Agriculture has played a major part in the nation's economic growth in recent decades. Output from farms has continued up, providing an abundance of food and fiber for our domestic population and an increasing amount of food for deficit areas abroad. The physical volume of farm production in the United States has doubled since 1930. In current dollars the value of farm products marketed more than quadrupled, and the retail value of farm product sales rose about sixfold during the period.

In terms of employment, however, the farm sector of the economy has declined, releasing workers to other sectors. Since 1930 farm employment in the nation has declined from 10 million to less than 4 million workers, an average rate of decline of 2.6 per cent per year throughout the 37-year period. The rate of decline in farm workers, however, has accelerated to about 5 per cent per year since 1960. The number of farm workers declined an average of 162,000 per year from 1930 to 1960 and an average of 231,000 per year from 1960 to 1967. Employment in agriculture has reached such a small portion of the labor force that increments to the nonfarm labor from this source will decline within a few years.
The nation may thus have already realized the major thrust of agriculture toward economic development.

We are fortunate to live in a nation and an age in which the production of food and fiber is so efficient. Only 5 per cent of the nation's labor force was employed on farms in 1966, as compared to 21 per cent in 1930. This decline in number of workers was possible because of the great increase in worker productivity. One worker was able to produce sufficient farm products for himself and 9 other persons in 1930; in 1966 he could produce a sufficient amount for himself and 39 other persons.

Numerous scientific successes have contributed to the efficiency gains in agriculture. These successes provided new technology on a wide front. Mechanization technology made possible large multi-row cultivating and harvesting equipment and other labor saving machines which greatly expanded the optimal size of farms. Plant and animal breeding have increased the productivity of crops and livestock. New chemicals, including insecticides, fungicides, weed control agents, and fertilizers have enabled producers to greatly increase output per acre and reduce labor per unit of production.

These gains involved major changes in the structure of agriculture. In addition to the sharp decline in farm employment, a corresponding decline has occurred in number of farms. On the
other hand, capital inputs have increased sharply. The value of all farm assets rose from $52.9 billion in 1940 to $269.5 billion in 1967. Part of the increase represents price inflation. However, a sizable amount of new capital inputs have been made. Total acres in farms rose 7 per cent, and capitalization of land through soil improvement, drainage and other means has increased. The number of cattle on farms rose from 68 million in 1940 to 108 million in 1967. Tractors rose from 1.5 to 5.6 million during the period.

Although new farm technology has contributed to the rising capitalization of the industry, its greatest impact has been through capital readjustments within agriculture. In 1940 the $52.9 billion of farm assets represented an average of $8,331 invested in each of 6.3 million farms. By 1967 the number of farms was down to 3.1 million, while capital per farm had increased tenfold, to $85,654. These capital adjustments, coupled with new capital inputs, have greatly increased the industry's demand for outside funds. Internal financing of agriculture has thus declined substantially relative to total capital, and credit has played an increasing role in capital accumulation. Agriculture is thus beginning to use credit in large quantities as it is used in manufacturing industries.

Changing Sources of Farm Credit

With the rising volume of farm debt, sources of credit have also changed. The change, however, has been gradual rather
than revolutionary. It is when we view changes over the long run that major contrasts appear. Significant increases have occurred both in number of competitor groups and the relative portion of credit supplied by financial agencies.

Prior to the 1900's, most farm mortgage credit was supplied by individuals and other non-institutional sources. Since the turn of the century a relative decline has occurred in farm mortgage credit supplied by non-institutional lenders, and the per cent supplied by institutional lenders has consistently increased. For example, in 1910 financial institutions supplied only 25 per cent of the outstanding farm mortgage credit in the nation, while in 1967 the proportion supplied by financial institutions had increased to 60 per cent. Despite the greater use of land contracts, which enhance seller-financed farm transfers, the per cent of farm debt held by financial institutions has remained stable since 1960.

Only two major institutional lender groups, commercial banks and life insurance companies, were in the farm mortgage business in 1910. With the creation of the Federal Land Banks (FLB's) in 1916 a third major credit supplier entered the field, providing farmers with another pipeline to the nation's financial centers. In the 1930's the Farmers Home Administration (Farm Security Administration) was created to finance high-risk farm mortgages with government assistance. The three financial institutions, namely FLB's,
commercial banks, and life insurance companies, have over the years supplied an increasing proportion of the total farm mortgage credit.

Competition in non-real estate farm credit has also increased. Even to a greater extent than mortgage lenders, this group was dominated by local suppliers well into the 1900's. Banks, dealers, merchants, and other local sources were almost the only suppliers of such credit prior to the 1920's when the Federal Intermediate Credit Banks (FICB's) and the Farmers Home Administration (FHA) (emergency crop and feed loans) were created. Later the Production Credit Associations (PCA's) entered the short-term farm credit market and have since become a major source of such loans. Both the land bank system and the PCS's are tied to the nation's financial markets, the land banks directly through the sale of bonds, and the PCA's through the FICB's.

It is generally believed that merchants, dealers, and other non-institutional lenders held at least 50 per cent of all non-real estate farm credit prior to the 1940's. Since early 1940, however, the per cent of the total held by this group has declined, and by early 1967 it accounted for only 41 per cent of all non-real estate farm credit outstanding.
This relative decline in merchant and dealer credit occurred despite their greater access to financial markets. Merchants and dealers who extend credit to farmers must, in turn, be financed. Most of this financing was probably done at local banks prior to the development of large agribusiness industries. In recent years, however, large manufacturers who sell machinery, fertilizer, and other products to farmers through merchants and dealers have provided a sizable portion of this financing. These manufacturers, in turn, obtain funds through retained earnings, by borrowing directly from large city banks, or by selling debt and equity instruments to the public. Merchants and dealers thus provide farmers with another pipeline to financial markets.

Commercial banks have been the largest single institutional supplier of non-real estate farm credit throughout the period since 1910. Banks probably supplied about 50 per cent of such credit until the 1930's when the Production Credit Associations began operations. Following this additional competition, the per cent held by both banks and non-reporting creditors declined. The per cent held by banks fell sharply in the 1930's, picked up somewhat in the 1940's, held about steady in the 1950's, and has declined since 1960.

Farm credit in the southern states has generally increased more rapidly than in the nation. In eight states centered in the
southern Mississippi Valley, total farm debt has increased fivefold since 1940, slightly above the national rate of gain. The move toward financial institutions as sources of farm credit has also been faster in the South than for the nation as a whole. Financial agencies probably supplied about the same per cent of non-real estate farm credit in the area as in the nation last year. However, financial agencies supplied a somewhat larger per cent of all real estate farm credit here than nationally. Insurance companies have made especially large gains in the South since 1940. From 15 per cent of the total farm real estate debt held at that time, their share rose to 28.4 per cent in 1967. This was 6 per cent above the share of farm real estate debt held nationally by insurance companies.

The movement of farm credit from individuals, local merchants, and dealers to financial agencies has greatly increased the efficiency of credit flows into agriculture. Evidence of the increased efficiency of farm credit is the relative decline in interest rates on farm loans. In 1947 rates on bank loans to farmers were almost double the average rate on all bank loans and almost four times the rate on prime commercial loans. In comparison, during

1/ Includes: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Tennessee and Texas.
1966 rates on bank loans to farmers were slightly below the average rate on all bank loans and only one percentage point higher than the rate on prime commercial loans. In 1947 rates on Federal Land Bank loans to farmers at 4 per cent were above rates on all commercial bank loans and almost three times the 1.52 per cent average rate on prime commercial loans. In 1967 the average rate on new Federal Land Bank loans was one percentage point below the average rate of return on all commercial bank loans and only one-fifth of a percentage point higher than prime commercial bank rates.

Another indication of the efficient functioning of the farm credit market is the relatively low rate of return on farm assets. A credit-starved agriculture is consistent with low values on capital assets and high returns to capital. This is not typical, however, of values and returns in agriculture. Agricultural assets have been bid up to relatively high levels, and returns are below returns to capital in other industries. This indicates that credit to farmers has been sufficient to bid up assets to levels at least consistent with asset values in the non-farm sector.

In addition to the more favorable cost of credit flows into agriculture, the increased number of farm credit sources has had other beneficial effects on the market. Farm credit suppliers have become less personal. Managerial ability and efficiency of operations
have become the important factors in determining credit worthiness. Credit and credit-purchased resources thus tend to flow to the more efficient users as determined by the impersonal officials of financial agencies.

The closer ties of farm credit to the financial markets as represented by life insurance companies, FLB's, PCA's, large agribusiness corporations, and the correspondent banking system means a more reliable supply of funds to agriculture. To gain control of funds, however, farmers must pay the money market rate plus the cost of retailing funds.

Better farm credit ties to the nation's financial markets assure more uniform interest rates to farmers throughout the nation, given similar lending costs and risks. Prior to these ties, rates paid by farmers may well have been determined by local supply and demand conditions. In local isolated markets, rates may have been greater or less than rates which reflected national credit conditions. In some instances, credit may have been unavailable at almost any price. With national funds available, however, local areas where rates are relatively high will attract funds from other areas until local and national rates are equalized after allowing for risk and lending cost differentials.
With the greatly improved credit market for farmers, many commercial banks are finding it increasingly difficult to maintain their former predominant position in agricultural credit. The bank's share of institutional (PCA-commercial bank total) short-term farm credit declined from a post-war peak of 77 per cent in 1952 to 69 per cent in 1967. By early 1967 the PCA's had outstanding more short-term farm loans than banks in seven states, five of which are in the South.²

In dollar amount, PCA outstandings nationally have grown at about the same rate as banks' since 1964. In most of the southern states, PCA loans outstanding increased faster than bank loans in both percentage gains and dollar amount during the year ending June 1, 1967.³

With increased competition for farm credit, banks would be expected to decline somewhat in per cent of total farm loans held. However, the extent of their proportionate decline in non-real estate credit, plus the fact that PCA's have taken the lead in a number of states, is cause for concern. I believe that agricultural credit needs the active competition of commercial banks. Furthermore, I believe that the farm credit business will continue to be profitable for banks.

² North Carolina, Tennessee, South Carolina, Georgia, and Florida.
³ This is the case in both the Atlanta (5th) and Richmond (6th) Federal Reserve Districts.
In looking at banks to see why they have failed to hold their early post-war positions in the short-term farm credit business, three problem areas are apparent. I would classify them as follows: (1) individual bank management, (2) bank structural problems, and (3) legal restrictions.

Under the first problem area, the willingness and "know-how" to meet competitive conditions is vital. Banks and other farm credit agencies are in the market of buying and selling funds. Competition must be met in both the purchase and selling price. If the offering price for funds is below the going rate, purchases will decline and funds will not be available to make loans. If the asking price is too high, sales of funds will decline as prospective borrowers will go to competitors. On the other hand, if the asking price is too low, sales must be rationed, because more loans are demanded than the bank has funds to lend.

Part of the farm credit problem of banks may be lack of knowledge. Most of the non-bank farm credit agencies are staffed by well-trained farm credit specialists. Banks in primarily farming communities may also find it advantageous to obtain farm credit specialists. This could be a major step toward equalizing bank opportunities in the farm credit business.
The second group of problems which may have retarded banks in the farm credit business involves the structure of commercial banking. In recent years the credit demands per farm have grown faster than the capital or assets of most banks in rural areas. As a result, some banks are finding it increasingly difficult to finance many farms because of size alone. In other instances, banks are located in low savings, high credit demand areas. Most loanable funds of banks are generated locally. Thus, banks located in these credit-deficit areas may not be able to obtain sufficient funds to meet their farm credit requests at competitive rates. This may be the major reason why non-bank credit has grown so fast in many southern states. It is in this geographic area that credit deficits are greatest. Bank ties to the financial centers are apparently not as strong as the PCA’s link to financial centers through the FICB’s.

Correspondent banking arrangements offer a possibility for assisting banks in credit shortage areas. Individual overline requests have apparently been handled with efficiency in most cases. The handling of over-all liquidity shortage problems has apparently been less satisfactory. Farm 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 larger banks. However, the smaller banks in chronically
deficit areas apparently have trouble obtaining funds to meet the competition of non-bank agencies.

A system of farm credit banks for discounting paper of commercial banks has been suggested as a means of meeting the area credit-deficit problem. Such banks would obtain funds by selling debt instruments in the financial centers similar to FICB operations.

A number of commercial banks have used the FICB facilities for distributing funds to rural areas. The FICB's were originally designed for this purpose. They have the corporate organization, the capital, and the trained farm credit specialists to do the job. They currently discount for about 70 commercial banks and commercial bank affiliates in the nation. It appears to me that these banks offer an ideal arrangement for channeling loanable funds from money market centers to rural credit-deficit areas. More recently, however, I hear that the Intermediate Credit Bank System is reluctant to take on the discounting for large numbers of commercial banks. Apparently, they prefer that the commercial banks set up their own agricultural discount system. I believe that a new credit discount system for rural banks would be a second-best alternative. In fact, it would probably weaken the present farm credit discount system. Commercial banks
probably hold 60 per cent of all outstanding FICB debentures. The major portion of Intermediate Credit Bank debt is thus held by commercial banks. If a new system is set up designed primarily for commercial banks, it seems likely that the current FICB system will have greater difficulty selling its debt instruments to commercial banks.

I thoroughly agree with those who argue for some type of discount system for rural banks in credit-deficit areas. I would also suggest that an early solution be found to this problem of whether a new system is organized or whether full cooperation is obtained with the current Intermediate Credit Bank System.

My third point, designed to increase the effectiveness of bank competition, involves the removal of excessive legal restrictions. Some states have unduly restrictive laws relative to rates permissible on time and savings deposits and on loans. As long as supply and demand, with respect to loanable funds, generally is equated at high rates, banks must both pay and charge high rates. Otherwise, growth of the bank will be retarded and its effectiveness in accumulating the savings of the community and selling funds to producers will be greatly reduced. The FICB's which supply the PCA's with funds paid an average rate of 5.6 per cent for funds in 1966. These banks, in turn, require a margin on funds passed on to the local
PCA's. In view of these rates necessary to gain control of funds, it is quite obvious that restrictions which limit rates on savings and time deposits to 4 per cent and rates on loans to 6 per cent are unrealistic. Such restrictions damage both the financial agencies and the community which the financial agencies serve.

In conclusion, we have a very efficient agriculture in the United States. It is rapidly changing and soon will be entirely commercial. The change from small to large, efficient farms involves large quantities of credit. The increased number of farm financial agencies is apparently supplying farm credit at competitive rates. Commercial banks, however, in many communities, especially in the South, are trailing their competitors in supplying non-real estate farm credit.

I believe that a strong, competitive commercial bank in each community makes for a healthy farm credit situation. The bidding for funds on a competitive basis and the addition of farm credit specialists to bank management should prove helpful. Maximum use should be made of correspondent banking facilities for overlines and, if possible, the excessive credit demand in deficit areas. In credit deficit areas where unit banking prevails, farm credit discount facilities similar to the FICB's are highly desirable. Apparently, banks in the South have greater need for these facilities than banks
in other parts of the nation. Finally, overly restrictive legal impediments to the purchase of loanable funds by banks should be removed. Banks must be permitted to compete for loanable funds in order to make funds available to productive users.