

Farm Credit - Supply and Demand For  
Funds and Efficiency of Credit Institutions

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Before the National Agricultural Credit Conference  
November 13, 1957

It is good to have this opportunity to discuss some current farm credit problems with you who represent the nation's major sources of farm credit. The fact that we meet for this discussion indicates our great interest in the agricultural sector of our economy.

In terms of employment, the farm sector of the economy is declining. If attendance at this conference had remained proportionate to the number of farmers, only about 50 per cent as many would be attending today as attended twenty years ago. However, rather than following the decline in number of farmers, participants in these conferences have increased. The farm credit industry is typical in this respect to other agribusiness industries. Both the farm supply and the processing and marketing sectors have trended constantly upward. Agribusiness output in 1965 totaled about \$130 billion. Such products accounted for 30 per cent of the nation's economic activity. The agribusiness group of industries grows about 4.0 per cent per year in dollar volume, despite the decline in workers at the farm sector.

From a national welfare viewpoint, we are indeed fortunate to live in a nation and an age when the production of food and fiber requires such a small portion of the nation's labor. Only 6 per cent of our labor force in the United States was employed on farms in 1965, and the per cent employed in this sector has declined almost every year during the past three decades. Indicative of the gains in farm technology, one worker in 1966 produced sufficient food and fiber for himself and 39 other people. This was almost six times the number of people sustained by one farm worker at the turn of the century.

Of the 12 major industrial nations of the world for which data are provided by the OECD (Organization for Economic Cooperation and Development), the United States in recent years has had the lowest per cent of workers employed directly in agriculture. Employment on farms in the 1960's ranged from 6 per cent of the labor force in the United States to 49 per cent in Greece. In Western Europe, one of the most highly-developed areas of the world outside the United States, about 20 per cent of the labor force was engaged in agriculture and still failed to produce sufficient food and fiber for the population. The area imported a sizable portion of its farm product needs.

In nonindustrial nations such as the African states, India, and Latin America, which contain about three-fourths of the world's population, more than half of the work force is usually engaged in producing

food. In other words, while we are living in a land of abundance, most of the world has been subjected to the harsh laws of scarcity as outlined by Malthus 150 years ago. The level of population in most countries may have actually been determined by the food supply, and starvation is the norm rather than the exception.

How have we in the United States achieved this efficiency in the production of farm products? I might begin by commenting that we have made wise use of our productive resources (labor, land and capital). Our labor has generally been well trained and our other resources have been efficiently allocated, not dictatorially nor by committee, but by the desire of each person to achieve greater profits via increased sales and/or reduced costs. This incentive to maximize has provided a market for productive farm resources. The more efficient operators have found it profitable to expand by purchasing resources from others. Individual farm expansion has taken several forms, including more acres per farm and an increase in both fixed and operating capital. The less efficient operators and many of the farm youth not already established in farming have moved to other occupations where labor returns are greater.

Efficiency of farm production has been greatly enhanced by technological developments. Science has attacked farm production problems on a wide front and with amazing success. Mechanization

technology has made possible our large multi-row cultivating and harvesting equipment, as well as numerous other labor-saving machines. Plant and animal breeding have changed the characteristics of plants and livestock. Chemicals, including insecticides, fungicides, weed control agents, and fertilizers, have been developed which enable producers to greatly increase output per acre and lower direct labor requirements per unit of output. Each success provided incentive for additional investment in research as markets for productive inputs developed.

In this development most government programs, especially those concerned with education and research, served as a catalyst, aiding the market to achieve maximum efficiency. Agriculturally-trained specialists hired by the government encouraged farmers to adopt new devices and use new products. Credit markets for farmers were improved through the organization of the Farm Credit Banks. Research supported by government has made major contributions to new farm production and marketing techniques. Government price stabilization programs have tended to reduce risk and possibly thereby increase marginal innovations. On the other hand, price supports have tended to reduce the rate of adjustment in the farm labor force and farm organization for maximum efficiency in some

areas. The Acreage Control Programs, a companion to price stabilization, may also have contributed to inefficiency in farm organization and output, but possibly hastened the exit of labor from agriculture. Despite the inefficiencies inherent in price and acreage controls, most other government programs have, on balance, tended to aid the market forces in moving toward greater efficiency in the industry.

Most moves toward greater farming efficiency have involved larger quantities of credit for longer terms. High returns to scale have hastened farm enlargement and greatly enhanced demand for farm real estate credit. Such credit rose at the annual rate of 9 per cent during the past decade and at an annual rate of 7 per cent in the prior ten years. Demand for credit per farm, i. e., size of loan, rose at a faster rate than total credit demand. Total credit per farm rose at the annual rate of 13 per cent during the decade ending in 1966, with almost equal rates of increase in real estate and non-real estate credit. Each increase in purchased inputs from farm supply industries has resulted in a corresponding increase in credit demand. Costs of many farm supply items such as machinery, breeding livestock, and specialized buildings can only be recovered after many years of use. Demand for longer-term credit for non-real estate purposes thus increased.

Despite government price stabilization programs, farm credit risks have probably increased. Major fluctuations in farm income could formerly be absorbed by the farm family, since family labor and other nonpurchased materials constituted the major portion of farm production expense. Now, however, purchased inputs total more than four-fifths the value of all farm inputs and three-fourths the value of all farm product sales. The farmer has thus moved into the category of a businessman. His margin from operations has declined. His capital and credit demands are high in relation to net returns. He can now go bankrupt.

With this brief background of developments in the farming industry, it seems appropriate to ask ourselves the questions: How well have farm credit demands been met? How well has the commercial banking system performed its job of supplying farm credit, and what are the prospects for bank credit to agriculture during the next few decades?

We have several yardsticks for measuring the efficiency of credit flows into agriculture. First, we have a general measure, which is over-all productive efficiency of the industry. If agriculture is credit starved, it would necessarily be inefficient. This is not, however, true relative to other nations. Compared with the rest of the world we are quite efficient. We have a very small per cent of

our labor force in agriculture. Yet it is able to produce an excess of farm commodities for domestic use at current prices. Thus, on the basis of over-all efficiency of farm production, it appears that farm credit demands have been adequately met.

Another measure of the farm credit market is the rate of return on farm productive assets. If agriculture is starved for credit or capital, one would expect the returns to capital to be relatively high. In other words, if farm credit is scarce, farm assets are likely to be moderately priced. The rate of return on such assets would be high. Returns on assets in agriculture, however, are actually relatively low. Since 1959 the rate of return on productive assets in agriculture has averaged only about 5 per cent. This is less than the average rate of return on book value in any of the 61 major industries listed in Standard and Poor's Industry Surveys. Despite the differences in measuring the value of farm and nonfarm assets, these data indicate that credit to farmers has been sufficient to bid up farm assets to relatively high levels.

A third measure of farm credit availability is the interest rates paid by farmers on borrowed funds. Rates charged farmers are generally higher than rates on other business loans. It is difficult, however, to compare interest rates in absolute terms, since size of loan and risk involved greatly influence the rate charged.

During the past twenty years the rates paid by farmers have increased less than rates paid by almost any other group. Average rates on commercial bank non-real estate loans to farmers rose from 6.3 to 7.1 per cent. This was an increase of only 13 per cent, or less than one percentage point, in the rate paid, whereas the prime commercial loan rate more than tripled and the average rate on all short-term business loans doubled. Agriculture would thus appear to be in a more favorable position on the basis of interest rates paid than it was twenty years ago.

These data on the farm credit situation are evidence that agriculture is being adequately financed and that farmers are able to borrow money at competitive rates.

If, as indicated, agriculture is being financed at reasonable rates, do we have a farm credit problem, or is it limited to commercial bank problems of financing agriculture? The data seem to suggest the latter. The volume of non-real estate farm credit by commercial banks has already declined to a secondary position in some states. In contrast, prior to the Great Depression of the 1930's banks were the only institutional lenders of importance in this field. In the late 1930's the Production Credit Associations and the Farmers' Home Administration (Farm Security Administration) had begun to supply substantial quantities of short-term credit to farmers. The commercial banks' share of all short-term farm credit by institutional

lenders had declined to 57 per cent of the total in 1939. The remaining 43 per cent included holdings of 30 per cent by the PCA's and 13 per cent by the Farmers' Home Administration. Following World War II commercial banks were in a highly liquid condition and eager to acquire additional loans. As a result of this liquid condition plus a rapid increase in farm credit demand, their holdings of short-term farm loans rose rapidly. By 1952 the banks' share had increased to 76.8 per cent of the \$4.1 billion outstanding to reporting lenders.

The share of short-term farm loans held by banks turned down, however, in 1952 and the relative decline continued through 1967. Nationally the banks' share of the total declined from 76.8 per cent in 1952 to 69 per cent in early 1967. The PCA proportion had increased from 13.8 per cent to 24 per cent during the period. Little change occurred in the shares held by Federal Intermediate Credit Banks, while the share held by the Farmers' Home Administration declined.

By early 1967 banks had been replaced as the leading institutional lender of short-term farm credit in seven states. In contrast, banks were the leading institutional suppliers of such credit in all states only ten years earlier.

Looking at rates of growth during the past ten years, banks have more than doubled their short-term farm credit outstanding, while the growth of such credit held by the PCA's has more than

tripled. In dollar amount, however, such holdings by banks continued to increase faster, rising \$4.4 billion compared with a gain of \$1.9 billion for PCA's. These data all point to the fact that PCA's are rapidly becoming a major competitor to banks in supplying non-real estate credit to farmers.

Commercial banks have historically held only a small portion of the farm real estate debt. At the beginning of 1967 all operating banks held only 14 per cent of all farm mortgage credit, a slightly smaller per cent than ten years earlier. Thus banks can look back on a small relative decline in farm real estate credit and a greater relative decline in non-real estate farm credit.

The facts with reference to farm credit so far indicate that farmers are not only being supplied with credit at reasonable rates, but that the competition for farm credit is so great that banks are losing in the struggle to maintain their relative position of recent years.

I do not believe that the relative decline of commercial bank credit to farmers can be traced to a shortage of funds in the banking system as a whole. For example, a large portion of the farm credit supplied by the PCA's and the Federal Land Banks has come from the commercial banks. At the close of last year banks held about \$6.5 billion of non-insured government agency issues, a large part of which were FICB debentures and FLB bonds. This is not a complaint against cooperative farm credit. On the contrary, I would suggest

that the evidence points to the possibility that these agencies have done a more efficient lending job by purchasing funds from banks at wholesale rates and retailing them out to farmers than has the banking system through direct loans.

In looking at commercial banks to determine why they are not gaining farm credit relative to other agencies, three problem areas are apparent. I would classify them as follows: (1) problems arising at the individual bank level, (2) bank structural problems, and (3) legal restrictions.

First let's take a look at some individual bank problems. It is quite obvious from the data that a number of banks are about "loaned up," given the set of conditions under which they are currently operating. A Federal Reserve System survey of bank credit to agriculture in mid-1966 indicated that 30 per cent of all farm banks in the nation had loan-to-deposit ratios in excess of 60 per cent and 10 per cent of such banks had loan-to-deposit ratios exceeding 70 per cent. Given the legal requirements for guaranteeing certain public accounts and the need for day-to-day liquidity, it is apparent that a substantial number of farm banks, especially those with 70 per cent loan-to-deposit ratios, are short of liquid assets.

Further confirming the "loaned up" thesis is the fact that one-sixth of all farm banks in the nation reported difficulty in meeting farm financing requests from their own resources. About

one-eighth of all banks in the Eighth Federal Reserve District similarly reported difficulty in meeting farm credit requests.

Prior to rushing out with major programs for the solution of this problem, however, we should take another look at the situation. Surely one important factor in meeting credit requests is the price charged on loans -- interest rates. If the rates charged are below the going rate for similar loans, one would expect an excess of requests and obviously all requests could not be handled, i. e., rationing becomes necessary.

On the other hand, if the price paid for loanable funds such as time and savings deposits is below the going rate, it is reasonable to expect a shortage of incoming money. One way of looking at the supply side of the credit market is to imagine yourself a wholesale merchant. If his offering price for apples is somewhat below the going rate but his asking price is the current market price, he will find his opportunities for selling to be about normal, but his warehouses will soon be empty because his purchases will decline.

The data indicate that many commercial banks are trying to operate in a manner similar to that of the wholesale apple merchant. Of the 175 banks in the Eighth Federal Reserve District which reported difficulty in meeting farm credit requests, 119, or two-thirds of the total, were paying well below the maximum permissible rates on

savings in mid-1966. It seems apparent that funds will be lost to other agencies and other geographic areas if the local offering price is not at generally competitive rates. I might mention that the PCA's, the banks' leading competitor in supplying short-term farm credit, were paying well above 5 per cent for their funds last year.

Part of the individual bank problem in the farm credit field is probably associated with motivation and quality of personnel. When I observe bank statements which show low loan-to-deposit ratios and note the high rate of growth of non-bank loans to farmers in their communities, I can only assume that the banker doesn't care for the additional business. Perhaps more competition among financial agencies is desirable in such communities. In other instances the quality of personnel in the competing agencies appears to be the deciding factor. Most of the non-bank farm credit agencies are staffed by well-trained farm credit specialists. Banks in rural communities may also find it advantageous to obtain specialists in farm credit, just as banks in non-farm areas have credit specialists. This would be a major step in equalizing bank opportunities in the farm credit field.

Second to individual bank problems in meeting farm credit competition I would place bank structural problems. Some banks grow at rapid rates while others grow at slower rates. The

capitalization and credit needs of most farms are increasing at a very high rate. As a result, many farms are becoming increasingly difficult for the local banks to finance because of size alone. Some banks are located in low savings and high credit demand areas. Since loanable funds of banks are generally obtained locally, these banks may not be able to obtain sufficient funds at competitive rates to meet their farm credit requests at going rates. A banking system which moved funds freely throughout the nation from high savings to high demand areas would apparently be more efficient in meeting all credit demands.

In the absence of a nationwide banking system we attempt to take care of these local fund shortage and overline problems through correspondent banking. Individual overline requests have probably been handled through the banking system with greater efficiency than local demands which have resulted from over-all liquidity shortages. About one bank in seven reported to the Federal Reserve System of having received overline requests during the 12 months ending in June 1966. Of the smaller banks (those with capital and surplus of less than \$300,000) more than a fourth received overline requests during the year.

I believe that most large correspondent banks are eager to participate with their customers in handling overline demands of farmers. On the other hand, I know of instances where smaller banks

preferred not to be bothered with such credit, and the loans were eventually made by non-bank agencies. How much of the farm credit business banks have lost because of problems of this type I do not know. If we were farmers, I wonder how long we would give the banker to reply to credit requests when we knew that someone else who had the means to meet all our credit demands was ready to give us a favorable hearing. With farms increasing in size and capitalization at such a fast rate, it is inevitable that participation requests will rise. I believe that the banking system will rise to the occasion and meet a considerable portion of such requests. On the other hand, unless many banks make preparations to avoid unnecessary delays in meeting overline requests, the banking system will probably continue to lose many overline customers.

The other part of the bank structural problem, namely, areas which are short on loanable funds at going rates, may require solutions outside the commercial banking system in some instances. Loanable funds and debt instruments do not move through the banking system as freely as we would like. Federal funds, certificates of deposit, and other instruments move quite freely among the larger banks and provide an opportunity for liquidity adjustments. Federal funds also move quite readily from the smaller to the larger banks. However, it is the smaller banks in the areas which are chronically

short on credit that may have difficulty in financing farm credit demands. Also, the certificates of deposit of smaller banks are not as marketable as those of larger banks. Unfortunately, the correspondent banking system does not work as well as we would like in these situations. Different credit standards among banks prevent the free movement of customers' notes from bank to bank. We do not have insurance policies available for most types of loans in case of default. Since banks in credit-deficit farm areas are likely to be loaned up, they have few asset instruments other than notes for exchanging, and exchanging notes from small to large banks has been less than satisfactory in providing a uniform national farm credit market. Nevertheless, I believe that more cooperation within the banking system toward the solution of this problem would be profitable.

It has been suggested that a system of farm credit discount banks be organized for discounting the paper of commercial banks. These discount banks would apparently obtain funds by selling debt instruments in the money market similar to Federal Intermediate Credit Bank operations.

I am not sure, however, that we have exhausted the facilities that are in existence for distributing funds to rural areas. The Federal Intermediate Credit Banks were originally designed for

this purpose. Most bankers have looked upon the FICB's as the exclusive discount agency for the PCA's. The officials at the local Intermediate Credit Bank, however, informed me that they are discounting farm notes for commercial banks. I believe that they are willing to expand such discounting. They report that the terms are generally the same for commercial banks as for the Production Credit Associations. If the facilities of the Intermediate Banks are capable and willing to do the job, and I believe they are, then I think that they should be used by those commercial banks that are willing to pay money market rates for loanable funds.

Only if we try the FICB's and find them unable to do the job do I suggest new agencies for channeling funds from money markets to rural banks. Ultimately all loanable funds must come from savings and the small increments created through the banking system by monetary operations. Thus, an agency already in existence for channeling such savings would appear to be stronger and more efficient than a new agency, if its policies are sufficiently flexible.

The third category of bank problems in meeting farm credit demands involves legal restrictions. In some respects legal restrictions are similar to bank structural problems, since both retard flows of loanable funds through the national market.

The type of restrictions to which I refer are those which limit the rates that banks may pay and charge for funds. When market rates are below the legal limits, the legal restrictions are not effective. On the other hand, when market rates rise above the legal limits, legal restrictions can be damaging, both to the banks involved and to some sectors of the economy.

When commercial banks are unable to pay rates comparable with other financial intermediaries on time and savings deposits, banks tend to lose deposits to these institutions. As a result, potential borrowers from banks are the ultimate losers. When limits are placed on rates paid by all financial agencies, savings tend to move directly from savers to users, thus bypassing our efficient lending agencies and thereby creating major inefficiencies in the loan markets.

Maximum limits on loans create problems similar to the limits on savings. For example, there is a legal limit of 6 per cent on single payment loans in one state of the Eighth Federal Reserve District and a limit of 7 per cent in another state. When such limits are set below the market rate, as determined by supply and demand conditions for loanable funds, either credit rationing or a tendency to bypass the regulations occurs. Banks may purchase loans made in other areas which yield higher returns, or they may divert money from single payment farm loans to installment loans at higher rates of return.

If credit rationing occurs, the banks will be likely to supply funds to the very low-risk applicants until all loanable funds are depleted. All higher-risk borrowers will thus be unable to obtain credit. In either the case of credit rationing or of bypassing the restrictions, the poorer and higher-risk farmers who the restrictions were designed to protect are damaged most, for credit is unavailable to them.

So long as the basic supply and demand situation with respect to loan and investment funds produces high general interest rates, it is necessary for the commercial banks to go along with these trends. Banks must both pay high rates and charge high rates if they are to perform their function in the economy. In many ways the high and increasing general level of interest rates is disruptive and undesirable. But if the general level of rates needs to be kept down, total demand for loanable funds must be reduced. Public policy can accomplish this only by influencing the supply and demand situation with respect to the total product of the economy. The only way we know to accomplish this is by a more restrictive Federal budget and a somewhat less rapid monetary expansion.

In conclusion, we have a very efficient agricultural industry in the United States. Apparently, farmers are receiving credit at competitive rates. Commercial banks, however, have declined somewhat from their earlier position as the predominant supplier of farm

credit. Several factors may have restrained the rate of bank credit growth to farmers. Such factors may include lack of proper personnel, bank structural problems, and legal restrictions on banks. I believe, however, that we should fully utilize existing institutions and attempt to remove some legal restrictions both on rates charged and rates paid before proposing additional agencies. I don't believe that we have exhausted these opportunities at the present time.

TABLE I

Per Cent of Population Employed in  
Agriculture in Selected Nations

	<u>Per Cent</u>
Japan (1966)	24.2
Norway (1966)	18.6
Switzerland (1960)	10.1
Iceland (1964)	14.0
United States (1965)	6.1
Italy (1966)	24.7
Portugal (1960)	42.3
Denmark (1960)	17.5
Canada (Oct. 1966)	7.5
Ireland (Apr. 1965)	32.2
Greece (1961)	49.0
Germany (1965)	10.9

Source: Economic Surveys, Organization for Economic Cooperation and Development, Paris, 1967.

TABLE II

## Interest Rates on Selected Loans and Securities

	Rates		Increase
	1945	1965	1945-65
<b>Farm loans</b>			
Nonreal estate			
PCA	5.40 %	6.60 %	22 %
Commercial banks	6.30	7.10	13
Real estate - Federal Land Banks	4.00	5.60	40
<b>Other loans</b>			
Bank business loans			
Prime commercial	1.50	4.50	200
All short-term	2.20	5.00	127
FHA new home mortgages	4.50	5.47	22
<b>Securities</b>			
3-month Treasury bills	0.375	3.954	954
3- to 5-year U. S. Government bonds	1.18	4.22	258
Corporate Aaa bonds	2.62	4.49	71
High-grade municipal bonds	1.67	3.27	96
Federal Land Bank bonds	1.36 <sup>1/</sup>	4.32	218
Intermediate Credit Bank debentures	0.88	4.47	408

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<sup>1/</sup> 1946.

Sources: Rates on farm credit from USDA; FHA new home mortgage yields from 1964 Supplement to Economic Indicators and Federal Reserve Bulletin; all other data from Economic Report of the President, January 1966.