Banking insights

Trends in capital at District banks: 1965-76

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Capital-to-asset ratios and growth rates of capital are often used as quantifiable measures of the health of the banking industry and of individual bank soundness. The question of what constitutes adequate levels of these measures has been of concern to bank regulators for some time. The problem of bank capital assumes greater importance during periods when bank profits are depressed, both because capital is more likely to be called upon to cushion losses on assets during such periods and because additions to capital in the form of retained earnings do not keep pace with asset growth. The result is an erosion of capital-to-asset ratios, which can be exacerbated if bank assets continue to grow rapidly.

The recent decline in capital ratios

The past decade has witnessed an exceptionally rapid rate of increase in bank assets. Bank assets in the five states of the Seventh Federal Reserve District grew at an average annual rate of over 10 percent between 1965 and 1970 and almost 12 percent between 1970 and 1976. Capital, on the other hand, grew at a much slower rate. As a consequence, capital-to-total asset ratios declined slightly in four of the five states over the 11 years, from an average of almost 9.0 percent in 1965 to close to the 8.5 percent level at the end of 1976.

Although the significance of this decline in capital ratios is not easy to assess in view of the simultaneous changes that have occurred in bank portfolios, access to borrowed funds, external economic conditions, and other elements of banks' total exposure to risk, there is reason to believe that it reflects a real deterioration in the soundness of the banking system. Fortunately, bankers generally recognize this and are taking serious steps to rebuild their capital positions and liquidity and to eliminate excessive risk from their portfolios.

Components of bank capital

The broad decline in capital-to-asset ratios from 1965 to 1976 masks the divergent behavior of the components of bank capital. Equity, which consists of common stock, preferred stock, surplus, undivided profits, and capital reserves, declined as a proportion of total capital over the period, a reflection both of greatly reduced bank earnings during the 1973-75 recession and the depressed market for bank stocks. Nevertheless, it remains the most important component of bank capital, constituting over 95 percent of bank capital in each of the five District states at year-end 1976.

The role of preferred stock, long the least important part of equity capital, remains minimal. Use of preferred stock is limited basically because the dividend is paid after taxes, making the explicit cost of preferred stock to the firm higher than for debt.

Capital notes and debentures were substituted for the generally more costly equity account throughout these 11 years, growing even faster in the 1970 to 1976 period than in the previous period. Even so, the average annual growth rate of debt capital was less than .75 percent in all five states.

That debt is still a relatively small portion of total capital can be explained in terms of several intrinsic disadvantages of debt relative to equity. Unlike equity, debt must ultimately be retired according to the terms of the indenture. Debt also carries a fixed interest rate, and interest must be paid whether earnings are positive or negative. Most importantly, while debt is a substitute for equity as a long-term source of funds, it does not serve the crucial role of equity as a cushion against declines in asset values.

Capital by size of bank

Important differences are discernible in the behavior of capital ratios by size of bank over the entire period 1965 to 1976. In

Changes in assets and capital accounts

	Illinois		Indiana		Iowa		Michigan		Wisconsin	
	1965-70	1970-76	1965-70	1970-76	1965-70	1970-76	1965-70	1970-76	1965-70	1970-76
Equity										
Percent change										
Group 1	45.64	89.85	57.50	107.83	43.85	87.67	49.06	80.52	50.99	78.74
Group 2	64.83	95.18	70.60	104.19	52.17	91.12	62.38	95.83	57.41	76.63
Group 3	53.55	49.25	49.27	55.31	41.89	30.40	51.18	75.57	27.01	37.7
Yearly avg.	8.96	11.42	10.26	12.70	7.82	11.11	9.33	11.13	8.83	10.08
Preferred stock										
Percent change										
Group 1	- .34	n.a.	0.00	0.00	-.42	- .42	0.00	0.00	0.00	0.00
Group 2	- .49	- .20	0.00	n.a.	0.00	- .89	-3.18	- 1.27	- .61	- .61
Group 3	0.00	0.00	0.00	0.00	0.00	- .57	2.08	-12.50	0.00	0.00
Yearly avg.	- .08	- .01	0.00	0.00	- .01	- .02	- .31	- 0.22	- .04	- .03
Capital notes										
Percent change										
Group 1	0.00	- .37	- .55	1.65	n.a.	.40	n.a.	n.a.	n.a.	- .64
Group 2	1.01	9.29	- .59	7.58	n.a.	5.82	.56	6.51	- .78	9.32
Group 3	3.24	13.94	-10.13	-10.70	0.00	4.39	13.21	10.54	- .83	-5.77
Yearly avg.	.09	.62	- .07	.71	0.00	.11	.20	.65	.09	.39
Total assets										
Percent change										
Group 1	59.44	106.42	61.72	109.96	49.68	107.70	52.66	86.14	59.84	84.26
Group 2	72.71	94.41	66.36	100.97	57.34	105.23	79.08	87.15	75.86	79.97
Group 3	41.50	58.96	52.94	84.34	44.85	85.76	61.27	47.41	44.91	53.42
Yearly avg.	10.47	12.31	10.38	12.70	8.65	12.89	10.80	10.76	10.48	10.58
Total capital/ Total assets										
Percent change										
Group 1	-2.21	-5.39	- .45	1.19	-2.27	- 8.03	-1.16	.19	- 3.30	- .05
Group 2	3.25	4.51	4.25	3.39	.00	- 5.54	-3.14	7.63	- 1.67	1.07
Group 3	10.30	- .43	- 3.27	-12.26	-1.53	-12.64	.23	13.30	-14.26	-7.36
Yearly avg.	.04	- .15	.37	.33	- .35	- 1.21	- .42	.78	- .42	.06

NOTE: Group 1 commercial banks have total assets between $0-24.9 million; Group 2 banks have total assets between $25-299.9 million; Group 3 banks have total assets over $300 million.

SOURCE: Report of Condition data December 31, 1965, 1970, and 1976. All assets for grouping purposes were as of December 31, 1976. Only banks from the five states of the Seventh Federal Reserve District in existence in their original form from 1965 to 1976 are included in the sample. This eliminates de novo, dissolved, or organizationally altered banks that would involve a change in the FDIC bank identification number. This leaves 1,004 banks from Illinois, 383 from Indiana, 622 from Iowa, 298 from Michigan, and 530 from Wisconsin for a total of 2,837 banks. All figures are averages of individual bank data.

Total capital is broken down into three categories for analysis. The equity category consists of common stock, surplus, undivided profit and reserves for capital accounts and loan losses. The second category consists of preferred stock, and the third of capital notes and debentures.

general, equity capital grew faster at medium-sized (group 2) banks than at either the largest (group 3) or smallest (group 1) banks, although this varied somewhat between the two subperiods. No pattern by size of bank was readily visible in the trends for other components of bank capital.

Total assets generally grew faster at small banks, followed by medium-sized banks and large banks in that order, a pattern that was most pronounced in the more recent subperiod. Nevertheless, as of the end of 1976, small banks still had the highest ratios of total capital to total assets, while large banks in three of the five District states had the lowest ratios.

Whether this pronounced difference in the capital-to-asset ratios of large and small banks indicates a lesser degree of soundness on the part of large banks is not clear. Some economists maintain that the lower capital ratios of large banks are justified by their greater diversification of assets and superior access to funds. Others, skeptical of this explanation, postulate that it reflects the inability of regulators to contain the level of risk-taking by these banks. Many bankers, particularly those managing large banks, would point to superior management as the factor enabling such banks to get by with less capital per dollar of assets. Whatever the actual case, regulators will be closely monitoring the capital ratios of both large and small banks either until they are restored to historically more normal levels or until it is determined that changed circumstances have rendered traditional capital standards irrelevant to the soundness of the banking system.

Composition of capital accounts

	Illinois	Indiana	Iowa	Michigan	Wisconsin
Average percent of equity to total capital					
1965	99.72	99.58	99.87	98.26	99.58
1976	97.48	98.30	99.58	95.67	96.91
Average percent of preferred stock to total capital					
1965	.07	0.00	.13	.68	.12
1976	.12	.04	.07	.18	.04
Average percent of capital notes and debentures to total capital					
1965	0.21	.42	0.00	1.05	.31
1976	2.40	1.67	1.35	4.15	3.05
Average percent of total capital to total assets					
1965	9.25	8.30	9.68	8.61	9.09
1976					
Group 1	8.71	8.56	8.63	8.98	8.72
Group 2	8.00	8.16	8.14	8.17	8.02
Group 3	8.16	7.49	8.33	7.75	7.17
State average	8.41	8.33	8.52	8.48	8.49

NOTE: Same as table on page 8.

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