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Agricultural Credit Conditions at Banks in the Great Plains

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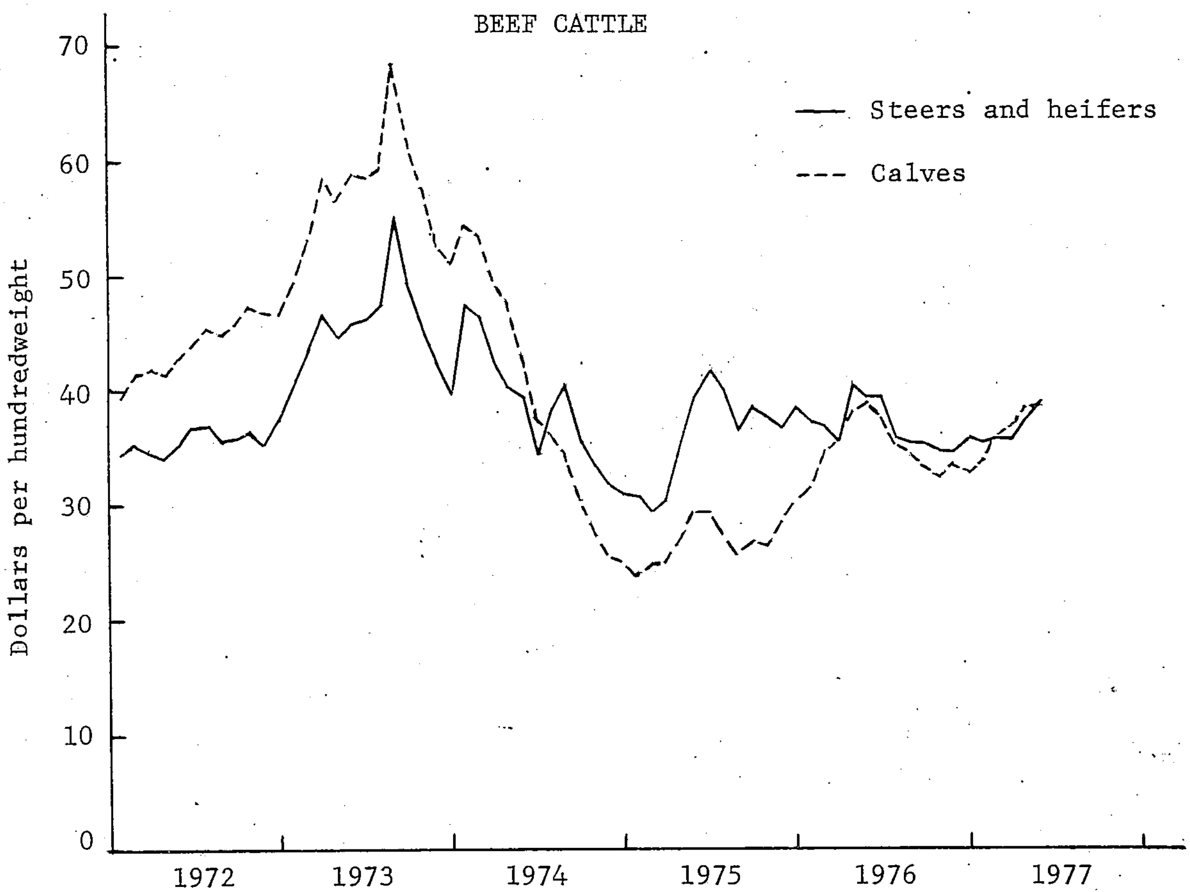
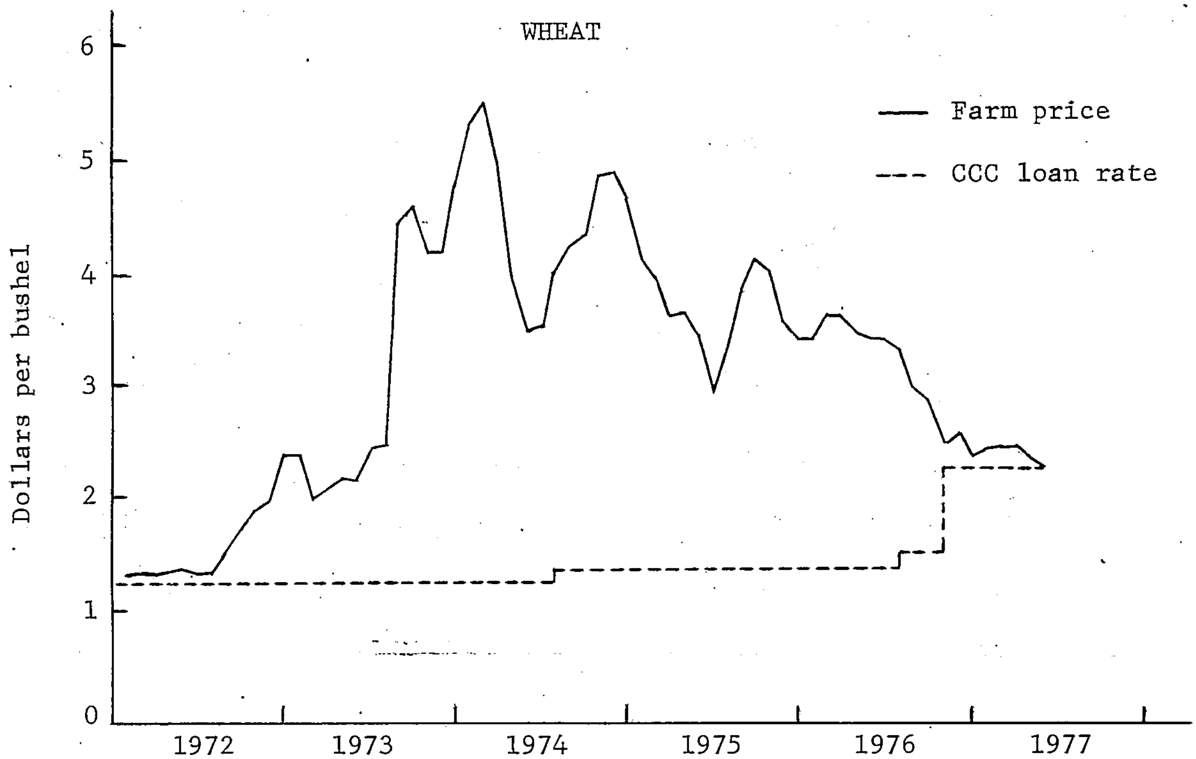
This spring there has been mounting concern about agricultural credit conditions at commercial banks in the Great Plains area. Two general problems have been evident: weakened financial positions of farmers, which have resulted in farm loan repayment difficulties; and large increases in farm lending, which have sharply reduced the liquidity of many rural banks.

The unfavorable situation in part reflects the cumulative impact on the Great Plains area of drought and low cattle prices over the past three years. Prices received by cattle ranchers and feeders declined appreciably from their peaks of mid-1973 and have remained at relatively unprofitable levels for much of the time since (Chart 1). The recent increase in financial problems, however, stems mainly from last fall's decline in wheat prices from the highly profitable levels that prevailed from mid-1972 to mid-1976 (lower panel of Chart 1). Last summer, many farmers stored their 1976 wheat crop in hopes of still better prices or to defer income into 1977. As a result, farmers now hold much of the projected national carryover of 1.1 billion bushels of wheat, amounting to about one-half of recent annual production. The financing of this large increase in farmer-held stocks was primarily responsible for the unusually sharp rise in farm loans during 1976. The subsequent decline in the value of these stocks was at the root of many of the loan repayment problems experienced this spring.

Chart 1

Average prices received by farmers, United States





Source: Agricultural Prices, USDA

Sources of data. Indicators of rural financial conditions as seen and experienced by commercial banks are provided by data from quarterly reports of condition (call reports) submitted by all banks and from special quarterly surveys of agricultural credit conditions conducted by five Federal Reserve Banks. This report focuses on data for the Minneapolis and Kansas City Federal Reserve Districts that include much of the Great Plains region.

Periodic surveys of agricultural credit conditions and lending experience have been made for many years by the Federal Reserve Banks of Chicago and Minneapolis, and since 1975 by the Federal Reserve Banks of Richmond, Kansas City, and Dallas. Most of the data obtained is qualitative in nature; however, the behavior of the various series over past cycles in monetary conditions and farm income provides a frame of reference for interpretation of current survey results.

Each Reserve Bank used different criteria in selecting banks for its survey panel, which affects the comparability and interpretation of some series, such as those indicating interest rates or loan availability. Kansas City selected its panel from banks at which farm loans comprise at least half of total loans. The banks surveyed by Chicago have at least one-fourth of their loans in agriculture, except in Michigan where the criterion is 10 per cent. Dallas chose its panel from all banks, but those with the higher proportions of farm loans were sampled far more heavily. In contrast, the Richmond and Minneapolis panels include more banks at which farm loans represent a minor share of total lending. Richmond sampled more heavily from the banks with the greater farm loan volume, while the Minneapolis panel represents a cross-section of District banks of all sizes.

In the two Federal Reserve Districts--Minneapolis and Kansas City--that include much of the Great Plains region, about three-fifths of the banks have at least 25 per cent of their loans in agriculture (Table 1). These banks hold about 80 per cent of all farm loans at banks in the two Districts. But on average they are rather small institutions, and in aggregate they hold only about one-third of total deposits in these Districts.

Table 1

Selected banking data, by farm loan ratio of bank
Insured commercial banks, December 1976

Area	Farm loans as per cent of total loans at bank: Under 25	25 to 49	50 and over	Total
		Number of banks		
Minneapolis District.....	556	400	447	1,403
Kansas City District.....	821	532	859	2,212
U.S....................	9,410	2,874	2,113	14,397
		Percentage distribution of banks		
Minneapolis District.....	40	29	32	100
Kansas City District.....	37	24	39	100
U.S....................	65	20	15	100
		Percentage distribution of farm loans		
Minneapolis District.....	20	40	41	100
Kansas City District.....	21	29	50	100
U.S....................	44	30	26	100
		Percentage distribution of deposits		
Minneapolis District.....	65	22	14	100
Kansas City District.....	67	17	16	100
U.S....................	92	5	2	100

Note: Farm loans include loans secured by farm real estate.

Farm loan quality. The Reserve Bank surveys indicate that major farm loan repayment difficulties are presently concentrated in the Minneapolis and Kansas City Districts (Table 2). The rate of farm loan repayments slowed markedly after mid-1976 in both Districts, with corresponding increases in the demand for farm loan renewals. The Minneapolis series, which go back to 1964, established new highs by a considerable margin.

Two Reserve Banks make a practice of adding special questions to their regular quarterly surveys. In response to such a query, banks in the Kansas City District on January 1 reported that 55 per cent of their farm borrowers were experiencing serious cash flow problems. Though many borrowers in this area thus are seen as having difficulty in matching income flows with their debt service requirements, their underlying financial condition apparently varies over a wide range. Another special question on the April 1 survey first noted that the unencumbered assets of farmers could be viewed as a credit reserve and then asked the banks to indicate the distribution of their customers by categories reflecting their general financial condition. A tabulation of the responses weighted by the farm loan volume of each surveyed bank shows the following distribution of customers in the Kansas City District:

	Per cent of customers
In good condition	50
Have problems but still have credit reserves	33
Have nearly exhausted their credit reserves	10
Are overextended and in serious trouble	4
Not reported	3
	100

Table 2
Federal Reserve Bank surveys of agricultural credit conditions

Date of survey	Federal Reserve District 5 Richmond	7 Chicago	9 Minneapolis	10 Kansas City	11 Dallas
	Percentage of banks reporting a slower rate of farm loan repayments				
1974--January	-	6	4	-	-
April	-	8	6	-	-
July	-	27	23	-	-
October	-	28	35	-	-
1975--January	-	37	52	-	-
April	-	44	50	-	-
July	-	30	34	-	37
October	31	15	21	-	25
1976--January	21	21	31	34	28
April	20	18	42	31	21
July	0	15	35	26	15
October	11	19	60	56	28
1977--January	24	28	75	68	28
April	6	30	75	64	26
	Percentage of banks reporting greater demand for farm loan renewals or extensions				
1974--January	-	10	5	-	-
April	-	13	10	-	-
July	-	30	16	-	-
October	-	32	24	-	-
1975--January	-	41	45	-	-
April	-	51	45	-	-
July	-	33	41	-	47
October	28	19	24	-	35
1976--January	27	23	38	31	34
April	20	26	42	38	27
July	3	18	34	31	20
October	9	20	47	54	26
1977--January	29	34	69	66	33
April	11	34	64	66	35

Note: In Districts 5, 9, and 11, respondents are asked to compare "current" experience with "usual" experience. In Districts 7 and 10, respondents are asked to compare experience during the past quarter with that of a year earlier.

Rural bank liquidity. Outstanding farm loans rose rapidly during 1976 (Table 3). The rate of increase was particularly sharp in the Kansas City District, where it equalled that experienced during the farm output expansion of 1972-73. In that earlier period, deposit growth at rural banks had kept pace as a result of the large gains in farm income, leaving the liquidity of rural banks unchanged (Table 4). Annual farm income, however, has been declining since its 1973 peak, and deposit growth at rural banks has slowed considerably. Thus the large increase in loans that occurred in 1976 resulted in a marked reduction in the liquidity of agriculturally-oriented banks. Average loan-deposit ratios for such

Table 3

Bank loans to farmers 1/
Percentage change during year

Year	Federal Reserve District		United States
	9. Minneapolis	10 Kansas City	
1970	11	13	7
1971	12	15	13
1972	9	20	15
1973	21	20	20
1974	12	2	6
1975	16	11	11
1976	12	20	16

1/ Outstanding loans to farmers (excluding loans secured by real estate) at insured commercial banks.

banks, both nationally and in the Minneapolis and Kansas City Districts, moved distinctly above the narrow ranges within which they had fluctuated during previous years of this decade (Table 4).

Another view of the sharp reduction in the liquidity of rural banks during 1976 is provided by observing the change in the distribution of these banks by loan-deposit ratio classes (Table 5). In the Kansas City District, for example, agricultural banks with a loan-deposit ratio of at least 70 per cent comprised only 16 per cent of all agricultural banks when the year began, but 31 per cent by year-end. Nationally, the percentage of agricultural banks with relatively high loan-deposit ratios

Table 4

Average loan-deposit ratios
(Per cent)

December call date	Federal Reserve District					United States	
	Minneapolis			Kansas City			
	Agr. banks 2/	Quarterly survey panel	All banks	Agr. banks 2/	All banks	Agr. banks 2/	All banks
1970.....	53	58	59	55	55	56	62
1971.....	52	58	57	55	56	54	61
1972.....	50	58	60	54	57	52	63
1973.....	50	61	63	53	59	52	67
1974.....	52	64	64	54	59	53	68
1975.....	55	63	63	56	58	55	64
1976.....	58	64	65	63	61	60	65

1/ Average loan-deposit ratio is total loans (excluding Federal funds sold) for all banks in the specified group as a percentage of total deposits at those banks.
2/ Banks at which farm loans (including loans secured by farm real estate) comprised one-half or more of total loans on the call date specified.

approached that of other banks, even though most of the agricultural banks probably served less diversified areas and were smaller institutions with lesser access to market sources of funds--factors generally thought to require the maintenance of a greater degree of liquidity.

Table 5

Percentage distribution of banks by loan-deposit ratio
December 1975 and 1976

Group of banks and call date	Loan-deposit ratio of bank (per cent)1/ Under 40	40 to 54	55 to 69	70 and over	Total
Agricultural banks2/					
Minneapolis District:					
December 1975	16	39	36	10	100
December 1976	13	31	41	15	100
Kansas City District:					
December 1975	21	31	32	16	100
December 1976	11	23	35	31	100
United States:					
December 1975	17	34	36	13	100
December 1976	13	27	39	21	100
Nonagricultural banks					
United States:					
December 1975	9	26	46	19	100
December 1976	8	24	45	23	100
All banks					
United States:					
December 1975	12	29	42	17	100
December 1976	10	25	42	23	100

1/ Total loans (excluding Federal funds sold) as a percentage of total deposits at the bank.
2/ Banks at which farm loans (including loans secured by farm real estate) comprise one-half or more of total loans on the call date specified.

Farm loan availability. In the Kansas City District, the Reserve Bank survey of agricultural banks indicates that many regard their liquidity position as tight. The proportion of these banks that consider their loan-deposit ratio to be higher than desired rose to about 50 per cent in the fall of 1976 and has since held at that level (Table 6). As one reaction, more of these banks have increased the number of farm borrowers referred to correspondent banks. Also, the proportion of agricultural banks seeking new farm loan accounts has fallen off sharply in the Kansas City District (Table 7). Finally, during the first quarter of 1977 over one-fifth of the banks had refused or reduced a farm loan request because of a shortage of funds.

Because the historical span of the Kansas City survey is so short, it is difficult to interpret the relative severity of the conditions that these statistics reflect. It is, however, clear that farm loan availability at these agricultural banks has dropped markedly since the spring of 1976.

The banks reporting these conditions are small institutions that probably have only limited and relatively unreliable access to market sources of funds. In the Kansas City District, deposits average \$8.5 million at the 859 banks at which farm loans comprise one-half or more of total loans. Of these banks, 32 per cent are members of the Federal Reserve System that could seek assistance at the discount window, but only a very few have done so thus far.

Table 6
Federal Reserve Bank surveys of agricultural credit conditions

Date of survey	Federal Reserve District 5 Richmond	7 Chicago	9 Minneapolis	10 Kansas City	11 Dallas
	Percentage of banks with a loan-deposit ratio that is higher than desired				
1974--January	-	20	15	-	-
April	-	17	11	-	-
July	-	27	27	-	-
October	-	32	39	-	-
1975--January	-	32	34	-	-
April	-	28	19	-	-
July	-	22	21	-	20
October	10	22	18	-	16
1976--January	9	23	16	37	17
April	6	20	16	34	15
July	15	24	26	39	19
October	9	25	26	51	26
1977--January	0	26	18	48	16
April	17	28	20	52	17
	Percentage of banks referring more farm borrowers to correspondent banks				
1974--January	-	-	5	-	-
April	-	-	4	-	-
July	-	-	9	-	-
October	-	-	7	-	-
1975--January	-	-	8	-	-
April	-	-	6	-	-
July	-	-	6	-	13
October	0	-	2	-	12
1976--January	3	-	6	19	13
April	0	-	5	18	11
July	3	-	10	16	11
October	3	-	8	21	18
1977--January	3	-	6	29	14
April	0	-	9	27	10

Note: With respect to referrals, respondents in Districts 5, 9, and 11 are asked to compare "current" experience with "usual" experience. Respondents in District 10 are asked to compare experience during the past quarter with that of a year earlier.

Table 7
Federal Reserve Bank surveys of agricultural credit conditions

Date of survey	Federal Reserve District 5 Richmond	9 Minneapolis	10 Kansas City	11 Dallas
		Percentage of banks actively seeking new farm loan accounts		
1974--January	-	69	-	-
April	-	76	-	-
July	-	46	-	-
October	-	27	-	-
1975--January	-	30	-	-
April	-	43	-	-
July	-	51	-	40
October	63	61	-	44
1976--January	62	62	58	49
April	71	63	51	51
July	59	54	51	50
October	65	55	35	45
1977--January	71	54	37	50
April	82	56	30	49
		Percentage of banks that refused or reduced a farm loan request in the preceding quarter because of a shortage of funds		
1974--January	-	6	-	-
April	-	4	-	-
July	-	18	-	-
October	-	35	-	-
1975--January	-	27	-	-
April	-	13	-	-
July	-	11	-	11
October	8	8	-	12
1976--January	3	5	13	8
April	3	7	14	7
July	3	9	11	7
October	0	10	20	13
1977--January	0	10	23	10
April	0	7	22	10

It is also evident that, on average, farm loans are much more readily available among the banks represented in the other Reserve Bank surveys. But in the Minneapolis District, where the wheat and cattle production areas are affected by much the same factors as in the Kansas City District, this survey indication may in part reflect the relatively high proportion of predominately nonagricultural banks in the survey panel. The average of the loan-deposit ratios reported by the surveyed banks has not changed much during the past two years (second column of Table 4). But over the same time span the average ratio at the heavily agricultural banks in the District has risen markedly (first column of Table 4). It seems likely, therefore, that credit conditions at these agricultural banks may resemble those reported by similar banks in the Kansas City District to a somewhat greater degree than one might surmise from the overall results of the Minneapolis survey.

Prospects. Looking ahead, in the near term financial conditions in the Great Plains may improve. Many agricultural analysts believe that cattle producers are entering a more profitable period. A break in the drought in the principal wheat areas appears to have assured another sizable wheat crop. Since the current market price of wheat is close to the CCC loan rate, returns per bushel to most producers will not drop much further. In addition, this year wheat producers will likely receive for the first time the deficiency payments provided under the format of the farm program adopted in 1973. These payments will depend on the difference between a target price, to be specified in the legislation now being considered by the Congress, and the average market price of wheat (but not to exceed the difference between the target price and the CCC loan rate).

For the longer term outlook, however, a key factor is that wheat acreage has apparently been overexpanded in response to the profitable prices of the 1972-75 marketing years. While recent acreage is about 50 per cent above its average early in this decade, utilization exclusive of the export bulges of the 1972-73 and 1975 marketing years (which were related to certain foreign droughts) seems to have risen in the neighborhood of only 20 per cent. Thus unless special export demand again develops, carryover wheat stocks a year from now could be the largest in U.S. history. If a retrenchment in production becomes necessary, it could be accompanied by a lengthy financial squeeze on farmers, farm-related businesses, and rural communities in the Great Plains. The severity of farm financial problems, however, would likely be limited by the government income and credit programs now in place.

Data for individual States. The appendix tables that follow provide selected call report data for individual Great Plains States. Tables A and B provide an overview of agricultural banking in each State, with Table A showing the degree to which individual banks are heavily involved in farm lending--or heavily exposed in the event of more severe farm loan problems--and Table B indicating the extent to which the State's farmers are relying on such banks. Table C shows how loan-deposit ratios rose significantly in most Great Plains States during 1976. Table D supplements this information by indicating the relative extent to which the banks in each State have reached liquidity positions considered relatively tight--particularly so for those States characterized by undiversified economic activity, high natural production risks, and small banks with poor access to market sources of funds--and by showing the degree to which farmers are relying for loans on banks now relatively illiquid.

Appendix Table A

Distribution of banks by farm loan ratio of bank
(insured commercial banks, Great Plains States, December 1976)

State	Farm loans as per cent of total loans at bank: Under 5	5 to 24	25 to 49	50 and over	Total
	Number of banks				
North Dakota	5	24	47	93	169
South Dakota	2	11	34	109	156
Nebraska	23	32	85	310	450
Kansas	66	90	161	298	615
Oklahoma	94	123	134	118	469
Texas	579	385	279	114	1,357
Montana	24	46	55	30	155
Wyoming	16	27	25	10	78
Colorado	138	63	41	39	281
New Mexico	39	25	14	4	82
United States	5,650	3,760	2,874	2,113	14,397
	Percentage distribution of banks				
North Dakota	3	14	28	55	100
South Dakota	1	7	22	70	100
Nebraska	5	7	19	69	100
Kansas	11	15	26	48	100
Oklahoma	20	26	29	25	100
Texas	43	28	21	8	100
Montana	15	30	35	19	100
Wyoming	21	35	32	13	100
Colorado	49	22	15	14	100
New Mexico	48	30	17	5	100
United States	39	26	20	15	100

Note: Farm loans include loans secured by farm real estate.

Appendix Table B

Distribution of farm loans and deposits, by farm loan ratio of bank (insured commercial banks, Great Plains States, December 1976)

State	Farm loans as per cent of total loans at bank: Under 5	5 to 24	25 to 49	50 and over	Total
	Percentage distribution of farm loans				
North Dakota	0	18	27	55	100
South Dakota	0	8	44	48	100
Nebraska	0	12	22	66	100
Kansas	1	14	27	58	100
Oklahoma	8	21	33	38	100
Texas	11	31	35	23	100
Montana	1	26	48	25	100
Wyoming	2	24	53	21	100
Colorado	4	44	22	30	100
New Mexico	7	25	48	19	100
United States	14	30	30	26	100
	Percentage distribution of deposits				
North Dakota	4	40	24	33	100
South Dakota	2	18	50	30	100
Nebraska	7	29	25	39	100
Kansas	25	30	20	25	100
Oklahoma	53	23	15	9	100
Texas	69	20	8	3	100
Montana	11	47	31	11	100
Wyoming	25	37	31	7	100
Colorado	44	42	8	5	100
New Mexico	61	24	13	3	100
United States	77	15	5	2	100

Note: Farm loans include loans secured by farm real estate.

Appendix Table C

Average loan-deposit ratios (per cent)
(insured commercial banks, Great Plains States, end of year)

State	1970	1971	1972	1973	1974	1975	1976
			Agricultural banks[1/]				
North Dakota . .	52	48	45	47	51	54	59
South Dakota . .	54	53	51	52	52	54	57
Nebraska	58	58	57	57	56	59	66
Kansas	54	53	52	50	51	56	62
Oklahoma	52	51	52	52	52	54	58
Texas	52	53	54	51	54	52	53
Montana	52	49	46	50	54	54	59
Wyoming	55	53	54	57	54	49	60
Colorado	62	59	59	55	58	63	71
New Mexico . . .	59	63	66	67	68	60	65
United States . .	56	54	52	52	53	55	60
			All banks				
North Dakota . .	57	52	53	56	60	60	65
South Dakota . .	58	57	57	60	61	61	63
Nebraska	57	59	61	61	61	61	66
Kansas	52	52	53	54	55	56	60
Oklahoma	51	53	55	57	55	54	57
Texas	58	56	58	60	58	56	57
Montana	56	56	57	62	64	63	66
Wyoming	55	55	55	58	59	58	64
Colorado	62	62	65	66	66	66	68
New Mexico . . .	56	58	60	62	63	59	62
United States . .	62	61	63	67	68	64	65

1/ Banks at which farm loans comprised one-half or more of total loans on the date specified.

Appendix Table D

Distribution of banks and farm loans by loan-deposit ratio of bank (insured commercial banks, Great Plains States, December 1976)

State	Loan-deposit ratio of bank (per cent)				Total
	Under 40	40 to 54	55 to 69	70 and over	
	Percentage distribution of banks at which farm loans comprise one-fourth or more of total loans				
North Dakota	10	26	36	27	100
South Dakota	20	31	39	10	100
Nebraska	10	17	33	40	100
Kansas	10	27	37	26	100
Oklahoma	17	25	40	17	100
Texas	22	36	31	10	100
Montana	7	24	45	25	100
Wyoming	6	14	60	20	100
Colorado	6	15	26	53	100
New Mexico	0	17	72	11	100
United States	13	27	39	21	100
	Percentage distribution of all banks				
North Dakota	8	24	40	28	100
South Dakota	19	29	42	11	100
Nebraska	10	16	34	40	100
Kansas	9	28	39	23	100
Oklahoma	12	27	44	17	100
Texas	13	33	40	13	100
Montana	4	18	44	34	100
Wyoming	4	15	54	27	100
Colorado	3	14	42	41	100
New Mexico	5	12	65	18	100
United States	10	25	42	23	100
	Percentage distribution of farm loans				
North Dakota	3	17	44	36	100
South Dakota	5	16	59	20	100
Nebraska	3	9	38	50	100
Kansas	3	20	45	32	100
Oklahoma	6	24	48	22	100
Texas	9	32	47	12	100
Montana	2	13	50	35	100
Wyoming	2	11	57	30	100
Colorado	1	5	22	72	100
New Mexico	1	11	75	13	100
United States	4	17	48	31	100

Note: Farm loans include loans secured by farm real estate.

Results of the Federal Reserve Bank quarterly surveys of agricultural credit conditions at commercial banks in each of five Federal Reserve Districts are reported regularly in the publications listed below. (The date of the issue giving results of the April 1977 survey is shown in parentheses.)

<u>Farm Credit Conditions in the Fifth District</u>, Research Department, Federal Reserve Bank of Richmond, Richmond, Virginia 23261 (First Quarter 1977).

<u>Agricultural Letter</u>, Research Department, Federal Reserve Bank of Chicago, Chicago, Illinois 60690 (Number 1428, April 29, 1977).

<u>Agricultural Credit Conditions Survey</u>, Research Department, Federal Reserve Bank of Minneapolis, Minneapolis, Minnesota 55480 (April 1977).

<u>Financial Letter</u>, Research Division, Federal Reserve Bank of Kansas City, Kansas City, Missouri 64198 (May 12, 1977).

<u>Farm and Ranch Bulletin</u>, Research Department, Federal Reserve Bank of Dallas, Dallas, Texas 75222 (May 1977).