would at times cause serious loss of deposits through disintermediation. He states that the control scheme would be vastly complicated, and in fact unworkable, in states that have high income tax rates and where the rates paid on deposits must reflect that factor.

There is no evidence, Ashley says, that the existing legal lending limit is a cause of problems for the BIF. A lower limit could impair the ability of midsize banks to fully meet the borrowing needs of companies of even moderate size, thereby forcing some

lending into the larger institutions. At the same time, the lower limit will not prevent institutions' overlending to certain areas of the economy, as happened in the 1980s.

Under the proposal the banking system could experience a shrinkage of as much as \$1.5 trillion, or one third of all bank and thrift assets. Ashley sees a resulting credit crunch in which, as capital and assets massively shift from banks to nonbank institutions, many borrowers would pay more for loans and others would lose all access to reasonably priced credit. Finally, the core banking approach would be against international trends where other countries are consolidating and integrating their financial systems. *Harvard Business Review*, May/June, 1991, pp. 73-86.

Interstate Branch Banking

The writer, David L. Mengle, attempts to show that interstate branching is a logical step in the evolution of the structure of U.S. banking. From the standpoint of banking efficiency, interstate branching would offer significant advantages compared to interstate holding companies and subsidiary banks. Under the present system, each subsidiary must have a separate board of directors, must submit separate regulatory reports and undergo separate examinations, must maintain its own support and control functions for such things as personnel and budget, and its own computer systems for certain activities. Also, in payments-processing a branching structure increases the number of "on-us" checks presented that can be cleared internally.

Disadvantages of converting to a branching system may include the loss of the name of the established bank, and loss of its board of directors, which typically is a valuable source of loan referrals. The headquarters management may lack experience in managing an extensive branch network, and in this case a decentralized management structure may be preferable. In addition, for banks of a certain size,

because of the tiered structure of reserves required by the Federal Reserve, the costs of maintaining reserves are lower for the holding company structure.

The lower costs comparatively, Mengle says, of establishing branches would lead to increased banking competition, and resulting benefits to the consumer. There would be consumer benefits also from access across state lines to the full services of a bank.

The effect of interstate branching on small banks would largely depend on the laws of the various states. In states with liberal branching laws, there might be little effect on the number of small banks. In the Fifth Federal Reserve District, for example, where all states allow statewide branching, the fact that there are substantial numbers of small banks (under \$500 million in assets) suggests that the great majority of small banks would remain in operation even if interstate branching were permitted.

Within states with liberal branching laws, a trend of converting subsidiaries into branches is occurring. While this reflects in some degree the benefits of decentralization, the experience has varied widely among institutions.

One way an interstate branching system could develop would be to allow national banks (as the Administration has proposed) to branch interstate where interstate holding company bank acquisitions are permitted. This approach would put state-chartered banks at a competitive disadvantage if they were not granted a similar power. An alternative that preserves the authority of the states would be interstate branching with host-state regulation. An example is the agreement by Utah to allow a state-chartered bank in Arizona to maintain a Utah office as a branch. (The Arizona bank had previously been a thrift, which was taken over by the RTC and then purchased by BankAmerica Corporation) Under host-state regulation, however, where states retain the ability to block the

process there is doubt as to how much interstate branching would actually occur. *Economic Review, Federal Reserve Bank of Richmond*, November/December 1990, pp. 3-17.

Banking Market Structure Effects on Commercial Lending

This paper, by Timothy H. Hannan, of the Federal Reserve Board staff, seeks to test two bases underlying current antitrust analysis in banking. One is that some bank product markets are local in nature. The other, frequently referred to as the structure-performance hypothesis, is that firms operating in more concentrated markets are more likely to engage in some form of noncompetitive behavior. These accepted beliefs have resulted in an antitrust policy that seeks to deter undue concentration as it applies to local banking markets. The validity of these tenets of bank antitrust analysis is tested in this study as they apply to commercial lending.

Using data from the Federal Reserve's Survey of the Terms of Bank Lending to Business, cross sections representing the interest-rate peak of 1984, the stable interest-rate period of late 1985, and the interest-rate trough of 1986 are examined. Significant local-market effects are found for all three cross sections, while strong support for the dominance of the structure-performance hypothesis in explaining the relationship between commercial loan rates and market concentration is found for two of the three cross sections.

The study concludes that the results are consistent with the existence of local banking markets and the dominance of competitive differences as an explanation for observed differences in loan rates. *Journal of Banking and Finance*, February 1991, pp. 133-49.

Banking Consolidation Trend Is Viewed Negatively

The authors, J. H. Boyd and S. L. Graham, of the Federal Reserve Bank of Minneapolis, observe that the

banking industry in the U.S. has been rapidly consolidating in recent years, moving to fewer and larger average-size banks. Since the post-Depression high of about 14,500 banks in 1984, the number of insured commercial banks dropped to 12,300 in 1990. This decrease reflects primarily the absorptions of troubled and healthy banks into branches of other banks. The decrease has *continued* even though the rate of formation of new banks in the past five years has been only slightly slower than in the first half of the 1980s, and faster than in the 1960s or 1970s. More important is the decline in the number of banking organizations — by 24 percent between 1976 and 1990 — reflecting the acquisition and conversion of independent banks into bank holding company subsidiaries. From 1977 to 1990 the domestic market share of the 100 largest U.S. banking organizations increased from 50 percent to 65 percent. Most of these gains occurred at banks ranked 11th or lower.

Economies of scale, the authors state, do not continue beyond banks of a “modest” size, and in fact there is some evidence that very large banking firms are less profitable than middle-size ones. The explanation of the consolidation movement is thus not found primarily in market forces, but in various public policies. One of these policies is “too-big-to-fail,” which the writers say gives a subsidy and an incentive for large banks to grow larger, though they provide no empirical evidence from the consolidation record to support this view. Another regulatory policy encouraging larger bank size is the (unintentional) regulatory protection that bank managers often enjoy from hostile takeovers. At the same time, bank managers appear to have an incentive for consolidation from the fact that while the compensation that the top managers receive is *not* significantly related to either profitability or asset growth, it *is* positively and significantly related to asset size. A final government policy is the “liberalized

attitude” of the U.S. Department of Justice and the regulatory agencies toward mergers within the same market. This policy is reflected, for example, in a rise in the 3-bank concentration ratio in U.S. urban markets since 1982. The writers cite evidence from other studies suggesting that a relationship exists between market structure and pricing — higher loan rates and lower deposit rates are seen in more concentrated markets. *Quarterly Review, Federal Reserve Bank of Minneapolis, Spring 1991, pp. 1-14.*

Credit Union System Reforms

This study by the GAO, which was required by FIRREA, discusses the financial condition of credit unions and their NCUSIF, regulation and supervision of credit unions, the structure of the credit union industry, and the evolving role of credit unions in the financial marketplace.

The credit union industry in the U.S. has undergone vast changes in the past two decades. Starting that period, there were approximately 24,000 credit unions in operation, with 23 million members, and \$18 billion in assets. Their asset powers generally were limited to short-term, small consumer loans and they had restricted membership requirements. As of June 30, 1990 the number of federally insured credit unions had declined to 13,102, of which 8,659 were federally chartered and 4,443 were state-chartered. Their membership, however, had grown to about 55 million, and their assets to almost \$200 billion. Today's credit unions have the authority to offer a wide range of consumer credit and depository services, and with relaxed membership requirements.

The study concludes that while credit unions have remained profitable and are in better financial condition than banks and thrifts, “difficulties could develop if credit unions are not operated safely and soundly in their new environment, if regulation is not modernized, if supervision and failure resolution are not

timely and effective, and if the National Credit Union Share Insurance Fund (NCUSIF) is not adequately overseen and financed.”

Along with the growth and continued profitability of the credit union industry, it has been exposed to increased risk. The greatest recent change in credit unions' asset portfolios, and one with the greatest risk, has been increased real-estate lending, including first mortgages and home-equity loans. Such lending rose from five percent of assets in December 1985 to 21 percent in June 1990. Credit unions may also make “member business” loans (commercial loans). These loans in mid-1990 totaled \$1.4 billion (0.7 percent of assets), excluding certain loans, such as commercial loans under \$25,000, and those secured by a primary residence.

Among the report's recommendations for maintaining sound insurance fund operations are: 1) expanding the Board of the NCUA to five members, to include the Chairman of the Federal Reserve Board and the Secretary of the Treasury, to be *ex officio* members; 2) require NCUA to identify unsound practices and the specific enforcement actions that will be used; 3) require credit unions (including “corporate” CUs) to expense their one-percent deposit in the NCUSIF over a reasonable period of time; and 4) authorize the NCUA to increase the NCUSIF capitalization level and the premium percentage above current limits and to borrow from the Treasury on behalf of NCUSIF.

To improve regulation and supervision, the recommendations include in part: 1) require NCUA to establish minimum, risk-based capital standards for credit unions, with a phase-in period; 2) limit credit unions' single-borrower loans to one percent of a lender's total assets, with larger limits as appropriate for small credit unions; and 3) prohibit natural-person credit unions (members are individuals, not other CUs) from borrowing, except to meet liquidity needs, unless

prior regulatory approval has been obtained.

The report contains numerous other recommendations and though not specifically recommended, GAO also believes Congress should, at a minimum, consider providing guidance on the purpose and limits of the common bond requirement, making it applicable to all federally insured credit unions. *Credit Unions, Reforms for Ensuring Future Soundness, U.S. General Accounting Office, July 1991.*