

Remarks Prepared for the Panel Discussion
of the
Agricultural Finance Outlook

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As a representative of the Federal Reserve System, I assume that I am expected to contribute an over-all portrayal of the current status of bank financing of agriculture. In addition, I have been asked to discuss the Federal Reserve's new seasonal borrowing privilege for member banks, and finally I would like to comment on parts of the USDA's Agricultural Finance Outlook and of Phil Allen's presentation.

Bank Financing of Agriculture

On June 30, 1973, the nation's 13,842 insured commercial banks held farm loans totaling \$21.1 billion and deposits of \$625.1 billion. Farm loans were 17 per cent higher than a year earlier, the largest annual percentage gain since 1951, while total deposits rose by 14 per cent.

On June 30, there were 2,368 banks at which farm loans constituted one-half or more of the total loan portfolio. Aggregate farm loans at these banks amounted to \$5.4 billion, 10 per cent more than the amount at this category of banks a year earlier, while total deposits at \$15.2 billion were 14 per cent larger. The aggregate loan/deposit ratio--a rough indicator of over-all loan availability--fell from .557 to .546, indicating that these banks in general were perhaps slightly better able to accommodate loan requests than they were in 1972. The June 30 aggregate loan/deposit ratio at this category of banks has since 1966 fluctuated very narrowly, in the range from .546 to .567, which reflects a balance between deposit and loan growth trends (farm

loans rose by 70 per cent at this category of banks between 1966 and 1973) and also shows that these banks were relatively unaffected by the factors that caused large cyclical swings in fund availability at large urban banks during this period.

Also on June 30, there were an additional 2,973 banks at which farm loans comprised between one-fourth and one-half of the loan portfolio. The farm loans at this group of banks totaled \$6.1 billion, 20 per cent more than the volume at this category of banks a year earlier. Total deposits, at \$30.7 billion, were 18 per cent larger. The aggregate loan/deposit ratio rose slightly from .551 to .562. But, just as at the group of banks at which farm loans were an even more prominent component of the portfolio, the June 30 aggregate loan/deposit ratio at this category of banks has also varied only slightly since 1966, remaining in the range from .544 to .562. In contrast, the loan/deposit ratio for both groups of banks had been rising steadily for many years prior to 1967.

Through mid-1973, therefore, rural banks on the whole remained in roughly the same liquidity position as in the previous six years, in spite of an unusual increase of 5.1 per cent in their farm loans during the second half of 1972 (no change is more typical) and an above-average increase of 11.7 per cent in the first half of 1973 (first-half increases during the last 10 years averaged 9.6 per cent).

Surveys of rural bankers regularly conducted by the Federal Reserve Banks of Chicago and Minneapolis indicate that the liquidity of some of these banks was reduced significantly during the third quarter of 1973, in part undoubtedly because of farm loan demands arising from

the July-August spurt in crop and livestock prices and an unusual increase in on-farm holdings of livestock and harvested crops.

Seasonal borrowing privilege

On April 19, 1973, the Federal Reserve System instituted a seasonal borrowing privilege at its discount window for those member banks that regularly experience a relatively pronounced seasonal swing in their funds available for lending (a swing in excess of 5 per cent of average deposits), and which in addition lack reasonably reliable access to national money markets, which the nation's larger banks often employ to obtain funds for seasonal and other short-term purposes. The new seasonal borrowing privilege, as the data that follow will indicate, can be relatively important to rural banks because the agricultural economies they service often generate sizable seasonality in their deposits and loans, and because most of these banks cannot easily raise funds in the main financial markets through sale of negotiable certificates of deposit or bankers' acceptances, as most large banks do.

In the course of designing the new privilege, the seasonal pattern in net fund availability at each member bank during 1968-72 was individually calculated. After the terms of the new regulation were applied to the calculated seasonality, it was estimated that about 1,900 banks, or 34 per cent of the nation's 5,700 member banks, could qualify for the privilege. But far larger proportions of rural member banks would probably qualify--68 per cent of the 657 member banks at which farm loans comprise one-half or more of the loan portfolio, and 44 per cent of the additional 977 member banks at which farm loans comprise between one-fourth and one-half of the loan portfolio.

The Board of Governors had hoped to announce the privilege early in 1973, giving rural banks more time to become familiar with its provisions and to make advance arrangements to use it in 1973, as the regulation requires. Several circumstances combined to delay adoption until April, by which time many member banks were already into their period of seasonal need and were handling it in other ways. Nevertheless, 205 banks had utilized the privilege by October 31, and on the days they borrowed they obtained an average ~~of~~ \$308 million, which was equal ~~to~~ 5.17 per cent of their outstanding loans.

Forty-four member banks at which farm loans comprised one-half or more of the loan portfolio had used the privilege by October 31, and had obtained an average of \$18 million on borrowing days, a sum equal to 5.28 per cent of their outstanding loans. An additional 35 banks at which farm loans comprised between one-fourth and one-half of the loan portfolio obtained an average of \$26 million on borrowing days, equal to 4.26 per cent of their outstanding loans. When compared to the potential that had been calculated beforehand, it is evident that the number of such rural banks using the privilege could be increased more than ten-fold, and that the amount borrowed could expand by a factor of 7 or more.

In general, relative to the potential that had been estimated, the record of actual seasonal borrowing through October 31 indicates that the larger and urban banks have been somewhat quicker than rural banks to take advantage of this new privilege of membership in the Federal Reserve System. Vigorous measures have been taken to explain the privilege to qualifying member banks and to promote its use, and these efforts will continue in coming months. However, the record cited indicates that university extension personnel that have contact with

rural bankers could also perform a service in this area--a service that may be particularly timely and useful to both bankers and farmers in view of the farm loan demands being projected for 1974.

Comments on the USDA's Agricultural Finance Outlook

Flow-of-funds analysis. As anyone who has followed my papers on farm capital and credit flows must already realize,^{1/} I am extremely pleased that in this issue of the Agricultural Finance Outlook^{2/} the USDA has presented its principal analysis and projections in the context of a comprehensive flow-of-funds framework that clearly indicates (Tables 3 and 6) both what amounts of capital funds were used each year for which of several purposes and how each year's total capital flow was financed--how much through an increase in debt and how much from current earnings. The use of a flow-of-funds framework or "sources and uses of funds statement" in current analysis and outlook work is a logical sequel to the theoretical and historical base laid by Arnold Tostlebe (1957), D. Gale Johnson (1963), John Brake (1966), and the USDA's own John Penson, David Lins, and George Irwin (1971).^{3/}

1/ The latest paper in this series is "Financing Agriculture: Demand for and Supply of Farm Capital and Credit," American Journal of Agricultural Economics, May 1973, pp. 313-325. References to previous papers are listed on page 325 of this article.

2/ Agricultural Finance Outlook, U.S. Department of Agriculture, AFO-13, December 1973, 14 pp.

3/ References to these works can be found on page 325 of the paper cited in footnote 1.

Capital formation. Since the terminology that is employed in this "official" application of the flow-of-funds approach to aggregate farm financial analysis is likely to be widely quoted and adopted, I would like to record concern, while there may still be time, about the use of the term "capital formation" to denote the total capital flow that is financed by the farming sector each year.

To both the layman and the economist, "capital formation" is most likely to connote an expansion of the capital plant. In the Agricultural Finance Outlook, however, a major part of the flow labeled "capital formation" consists of the funds used to purchase farm real estate from operators and landlords who are leaving the farming sector. It is necessary for the farming sector to come up with the funds to finance these transfers of property, but obviously the capital plant is unaffected by these changes in ownership. I suggest that "capital formation" should be replaced either with an innocuous term such as "total capital flow" or with "real estate transfers and gross capital formation," which would more accurately denote the nature of the item.

It may also be useful to point out that the capital expenditures data listed under capital formation are roughly equivalent to gross purchases, and that depreciation must be subtracted from these sums to obtain an estimate of the net addition to the farm capital plant. For instance, to estimate the net expansion of agriculture's plant during 1973, take the total "capital formation" of \$25.8 billion, delete the real estate transfers of \$11.2 billion, and subtract depreciation allowances of perhaps \$9 billion. This leaves \$5.6 billion as the net investment in the farm plant, or "net capital formation."

Farm debt forecast. It does not necessarily follow that the forecasts of the change in debt will be more reliable than in the past just because the flow-of-funds table is used and presented. However, when the course of events causes actual capital and credit flows to deviate significantly from the flows forecast, this table will clearly show where the deviations occurred.

A second new feature of this year's outlook statement is that the projections have been generated by simulation of an econometric model of the farm financial sector, the AIW Simulator. It should be noted that the use of the flow-of-funds framework neither depends on nor necessitates the use of such a model to generate the projections; judgmental forecasts can also profit from being made and presented in a flow-of-funds framework. On the other hand, so many interrelated factors are involved in determining farm capital and credit flows that most analysts can benefit from using a model in which they formally organize and record their ideas and findings about the various relationships. Thus the construction of this model is another significant forward step in the USDA's analysis of aggregate financial developments.

Two alternative forecasts of the net addition to farm debt during 1974 are presented, one of \$10.5 billion and the other of \$11.9 billion (all debt data cited in these remarks exclude CCC loans). To put these numbers into perspective, note that prior to 1971 the largest net increase in debt was \$4.4 billion which occurred in 1967. Since 1970, according to current USDA estimates, total farm debt has risen by \$5.4 billion in

1971, \$7.2 billion in 1972, and \$7.5 billion in 1973.^{4/} The alternative amounts forecast for 1974 thus represent jumps of 40 and 59 per cent, respectively, over the record high net new borrowing estimated to have occurred during the current boom year. Forecasts that venture so far into unexplored numerical territory should be accompanied by a compelling argument or explanation.^{5/}

A compelling argument may exist, but if it does it is not presented in Agricultural Finance Outlook. The implicit explanation is as follows: capital spending in 1974 is to be about as large as in 1973, but net farm income will drop by several billions of dollars; therefore, farmers will substitute debt dollars for income dollars in financing the roughly unchanged volume of capital spending, thereby increasing their net new borrowing by several billions of dollars.

In this scenario, there must be some probability to the outcome that net new borrowing will be as high as forecast or more, as well as some probability that significantly lower outcomes will materialize. It would be helpful to have some information on factors relevant to assessment of these probabilities; for example, information on how well the AIW Simulator has succeeded in modeling farmers' past financial behavior. It is, for

^{4/} In his comments (footnote 7), Allen explains that the AIW simulation being reported had necessarily covered both 1973 and 1974 and that the AIW projection of debt increase in 1973 was \$0.7 billion higher than the 1973 estimate shown in Table 6 of Agricultural Finance Outlook, so that the AIW projections of debt increase were actually as follows: \$8.3 billion in 1973 and either \$9.8 billion or \$11.2 billion in 1974, depending on which interest rate scenario is used in projecting 1974.

^{5/} There is also some possibility that the increase in debt during 1973 will turn out to have been significantly higher than the present USDA estimate of \$7.5 billion, in which case the forecasts for 1974 would in retrospect be correspondingly less astounding.

instance, puzzling to look back to the two previous postwar years-- 1952 and 1967--in which, as is projected for 1974, farm capital spending was maintained while net income dropped after two preceding years of sharp gains, and to find that net new borrowing dropped sharply in 1952 and increased only slightly in 1967. Can the different financial behavior in 1952, 1967, and 1974 be explained, or is the split between debt and internal financing in fact an erratic and uncertain parameter? How well does the AIW Simulator simulate 1951-52 and 1966-67? In the Simulator, the desired stock of debt is related mainly to the interest rates paid on such debt and to the value of the principal assets financed by such debt. Is this specification adequate in periods, such as the present, in which net income has soared far above previous consumption levels and in which farmers are therefore presumably enjoying an unusual degree of freedom in choosing among higher consumption, repayment of debt, or internal financing of plant expansion?

To summarize, I find in the Agricultural Finance Outlook some discussion of the basis for the projection of each type of capital flow. I look for, but do not find, a similar discussion of the basis for the forecasted split between internal and external financing, nor information on the degree of reliability that might appropriately be attached to this element of the forecast (or, for that matter, to the projections of capital flows).

Federal Land Bank interest rates. On page 4, Agricultural Finance Outlook states, "Rising interest rates in the central money markets were soon reflected in rates charged by farm lenders such as the Production Credit Associations and the Federal Land Banks who obtain

their funds through the sale of securities in the money markets."

This statement is substantially correct for the PCA experience in 1972-73, but not for the Land Bank experience. As the Farm Credit Administration has reported, the cost of funds obtained in the money markets began to increase in February-March 1972.^{6/} The average cost of funds raised for lending by PCA's subsequently bottomed out in mid-1972, and the interest rates charged by PCA's began to rise at that point. The response lag was about 6 months, which probably can be called "soon."

In spite of rising costs of new money, however, the average cost of Federal Land Bank funds continued to decline through 1972. In response, several Land Banks reduced their charges during 1972, with the last rate reduction occurring at year-end. The average cost of funds began to rise early in 1973, but the first increase in rates charged at any Land Bank did not occur until August 1, approximately 18 months after the rise in money market rates had started. Many Land Banks in fact did not increase their billing rate until October 1.

One of the farm credit phenomena of the first half of 1973, therefore, was in fact the stability found in interest rates charged on farm loans by Federal Land Banks and also by most commercial banks, which gave them a competitive edge over PCA's and life insurance companies and helps to explain the markedly different rates of increase in loan volume that were reported by these groups of lenders during that period.

At present, however, the situation is the reverse of that found during the first half of 1973. Market interest rates are easing

6/ Economic Factors Influencing Agricultural Credit, Research Division, Farm Credit Administration, Washington, D.C. 20578, December 1973, p. 16.

and may ease further if the current slowdown in business, housing, and consumer loan demands continues. Officials of the Farm Credit Administration, however, have recently been pointing out that the average cost of Federal Land Bank funds will continue to rise in early 1974, particularly because these Banks must refund maturing bonds that were issued at rates much below current levels. They warn that rates charged by Land Banks may therefore increase further in 1974 even if market rates ease further. If market interest rates do fall significantly, the competitive position of the Federal Land Banks vis-a-vis most other farm mortgage lenders may tend toward the reverse of that which prevailed during much of 1972 and 1973.

Overline loan problems. On page 13, in speaking of 1974, Agricultural Finance Outlook states, "The smaller commercial banks are likely to find that more of the loan requests they receive are beyond their lending limits and will more frequently be turning to correspondents to carry their overlines." There is reason to believe, however, that while overline loan requests may continue to be unusually numerous in 1974, the peak of the problem in this farm business cycle may have occurred in 1973, and perhaps specifically in August 1973, coincidentally with the probable peak in many farm prices. The basis for this belief is that, as noted earlier, deposits at most rural banks rose substantially during the past year, and many bankers will now be adjusting their capital and surplus accounts upward in response to a large rise in their total assets. Since legal limits on the size of individual loans are generally related to the amount of capital and surplus, during 1974 lending limits will be tending to "catch up" with the size of farm loan requests.

Debt servicing. On page 14, Agricultural Finance Outlook states, "Farmers may have some difficulties servicing their debt commitments out of farm earnings in 1974 regardless of which interest rate scenario occurs, due primarily to the projected lower net farm income." I find this statement very surprising because, in spite of the projected drop in net income, the fact remains that if the projected level of net income materializes it would be the second highest on record and should enable 1974 to be classed among the more prosperous years. If difficulties in servicing debt obligations were to appear in such a year, there would be cause for real longer-term concern, but such difficulties probably will not materialize this early in the farm business cycle.

Farm loan interest rates in 1972-73. Finally, a comment to correct a misleading impression given by Allen in his Table 1, which is entitled "average interest rates on farm loans, selected lenders."^{7/} The only rates shown for commercial banks in that table are rates charged by banks reporting monthly for the G.10 release published by the Federal Reserve System. These are mostly large banks whose lending rates tend to follow changes in money market rates fairly closely, as the rapid increases shown for 1972-73 clearly demonstrate. The bulk of the banks serving farmers, however, are small and medium-sized country banks, and comprehensive interest rate information available quarterly for such banks in the Seventh (Chicago) and Ninth (Minneapolis) Federal Reserve Districts shows conclusively that rates on farm loans at these banks did not rise significantly until the third quarter of 1973. The contrast between the 1972-73 patterns of farm loan interest rates of rural com-

^{7/} Allen, Philip T., "Agricultural Finance Outlook, 1974," Agricultural Outlook Conference, December 19, 1973, (mimeo.).

mercial banks on the one hand and large banks and PCA's on the other is striking and should be of much interest, and so I reproduce Allen's Table 1 below with the addition of data from the Seventh and Ninth District surveys of rural banks.

Average interest rates on farm loans
(per cent)

Loan type and lender	1972		1973			
	July 1	Oct 1	Jan 1	Apr 1	July 1	Oct 1
Short and intermediate term loans:						
Rural banks (7th F.R. District)--						
Feeder cattle loans.....	7.44	7.47	7.52	7.55	7.69	8.27
Rural banks (9th F.R. District)--						
Short-term loans.....	8.03	8.02	8.06	8.08	8.18	8.55
Intermediate-term loans.....	8.13	8.15	8.20	8.20	8.26	8.67
Banks reporting for G.10 release--						
Feeder cattle loans.....	7.34	7.56	7.74	8.03	8.61	9.71
Other production loans.....	7.55	7.72	7.89	8.01	8.35	9.09
Production Credit Associations...	7.07	7.11	7.43	7.71	8.16	8.98
Farm mortgage loans:						
Rural banks--						
7th F.R. District.....	7.61	7.64	7.67	7.71	7.81	8.35
9th F.R. District.....	7.90	7.91	7.92	7.95	8.05	8.43
Federal Land Banks.....	7.42	7.38	7.35	7.35	7.35	7.75
Life insurance companies ^{1/}	8.32	8.26	8.39	8.29	8.49	8.70

^{1/} Average for the quarter ending day before date shown.