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# Staff Paper

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WHY LEND TO AGRICULTURE

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## WHY LEND TO AGRICULTURE

*Eddy L. LaDue<sup>1</sup>*

Some lenders, particularly commercial banks and insurance companies, must decide whether, and how much, to lend to agriculture. Loan funds can be allocated in a number of different ways. Loan policies can be developed to include or exclude any industry depending on how the characteristics of that industry fit with the overall strategy of the institution and the rest of the loan portfolio.

My assignment for today is to identify some of the characteristics of agriculture that may make it a good industry to include in a loan portfolio. I will not spend a lot of time on the negatives of agriculture. Many of you have indicated that you think that the negative side has already received considerable attention.

### **Agricultural Loans Have Lower Costs**

I am aware of only two studies that have tried to directly assess the profitability of agricultural loans compared to other types of loans. One was done here at Cornell and the other, which replicated the Cornell study, at Auburn University in Alabama. Both of these studies focused on the cost side of the profitability equation.

These studies found that the net loan loss and loan service costs (i.e., noninterest costs) connected with agricultural loans were lower than similar costs for installment loans or commercial (nonfarm) loans and higher than mortgage loans (Figure 1). Costs connected with farm loans were one-half to three-quarters of a percent below the costs for commercial loans. The banks included in these studies were primarily small and midsized banks and their commercial loans were to small and midsized firms. They did not include many of the huge loans that can have very low service costs. Thus, the comparison is between agriculture and other small and medium sized businesses that are typical of rural areas.

The main reason that agricultural loans were lower cost was the lower level of net loan loss experienced. Although the studies varied somewhat in the level of loan losses found for commercial loans, a high proportion of the difference in total costs results from differences in loan losses (Figure 2). Gross loan losses, or gross loan write-off's, for farm loans were only one-quarter to one-third that found for other loan types. The Cornell study also found a higher recovery rate for farm loans than for other loans.

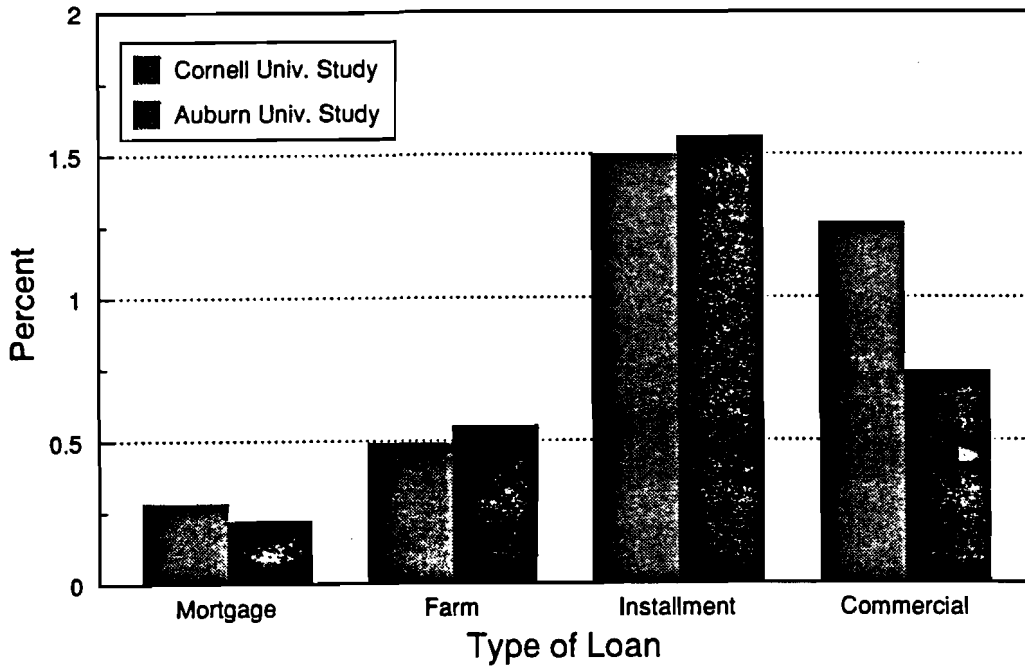
There are at least two reasons why loan losses are lower for farm loans. First, a farmer's home and his hobbies are frequently part of the farm business. Thus, bankruptcy represents an immense personal loss, making the process a personal defeat rather than a chance to wipe his or her business slate clean in preparation for a fresh start.

Second, farm assets normally represent salable assets that frequently increase in value over time. Except for a brief period in the 1980's, farm real estate values have been increasing over the last 50 years. Under reasonable management, livestock inventories also tend to increase over time.

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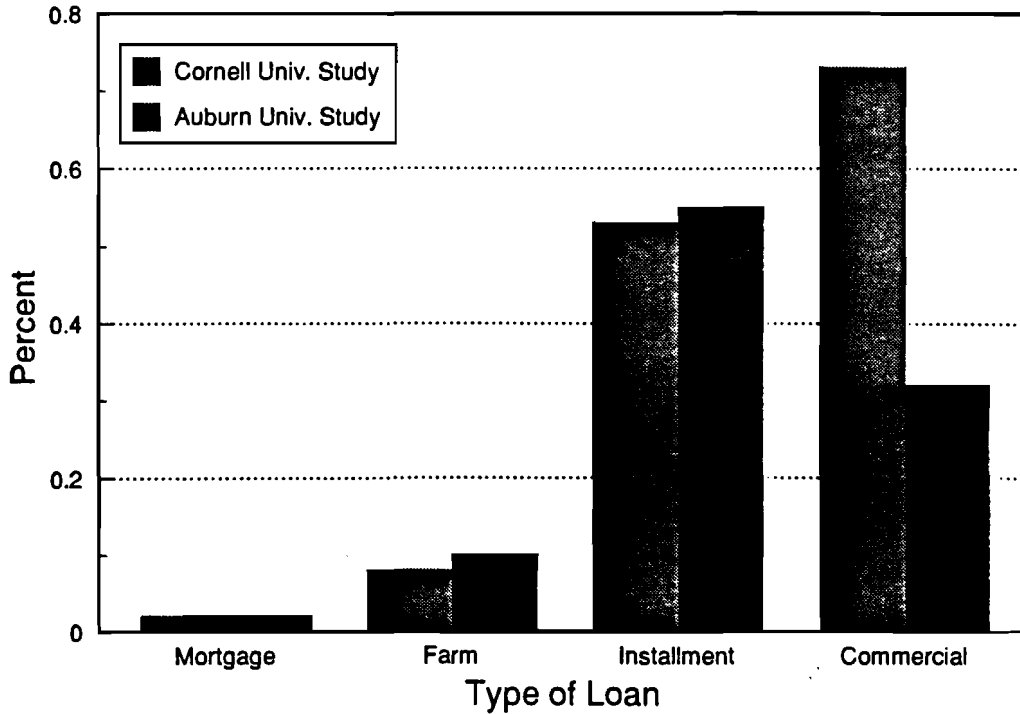
**Figure 1. Loan Loss and Loan Service Costs by Type of Loan**



Source: LaDue, Moss, and Smith. "The Profitability of Agricultural Loans for Commercial Banks." Cornell University A.E. Res. 77-12, July 1977.

Moore. "An Evaluation of Agricultural Loan Profitability for Commercial Banks in Alabama." M.S. Thesis, Auburn University, August 1979.

**Figure 2. Loan Loss Expense by Type of Loan**



Source: LaDue, Moss, and Smith. "The Profitability of Agricultural Loans for Commercial Banks."

Moore. "An Evaluation of Agricultural Loan Profitability for Commercial Banks in Alabama."

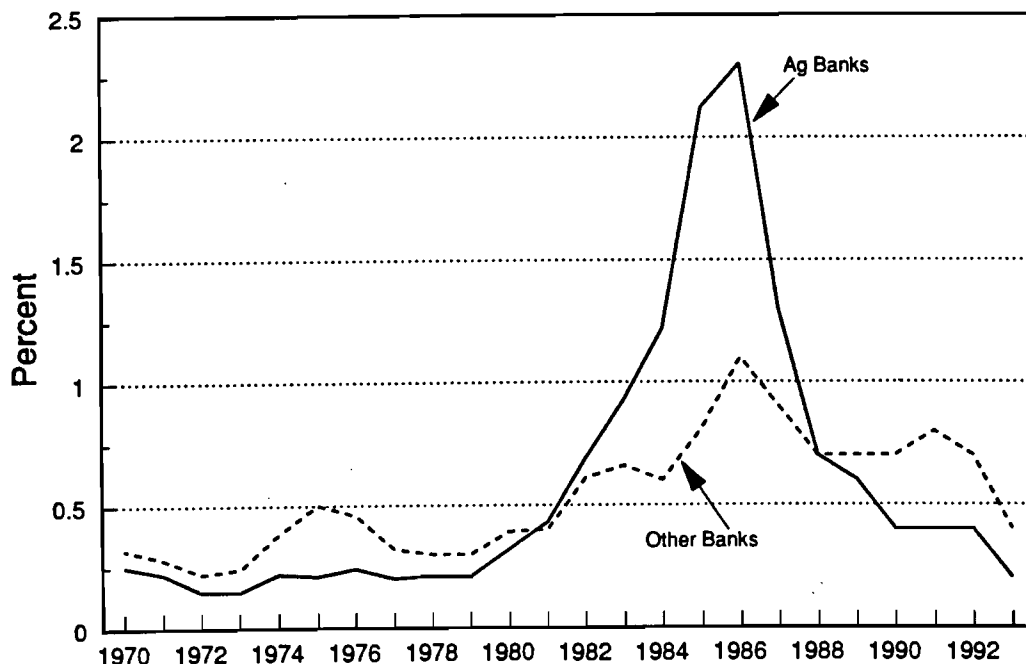
One of the problems with these studies of bank profitability is that they were conducted in the mid 1970's. Both the agricultural and banking industries have changed since that time. Whether the results of these studies still hold has not been tested with more recent studies. The basic characteristics of farmers have not changed; so we would expect that the difference between farm and nonfarm loan losses would still be similar. I have seen some recent data on individual banks with large farm loan portfolios that show lower losses on agricultural loans than other types of loans. If the lower loss levels still exist, since most of the difference in costs observed in the two studies reflected lower loan losses, the lower cost of farm loans would still hold.

The only evidence that we have of what has happened since the mid 1970's comes from the data provided by the Board of Governors of the Federal Reserve System on the performance of agricultural versus other small banks. The Board of Governors defines an agricultural bank as one that has a higher than national average percent of loans to farmers. Currently the average percentage is 17. Nationally, most of the banks that meet the agricultural bank definition are small banks. Thus, the Board of Governors provide comparison data for agricultural and other small banks.

The basic problem with these data is that the effects of the characteristics of agricultural loans are somewhat masked by the fact that the data are for the whole bank which include a considerable amount of nonagricultural loans. The magnitude of difference that we observe between agricultural and other small banks is likely less than the difference between agricultural and nonagricultural loans.

The data do show lower loan losses for agricultural banks in the late 1970's (Figure 3). This result confirms the results of the Cornell and Auburn University studies discussed above. During the agricultural recession of the mid 1980's losses of agricultural banks were higher than experienced by other banks. However, since 1989 the agricultural banks have experienced much lower net loan charge-offs than the other banks. These data imply that the cost advantages experienced with agricultural loans in the mid 1970's appears to also exist in the 1990's, even though they did not exist during the 1982 through 1987 period.

**Figure 3. Net Charge-Offs as a Percentage of Total Loans**



Source: Agricultural Finance Databook.

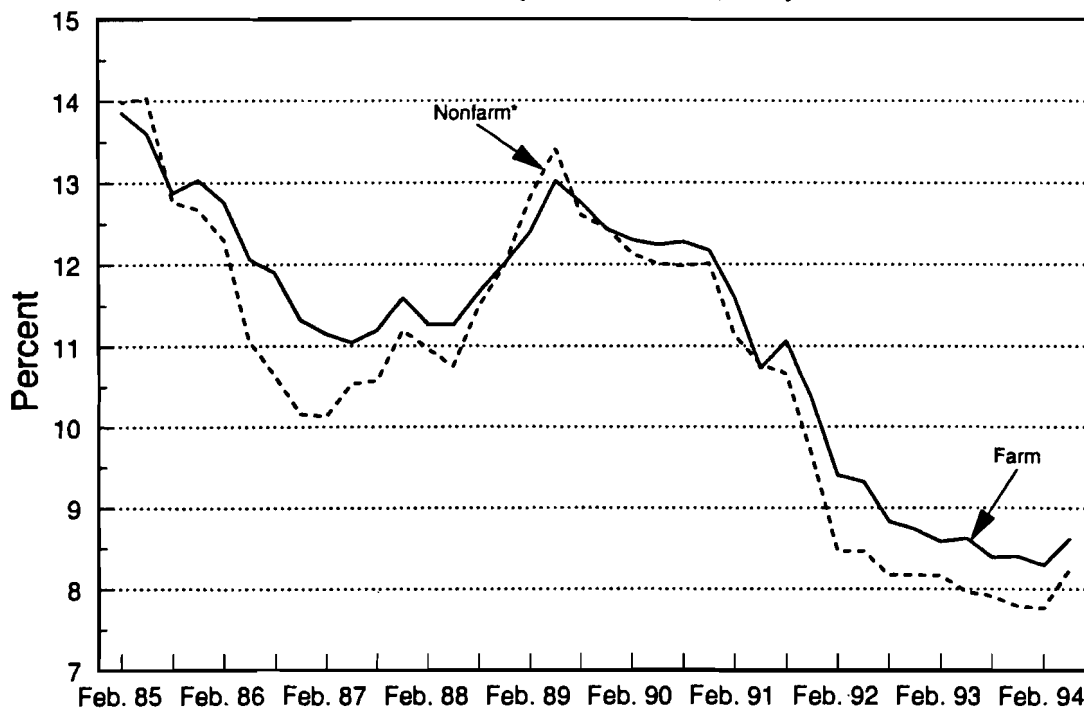
## Interest Rates are as High or Higher

The other side of the profit equation is income. Interest rates charged to agriculture vary considerably from farm to farm. There is a tendency to remember the very high quality loan to a leading farmer where the competition forced you to cut your rate to the bear minimum. You made the loan because you still made a small profit and because you want leading farmers in your portfolio. However, at a national level, the average rates paid by farmers compare favorably, from the lenders point of view, to somewhat comparable loans made to others.

The data we have on relative rates comes from the quarterly survey of terms of bank lending conducted by the Federal Reserve. Again we use the data from the other banks, which is all banks except the large banks, for our comparison banks. Since the data reported for nonagricultural loans is divided into many categories, none of which has characteristics comparable to farm loans, these data were combined to provide rates for loans with maturities and proportion at variable rates that were the same as farm loans. Because the average size of all nonfarm loans over \$100,000 is much larger than the average for farm loans, large loans are also adjusted for loan size. For more information on the calculation procedure and data, see Appendix A.

Farm interest rates are generally higher than nonfarm rates on small loans of less than \$100,000 (Figure 4). From 1985 through Second Quarter 1994, farm rates were higher than nonfarm rates in all except four quarters. For the 38 quarters, farm rates averaged 11.13 percent compared to 10.73 percent for nonfarm loans, a difference of 0.6 percent (60 basis points). A similar picture emerges for large loans (Figure 5). Farm loan rates on large loans are generally greater than nonfarm rates. During the 1985-94 period, farm rates on large loans were above nonfarm rates in all but one quarter. Average rates were 0.7 percent (70 basis points) higher for farm rates over the 38 quarters, with farm rates averaging 9.87 percent compared to 9.17 percent for nonfarm rates.

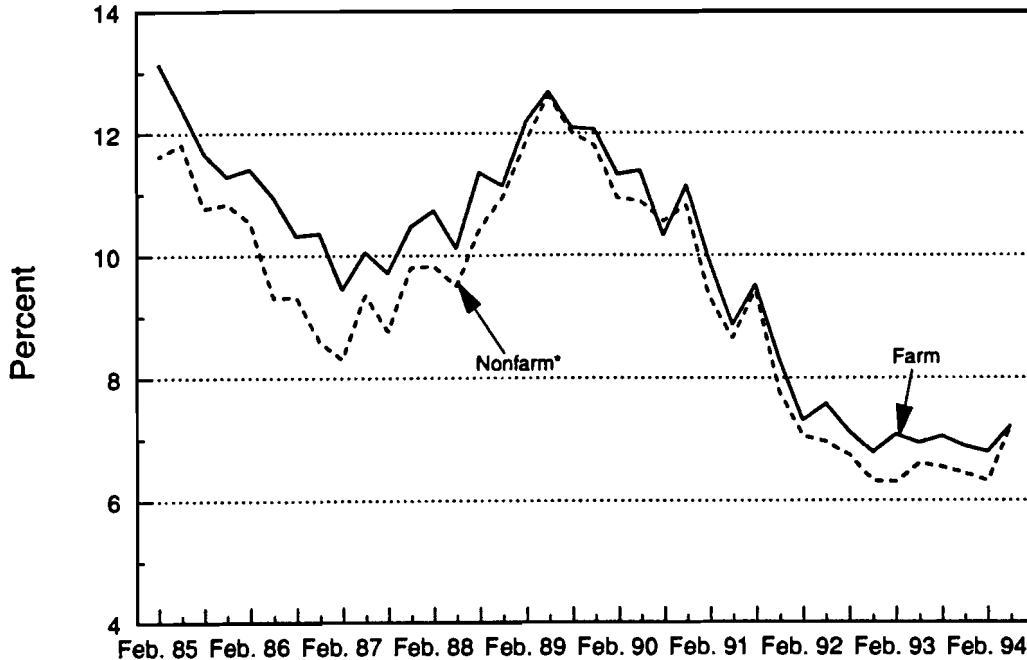
**Figure 4. Interest Rates Charged on Small Loans (Under \$100,000)**



\*Same maturity and proportion at variable rates as for farm loans.

Source: Agricultural Finance Databook and Federal Reserve Bulletin.

**Figure 5. Interest Rates Charged on Large Loans (\$100,000 and Over)**



\*Same loan size, maturity and proportion at variable rates as for farm loans.

Source: Agricultural Finance Databook, and Federal Reserve Bulletin.

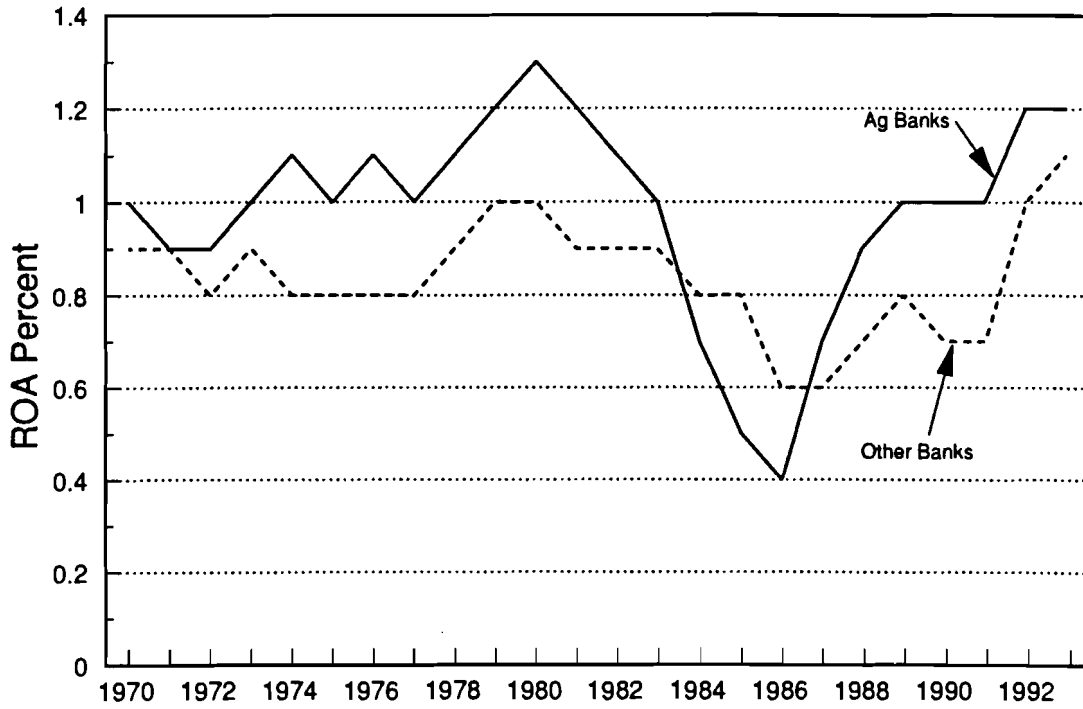
### Loans are Profitable

With lower costs and as high or higher interest rates, agricultural loans are clearly profitable. That fact is illustrated by the ROA's obtained by agricultural and other comparable size banks (Figure 6). Except for the period of the agricultural recession of the mid 1980's agricultural banks were more profitable than other banks. From a more recent perspective, agricultural banks have been more profitable for the last seven years. For the entire 1970 through 1993 period, including the agricultural recession period of the 1980's, the average return on assets at agricultural banks has averaged .99 percent compared to .84 percent for small nonagricultural banks.

One of the questions that the national data raise is how often conditions like the 1980's occur? What made the mid 1980's a recession for agriculture was the combination of significant declines in both income and asset values. Farmers could not make their debt payments and the collateral value of the assets used to secure those loans declined precipitously. Either of those occurrences by itself has historically engendered only modest farm loan losses. For example, income declined during the late 1940's and early 1950's, but asset values continued to rise. Fortunately, occurrences like the mid 1980's have historically occurred very infrequently (Figure 7). The most recent occurrence prior to the 1980's was the 1930's. Some writers have observed that prior severe stress periods for agriculture occurred in the 1870's and 1820's and suggested that these financial stress periods occur about every 50 years as the result of a regular boom and bust cycle<sup>2</sup>. If we could believe that, we should expect agricultural loans to be profitable for the next few decades.

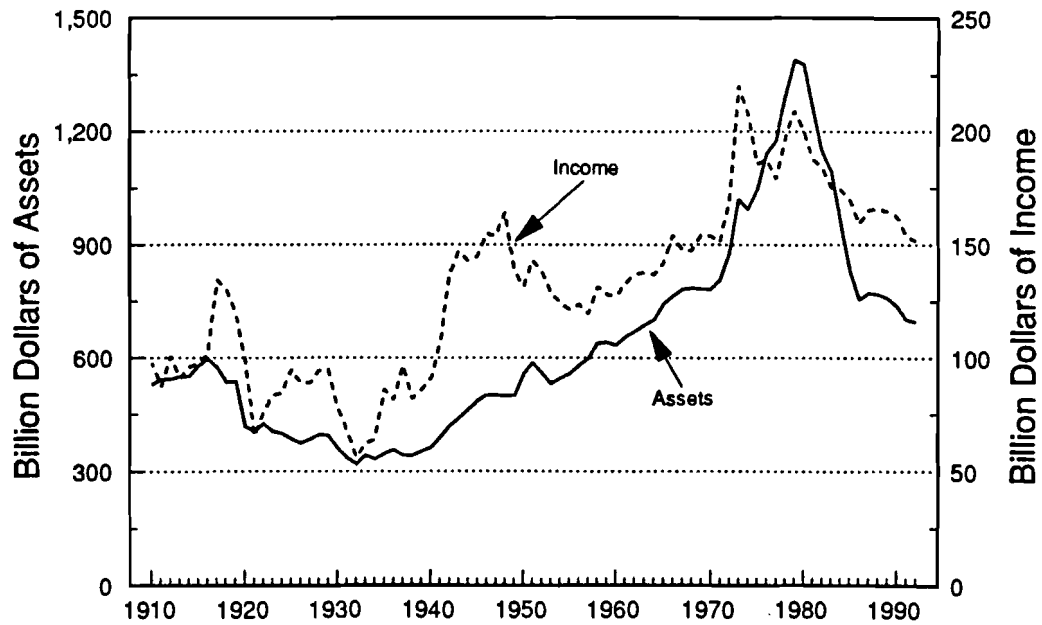
<sup>2</sup> McKinzie, L., T.G. Baker and W.E. Tyner. "A Perspective on U.S. Farm Problems and Agricultural Policy." Westview Press. 1987

**Figure 6. Rate of Return on Assets for Agricultural and Other Small Banks**



Source: Agricultural Finance Databook, Board of Governors of the Federal Reserve System.

**Figure 7. Farm Assets and Income United States, 1987 Dollars**



Source: Economic Indicators of the Farm Sector; Agricultural Finance Databook, and Economic Report of the President.

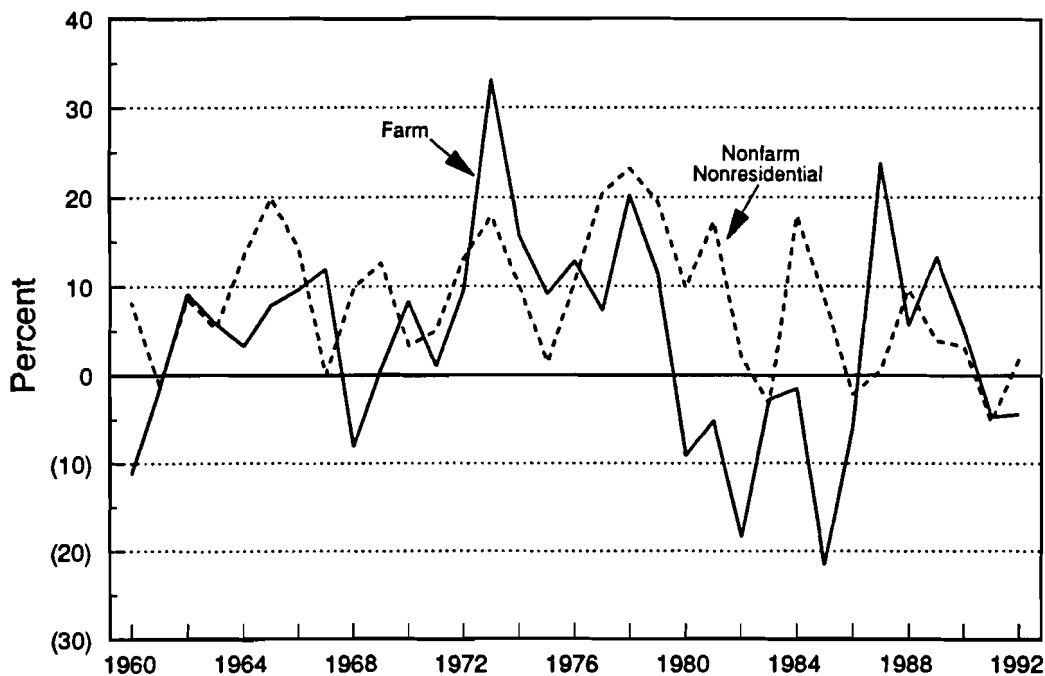


We do know, however, that the decline of agricultural asset prices in the 1980's removed most of the speculative, or asset price inflation, expectations from asset prices. Most prices are now at levels that can be sustained by cash flows from the assets. This provides a strong foundation for sound lending in the near future.

### Diversifies Portfolio Risk

Although agriculture is not considered a counter-cyclical industry, it generally does not move with the general business cycle. The cyclical nature of industries influences the demand for loans and the ability of borrowers to repay loans. A major part of both farm and nonfarm investment, and thus demand for loans, is represented by durable equipment and structure purchases. Figure 8 indicates the percent change in investment in the farm and nonfarm economy. Presumably, an increase in the rate of investment would imply increased loan demand while a decrease would indicate a decrease in loan demand. Clearly, farm and nonfarm investment frequently, but not always, go in different directions. Thus, including agricultural loans in a portfolio would tend to level out loan demand and provide opportunities for lending in some years when demand from the rest of the economy is lagging.

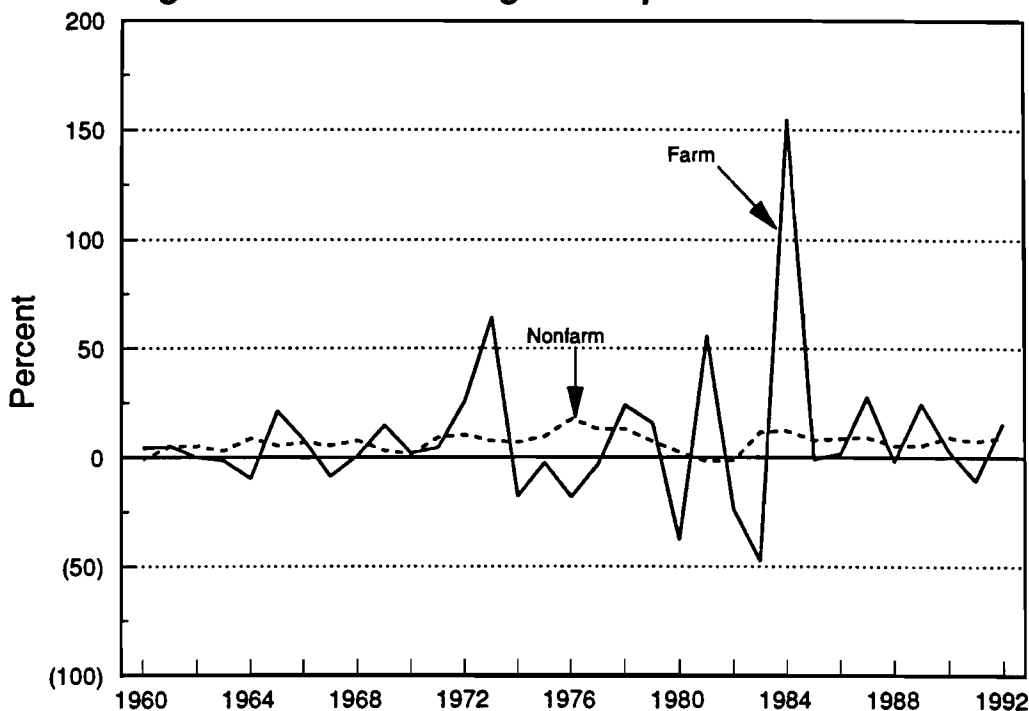
**Figure 8. Percent Change in Durable Equipment and Structures Investment**



Source: Agricultural Resources, Inputs, and Economic Report of the President.

The income side of the picture shows some of the same characteristics; farm income is frequently up when nonfarm income is down and vice versa (Figure 9). During the 1960 to 1992 period farm and nonfarm income went in opposite directions, one up and the other down or vice versa, in 15 of the 33 years. On the negative side, however, agriculture also appears to have more income variability. Part of this, of course, occurs because the farming is being compared to an aggregation of a multitude of other industries, each of which may also have their ups and downs that are partially offset by different experiences of other industries. But, at least some of the agricultural income fluctuation is likely the result of weather variability, which has little effect on most other industries.

Clearly, agriculture does provide diversification opportunities.

**Figure 9. Percent Change In Proprietor's Income**

\*Includes inventory valuation adjustment but excludes capital consumption adjustment.

Source: Economic Report of the President.

### Helps Build the Deposit Base

The Cornell study reported earlier found farmer deposit balances were about 23 percent of their loan balances. The Auburn University study found average dollar deposit balances that were over twice as much as the Cornell study, but did not report average farmer loan balances. About half of the deposits were in checking accounts with the remainder in savings accounts and certificates of deposit (CD's). We know deposit relationships and products have changed since the 1970's. So, these relationships may no longer hold. However, we do know that farms handle fairly large sums of money during the year. For example, the commercial dairy farms that participate in Cornell Cooperative Extension's Dairy Farm Business Summary program have cash income in excess of \$350,000 per year<sup>3</sup>. This money has to sit somewhere from the time it is received until it is spent. Putting that amount of money through a checking account can result in significant average deposit balances.

The 1970's studies found that retired farmers had average deposit balances that were about twice the active farmer balances. Farmers tend to retire on or near the farm business. They are less likely than the general population to make a permanent move to Florida or Arizona. They visit those locations for a while during the winter but return to the home town for most of the year. This means that their accounts stay in the local community. They are most likely to leave that money in the bank that served them while they were farmers.

<sup>3</sup> Smith, S.F., W.A. Knoblauch, and L.D. Putnam. "Dairy Farm Management Business Summary New York State 1992." Department of Agricultural Economics R.B. 93-11, August 1993.

Clearly, the combined balances of the active and retired farmers will contribute positively to the bank's deposit base, even though we do not have any recent measures of the exact magnitude of these deposits. One way to get those deposits is to require that the checking account be transferred to your institution as a condition of the loan.

### **A Market for Trust and Investment Services**

As farms get larger and more complex, the process of transfer of either the farm or the net asset value of the farm to the next generation becomes more difficult, and the amount of money involved gets greater. Over the last 20 years the average assets has increased from about \$100,000 per farm to nearly \$500,000<sup>4</sup>. Further, about a quarter of all farms with over \$50,000 in sales have primary operators over 60 years of age<sup>5</sup>. A high proportion of these farms will be transferred or sold over the next few years.

Many large farm operators will need to employ financial advisors to assist them with the design and conduct of the transfer. They will frequently need someone to serve as executor, trustee, investment advisor or investment manager. These are services that the trust department provides on a regular basis. Many of these businesses will need other nonloan products such as Individual Retirement Accounts (IRA's) and Keogh plans. These products all contribute fee income to the bank. With the increased focus by many banks on fee income, this could be an important plus for agriculture<sup>6</sup>. The institution that has provided funds and financial advise for the farming operation is likely to have the inside track in obtaining the trust and investment service business.

### **Agriculture Is Profitable**

A lot has been written about the low rates of return to agriculture. The USDA routinely publishes data showing rates of return for farm income of four to six percent, or less. This has led many people with modest agricultural backgrounds to conclude that agriculture is basically unprofitable when compared to nonfarm businesses that report higher income levels. There are two basic problems with the rate of return numbers provided by the USDA. First, the data include everyone with over \$1,000 in farm sales. Many of these small operations, which make up a large portion of the total number of farms, are part time or hobby operations where the primary objective is something other than making money. The larger commercial farms have much higher rates of return than these small entities (Table 1). Loans to these small businesses would normally be made on a consumer loan or home equity line of credit basis. Loans to the larger commercial farm businesses come closer to representing what most of us think about when we consider lending to agriculture, and these businesses have much better rates of return.

Second, the rate of return data published by the USDA are based on the market value of the assets in the business, where most of the rate of return data for other kinds of businesses is based on book value. Recent studies indicate that the book value of farm assets may be about half

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<sup>4</sup> Economic Indicators of the Farm Sector, National Financial Summary ECIFS 11-1, ERS, USDA, January 1993.

<sup>5</sup> 1987 Census of Agriculture.

<sup>6</sup> For a discussion of these opportunities, see LaDue, E.L. "Partnership Agreements and Inter-Generational Transfer: Opportunities for Agricultural Banks." Cornell University, Department of Agricultural, Resource, and Managerial Economics, Staff Paper No. 93-22, November 1993.

of the market value<sup>7</sup>. This large discrepancy in the way the assets are valued means that the two sets of reported rates of return are not comparable.

**Table 1. Rates of Return by Farm Size  
United States, 1987-90**

Measure and Gross Sales	Year		
	1988	1989	1990
<i>Rate of Return on Assets (percent)</i>			
Over 500,000	8.2	9.6	8.2
250,000 - 499,999	4.4	4.2	5.7
50,000 - 249,999	1.4	2.1	1.5
49,999 and under	-3.0	-2.2	-2.2
All Farms	0.5	1.2	1.0
<i>Return on Equity (percent)</i>			
Over 500,000	7.6	9.3	7.3
250,000 - 499,999	2.9	2.7	4.5
50,000 - 249,999	-0.3	0.8	-0.2
49,999 and under	-4.1	-3.2	-3.2
All Farms	-1.1	-0.0	-0.4

*Source:* The Economic Well-Being of Farm Operator Households, 1988-90. Agricultural Economic Report Number 666, USDA, ERS, January 1993, pp. 25-31.

In an attempt to see what more comparable data would look like, I calculated rates of return for agriculture on a book value basis by assuming that the book value of assets was half the market value<sup>8</sup>. These approximate book value rates for farm businesses were then compared to the book value rates reported by manufacturing corporations (Figure 10). The adjusted agricultural rates are still below manufacturing rates much of the time, but compare much more favorably than the unadjusted rates. For the period 1960 through 1992, nonfarm ROE's averaged 18.7 percent compared to 3.8 for agriculture on a market value basis and 7.6 for agriculture on an approximate book value basis. If we had the data to construct a series for farm businesses that included only commercial farm businesses and made the comparison on a book value, it is likely that farm rates would be similar to the rates of manufacturing corporations.

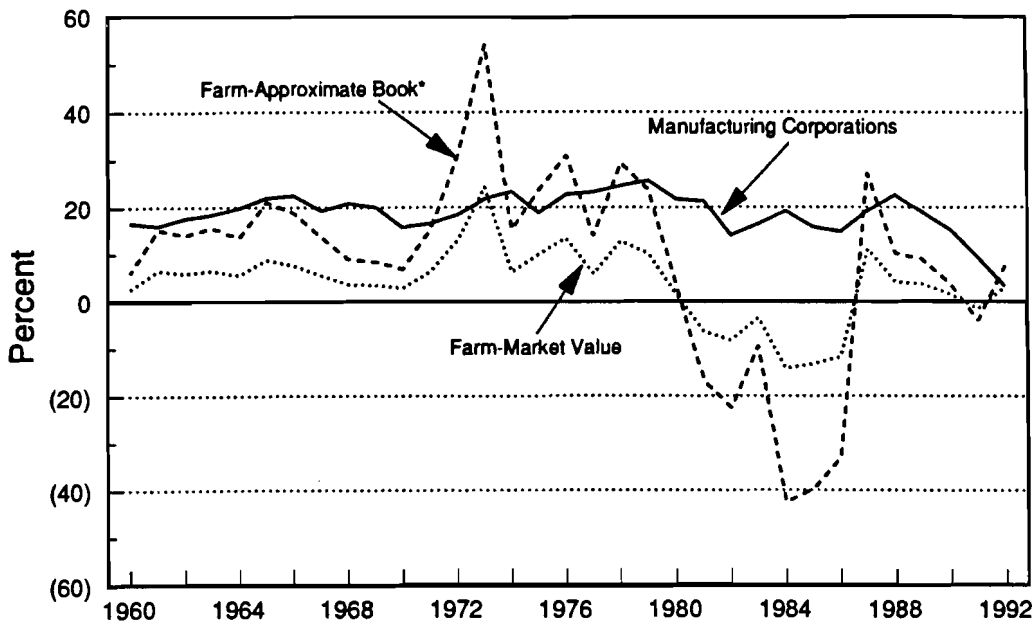
Another measure of profitability often used by nonfarm businesses is earnings as a percent of sales. Data to calculate this measure are available for both farm businesses and manufacturing corporations (Figure 11). Except for the 1980's agricultural recession period, farm businesses compare very favorably using this measure. Earnings as a percent of sales does not have the data comparability problems that we observed with rate of return values. We should recognize, however, that this measure favors highly capitalized industries such as agriculture.

At a minimum, it is clear that many farm businesses achieve rates of return that make them good loan prospects from a business profitability point of view.

<sup>7</sup> LaDue, E.L. "Deferred Taxes: Estimation Errors and Effects on Analytical Ratios." *Agr. Fin. Rev.* 54(1994):24-38.

<sup>8</sup> Book value equity was calculated as  $M/2 - L = E$  where M = the market value of farm assets, L = farm debt, and E = book value equity. This book value equity was then divided into the net return to equity measured in dollars.

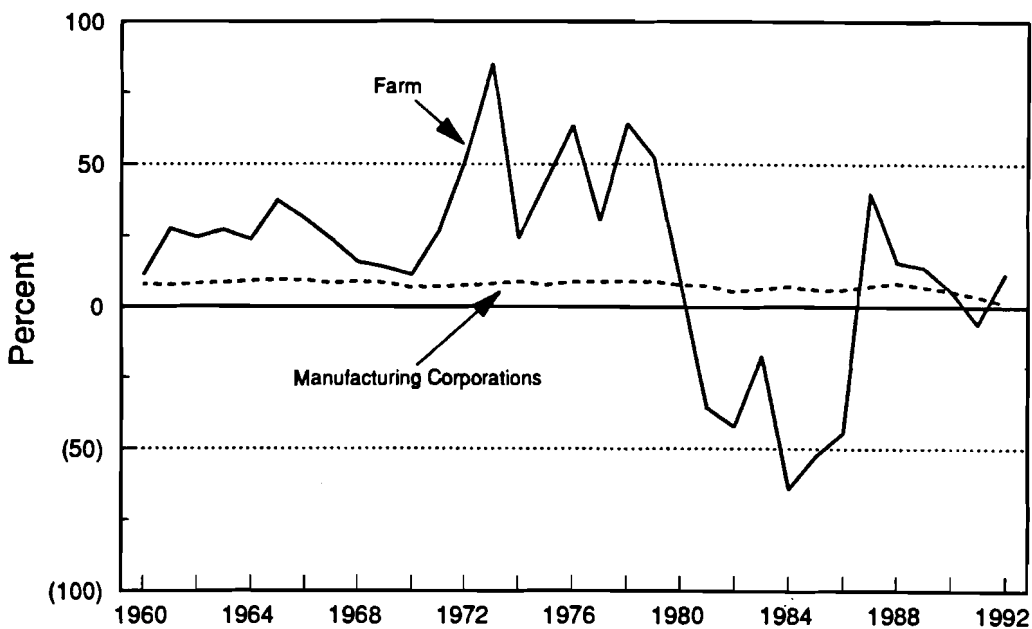
**Figure 10. Before Tax Rates of Return on Equity**



\*Assuming the book value of farm assets is one-half the market value and that the book value of liabilities equals the market value of liabilities.

Source: Economic Indicators of the Farm Sector, and Economic Report of the President.

**Figure 11. Before Tax Earnings as Percent of Sales\***



\*Returns to equity divided by sales for manufacturing corporations and returns to equity divided by gross cash income for farm.

Source: Economic Indicators of the Farm Sector, and Economic Report of the President.

## Agriculture Is Big Business

United States farm businesses have total assets of \$878 billion, total debt of \$141 billion<sup>9</sup> and gross 1993 farm income of \$198 billion.<sup>10</sup> Clearly, on a national scale, it is big business.

New York is frequently not thought of as an agricultural state. It ranks 24th in the 50 states in total cash receipts from farming. However, it ranks second in apple, corn silage and sweet corn production, third in milk, tart cherry and grape production, fourth in pear, cauliflower and carrot production, and fifth in celery, onion, green pea and green bean production. The farming industry in New York has total assets of about \$12.5 billion and outstanding debt of \$2.1 billion (ERS, USDA).

Since agriculture is made up of a number of small to mid-sized businesses that are geographically disbursed, none of which is located in the town or city where the bank is located, it is easy to underestimate the magnitude of the agricultural industry. However, in many lender market areas, the total industry represents an industry of significant proportions. To provide some indication of the magnitude of agriculture in various lender market areas, estimates of the market value of farm assets and the total debt on those assets were prepared for each county in New York State.

The most recent county data on farm assets come from the 1987 Census of Agriculture. The 1992 census data are not yet available. Total farm assets for each county were estimated from 1987 from the census data<sup>11</sup>. The December 31, 1992 assets for the State as reported by the Economic Research Service (ERS), USDA were then distributed among counties in proportion to the 1987 asset totals. December 31, 1992 debt as reported by ERS was then distributed in proportion to total assets. The county farm assets and debts as developed using this procedure are presented in Figure 12.

The biggest shortcoming of this procedure is that the change in agriculture since 1987 has not been the same in all counties. Some counties have experienced significant declines while the agriculture in other counties has remained strong. However, the data are indicative of the total assets and debt in each county.

Each institution will have to decide whether an industry of this size presents an opportunity in their market area. For example, an institution located in northwestern New York with St. Lawrence, Jefferson and Lewis counties as a market area has total farm debt in its counties of about \$170 million. A 15 percent penetration would provide a portfolio of \$25 million.

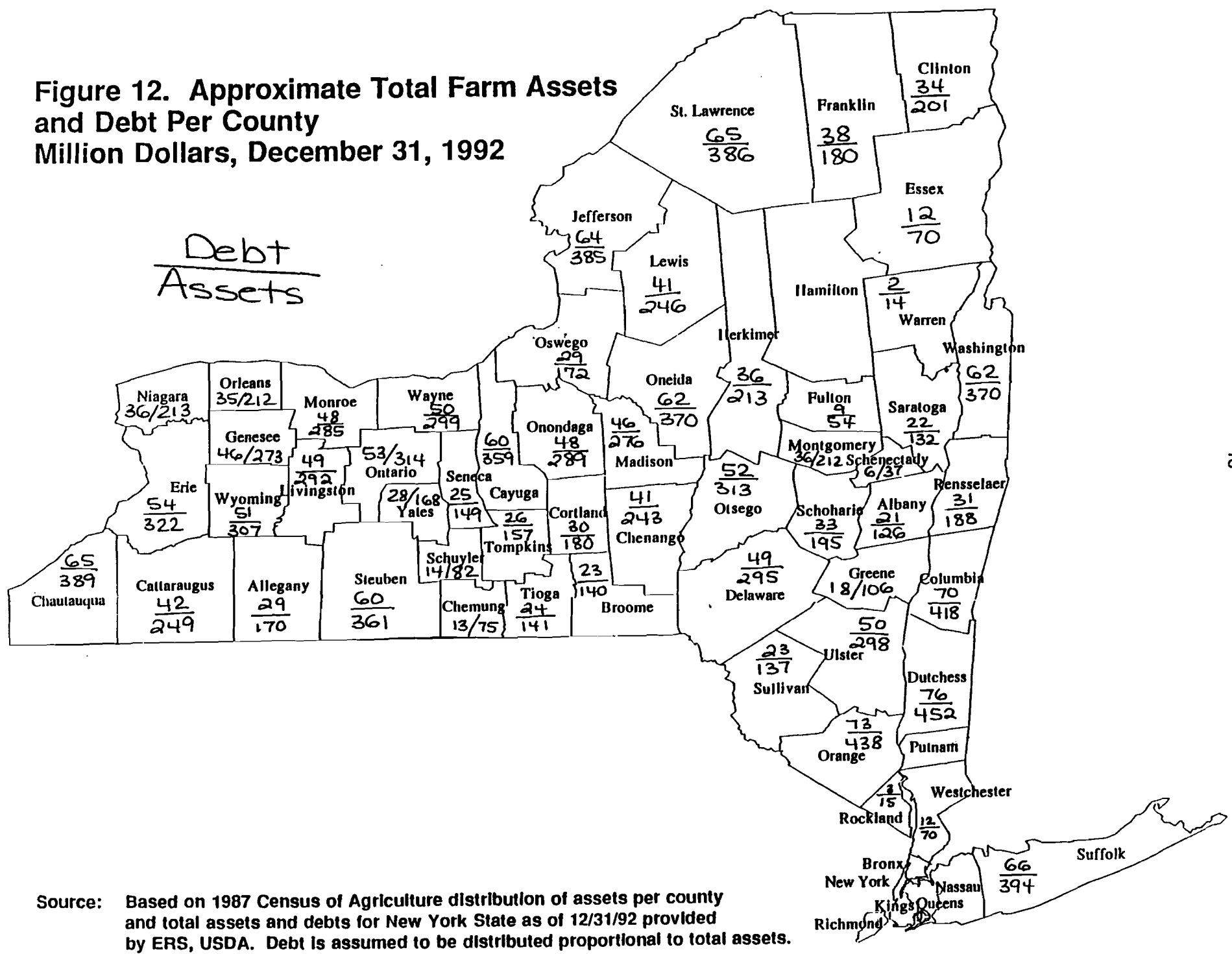
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<sup>9</sup> December 31, 1993 excluding operator households. Source: Agricultural Income and Finance, Situation and Outlook Report, ERS, USDA, AIS-52, February 1994, pp. 4 and 57.

<sup>10</sup> For 1993. Source: Agricultural Outlook, ERS, USDA.

<sup>11</sup> A rough approximation of the following assets per county were calculated as: (1) real estate = value of land and buildings per farm times the number of farms, (2) machinery = estimated market value of all machinery and equipment per farm times the number of farms, (3) livestock = number of cattle and calves times \$880 (the January price of a milk cow from Agricultural Prices), plus the number of hogs and pigs times \$40.40 (the December 1987 Pennsylvania all hog price per hundredweight from Agricultural Prices) times 2.2 (hundredweight per hog), plus the number of sheep and lambs times \$100, plus the number of chickens three months old or older times \$1.63 (average value per hen from the 1988 New York Poultry Farm Business Summary), plus broiler and other meat type chickens sold times \$0.27 (broiler price per pound from December 1987 Agricultural Prices times 3 (pounds per animal). Total assets for New York State for these three categories as reported by the Economic Research Service were then distributed among the counties in proportion to these rough approximations. All other assets were distributed in proportion to the total market value of agricultural products sold in each county.

**Figure 12. Approximate Total Farm Assets and Debt Per County  
Million Dollars, December 31, 1992**



**Source: Based on 1987 Census of Agriculture distribution of assets per county and total assets and debts for New York State as of 12/31/92 provided by ERS, USDA. Debt is assumed to be distributed proportional to total assets.**

## Summary

There are a number of reasons for lending to agriculture. Research studies indicate that agricultural lending can be lower cost than other commercial lending or installment lending, primarily because of the lower loan losses generally experienced with farm loans. Interest rates are generally higher than charged on nonfarm loans. The lower costs and higher rates result in agricultural loans being profitable for lenders. Except for the mid 1980's agricultural recession period, agricultural banks tend to be more profitable than other banks of similar size. Historically, conditions like the mid 1980's have occurred in agriculture about every 50 years.

Agricultural investment and income tend not to move with the general business cycle, indicating that including agricultural loans in a portfolio could be expected to provide more stable loan demand and diversification of risk. Because of the high cash throughput of operating farm businesses and the tendency of retired operators with large deposit balances to retire near the farmstead, agricultural loans can help build deposit balances. The increasing size of farm businesses and the aging of farm operators provides a market for cross-selling of trust, investment and other services that could result in considerable fee income for an institution that is able and willing to capitalize on the opportunity.

Because farming is made up of a number of small to mid-sized businesses that are geographically dispersed, the size of the industry tends to be underestimated. Nationally, and in many counties of New York State, farming is a large industry. In spite of much press that indicates or implies to the contrary, many commercial farm businesses are profitable entities that provide solid lending opportunities.

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## Appendix A Calculation of Comparable Farm and Nonfarm Interest Rates

Loans to farm businesses tend to have different average term, maturity, size and proportion at variable rate characteristics than loans to nonfarm businesses. Part of this difference results from differences in the credit needs of farmers i.e. more intermediate term (3,5 or 7 year) loans. Part of the difference results from differences in reporting. For example, the Federal Reserve Bulletin reports rates for agricultural loans of different sizes, but reports nonfarm rates for different sizes and term (long and short term) as well as fixed and variable rates.

To determine nonfarm rates that are comparable to farm rates the various categories of nonfarm rates were combined to provide rates for loans with characteristics similar to those found for agriculture.

### Small Loans (under \$100,000)

For small loans under \$100,000, loan characteristics are reported in categories that can be aggregated for both farm and nonfarm loans. Average credit terms are calculated by weighing the various reported categories by the total loan volume reported. Using this process, average loan size for farm and nonfarm loans are roughly equivalent. However, the average maturity and proportion at variable rates for agricultural loans differs significantly from any of the reported categories or nonfarm loans. To obtain nonfarm rates that were comparable to the reported farm rates (as graphed in figure 4 of the main report), the following procedure was used:

*Step 1.* Credit terms reported for long and short term floating rate loans were combined in the proportion required to make the average loan term equal to that reported for farm loans. For example, the average maturity of farm loans reported for February 1985 was 8.5 months (Table A1). The average maturity of nonfarm floating rate short term loans was 152 days ( $152/30 = 5.07$  months). For nonfarm long term floating rate loans average maturity was 42 months (Table A2). The nonfarm terms of floating rate loans of average term of 8.5 months was determined by first calculating the weight needed on long and short term loans to get an average term of 8.5 months. The percent weight needed for long term loans is  $(8.5 - 5.07) / (42 - 5.07) = .093$ . Thus, the average interest rate for nonfarm variable rate loans with a term of 8.5 months is the long term rate of  $12.96 \times .093$  (Table A4) plus the short term rate of  $12.8 \times (1 - .093)$ , which equals 12.82 (Table A4). The average loan size and maturity of these loans was calculated using the same weights.

*Step 2.* The same procedure was then used for long and short term fixed rate loans. For example, the average maturity of short term fixed rate loans was 103 days ( $103/30 = 3.43$  months) and long term fixed rates was 36 months (Table A3). The weight on long term loans required to get the same average maturity as agriculture (8.5 months) is  $.156 (8.5 - 3.43 / 36 - 3.43)$  (Table A4). The average nonfarm interest rate during February 1985 for loans of 8.5 months maturity is  $16.39 \times .156 + 18.28 \times (1 - .156) = 18.28$  (Table A4). The average loan size and maturity of these loans was determined using the same weights.

*Step 3.* Steps 1 and 2 provide credit terms for variable and fixed rate loans with the same average term as agricultural loans. These rates are then combined to provide rates for the same average term and percent variable rates by using the percent floating rates reported for agricultural loans (Table A1). For example, for February 1985 an average of 30.4 percent of agricultural loans were floating. Thus, the average rate for nonfarm loans is  $.304 \times 12.82$  (from step 1) plus  $(1 - .304) \times 18.28$  (from step 2) which equals 16.62 percent (Table A5).

## Large Loans (\$100,00 and over)

To obtain the nonfarm data used in Figure 5 of the main part of this publication a similar procedure was used for loans over \$100,000. The primary difference is that the nonfarm data loan size categories are not comparable to the average size of loans of over \$100,000 found for agricultural loans. This necessitated a preliminary step (labeled Step 1 below) to correct for loan size.

*Step 1.* Credit terms of nonfarm loans of size similar to those found for agriculture were determined for variable rate short term loans, variable long term loans, fixed rate short term loans, and fixed rate long term loans. Nonfarm credit terms are reported for loan sizes of \$100,000 to \$499,999, \$500,000 to \$999,999, and \$1,000,000 to \$4,999,999. When the average size of agricultural loans (Table A1) was between the averages for the \$100,000 to \$499,999 and \$500,000 to \$999,999 categories, nonfarm credit terms were determined by weighing the terms of these two groups by the weight necessary to result in the average size of loan equal to that found for farm loans. When the average size of agricultural loans (Table A1) was between \$500,000 to \$999,999, and \$1,000,000 to \$4,999,999, nonfarm credit terms were determined by weighing the terms of these two groups by the weight necessary to result in the average size of loan equal to that found for farm loans.

For example, in February 1985 the average loan size for agriculture was \$465 thousand. The average size of nonfarm loans \$186 thousand for loans between \$100,000 and \$499,999 and \$642 thousand for loans between \$500,000 and \$999,999 (data not shown in tables). A weight of .388 ( $642 - 465 / 642 - 186$ ) on the larger loans and  $(1 - .388)$  on the smaller loans results in an average size of \$465 thousand. Using similar weights for the interest rates results in an average interest rate of 11.77 percent (Table A6) calculated as the rate on smaller loans of 12.01 percent multiplied by .388 plus the rate on larger loans of 11.61 percent multiplied by .612. A similar weighing is used to calculate the average maturity of these loans.

In May 1986 the average size of agricultural loans was \$666 thousand. The average size of nonfarm loans in the \$500,000 to \$999,999 category was \$620 thousand and loans in the \$1,000,000 to \$4,999,999 category was \$2,797 thousand. Weights of .0211 on the larger category and .9789 on the smaller category result in an average size of \$666 thousand, an average interest rate of 9.41 and average maturity of 150 days (Table A6). The resulting credit terms corrected for loan size for the four categories are shown in Table A6.

*Step 2.* This is similar to Step 1 used for small loans. Data from Table A6 are weighted to obtain loan terms for variable rate loans with maturities similar to those found in agriculture. The results of this step are shown in the left side of Table A8.

*Step 3.* This step is similar to Step 2 used for small loans. Data from Table A7 are weighted to obtain loan terms for fixed rate loans with maturities similar to those found in agriculture. The results of this step are shown in the right side of Table A8.

*Step 4.* This step is similar to Step 3 used for small loans. Data from Table A8 are weighted by the percent of agricultural loans that are at a floating rate to obtain nonfarm rates for loans with a similar variable and fixed rate mix as found in agricultural loans (Table A9).

The interest rates reported in Table A9 are of similar size, maturity and floating rate percentage as agricultural loans. These rates are shown in Figure 5 of the main report.

Date	Small Loans (Under \$100,000)				Large loans (\$100,000 and over)			
	Interest Rate	Maturity (months)	Loan Size (\$1,000)	Percent Floating	Interest Rate	Maturity (months)	Loan Size (\$1,000)	Percent Floating
Feb. '85	13.86	8.5	28	30.4	13.14	5.3	465	47.1
May '85	13.60	8.1	24	35.6	12.41	8.9	491	59.4
Aug. '85	12.87	7.3	22	35.7	11.66	8.3	468	47.4
Nov. '85	13.03	7.6	26	35.9	11.29	9.3	474	59.3
Feb. '86	12.76	11.2	24	41.4	11.41	6.9	504	43.0
May '86	12.06	9.6	25	46.0	10.95	8.7	666	74.6
Aug. '86	11.90	8.9	28	49.0	10.32	8.6	373	61.2
Nov. '86	11.32	8.8	31	41.6	10.36	7.8	459	69.6
Feb. '87	11.15	9.9	26	46.8	9.45	11.2	653	79.8
May '87	11.04	12.2	25	53.7	10.06	40.5	449	58.9
Aug. '87	11.19	9.6	30	56.8	9.72	6.4	771	55.1
Nov. '87	11.59	7.5	30	48.1	10.47	16.7	506	63.9
Feb. '88	11.27	16.6	32	61.2	10.73	18.2	385	55.5
May '88	11.26	12.1	25	57.9	10.12	15.2	477	57.2
Aug. '88	11.66	6.8	25	48.2	11.35	7.2	899	74.9
Nov. '88	12.01	8.7	31	55.9	11.14	5.8	575	69.6
Feb. '89	12.39	16.6	28	56.8	12.18	11.5	484	73.7
May '89	13.02	10.1	29	50.2	12.68	7.3	435	53.5
Aug. '89	12.75	9.4	27	59.7	12.10	15.4	337	71.6
Nov. '89	12.43	8.0	29	51.0	12.07	8.0	372	76.5
Feb. '90	12.30	15.3	33	62.3	11.32	9.9	630	78.6
May '90	12.24	12.8	24	61.5	11.38	15.0	734	84.8
Aug. '90	12.27	8.6	25	66.0	10.32	4.5	1309	59.6
Nov. '90	12.17	9.9	32	54.5	11.14	7.7	960	60.7
Feb. '91	11.59	12.5	35	63.5	9.91	8.2	1191	60.2
May '91	10.73	13.3	26	61.1	8.86	7.6	1923	78.4
Aug. '91	11.06	9.2	25	63.8	9.52	9.2	593	83.0
Nov. '91	10.36	9.9	31	55.5	8.31	6.0	820	55.9
Feb. '92	9.40	14.7	34	56.6	7.31	13.2	888	77.4
May '92	9.32	14.7	29	60.3	7.58	18.5	666	81.6
Aug. '92	8.83	13.0	28	64.0	7.13	11.8	810	76.8
Nov. '92	8.74	12.9	30	59.7	6.78	8.6	806	81.0
Feb. '93	8.58	13.7	31	60.8	7.07	13.2	765	77.5
May '93	8.62	13.9	27	60.8	6.93	15.3	1021	89.2
Aug. '93	8.39	14.1	28	63.9	7.04	12.6	815	88.0
Nov. '93	8.40	13.5	33	63.2	6.88	10.6	816	79.1
Feb. '94	8.29	17.9	34	66.3	6.79	11.3	783	82.9
May '94	8.62	18.3	29	62.2	7.22	14.0	704	77.7

\*Average of reported rates weighted by loan volume.

Source: Agricultural Finance Databook and Federal Reserve Bulletin.

Date	Short Term Loans			Long Term Loans		
	Loan Size (\$1,000)	Maturity (days)	Interest Rate	Loan Size (\$1,000)	Maturity (months)	Interest Rate
Feb. '85	40	152	12.80	22	42	12.96
May '85	42	158	12.93	21	47	13.26
Aug. '85	38	149	11.48	24	49	12.31
Nov. '85	39	154	11.55	27	38	11.62
Feb. '86	38	143	11.52	26	47	11.83
May '86	40	154	10.43	23	49	10.61
Aug. '86	41	153	9.94	22	48	10.07
Nov. '86	42	151	9.20	23	43	9.71
Feb. '87	42	147	9.42	26	47	9.92
May '87	42	157	9.84	28	43	10.15
Aug. '87	41	141	10.18	23	42	10.59
Nov. '87	42	155	10.79	23	43	11.33
Feb. '88	41	155	10.47	22	43	10.9
May '88	41	158	10.40	26	44	10.62
Aug. '88	41	161	11.48	28	50	11.58
Nov. '88	41	163	11.90	27	67	12.04
Feb. '89	42	157	12.54	28	43	12.62
May '89	42	164	13.44	23	51	13.73
Aug. '89	41	168	12.51	26	49	12.66
Nov. '89	43	155	12.46	24	56	12.49
Feb. '90	40	145	11.97	24	46	12.25
May '90	42	163	11.98	28	41	12.09
Aug. '90	42	174	11.86	24	46	12.15
Nov. '90	42	169	11.93	24	46	12.11
Feb. '91	23	155	10.87	25	47	11.33
May '91	24	166	10.34	27	43	10.78
Aug. '91	23	165	10.25	27	45	10.45
Nov. '91	29	167	9.03	28	35	9.12
Feb. '92	28	147	8.20	31	37	8.54
May '92	23	165	7.87	26	47	7.93
Aug. '92	23	180	7.58	25	47	7.84
Nov. '92	25	163	7.62	24	51	8.06
Feb. '93	25	163	7.62	24	51	8.06
May '93	23	171	7.55	24	43	7.94
Aug. '93	23	196	7.43	26	45	7.92
Nov. '93	23	178	7.49	28	40	7.73
Feb. '94	23	162	7.63	27	37	7.84
May '94	23	185	8.24	34	52	8.4

\*Average of reported rates weighted by loan volume.

Source: Federal Reserve Bulletin.

**Table A3. Nonfarm Credit Terms on Fixed Rate Loans, Small Loans (under \$100,000)**

Date	Short Term Loans			Long Term Loans		
	Average Loan Size (\$1,000)	Weighted Average Maturity (days)	Loan Rate Weighted Average Effective	Average Loan Size (\$1,000)	Weighted Average Maturity (months)	Loan Rate Weighted Average Effective
Feb. '85	29	103	14.14	13	36	16.39
May '85	11	107	14.43	15	41	16.09
Aug. '85	30	106	13.43	14	43	13.53
Nov. '85	27	133	13.09	11	64	16.71
Feb. '86	29	108	12.75	12	62	13.14
May '86	30	113	11.47	16	45	12.32
Aug. '86	29	115	11.18	17	31	11.86
Nov. '86	30	110	10.72	15	45	11.37
Feb. '87	26	120	10.66	19	56	10.97
May '87	32	109	11.28	17	39	11.23
Aug. '87	27	105	10.84	17	50	12.14
Nov. '87	30	103	11.47	17	35	11.88
Feb. '88	31	116	11.30	20	35	11.91
May '88	34	115	10.99	18	42	11.79
Aug. '88	31	110	11.49	21	61	11.49
Nov. '88	31	105	12.03	18	76	12.66
Feb. '89	30	121	12.37	13	34	14.24
May '89	33	118	13.40	18	35	13.14
Aug. '89	30	111	12.78	17	36	12.44
Nov. '89	34	126	12.43	21	41	12.28
Feb. '90	30	115	12.24	16	49	12.32
May '90	30	133	12.03	18	33	12.00
Aug. '90	28	114	12.16	17	49	12.22
Nov. '90	31	131	12.06	19	54	12.33
Feb. '91	14	128	11.29	18	28	11.73
May '91	13	134	11.29	18	38	11.29
Aug. '91	11	123	11.37	13	37	11.29
Nov. '91	13	135	10.40	15	36	10.41
Feb. '92	19	130	8.40	22	41	9.31
May '92	16	142	9.18	16	47	9.85
Aug. '92	14	124	9.06	15	38	9.40
Nov. '92	15	151	8.73	16	38	9.31
Feb. '93	15	151	8.73	16	38	9.31
May '93	14	178	8.35	16	43	8.82
Aug. '93	14	140	8.61	15	47	8.56
Nov. '93	13	147	8.18	20	40	8.36
Feb. '94	14	142	8.06	18	47	7.35
May '94	16	169	8.07	18	48	8.62

\* Average of reported rates weighted by loan volume.

Source: Federal Reserve Bulletin.

**Table A4. Nonfarm Credit Terms Weighted to Farm Maturities<sup>a</sup>, Small Loans (Under \$100,000)**

Date	Floating Rate Loans				Fixed Rate Loans			
	Long Term Weight <sup>b</sup>	Average Interest Rate	Average Maturity (months)	Average Loan Size (\$1,000)	Long Term Weight <sup>b</sup>	Average Interest Rate	Average Maturity (months)	Average Loan Size (\$1,000)
Feb. '85	0.094	12.82	8.5	38	0.156	14.49	8.5	26
May '85	0.067	12.95	8.1	41	0.120	14.63	8.1	11
Aug. '85	0.053	11.52	7.3	37	0.095	13.44	7.3	28
Nov. '85	0.076	11.56	7.6	38	0.054	13.29	7.6	26
Feb. '86	0.153	11.56	11.2	36	0.131	12.80	11.2	27
May '86	0.103	10.45	9.6	38	0.142	11.59	9.6	28
Aug. '86	0.089	9.95	8.9	39	0.187	11.31	8.9	27
Nov. '86	0.098	9.25	8.8	40	0.123	10.80	8.8	29
Feb. '87	0.119	9.48	9.9	40	0.114	10.70	9.9	26
May '87	0.184	9.90	12.2	40	0.242	11.26	12.2	28
Aug. '87	0.131	10.23	9.6	39	0.131	11.01	9.6	26
Nov. '87	0.063	10.82	7.5	41	0.130	11.53	7.5	28
Feb. '88	0.303	10.60	16.6	35	0.410	11.55	16.6	27
May '88	0.177	10.44	12.1	39	0.217	11.17	12.1	31
Aug. '88	0.032	11.48	6.8	40	0.054	11.49	6.8	30
Nov. '88	0.053	11.90	8.7	41	0.072	12.08	8.7	30
Feb. '89	0.301	12.56	16.6	38	0.419	13.15	16.6	23
May '89	0.101	13.47	10.1	40	0.197	13.35	10.1	30
Aug. '89	0.087	12.52	9.4	40	0.177	12.72	9.4	28
Nov. '89	0.056	12.46	8.0	42	0.105	12.41	8.0	33
Feb. '90	0.254	12.04	15.3	36	0.253	12.26	15.3	26
May '90	0.206	12.01	12.8	39	0.292	12.02	12.8	27
Aug. '90	0.068	11.88	8.6	41	0.105	12.17	8.6	27
Nov. '90	0.106	11.95	9.9	40	0.112	12.09	9.9	30
Feb. '91	0.175	10.95	12.5	23	0.347	11.44	12.5	15
May '91	0.208	10.43	13.3	25	0.264	11.29	13.3	14
Aug. '91	0.095	10.27	9.2	23	0.156	11.36	9.2	11
Nov. '91	0.147	9.04	9.9	29	0.171	10.40	9.9	13
Feb. '92	0.305	8.30	14.7	29	0.283	8.66	14.7	20
May '92	0.222	7.88	14.7	24	0.236	9.34	14.7	16
Aug. '92	0.172	7.62	13.0	23	0.263	9.15	13.0	14
Nov. '92	0.164	7.69	12.9	25	0.240	8.87	12.9	15
Feb. '93	0.180	7.70	13.7	25	0.261	8.88	13.7	15
May '93	0.219	7.64	13.9	23	0.214	8.45	13.9	14
Aug. '93	0.196	7.53	14.1	24	0.222	8.60	14.1	14
Nov. '93	0.222	7.54	13.5	24	0.245	8.22	13.5	15
Feb. '94	0.395	7.71	17.9	25	0.311	7.84	17.9	15
May '94	0.264	8.28	18.3	26	0.298	8.23	18.3	17

<sup>a</sup>Average of Table A2 and A3 rates weighted by the percentage necessary to achieve the same average maturity as found for agricultural loans in Table A1. <sup>b</sup>Rate used to weight long term loans to achieve average maturity equal to that found in agriculture. Source: Federal Reserve Bulletin.

<b>Table A5. Nonfarm Credit Terms Corrected to Farm Maturities and Proportion Floating Rates* Small Loans (Under \$100,000)</b>				
<b>Date</b>	<b>Floating Rate Weight</b>	<b>Average Interest Rate</b>	<b>Average Maturity (months)</b>	<b>Average Loan Size</b>
Feb. '85	0.304	13.98	8.5	30
May '85	0.356	14.03	8.1	22
Aug. '85	0.357	12.76	7.3	31
Nov. '85	0.359	12.67	7.6	30
Feb. '86	0.414	12.29	11.2	31
May '86	0.460	11.07	9.6	33
Aug. '86	0.490	10.64	8.9	33
Nov. '86	0.416	10.16	8.8	33
Feb. '87	0.468	10.13	9.9	32
May '87	0.537	10.53	12.2	34
Aug. '87	0.568	10.57	9.6	33
Nov. '87	0.481	11.19	7.5	34
Feb. '88	0.612	10.97	16.6	32
May '88	0.579	10.75	12.1	35
Aug. '88	0.482	11.49	6.8	35
Nov. '88	0.559	11.98	8.7	36
Feb. '89	0.568	12.82	16.6	31
May '89	0.502	13.41	10.1	35
Aug. '89	0.597	12.60	9.4	35
Nov. '89	0.510	12.44	8.0	37
Feb. '90	0.623	12.13	15.3	32
May '90	0.615	12.01	12.8	34
Aug. '90	0.660	11.98	8.6	36
Nov. '90	0.545	12.01	9.9	35
Feb. '91	0.635	11.13	12.5	20
May '91	0.611	10.77	13.3	21
Aug. '91	0.638	10.66	9.2	19
Nov. '91	0.555	9.65	9.9	22
Feb. '92	0.566	8.46	14.7	25
May '92	0.603	8.46	14.7	21
Aug. '92	0.640	8.17	13.0	20
Nov. '92	0.597	8.17	12.9	21
Feb. '93	0.608	8.16	13.7	21
May '93	0.608	7.96	13.9	20
Aug. '93	0.639	7.91	14.1	20
Nov. '93	0.632	7.79	13.5	21
Feb. '94	0.663	7.76	17.9	21
May '94	0.622	8.26	18.3	22

\*Average values determined by weighing Table A4 fixed and variable values by the proportions necessary to achieve the same percent floating as observed for agriculture in Table A1. *Source:* Federal Reserve Bulletin.



**Table A6. Nonfarm Credit Terms For Loans at Weighted Average Size of Farm Loans\*  
Variable rate Large Loans (\$100,000 and over)**

Date	Short Term Loans			Long Term Loans		
	Average Interest Rate	Average Maturity (days)	Average Loan Size (\$1,000)	Average Interest Rate	Average Maturity (months)	Average Loan Size (\$1,000)
Feb. '85	11.77	152	465	11.93	47.8	465
May '85	11.88	171	491	11.83	44.1	491
Aug. '85	10.62	145	468	11.04	41.8	468
Nov. '85	10.70	156	474	11.05	47.2	474
Feb. '86	10.72	160	504	10.79	48.7	504
May '86	9.41	150	666	9.65	43.0	666
Aug. '86	9.23	142	373	9.54	60.6	373
Nov. '86	8.62	166	459	8.77	47.0	459
Feb. '87	8.37	159	653	8.67	65.0	653
May '87	9.21	164	449	9.23	45.8	449
Aug. '87	9.24	177	771	9.27	43.5	771
Nov. '87	10.01	159	506	10.34	44.5	506
Feb. '88	9.94	148	385	10.28	76.9	385
May '88	9.71	183	477	9.89	61.3	477
Aug. '88	10.53	143	899	10.64	39.3	899
Nov. '88	11.34	167	575	11.60	60.6	575
Feb. '89	11.97	128	484	12.29	50.2	484
May '89	12.94	172	435	13.05	47.0	435
Aug. '89	11.99	168	337	12.13	43.7	337
Nov. '89	11.88	153	372	12.26	39.8	372
Feb. '90	10.96	142	630	11.56	45.8	630
May '90	11.13	195	734	11.18	33.1	734
Aug. '90	10.90	160	1309	11.18	35.8	1309
Nov. '90	11.05	212	960	11.00	47.1	960
Feb. '91	10.01	199	1191	9.97	37.5	1191
May '91	8.95	152	1923	9.81	34.3	1923
Aug. '91	9.64	184	593	10.25	44.9	593
Nov. '91	8.45	175	820	8.39	35.9	820
Feb. '92	7.30	148	888	7.19	35.5	888
May '92	7.12	175	666	7.18	51.3	666
Aug. '92	6.88	233	810	6.95	42.1	810
Nov. '92	6.73	155	806	6.93	41.4	806
Feb. '93	6.73	154	765	6.94	41.3	765
May '93	6.71	200	1021	6.84	42.3	1021
Aug. '93	6.58	206	815	6.76	50.0	815
Nov. '93	6.79	160	816	6.36	31.6	816
Feb. '94	6.43	178	783	6.69	27.4	783
May '94	7.50	273	704	7.67	45.9	704

\*Weighted average credit terms between \$100,000 to \$499,999 and \$500,000 to \$999,000 or between \$500,000 to \$999,999, and \$1,000,000 and \$4,999,999 with weights determined by the combination needed to obtain the same average loan size as found for ag loans (Table A1).

**Table A7. Nonfarm Credit Terms For Loans at Average Size of Farm Loans\*  
Fixed Rate Large Loans (\$100,000 and over)**

Date	Short Term Loans			Long Term Loans		
	Weighted Average Interest Rate	Weighted Average Maturity (days)	Weighted Average Loan Size	Weighted Average Interest Rate	Weighted Average Maturity (months)	Weighted Average Loan Size
Feb. '85	11.43	61	465	12.83	73.5	465
May '85	11.58	56	491	13.15	70.4	491
Aug. '85	10.83	130	468	12.18	112.2	468
Nov. '85	10.94	74	474	11.76	98.5	474
Feb. '86	10.35	53	504	11.30	62.7	504
May '86	8.91	78	666	9.35	111.5	666
Aug. '86	9.35	83	373	9.93	41.5	373
Nov. '86	8.35	108	459	9.84	69.4	459
Feb. '87	7.65	77	653	9.73	60.0	653
May '87	8.82	79	449	9.70	49.4	449
Aug. '87	8.03	61	771	9.38	44.9	771
Nov. '87	8.92	68	506	10.56	70.6	506
Feb. '88	9.55	113	385	9.92	76.4	385
May '88	8.97	102	477	9.73	47.7	477
Aug. '88	9.87	49	899	10.99	34.5	899
Nov. '88	9.96	68	575	11.01	63.4	575
Feb. '89	11.35	82	484	11.92	63.1	484
May '89	12.25	156	435	12.14	50.8	435
Aug. '89	11.52	84	337	12.99	42.4	337
Nov. '89	11.39	89	372	11.81	61.9	372
Feb. '90	10.42	71	630	11.09	53.5	630
May '90	9.01	59	734	11.64	86.8	734
Aug. '90	10.03	89	1309	10.53	46.5	1309
Nov. '90	10.35	89	960	11.03	44.3	960
Feb. '91	8.09	49	1191	9.30	49.1	1191
May '91	7.09	36	1923	8.55	45.9	1923
Aug. '91	8.00	76	593	9.72	100.3	593
Nov. '91	6.82	67	820	8.73	56.9	820
Feb. '92	5.87	55	888	7.07	30.8	888
May '92	5.77	81	666	8.74	116.2	666
Aug. '92	5.15	85	810	8.31	29.9	810
Nov. '92	4.29	160	806	7.37	68.4	806
Feb. '93	4.29	163	765	7.39	68.7	765
May '93	4.62	73	1021	8.39	59.2	1021
Aug. '93	4.69	87	815	7.83	24.5	815
Nov. '93	5.03	77	816	7.34	46.3	816
Feb. '94	5.10	95	783	6.71	46.8	783
May '94	5.71	114	704	7.37	45.0	704

\*Weighted average credit terms between \$100,000 to \$499,999 and \$500,000 to \$999,000 or between \$500,000 to \$999,999 and \$1,000,000 and \$4,999,999 with weights determined by the combination needed to obtain the same average loan size as found for ag loans (Table A1).

**Table A8. Nonfarm Credit Terms for Loans at Average Size and Maturities of Agricultural Loans\*, Large Loans (\$100,000 and over)**

Date	Variable Rate Loans				Fixed Rate Loans			
	Percent Long Term Weight <sup>b</sup>	Weighted Average Interest Rate	Weighted Average Maturity (months)	Weighted Average Loan Size	Percent Long Term Weight <sup>b</sup>	Weighted Average Interest Rate	Weighted Average Maturity (months)	Weighted Average Loan Size
Feb. '85	0.004	11.77	5.3	465	0.045	11.49	5.3	465
May '85	0.084	11.87	8.9	491	0.103	11.74	8.9	491
Aug. '85	0.094	10.66	8.3	468	0.037	10.88	8.3	468
Nov. '85	0.097	10.74	9.3	474	0.071	11.00	9.3	474
Feb. '86	0.036	10.72	6.9	504	0.085	10.43	6.9	504
May '86	0.097	9.43	8.7	666	0.056	8.94	8.7	666
Aug. '86	0.069	9.25	8.6	373	0.151	9.44	8.6	373
Nov. '86	0.054	8.63	7.8	459	0.064	8.45	7.8	459
Feb. '87	0.100	8.40	11.2	653	0.151	7.96	11.2	653
May '87	0.870	9.23	40.5	449	0.809	9.53	40.5	449
Aug. '87	0.014	9.24	6.4	771	0.102	8.16	6.4	771
Nov. '87	0.291	10.11	16.7	506	0.211	9.26	16.7	506
Feb. '88	0.184	10.00	18.2	385	0.199	9.62	18.2	385
May '88	0.166	9.74	15.2	477	0.267	9.17	15.2	477
Aug. '88	0.070	10.54	7.2	899	0.168	10.06	7.2	899
Nov. '88	0.004	11.34	5.8	575	0.058	10.02	5.8	575
Feb. '89	0.156	12.02	11.5	484	0.144	11.43	11.5	484
May '89	0.037	12.95	7.3	435	0.046	12.24	7.3	435
Aug. '89	0.257	12.03	15.4	337	0.317	11.99	15.4	337
Nov. '89	0.085	11.91	8.0	372	0.086	11.43	8.0	372
Feb. '90	0.127	11.04	9.9	630	0.148	10.52	9.9	630
May '90	0.319	11.15	15.0	734	0.153	9.42	15.0	734
Aug. '90	-0.029	10.89	4.5	1309	0.034	10.05	4.5	1309
Nov. '90	0.016	11.05	7.7	960	0.115	10.43	7.7	960
Feb. '91	0.051	10.01	8.2	1191	0.138	8.26	8.2	1191
May '91	0.088	9.02	7.6	1923	0.143	7.30	7.6	1923
Aug. '91	0.079	9.69	9.2	593	0.068	8.12	9.2	593
Nov. '91	0.007	8.45	6.0	820	0.070	6.95	6.0	820
Feb. '92	0.270	7.27	13.2	888	0.391	6.34	13.2	888
May '92	0.279	7.14	18.5	666	0.139	6.19	18.5	666
Aug. '92	0.119	6.89	11.8	810	0.333	6.20	11.8	810
Nov. '92	0.096	6.75	8.6	806	0.052	4.46	8.6	806
Feb. '93	0.223	6.78	13.2	765	0.123	4.67	13.2	765
May '93	0.242	6.74	15.3	1021	0.226	5.47	15.3	1021
Aug. '93	0.133	6.61	12.6	815	0.450	6.10	12.6	815
Nov. '93	0.201	6.70	10.6	816	0.184	5.46	10.6	816
Feb. '94	0.249	6.50	11.3	783	0.186	5.40	11.3	783
May '94	0.133	7.52	14.0	704	0.248	6.12	14.0	704

\*Average of Table A6 and A7 rates weighted by the percentage necessary to achieve the same average maturity as found for agricultural loans in Table A1. <sup>b</sup>Rate used to weight long term loans to achieve average maturity equal to that found in agriculture. Source: Federal Reserve Bulletin.

**Table A9. Nonfarm Credit Terms for Loans at Average Size  
Maturities and Proportion Variable Rates of Agricultural Loans\*  
Large Loans (\$100,000 and Over)**

Date	Percent Floating Rate Weight	Weighted Average Interest Rate	Weighted Average Maturity (months)	Weighted Average Loan Size (\$1,000)
Feb. '85	0.304	11.58	5.3	465
May '85	0.356	11.79	8.9	491
Aug. '85	0.357	10.80	8.3	468
Nov. '85	0.359	10.91	9.3	474
Feb. '86	0.414	10.55	6.9	504
May '86	0.460	9.17	8.7	666
Aug. '86	0.490	9.35	8.6	373
Nov. '86	0.416	8.52	7.8	459
Feb. '87	0.468	8.16	11.2	653
May '87	0.537	9.37	40.5	449
Aug. '87	0.568	8.78	6.4	771
Nov. '87	0.481	9.67	16.7	506
Feb. '88	0.612	9.85	18.2	385
May '88	0.579	9.50	15.2	477
Aug. '88	0.482	10.29	7.2	899
Nov. '88	0.559	10.76	5.8	575
Feb. '89	0.568	11.76	11.5	484
May '89	0.502	12.60	7.3	435
Aug. '89	0.597	12.01	15.4	337
Nov. '89	0.510	11.68	8.0	372
Feb. '90	0.623	10.84	9.9	630
May '90	0.615	10.48	15.0	734
Aug. '90	0.660	10.60	4.5	1309
Nov. '90	0.545	10.77	7.7	960
Feb. '91	0.635	9.37	8.2	1191
May '91	0.611	8.35	7.6	1923
Aug. '91	0.638	9.12	9.2	593
Nov. '91	0.555	7.78	6.0	820
Feb. '92	0.566	6.87	13.2	888
May '92	0.603	6.76	18.5	666
Aug. '92	0.640	6.64	11.8	810
Nov. '92	0.597	5.82	8.6	806
Feb. '93	0.608	5.95	13.2	765
May '93	0.608	6.24	15.3	1021
Aug. '93	0.639	6.42	12.6	815
Nov. '93	0.632	6.24	10.6	816
Feb. '94	0.663	6.13	11.3	783
May '94	0.622	6.99	14.0	704

\*Average values determined by weighing Table A8 fixed and variable values by the proportions necessary to achieve the same percent floating as observed for agriculture in Table A1.

Source: Federal Reserve Bulletin.

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