Melichar

AGRICULTURAL FINANCE COMMENTARY

NOVEMBER 1977

Farm Finance--Current Developments in Perspective

Contents

Emanuel Melichar
Senior Economist

Division of Research and Statistics
Board of Governors of the Federal Reserve System
Washington, D.C. 20551

Circulated among research workers in agricultural finance to stimulate interchange of information and analyses. The author will appreciate receiving other analyses and data. The analysis and conclusions are solely those of the author and do not necessarily reflect the views of the Board of Governors or of other members of its staff.

Farm credit conditions at rural banks

In the fall of 1976, banks in wheat producing areas encountered lower rates of farm loan repayments as many growers sought loan renewals to avoid selling wheat during a period of falling prices. An earlier commentary noted that such farm loan difficulties were then concentrated in the Great Plains area [5]. However, after this year's sharp drop in prices of feed grains, soybeans, and cotton, higher proportions of rural banks in the Corn Belt and the South began to report similar farm loan repayment and renewal experience.

At the same time, outstanding farm loans at rural banks have been increasing faster than deposits, whose growth has been slowed by the reduction in net farm income. Consequently, the liquidity of these banks has, on average, been rapidly and sharply reduced from the level that had prevailed for a number of years prior to 1976. Thus increasing proportions of banks are also finding it necessary to limit their further expansion of loans.

Sources of data. Indicators of farm credit conditions as seen and experienced by commercial banks are provided by data from quarterly reports of condition (call reports) submitted by all banks (results of the June 30, 1977 call became available this month) and from quarterly surveys of agricultural credit conditions conducted by five Federal Reserve Banks (the latest surveys were made as of October 1). The Federal Reserve Banks of Chicago and Minneapolis have made such surveys for many years, while those conducted by the Federal Reserve Banks of Richmond, Kansas City, and Dallas were instituted during 1975.

The five Federal Reserve Districts covered by the quarterly surveys are diverse both in banking structure and the relative importance of agriculture. Thus the proportion of banks heavily involved in financing agriculture varies considerably among Districts, as shown by the distributions of call report data in Table 1. Nationally, 35 per cent of all banks have at least one-fourth of their loan portfolio in farm loans (this group will be referred to as "agricultural banks"), and such banks hold 55 per cent of all farm loans in the banking system. But in the Kansas City District, agricultural banks constitute 62 per cent of all banks and account for 78 per cent of the farm loans. And in Nebraska, for instance, they comprise 88 per cent of both banks and farm loans.

Table 1

Selected banking data, by farm loan ratio of bank
Insured commercial banks, June 30, 1977

Federal Reserve District	All banks	Farm loans as per cent of total loans at bank: Under 5	5 to 24	25 to 49	50 and over
		Number of banks			
U.S.	14,425	5,699	3,714	2,884	2,128
5--Richmond	782	468	264	45	5
7--Chicago	2,704	889	668	689	458
9--Minneapolis	1,406	296	273	380	457
10--Kansas City	2,222	449	394	511	868
11--Dallas	1,522	633	447	315	127
		Percentage distribution of banks			
U.S.	100	40	26	20	15
5--Richmond	100	60	34	6	1
7--Chicago	100	33	25	25	17
9--Minneapolis	100	21	19	27	32
10--Kansas City	100	20	18	23	39
11--Dallas	100	42	29	21	8
		Percentage distribution of farm loans			
U.S.	100	14	31	30	25
5--Richmond	100	28	60	11	1
7--Chicago	100	7	26	39	28
9--Minneapolis	100	2	19	38	41
10--Kansas City	100	3	19	28	50
11--Dallas	100	10	35	34	22
		Percentage distribution of deposits			
U.S.	100	77	15	5	2
5--Richmond	100	80	19	1	*
7--Chicago	100	72	15	9	4
9--Minneapolis	100	41	25	21	14
10--Kansas City	100	39	29	17	16
11--Dallas	100	68	21	8	3
		Average loan/deposit ratio (per cent)			
U.S.	66	66	66	64	64
5--Richmond	68	68	68	63	53
7--Chicago	67	68	65	64	63
9--Minneapolis	69	72	70	67	62
10--Kansas City	65	63	66	65	67
11--Dallas	62	63	59	60	61

"Farm loans" are loans secured by farm real estate and other loans to farmers.
Source: (11), Tables 311.11, 311.22, and 311.31.

*Less than 0.5 per cent.

The survey results, their interpretation, and their comparability among Districts are affected not only by economic and banking structure considerations, but also by differences in the criteria used in selecting the banks to be surveyed. The Kansas City panel is the most heavily involved in agriculture, as it was chosen from banks at which farm loans were at least one-half of total loans. The Chicago survey also covers only banks at which farm lending is relatively important, with the panel limited to banks at which farm loans comprised at least one-fourth of total loans (except in Michigan where the criterion was 10 per cent). The remaining Districts chose their reporting panel from all banks, using varying criteria. Dallas sampled more heavily from the banks with the higher proportions of farm loans and Richmond from the banks with the greater farm loan volume, while Minneapolis chose a cross-section of banks of all sizes. Finally, because the Richmond panel is necessarily much smaller than that of the other Districts, the results tend to display more sampling variability from one quarter to the next. Ideally, these differences should be kept in mind as the survey results are presented.

Farm loan quality. The extent to which surveyed banks are encountering greater farm loan repayment difficulties is shown in Table 2. Greater repayment problems are usually accompanied by increased demand for loan renewals or extensions, as indicated in Table 3. These series are quite sensitive to variations in farm prices and income; for example, note the rise and subsequent decline in the incidence of such lending experience during 1974-75, when farm income first fell sharply and then recovered in mid-1975.

Recent experience falls into two categories. In the wheat-producing Districts--Minneapolis and Kansas Ctiy--the proportions of banks reporting greater farm loan repayment problems reached a high level by the end of 1976 and held it through 1977. Elsewhere, loan quality conditions were much more favorable earlier this year but worsened significantly by autumn--especially in the Chicago District. The proportions of banks now reporting slower farm loan repayments are also relatively high when compared with past survey results. In the Chicago survey, which goes back to 1965, the highest proportion previously recorded was 38 per cent in October 1967. Prior to 1976, the previous high in the Minnepolis survey, which goes back to 1964, had been 53 per cent in January 1965. Both old marks are now far exceeded.

Table 2

Percentage of banks reporting a slower rate of farm loan repayments

Date of survey	Federal Reserve District: 5 Richmond	7 Chicago	9 Minneapolis	10 Kansas City	11 Dallas
1972--January	–	12	18	–	–
April	–	6	12	–	–
July	–	4	7	–	–
October	–	3	2	–	–
1973--January	–	22	0	–	–
April	–	9	2	–	–
July	–	7	1	–	–
October	–	6	3	–	–
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
July	11	40	62	67	31
October	24	52	74	65	38

Source: Federal Reserve Bank surveys of agricultural credit conditions.
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.

Table 3

Percentage of banks reporting greater demand for loan renewals or extensions

Date of survey	Federal Reserve District				
	5 Richmond	7 Chicago	9 Minneapolis	10 Kansas City	11 Dallas
1972--January	–	15	15	–	–
April	–	10	15	–	–
July	–	7	8	–	–
October	–	8	5	–	–
1973--January	–	26	4	–	–
April	–	14	6	–	–
July	–	12	5	–	–
October	–	8	2	–	–
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
July	14	45	55	69	31
October	30	56	61	67	44

Source: Federal Reserve Bank surveys of agricultural credit conditions.
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.

During 1977 several Reserve Banks added special questions to their quarterly surveys to obtain more detailed information on the financial condition and prospects of farm borrowers. In response to the first such query, banks in the Kansas City District reported in January that 55 per cent of their farm borrowers were experiencing serious cash flow problems. In April, the same banks were asked to estimate how their farm customers were distributed by financial condition. On average, one-half were classified as in good general condition, one-third as having problems but also credit reserves to draw on, 10 per cent as having "nearly exhausted their credit reserves," and 4 per cent as "overextended and in serious trouble." Condition varied among farming areas as well as from bank to bank; for instance, 53 per cent of the banks said that over half of their customers were in good condition, whereas 14 per cent placed the proportion at less than one-fourth. In October, when asked about the proportion of farm customers facing possible liquidation, the panel's responses averaged about 3 per cent. Interestingly, this percentage exceeded the proportion of customers reported as having loans delinquent at the time. Variation among banks was again evident; for example, nearly a third of the banks had no delinquent farm borrowers, while a tenth reported that more than 5 per cent were delinquent.

In July the Federal Reserve Bank of Chicago asked its survey panel to indicate the extent of current repayment problems and also to estimate the normal incidence of such difficulties. On average, the bankers reported that 1 per cent of the farm loan portfolio was outstanding to farmers with severe repayment problems (which was also indicated as the normal level) and that an additional 5 per cent of the portfolio involved "major repayment problems requiring added collateral and/or long-term workouts" (compared with an indicated normal level of 3 per cent).

The Federal Reserve Bank of Dallas in October asked its panel about the ability of agricultural borrowers to repay their operating loans as scheduled. For the District as a whole, the estimated proportion that would be unable to repay on time averaged 26 per cent. However, conditions varied greatly among different farming areas, with the average response ranging from 11 per cent in a diversified farming area to 50 per cent in a primarily grain-producing area, the northern High Plains of Texas.

Rural bank liquidity. At insured commercial banks, over the two-year period ending June 30, 1977, total deposits increased by 13.5 per cent and total loans by 14.6 per cent--but total farm loans rose by 31.1 per cent. The result, as shown in Table 4, is that the average loan/deposit ratio remained virtually unchanged for banks as a whole but rose sharply at banks with above-average involvement in farm lending (nationally, farm loans comprised 5.9 per cent of total bank loans on June 30, 1977). At agricultural banks, the average loan/deposit ratio rose to 64 per cent, a significant increase from the plateau around 55 per cent that had been maintained since 1967.11/ The reduced liquidity at agricultural banks resulted in part from a rate of deposit growth somewhat below the national average. A major factor, however, was the sharp expansion in outstanding farm loans, an outcome of slower repayments and increased renewals as well as greater new loan demand.

Table 4

Average loan/deposit ratios, by farm loan ratio of bank
Insured commercial banks (per cent)

June 30	All banks	Farm loans as per cent of total loans at bank			
		Under 5	5 to 24	25 to 49	50 and over
1972.............	63	65	60	56	56
1973.............	68	70	63	56	55
1974.............	69	71	64	57	55
1975.............	66	67	61	57	55
1976.............	65	66	63	60	59
1977.............	66	66	66	64	64

"Farm loans" are loans secured by farm real estate and other loans to farmers.
Source: (11), Table 311.31

11/ The loan/deposit ratio remains the most popular indicator of bank liquidity position; however, because large banks make much greater use of nondeposit sources of funds than do small banks, the ratio of loans to total assets indicates more accurately the relative commitment of banking resources to loans. Loan/asset ratios at agricultural banks averaged 57 per cent on June 30, 1977, compared with an average of 54 per cent at all insured commercial banks.

During the past two years, therefore, many more banks involved in farm lending moved to a loan/deposit ratio exceeding 70 per cent--a level at which the ability of small banks to expand loans further becomes highly dependent on their future deposit growth. As shown in Table 5, the proportion of banks with loan/deposit ratios in this range (as well as the proportion of farm loans accounted for by such banks) now exceeds that of June 1974, a time of monetary restraint with the national prime interest rate at 12 per cent.

Table 5

Distribution of banks and farm loans, by loan/deposit ratio of bank
Insured commercial banks (per cent)

June 30	Total	Loan deposit ratio of bank (per cent)			
		Under 40	40 to 54	55 to 69	70 and over
			Agricultural banks		
1972............	100	15	34	37	14
1973............	100	19	34	35	12
1974............	100	19	33	34	15
1975............	100	17	33	35	14
1976............	100	13	28	37	22
1977............	100	9	21	37	33
			Other banks		
1972............	100	11	29	44	16
1973............	100	10	25	43	22
1974............	100	9	23	41	27
1975............	100	9	26	45	19
1976............	100	8	24	45	23
1977............	100	6	19	42	32
			Farm loans		
1972............	100	5	23	50	22
1973............	100	5	21	45	29
1974............	100	5	20	38	37
1975............	100	5	22	48	25
1976............	100	4	17	46	33
1977............	100	2	12	41	45

"Agricultural banks" are banks at which farm loans comprised one-fourth or more of total loans on the date specified.

"Farm loans" are loans secured by farm real estate and other loans to farmers.

Source: (11), Tables 312.12 and 312.21.

Table 6

Average loan/deposit ratio at banks surveyed
(Per cent)

Date of survey	Federal Reserve District				
	5 Richmond	7 Chicago	9 Minneapolis	10 Kansas City	11 Dallas
1972--January	-	54	58	-	-
April	-	54	58	-	-
July	-	55	60	-	-
October	-	55	59	-	-
1973--January	-	54	58	-	-
April	-	54	58	-	-
July	-	55	61	-	-
October	-	56	61	-	-
1974--January	-	55	61	-	-
April	-	54	63	-	-
July	-	58	63	-	-
October	-	57	65	-	-
1975--January	-	57	64	-	-
April	-	56	63	-	-
July	-	56	63	-	58
October	64	57	63	-	55
1976--January	60	57	63	56	54
April	61	56	63	57	55
July	64	58	65	59	58
October	62	59	66	62	60
1977--January	62	59	64	61	57
April	64	59	63	62	58
July	66	61	66	65	62
October	65	64	68	64	63

Source: Federal Reserve Bank surveys of agricultural credit conditions.

As one would expect after viewing these national trends in liquidity, loan/deposit ratios rose on average during 1977 at the banks in each of the five Federal Reserve Bank surveys of agricultural credit conditions, continuing the upward move that began in 1976 (Table 6). Simultaneously, as indicated by Table 7, the proportion of banks declaring that their loan/deposit ratios were undesirably high also rose, except in the Kansas City District where it stayed at the high level--about one-half of the banks--that it had reached last fall.

Farm loan availability. Logically, the availability of farm loans from rural banks is affected by trends in the quality of such loans and in the liquidity of the banks. One would infer, therefore, that in 1977 the adverse developments noted in both of these factors were progressively reducing the overall availability of bank loans to farmers. Four of the Reserve Bank surveys yield direct indicators of loan availability that provide a check on and limited quantification of this inference.

One indicator is the proportion of banks actively seeking new farm loan accounts, shown in Table 8. In the Minneapolis District, where this question has been asked of the panel since 1964, that proportion has ranged from as high as 95 per cent in January 1968 to as low as 32 per cent in July 1970 and 27 per cent in October 1974. These peaks and troughs closely follow similar extremes in national monetary ease and restraint, and thus national monetary conditions appear to exert a major influence on the farm lending capability of the banks in the Minneapolis panel. Current experience is consistent with this hypothesis. Farm lending by this group now appears, on average, to be only moderately constrained by considerations of fund availability. Over half of the banks are still seeking new farm loan accounts and--looking ahead to other data--neither loan referrals to other banks (Table 9) nor loan refusals due to fund shortage (Table 11) reflect more than a moderate degree of restraint. However, the quality of farm loans has become a more prominent factor in their lending decisions, judging from the increased number of banks referring more farm borrowers to nonbank credit agencies--probably to real estate lenders and the Farmers Home Administration (Table 10).

Table 7

Percentage of banks with a loan/deposit ratio that is higher than desired

Date of survey	Federal Reserve District				
	5 Richmond	7 Chicago	9 Minneapolis	10 Kansas City	11 Dallas
1972--January	–	17	13	–	–
April	–	14	12	–	–
July	–	19	13	–	–
October	–	14	6	–	–
1973--January	–	17	6	–	–
April	–	17	7	–	–
July	–	20	15	–	–
October	–	22	15	–	–
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
July	24	38	29	59	26
October	15	46	35	51	28

Source: Federal Reserve Bank surveys of agricultural credit conditions.

Table 8

Percentage of banks actively seeking new farm loan accounts

Date of survey	Federal Reserve District			
	5 Richmond	9 Minneapolis	10 Kansas City	11 Dallas
1972--January	–	67	–	–
April	–	69	–	–
July	–	68	–	–
October	–	72	–	–
1973--January	–	75	–	–
April	–	78	–	–
July	–	71	–	–
October	–	62	–	–
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
July	72	58	31	44
October	68	58	25	39

Source: Federal Reserve Bank surveys of agricultural credit conditions.

Table 9

Percentage of banks referring more farm borrowers to correspondent banks

Date of survey	Federal Reserve District 5 Richmond	9 Minneapolis	10 Kansas City	11 Dallas
1972--January	–	6	–	–
April	–	5	–	–
July	–	6	–	–
October	–	2	–	–
1973--January	–	7	–	–
April	–	7	–	–
July	–	7	–	–
October	–	6	–	–
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
July	0	13	28	17
October	0	8	34	20

Source: Federal Reserve Bank surveys of agricultural credit conditions.

Note: 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 10

Percentage of banks referring more farm borrowers
to nonbank credit agencies

Date of survey	Federal Reserve District			
	5 Richmond	9 Minneapolis	10 Kansas City	11 Dallas
1972--January	–	5	–	–
April	–	8	–	–
July	–	3	–	–
October	–	2	–	–
1973--January	–	2	–	–
April	–	2	–	–
July	–	3	–	–
October	–	5	–	–
1974--January	–	3	–	–
April	–	2	–	–
July	–	6	–	–
October	–	19	–	–
1975--January	–	24	–	–
April	–	27	–	–
July	–	11	–	22
October	13	9	–	20
1976--January	9	16	26	18
April	13	13	20	13
July	3	12	19	7
October	3	14	25	9
1977--January	3	27	34	15
April	9	33	37	22
July	10	28	37	21
October	16	25	50	29

Source: Federal Reserve Bank surveys of agricultural credit conditions.
Note: 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 11

Percentage of banks that refused or reduced a farm loan request in the preceding quarter because of a shortage of funds

Date of survey	Federal Reserve District 5 Richmond	9 Minneapolis	10 Kansas City	11 Dallas
1972--January	–	4	–	–
April	–	5	–	–
July	–	2	–	–
October	–	2	–	–
1973--January	–	2	–	–
April	–	5	–	–
July	–	5	–	–
October	–	9	–	–
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
July	0	12	26	15
October	0	11	27	9

Source: Federal Reserve Bank surveys of agricultural credit conditions.

Farm loan availability is decidedly tighter at the banks surveyed in the Kansas City District, as judged from these indicators. Because, as noted earlier, the Kansas City reporting panel is composed solely of banks at which farm loans constitute a majority of total loans, deposit and loan trends at most of the banks are undoubtedly dominated by agricultural developments. As of the October survey, only one-fourth of these banks were actively interested in new farm loan accounts. The proportions referring more borrowers to both correspondent banks and nonbank credit agencies had increased significantly, and over one-fourth of the banks had refused or reduced at least one farm loan request during the third quarter because of a shortage of funds.

Loan availability at the generally more diversified banks in the Dallas panel was considerably less constrained, on the basis of data in Tables 7 through 11. In October, the Reserve Bank also asked the banks to indicate the percentage of their farm borrowers that they would not continue to finance. The District average was 6 per cent, but the proportion varied by farming area, from a low of 3 per cent in northern Louisiana to a high of 12 per cent in the "High Plains" grain-producing area of Texas. Inadequate income and insufficient equity were cited most often as reasons why borrowers would be dropped, and poor management by borrowers was also named by many bankers. The bank's loan limit or availability of funds was cited by relatively few banks.

A special inquiry in the Chicago District in July indicated that the percentage of farmers whose loan requests were denied or scaled down in the first half of 1977 was about 50 per cent above normal; for instance, bankers reported taking such action on 9 per cent of farmers requesting new loans to finance capital expenditures, compared with 6 per cent normally. When asked about factors accounting for these actions, 71 per cent of the bankers indicated that most of these borrowers were already over-extended. Inadequate income prospects and insufficient equity of borrowers were each a factor at nearly two-thirds of the banks, whereas the bank's loan limit or availability of funds was cited by less than one-fourth of the bankers.