Banking & Finance

AN EIGHTH DISTRICT PERSPECTIVE

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Margin Analysis at District Banks

In the competitive world of commercial banking, the financial success of a bank is contingent on the institution's ability to maximize the difference between revenue and cost. Ensuring success entails actions by bank management to generate revenue and control costs. More concretely, managers make numerous decisions concerning asset and liability management, the pricing of services and operating expenses. Two indicators of the results of these decisions are interest and noninterest margins. This issue of *Banking and Finance* examines these indicators for commercial banks in the Eighth Federal Reserve District and throughout the United States for the years 1986 and 1987.

Table 1
Net Interest Margin

	1987[1]		1986	
	District	U.S.	District	U.S.
Aggregate	4.08%	3.71%	4.05%	3.76%
< $25 million in assets	4.23	4.29	4.30	4.29
$25-50 million	4.18	4.34	4.20	4.34
$50-100 million	4.22	4.38	4.24	4.39
$100-300 million	4.22	4.36	4.12	4.33
$300-1 billion	4.41	4.35	4.12	4.26
$1-10 billion	3.71	4.07	3.74	3.92
> $10 billion	N.A.	2.84	N.A.	3.12

[1]Annualized based on data through September 1987

Source: FDIC, "Consolidated Reports of Condition and Income for Insured Commercial Banks," 1986-1987.

Net Interest Margin

An important measure of the results of asset and liability management is the net interest margin, the difference between interest income and interest expense as a percent of average assets. This ratio indicates how well interest-earning assets are being employed relative to interest-bearing liabilities.

On the asset side, this includes interest income and fees related to interest-earning assets. Examples are interest on loans, points on loans, income on tax equivalent municipal loans and bonds and income on U.S. government securities. On the liability side, interest expense includes the amount paid on all categories of interest-bearing deposits, short-term deposit-like instruments and capital notes. In simplest terms, net interest margin is the difference between what a bank earned on loans and investments and what it paid its depositors relative to average assets.

A bank is concerned not only with the level of the net interest margin, but also with the variability of the net interest margin over time. With volatile interest rates, the stability of the net interest margin indicates that the interest sensitivity of assets and liabilities is matched.

Table 1 shows the average net interest margin for commercial banks on a national and regional level. For 1986 and 1987, the average aggregate net interest margin of District banks exceeds that of the nation. The average results, however, conceal differences between asset-size classes. Upon closer inspection of the asset-size categories, banks across the nation tended to outperform banks in the Eighth District. For five of the six categories encompassing banks with assets less than $10 billion, averages for the District banks are below the national average. The overall national average is reduced because of the net interest margins of the banks (none of which are in the Eighth District) with assets greater than $10 billion. This category of banks experienced a decline in net interest margin due, in part, to lost income from nonperforming foreign loans. In 1987, many large banks placed millions of Latin American loans on nonaccrual status, meaning that even if the bank

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receives an interest payment it will not be counted as interest-earning income.

Noninterest Margin

The noninterest margin is an indicator of the efficiency of a bank's operations and the result of its pricing and marketing decisions. The noninterest margin is the difference between other (noninterest) income and noninterest expense as a percentage of average assets. Since noninterest expense generally exceeds other income, the calculation yields a negative number; however, it is common practice for the noninterest margin to be reported as a positive number. Thus, smaller noninterest margins indicate better bank performance, holding all other things constant.

As a supplement to income generated from earning assets, banks have been concentrating their efforts on fee income. Noninterest income derived from bank services and sources other than interest-bearing assets has increased as banks seek to price more of their products explicitly. Sources of noninterest income include fees for checking accounts, discount brokerage services, credit cards, fiduciary activities, mortgage loan servicing and safe deposit box rentals.

Noninterest expense includes all the expense items involved in overall bank operations. Noninterest expense (overhead) includes employee salaries and benefits as well as expenses of premises and fixed assets. Noninterest expense also covers such items as director's fees, insurance premiums, legal fees, advertising costs and litigation charges.

Table 2 shows the noninterest margin for banks in the Eighth District and in the nation grouped by various asset sizes. As presented in the table, District banks outperformed the national average across all asset sizes for both 1986 and 1987. In the aggregate, however, the nation outperformed the District primarily because of the pricing strategies and operating efficiencies of banks with assets greater than $10 billion. These banks continue to expand their noninterest sources of income while controlling their noninterest expenses. Smaller institutions, on the other hand, have had much slower growth of noninterest income. Therefore, noninterest income relative to average assets has remained essentially unchanged at small banks while increasing at banks with assets greater than $300 million.

Noninterest expenses have been moving upward for the past several years in both the District and the nation. As a result, banks are closely monitoring personnel and occupancy costs in an effort to improve profits. Some banks have elected to reduce staff in an effort to streamline operations. In addition, mergers and consolidations have allowed banks the opportunity to centralize operations, improving efficiency due to improved economies of scale.

—Lynn M. Barry

Table 2
Noninterest Margin

	1987[1]		1986	
	District	U.S.	District	U.S.
Aggregate	2.00%	1.92%	1.97%	1.92%
< $25 million in assets	2.43	2.81	2.51	2.90
$25-50 million	2.08	2.55	2.13	2.58
$50-100 million	2.04	2.40	2.07	2.47
$100-300 million	2.02	2.36	2.01	2.36
$300-1 billion	2.16	2.30	2.20	2.34
$1-10 billion	1.78	1.98	1.61	1.95
> $10 billion	N.A.	1.44	N.A.	1.42

[1]Annualized based on data through September 1987

Source: FDIC, "Consolidated Reports of Condition and Income for Insured Commercial Banks," 1986-1987.

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EIGHTH DISTRICT BANKING DATA

LARGE WEEKLY REPORTING BANKS[1]

	Level	Rates of Change			
		Current Quarter	Current Year	Same Periods Previous Year	
	IV/1987 ($ millions)	III/1987-IV/1987	IV/1986-IV/1987	III/1986-IV/1986	IV/1985-IV/1986
Selected Assets & Liabilities					
Total Loans & Leases	$20,054	8.7%	8.5%	13.4%	10.8%
Commercial Loans	6,619	12.4	8.0	14.9	8.0
Consumer Loans	4,767	–3.7	8.4	25.4	17.7
Real Estate Loans	5,535	26.2	25.4	23.6	13.6
Loans to Financial Institutions	816	–25.6	–28.6	9.6	22.3
All Other Loans	2,315	3.4	–3.2	–19.8	–2.4
Total Securities	4,830	15.4	12.3	21.0	7.3
U.S. Treasury & Agency Securities	3,366	22.4	22.8	48.9	13.8
Other Securities	1,465	1.1	–6.2	–14.1	–2.4
Total Deposits	23,194	11.1	5.7	18.0	7.9
Non-Transaction Balances	14,492	12.9	10.4	4.0	3.1
MMDAs	2,627	–15.3	–6.0	21.5	22.1
$100,000 CDs	4,856	36.5	28.9	–0.6	–3.7
Demand Deposits	6,214	11.3	–5.4	41.0	14.0
Other Transaction Balances[2]	2,488	1.0	10.7	50.9	26.7

EIGHTH DISTRICT INTEREST RATES[3]

	Dec 1987	Nov 1987	Oct 1987	Dec 1986
NOWs	5.05%	5.05%	5.03%	5.07%
MMDAs	5.42	5.39	5.42	5.27
Time CDS				
92 — 182 days	6.45	6.32	6.42	5.63
1 — 2½ years	7.05	6.97	7.09	6.26
2½ years and over	7.57	7.58	7.59	6.73

All data are not seasonally adjusted.

[1] A sample of commercial banks with total assets greater than $750 million. Historical data have been revised to incorporate adjustment factors that offset the cumulative effects of mergers and other changes involving weekly reporting banks during 1986. These adjustment factors, which are computed each year, are used to construct a consistent time series for which year-to-year growth rates can be calculated. Adjustment factors are available upon request from the Statistics Section of the Research and Public Information Department. Rates of change are compounded annual rates.

[2] Includes NOW, ATS and accounts permitting telephone or pre-authorized transfers.

[3] Average interest rates paid on new deposits by a sample of Eighth District commercial banks.

BANK PERFORMANCE RATIOS[1]

	Eighth District			United States		
	III/87	III/86	III/85	III/87	III/86	III/85
Return on Average Assets (annualized)						
<$100 million	.99%	1.06%	1.07%	.65%	.66%	.87%
$100 — $300 million	1.01	.99	1.09	.81	.85	.93
$300 million — $1 billion	.96	.83	.48	.57	.68	.84
>$1 billion	.59	1.01	.84	–.33	.65	.68
Return on Average Equity (annualized)						
<$100 million	11.02	11.88	12.09	7.35	7.56	9.82
$100 — $300 million	12.31	12.29	13.58	10.35	11.26	12.12
$300 million — $1 billion	12.11	10.68	6.36	8.15	9.80	11.81
>$1 billion	8.90	14.93	12.98	–6.18	11.25	12.21
Loans as Percent of Deposits						
<$100 million	56.71	55.37	56.64	59.20	58.51	60.41
$100 — $300 million	65.94	62.22	64.54	65.70	64.06	65.35
$300 million — $1 billion	69.64	67.69	67.06	75.63	72.52	71.22
>$1 billion	85.95	81.98	79.13	87.23	86.78	86.36
Nonperforming Loans as Percent of Total Loans[2]						
<$100 million	2.31	2.84	3.08	2.94	3.41	3.33
$100 — $300 million	2.09	2.24	2.31	2.47	2.68	2.72
$300 million — $1 billion	1.87	2.58	2.85	2.56	2.74	2.47
>$1 billion	2.42	2.12	2.45	4.10	2.97	3.24
Loan Loss Reserves as Percent of Total Loans						
<$100 million	1.50	1.42	1.26	1.63	1.53	1.30
$100 — $300 million	1.41	1.33	1.16	1.53	1.41	1.27
$300 million — $1 billion	1.39	1.37	1.30	1.71	1.59	1.31
>$1 billion	1.92	1.43	1.39	3.08	1.66	1.42
Net Loan Losses as Percent of Total Loans						
<$100 million	.47	.61	.66	.73	.92	.74
$100 — $300 million	.42	.57	.36	.53	.64	.50
$300 million — $1 billion	.52	.59	.52	.66	.65	.45
>$1 billion	.46	.39	.45	.55	.61	.49

[1] Size range based on bank assets.

[2] Includes past due greater than 89 days and nonaccrual.