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PARTICIPANTS IN RURAL BANK CONSOLIDATIONS

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Participants in Rural Bank Consolidations*

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The consolidation and restructuring of the financial services industry is changing the delivery of credit to rural borrowers. A major concern is that continued consolidation may lead to a decline in rural banks and ultimately a reduction in the availability of credit to farmers, small businesses and local communities. More than 2,500 bank acquisitions, worth approximately \$120 billion occurred in the U.S. between 1979 and 1993. The number of commercial banks declined from 14,496 in 1984 to 10,432 in 1994, a notable decrease of 28%. The passage of Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 is likely to accelerate consolidation.

In *Vision 2000: The Transformation of Banking*, Anderson Consulting and the Bank Administration Institute forecast that there will be less than 7,500 banks by the year 2000. McLaughlin suggests that past consolidation experience at the state-level suggests that reform will accelerate the pace of industry consolidation, but will not lead to immediate nationwide banking. The evidence from historical state-level activity implies institutions will likely convert bank subsidiaries into bank branches to reduce operating costs. The pace that other interstate consolidation occurs may be dependent on the diversification benefits that occur as banks expand into states with economic characteristics that are not strongly correlated with banks in the states they already operate. Rose measures the correlation among different banking regions and investigates the economic benefits of interstate consolidations. Results indicate that banks may be able to reduce risk and improve operating efficiency through interstate diversification.

Smaller, locally-owned banks typically have developed strong relationships with borrowers and have more expertise in local agricultural production processes than larger regional-banks. They are often better able to identify the needs and problems of local-market, small business participants. There is recent empirical evidence that small business lending is fundamentally different than large business lending.

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Berger and Udell (1995, 1996) and Peterson and Rajan (1994, 1995) suggest that one of the differences is the strong lender-borrower relationships developed with small business lending. The results from these studies suggest that small business borrowers with stronger lender-borrower relationships tend to pay lower interest rates, have fewer collateral requirements, become less dependent on trade credit, and consolidate their working capital financing with a single bank. Berger and Udell (1996) also find that as banks become larger and more complex, they may become less inclined to supply credit services to small businesses. The extent that the consolidation of commercial banks impacts the lender-borrower relationships in agricultural lending will play a large role in determining the performance and growth of agricultural production.

Consolidation has affected small community banks as well as large regional and national banks. Commercial banks provide almost 40% of all U.S. agricultural credit. The first objective of this paper is to provide an overview of the competitive landscape of rural financial markets. The extent that rural banks are involved in funding agriculture in different regions of the country are presented. The second objective of the paper is to measure the extent that rural banks have been involved in consolidation. The characteristics of the participants and transitions in ownership location are identified.

Rural Financial Market Overview

Approximately 55% of the 10,433 banks in the U.S are located in rural areas. Rural banks are much smaller in size than their urban counterparts (Table 1)¹. Their average size has increased from \$48 million assets in 1987 to \$71 million assets in 1994. Banks located in urban areas also have increased in asset size over the period. Urban banks are over 10 times greater in size than rural banks in 1994.

Regionally, there are relatively more rural than urban banks in the Midwest and the South². These include states that have traditionally had restrictive unit banking laws, i.e., Illinois, Texas, Iowa. The percentage of total bank agricultural loans held by rural banks varies similarly by region. In the Midwest, nearly 80 percent of agricultural loans at all commercial banks are held by rural banks. In 1993, banks in the Midwest held over \$23 billion in agricultural loans, a 40 percent share of all U.S. agricultural loans held at commercial banks. Rural banks in the South, West and East hold about \$9 billion, \$2 billion and \$0.5 billion of agricultural loans, respectively. Rural banks in the South hold 60 percent of regional agricultural loans. Rural banks in the West and Northeast hold only 20 percent.

While rural banks held 61 percent of all U.S. bank agricultural loans in 1993, they only owned 11 percent of total U.S. bank assets. Nationally, banks in the Northeast hold the largest share of total bank assets (40 percent). Rural banks in the Northeast, however, account for only three percent of regional assets. Rural banks in the Midwest and the South hold the largest share of regional bank assets (20 percent). Rural banks in the West own about 5 percent of regional bank total assets.

The market shares mentioned in the previous two paragraphs are from 1993. However, changes in bank structure and ownership have been occurring rapidly. Recently, combinations of bank entities through merger and acquisition and changes in bank ownership form have occurred in rural, as well as urban communities.

Table 2 summarizes the number of banks, total agricultural loans and agricultural loan share by bank location and ownership structure from 1987 to 1994. Over this eight-year period, the number of rural banks in the U.S. has declined by 1,621 banks (22 percent). The number of banks located in urban areas has declined by 1,561 (25 percent).

Total agricultural loans have increased steadily for both rural and urban banks. Following the agricultural crisis of the early 1980s, there was a shift in agricultural loan market share away from the Farm Credit System and Farmers Home Administration toward commercial banks. This change has been well documented (e.g. Ahrendsen, Dixon and Priyanti) and explains the majority of the increase in bank agricultural loans. From 1987 to 1989, total U.S. agricultural debt decreased but commercial banks increased both their share and volume. Commercial banks have continued to increase their total agricultural loan volume each year over the period.

In rural areas, independent and single-bank holding companies are the predominate forms of bank ownership. These banks also hold the largest share of commercial bank agricultural debt (40.5 percent in 1994). The number of rural independent and single-bank holding companies has declined by 1,630 banks (28 percent) from 1987 to 1994. Their market share of commercial bank agricultural debt has decreased by 7.5 percent over the period. The number of rural banks affiliated with a multi-bank holding company (MBHC) has increased by 9 banks. The banks affiliated with a MBHC in rural areas have increased their share of agricultural loans by 6 percent over the period indicating movement of agricultural loans away from smaller independent and single-bank holding companies towards banks affiliated with a MBHC in rural areas.

In urban areas, banks affiliated with a MBHC have decreased in number over the period (34 percent) from 1987 to 1994. The number of urban independent and single-bank holding companies has declined 20 percent with the majority of the decline occurring from 1992 to 1994. The market share of agricultural loans of independent and single-bank holding company urban banks has remained relatively constant over the period at 13 to 16 percent. The market share of commercial bank agricultural loans of urban banks affiliated with a MBHC also has been relatively constant at 22 to 25 percent.

Rural Bank Consolidation Activity

The increases in bank merger and acquisition activity began in 1978 when Maine enacted legislation permitting interstate banking on a reciprocal basis. The purpose of this section of the paper is to measure and examine the extent that rural banks and U.S. agricultural loans are involved in the consolidations.

Data are collected from 1987 to 1994 from the Board of Governors of the Federal Reserve System 4th quarter Report of Condition and Income (Call Reports). Data also are collected from a bank merger and acquisition (M&A) database purchased from SNL Securities. The M&A data include activities that occur during the 1990 to 1994 period. The M&A data include information on both the acquired banks and the buyer institutions. However, the data do not include information on agricultural loans. The Call Reports are used to supplement the M&A database.

Data for banks involved in consolidation activities during a particular year are matched with Call Report data from the previous year. In the bank M&A database, there are 2,113 completed bank mergers or acquisitions that occurred from 1990 to 1994. Of the 2,113 mergers in the M&A data base, 1,214 mergers or acquisitions could be matched with Call Report data³.

Table 3 summarizes the total agricultural loans of banks that are acquired from 1990 to 1994. The total agricultural loans held by acquired banks increases from \$728 million in 1990 to \$1.85 billion in 1994. The volume of agricultural loans in 1992 is particularly large due to the acquisition of a California MBHC with a \$1.1 billion agricultural loan portfolio in 9 member banks.

The volume of agricultural loans held at acquired rural banks is small during the period. The amount represents only about one percent of total U.S. agricultural loans at commercial banks. The volume of agricultural loans held at all acquired banks increases from 1.5 percent in 1990 to 3.2 percent in 1994. The California merger increases the share of loans at acquired banks to 5.3 percent in 1992.

The number of acquired institutions is summarized over the period by region and location in Table 4.⁴ Most of the consolidation activity occurs in the Midwest and South, where the majority of the nation's banks are located. Bank acquisitions have been highest in Texas, Illinois, Florida and Kansas. In the Midwest and South, 472 and 469 banks, respectively, are involved in mergers or acquisitions. More rural banks are acquired in the Midwest while more urban banks are acquired in the South.

Nationally, 160 more urban banks are merged or acquired than rural banks. The location of these urban banks is somewhat more balanced across regions than the acquired rural banks, which tend to be primarily located in the Midwest and the South.

An important concern regarding acquisitions of rural banks is the location of the buying institution relative to the acquired bank. If rural banks are being acquired by out-of-state banking organizations as opposed to in-state organizations, the acquisitions may have different effects on the community. Out-of-state banks may be less likely than in-state banks to have an interest in the local economy, and may adjust services and prices to a point where the needs of local borrowers and small businesses are not satisfied. However,

the out-of-state institution may have capital resources independent of the local economy and have a higher ability to meet loan demand.

Table 5 provides information on intrastate and interstate consolidation activities. In rural areas, most banks (80 percent) are acquired by institutions within the same state. Interstate combinations include 168 more urban than rural banks. From 1990 to 1994, only \$635 million of agricultural loans are held by rural banks that are acquired by out-of-state institutions. Approximately \$2.65 billion of agricultural loans are held by urban banks that were purchased by out-of-state institutions over the same time period.

Selected financial characteristics of buyers, acquired banks and the purchase agreements are summarized in Table 6 by year and bank location. Acquired rural banks are substantially smaller in size (average assets) than urban banks. Price-to-book, price-to-earnings and premium-to-deposit ratios also are generally smaller for rural banks than urban banks. This indicates that, on average, urban banks have been more attractive targets and buyers are more willing to pay premiums to purchase urban banks.

Acquired banks generally have a higher equity-to-asset ratio than the buyers, indicating that purchasing banks may be more aggressive in their capital structure by using more leverage than acquired banks. Acquired and buyer rural banks have higher capital ratios on average than urban banks. This may reflect a more conservative attitude of bank managers and directors in rural areas.

Profitability measures are higher on average each year for both rural and urban acquiring institutions. In rural areas, acquiring institutions earn about 0.3 percent higher return on assets than the acquired banks. In urban areas, the spread is even greater, about a 0.5 percent higher return on average over the period.

The average agricultural loan ratio of acquired rural banks is much higher than those acquired in urban areas. Agricultural loans of urban banks only average about 1-2 percent of total loans. The agricultural loan ratio of the rural banks is, however, still relatively low when compared to a U.S. average agricultural loan ratio of 25 to 26 percent of all rural banks over the same period. The average total deal value of rural banks is much smaller reflecting the smaller size of the rural banks purchased.

Summary and Conclusions

Over the 1987 to 1994 period, the number of rural banks has declined by about 1,600 banks or 22 percent. The decline has primarily been those banks with an independent or single-bank holding company ownership structure. The remaining independent and single-bank holding company institutions have lost about an 8 percent market share of U.S. agricultural loans held at commercial banks. This share has primarily been taken over by rural banks affiliated with multi-bank holding companies indicating evidence of a some movement of bank ownership to larger institutions.

Call Report and M&A Database data are used to measure and examine the extent that U.S. rural banks are involved in bank consolidation activities. The total transfer of agricultural loans between banks during the period is only about 1 to 5 percent. The majority of these loans were held by acquired banks in urban areas. Of the approximately 1,200 mergers or acquisitions that are examined, about 160 more urban banks than rural banks are acquired.

There have been limited interstate acquisitions of rural banks. Furthermore, the agricultural loan volume of the rural banks that have been acquired by interstate buyers is relatively low (\$635 million). It appears that rural banks with considerable agricultural lending have not been the primary targets of acquiring institutions that have been involved in interstate combinations.

The premiums paid for rural banks have been lower than premiums paid for urban banks. Furthermore, the rural banks that have been acquired have lower agricultural loan ratios than average rural banks. This is another indication that rural banks, especially banks involved in agricultural lending, have not been primary targets in the bank acquisition market.

In summary, there is some evidence that independent rural banks have lost market share to larger institutions. However, the pace of consolidation of banks in rural areas is slower than banks in urban areas. The impact the consolidation trend has on rural borrowers will likely depend on how the lender-borrower relationships are affected by the changes occurring. Furthermore, the extent that loans will be extended to the agricultural and rural businesses will also depend on the other institutions competing in rural financial markets. As long as loans to rural businesses are positive net present value investments, the businesses will likely be serviced.

Endnotes

1. Rural banks are defined as those banks located outside of a 1) Metropolitan Statistical Area (MSA), a city with a population of more than 50,000 people or an urbanized area of at least 50,000 with a total metropolitan population of at least 100,000; or 2) a Primary MSA, an integrated economic and social unit with a recognized large population nucleus. Urban banks are all banks not classified as rural.
2. The West region is bordered on the east by the states of MT, WY, CO and NM. The Midwest region is bordered on the south by KS, MO, IL, IN, and on the east by OH and MI. The Northeast region is bordered on the southwest by PA and MD. The South region is bordered on the west by TX and the north by OK, AR, KY, WV and VA.

3. The total value of agricultural loans changing ownership over the period is likely underestimated due to the inability to include all 2,113 banks involved in merger or acquisition activities.
4. Banks affiliated with an acquired multi-bank holding company are aggregated into a single observation.

References

- Ahrendsen, B.L., B.L. Dixon and A. Priyanti. "Growth in Agricultural Loan Market Share for Arkansas Commercial Banks." *J. Agr. and Applied Econ.* 26(December 1994):430-442.
- Anderson Consulting. *Vision 2000: The Transformation of Banking.* Bank Administration Institute, Chicago, IL. 1994.
- Berger, Allen N. and Gregory F. Udell. "Relationship Lending and Lines of Credit in Small Firm Finance." *Journal of Business*, forthcoming 1995.
- _____. "Universal Banking and the Future of Small Business Lending." in *Financial System Design: The Case for Universal Banking*, A. Saunders and I. Walter, eds. Irwin Publishing, Homewood, IL forthcoming, 1996.
- Board of Governors of the Federal Reserve. "Call and Income Consolidated Reports." U.S. Department of Commerce, National Technical Information Service. Various Issues.
- McLaughlin, Susan. "The Impact of Interstate Banking and Branching Reform: Evidence from the States." *Current Issues in Economics and Finance.* Federal Reserve Bank of New York., 1(May 1995).
- Peterson, Mitchell A. and Raghuram G. Rajan. "The Benefits of Firm-Creditor Relationships: Evidence From Small Business Data." *Journal of Finance*, 49(March 1994): 3-37.
- _____. "The Effects of Credit Market Competition on Lender Relationships." *The Quarterly Journal of Economics*, 100(May 1995): 407-43.
- Rose, Peter S., "Diversification and Interstate Banking." Proceedings of 31st Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, (May 1995):296-313.
- The SNL Bank M&A DataSource. SNL Securities, L.P. Hoboken, NJ. Version 3.2. 1995.

Table 1. Average Assets of Rural, Urban, and All U.S. Banks by Year, 1987 to 1994.

Year	Rural Banks	Urban Banks	All Banks
----- \$ (Million) -----			
1987	48	422	219
1988	51	467	239
1989	56	513	269
1990	60	542	283
1991	64	570	295
1992	67	576	311
1993	70	643	340
1994	71	764	382
Average	61	562	292

Table 2. Number of Banks, Total Agricultural Loans and Agricultural Loan Share by Location and Ownership Structure, 1987 to 1994.

Location	Year	All Banks		Independent and Single BHCs		Multi-BHCs	
		Num.	Total Agric. Loans (\$Bill.)	Num.	Agric. Loan Share ^a (%)	Num.	Agric. Loan Share ^a (%)
Rural	1987	7,377	27.2	5,728	48.0	1,649	14.0
	1988	7,164	28.1	5,531	46.9	1,633	14.6
	1989	7,065	29.7	5,455	46.7	1,610	15.3
	1990	6,893	31.4	5,311	45.9	1,582	16.1
	1991	6,735	33.4	5,184	46.1	1,551	16.2
	1992	6,246	33.3	4,751	43.4	1,495	17.1
	1993	6,107	35.5	4,567	43.0	1,540	18.0
	1994	5,756	37.1	4,098	40.5	1,658	20.2
Urban	1987	6,238	16.7	3,894	13.3	2,344	24.7
	1988	5,904	17.6	3,800	13.9	2,104	24.6
	1989	6,130	18.2	4,089	14.2	2,041	23.8
	1990	5,904	19.2	3,996	12.8	1,908	25.2
	1991	5,637	20.2	3,955	15.8	1,682	21.9
	1992	5,737	21.7	4,096	16.6	1,641	22.9
	1993	5,453	22.7	3,922	15.6	1,531	23.4
	1994	4,677	24.1	3,132	14.2	1,545	25.1

^a Agricultural loan share is the share of all U.S. agricultural loans held at commercial banks.

Table 3. Total Agricultural Loans of Acquired Banks by Location and Share of Agricultural Loans, 1990 to 1994.

Year	Agricultural Loans of Acquired Banks			Agric. Loan Share ^a
	Rural	Urban	Total	
	----- (\$M) -----			(%)
1990	340	388	728	1.5
1991	268	601	869	1.7
1992	734	2,128	2,862	5.3
1993	481	1,120	1,602	2.9
1994	747	1,100	1,847	3.2

^a Agricultural loan share is the share of all U.S. agricultural loans held at commercial banks.

Table 4. Number of Acquired Banks by Region and Location, 1990 to 1994.

Year	Region										Total U.S.	
	West		Midwest		Northeast		South		R	U	R	U
	R ^a	U ^b	R	U	R	U	R	U				
1990	3	11	18	23	9	9	9	21	19	51	62	
1991	6	19	46	24	0	6	19	28	71	77	134	
1992	10	19	81	55	7	13	40	47	113	194	220	
1993	11	24	51	57	2	28	49	85	154	687		
1994	12	30	66	51	7	47	69	92	527	687		
Total	42	103	262	210	25	103	198	271	527	687		

^a Banks located in rural areas.

^b Banks located in urban areas.

Table 5. Number of Bank Combinations and Total Agricultural Loans Held at Acquired Banks by Intrastate or Interstate Combination and Location of Acquired Bank, 1990 to 1994.

Year	Intrastate Combinations				Interstate Combinations			
	Rural		Urban		Rural		Urban	
	Number	Total Ag. Loans (\$M)	Number	Total Ag. Loans (\$M)	Number	Total Ag. Loans (\$M)	Number	Total Ag. Loans (\$M)
1990	35	262	36	213	16	78	26	175
1991	66	239	51	154	5	29	26	446
1992	118	538	87	1,459	20	196	48	669
1993	83	296	112	287	30	186	82	833
1994	126	600	136	569	28	146	85	531
Total:	428	1,935	422	2,682	99	635	267	2,654

Table 6. Characteristics of Commercial Banks Involved in Combinations by Location, 1990 to 1994, average values.

Location	Year	Number of Banks	Assets (\$M)	Price/Book ^a	Price/Earnings ^b	Premium/Deposits ^c	Buyer Equity/Assets (%)	Acquired Equity/Assets (%)	Buyer ROE ^d (%)	Acquired ROE (%)	Buyer ROA ^e (%)	Acquired ROA (%)	Ag Loan Ratio ^f (%)	Total Deal Value (\$M)
Rural	1990	51	134	1.35	27.09	3.48	7.87	8.51	12.71	-5.51	1.00	0.24	8.4	15.7
	1991	71	48	1.25	20.19	2.81	8.15	9.30	13.64	7.00	1.10	0.80	15.6	5.9
	1992	138	59	1.39	28.57	3.71	8.57	8.82	13.66	8.16	1.10	0.75	17.4	10.8
	1993	113	70	1.60	14.82	6.45	8.60	9.17	14.66	11.05	1.18	1.05	12.2	11.6
	1994	154	68	1.55	15.00	6.36	8.62	9.65	15.27	9.34	1.27	0.92	13.9	11.4
Urban	1990	62	906	1.88	17.01	7.62	7.29	7.95	16.33	7.97	1.21	0.70	1.1	89.2
	1991	77	1,178	1.52	22.52	4.98	8.00	8.15	13.61	-3.27	1.06	0.29	1.0	80.6
	1992	135	1,200	1.61	29.43	5.63	8.01	7.94	13.05	3.73	1.02	0.37	2.0	152.2
	1993	194	508	1.73	17.79	6.89	7.90	8.41	16.23	6.58	1.27	0.61	1.9	73.6
	1994	221	541	1.78	17.69	7.99	8.44	8.58	15.29	11.12	1.24	0.94	1.5	89.9

^a Final deal price per share divided by tangible book value per share for publicly traded companies, final deal value divided by tangible equity for non-publicly traded companies.

^b Final deal price per share divided by trailing four-quarter earnings per share for publicly traded companies, final deal value divided by trailing four-quarter net income for non-publicly traded companies.

^c Final tangible book premium divided by core deposits.

^d Rate of Return on equity.

^e Rate of Return on assets.

^f Total agricultural loans divided by total loans.