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# Life Insurance Company Mortgage Lending to U.S. Agriculture

## Challenges and Opportunities



Jerome M. Stam
Steven R. Koenig
George B. Wallace

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## Abstract

This report examines the historical and current role of life insurance companies in providing capital to the U.S. farm sector. Special attention is paid to the activities of the life insurance industry in the wake of farm sector financial stress in the 1980's and the advent of the Farmer Mac secondary market for farm mortgage loans. As a result, fewer life insurance companies offer new farm loans, portfolios are more diversified, loans are larger, and lending has shifted to the Southeast and West. Life insurance companies were leaders in developing the first loan pools guaranteed by Farmer Mac. Through time, they have lessened involvement in direct farm loan activities, increased direct ownership of farmland, and achieved wider flexibility in managing their agricultural investment portfolios.

**Keywords**: Life insurance, farm mortgages, Farmer Mac, credit, financial stress, agricultural finance, lenders

**Authors**: Jerome M. Stam is leader of the Finance Team and Steven R. Koenig and George B. Wallace are agricultural economist and financial economist, respectively, Rural Economy Division.

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# Summary

The life insurance industry held $9.6 billion in U.S. farm real estate debt (11.5 percent of the total) in 1994, down about a fourth from their 1980 level of $12.9 billion (13.3 percent of the total).

The decline reflects the more complicated relationship now existing between life insurance companies and U.S. agriculture in the wake of the financial stress of the 1980's. The seven companies still active in farm lending have virtually pulled out of the small- to medium-sized farm mortgage market in favor of more agribusiness, timber, and specialty enterprises. Life insurance companies are also emphasizing larger ($500,000 or more) agricultural loans. These new policies have shifted life insurance lending away from the Midwest and toward the Southeast, Delta, and West Coast regions. Life insurance companies only make farm loans secured by a farm real estate mortgage.

Most life insurance companies were conservative farm mortgage lenders going into the farmland price boom of the 1970's, and did not become more aggressive lenders until well into the decade. As a result, they found themselves competing for riskier loans at the high end of the cycle of land prices and interest rates. Farm borrowing and land values dropped abruptly during the farm recession of the 1980's. Insurance company farm mortgage portfolios often experienced greater financial stress than those of the Farm Credit System or commercial banks.

Delinquency rates on life insurance company farm mortgage debt rose from 1.5 percent at the beginning of 1980 to 19.9 percent at midyear 1986. During the same period, foreclosures rose from less than 0.2 percent to 8.2 percent of outstanding loan volume. The market value of property acquired through foreclosure reached $1.6 billion in 1987, an amount equivalent to more than 15 percent of the industry's outstanding farm mortgage volume at the time. Life insurance farm loan losses are estimated at $859 million for the 1984-89 period, or 6.8 percent of the farm loan portfolio at the beginning of 1984.

The events of the 1980's led to increased concentration of farm mortgage assets within the industry. The number of life insurance companies making new farm loans declined from 12 in 1980 to 7 in late 1995. Most departures occurred in 1986. The life insurance companies remaining in farm lending are among the largest in the industry. The seven companies that remain active in farm lending account for about 80 percent of the industry's farm mortgages.

Life insurance company farm mortgage loans are spread throughout the Nation. The concentration has been shifting away from the Corn Belt to the Southeast and Pacific Coast farm production regions. This trend accelerated during the 1980's as companies divested troubled midwestern loans, sought larger loans, and invested more in mortgages backed by timber or agribusiness assets. The share of the insurance industry's mortgage volume in the Corn Belt declined from 23.5 percent in 1980 to 13.5 percent in 1994, and the share captured by the Pacific region increased to 36.8 percent from 19.3 percent. California has the largest concentration of life insurance farm mortgage loans, with 30.4 percent of the total in 1994.

Despite farmland's potential as an equity investment in a diversified portfolio, life insurance companies typically have been only minor players in direct farmland ownership. At the end of 1979, life insurance companies held only $241.4 million in direct farmland investments, as opposed to $12.2 billion in farm mortgages. Today, the industry holds $2.6 billion in direct farmland investment, up tenfold since 1979. In the 1980's, much of this accumulation resulted from foreclosure and default, but subsequently industry policies favored such acquisitions. Despite the increases, life insurance companies owned only 0.36 percent of all farmland in terms of dollar value in 1994.

The life insurance industry was a leader in using the Farmer Mac secondary market for farm mortgages. After participating in six of the seven Farmer Mac loan pools as originators, poolers, or both, life insurance companies one by one withdrew their participation in recent years. Without a major participant, the secondary market is struggling to survive and is seeking legislation to expand its charter.

# Life Insurance Company Mortgage Lending to U.S. Agriculture

## Challenges and Opportunities

### Introduction

Life insurance companies are well established in American economic history, having offered risk protection for over 200 years. Life insurance companies are among the leading financial institutions in terms of size and influence. The high predictability of most insurance claims has enabled life insurance firms to invest billions of dollars in capital markets to support economic growth. Life insurance companies historically have been major investors in financing real property and bonds.

Life insurance companies' sizable investments in real estate mortgages through time can be explained by their comparatively high yields and by the fact that the term of mortgage assets provides a good match for the long-term nature of life insurance liabilities.[1] For these reasons, life insurance companies have been major suppliers of long-term mortgages.[2] Despite an active role in farm lending dating back into the last century, the life insurance industry's lending to agriculture has been the least studied of the four institutional agricultural lender categories (life insurance companies, commercial banks, Farm Credit System, and USDA's Farm Service Agency).

Historically, the convenient match between the maturity of life insurance liabilities and long-term farm mortgage assets provided a relatively stable relationship between life insurance companies and the farm sector. The matching of assets and liabilities paralleled the match between the maturity of commercial bank deposits (liabilities) and farm operating loans (assets). However, during the past two decades, the life insurance mortgage loan relationship with the farm sector has been severely tested. First, the agricultural sector experienced a severe boom-bust cycle during the 1970's and 1980's that increased credit risks and diminished farm lending profitability. Second, the volatile economic environment of the past two decades caused significant changes in the life insurance industry's product mix and investment strategy. Inflation, high interest rates, and other volatile economic conditions caused traditional life insurance policies to be less well received by the public and altered the investment strategies life insurance companies choose. Third, the deregulation of financial markets, tax law changes, and an array of new investment alternatives provided the life insurance industry with a wide range of more sophisticated products, such as mortgage-backed securities. As a result, some observers question life insurance companies' commitment to future agricultural lending.

This report explores the changing nature of life insurance company lending to U.S. agriculture. Specific objectives of the report are to: (1) evaluate the importance of life insurance company farm mortgage lending to the farm sector (including differences by geographical division and State); (2) study life insurance company farm mortgage lending policies and loan terms; (3) analyze the competitive interrelationships faced by life insurance companies in the farm mortgage market, with particular focus on the Farm Credit System (FCS); (4) explore the life insurance companies' policies and activities in the farmland ownership market; (5) analyze the opportunities and implications of Farmer Mac for the life insurance companies; (6) evaluate the impact of the 1980's farm sector financial stress on the life insurance farm mortgage portfolio; and (7) explore the potential future nature and extent of life insurance company farm mortgage lending.

[1] The term "mortgage" is used in this report to represent any type of debt contract secured by real estate, including mortgages, purchase money mortgages, and real estate sales contracts. The terms "farm mortgage" and "agricultural mortgage" are used interchangeably.

[2] The majority of the life insurance industry's loans have been made for real estate purchases, but insurance companies have also financed livestock facilities, particularly joint-venture operations such as integrated poultry, feeder pig, or cattle feeding corporations and limited partnerships, plus drainage and irrigation systems (Boehlje and Eidman, 1984).

## The Life Insurance and Agricultural Industries: An Overview

Both the life insurance and agricultural industries have complex economic histories and both have experienced financial adversity in recent years. It is important to place both situations in context by briefly exploring the experience of each industry.

Throughout much of the 20th century, the large insurance companies were popular symbols of unquestioned strength and stability for both the general public and for professionals within the financial community. The financial risks were thought to be modest in large, diversified insurance companies (Randall and Kopcke, 1992). Management was considered conservative and company ratings by regulators generally varied from superior to excellent. Despite the inherent conservatism of investment criteria in the insurance industry, however, external forces affecting financial markets have sometimes disrupted the stability of the life insurance contract and threatened the solvency of many companies. Earlier crises have been overcome with a variety of solutions based on both industry-wide efforts and cooperation with State regulators.

Wright (1990) notes that, beginning with the Great Depression, there have been at least six major threats of disaster for life insurance investments and, in some cases, the related solvency of a large number of companies:

- The drastic and continuing decline in security values during the Great Depression of the 1930's.
- The 1966-67 run on policy loans when rising interest rates brought about massive disintermediation as companies had to pay out large sums.[3]
- The renewed increase in policy loans in 1970-71.
- The 1973-74 decline in the stock market, which resulted in sizable surplus incursions of funds for many companies.
- The liquidity crunch of 1980, when record-high interest rates brought a surge of new demand for policy loans and a sharp fall-off in pension fund inflows.

[3] The process whereby funds that had previously flowed from ultimate providers to ultimate users through an insurance company were now routed elsewhere because of reasons connected with low relative interest rates paid by the life insurance industry.

The sixth challenge began in the late 1980's and ran into the early 1990's. It was termed by Wright in 1990 as the "fears of an impending crisis." Some tried to draw analogies between the earlier savings and loan (S&L) crisis and the life insurance industry. Both are major investors in commercial real estate mortgages and had poured large sums into these investments during the 1980's. These mortgages encountered repayment difficulties because of rising vacancy rates, rising interest rates, and serious overbuilding in several areas of the country. By the early 1990's, delinquencies and foreclosures on commercial real estate loans were jeopardizing segments of the lending industry.

The 1980's brought considerable change in the insurance industry, affecting the industry's structure, distribution systems, and focus (USITC, 1991). A broad array of new products, new investment strategies, and new public policy disputes occurred in rapid order. The aging "baby boomers" shunned purchasing traditional products in favor of adding to their pension and annuity purchases. Long-term investment is central to the insurance business, and financial deregulation in the 1980's meant that interest rates for traditional whole life policies could no longer keep up with competing investment instruments. Insurers sought new ways to give customers current market returns, which often trimmed profit margins and stretched capital in what traditionally had been an overcapitalized industry (USITC, 1991).

Some life insurance companies grew rapidly in the 1980's through the sale of investment-oriented products. These products, mostly single-premium deferred annuities and guaranteed investment contracts, differed from traditional products. They were sold on the basis of their high fixed rate of return and had more in common with bank certificates of deposit than with other insurance products (Todd and Wallace, 1992). Some observers viewed the changes in the life insurance industry as risky and paralleling the earlier course of the savings and loan industry (Todd and Wallace, 1992; Kopcke, 1992). Yet, analysts stressed that there exist a number of critical differences between life insurance companies and savings and loan associations (Wright, 1990).

Life insurance companies were experienced in the commercial mortgage loan market and better able to adjust, while S&L's were virtual newcomers to this field in the 1980's (Brewer and others, 1993). The S&L industry was hurt by high interest rates, and deregulation allowed them to enter the commercial

real estate area. Many S&L's were too aggressive and others were fraudulent. S&L's in the Southwest were hurt by the drop in oil prices while others undertook risky investments in areas such as low-grade bonds.

American consumers, by 1990, had trouble recognizing the insurance industry they thought they had understood a decade earlier (McCartney, 1992). According to Randall and Kopcke (1992), a crack appeared in the life insurance company facade in 1988 when the fourth largest U.S. company encountered well-publicized losses that ate deeply into its capital. This was considered to be an isolated problem at the time.

Two events, however, highlighted the industry's emerging financial troubles. In January 1990, First Executive, the 16th largest U.S. life insurance holding company with over $18 billion in assets, stated that it was writing down the value of its bond portfolio by $515 million (Fenn and Cole, 1992). Then in October 1990, Travelers, the seventh largest life insurance company with $36 billion in assets, announced that it was setting aside $650 million in reserves for expected losses on its large commercial real estate portfolio (Fenn and Cole, 1992).

The value of insurance company stocks dropped in late 1990 as investors began to closely examine the financial setbacks besieging the industry. Media attention grew in 1991 as it became evident that the life subsidiaries of two companies were impaired as a result of substantial investments in junk bonds. Junk bonds are high-yielding financial instruments that carry substantial default risk and are thus rated as below investment grade by financial rating companies. The subsequent acquisitions of these large insurance companies by their regulators caused liquidity runs by panic-driven insurance policy withdrawals (Randall and Kopcke, 1992). During April-July 1991, six medium- to large-sized life insurance companies were taken over by regulators (Harrington, 1992). These companies had suffered writedowns in the value of their junk/low-grade bonds and commercial real estate holdings. Several of the insolvencies were preceded by large cash withdrawals by policyholders. The fragility of the industry became a matter of national concern (Malkiel, 1991).

Financial ratings for a number of major insurers were downgraded and insolvencies increased from about 5 per year during 1975-83 to 18 per year in 1984-91, with a high of 47 in 1989 (GAO, 1992). In 1990, a landmark year for the life insurance industry, the public discovered that the same asset-quality problems affecting thrift and commercial banks during the late 1980's, namely investments in junk bonds and commercial real estate, also affected the life insurance industry (Fenn and Cole, 1992). Drastic changes in risk factors transformed the seemingly stable and dependable life insurance industry into one that could cause widespread public concern (Randall and Kopcke, 1992). Events and concerns continue to play out in the 1990's.

A number of observers are optimistic about the industry's future, noting that the life insurance industry was able to avoid an S&L-type of crisis (Brewer and others, 1993). Compared with the writedowns taken by other financial institutions, the level of loan losses recognized by the life insurance industry appears modest. The asset base of the insurance companies is well diversified. It is recognized that one of the major problems of the 1980's was a shift to pension and annuity business relative to traditional life insurance underwriting. But companies reacted by divesting risk in commercial real estate and certain segments of the corporate bond market. In response to the liquidity runs of the early 1990's, the life insurance industry has reduced holdings of risky assets, restored profitability, and raised new capital to improve capital ratios (Brewer and others, 1993). Supervision by State regulatory authorities also has been strengthened (Wright, 1992).

Life insurance companies face continued challenges in managing their commercial mortgage portfolios in the 1990's. The earlier slide toward instability has been replaced by a retreat toward caution. Delinquency and foreclosure rates declined in the mid-1990's but remain elevated, and surplus commercial space is keeping rents and real estate prices down (Cabanilla, 1993). Annual new mortgage commitments for commercial mortgages are a fraction of the levels of the late 1980's. The financial strength ratings of the industry are now more stable.

## Financial Stress in the Agricultural Sector

In contrast to the historical stability of the life insurance industry, the agricultural sector is both dynamic and risky. The sector is subject to the vagaries of the biological production process with all the uncertainty introduced by weather, disease, and pests in addition to the usual financial uncertainties inherent in business. During the past two decades, the U.S. farm sector experienced its latest boom-bust cycle when a combination of forces placed the sector on an economic roller coaster.

The 1970's were a relatively prosperous time for agriculture, with optimistic expectations of higher worldwide demand for U.S. farm products spurred by a depreciating dollar and the emergence of new markets. Prices for grains and soybeans rose early in the decade in response to strong demand. Production and investment expanded in a climate of low, and at times negative, real interest rates. During this period of high economic expectations, farm borrowing grew, and land values and machinery investments increased rapidly. Lenders, consultants, government, universities, and others often encouraged additional borrowing to finance expansion. Combined with surging land rents and other cost increases, a higher cost structure for agriculture resulted.

The early 1980's saw a rapid turnaround in the forces that had caused the rapid production expansion. Back-to-back recessions in 1980 and 1981-82 hit the farm sector hard. The appreciation of the dollar reduced U.S. farm exports, and major droughts (in 1980 and 1983) reduced the amount of grains available for export. Other countries expanded production in response to generally higher world prices. In the United States, the cost of producing commodities increased into the early 1980's. Monetary policies designed to reduce inflation prompted interest rates to rise to unprecedented levels in the early 1980's. Farm input and debt-servicing costs increased, while net farm income generally fell. Returns to land declined due to slower export growth, a reduction in commodity prices, a high cost structure, and even lower expectations of future returns. Declining farmland values weakened farmers' equity positions. Many farmers were unable to make payments on the large amount of debt acquired during the 1970's boom period.

The result of these interrelated economic changes was the most severe financial stress for the farm sector since the Great Depression. Financial stress is generally accepted to indicate insufficient cash available to meet the cash expenses of the farm operation, family living, and scheduled debt service of the farm household (Leistritz and Eckstrom, 1988).

Deregulation also affected the agricultural sector in the early 1980's (Barry, 1981). The Depository Institutions Deregulation and Monetary Control Act of 1980 and the Garn-St. Germain Act of 1982 substantially deregulated commercial banking. Both geographic and product-line barriers in the financial services industry were significantly reduced. The Farm Credit Act Amendments of 1980 (P.L. 96-592) were enacted to update and improve the operation of the Farm Credit System. Deregulation, coupled with changes in monetary policy and fluctuating inflation rates, significantly altered the financial market environment for agricultural lenders and borrowers.

Rural lenders were no longer insulated from outside market forces when market interest rates became highly variable. The unexpected changes in interest rates, particularly the increases in the early 1980's, meant lenders lost earnings on fixed-rate loans. Lenders had to find ways to alter their interest rate risk and insulate themselves from surging and/or variable interest rates. Interest rate variability during the late 1970's and early 1980's increased the amount of risk above the levels that financial institutions had expected (LaDue and Leatham, 1984). The fastest and most convenient way to handle interest rate risk was to transfer it to borrowers through variable-rate loans.

Increased debt levels, higher interest rates, and expanding use of variable-rate loans spurred rapid growth in interest expenses for the farm sector during 1977-82. Interest as a percentage of total production expenses increased to 15.6 percent in 1982, compared with 8.5 percent in 1975 and 4.9 percent in 1960 (USDA, ECIFS series).

The farm sector financial problems of the 1980's generally arose not from production inefficiency but from the excessive debt held by many farmers (Harl, 1983). The large debts and high interest rates incurred during the 1970's, undercut by lower farm product prices and declining land values in the 1980's, overwhelmed the debt-carrying capacity of earnings on some farms. The challenge presented by the need to absorb large capital losses presented more of a problem than did low income levels for the sector during the 1980's (Lee, 1986). Since 1981, the debt load of the farm sector has been reduced significantly, and the sector's balance sheet has improved. Agriculture's vulnerability stems from its comparatively high level of capital intensity and its relatively low rate of return on assets. This combination ensures that domestic agriculture will be highly sensitive to interest rate, commodity price, and production changes (Harl, 1988).

Despite the perception of general financial stress until the late 1980's, there was a great deal of diversity within the agricultural sector during the decade. Some 39.5 percent of all farms reporting on USDA's Farm Costs and Returns Survey (FCRS) for January 1, 1986, stated that they had no debt (USDA, 1986). Only 13.4 percent of farms with annual sales of

$500,000 and over were debt-free, compared with 59.8 percent of farms with sales under $10,000 per year. A total of 33.4 percent of all debt owed to lenders was by farmers with debt/asset ratios of 0.71 or greater. The continued operation of these farm businesses was threatened, and lenders faced the likelihood of significant losses from farm loans.

The financial picture for the farm sector strengthened in the late 1980's and into the 1990's. U.S. per-acre farmland values stopped their slide in 1987 and began trending upward in 1988. The 1985 and 1990 Farm Bills provided an ample level of support for the industry. Farmers used retained earnings and increased cash incomes to reduce their economic vulnerability. Debt restructuring and write-offs fell, and farm borrowings increased slightly--a trend that has continued since. Major flood and drought problems hit in 1993, but the sector is fundamentally much better able to cope than it was a decade earlier.

## Life Insurance Company Assets

The life insurance industry is both large and extraordinarily complicated. Some of its companies number among the largest institutions in the financial system. The life insurance industry is an important player among the three major types of financial intermediaries--commercial banks, thrifts, and insurance companies. At the end of 1994, the life insurance industry controlled about $1.94 trillion in assets, compared with $3.99 trillion for commercial banks, $768.6 billion for thrifts, and $697.6 billion for property/casualty companies. Between 1980 and 1990, life insurance industry assets grew at a higher average annual rate than either commercial bank or thrift assets.

The number of life insurance companies and amount of life insurance company assets for selected years during the 1920-94 period are shown in table 1.[4] In 1994, 1,770 chartered companies held $1.94 trillion in life insurance company assets for an average holding of $1.1 billion.[5] During the 1980's both total and per-company assets grew at record percentage levels. Since 1920, the most rapid expansion in the number of companies occurred in the 1950-70 period (table 1). The record percentage growth in total industry assets during the 1980's, however, was the highest since the 1920's.

The predictability of most insurance claims allows life insurance companies to invest billions of dollars in capital markets. Historically, insurance companies placed a high priority on investment safety based on tradition, law, and regulation. Traditionally, the industry valued a "buy and hold" investment strategy over marketability of investment assets. The volatile economic environment since the 1970's changed that investment strategy. Life insurance companies responded by following a more flexible, market-aware investment policy and by increasing portfolio liquidity.

The changes in investment strategy affected the kinds of assets held by these companies. The most important investment trend shift during the past decade has been toward more liquid investments (table 2). Government security holdings showed the largest increase between 1980 and 1994, moving from 6.9 percent to 20.3 percent of assets. Holdings of corporate bonds and corporate stock grew likewise, but at a more modest pace.

Real estate mortgages traditionally have been a primary investment category for life insurance companies because of their relatively high yields and good investment quality. But, total life insurance mortgage holdings have been declining in favor of more liquid assets, such as government securities, since the 1970's, with this shift accelerating after 1980. Mortgage origination and servicing costs may be a factor in this shift. The share of assets held as mortgages declined from 35.9 percent in 1970 to 11.1 percent in 1994. Treasury and government-agency securities holdings more than doubled from 6.9 percent of assets in 1980 to 15 percent in 1990, at the same time the movement out of mortgages occurred (table 2). Not since World War II, when life insurance companies held huge quantities of government securities, was the industry's mortgage share as low. The other major trend was a shortening of asset maturities, especially the maturities of commercial mortgages (Fenn and Cole, 1992).

Farm mortgages dominated life insurance company mortgages in earlier years, accounting for slightly over half of all life insurance industry mortgage lending in 1920 (table 3). Farm mortgages accounted for 42.4 percent of the total mortgage portfolio in

[4] The data in table 1 were derived from the annual *Life Insurance Fact Book* published by the American Council of Life Insurance (ACLI). The *Fact Book* contains data obtained annually for all life insurance companies. Other tables in this report also contain data from the *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures*, also published by the ACLI. The *Investment Bulletin* is based on data obtained from approximately 75 companies that account for 80-85 percent of mortgages held by U.S. life insurance companies depending on the survey's date.

[5] It is estimated that about 1,200 of these companies are actually in operation (Wright, 1991, 1992). The balance have been chartered but do not conduct an active current business.

**Table 1--Number of life insurance companies and value of life insurance company assets, selected years, 1920-94**

| Year | Life insurance companies[1] | Total assets | | Average assets per company | |
|---|---|---|---|---|---|
| | | Current dollars | Constant dollars 1987=100 | Current dollars | Constant dollars 1987=100 |
| | *Number* | | *Million dollars* | | |
| 1920 | 335 | 7,320 | NA | 21.9 | NA |
| 1930 | 438 | 18,880 | 60,496 | 43.1 | 138.1 |
| 1940 | 444 | 30,802 | 263,265 | 69.4 | 593.2 |
| 1950 | 649 | 64,020 | 300,563 | 98.6 | 462.9 |
| 1960 | 1,441 | 119,576 | 459,908 | 83.0 | 319.2 |
| 1970 | 1,780 | 207,254 | 588,790 | 116.4 | 330.7 |
| 1980 | 1,958 | 479,210 | 668,354 | 244.7 | 341.3 |
| 1990 | 2,195 | 1,408,208 | 1,242,902 | 641.6 | 566.3 |
| 1994 | 1,770 | 1,942,273 | 1,540,264 | 1,097.3 | 870.2 |
| | | | *Percentage change* | | |
| 1920-30 | 30.7 | 157.9 | NA | 96.8 | NA |
| 1930-40 | 1.4 | 64.1 | 335.2 | 61.0 | 329.2 |
| 1940-50 | 46.2 | 107.8 | 14.2 | 42.1 | -22.0 |
| 1950-60 | 122.0 | 86.8 | 53.0 | -15.8 | -31.0 |
| 1960-70 | 23.5 | 73.3 | 28.1 | 40.2 | 3.6 |
| 1970-80 | 10.0 | 131.2 | 13.5 | 110.2 | 3.2 |
| 1980-90 | 12.1 | 193.9 | 86.0 | 162.2 | 65.9 |
| 1990-94 | -19.4 | 37.9 | 23.9 | 71.0 | 53.7 |
| 1920-94 | 428.4 | 26,433.8 | NA | 4,910.5 | NA |

NA = Not available. The implicit price deflator for the Gross Domestic Product used to calculate constant dollar values is not available prior to 1929.

[1] Includes companies chartered but not necessarily active.

Sources: American Council of Life Insurance, *Life Insurance Fact Book,* various issues. U.S. Council of Economic Advisors, *Economic Report of the President,* Washington, DC, Feb. 1995.

1925, when total mortgages were at a peak of 41.7 percent of all life insurance assets. The farm mortgage share declined to 11.7 percent by 1945 and ranged between 7.1 and 10.3 percent during 1950-80. Farm mortgages dropped from 9.9 percent of the total in 1980 to 3.7 percent during 1992 before increasing to 4.4 percent in 1994.

Much of the decline in the farm portfolio share is due to the growth in commercial real estate lending. Commercial real estate includes apartment, office, retail, industrial, hotel and motel, and mixed-use classifications. Inflating commercial real estate values during the 1970's and 1980's made this category of lending appear to be a safe and profitable long-term investment. As the industry focused on commercial real estate, farm and family home mortgages as a percentage of total mortgages declined. This trend toward specialization in commercial real estate began before 1980. Commercial real estate mortgages still accounted for only a third of the industry's total mortgage assets at the beginning of 1970, but were 91.9 percent of the total at the end of 1994.

Life insurance companies have increased their direct ownership of real property through the years, but this asset category has tended to just keep pace with the growth in total assets. Since 1960, direct ownership has remained 2.8-3.6 percent of total assets (table 2). Another asset, loans to policyholders, has shown more variability than direct real estate investments, but has trended down from a post-World War II high of 9.3 percent in 1981 to 4.2 percent in 1993 before moving to 4.4 percent in 1994. The substantial growth in the dollar value of policy loans in the 1970's was a response of policyholders to high interest rates on other sources of loanable funds. At that time, the

**Table 2--Distribution of assets of U.S. life insurance companies, selected years, 1917-94**

| Year | Government securities | Corporate securities | | Mortgages | Real estate | Policy loans | Misc. assets | Total |
|---|---|---|---|---|---|---|---|---|
| | | Bonds | Stocks | | | | | |
| | | | | *Percent* | | | | |
| 1917 | 9.6 | 33.2 | 1.4 | 34.0 | 3.0 | 13.6 | 5.2 | 100.0 |
| 1920 | 18.4 | 26.7 | 1.0 | 33.4 | 2.3 | 11.7 | 6.5 | 100.0 |
| 1925 | 11.3 | 26.2 | .7 | 41.7 | 2.3 | 12.5 | 5.3 | 100.0 |
| 1930 | 8.0 | 26.0 | 2.8 | 40.2 | 2.9 | 14.9 | 5.2 | 100.0 |
| 1935 | 20.4 | 22.9 | 2.5 | 23.1 | 8.6 | 15.2 | 7.3 | 100.0 |
| 1940 | 27.5 | 28.1 | 2.0 | 19.4 | 6.7 | 10.0 | 6.3 | 100.0 |
| 1945 | 50.3 | 22.5 | 2.2 | 14.8 | 1.9 | 4.4 | 3.9 | 100.0 |
| 1950 | 25.2 | 36.3 | 3.3 | 25.1 | 2.2 | 3.8 | 4.1 | 100.0 |
| 1955 | 13.1 | 39.7 | 4.0 | 32.6 | 2.9 | 3.6 | 4.1 | 100.0 |
| 1960 | 9.9 | 39.1 | 4.2 | 34.9 | 3.1 | 4.4 | 4.4 | 100.0 |
| 1965 | 7.5 | 36.7 | 5.7 | 37.8 | 3.0 | 4.8 | 4.5 | 100.0 |
| 1970 | 5.3 | 35.3 | 7.4 | 35.9 | 3.0 | 7.8 | 5.3 | 100.0 |
| 1975 | 5.2 | 36.6 | 9.7 | 30.8 | 3.3 | 8.5 | 5.9 | 100.0 |
| 1976 | 6.3 | 37.5 | 10.7 | 28.5 | 3.3 | 8.0 | 5.7 | 100.0 |
| 1977 | 6.7 | 39.2 | 9.6 | 27.5 | 3.2 | 7.8 | 6.0 | 100.0 |
| 1978 | 6.8 | 40.0 | 9.1 | 27.2 | 3.0 | 7.8 | 6.1 | 100.0 |
| 1979 | 6.9 | 39.1 | 9.2 | 27.4 | 3.0 | 8.1 | 6.3 | 100.0 |
| 1980 | 6.9 | 37.5 | 9.9 | 27.4 | 3.1 | 8.6 | 6.6 | 100.0 |
| 1981 | 7.5 | 36.8 | 9.1 | 26.2 | 3.5 | 9.3 | 7.6 | 100.0 |
| 1982 | 9.4 | 36.2 | 9.5 | 24.1 | 3.5 | 9.0 | 8.3 | 100.0 |
| 1983 | 11.7 | 35.4 | 9.9 | 23.1 | 3.4 | 8.3 | 8.2 | 100.0 |
| 1984 | 13.8 | 35.8 | 8.8 | 21.7 | 3.6 | 7.5 | 8.8 | 100.0 |
| 1985 | 15.0 | 36.0 | 9.4 | 20.8 | 3.5 | 6.6 | 8.7 | 100.0 |
| 1986 | 15.4 | 36.5 | 9.7 | 20.6 | 3.4 | 5.8 | 8.6 | 100.0 |
| 1987 | 14.5 | 38.8 | 9.3 | 20.4 | 3.3 | 5.1 | 8.6 | 100.0 |
| 1988 | 13.7 | 41.2 | 8.9 | 20.0 | 3.2 | 4.6 | 8.4 | 100.0 |
| 1989 | 13.7 | 41.4 | 9.7 | 19.5 | 3.1 | 4.4 | 8.2 | 100.0 |
| 1990 | 15.0 | 41.4 | 9.1 | 19.2 | 3.1 | 4.4 | 7.8 | 100.0 |
| 1991 | 17.4 | 40.2 | 10.6 | 17.1 | 3.0 | 4.3 | 7.4 | 100.0 |
| 1992 | 19.2 | 40.3 | 11.5 | 14.8 | 3.1 | 4.3 | 6.8 | 100.0 |
| 1993 | 20.9 | 39.7 | 13.7 | 12.5 | 2.9 | 4.2 | 6.1 | 100.0 |
| 1994 | 20.4 | 40.7 | 14.5 | 11.1 | 2.8 | 4.4 | 6.2 | 100.0 |

Sources: American Council of Life Insurance, *Life Insurance Fact Book, 1990*, and American Council of Life Insurance, *Life Insurance Fact Book,1995*.

**Table 3--Distribution of farm and nonfarm mortgage loans owned by U.S. life insurance companies, selected years, 1920-94**

| Year | Farm | Nonfarm | Total amount[1] |
|---|---|---|---|
| | *Percent* | | *Million dollars* |
| 1920 | 52.0 | 48.0 | 2,442 |
| 1925 | 42.4 | 57.6 | 4,808 |
| 1930 | 27.1 | 72.9 | 7,598 |
| 1935 | 20.0 | 80.0 | 5,357 |
| 1940 | 15.1 | 84.9 | 5,972 |
| 1945 | 11.7 | 88.3 | 6,636 |
| 1950 | 8.2 | 91.8 | 16,102 |
| 1955 | 7.7 | 92.3 | 29,445 |
| 1960 | 7.1 | 92.9 | 41,771 |
| 1965 | 8.0 | 92.0 | 60,013 |
| 1966 | 8.1 | 91.9 | 64,609 |
| 1967 | 8.2 | 91.8 | 67,516 |
| 1968 | 8.3 | 91.7 | 69,973 |
| 1969 | 8.0 | 92.0 | 72,027 |
| 1970 | 7.6 | 92.4 | 74,375 |
| 1971 | 7.4 | 92.6 | 75,496 |
| 1972 | 7.4 | 92.6 | 76,948 |
| 1973 | 7.4 | 92.6 | 81,369 |
| 1974 | 7.3 | 92.7 | 86,234 |
| 1975 | 7.6 | 92.4 | 89,167 |
| 1976 | 8.1 | 91.9 | 91,552 |
| 1977 | 9.1 | 90.9 | 96,848 |
| 1978 | 9.9 | 90.1 | 106,167 |
| 1979 | 10.3 | 89.7 | 118,421 |
| 1980 | 9.9 | 90.1 | 131,080 |
| 1981 | 9.5 | 90.5 | 137,747 |
| 1982 | 9.0 | 91.0 | 141,989 |
| 1983 | 8.4 | 91.6 | 150,999 |
| 1984 | 8.0 | 92.0 | 156,699 |
| 1985 | 6.9 | 93.1 | 171,797 |
| 1986 | 5.6 | 94.4 | 193,842 |
| 1987 | 4.6 | 95.4 | 213,450 |
| 1988 | 4.1 | 95.9 | 232,863 |
| 1989 | 3.8 | 96.2 | 254,215 |
| 1990 | 3.8 | 96.2 | 270,109 |
| 1991 | 3.8 | 96.2 | 265,258 |
| 1992 | 3.7 | 96.3 | 246,702 |
| 1993 | 4.1 | 95.9 | 229,061 |
| 1994 | 4.4 | 95.6 | 215,332 |

[1] Includes mortgages insured under the Canadian National Housing Act and other foreign sources; in 1994 these amounted to 2.1 percent of total holdings.
Sources: American Council of Life Insurance, *Life Insurance Fact Book,* various issues.

maximum loan rate on the policy's cash value was typically a fixed rate between 5 and 6 percent, which was below the cost of borrowing funds elsewhere. Policy loans increase during periods of high interest rates, such as during 1973-74 and 1978-80. Today, policy loan rates are generally variable and based on indexes linked to market conditions.

Portfolio losses experienced by insurers on policy loans in the late 1970's and early 1980's caused a shift toward shorter maturities and more liquid investments. During this period of rising interest rates, companies found the effective maturities of their liabilities reduced as large numbers of policyholders took policy loans. The industry had to either raise funds at high current rates to support lower yielding long-term assets, or sell those assets at a loss. Faced with the outlook of continued volatility in interest rates, the industry took measures to reduce interest-rate and liquidity risks.

The investment shifts seem to have had little impact on the industry's overall exposure to credit risk. The increased holdings of government securities reduced credit risk, but this reduction was partially offset by higher risks in equity-related investments (Fenn and Cole, 1992). Equity-related commercial real estate investments include direct holdings, joint ventures, and limited partnerships. These total to 5-10 percent of assets for most companies.

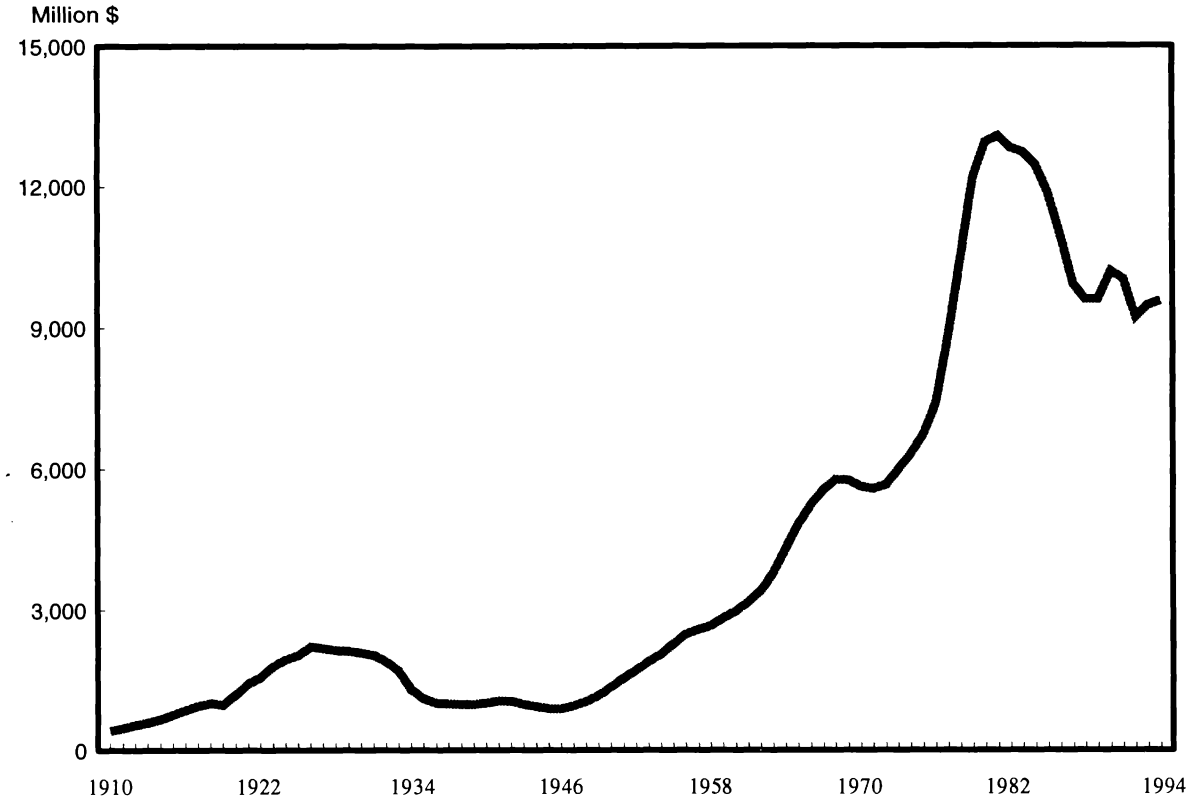
Industry aggregates understate the credit exposure of individual firms, especially with respect to commercial real estate and junk bond corporate debt (Malkiel, 1991). Despite the increased risks in the life insurance asset structure, the industry's portfolio did not present the same level of risk that had affected some banking institutions in the 1980's. A generalized problem such as that faced by the savings and loan industry was unlikely, unless the economy faced a severe and prolonged recession.

## Role of Life Insurance Companies in Farm Mortgage Lending

Farm sector mortgage borrowing from the life insurance industry has a long and distinguished history. Unfortunately, the early history of this relationship is obscure because time series data on farm mortgage loan amounts by lender prior to 1910 are unavailable. Life insurers were among the first intermediaries marketing financial services in the United States. A company incorporated in Philadelphia, known today as the Presbyterian Ministers Fund, is the oldest life insurer in the world, having an unbroken record of service to its

Figure 1

**Total life insurance company farm real estate loans outstanding (including operator households), 1910-94**




policyholders since incorporation in 1759 (Rose and Fraser, 1985). That life insurance companies were early participants in farm lending is illustrated by the fact that Phoenix Mutual Life Insurance Company made its first farm loan in 1861.[6] Phoenix Mutual's support of U.S. agriculture through mortgage loans continued unbroken for 131 years before ending in 1992 when Phoenix Mutual merged with another company and the farm loan portfolio was sold.

Historically, life insurance companies were the source of long-term, fixed-rate mortgage loans made through a network of fieldmen or loan correspondents. Many rural commercial banks supplied the short-term credit, with affiliated life insurance companies supplying long-term credit. This system was disrupted by increased competition, inflation, and more volatile economic conditions, especially after the 1960's. Life insurance companies made many adjustments to meet the new challenges, including a move to shorter term loan instruments.

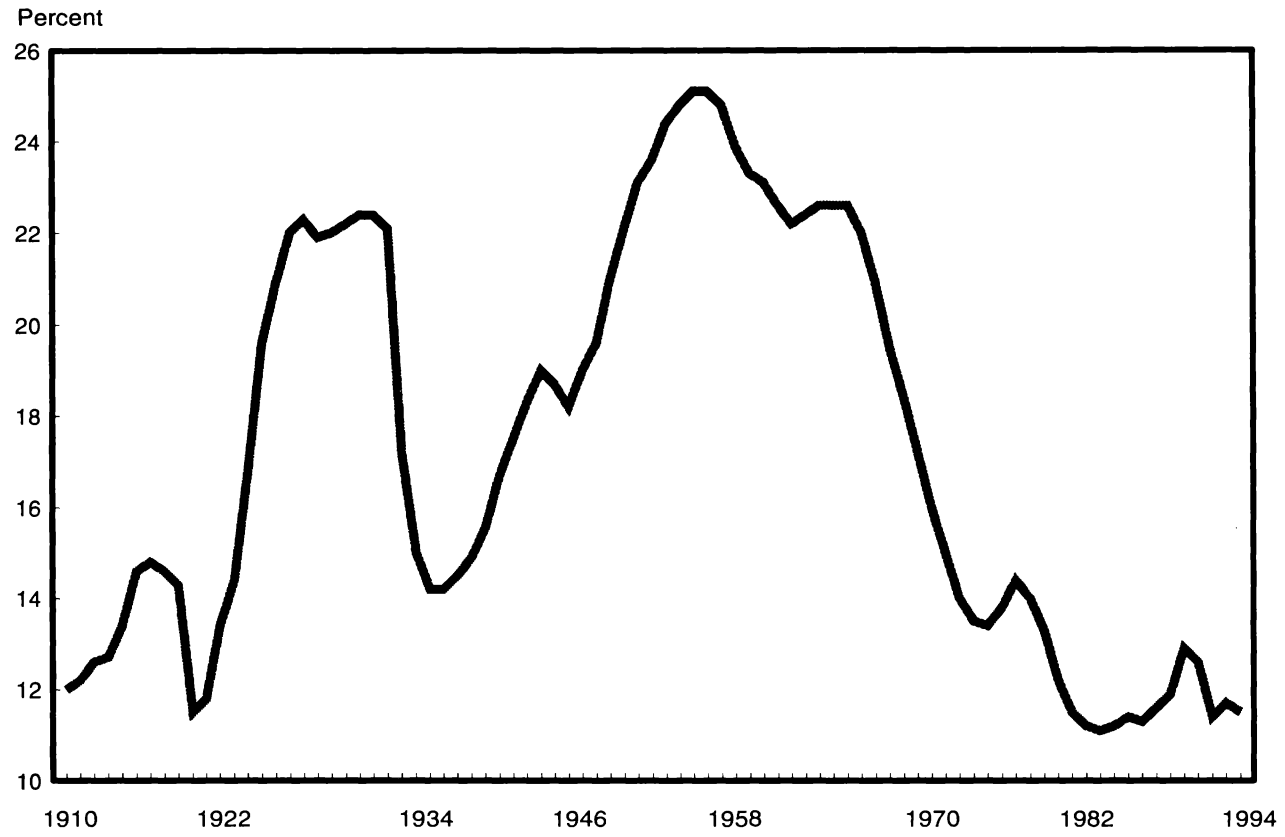
[6] Personal correspondence from Bill B. Myers, Second Vice President, Farm Investment, Phoenix Mutual Life Insurance Company, Feb. 13, 1992.

Agriculture historically has undergone cycles of growth and decline in its use of credit. Such cycles typically last more than a generation. Farm mortgage debt is no exception to this pattern. Wide swings in debt volume outstanding through time are generally associated with economic conditions in the sector, increasing in good times and declining when conditions are poor. For example, total farm mortgage debt peaked in 1922, declined to a low in 1945, increased to a new peak in 1983, declined until 1990, and increased slightly through 1994 (app. table 1).

Life insurance company farm mortgage lending has followed a similar trend (fig. 1, app. table 1). Life insurance farm real estate loans in nominal terms were $423 million in 1910, expanded to $2.2 billion in 1926, then declined as farmers became wary of the use of debt in the late 1920's. The decline continued with the large number of farm foreclosures during the Great Depression. A low was reached at $889 million in 1946 before a general expansion resumed. Life insurance company farm mortgage lending grew at average annual rates of 8.9 percent during 1960-70 and 13 percent during 1970-80. Life insurance company farm mortgage lending peaked at $13.1

Figure 2

**Life insurance company farm real estate loans as a percentage of total farm real estate loans, 1910-94**




billion in 1981 before trending down to a low of $9.6 billion in 1988 as a result of the farm sector financial crisis of the 1980's. A new upturn to $10.2 billion in 1990 was quickly followed by a decline to $9.2 billion in 1992, before slight growth to $9.6 billion in 1994.

Tostlebe, in his landmark study (1957), noted the striking extent to which farmers were dependent on local sources of farm mortgage credit in the late 19th century. In 1900, as much as 94 percent of the total farm mortgage debt outstanding was owed to banks, individuals, and others--loans based on mostly local sources of savings. Life insurance companies held 6 percent and were the primary source of mortgage funds that had originated as insurance policy payments (savings) at distant points (Tostlebe, 1957). By the beginning of USDA's time series in 1910, the life insurance company market share had grown to 12 percent (fig. 2, app. table 2).

Dependence on local sources of farm mortgage financing declined very slowly during the first two decades of this century (Tostlebe, 1957). The financing share coming from individuals and others remained at 69 percent or higher as late as 1920 (app. table 2). Increases in farm mortgage dollar volume by life insurance companies, the new Federal and Joint-Stock Land Banks, and the USDA Resettlement Administration (a predecessor of the Farmers Home Administration--FmHA) reduced the share of farm mortgage money originating from individuals and others to 32.8 percent by 1941.

The life insurance company market share of all farm real estate loans has varied markedly since 1910 (fig. 2). From a farm mortgage market share of 12 percent in 1910, a peak of 25.1 percent was reached in 1955-56. In 1994, the life insurance market share of 11.5 percent was about the same as that registered in 1910. Life insurance companies were the largest institutional lender category in terms of market share beginning in 1922. They gave up this position in 1933, regained it in 1948, and lost the lead again in 1968 to the FCS.

A comparison of the relative market share of farm real estate loans by life insurance companies and

**Table 4--Percentage change in number and dollar volume of agricultural and nonagricultural mortgage loans outstanding, selected years, 1960-94**

| Year[1] | Nonagricultural mortgages | | | Agricultural mortgages | | |
|---|---|---|---|---|---|---|
| | | Volume | | | Volume | |
| | Number of loans | Current dollars | Constant dollars 1987 = 100 | Number of loans | Current dollars | Constant dollars 1987 = 100 |
| | | | *Percentage change* | | | |
| 1960-70 | -10.3 | 88.8 | 39.5 | -8.1 | 114.2 | 58.2 |
| 1970-80 | -54.3 | 69.5 | -16.8 | -44.3 | 136.6 | 16.2 |
| 1980-90 | -66.9 | 125.5 | 42.7 | -62.9 | -24.3 | -52.1 |
| 1990-94 | -55.2 | -19.8 | -27.9 | -52.5 | -7.4 | -16.8 |
| 1960-94 | -93.9 | 478.9 | 19.4 | -91.0 | 255.5 | -26.7 |

[1] December 31.

Sources: American Council of Life Insurance, *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures,* various issues. U.S. Council of Economic Advisors, *Economic Report of the President,* Washington, DC, Feb. 1995.

commercial banks is revealing given their history of joint financing of farm borrowers (mortgage loans from life insurance companies and production loans from banks). Life insurance companies first exceeded commercial banks as a source of farm mortgage loans in 1922 with market shares of 14.4 and 14 percent, respectively; they maintained a lead until 1986 when their market share fell behind that of banks (11.4 to 13.3 percent, respectively) (app. table 2).

Commercial bank real estate lending expanded rapidly during and after the farm financial crisis of the early and mid-1980's as banks began securitizing a larger share of their farm operating loans. They developed new variable-rate real estate mortgages, balloon loan instruments, and standing lines of credit backed by real estate collateral. Several life insurance companies stopped new lending activity during the 1980's while local banks often had a more difficult time totally abandoning existing customers.

Life insurance industry farm mortgage lending as a percent of total farm mortgage lending held up quite well after 1970 despite the farm sector's boom-bust cycle and the life insurance industry's growing financial turbulence. Market share declined from 18.4 percent in 1970 to 13.3 percent in 1980. It was 12.9 percent in 1990 and was no lower than 11.1 percent (1984) during 1970-94.

A comparison of life insurance company agricultural and nonagricultural mortgage loan activity in recent decades reveals some other key trends (fig. 3, app. table 3). The trend throughout the post-1960 period has been toward fewer loans outstanding and a much larger loan volume outstanding (fig. 3, table 4). During 1960-94, the current dollar volume of farm mortgage loans outstanding grew 255.5 percent, but those of nonagricultural mortgages grew 478.9 percent. In constant dollars, agricultural loans outstanding decreased by 26.7 percent while nonagricultural loans outstanding grew 19.4 percent. In terms of number of loans outstanding, agricultural loan numbers declined 91 percent and nonagricultural loans 93.9 percent during 1960-94, with much of the change occurring after 1980.

These trends mean that average loan sizes have been increasing dramatically. The data show that average loan sizes have been steadily trending upward for both agricultural and nonagricultural mortgage loans with an especially rapid acceleration in the 1980's (fig. 4, app. table 4). During 1960-94, in nominal dollars, average agricultural loan size grew over 38 times, but average nonagricultural loan size jumped over 94 times (table 5). In constant dollar terms during the 1960-94 span, the average size of farm loans grew over 7 times and nonfarm loans over 18 times (table 5).

Historically, the average size of life insurance company agricultural loans has been larger than that of nonagricultural loans (fig. 4). In 1985, however, nonagricultural loans became larger than agricultural loans (app. table 4). In 1994, the average loan sizes of nonagricultural and agricultural loans were $1.25 million and $556,500, respectively (table 5). In 1980-94, the average size of nonagricultural loans increased over 11 times while that of agricultural loans grew only about 3 times. The life insurance

Figure 3

**Number and dollar volume of life insurance company agricultural and nonagricultural mortgage loans outstanding, 1960-94**

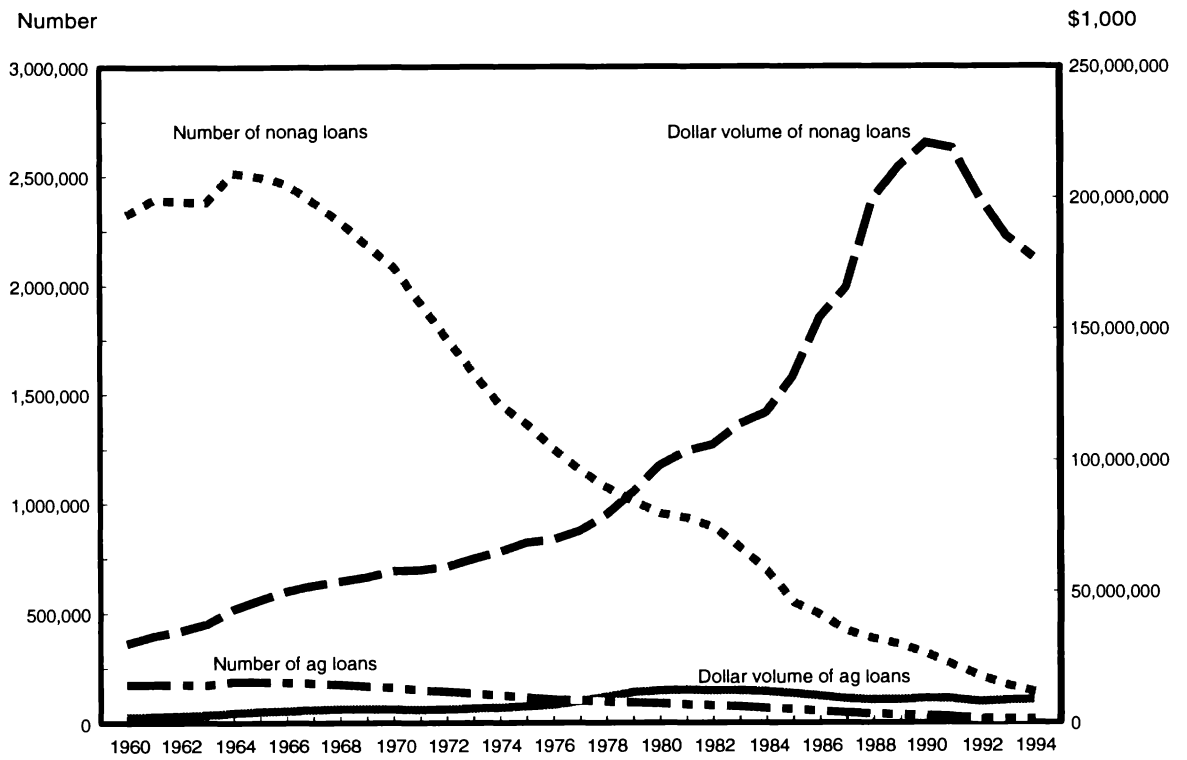



Figure 4

**Life insurance company agricultural and nonagricultural average mortgage loan sizes in current dollars, 1960--94**

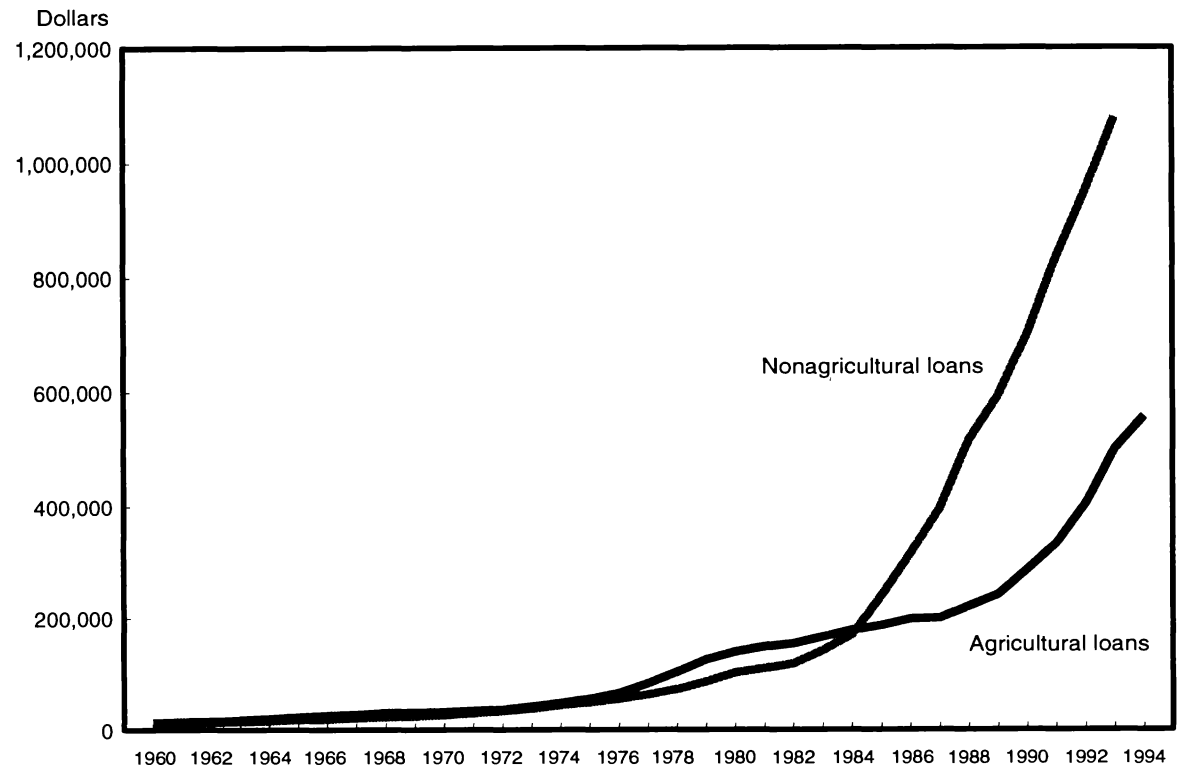


**Table 5--Life insurance company agricultural and nonagricultural average mortgage loan sizes in current and constant dollars, selected years, 1960-94**

| Year[1] | Nonagricultural loans | | Agricultural loans | |
|---|---|---|---|---|
| | Current dollars | Constant dollars 1987=100 | Current dollars | Constant dollars 1987=100 |
| 1960 | 13,163 | 50,627 | 14,121 | 54,312 |
| 1970 | 27,695 | 78,903 | 32,905 | 93,746 |
| 1980 | 102,720 | 143,264 | 139,761 | 194,925 |
| 1990 | 699,853 | 617,699 | 285,234 | 251,751 |
| 1994 | 1,252,621 | 993,355 | 556,459 | 441,284 |
| | | *Percentage change* | | |
| 1960-70 | 110.4 | 55.9 | 133.0 | 72.6 |
| 1970-80 | 270.9 | 81.6 | 324.7 | 107.9 |
| 1980-90 | 581.3 | 331.2 | 104.1 | 29.2 |
| 1990-94 | 79.0 | 60.8 | 95.1 | 75.3 |
| 1960-94 | 9,416.2 | 1,862.1 | 3,840.6 | 712.5 |

[1] December 31

Sources: American Council of Life Insurance, *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures*, various issues. U.S. Council of Economic Advisers, *Economic Report of the President*, Washington, DC, Feb. 1995.

companies stressed large commercial real estate loans during this period thus rapidly expanding average nonagricultural loan size.

## Life Insurance Agricultural Loans by Region and State

Life insurance company farm mortgage investments are spread throughout the Nation. Unlike the Farm Credit System (FCS), insurance companies have no legal obligation to serve all farmers. They can choose service areas where an acceptable level of risk is associated with a sizable business volume at the best possible returns. Companies making farm mortgage loans thus choose the geographic areas in which they lend. Preference is given to areas with larger commercial farms, real estate that is primarily land rather than depreciable buildings, productive and uniform soils, adequate rainfall or irrigation, and return on investment consistent with risks taken. Historically, smaller companies have tended to restrict their farm loan activity to selected territories to minimize operation costs. Larger companies have chosen their bigger trade areas in order to obtain the best economic return consistent with minimizing expenses and risk.

In 1994, the life insurance industry held farm loans in 46 States--all States except Connecticut, New Hampshire, Rhode Island, and Vermont (app. table 5). Only Alaska, Hawaii, and Rhode Island were exceptions in 1960. Life insurance company farm mortgage loans were found in all 50 States in 1980 following the boom in farmland values of the 1970's. Since the peak in life insurance industry farmland loans outstanding in the early 1980's, there has been geographic concentration in life insurance company farm lending.

Farm mortgage holdings by life insurance companies had been shifting from the Corn Belt to the Southeast and Pacific Coast, but this trend accelerated during the 1980's (table 6). In 1960, the Corn Belt accounted for 31.1 percent of industry farm loan totals, while the Pacific States accounted for only 9.3 percent. Throughout the 1980's, nearly all life insurance companies imposed requirements for larger loans, which limited midwestern lending due to the smaller size of farming operations in the region. The Corn Belt's share of the insurance industry's outstanding mortgage loan volume declined from 23.5 percent in 1980 to 13.5 percent in 1994 while the share captured by the Pacific region increased from 19.3 percent to 36.8 percent. California has the largest concentration of life insurance farm mortgage loans, with 30.4 percent of the total in 1994 (app.

**Table 6--Life insurance company farm real estate loans outstanding (including operator households), by farm production region, December 31, selected years, 1960-94**

| Farm production region | 1960 | 1970 | 1980 | 1990 | 1994 |
|---|---|---|---|---|---|
| | | | *$1,000* | | |
| Northeast | 49,589 | 38,500 | 108,700 | 56,900 | 103,226 |
| Lake States | 201,605 | 287,500 | 684,900 | 327,700 | 357,514 |
| Corn Belt | 923,801 | 1,281,300 | 3,031,500 | 1,667,500 | 1,288,864 |
| Northern Plains | 304,718 | 586,900 | 1,340,200 | 658,900 | 501,873 |
| Appalachian | 140,949 | 196,700 | 440,700 | 442,100 | 291,235 |
| Southeast | 137,096 | 332,100 | 873,800 | 1,091,400 | 1,464,127 |
| Delta States | 215,899 | 597,700 | 1,123,400 | 775,200 | 664,822 |
| Southern Plains | 387,241 | 755,600 | 1,211,200 | 744,900 | 520,338 |
| Mountain | 335,932 | 702,000 | 1,619,100 | 989,300 | 850,887 |
| Pacific | 277,779 | 832,000 | 2,494,300 | 3,432,400 | 3,519,955 |
| United States | 2,947,609 | 5,610,300 | 12,927,800 | 10,186,300 | 9,562,841 |
| | | | *Percentage distribution* | | |
| Northeast | 1.7 | 0.7 | 0.8 | 0.6 | 1.1 |
| Lake States | 6.8 | 5.1 | 5.3 | 3.2 | 3.7 |
| Corn Belt | 31.1 | 22.8 | 23.5 | 16.4 | 13.5 |
| Northern Plains | 10.2 | 10.5 | 10.4 | 6.5 | 5.3 |
| Appalachian | 4.7 | 3.5 | 3.4 | 4.3 | 3.0 |
| Southeast | 4.6 | 5.9 | 6.8 | 10.7 | 15.3 |
| Delta States | 7.3 | 10.7 | 8.7 | 7.6 | 7.0 |
| Southern Plains | 13.0 | 13.5 | 9.4 | 7.3 | 5.4 |
| Mountain | 11.3 | 12.5 | 12.5 | 9.7 | 8.9 |
| Pacific | 9.3 | 14.8 | 19.3 | 33.7 | 36.8 |
| United States | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Note: Northeast = CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT. Lake States = MI, MN, WI. Corn Belt = IL, IN, IA, MO, OH. Northern Plains = KS, NE, ND, SD. Appalachian = KY, NC, TN, VA, WV. Southeast = AL, FL, GA, SC. Delta States = AR, LA, MS. Southern Plains = OK, TX. Mountain = AZ, CO, ID, MT, NV, NM, UT, WY. Pacific = AK, CA, HI, OR, WA.

Sources: George Amols and Wilson Kaiser, *Agricultural Finance Statistics, 1960-83,* Stat. Bul. 706. U.S. Dept. Agr., Economic Research Service, April 1984, and U.S. Dept. Agr., Econ. Res. Serv., *Economic Indicators of the Farm Sector: State Financial Summary,* ECIFS series, various issues.

table 6). At yearend 1994 (based on the most recent available State-level data), the Pacific region, Florida, and Texas together accounted for 54.8 percent of total outstanding life insurance farm mortgages.

In the Northeast, Lake States, Corn Belt, Northern Plains, Southern Plains, and Appalachia, insurance companies are becoming minor players in farm mortgage lending (table 7). The industry's market share of total farm real estate debt is below 10 percent in these regions, and it fell in all but three USDA production regions since 1980--a trend predating 1960. Only the Southeast and Pacific regions show 1980-94 gains in insurance company share, while the Northeast share was constant during this period.

In a few States, the insurance company market share of farm mortgage dollar volume still exceeds that of the FCS, the Nation's largest farm mortgage holder with 31.7 percent of the market at 1994 yearend. In 1994, life insurance companies held over 20 percent of the market in five States (app. table 7). In 1960, life insurance companies had over 20 percent of the loan dollar volume in 22 States. Policies emphasizing larger specialty, agribusiness, and timber enterprises might explain some of the rapid departure of life insurance companies from the Midwest to the Pacific and Southeast. If the industry continues to concentrate its lending geographically, default risks inherent with a less diverse loan portfolio could rise.

**Table 7--Market share of life insurance company real estate loans (including operator households) as a percentage of total real estate loans, by farm production region, selected years, 1960-94**

| Farm production region | 1960 | 1970 | 1980 | 1990 | 1994 |
|---|---|---|---|---|---|
| | | | *Percent* | | |
| Northeast | 6.8 | 2.5 | 2.4 | 1.4 | 2.4 |
| Lake States | 14.3 | 9.6 | 6.6 | 4.1 | 4.3 |
| Corn Belt | 32.1 | 18.5 | 12.5 | 9.4 | 6.6 |
| Northern Plains | 26.0 | 17.5 | 12.2 | 7.7 | 5.4 |
| Appalachian | 16.6 | 9.3 | 6.3 | 7.3 | 4.7 |
| Southeast | 18.3 | 17.3 | 13.1 | 18.9 | 23.9 |
| Delta States | 31.1 | 31.8 | 20.9 | 20.1 | 16.2 |
| Southern Plains | 30.0 | 24.1 | 15.2 | 11.1 | 7.9 |
| Mountain | 27.1 | 23.2 | 17.7 | 14.6 | 12.6 |
| Pacific | 15.0 | 22.8 | 22.0 | 30.0 | 30.1 |
| United States | 23.1 | 18.4 | 13.3 | 12.9 | 11.5 |

Sources: George Amols and Wilson Kaiser, *Agricultural Finance Statistics, 1960-83*, Stat. Bul. 706. U.S. Dept. Agr., Economic Research Service, April 1984, and U.S. Dept. Agr., Economic Research Service, *Economic Indicators of the Farm Sector: State Financial Summary*, ECIFS series, various issues.

One of the major reasons companies shifted lending away from the North Central States had to do with State laws governing loan terms and foreclosure. Litigation in States such as Wisconsin, Minnesota, the Dakotas, and even Iowa is very lengthy and borrower-oriented. This increases the risk of conducting business in those States. Many insurance company foreclosures in those States in the 1980's took 2-3 years to resolve, and the borrower remained in possession the entire time. The financial problems of the 1980's prompted some of the States to make farm foreclosure laws even tougher, driving risk-averse capital sources away. In Iowa, life insurance companies cannot include language in the loan agreement to prevent prepayment at par. This does not fit companies' need to match interest rates if they cannot include "make-whole" language in their documents. Thus, some companies ceased lending in Iowa several years ago. The Delta States (Arkansas, Louisiana, and Mississippi) have similar laws that discourage companies from lending there also. The companies thus maintain that generous litigation laws are a factor in the geographic lending shift of the industry.

Despite the ongoing geographic concentration of the life insurance industry's farm mortgage loan portfolio, considerable portfolio loan size diversity still exists. The American Council of Life Insurance (ACLI) began reporting mortgage loan information by geographic division in 1988. The results show, despite the shifting of loan dollar volume to the Southeast and Pacific farm production regions, a considerable number of loans remain in the central United States. For example, at yearend 1994, the ACLI data show the 12-State North Central region accounted for 53.6 percent of all life insurance company farm mortgages, but only 21.4 percent of the dollar volume (app. table 8).[7] (The West North Central region alone accounted for 36.5 percent of the total number of loans, but only 13 percent of the dollar volume.) In comparison, the Pacific region accounted for only 17.8 percent of the mortgage loans but 37.5 percent of the loan dollar volume. Thus, a considerable variation in average loan size between geographic regions still exists despite an industry-wide move toward larger loans.

## The Changing Life Insurance Farm Mortgage Loan Industry

The structure and conduct of life insurance industry lending to agriculture has evolved through the decades, but the pace of change has accelerated in recent years. The events of the 1980's led to a concentration of farm mortgage assets within the industry. The number of companies actively making new loans in the farm mortgage market declined from 12 in 1980 to 7 in late 1995, with most departures occurring in 1986 (table 8).[8] Twenty companies held farm mortgages in late 1995, compared with 21 in 1980.

[7] In comparison, in 1938 some 70 percent of life insurance industry farm mortgage loan dollar volume was held in the North Central States (USDA, 1939). In 1943, 24 percent was located in Iowa and over 50 percent was located in the four States of Illinois, Indiana, Iowa, and Minnesota (Larson, 1943).

[8] John Hancock Financial Services left the farm mortgage lending business effective February 1, 1995, but continues to make large agribusiness and timber loans, and to invest in agricultural equities including farm real estate. Providian Capital Management of Louisville, Kentucky became a new participant in agricultural mortgage lending beginning in July 1995 and had closed $3 million in new loans by the end of September 1995. The Providian goal is to build an organization capable of generating $200 million per year in annual farm mortgage loan volume. Thus, there were briefly (February-July 1995) only six life insurance company farm mortgage lenders.

**Table 8--Farm real estate loans held by life insurance companies, 1980, 1992, and 1994, and farm loan market status, 1995**

| | Share of total loans | | | Farm loan market status, December 1995[4] |
|---|---|---|---|---|
| | January 1, 1980[1] | January 1, 1992[2] | January 1, 1994[3] | |
| | | *Percent* | | *Status* |
| Metropolitan Life* | 12.148 | 18.684 | 26.067 | Active |
| Equitable (U.S.)* | 15.777 | 19.114 | 19.259 | Active |
| Prudential* | 17.941 | 16.338 | 18.165 | Active |
| Travelers* | 13.649 | 13.972 | 6.995 | Active |
| MONY* | 3.090 | 3.872 | 5.811 | Active |
| MBL Life Assurance[5]* | 2.682 | 4.155 | 3.399 | Active |
| Providian Capital Management[6] | 0 | 0 | 0 | Active |
| John Hancock [7]* | 15.026 | 18.089 | 17.053 | Inactive |
| CIGNA* | 5.874 | 2.285 | 1.226 | Inactive |
| Northwestern* | 3.495 | 0.960 | 0.741 | Inactive |
| Connecticut Mutual* | 4.093 | 1.313 | .608 | Inactive |
| Aetna[8]* | 3.251 | .869 | .486 | Inactive |
| Kansas City | 0.997 | .140 | .090 | Inactive |
| Northwestern National | .384 | .113 | .059 | Inactive |
| Phoenix Home Life[9]* | 1.272 | .074 | .023 | Inactive |
| American General[10] | .069 | .011 | .007 | Inactive |
| Southwestern | .027 | .007 | .005 | Inactive |
| Equitable (Iowa) | .140 | .002 | .002 | Inactive |
| Business Men's | .065 | .002 | .002 | Inactive |
| Midland National | .004 | 0 | .001 | Inactive |
| Principal Mutual[11] | .015 | 0 | 0 | Inactive |
| Great Southern | --[12] | 0 | 0 | Inactive |
| Total | 100.0 | 100.0 | 100.0 | NA |

NA = Not applicable.

* = An active participant in the farm mortgage loan market in 1980.

[1] Data obtained from published annual statements of the life insurance companies. The reported total was $11,895,118,000 or 97.8 percent of the $12,165,000,000 held on December 31, 1979, as reported by the American Council of Life Insurance in their annual *Life Insurance Fact Book.*

[2] Based on data reported by the individual companies. The reported total was $10,735,567,000 or 107.0 percent of the $10,029,300,000 held on December 31, 1991, as reported by the American Council of Life insurance in the *Life Insurance Fact Book.*

[3] Based on data reported by the individual companies. The reported total was $9,378,924,582 or 99 percent of the $9,469,174,000 held on December 31, 1993, as reported by the American Council of Life insurance in the *Life Insurance Fact Book.*

[4] "Active" = Participates as an active farm mortgage lender; "Inactive" = Not presently in the market for farm mortgage loans.

[5] MBL Life Assurance acquired the assets of Mutual Benefit Life Insurance in 1994.

[6] Providian Capital Management Real Estate Services is a new participant in agricultural mortgage lending initiating operations in July 1995. Its goal is to build an organization capable of generating $200 million per year in annual loan volume.

[7] John Hancock left the farm mortgage lending business effective February 1, 1995, but continues to make large agribusiness loans, timber loans, and to invest in agricultural equities including farm real estate.

[8] Aetna Life Insurance, after being out of the farm mortgage loan market since 1948, re-entered the market in 1977 but stopped making new farm mortgage loans in 1984.

[9] Phoenix Mutual and Home Life Insurance Company merged in 1992 to form Phoenix Home Life.

[10] American Amicable merged with American General in 1987.

[11] Formerly Bankers Life Insurance Company.

[12] Negligible.

Some companies that terminated lending still service existing farm mortgage customers or provide purchase money mortgages to finance the sale of land acquired through foreclosure. Two insurance companies (not included among the remaining seven active companies) still make agribusiness loans but no longer serve the conventional farm mortgage market. Presumably, some of these companies could re-enter the farm mortgage market with relative ease should they choose to do so.

The seven companies active in farm lending in late 1995 (Metropolitan Life Insurance Company, The Travelers Real Estate Investments Company, The Prudential Insurance Company of America, MBL Life Assurance, Equitable Agri-Business, Mutual of New York, and Providian Capital Management) represent a small subset of the total number of insurance companies. The withdrawal of five life insurance companies from farm lending occurred during 1980-90 when life insurance company numbers rose 12.1 percent from 1,958 to 2,195 (ACLI, *Fact Book*).

The 22 companies that have held farm mortgages at some juncture since 1980 represent only a small portion of the industry, as has always been the case. There has been no golden age of life insurance company farm mortgage lending in terms of a large number of companies actively lending in the farm mortgage loan market. For example, one study reported 16 companies active during 1954-56 (Bierman, 1957), and all were members of the National Agricultural Credit Committee (NACC).[9] Another study of the industry involved 17 companies for the 1950-57 period (Bierman and Case, 1958). A 1994 ERS survey of companies making farm mortgage loans estimated a maximum of 25 active companies in the 1960's. Twelve companies attended NACC meetings in the mid-1980's, and they represented a lion's share of industry lending to agriculture.

## Large Companies Dominate

The life insurance companies still active in farm lending generally are among the largest in the industry. Prudential and Metropolitan, for example, both command assets well in excess of $100 billion, dwarfing the 1994 industrywide average of $1.1 billion. Companies ceasing farm lending during the 1980's were firms with small- to medium-sized farm loan portfolios. These companies had farm loan portfolios averaging just $428 million at the start of 1980. Terminating farm lending is not necessarily linked to total asset size, however, as some large companies, such as Aetna Life, also stopped new farm lending activity. The share of industry farm mortgage assets held by the five departing companies in the 1980's declined from 18 percent in 1980 to 3.1 percent in 1994 and continues to shrink.

The five largest companies active today also dominated farm lending among insurance companies prior to 1980. These companies held 76.3 percent of the industry's farm mortgage assets in 1994, up from 62.6 percent in 1980. The farm loan portfolios for the individual companies are large, ranging from $650 million to $2.4 billion and amounting to 7-26 percent of the farm loan portfolio for the industry. By comparison, the largest farmland-secured loan portfolio of a commercial bank at the start of 1995 was $276 million (Bank of America) and AgriBank had the largest such portfolio among district Farm Credit Banks, with $8.4 billion on December 31, 1994 (AgriBank was formed from the previous Louisville, St. Louis, and St. Paul Farm Credit Banks).

## Farm Mortgage Portfolio Composition Changes

Not only has the number of insurance companies active in farm mortgage lending declined, but the composition of farm mortgage portfolios has changed since 1980. Most company portfolios saw a large increase in average loan size--in nominal terms, average outstanding loan size increased 298.2 percent during 1980-94. The average farm loan size stood at $556,459 at the end of 1994 (ACLI, *Fact Book*), 6.49 times the average size of an FCS farm real estate loan ($85,785) that same year. Smaller loans tend to be served by the FCS and commercial banks. Insurance company agricultural loan numbers plummeted from 90,384 in 1980 to 15,922 by 1994.

Life insurance companies are insignificant players in the market for farm mortgages under $150,000 and are relatively minor players for mortgages under $500,000. For Corn Belt farmers, this implies that most insurance companies are not in the market for mortgages on less than 200 acres. (This assumes a 35-percent downpayment requirement, a $150,000 loan minimum, and the 1994 Corn Belt average farmland value of $1,285 per acre.) Among the seven

[9] The National Agricultural Credit Committee is an informal group, without official status, composed of representatives of Government agencies and private concerns interested in agricultural credit. Represented on the committee are life insurance companies, commercial banks, the American Bankers Association, Independent Bankers Association of America, the Federal Reserve Banks, Farm Credit Administration, Farm Credit Council, Farm Credit System, USDA's Farm Service Agency and Economic Research Service, and others interested in agricultural credit.

remaining companies in 1995, at least two had established minimum new farm loan sizes of $500,000, and one of these required a minimum of $1 million for new farm loans. Even companies making smaller loans do not pursue the small loans per se unless the loan terms or future business prospects are promising. Some have a minimum loan average so the number of smaller loans accepted depends on the number of larger loans in their portfolios. Lower loan size limits are typically not a rigid ironclad policy but vary by region and type of operation.

Insurance companies often prefer larger loans because they provide a greater return over fixed originating costs. Historically, the life insurance industry had a considerable loan originating and servicing network, but this has changed radically since the 1970's. The traditional pattern was to originate loans directly or via correspondents. The farm financial stress of the 1980's caused companies to reduce and consolidate operations, however. A new lending approach emphasized larger loans and more agribusiness loans, which reduced the labor requirements in loan acquisition and processing.

Fewer and larger loans concentrated in selected areas required fewer regional offices and fewer workers. Total professional farm mortgage staffs for the 7 companies making farm mortgage loans in 1994 ranged from 6 to 90, with an average of 41. The 7 active companies had a total of 26 regional, direct loan origination, or production (field) offices. Thus, most insurance companies do not have the originating network necessary to compete for smaller mortgages, especially in geographic regions far removed from their loan offices. They do not have offices in smaller towns, and even the largest companies have only a handful of regional offices. And life insurance companies face less competition for large loans from small local banks, since bank regulations limit banks' ability to accommodate larger loan requests. In many cases, banks refer larger mortgage loan customers to life insurance companies.

Insurance companies still issuing mortgages under $500,000 often do so to accommodate existing customers or operate through correspondent relationships with other originators. American Council of Life Insurance (ACLI) gross mortgage flow survey data indicate that mortgage purchases made by the industry rose in recent years. Annual volume purchased from other farm mortgage originators increased from nothing in 1988 to $100-$200 million per year in the 1990's. In conjunction with the Farmer Mac secondary market for farm mortgages, a few insurance companies established correspondent relationships with originating banks, which may account for much of this growth. These types of correspondent relationships have been evident in the past.

Some life insurance companies, following the 1980's farm financial stress, boosted their agribusiness lending. Agribusiness and timber production (classified as agricultural loans) have traditionally been components of farm lending activity and accounted for about 16 percent of the industry's $9.6-billion outstanding farm mortgage volume in 1994. This, too, has contributed to larger agricultural mortgage loans because these firms generally have greater capital needs. The ACLI's *Investment Bulletin* provides survey data on the type of farm enterprise being served by insurance mortgages. During 1988-94, the percentage of agribusiness loan volume ranged from 5.2 to 9.6 percent.[10] Outstanding loan volume from timber activity ranged from 7.5 to 9.9 percent of total loans during 1988-94, but the total dollar amount has been trending down since 1990--from $949.7 million to $752 million.

Insurance companies, like other farm lenders, now have more stringent lending standards than before the mid-1980's. Stricter standards were implemented even as the industry moved to larger and, hopefully, financially stronger producers (who in many cases were survivors of the 1980's) and to agribusiness. Maximum loan-to-value ratios are now between 60 and 70 percent, and debt service requirements are higher than in the past. Shorter term fixed interest rate and loan maturity commitments are now common, but some companies still offer fixed interest rate contracts for up to 15 years.

Competition for high-quality farm borrowers is keen. Most life insurance companies indicate they would like more business but that it is difficult to find borrowers who meet their new lending standards. In general, loan demand has been flat to moderate in recent years. Declines in interest rates in the early

[10] Major farm enterprise data have been published since 1988. Roughly two-thirds of the industry's total loan volume is broken down by loan purpose in the survey. These estimates assume that the other one-third is allocated in the same proportion to the various enterprise categories. Agribusiness loans are defined as those to entities that derive over 50 percent of their gross sales from production of a product that adds value to an agricultural commodity or forest product; a loan is defined as a timber loan if more than 50 percent of the security backing the loan is attributable to a commercial timber crop.

1990's appeared to have induced some refinancing of high-cost debt and encouraged capital purchases.

## Farm Mortgage Flows

Annual gross farm mortgage acquisitions, dispositions, and yearend volumes for life insurance companies are available from the *Life Insurance Fact Book* published by the American Council of Life Insurance (ACLI). Data in the ACLI's *Fact Book* are from industrywide reports that include companies known to be active in farm real estate lending. For 1994, the ACLI reports farm mortgage acquisition volume of $1.7 billion (table 9). Acquisitions include volume from farm mortgages for new property purchases, loan purchases from other originating sources, the refinancing of existing mortgage debt, loans to agribusinesses, and loans for timber purposes. Disposition volume totaled $1.6 billion and includes that from scheduled amortization payments, prepayments of principal, default and foreclosure actions, and loan sales. Acquisition and disposition have been relatively stable for the past 7 years.

Gross mortgage flow data from another ACLI survey suggest that annual life insurance company origination volume for new farmland purchases (that is, purchase money mortgages) has been relatively small in recent years.[11] This survey separates gross acquisitions into those for new property, existing property, and loan purchases; gross dispositions are separated into those from principal repayments (includes terminations) and loan sales.[12] From 1988 through 1994, the survey suggests that between one- and two-thirds of farm mortgage origination volume was used to finance new property purchases. The survey also reflects life insurance company activity in Farmer Mac. Before Farmer Mac, purchased loan volume was $0, but it increased to $100-$200 million annually afterward.

Annual farm mortgage origination volume associated with the purchase of traditional farm properties is even less. Acquisition volume includes mortgages for timber and agribusiness purposes, which overall are a significant component of life insurance company lending.

ACLI's *Investment Bulletin* dealing with mortgage loan delinquencies and foreclosures provides survey data on the type of farm enterprise being served by life insurance mortgages. As much as 15.9 percent of outstanding farm mortgages at the end of 1994 went to agribusiness and timber enterprises as opposed to conventional farm enterprises.[13] This evidence, coupled with other unpublished information from major life insurance companies, suggests that nonconventional farm mortgage acquisition volume may have been no more than $1.4 billion for 1994.

The disposition or principal repayment rate for life insurance company mortgages indicates that the 1990's outstanding volume was turning over or being repaid every 5-7 years. This repayment rate is slower than in the mid-1980's when defaults and rapidly falling interest rates accelerated repayments and loan restructuring, but is close to the historical average. A relatively high rate of principal repayment is consistent with the terms on life insurance company mortgages, which stress balloon payments and shorter term loans over long-term loans with amortization of 15-25 years. Fixed interest rate mortgages often carry balloons of 3-10 years to allow for loan repricing.

## Experience Differs From Canada's

The U.S. life insurance industry continues to make agricultural mortgage loans despite periods of severe economic stress in the farm sector during the 1920's, 1930's, and 1980's. Canada's life insurance companies, by contrast, basically left the agricultural lending field in the 1930's and have not returned (Easterbrook, 1938).[14] The farm lending role of Canadian life insurance companies began about the turn of the century. Most of the companies were looking for investment possibilities and were probably, initially at least, unaware of the risks. Optimism prevailed during the early part of the century and peaked during World War I. Lending activity leveled off during the early 1920's, faded toward the end of the decade, and died in the 1930's. Prudent lenders observed that Canadian agriculture, especially in the west, had been artificially stimulated by the railroads, government, and war-induced

[11] This monthly survey covers a smaller sample frame and has a lower response rate than that of the more extensive industrywide ACLI *Fact Book* data. See footnote 4.

[12] HUD definitions of new existing properties are used by the ACLI. The ACLI is unsure how farm mortgage survey respondents interpret these definitions, which were developed for the housing mortgage market. Originations for new properties include mortgages for properties not previously occupied by the current owner, while existing property originations include mortgages on previously occupied properties, existing mortgages that were refinanced, or mortgages for property improvements.

[13] See footnote 10.

[14] Valuable information also was provided by A.H. Harrison in personal correspondence to the senior author dated October 3, 1992. Harrison at that time was retired in Calgary, Alberta. He worked many years for the Farm Credit Corporation of Canada and is a former director of CANFARM.

## Table 9--Life insurance company farm mortgage lending activity, 1960-95

| Year | January 1, outstanding | Originations[1] | Ratio[2] | Repayments[3] | Ratio[4] |
|---|---|---|---|---|---|
| | *Million dollars* | | *Percent* | *Million dollars* | *Percent* |
| 1960 | 2,820 | 464 | 16.5 | 309 | 12.7 |
| 1961 | 2,975 | 552 | 18.6 | 365 | 12.3 |
| 1962 | 3,162 | 619 | 19.6 | 390 | 12.3 |
| 1963 | 3,391 | 866 | 25.5 | 477 | 14.1 |
| 1964 | 3,781 | 1,047 | 27.7 | 540 | 14.3 |
| 1965 | 4,288 | 1,149 | 26.8 | 635 | 14.8 |
| 1966 | 4,802 | 994 | 20.7 | 582 | 12.1 |
| 1967 | 5,214 | 837 | 16.1 | 511 | 9.8 |
| 1968 | 5,540 | 772 | 13.9 | 548 | 9.9 |
| 1969 | 5,764 | 540 | 9.4 | 570 | 9.9 |
| 1970 | 5,734 | 314 | 5.5 | 438 | 9.7 |
| 1971 | 5,610 | 503 | 9.0 | 549 | 9.8 |
| 1972 | 5,564 | 700 | 12.6 | 621 | 11.2 |
| 1973 | 5,643 | 1,005 | 17.8 | 685 | 12.1 |
| 1974 | 5,965 | 1,005 | 16.9 | 674 | 11.3 |
| 1975 | 6,297 | 1,075 | 17.1 | 646 | 10.3 |
| 1976 | 6,726 | 1,510 | 22.5 | 836 | 12.4 |
| 1977 | 7,400 | 2,373 | 32.1 | 954 | 12.9 |
| 1978 | 8,819 | 2,748 | 31.2 | 1,089 | 12.3 |
| 1979 | 10,478 | 2,806 | 26.8 | 1,119 | 10.6 |
| 1980 | 12,165 | 1,654 | 13.6 | 891 | 7.3 |
| 1981 | 12,928 | 1,108 | 8.6 | 962 | 7.4 |
| 1982 | 13,074 | 695 | 5.3 | 964 | 7.3 |
| 1983 | 12,805 | 1,109 | 8.7 | 1,197 | 9.3 |
| 1984 | 12,717 | 1,003 | 7.9 | 1,277 | 10.0 |
| 1985 | 12,443 | 1,070 | 8.6 | 1,677 | 13.4 |
| 1986 | 11,836 | 1,219 | 10.3 | 2,115 | 17.9 |
| 1987 | 10,940 | 1,097 | 10.0 | 2,141 | 19.6 |
| 1988 | 9,896 | 1,424 | 14.4 | 1,738 | 17.6 |
| 1989 | 9,582 | 1,399 | 14.6 | 1,383 | 14.4 |
| 1990 | 9,598 | 1,833 | 19.1 | 1,245 | 13.0 |
| 1991 | 10,186 | 1,526 | 15.0 | 1,683 | 16.5 |
| 1992 | 10,029 | 1,899 | 18.9 | 2,706 | 27.0 |
| 1993 | 9,222 | 2,113 | 22.9 | 1,851 | 20.1 |
| 1994 | 9,484 | 1,689 | 17.8 | 1,596 | 16.8 |
| 1995 | 9,577 | NA | NA | NA | NA |

NA = Not Available.

[1] Gross farm mortgage acquisitions, including purchased loans and loans for timber and agribusiness purposes.

[2] Gross acquisitions divided by beginning year volume.

[3] Gross farm mortgage dispositions, including loans for timber and agribusiness purposes.

[4] Gross dispositions divided by beginning year volume.

Source: American Council of Life Insurance. *Life Insurance Fact Book*, Washington, DC, various issues.

demand and began to adopt a cautious attitude toward farm loans as they searched for alternative lending opportunities in commercial markets.

Provincial lending agencies were formed beginning in 1917 and the Federal Government's involvement began with the Soldier Settlement Act that same year. Debt adjustment creditor legislation was passed by Alberta in 1923 with similar Provincial legislation soon to follow elsewhere. In 1923, the Federal Government passed the Farmers' Creditors Arrangements Act that brought creditor and farmer together in a major effort to adjust terms of repayment. The Canadian Farm Loan Board was set up in 1929 and subsequently evolved into a major farm mortgage lender, ultimately being replaced by the Farm Credit Corporation of Canada in 1959.

The Federal supply of farm credit increased through time and most Provinces added their own credit programs tailored to their particular needs. The combined effect of Canadian creditor and other legislative reforms, the uncertainties of farm production and markets, and the advent of public farm credit institutions kept many insurance companies away from further farm lending. The insurance firms found that they could not compete with the Farm Credit Corporation of Canada. Moreover, Canada's larger branch banking structure may have permitted Canadian banks to offer more competition to life insurance companies than was the case in the United States.

## Life Insurance Company Competition With the Farm Credit System

Life insurance companies have long been an important source of farm mortgage funds for agriculture. By the latter part of the 19th century, the issue of agricultural lending, or "rural credits" as it was known, became an important public policy issue. During this Populist era, the level and pattern of farm interest rates and conditions of farm tenancy became important political topics.

Farmers were highly dependent on local sources of farm mortgage credit during the latter part of the 19th century. Commercial banks in rural areas were significant lenders for production and other non-real-estate loans, but often were restricted in making long-term real estate loans. National banks (federally chartered banks) were restricted at that time from making real estate loans. State-chartered banks that could extend real estate loans to farmers were often too small to make sufficient real estate loans (Ely and Vanderhoff, 1990).

Many farm real estate loans were provided by sellers or by wealthy individuals. A small share was provided by life insurance companies. The maturity of available farm mortgage debt in the 19th century was as short as 1-2 years. By the early 1900's, mortgages had longer maturities but were subject to special installment repayment provisions (O'Hara, 1983). Commercial banks' historical restrictions on farm mortgage lending were loosened in the 1913 Federal Reserve Act (O'Hara, 1983). Nevertheless, there was a feeling of insufficient credit available for long-term farm real estate loans, especially during economically prosperous periods.

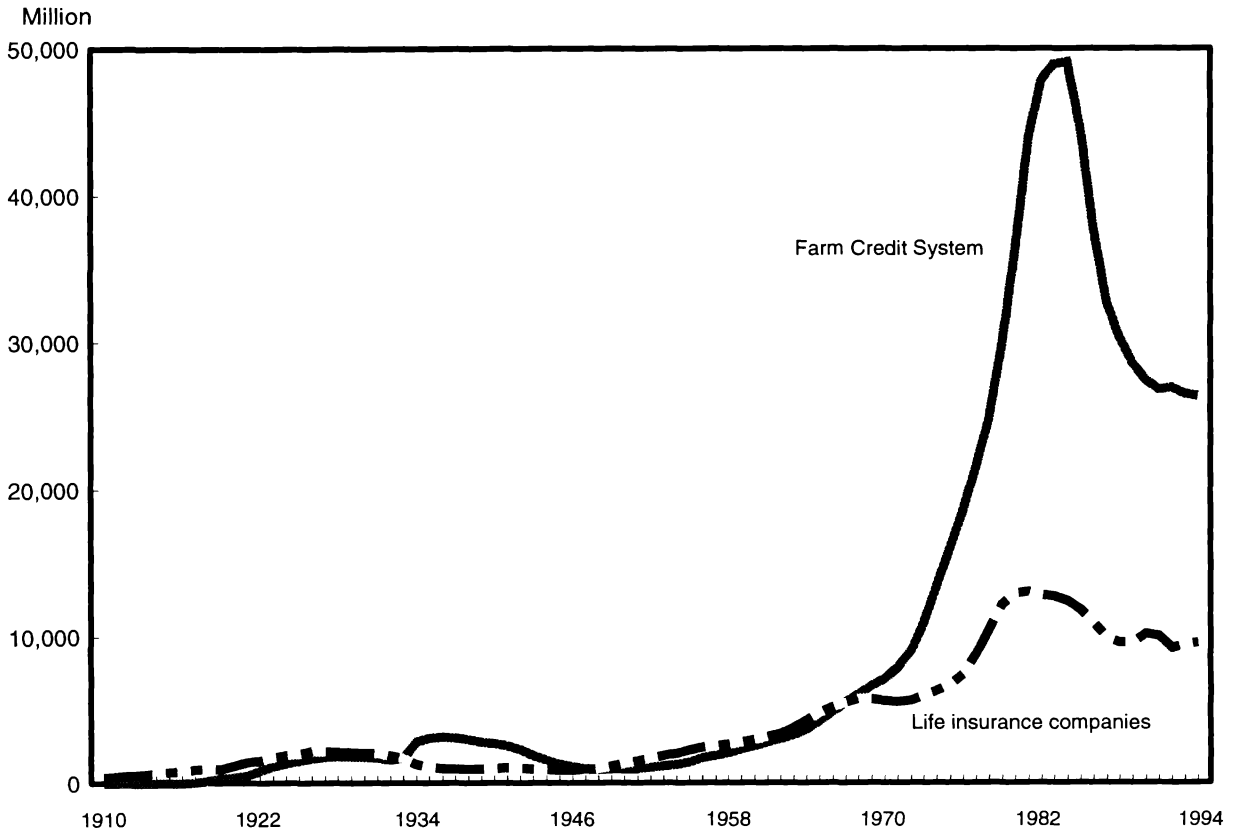
After years of study and political effort, Congress passed the Federal Farm Loan Act in 1916. This compromise legislation set up Federal Land Banks (FLB's) side by side with joint stock banks (liquidated in 1933). The former were cooperative in nature and the latter were private. Both were funded via tax-exempt bonds and subject to the same governmental monitoring. The FLB's provided long-term financing to the farm sector. FLB's made loans through Federal Land Bank Associations (FLBA's), their agents in the field.

Congress next created the Federal Intermediate Credit Banks (FICB's) in 1923 to wholesale short- and intermediate-term credit to commercial banks, agricultural credit corporations, livestock loan companies, and cooperatives (for storage loans). Through legislation, in 1933, the Production Credit Associations (PCA's) and Banks for Cooperatives (BC's) were added. PCA's obtained funds from FICB's and provided short- and intermediate-term credit to farmers. BC's made loans to cooperatives engaged in processing, handling, and marketing of farm or aquatic products or in furnishing products or services to farmers. The 1933 legislation completed the creation of the modern Farm Credit System (FCS), comprised of the cooperative FLB's, FLBA's FICB's, PCA's, and BC's.

The Agricultural Credit Act of 1987, precipitated by the farm-sector financial distress of the 1980's, merged the FLB's and FICB's into Farm Credit Banks (FCB's). The 1987 Act also encouraged FCS banks and associations to merge voluntarily. Existing PCA's and FLBA's were encouraged to merge among like institutions to form larger associations. PCA's and FLBA's could also merge to form new associations with both real estate and non-real-estate

Figure 5

**Total life insurance company and Farm Credit System farm real estate loans outstanding (including operator households), 1910-94**




lending authority, called Agricultural Credit Associations (ACA's). The Act also authorized the transformation of FLBA's into Federal Land Credit Associations (FLCA's) by the transfer of lending authority from FCB's to pre-existing FLBA's.

Except for the FLBA's, each type of association is chartered as a direct lender, generally holding loans they originate in their own portfolio. FLBA's originate loans for the portfolios of the regional banks, and have no loan portfolio of their own. Each type of association also has a different mandate in terms of the types of loans (real estate or non-real estate) it can originate. PCA's have non-real-estate lending authority, FLBA's and FLCA's have real estate lending authority, and ACA's have authority to originate both types of loans.

## Life Insurance Company Market Share Varies

The establishment of the FLB's in 1916 greatly intensified the competition between farm lenders (O'Hara, 1983). The new FLB's, with their Federal backing and low-cost tax-exempt bond funding, did not enter the market as equal competitors, but forced existing lenders to either exit the field or change their behavior (O'Hara, 1983). The appearance of a new institution specializing in long-term farm mortgage lending caused a redistribution of farm debt. Both private investor and commercial bank lending decreased in importance.[15]

The life insurance companies and the FLB's have a long history of competition, with market dominance seesawing back and forth. Life insurance companies maintained the lead in farm real estate loan market share from the FLB's creation in 1916 until 1933 (fig. 5, app. table 2). The insurance industry reduced its total farm mortgage loan activity in the 1930's as a result of the Great Depression. Life insurance

[15] The commercial bank farm real estate loan portfolio historically has included many loans that are shorter term but collateralized by real estate. In earlier decades of this century, commercial bank real estate loans were short term (3 to 5 years), thus explaining some of the interest in a Federal land bank that would offer longer term mortgage loans. More recently, since the farm financial crisis of the early to mid-1980's, the commercial bank real estate loan market share has grown due in large part to increased collateralization of short- to intermediate-term production loans.

companies regained market dominance in 1948-66. (The all-time high in life insurance industry market share was 25.1 percent in 1955-56.) Since 1966, the life insurance company market share has slowly decreased except for brief respites in 1977-78 and in 1986-90.

The reason for the decline in the market share of life insurance companies since the late 1960's has been the subject of considerable disagreement (Lins, 1981). Some factors contributing to the decline include: (1) competition from nonfarm investments offering more attractive yields; (2) the view by some companies that agriculture is a subsidized industry unable to pay market rates; (3) a rapid increase in policy loans; (4) State usury laws affecting life insurance but not FLB lending; (5) changes in the 1971 Farm Credit Act favorable to FLB's; (6) the adoption of variable interest rates by FLB's in 1969-70; (7) internal rationing of life insurance company funds; and (8) the quasi-public image and high liquidity of FCS bonds, which permit them to be sold at a rate below corporate bond rates (Melton, 1977; Lins, 1981; Robinson and Love, 1979).

The FCS's overall farm mortgage market share has been decreasing since 1984. Many borrowers left the FCS during the tumultuous economic events of the 1980's. During this period, FCS interest rates generally were not competitive and its image with farmers was soiled by borrower-relation problems and the prospect of FCS financial collapse. High loan defaults eroded FCS capital and, with the prospect of financial collapse, borrowing costs soared. The FCS was rescued in 1987 with a $4 billion Federal line of credit that restored investor and farmer confidence.

Some of the FCS's earlier market share advantages, including the ability to price loans below competition, were limited by legislation. For example, the Farm Credit Amendments Act of 1986 (P.L. 99-509) specified "That in no case is any borrower to be charged a rate of interest that is below competitive market rates for similar loans made by private lenders to borrowers of equivalent creditworthiness and access to alternative credit." Despite its recent market share losses, the FCS still possesses: (1) unlimited access to funds, (2) a cost-of-funds advantage, (3) staff with specialized knowledge of agricultural lending, and (4) a strong retail delivery system. Moreover, even though the FCS lost market share beginning in the mid-1980's, its market share position is still above levels held in the 1960's and earlier.

## Farm Loan Sizes Diverging

The average size of farm real estate loans held by life insurance companies historically has been larger than those held by the FCS. Unlike the FCS, which focuses on agriculture, insurance companies will make agricultural loans only if the return is competitive with alternative investments in other sectors of the economy. In order to reduce costs, life insurance companies prefer large loans that are well secured and are intermediate- to long-term in maturity. The overhead and servicing costs of a large loan are not much different than a smaller loan; profits are enhanced if the same loan amount is dispersed among fewer, larger loans rather than many small loans. In contrast, the FCS is a farmer-owned cooperative that serves all sizes of farms. The average FCS loan size is much smaller than that of the life insurance companies.

In 1960, the average farm mortgage loan size for life insurance companies was 2.14 times that of the FCS (table 10). This ratio declined to a low of 1.67 in 1975 during the boom years of the 1970's. It increased to 2.18 in 1980 before increasing to 6.49 in 1994. The FCS has been increasing average farm mortgage loan size (up 33.5 percent from 1980 to 1994). But the life insurance companies, with their increased emphasis on large loans in the West Coast, Delta, and Southeast regions at the expense of the Corn Belt and Great Plains regions, have vastly outpaced the FCS in average loan size growth.

## Impact of the Farmland Price Boom and Bust

The financial performance of the life insurance company and FLB farm mortgage portfolios and, hence, market shares were greatly affected by the farmland boom and bust cycle after 1970. The fifth U.S. farm boom during the past two centuries was unique in that it was not triggered by a U.S. or European war (Melichar, 1984). It was one of the most pronounced cycles in farmland prices in U.S. history (Raup, 1989).

The origins of land booms are often complex, and the 1970's episode was no exception. The early 1970's marked a new U.S. perception of world food supply. Three 1972-73 events loom important: (1) the unexpected appearance of the Soviet Union in the world grain market as a major importer, (2) the formation of OPEC and its subsequent embargo of petroleum sales to the United States and other nations, and (3) a policy based on the view that there were limits to agricultural growth and the presumption of physical supply constraints on further resource use

**Table 10--Average size of farm real estate loans outstanding by life insurance companies and the Farm Credit System, 1960-94**

| Year[1] | Life insurance companies (LIC's) | Farm Credit System (FCS)[2] | LIC's/FCS |
|---|---|---|---|
| | *Dollars* | | *Ratio* |
| 1960 | 14,121 | 6,608 | 2.14 |
| 1961 | 15,081 | 7,179 | 2.10 |
| 1962 | 16,270 | 7,788 | 2.09 |
| 1963 | 18,002 | 8,405 | 2.14 |
| 1964 | 21,012 | 9,249 | 2.27 |
| 1965 | 23,819 | 10,557 | 2.26 |
| 1966 | 26,278 | 12,123 | 2.17 |
| 1967 | 28,272 | 13,459 | 2.10 |
| 1968 | 30,767 | 14,950 | 2.06 |
| 1969 | 31,955 | 16,240 | 1.97 |
| 1970 | 32,905 | 17,275 | 1.90 |
| 1971 | 34,570 | 18,680 | 1.85 |
| 1972 | 37,449 | 20,743 | 1.81 |
| 1973 | 42,369 | 24,453 | 1.73 |
| 1974 | 48,169 | 28,739 | 1.68 |
| 1975 | 55,905 | 33,530 | 1.67 |
| 1976 | 66,633 | 37,959 | 1.76 |
| 1977 | 83,654 | 43,024 | 1.94 |
| 1978 | 104,326 | 48,120 | 2.17 |
| 1979 | 126,328 | 57,009 | 2.22 |
| 1980 | 139,761 | 64,244 | 2.18 |
| 1981 | 149,500 | 71,883 | 2.08 |
| 1982 | 154,530 | 75,422 | 2.05 |
| 1983 | 166,435 | 77,125 | 2.16 |
| 1984 | 178,596 | 80,058 | 2.23 |
| 1985 | 187,194 | 78,799 | 2.38 |
| 1986 | 198,118 | 76,142 | 2.60 |
| 1987 | 199,726 | 75,399 | 2.65 |
| 1988 | 220,872 | 73,799 | 2.99 |
| 1989 | 241,904 | 76,369 | 3.17 |
| 1990 | 285,234 | 78,795 | 3.62 |
| 1991 | 330,880 | 79,904 | 4.14 |
| 1992 | 404,137 | 83,720 | 4.83 |
| 1993 | 499,923 | 83,867 | 5.96 |
| 1994 | 556,459 | 85,785 | 6.49 |

[1] December 31 numbers for the life insurance companies throughout. For the Farm Credit System, June 30 numbers for 1960-78 and December 31 numbers for 1979-94.

[2] Federal Land Banks, 1960-87, and Federal Land Bank Associations and Federal Land Credit Associations 1988-94.

Sources: Amer. Council of Life Insurance, *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures*, Washington, DC, Dec. 31, 1960-93. Farm Credit Admin., *Summary Report of Condition and Performance of the Farm Credit System as of December 31, 1984*, Washington, DC, June 1, 1985. Farm Credit Admin. and Coop. Farm Credit System, *Annual Report.*, Washington, DC 1960-83. Farm Credit Corp. of America, *Summary Report of Condition and Performance of the Farm Credit System.*, Washington, DC, Dec. 31, 1985-87. Farm Credit Adm. *Annual Report*, McLean, VA, 1988-92. Unpublished data for 1993 and 1994 provided by the Farm Credit Adm.

(Raup, 1989). It appeared that the world's agricultural sector had entered a new era where it would be increasingly difficult for the food supply to meet demand. American farmers thus would enjoy steadily rising exports and income.

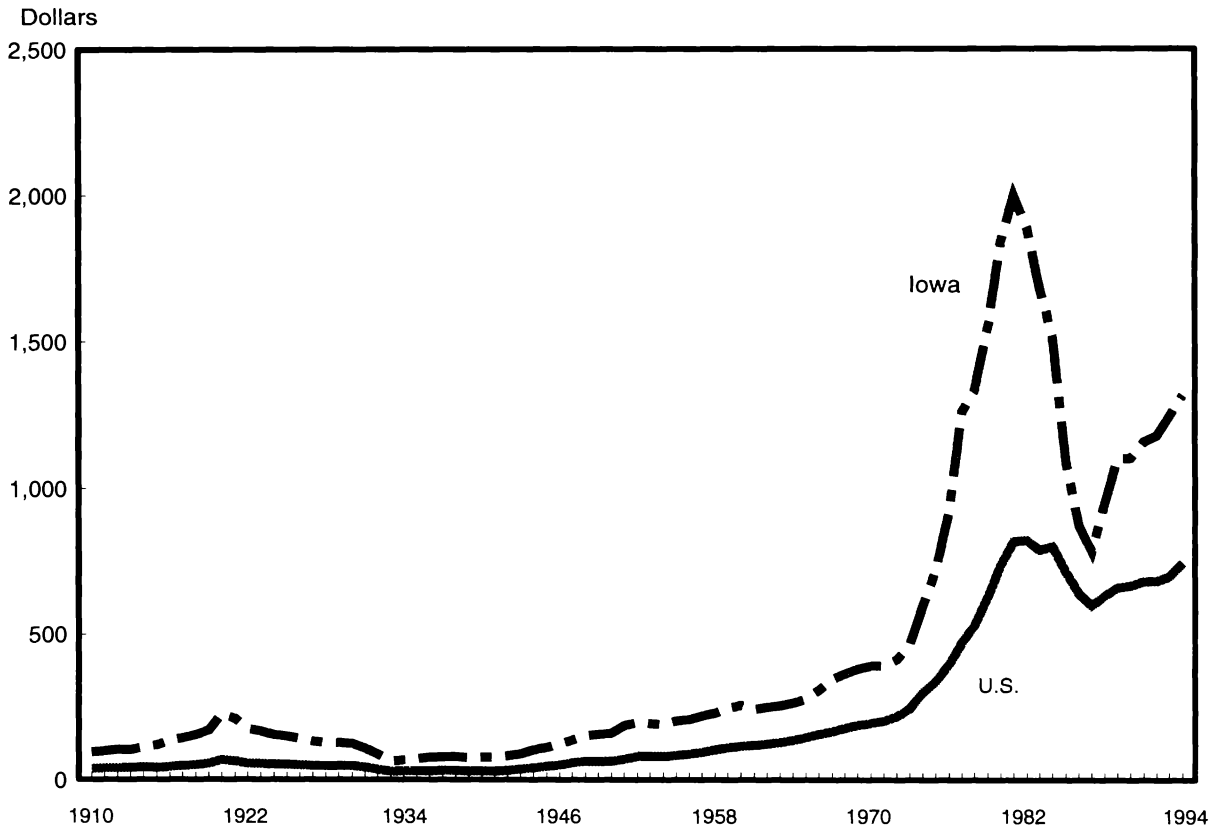
Farmers' income expectations were further buoyed by Government programs and ample credit. Farmers bid up land prices and increased their investments in machinery and in land development projects, such as irrigation facilities, land clearing and development, and permanent plantings (Melichar, 1987). According to Raup (1989), it appears the land boom after 1972 was fueled by neighboring farmers who were apparently acting on the belief in ever-expanding markets for farm products. Even as late as 1981, some analysts and forecasting firms expected steep upward trends in commodity prices and farm incomes (Melichar, 1987). Asset values, dominated by changes in farmland prices, tended to follow the upward trend in farm income from assets.

Farm income, instead of rising, fell as the United States entered the 1980's. Prospects for shortrun income growth declined and, as the idea of resource scarcity was downgraded, long-term income prospects dimmed as well. Scott (1994) notes that the earlier FLB change to variable-rate loans became a burden for indebted farmers as the general inflation that followed the elimination of the gold standard in 1971 increased. By the end of 1980, mortgage rates reached 12 percent or higher; some reached 17 percent by early 1982 (Scott, 1994). In short, interest rates rose to levels that farmers earlier could not have anticipated. Government payments could not replace all of the farm income that was not forthcoming from commodity markets. Farmers who bought land during the boom faced capital losses as they tried to make ever-higher payments on variable-rate mortgages (Scott, 1994). As a result, farm sector real asset values began to decline.

The magnitude of the boom-bust in U.S. farmland values was impressive (table 11, fig. 6). The nominal value of U.S. farmland per acre increased 67.5 percent in the 1960's, 276 percent in the 1970's, then rose, fell, and rose again for a net decline of 9.4 percent in the 1980's (table 11). The nominal peak-to-trough decline was more dramatic. During the 1982-87 period, the decline was 27.2 percent; in real terms during 1981-87, the peak-to-trough drop was 42.3 percent (table 11). In some regions, such as the Corn Belt and Plains, farmland price changes were even more dramatic.

Figure 6

**Nominal value of farmland and buildings per acre, United States and Iowa, 1910-94**




Some of the earlier farm booms precipitated expansion into marginal or newly settled lands. The 1972-87 farmland boom and bust was a prime-land phenomenon based on a misreading of profit potentials at the intensive margins of agricultural land use rather than at the extensive margins (Raup, 1989). Therefore, the greatest farmland price changes occurred in intensive farming areas such as the Corn Belt. In Iowa, nominal farmland values per acre increased 369.4 percent during 1970-80 and fell 40.1 percent 1980-90 (table 11). Nominal peak-to-trough farmland values per acre declined over 50 percent throughout the Corn Belt States in 1982-87, with Iowa and Minnesota suffering drops of over 60 percent. Declines tended to be most evident in major food and feed grain regions.

Much interest in the farm financial scene stemmed from the sheer size of the credit flows associated with the large changes in farmland values (fig. 7). FCS lending grew 1,833 percent from 1960 to the 1984 high of $49 billion before dropping 46.4 percent during 1980-94. During the expansion phase, the FCS gained farm real estate loan market share 16 straight years from 1969 (22.7 percent) to 1984 (43.7 percent). As of 1994, it had experienced declines in market share for 10 consecutive years.

Life insurance companies were more restrained. Total life insurance company farm lending increased 339.5 percent from 1960 to the 1981 peak before declining 26.9 percent by 1994. Life insurance companies lost market share every year from 1967 until 1985 except for 1977-78. The life insurance company performance through the farmland boom suggests that the industry's less aggressive approach to farm real estate lending in the early years of the land boom was reversed by the mid-1970's. The less aggressive farm real estate lending policies of the life insurance companies during the early part of the boom were the result of less money to lend (the amount allocated to farm mortgages was limited). The internal competition for life insurance investment funds is typically keen, but the attractiveness of the farmland market boom eventually prevailed. One major company that had been out of the market since 1948 re-entered in 1977 (only to leave again in 1984).

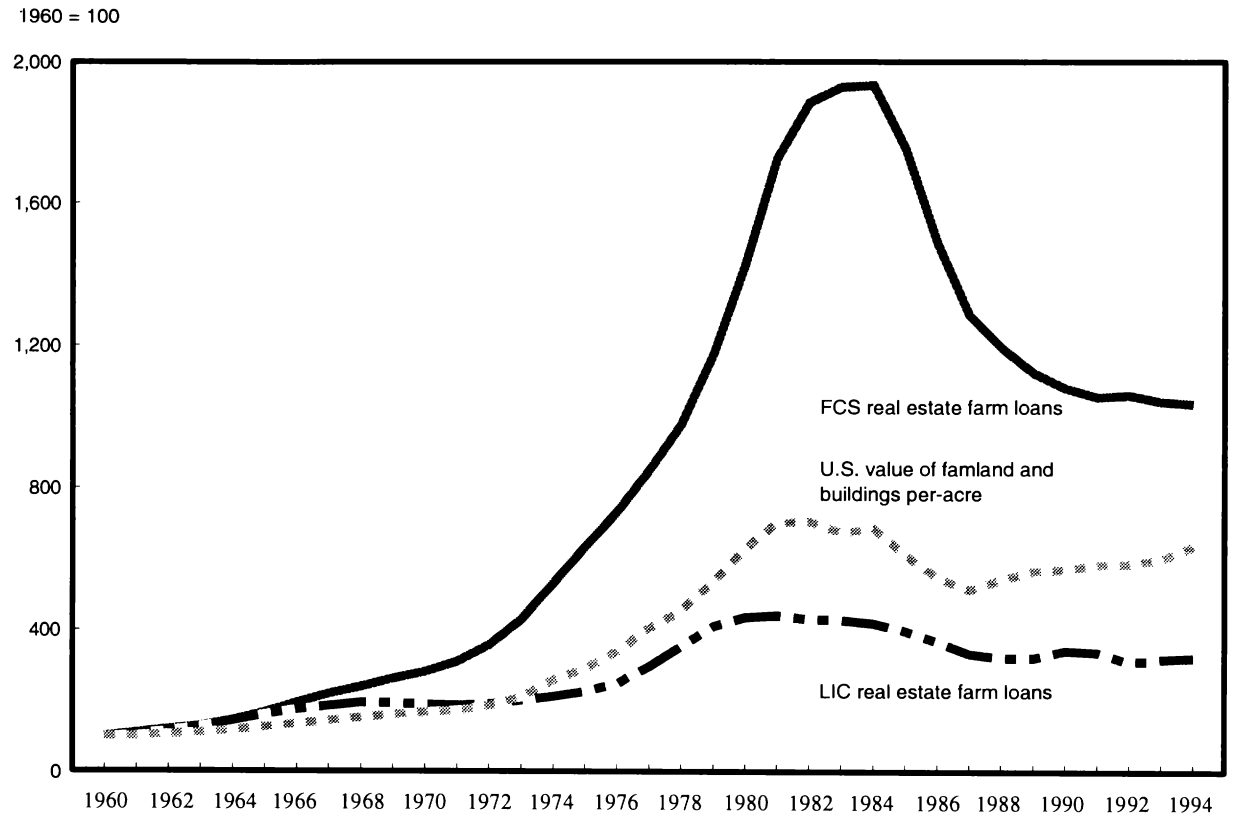
**Table 11--Average per-acre nominal and real value of farmland and buildings, 1960-94, and percentage change, selected years, United States and Iowa, 1960-94**

| Year | GDP implicit price deflator, 1987=100 | Nominal value per acre | | Real value per acre | |
|---|---|---|---|---|---|
| | | U.S. | Iowa | U.S. | Iowa |
| | *Number* | | *Dollars* | | |
| 1960 | 26.0 | 117 | 257 | 450 | 988 |
| 1961 | 26.3 | 119 | 242 | 452 | 920 |
| 1962 | 26.9 | 125 | 251 | 465 | 933 |
| 1963 | 27.2 | 130 | 256 | 478 | 941 |
| 1964 | 27.7 | 138 | 265 | 498 | 957 |
| 1965 | 28.4 | 147 | 279 | 518 | 982 |
| 1966 | 29.4 | 158 | 310 | 537 | 1,054 |
| 1967 | 30.3 | 168 | 346 | 554 | 1,142 |
| 1968 | 31.8 | 179 | 365 | 563 | 1,148 |
| 1969 | 33.4 | 189 | 382 | 566 | 1,144 |
| 1970 | 35.2 | 196 | 392 | 557 | 1,114 |
| 1971 | 37.1 | 203 | 392 | 547 | 1,054 |
| 1972 | 38.8 | 219 | 414 | 564 | 1,067 |
| 1973 | 41.3 | 246 | 466 | 596 | 1,128 |
| 1974 | 44.9 | 302 | 597 | 673 | 1,330 |
| 1975 | 49.2 | 340 | 719 | 691 | 1,461 |
| 1976 | 52.3 | 397 | 920 | 759 | 1,759 |
| 1977 | 55.9 | 474 | 1,259 | 848 | 2,252 |
| 1978 | 60.3 | 531 | 1,331 | 881 | 2,207 |
| 1979 | 65.5 | 628 | 1,550 | 959 | 2,366 |
| 1980 | 71.7 | 737 | 1,840 | 1,028 | 2,566 |
| 1981 | 78.9 | 819 | 1,999 | 1,038 | 2,534 |
| 1982 | 83.8 | 823 | 1,889 | 982 | 2,254 |
| 1983 | 87.2 | 788 | 1,684 | 904 | 1,931 |
| 1984 | 91.0 | 801 | 1,518 | 880 | 1,668 |
| 1985 | 94.4 | 713 | 1,091 | 755 | 1,156 |
| 1986 | 96.9 | 640 | 873 | 660 | 901 |
| 1987 | 100.0 | 599 | 786 | 599 | 786 |
| 1988 | 103.9 | 632 | 947 | 608 | 911 |
| 1989 | 108.5 | 661 | 1,101 | 609 | 1,015 |
| 1990 | 113.3 | 668 | 1,102 | 590 | 973 |
| 1991 | 117.6 | 681 | 1,157 | 579 | 984 |
| 1992 | 120.9 | 684 | 1,178 | 566 | 974 |
| 1993 | 123.5 | 699 | 1,245 | 566 | 1,008 |
| 1994 | 126.1 | 744 | 1,316 | 590 | 1,044 |
| | | | *Percentage change* | | |
| 1960-70 | 35.4 | 67.5 | 52.5 | 23.8 | 12.8 |
| 1970-80 | 103.7 | 276.0 | 369.4 | 84.6 | 130.3 |
| 1980-90 | 58.0 | -9.4 | -40.1 | -42.6 | -62.1 |
| 1990-94 | 11.3 | 11.4 | 19.4 | 0.0 | 7.3 |
| 1960-94 | 385.0 | 535.9 | 412.1 | 31.1 | 5.7 |

Sources: U. S. Council of Economic Advisers, *Economic Report of the President,* Washington, DC, Feb. 1995. U.S. Department of Agriculture, Economic Research Service, *Agricultural Resources: Agricultural Land Values and Markets: Situation and Outlook Report,* AR Series, various issues; *RTD Updates: Agricultural Land Values,* various issues; *Farm Real Estate: Historical Series Data, 1950-92,* SB-855, 1993

Figure 7

**Total life insurance company (LIC) and Farm Credit System farm real estate loans outstanding (including operator households) and U.S. per-acre nominal value of farmland and buildings, 1960-94**




In 1975, life insurance companies introduced more flexible loan policies to suit an increasingly dynamic farm loan market (Melton, 1977). Many loans were now written for either a 15-year term with a balloon at maturity, or for a 25- or 30-year term with the company retaining the option to call the loan at the end of 15 years upon 6 months' notice. Prior to this, life insurance lenders wrote 20- to 30-year term mortgages. The change in packaging loans allowed interest rate adjustments if inflation continued at high levels. The borrower was assured of a fixed rate for a specified period, and the company was locked into a rate for a shorter period of time. This amortization plan made farm loans more competitive with bond investments by life insurance companies and increased the flow of funds to agriculture (Melton, 1977). Farmers reportedly expressed preference for this approach over the FLB's variable rates because they maintained that they had seen no sustained decreases in FLB interest rates for decades (Melton, 1977).

## Funding Sources Differ

Credit is a means of financing new capital, the transfer of the ownership of assets, and the refinancing of existing debt (Hesser and Schuh, 1962). The frequent use of credit in the farmland market shows its importance in the use and control of land. Credit expedites the transfer of ownership, which might languish if the buyer were forced to purchase with retained earnings. Credit finances both the acquisition of farm units and additions to existing farms.

USDA first estimated the level of credit-financed farmland transfers in 1944. Debt was incurred on 44 percent of real estate transfers in 1944 and generally increased to a high of 91 percent in 1980 during the farmland price boom before declining to 60 percent in 1993 (latest available data). Debt as a percentage of the purchase price ranged from 58 percent in 1944 to 79 percent in 1979, but trended down to 72 percent by 1993.

The determinants of net changes in farm real estate debt levels are complex (Lins, 1972). A key factor on

the credit supply side of the equation is the capacity and performance of the life insurance companies and the FCS to respond to changes in demand as agriculture moves through its financial cycles. Life insurance company funding sources include life insurance policies, annuity policies, health insurance policies, earnings from investment holdings, pension funds, and other sources. Life insurance industry assets include government securities, bonds, stocks, mortgages (farm and nonfarm), real estate, policy loans, and miscellaneous items.

The funding of mortgages by life insurance companies depends on the income generated from and risks inherent in investment alternatives. The primary considerations typically are security of principal, adequacy of yield, and diversification of investments (Lee and others, 1988). Companies diversify investments to reduce risks and develop goodwill. It is considered sound business policy to spread investments among different classes as well as geographically (Lee and others, 1988). Insurance company assets invested in farm real estate loans are a small percentage of total industry assets, as befits a pool of total farm mortgages that is very small when compared with aggregate investment opportunities.

The response of life insurance companies to increased demand for farm mortgage loans depends upon a complex set of factors. Adequate funds for investment are available from the income and assets that exist in such a large industry. But only a few companies within the industry make farm mortgage loans. The investment response to demand depends on how mortgage investments are viewed in general and farm mortgages in particular. The big determinant of life insurance market share typically is internal rationing of funds (Robison and Love, 1979). Unlike the FCS, insurance companies will make farm real estate loans only if the rate of return over a sustained period is reasonably competitive with alternative uses of funds in other sectors of the economy (Boehlje and Eidman, 1984). The insurance industry possesses greater investment flexibility than does the FCS, which is predominately limited to alternatives in the farm sector.

The FCS acquires loanable funds by issuing bonds and notes in the national financial markets. Responsibility for marketing the FCS's securities rests with the Federal Farm Credit Banks Funding Corporation. The FCS is considered a government-sponsored enterprise (GSE) in the financial markets even though its bonds and notes are not guaranteed by the Federal Government against default. Agency status enables the FCS to market large volumes of securities at relatively favorable costs just above the cost of Treasury bonds and notes (Lins and Barry, 1984). FCS issues typically trade at yields that fall between Treasury securities and yields on prime corporate bonds of similar maturities. The FCS thus is viewed as having a competitive advantage in its cost of funds compared with other institutions that raise money in the national money markets except during periods of financial stress, such as during the mid-1980's, when the spread above Treasury issues widened (Duncan and Singer, 1992).

During the farmland price boom, the FCS based mortgage interest rates on its average cost of funds, that is, on the average rate paid on all outstanding FCS bonds and notes (Lee and others, 1988). During a period of rising interest rates, such as during the 1970's and early 1980's, the FCS banks' interest rates thus rose more slowly than did their competitors, who largely used marginal cost pricing, where lending rates were based on the current cost of raising new funds. This meant the existing FCS borrowers were in a sense giving a subsidy to new borrowers (Robison and Love, 1979). The existing borrowers, in effect, were sharing the benefit of previously issued lower rate bonds with the new borrowers. The use of average cost pricing helped the FLB's expand their loan portfolios more rapidly than the life insurance companies in the 1970's. With falling interest rates, however, lending rates based on average cost of funds fall more slowly than with marginal cost pricing. This occurred during 1984-87 and contributed greatly to the loss in the FCS' market share and the continuing financial stress of its borrowers.

The FCS's reputation as a highly competitive, low-cost lender was shaken by the events of the mid-1980's, but its ability to raise funds quickly through a single fiscal agent makes the FCS very adaptable to current market conditions. Moreover, as a single-purpose lender devoted to agriculture, mortgage loans are an important part of its portfolio. Farm lending does not have to compete with nonagricultural nor nonmortgage demands for funding within the FCS. Thus, the speed with which a response could be mounted to fund a surge in mortgage loan demand appears to favor the FCS over the life insurance industry.

### The Farm Credit System's Tax Advantage

Some observers feel that the historic tax advantage held by the FCS compared with the life insurance companies has provided the FCS with a competitive edge, other things being equal, in acquiring farm

mortgage loan market share. The Federal Farm Loan Act of 1916 exempted the FLB's and FLBA's from all taxation, except for taxes on the real estate they own. Previous to the Agricultural Credit Act of 1987(P.L. 100-233), FLB's and FLBA's were the only FCS institutions with authority to make real estate loans. Specifically, the law stated:

> [The FLB's, FICB's, FCB's/Each FLBA] and the capital, reserves, and surplus thereof, and the income derived therefrom, shall be exempt from Federal, State, municipal, and local taxation, except taxes on real estate held by a FLBA to the same extent, according to its value, as other similar property held by other persons is taxed. The mortgages held by the [FCB's/FLBA's] and the notes, bonds, debentures, and other obligations issued by the associations shall be considered and held to be instrumentalities of the U.S. and, as such, they and the income therefrom shall be exempt from all Federal, State, municipal, and local taxation, other than Federal income tax liability of the holder thereof under the Public Debt Act of 1941 (31 U.S.C. 3124).

No other institutions in the FCS enjoyed the broad exemption from taxation bestowed by the first sentence of the above paragraph. The exemption in the last sentence for interest income paid out applies to all FCS institutions, however. Therefore, interest owed on FCS obligations is subject to Federal income taxation, but not State and local.

The 1987 Act created two new types of associations with authority to make and hold real estate loans--Federal Land Credit Associations (FLCA's) and Agricultural Credit Associations (ACA's). Federal Land Credit Associations are created by the FCB transferring its authority to hold mortgage loans to the FLBA, making the FLBA a direct lender. FLCA's retain the broad tax exemption of FLBA's. ACA's created by the merger of a PCA and an FLBA are also direct lenders. However, since PCA's do not enjoy the broader tax exemption, neither do ACA's. Thus, income from long-term mortgage loans is taxable if earned by an ACA but not if earned by an FCB, FLCA, or FLBA. This divergence in taxation has induced associations in several districts to maintain separate PCA's and FLBA's or FLCA's rather than merge associations into ACA's.

The Farm Credit Administration (FCA), the FCS's regulator, feels that the difference in tax status between FCB's and PCA's and ACA's continues to impede elimination of structural inefficiencies and accumulation of capital at the direct lender associations. Under current law, FCB's, FLBA's, and FLCA's are tax-exempt, but BC's, PCA's, and ACA's are taxable. Thus, capital has accumulated at the tax-exempt FCB's rather than at the taxable direct lender associations. The FCA views this unfavorably since much of the risk in the FCS is the credit risk borne by direct lenders. The current tax structure discourages the accumulation of capital at those associations.

The continuing role of FCB's as capital "wholesalers" or "warehouses" impedes the development of accountable and autonomous direct lender associations. Association accountability is weakened because the associations rely on FCS banks to serve as a primary source of earnings and capital. Tax-free earnings are typically retained by the FCB's and therefore control of the capital is vested in them. Although bank earnings are distributed to direct lender associations, these distributions are merely a book entry. The distribution is not a tangible asset that direct lending associations can use to invest in assets, reduce their indebtedness, or distribute to patrons. Equalization of tax status would eliminate a primary reason that earnings and earned capital are generated at FCB's at the expense of associations.

The FCA wants Congress to either make all FCS institutions taxable or make them all exempt. However, if all institutions are made taxable, the FCA feels that it is critical that institutions be provided a one-time, tax-exempt opportunity to transfer capital from FCB's to direct lender associations. Absent this opportunity, capital would either remain at the FCB's or be severely eroded, leaving some institutions with inadequate capital. Thus, the FCS tax dilemma remains to be resolved.

The taxation of life insurance companies and other financial intermediaries is one of the most complex topics in public finance (Aaron, 1983). Life insurance companies are taxed by Federal, State, and local governments. Federal income taxes levied on life insurance companies are based on a separate statute designed to take account of the special features of the business. The basis for this taxation is different from the tax basis levied on other corporations. There are two reasons for this. First, a significant portion of life insurance premium income is akin to a deposit of funds by policyowners and thus is not earned income to the life insurance company. Second, the life insurance contract is long term, and the usual method of annual income taxation is not as appropriate for life insurance companies as for other companies

where contracts are usually short term (Black and Skipper, 1987).

A qualified life insurance company is granted special tax treatment because of the reserves it must carry for policyholder claims. Its income and deductions are calculated under special rules, but it is subject to the same tax rates as corporations in general. Profitability of the life insurance business has always been difficult to measure because of the unique accounting system of the industry (Wright, 1991).

There have been a number of revisions in life insurance tax methods. The present approach is based on a law enacted in 1984, which employs a standard quite similar to corporate income taxation of net income after expenses, but with two major exceptions. The first is a deduction for dividends paid to policyholders, as such payments are a necessary part of insurance procedures. The second exception is a 20-percent deduction from gross income (net gains from operations) to keep life insurance companies competitive with other financial institutions. In 1990, further remission in the Federal tax status for life insurance raised the tax burden by disallowing the previous deduction for "deferred acquisition costs," primarily company commitments to pay commissions on policy renewals in later years (Wright, 1992). Such costs previously had been carried as a current expense and a current deduction.

The tax policies directed at the life insurance industry have been the subject of considerable study in recent years (GAO, 1989; Aaron, 1983; Harman, 1992; U.S. Dept. Treasury, 1988, 1989, 1990). The tax burden of the industry has increased significantly in recent decades following passage of Federal legislation in 1959, 1982, 1984, 1986, and 1990 (Harman, 1992; Rose and Fraser, 1988; Wright, 1992). The taxation rules for life insurance companies were substantially revised in the 1980's in response to concerns that the 1959 Act rules were unduly complex and an inappropriate measure of life insurance company income in an environment of high interest rates and new insurance products (U.S. Dept. Treasury, 1989).

The 1982 and 1984 tax acts' changes to life insurance company tax rules increased tax revenues by a smaller amount than predicted. In particular, the tax payments of the life insurance industry and the relative shares paid by the mutual and stock segments in 1984 and 1985 did not meet congressional expectations. These shortfalls were attributable to: (1) the complexity of the life insurance industry and its tax rules; (2) the significant changes in its practices, products, and tax rules during the last decade; and (3) the possible underestimation of the effect of the industry's tax-minimizing behavior in response to the 1982 and 1984 Tax Act changes (U.S. Dept. Treasury, 1988).

Defenders of the FCS feel that the tax exemptions have been justified because the System serves some uneconomical lending areas, makes all sizes of loans, and must set aside a substantial proportion of its earnings as reserves (Lee and others, 1988). Life insurance companies and other farm lenders feel that the tax exemptions provide an unfair interest rate advantage to the FCS. Work published in 1980 indicated that the income tax exemptions provided about a one-half percentage point interest rate advantage for the FLB's (Lee and others, 1980; Penson and Lins, 1980).

Using 1979-80 data, Lins and Barry (1984) estimated the maximum loan interest rate increase necessary under taxation to maintain an FCS bond's net earnings at the same level as occurred without taxation. For an FLB interest rate of 12 percent, this would translate into rate increases from 56.4 to 80.4 basis points, depending on the FLB district.

Bosworth and others (1987) characterized the FCS's special relationship with the Federal Government as a subsidy of farm credit. (This would involve not only tax exemptions, but the FCS's agency status and other benefits as well.) They noted the 0.5-percent loan interest rate advantage through FCS loans provided by tax exemptions and the fact, that before the farm crisis, FCS debt costs were about 90 basis points below rates paid by commercial banks on certificates of deposit. In total, they feel the FCS enjoys an advantage in its loan costs equal to 0.5-1.0 percent on its loan rates. But these costs must be balanced against the benefits that the FCS has provided in broadening the market for agricultural credit.

### The 1971 Farm Credit Act Broadens FCS Authority

Prior to 1947, FLB's could lend a maximum of 50 percent of the assessed market value of land offered as security, and 20 percent of the value of buildings. In 1947, the limit was raised to 65 percent of the assessed "normal value" of land and buildings, as determined by FCA analysis of long-term trends in the determinants of farm income. The change was made to enable FLB's to lend more because it was thought that land values were still too low as a consequence of the Great Depression. By the 1960's, "normal values" calculated in nominal terms were

lagging behind market values, and the fraction of market value that FLB's were able to lend was once again falling below 50 percent.

The Farm Credit Act of 1971 (P.L. 92-181) recodified and replaced the laws under which the FCA and the institutions of the FCS were organized and operated. One of the controversial provisions of this legislation dealt with increasing the maximum size of farm mortgage loan commitments. The 1971 Act liberalized FLB lending in two significant ways. First, it tended to raise the appraisal values to near market values and, second, it increased the permitted loan-to-security ratio.

Specifically, the Act authorized the FLB's to make loans up to 85 percent of the appraised value of the security. In contrast, life insurance companies are limited by law to a maximum percentage of the loan set by the State insurance commissioners vis-a-vis the appraised value of the farmland (Melton, 1977). These percentages vary over time and between States. Prior to 1971, FLB loans were limited to 65 percent of the appraised normal agricultural value, which was an estimate of the value of the property when operated by a farmer typical to the area (Baker and Dunn, 1979). For most kinds of farm real estate, appraised value thus was defined as the market value of the property (Herr, 1975). In the late 1960's and early 1970's, normal value levels were estimated to average 80-85 percent of the market value (Herr, 1975).

Baker and Dunn (1979) note that prior to 1971, by both method and logic, land appraisal was linked with the cash flows expected from farm use of the property. If property value accrued from other factors, that increment was ignored, at least formally. If the longrun net cash flow expectations led to appraised real estate values in excess of market values, as occurred in the 1920's and 1930's, the FLB loan commitment could be and often was high relative to market real estate value and immediate cash flow prospects.

The rationale for the 1971 legislation's increase in FLB loan limits was that land appraisals had lagged behind market values. It was felt that farmland prices had been increasing at rates often considerably in excess of increased cash-flow expectations that determined FLB appraised values (Baker and Dunn, 1979). Hoag observes that, prior to 1971, inflation had caused FLB loan limits to frequently be less than 50 percent of the market value of the property (Hoag, 1976). He feels that the dropping of the normal value requirements in 1971 caused land loan appraisals to be much more influenced by current market prices.

Hoag states that the pre-1971 limitation of 65 percent of the approved normal value kept FLB's from lending too heavily. After 1971, the margin for error increased; FLB's and FLBA's would have to carefully consider such factors as the borrower's management ability, his financial position, the nature of the farming operation, and individual farming trends. Hoag feels that the pre-1971 normal land value rules served well during the Great Depression when prices were low, but became obsolete. The pre-1971 rules made the FLB's purely collateral lenders, but the reforms allowed for more credit judgments (Hoag, 1976).

Implementation of the 1971 Act occurred in mid-1972, and opinions on what happened next vary. Penson and Lins (1980) argue that in the years immediately following passage of the act, the ratio of loan to appraised value limit actually declined. The borrowers who were granted loans that approached the 85-percent value limit tended to be young operators who had demonstrated management ability and repayment capacity. The 1971 legislation was passed during a steady increase in land values and overall farm real estate loan levels. So it is not surprising that the loan-to-value ratio of the entire FLB portfolio declined as the higher ratio on new loans was not enough to enable the entire portfolio to keep pace with the burgeoning land values.

A 1975 study by Herr shows that substantial changes in loan-to-market-value ratios did occur after implementation of the 1971 Act. In the 6 months following June 30, 1972, the average loan-to-security ratio rose from 50 to 62 percent. In the first half of 1972, about 75 percent of the loans were made at a loan-to-value ratio of under 60 percent. In the second half of 1972, less than half of all loans were at ratios below 60 percent, and nearly one-third had ratios of 70 percent or more. In 1973, the proportion of loans having a loan-to-market-value ratio of 70 percent or more had increased to 40 percent.

Herr also notes that the extent and rapidity of the change supported the view that the authority to increase the loan ratio was both needed and beneficial, and that a large group of borrowers was not adequately financed prior to the 1971 Act. But he cautions that the legislation was enacted at the same time that farm prices, production expenses, capital outlays, and farm income increased substantially, and these changes make it difficult to separate their effects

effects from those caused by the liberalization of security requirements (Herr, 1975).

Baker and Dunn (1979) concluded that because real estate values rose relative to farm cash-flow expectations, the 1971 Act raised the delinquency risks of farm mortgage lending by FLB's. Their conclusions, based on econometric simulations of the average farm borrower before and after the 1971 Act, showed that the increase in potential lending risks varied widely among the farm loan types.

USDA's Economic Research Service in 1975 noted that "The rapid shift in market share and the sharp increase in funds provided by the Federal Land Banks are dramatic evidence of the changes in lending policies which were the result of the Farm Credit Act of 1971. The shift also reflects the inability of insurance companies to increase their allocation of funds in agriculture in a time of rising demand for loan funds."

Robison and Love in 1979 developed a simultaneous equation model to simulate the reasons for the changes in FLB and life insurance company farm mortgage loan shares. Their results indicated that life insurance companies were only slightly affected by the 1971 Act, while FLB's could ascribe only about 15 percent of their loans outstanding to the legislation (Robison and Love, 1979).

More recent analyses link the 1971 liberalization in FCS lending authority as a factor in the farmland boom-and-bust cycle. The U.S. General Accounting Office (1987) noted that the 1971 change liberalizing FLB loan collateral requirements and the 1969-70 switch to variable interest rates led to greater borrowing by farmers from the FCS and a larger FCS market share. Carey (1990) noted that "a crucial restriction on FLB lending was lifted as part of the Farm Credit Act of 1971." Ely and Vanderhoff (1990), in a study funded by the American Bankers Association, wrote that "The 1971 Farm Credit Act was the seminal event in the greatest land boom and bust American agriculture has ever experienced."[16] They believe that if the 1971 Act had not liberalized the FCS authority, the farm credit crisis would have been much less severe, if it had occurred at all. Farmland prices might have continued to rise above the 1971 level, but not to the extent they did. In short, the 1971 Act, in their view, "dramatically played a key role in altering the lending priorities of the FCS, to the detriment of American agriculture" (Ely and Vanderhoff, 1990).

### An FCS Net Advantage?

The FCS's agency status, funding advantage, possible tax advantage, large size, and strong retail delivery system are thought to give it a competitive advantage. But some observers maintain that the FCS may have disadvantages that increase costs. It is a single-industry lender and the lack of diversification means that loan investigation, documentation, and criteria, as well as its capital base, must all be stronger than for a more diversified lender, other things being equal. The strategies to handle risks inherent in lending to a single industry increase costs. Also, the need to serve farmers and, historically, the smaller loans resulted in higher costs. The FCS thus may need the government-sponsored enterprise (GSE) and tax advantages to overcome the single-lender requirements imposed by law.

The FCS's retail delivery system historically has been strong in numbers (staff and locations), but perhaps inefficient. Given that the FCS's cost of funds is 20 percent that incurred by the typical insurance lender (10-15 basis points versus 50-80 basis points above comparable-term U.S. Treasury issues), their farm mortgage loan interest rates should be significantly below the rates offered by insurance companies. They are not. Neither are FCS profits significantly higher. The reason for this may be the high cost of the FCS's distribution system. Life insurance companies typically manage large portfolios with a few professionals. The FCS' operating inefficiencies may negate its advantages in sourcing funds and tax status.

## Financial Stress in the Life Insurance Company Farm Mortgage Loan Portfolio

Both 1980 and 1990 seem uneventful years for life insurance company lending to agriculture, based on a number of statistical comparisons. Loan delinquency rates increased only slightly and are not indicative of the events that the insurance industry experienced

[16] The 1970's were not the first time that FLB's are alleged to have increased the supply of mortgage credit too much. O'Hara (1983) noted that one of the key purposes of the Federal Farm Loan Act of 1916 was to enable tenant farmers to become owners, but the opposite occurred with the proportion of tenant farmers increasing. She found that the real effect of the act was to raise farmland values. Thus, a subsidy (FLB tax exemption) helped existing landowners and hurt the very group it was intended to help. The high land values of the 1920's encouraged loans larger than could be justified by income alone. This high debt burden increased the number of foreclosures as farm income fell in the late 1920's.

during the decade in its farm mortgage loan portfolio. The industry ended 1980 with a 13.3-percent market share of farm real estate debt and ended 1990 with a 12.9-percent share. The 1980-90 21.1-percent decline in life insurance company farm mortgage loans outstanding was only somewhat greater than the 19.1-percent drop in total outstanding farm real estate loans (including operator households).

Some insurance companies were aggressive lenders in the 1970's farmland boom, with annual lending volume peaking at $2.8 billion in 1979 (table 9). Lending standards of insurance companies, like those of many other lenders during the boom, had frequently failed to properly evaluate borrowers' debt servicing capacity. Instead, lending standards often relied on collateral value to ensure loan repayment. Generous or even lax appraisal standards cost the industry when farmland prices subsequently plummeted as much as 50 percent in some midwestern States. As the farm financial problems of the 1980's played out, life insurance companies' farm loan portfolios were hard hit by foreclosures and principal write-offs, with many highly leveraged farm operations unable to meet their financial obligations. New lending activity was down dramatically, falling to as little as $695 million in 1982.

Insurance company farm mortgage portfolios experienced greater financial stress, by some measures, during the 1980's than either FLB's or commercial banks. Delinquency rates on life insurance farm mortgage debt rose from 1.5 percent at the beginning of 1980 to 19.9 percent at midyear 1986. (A delinquent life insurance industry farm mortgage is defined as a loan that has interest payments in arrears more than 90 days or is in the process of foreclosure.) During the same period, foreclosures rose from less than 0.2 percent to 8.2 percent of outstanding dollar volume. The market value of property acquired through foreclosure reached $1.6 billion in 1987, or over 15 percent of the industry's outstanding farm mortgage volume at the time. These measures of loan portfolio stress equal or exceed those of the FCS, whose financial turmoil received considerable publicity and resulted in $1.26 billion of Federal assistance.

The life insurance industry does not report data on farm loan losses (net loan chargeoffs). One study estimated losses to be 30 percent of reported foreclosures and determined a cumulative farm loan loss of $859 million for 1984-89 (Hanson and others, 1991). This represented 6.8 percent of the life insurance farm loan portfolio outstanding at the beginning of 1984. The life insurance companies were less aggressive farm mortgage lenders going into the 1970's farmland price boom, and they did not become aggressive until mid-decade. As a result, some found themselves competing at the end of the boom with a disproportionate number of riskier loans written at the high end of the cycle of land prices and interest rates (Raup, 1989). So the stage was set for major problems when the boom turned into a bust.

Like other farm lenders, insurance companies restructured many nonperforming loans during the decade. In general, most companies tried to avoid foreclosure with a workable debt-restructuring plan. After peaking in 1986-87, the financial stress of insurance company farm loan portfolios did abate, but stress remains somewhat elevated by pre-1980 standards.

Delinquency rates based on the number of loans held by life insurance companies were lower for agricultural mortgages than for nonagricultural loans throughout the 1960's and 1970's (table 12). The agricultural delinquency rate first exceeded the nonagricultural rate in June 1981. The June 1987 agricultural mortgage delinquency rate of 9.12 percent was the highest recorded since the American Council of Life Insurance initiated its survey in 1954. The rate declined to 1.27 percent by the end of 1994, below the nonagricultural rate that continues to be hurt by commercial real estate mortgages.

Delinquency rates based on the dollar volume of loans outstanding were proportionately higher for farm mortgages because these loans were larger until the mid-1980's. The share of delinquent farm mortgage dollars exceeded the nonfarm share continuously from June 1978 until December 1991, peaking at 19.85 percent in June 1986 (table 12). Only $230.5 million of the agricultural loan portfolio was delinquent in December 1994 compared with $5.9 billion for the nonagricultural portfolio (app. table 9).

Agricultural mortgage loan foreclosure rates, a more restrictive measure based on the number of loans, were below nonagricultural rates until 1982 and again fell behind in 1991 (table 13). The foreclosure rate based on loan dollar volume was higher for agricultural loans during 1971 and again in 1980-89 (table 13).

Agricultural mortgage foreclosures in dollar amount rose each year of the 1980's until 1986 when they peaked at $827.5 million (app. table 10). During

**Table 12--Life insurance company mortgage loan delinquency rates, 1960-94[1]**

| Year[2] | Rates by number of loans | | Rates by amount | |
|---|---|---|---|---|
| | Nonagri-cultural mortgages | Agricultural mortgages | Nonagri-cultural mortgages | Agricultural mortgages |
| | *Percent* | | | |
| 1960 | 0.77 | 0.15 | 0.61 | 0.21 |
| 1961 | .89 | .12 | .71 | .18 |
| 1962 | .94 | .14 | .73 | .39 |
| 1963 | 1.06 | .14 | .99 | .19 |
| 1964 | .94 | .13 | .96 | .19 |
| 1965 | .90 | .21 | .93 | .28 |
| 1966 | .86 | .16 | .86 | .25 |
| 1967 | .75 | .20 | .80 | .60 |
| 1968 | .64 | .18 | .63 | .57 |
| 1969 | .66 | .17 | .57 | .36 |
| 1970 | .78 | .34 | .85 | 1.51 |
| 1971 | .84 | .42 | .90 | 1.59 |
| 1972 | .97 | .34 | 1.13 | 1.38 |
| 1973 | .97 | .19 | 1.57 | .63 |
| 1974 | .98 | .23 | 2.57 | .71 |
| 1975 | 1.08 | .22 | 3.68 | 1.27 |
| 1976 | 1.10 | .32 | 3.37 | 2.07 |
| 1977 | 1.16 | .56 | 2.41 | 1.16 |
| 1978 | 1.05 | .54 | 1.65 | 2.59 |
| 1979 | 1.01 | .40 | .76 | 1.45 |
| 1980 | 1.06 | .54 | .89 | 2.00 |
| 1981 | 1.11 | .77 | .69 | 3.69 |
| 1982 | 1.07 | 1.66 | .83 | 6.40 |
| 1983 | 1.10 | 2.63 | .90 | 8.27 |
| 1984 | 1.24 | 3.78 | .90 | 9.58 |
| 1985 | 1.43 | 6.34 | 1.16 | 15.06 |
| 1986 | 1.64 | 8.30 | 2.65 | 17.01 |
| 1987 | 1.60 | 6.83 | 2.61 | 14.31 |
| 1988 | 1.74 | 4.44 | 2.44 | 8.87 |
| 1989 | 1.68 | 2.68 | 2.37 | 4.74 |
| 1990 | 2.10 | 2.40 | 3.60 | 4.22 |
| 1991 | 2.66 | 2.34 | 5.79 | 3.84 |
| 1992 | 3.05 | 2.64 | 6.50 | 3.33 |
| 1993 | 2.84 | 1.99 | 4.48 | 2.21 |
| 1994 | 2.81 | 1.27 | 3.34 | 2.60 |

[1] Delinquent loans (including loans in the process of foreclosure). A delinquent loan is a nonfarm mortgage with interest payments in arrears at least 2 months (60 days if other than a monthly pay) or a farm loan with interest in arrears more than 90 days. Reporting companies account for approximately 80-85 percent of the mortgages held by U.S. life insurance companies depending on the date of the survey.

[2] December 31.

Source: American Council of Life Insurance, *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures,* various issues.

1982-85, the dollar amount of agricultural mortgage foreclosures exceeded nonagricultural foreclosures despite the much smaller size of the farm loan portfolio. Foreclosures on life insurance company agricultural loans during 1980-90 totaled $3.58 billion, with 57.2 percent occurring during 1985-87. Nonagricultural loan foreclosures grew from $58.5 million in 1981 to $6.7 billion in 1992, and were $4.5 billion in 1994, compared with $41.7 million for the agricultural portfolio.

Historically, smaller nonagricultural loans led to smaller average-sized delinquent and foreclosed loans, as would be expected (app. tables 11 and 12). This all changed dramatically in the mid-1980's. Average nonagricultural loan size exceeded average agricultural loan size in 1985. Both average nonagricultural delinquent and foreclosed loan sizes followed this trend and exceeded their agricultural counterparts beginning in 1986. By 1988, the ratio of an average-sized nonagricultural foreclosed loan to an average-sized agricultural foreclosed loan exceeded that of the corresponding outstanding loan sizes ratios for each year. The same happened to the delinquent loan ratios beginning in 1991. In short, not only are nonagricultural loans now larger than agricultural loans, but the nonagricultural delinquent and foreclosed loans are even larger than the farm loans. This reversal of a historical pattern thus has not only occurred suddenly, but profoundly.

## Life Insurance Company Equity Ownership of Farmland

For many years, insurance companies were forbidden to invest in real estate for other than operational purposes (Black and Skipper, 1987). This restriction was relaxed after World War II as the demand for capital increased. Still, companies are allowed to have only a small proportion of their assets invested in real estate. Many companies increased their real estate equity holdings in the early 1970's and early 1980's in an attempt to protect themselves against inflation. As interest rates rose to record levels, they saw the value of their stocks and bonds flag while the value of real estate spiraled upward.

As lenders on commercial real estate, life insurance companies became more familiar with the management aspects of equity properties and decided to undertake direct real estate investments. As direct owners, rather than lenders to developers, they stood to benefit from increased market value of the real estate (Wright, 1992). Many life insurance companies

**Table 13--Life insurance company mortgage loan foreclosure rates, 1960-94[1]**

| Year | Rates by number of loans | | Rates by amount | |
|---|---|---|---|---|
| | Nonagricultural mortgages | Agricultural mortgages | Nonagricultural mortgages | Agricultural mortgages |
| | *Percent* | | | |
| 1960 | 0.13 | 0.02 | 0.13 | 0.02 |
| 1961 | .24 | .02 | .22 | .04 |
| 1962 | .31 | .02 | .48 | .04 |
| 1963 | .37 | .01 | .32 | .02 |
| 1964 | .43 | .02 | .37 | .02 |
| 1965 | .41 | .02 | .38 | .03 |
| 1966 | .40 | .01 | .41 | .03 |
| 1967 | .32 | .01 | .29 | .04 |
| 1968 | .22 | .02 | .23 | .11 |
| 1969 | .14 | .02 | .17 | .15 |
| 1970 | .13 | .04 | .16 | .16 |
| 1971 | .12 | .06 | .17 | .44 |
| 1972 | .13 | .05 | .28 | .24 |
| 1973 | .13 | .04 | .24 | .22 |
| 1974 | .11 | .02 | .37 | .06 |
| 1975 | .13 | .03 | .90 | .39 |
| 1976 | .10 | .03 | .69 | .37 |
| 1977 | .10 | .02 | .60 | .08 |
| 1978 | .08 | .03 | .34 | .20 |
| 1979 | .06 | .02 | .19 | .19 |
| 1980 | .05 | .03 | .07 | .15 |
| 1981 | .06 | .05 | .06 | .44 |
| 1982 | .08 | .20 | .13 | 1.33 |
| 1983 | .10 | .38 | .11 | 2.79 |
| 1984 | .13 | .66 | .21 | 2.33 |
| 1985 | .15 | 1.47 | .28 | 4.35 |
| 1986 | .28 | 2.72 | .87 | 7.26 |
| 1987 | .42 | 2.86 | 1.02 | 6.60 |
| 1988 | .29 | 1.56 | 1.53 | 3.92 |
| 1989 | .28 | .86 | 1.09 | 2.24 |
| 1990 | .28 | .33 | 1.43 | .95 |
| 1991 | .41 | .37 | 2.24 | .99 |
| 1992 | .52 | .31 | 3.19 | 1.56 |
| 1993 | .55 | .38 | 3.01 | 1.16 |
| 1994 | .49 | .18 | 2.41 | .47 |

[1] Rates calculated as the percent of loans outstanding at the beginning of the year.

Source: American Council of Life Insurance, *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures*, various issues.

thus entered the real estate development field and acted as both lender and developer of large commercial real estate projects. At the end of 1994, life insurance companies held $53.8 billion (2.8 percent of their assets) in real property.

Direct investment in farm real estate was $2.6 billion, or only 4.9 percent of the industry's total direct real estate investment at the end of 1994. Farmland has traditionally been viewed by many institutional investors as having a rate of return that is not competitive with other alternatives. A considerable literature has developed on farm real estate as an investment. Results indicate that much depends on the study design, economic conditions during the period under consideration, and the choice of investments compared with farmland.

Tegene and Kuchler (1993) found the returns to farmland ownership so low when compared with many other investments as to make the present value model suspect as a predictor of farmland price movements. Kost (1968) found the rates of return on common stock for 1950-63 were larger but more variable with greater risk than comparable rates of return on farm real estate. Gertel and Llacuna (1990) showed that returns to land ownership averaged below 2 percent across several Western States. Burt (1986) and Tegene and Kuchler (1990, 1993) empirically demonstrated that farmland capitalization rates fell between 4 and 6 percent during 1921-89 in the traditional agricultural regions of the United States. Gertel and Jones (1991) compared returns to cash-rented farmland and common stock for 1940-60 and concluded that returns to stocks were larger.

Other research has reported more optimistic results for farm real estate. Feldstein (1980) reported that during the rapid inflation of the 1970's, the price of farmland increased more rapidly than the general price level. Thus, under certain conditions, investors would not only keep pace with inflation but realize gains in real value as well. Barry (1980) found that farm real estate has low risk relative to other assets and can provide risk reduction in well-diversified portfolios. Gertel (1982) found, for 1940-82, that the internal rate of return for cash-rented farmland (adjusted for inflation) exceeded the return to common stocks by 1.3 percent. Scott (1983) reported that farmland has provided a moderate rate of return and has been a good hedge against inflation.

A number of other studies have investigated the potential benefits of diversifying portfolios dominated by domestic stocks and/or bonds with investments in

farmland. They generally have found that risk/return tradeoffs on farmland compared well with common stocks (Moss, Featherstone, and Baker, 1987; Kaplan, 1985; Webb and Rubens, 1988). Lins, Sherrick, and Venigalla (1992) used cash rents after property taxes to derive the income part of the returns on farmland for 1967-88 and showed that diversification enhances portfolio performance for institutional investors. Farmland exhibited a higher return than stocks and bonds; returns on farmland were negatively correlated with stocks and bonds and positively correlated with inflation. Investment in farmland thus was both a hedge against inflation and a source of portfolio diversification.

Lins, Kowalski, and Hoffman (1992) found, for 1970-90, that many of the gains achieved by international diversification into stocks could also be achieved with farmland. Foreign stocks offer the possibility of high risk/high return combinations. But much of the gains from diversifying into farmland result not from higher rates of return, but rather from the fact that returns on farmland have a very low or negative correlation with returns on other assets.

Despite the potential as an equity investment in a diversified portfolio, life insurance companies have been only minor players in the equity farmland market. At the end of 1979, following the farmland price boom, they held only $241.4 million in direct farmland investments (table 14), or 1.9 percent of life insurance direct real estate holdings. But farmland holdings jumped 572 percent during 1979-84 to $1.6 billion (6.3 percent of total industry real estate investments). By 1994, farmland holdings had grown to $2.6 billion or 4.9 percent for all life insurance real estate holdings.

The life insurance direct farmland investment portfolio grew almost tenfold during 1979-94. However, much of this resulted from the accumulation of property through foreclosure and default in the early and mid-1980's and not from independent investments. Subsequent increases in direct investments in farmland were the result of changes in industry policies favoring such acquisitions. Data by farm production region show a rapid buildup in farmland ownership in terms of dollar value owned during 1979-84, especially in the Corn Belt, Delta, and Pacific regions (table 14).[17]

[17] The ACLI does not report real estate owned by life insurance companies by State for every year. The years 1979, 1984, 1989, and 1994 were chosen to give a comparison every 5 years. Data were not available for 1978, 1980-82, 1985, 1988, and 1990.

**Table 14--Life insurance company farm real estate owned, by farm production region, December 31, selected years, 1979-94**

| Farm production region | 1979 | 1984 | 1989 | 1994 |
|---|---|---|---|---|
| | | *$1,000* | | |
| Northeast | 100 | 7,100 | 3,695 | 78,057 |
| Lake States | 1,500 | 50,300 | 102,315 | 16,229 |
| Corn Belt | 23,000 | 353,200 | 430,700 | 122,664 |
| Northern PLains | 700 | 42,800 | 82,706 | 2,019 |
| Appalachian | 23,500 | 133,100 | 91,867 | 124,268 |
| Southeast | 14,200 | 132,300 | 348,343 | 539,114 |
| Delta States | 67,800 | 385,900 | 287,023 | 387,982 |
| Southern Plains | 8,600 | 59,500 | 126,572 | 74,554 |
| Mountain | 24,500 | 88,700 | 229,126 | 74,910 |
| Pacific | 77,500 | 369,400 | 707,821 | 1,196,407 |
| United States | 241,400 | 1,622,300 | 2,410,168 | 2,616,206 |
| | | *Percentage distribution* | | |
| Northeast | [1] | 0.4 | 0.2 | 3.0 |
| Lake States | 0.6 | 3.1 | 4.2 | 0.6 |
| Corn Belt | 9.5 | 21.8 | 17.9 | 4.7 |
| Northern Plains | .3 | 2.6 | 3.4 | .1 |
| Appalachian | 9.7 | 8.2 | 3.8 | 4.7 |
| Southeast | 5.9 | 8.2 | 14.5 | 20.6 |
| Delta States | 28.1 | 23.8 | 11.9 | 14.8 |
| Southern Plains | 3.6 | 3.7 | 5.3 | 2.8 |
| Mountain | 10.1 | 5.5 | 9.5 | 2.9 |
| Pacific | 32.1 | 22.8 | 29.4 | 45.7 |
| United States | 100.0 | 100.0 | 100.0 | 100.0 |

[1] Less than 0.05 percent.

Note: Northeast = CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT. Lake States = MI, MN, WI. Corn Belt = IL, IN, IA, MO, OH. Northern Plains = KS, NE, ND, SD. Appalachian = KY, NC, TN, VA, WV. Southeast = AL, FL, GA, SC. Delta States = AR, LA, MS. Southern Plains = OK, TX. Mountain = AZ, CO, ID, MT, NV, NM, UT, WY. Pacific = AK, CA, HI, OR, WA.

Source: American Council of Life Insurance, *Life Insurance Fact Book,* Washington, DC, various issues.

During 1984-89, the Corn Belt, Southeast, Southern Plains, and Pacific regions all showed major gains. By 1994, 81.2 percent of all direct farmland holdings were in the Southeast (cotton, rice, and orchard farms), Delta (timber and fruit crops), and Pacific (a diverse agricultural base) regions.

All agricultural lenders acquired farmland via foreclosure, deed in lieu of foreclosure (voluntary conveyance), and farm bankruptcy as the farm sector's financial crisis played out during the 1980's. Lenders generally viewed their growing farmland

holdings as troublesome assets, and were accused of mismanaging the acquired farmland and dumping it on an already weak land market. A key question was whether lender holdings of acquired property were large enough to depress farmland prices and values (Stam and others, 1989).

The peak total value of all lender-acquired property in the 1980's was $3.8 billion held on June 30, 1987 (Stam and others, 1989). This was only 0.69 percent of the U.S. total value of land and buildings in 1987. Total institutional lender-acquired property was equal to 24 percent of annual sales in terms of acreage and 19.7 percent in terms of value in 1987. (This was the maximum potential impact since not all acquired property would be disposed of in a single year.) Lender holdings of farmland affected the national farmland market in the 1980's, but were not a dominating factor. In some regions, however, the potential impact of lender holdings of acquired farmland was important.

Rural advocacy groups scrutinized the management policies of all lenders in the 1980's (Senf, 1987, 1988). Controversy flared especially when a large acquired tract was sold to an "outsider" or "corporate interest," or when the farmer was evicted without a chance to repurchase the land. The FmHA and FCS were especially conspicuous in this regard because of their size and governmental associations. Critics maintained that the large amount of the acquired property in lenders' hands raised serious questions about control of the Nation's farmland. Some of the acquired property was placed in the USDA's conservation reserve. Some farms were leased back to the former owners. Many lenders hired professional farm managers to get the highest return possible.

Life insurance company holdings peaked at $1.6 billion, or 47.3 percent of all institutional lender holdings, in December 1987. Public interest groups and the media were concerned about what they viewed as the rising corporate control of U.S. agriculture (Senf, 1987, 1988) and the management of land under absentee ownership.

Unlike some other lenders, life insurance companies largely took a "wait and see" stance regarding the sale of acquired farmland. Commercial banks and the FCS had less latitude in the disposal of acquired property as regulations restricted how long they could hold acquired property. Although some life insurance companies aggressively sold property as it came into inventory, others were content to hold the properties as investments, watchful of future increases in farmland values. While in inventory, the land was usually leased for cash. Most of the major life insurance companies had the internal resources necessary to manage their acquired property. Some companies retained choice acquired properties as direct investments. Three farm management firms were purchased by life insurance companies during the 1980's to assist them in disposing and managing the newly acquired real estate. Through the 1990's, much of the remaining acquired property was disposed of as farmland prices rose. By June 1994, acquired property holdings had declined to just $110 million.

The latest available data for 1994 show that life insurance companies owned only 0.36 percent of all farmland in terms of dollar value (table 15, app. table 13). Farm real estate directly held as an investment by insurance companies is heavily concentrated in California, Florida, and Washington (table 15). These three States accounted for 51.1 percent of total direct investment in 1994, but only 12.2 percent of the U.S. total value of land and buildings. Life insurance company holdings exceed 1 percent of the total value of farmland only in Alabama, Florida, Maine, Mississippi, New Hampshire, South Carolina, and Washington (table 15). Because holdings include some real estate acquired through foreclosure, land ownership patterns are influenced by regional acquisition rates.

Equity farmland properties now play a more important role in the agricultural activities of the life insurance industry than they did prior to the farm financial crisis of the 1980's. For example, in 1979 farmland equity investments equaled only 2 percent of the value of total life insurance loans to the agricultural sector. By 1994, they equaled 27.4 percent of total farm loans. It thus appears that several life insurance companies now view direct ownership of farmland favorably and that it carries different risks than does direct mortgage lending to the agricultural sector.

## Life Insurance Company Lending and Farmer Mac

The Agricultural Credit Act of 1987 (P.L. 100-233), enacted in January 1988, amended the Farm Credit Act of 1971 to establish the Federal Agricultural Mortgage Corporation (or Farmer Mac). Farmer Mac, as a federally chartered but privately funded and owned corporation, was given authority to establish a

**Table 15--Total value of farm real estate owned by life insurance companies compared with total value of farmland and buildings, by State, 1994**

| State | LIC farm real estate owned | Total value of farmland and buildings | LIC holdings/total value of farmland and buildings |
|---|---|---|---|
| | *Million dollars* | | *Percent* |
| Alabama | 100.4 | 9,637 | 1.042 |
| Alaska | 0 | NA | NA[1] |
| Arizona | 64.6 | 11,295 | 0.572 |
| Arkansas | 104.8 | 12,312 | .851 |
| California | 466.9 | 51,153 | .913 |
| Colorado | 1.4 | 14,104 | .010 |
| Connecticut | 0 | 1,921 | 0 |
| Delaware | 0 | 1,452 | 0 |
| Florida | 254.8 | 22,709 | 1.122 |
| Georgia | 43.3 | 11,893 | .364 |
| Hawaii | 9.6 | NA | NA[1] |
| Idaho | 0.5 | 10,587 | .005 |
| Illinois | 51.3 | 46,544 | .110 |
| Indiana | 42.3 | 23,569 | .180 |
| Iowa | 4.3 | 43,838 | .010 |
| Kansas | 0 | 25,647 | 0 |
| Kentucky | 0 | 16,127 | 0 |
| Louisiana | 83.3 | 8,366 | .996 |
| Maine | 58.6 | 1,535 | 3.814 |
| Maryland | 1.5 | 6,305 | .0241 |
| Massachusetts | 0 | 2,595 | 0 |
| Michigan | 2.0 | 12,969 | .015 |
| Minnesota | 4.1 | 26,722 | .015 |
| Mississippi | 199.9 | 10,585 | 1.888 |
| Missouri | .5 | 23,016 | .002 |
| Montana | .8 | 18,115 | .005 |
| Nebraska | 1.7 | 29,894 | .006 |
| Nevada | 4.5 | 2,036 | .222 |
| New Hampshire | 13.3 | 1,116 | 1.194 |
| New Jersey | 0 | 4,210 | 0 |
| New Mexico | 0 | 10,630 | 0 |
| New York | 0 | 10,261 | 0 |
| North Carolina | 49.9 | 12,679 | .394 |
| North Dakota | .2 | 16,541 | .001 |
| Ohio | 24.2 | 21,067 | .115 |
| Oklahoma | 27.3 | 18,143 | .666 |
| Oregon | 108.4 | 12,956 | .837 |
| Pennsylvania | 0 | 15,088 | 0 |
| Rhode Island | 0 | 336 | 0 |
| South Carolina | 140.6 | 4,751 | 2.959 |
| South Dakota | .2 | 17,139 | .001 |
| Tennessee | 3.6 | 13,066 | .027 |
| Texas | 47.3 | 64,146 | .074 |
| Utah | 0 | 5,685 | 0 |
| Vermont | 4.7 | 1,906 | .245 |
| Virginia | 70.8 | 11,506 | .615 |
| Washington | 611.5 | 14,370 | 4.256 |
| West Virginia | 0 | 2,638 | 0 |
| Wisconsin | 10.2 | 16,678 | .061 |
| Wyoming | 3.0 | 5,871 | .052 |
| United States[2] | 2,606.6[1] | 725,711[1] | .359 |

NA = Not available. [1] The USDA national survey of farmers and ranchers who provide estimates of farmland values historically has not included Alaska and Hawaii. Alaska had no farm real estate owned by life insurance companies in 1994 while Hawaii had $9.571 million in such holdings. The 1992 U.S. Census of Agriculture reported a value of farmland and buildings for Hawaii of $3,853.6 million in 1992 making the life insurance company holdings about 0.25 percent of the total. [2] 48 States. Alaska and Hawaii not included. Sources: American Council of Life Insurance, *Life Insurance Fact Book,* Washington, DC, 1995. U.S. Department of Agriculture, Economic Research Service, Agricultural Land Values Data Series. U.S. Deparment of Commerce, Bureau of the Census. *1992 Census of Agriculture*, Vol. 1, Geographic Area Series, Part 51, Unites States: Summary and State Data.

secondary mortgage market for certain high-quality agricultural real estate loans, including rural housing mortgages modeled after the secondary market for home mortgages. In a secondary market, lenders sell mortgages to poolers who, in turn, bundle the mortgages and then sell securities backed by those mortgages to investors (Wright, 1992). Farmer Mac's initial sale of stock was bought by commercial banks, the FCS, life insurance companies, investment bankers, and other financial institutions.

Farmer Mac guarantees investors repayment on the securities but is not responsible for assembling the mortgage pools or issuing securities. As originally conceived, lenders would sell qualifying loans to a certified agricultural mortgage facility, or loan pooler, thereby providing liquidity to lenders and allowing lenders to earn loan origination and serving fees. Farmer Mac was to provide lenders with the means to provide farmers and rural residents with lower cost, fixed-rate real estate financing. In the market, a pooler packages loans in various forms and sells securities that are backed by, or represent interests in, the pooled loans. Farmer Mac's enhancement to the secondary market is its guarantee of the timely repayment of principal and interest on the loan pool payout.

Under broad statutory guidelines, Farmer Mac developed underwriting and pooling standards and the secondary market became operational in October 1989. Generally, the standard disallowed loans of less than average creditworthiness from being pooled and required the loan pools to be diversified across commodities and geographic regions. Also, to further safeguard against loss to the U.S. Treasury, Congress required that the first 10 percent of principal loss in the loan pools be absorbed by market participants, before Farmer Mac's guarantee was called upon. (Farmer Mac guarantees 90 percent of the mortgage principal and, hence, its liability occurs only when principal losses exceed 10 percent.) This 10-percent reserve of the loan retained by the originator or pooler is referred to as the subordinated participation interest (SPI).

In 1990, Congress gave Farmer Mac the authority to pool the USDA guaranteed portion of farm loans and certain rural development loans. This market became known as Farmer Mac II, whereas the private mortgage market became known as Farmer Mac I.[18] Later in 1991, Congress gave Farmer Mac the authority to operate a Linked Portfolio Strategy. This financing method allowed Farmer Mac to issue securities for the first time in an attempt to improve the rate of return for participating lenders and, therefore, make it more competitive.

## Life Insurance Companies Active in the Market

Despite its initial promise, Farmer Mac I has floundered since its beginning and by 1995 it became apparent that the market, as originally structured, was not viable. Farmer Mac has never reported a profit and by mid-1995 had consumed about half of its startup capital of $22 million. Frequently cited explanations for Farmer Mac's poor performance have been the 10-percent SPI requirement, unfavorable bank regulatory rulings, ample farm lending capacity, weak demand for fixed-rate financing, and Farmer Mac's reliance on poolers to develop and promote the market (Hiemstra and others, 1988; Koenig and Ryan, 1992).

Life insurance participation has been key to Farmer Mac's limited success. Life insurance companies have accounted for much of the $827 million of loan principal pooled under Farmer Mac I. Six of the seven loan pools guaranteed through June 30, 1995, involved a life insurance company as either an originator, pooler, or both (table 16). Only a pool assembled by the Western Farm Credit Bank did not involve a life insurance company in some aspect. Also, five of the original nine poolers certified by Farmer Mac were affiliated with life insurance companies. The loan pools assembled with life insurance company loans are reflective of the industry's agricultural lending, which specializes in larger loans with short maturities or balloon payments.

But the strong life insurance company participation in Farmer Mac is somewhat misleading. Much of the loan volume pooled by life insurance companies came from existing loans that were packaged together and securitized. Only two pools contained loans that were specifically originated for sale into the market. Also, the pool formed by Prudential Securities was formed with the remaining principal balance of its first pool and so this last loan pool was really a reissue. Finally, four of the six life insurance pools were private placements where the pooler retained ownership of the guaranteed securities.

[18] Farmer Mac I refers to the market pertaining to the pooling of private sector farm mortgage loans and selling the securities backed by those mortgages to investors. Under the Farmer Mac II program, lenders sell the USDA-guaranteed portion of operating loans (OL) or farm ownership (FO) loans with maturities of 1 year or more (Farmer Mac serves as the pooler for this market). Lenders swap these loans for a marketable security or sell them for cash.

**Table 16--Characteristics of Farmer Mac I loan pools**

| Pooler | Guarantee date | Loans | Total principal | Average loan size | Average interest rate | Average maturity date |
|---|---|---|---|---|---|---|
| | | *Number* | *Dollars* | | *Percent* | |
| John Hancock Mutual Life Insurance Company | 12/91 | 512 | 112,287,347 | 219,311 | 9.810 | 1/11/96 |
| Chemical Securities, Inc. | 5/92 | 790 | 233,389,529 | 296,143 | 10.030 | 10/27/96 |
| Prudential Agricultural Credit, Inc. | 6/92 | 603 | 237,928,363 | 394,574 | 10.260 | 10/10/99 |
| Equitable Agri-Business, Inc | 10/92 | 374 | 97,677,004 | 311,073 | 10.050 | 5/1/98 |
| Prudential Securities and Equitable Agri-Business | 8/94 | 92 | 33,726,095 | 366,588 | 9.380 | 7/15/08 |
| Western Farm Credit Bank | 2/95 | 166 | 71,343,669 | 429,781 | 8.165 | 7/1/13 |
| Prudential Securities and Equitable Agri-Business[1] | 5/95 | 115 | 41,221,940 | 358,452 | 9.610 | 7/15/08 |

[1] The pool included the loans in the pool previously securitized by Prudential Securities and Equitable Agri-Business in August 1994.
Source: Federal Agricultural Mortgage Corporation.

### Future Participation Is Uncertain

Life insurance company experimentation with Farmer Mac may be over. Of the nine poolers certified to participate, six have been decertified by Farmer Mac for lack of participation and only one life insurance company affiliate remains, Prudential Securities. John Hancock, which assembled the first pool, was decertified as a pooler and is no longer active in traditional farm mortgage lending. Equitable Agri-Business was decertified as a pooler, but is assembling loan pools and providing loan servicing for Prudential Securities. Prudential Agricultural Credit, The Travelers Real Estate Investments, and Chemical Securities, which had securitized an early pool of Travelers mortgages, were also decertified because of inactivity or lack of interest.

Travelers and Prudential Securities ran much publicized Farmer Mac loan purchase programs available to all lenders beginning in 1993. Under these "open pooling programs," the poolers purchased new loans, primarily from banks, that adhered to Farmer Mac underwriting standards and had uniform interest rate structures. Instead of selling, Travelers elected to hold all of the loans it purchased in its portfolio and Prudential Securities has indicated it will no longer pool loans. Therefore, after mid-1995 no life insurance company is active in Farmer Mac. Two regional Farm Credit System Banks, AgFirst Farm Credit Bank and the Western Farm Credit Bank, remain as poolers. Neither bank has an operational open-window pooling program.

Without a change in market conditions or a change in Farmer Mac's secondary market authority, further life insurance company participation in Farmer Mac seems unlikely. The biggest originator of farm mortgages among life insurance companies, Metropolitan, never embraced the Farmer Mac secondary market. Farmer Mac's fate, and future life insurance participation, will likely hinge on its legislative agenda.

In early 1995, facing new capital standards in 1997 that it will likely fail to meet, administrators of Farmer Mac proposed changes to its charter. Among the more important changes proposed in legislation were new authorities to pool loans and hold them in portfolio, removal of the 10-percent SPI for loans and pools, relaxed capital standards, and the elimination of loan pool diversification standards. If passed, Farmer Mac would have a charter similar to the Federal National Mortgage Association or Fannie Mae. Life insurance companies might then elect to utilize Farmer Mac once again as originators or servicers, but not as loan poolers.

## Role of Credit in Inducing the 1970's Farmland Price Boom

A number of questions have been raised about the role of credit and whether easy credit from farm mortgage lenders, particularly the life insurance companies, FCS, and FmHA, helped spur the 1970's farmland price boom. The factors influencing the

supply and demand of agricultural mortgage credit, farmland markets, and their interrelationship are complex. Credit is only one of numerous variables possibly influencing farmland prices. Researchers' views of credit's significance range from credit as a benign facilitator of economic change to credit as an input carrying much associated risk and as a causal influence on land values.

The 1970-82 U.S. per-acre farmland value increase of 319.9 percent to a peak level compares with a 1970-82 increase in total farm real estate loans of 265.1 percent. Farm mortgage loans of life insurance companies increased 128.2 percent, FCS farm real estate loans grew 569.3 percent, and the subsidized real estate loans of FmHA were up 275.8 percent. These increases are viewed by some as evidence that farm mortgage credit had been too easy to obtain. The opposing perspective, however, is that lenders and farmers made rational decisions on the use of credit after 1970 based on the prevailing market forces. Their view is that problems arose when market fundamentals changed radically in the late 1970's and early 1980's.

The agricultural finance literature contains an impressive list of factors that help determine farmland values. However, the list of price determinants from these studies is so long that it is evident why it is difficult to sort out the impacts of financial variables, such as credit, debt, interest rates, and related variables in determining farmland values. The remarkable feature about these studies is their lack of consensus. At the individual study level, the work seems to be quite encouraging. Agricultural economists have tended to develop farmland value models that, for a given study and data set, always seem to be able to "predict" or are deemed successful by the authors. But even though many of the land value models appear to work on the data at hand, they fail when applied to a different data set or using the same variables for a different time period.

Speculative or rational bubbles are another factor that can influence farmland values. A speculative bubble is an overreaction to current price information. Several studies have been conducted to see if the 1970's farmland price boom resulted from such a bubble. The empirical questions concerning the existence of speculative bubbles remain to be solved. Research on farmland investment decisions based on market fundamentals and the possibility of speculative bubbles demonstrates little consensus.

The research to date concerning the role of credit in the 1970's farmland price boom is also inconclusive. Credit is only one factor influencing farmland values and it is difficult to isolate a single variable. It appears that credit is more than a benign facilitator, but definitive conclusions are difficult. Critics of the actions of the farm mortgage lenders maintain that their extension of excess credit with generous terms fueled higher land prices than market fundamentals justified. Their defenders, however, say that lenders extended credit to willing borrowers under a rational economic scenario that included both current and capital gains from farmland. Lenders were just responding to a shift in credit demand.

The relationship between mortgage credit and farmland values is extremely complex. Even in the narrowest sense, the demand for mortgage credit to finance farmland as a productive asset is a derived demand conditional on the demand for farmland and all other inputs and output supply. Such credit is used as a means of obtaining control of land as an asset, but farmland has a number of other resource uses. Thus, it has been very difficult to isolate the effects of mortgage credit use on farmland values. Many farmland value studies fail to recognize that farm income may not be adequate to explain agricultural land's market value. Additional problems in conducting predictive farmland value research include a heavy emphasis on export analysis of secondary data using formal frameworks. Attempts to replicate results of earlier land value studies have concluded that such models did not accurately reflect the relevant structural changes and other characteristics of the farmland market.

## Conclusions and Implications

One of the largest agricultural boom-and-bust cycles in U.S. history occurred in the 1970's and 1980's when a combination of forces placed the agricultural sector on an economic roller coaster. In the boom period, borrowing and land values increased rapidly, but problems ensued during the 1980's bust period. Insurance companies experienced greater financial stress, by some measures, in their farm mortgage loan portfolios than either the FCS or commercial banks. Delinquency rates on the volume of life insurance farm mortgage loans jumped from 1.5 percent at the beginning of 1980 to 19.9 percent at midyear 1986. Foreclosure rates peaked at 8.2 percent of the outstanding loan dollar volume in 1986 and the market value of property acquired through foreclosure

reached $1.6 billion in 1987, or 15 percent of the industry's outstanding loan volume.

The farm financial problems of the 1980's and the advent of the Farmer Mac secondary market for farm mortgage loans have had a strong impact on life insurance company lending to agriculture. As a result of high loan losses, five companies with small- to medium-sized loan portfolios terminated their farm lending operations. Departing companies had some of the most distressed loan portfolios in the industry. Farm mortgage lending declined sharply during the 1980's, with the value of farm mortgages held by the industry falling more than 20 percent from its peak.

The seven companies that are currently active in farm lending now account for about 80 percent of the insurance industry's farm mortgages and generally have both high total assets and large farm mortgage portfolios. They have virtually pulled out of the small- to medium-sized farm mortgage market in favor of more agribusiness, timber, and specialty enterprises. Life insurance companies are emphasizing larger ($500,000 or more) agricultural loans. These new policies have shifted life insurance lending away from the Midwest and toward the Southeast, Delta, and West Coast regions.

The life insurance industry was the leader in using the troubled Farmer Mac secondary market for farm mortgages. Life insurance companies' limited activity in Farmer Mac occurred at a time when the industry was downsizing traditional farm lending in favor of agribusiness and timber investments. However, after participating in all but one of the seven Farmer Mac loan pools as originators, poolers, or both, life insurance companies one by one withdrew their participation in Farmer Mac. Without a major participant, the secondary market is struggling to survive and is seeking legislation to expand its charter.

Life insurance companies maintained market share of farm real estate debt in face of the farm sector financial problems of the 1980's. They held 13.3 percent of the debt in 1980 and 12.9 percent in 1990. Their 1994 portfolio of $9.6 billion compares with the all-time high of $13.1 billion in 1981. The 1994 11.5-percent market share compares with a high of 25.1 percent held in 1955-56 and 12 percent in 1910 (the beginning of the USDA data series).

The life insurance companies and the FCS have a long history of competition for real estate loans with the lead in market share seesawing back and forth. The decline in the market share of life insurance companies since the late 1960's has been a subject of considerable debate. Many factors contributed to the rapid growth in the FCS market share. One key element often cited in the literature is the Farm Credit Act of 1971 (P.L. 92-181), which tended to raise farmland appraisal values to near market values and increased the permitted loan-to-security ratio from 65 percent to 85 percent.

In normal times, the FCS is viewed to have a lower cost of funds than other institutions that raise funds in the national money markets. In contrast, life insurance company farm mortgage loan departments face internal competition from other investment alternatives. The FCS does not have to compete with internal nonagricultural demands for funds. The historic tax advantage held by the FCS may have helped it acquire farm mortgage loan market share. The FCS historically has had the justifiable reputation of a single-purpose, highly competitive, low-cost lender although some observers dispute this claim.

The financial performance of the life insurance company and FCS farm mortgage portfolios and, hence, market shares were greatly affected by the farmland boom and bust cycle occurring after 1970. Much interest stemmed from the sheer size of the credit flows associated with the large changes in farmland value. The literature on farmland value determinants includes many factors that help determine farmland values, but it is difficult to sort out the impacts of financial variables, such as credit, debt, and interest rates in determining farmland prices, and the studies lack consensus.

The evidence indicates that the life insurance companies played a much lesser role in funding the 1970's farmland boom than did the FCS. Life insurance companies conducted much more restrained policies and were slow to pursue large loan increases early in the boom in large part because they had fewer funds to lend to agriculture.

The average size of farm real estate loans held by life insurance companies historically has been larger than those held by the FCS. To reduce costs, life insurance companies prefer large loans that are well secured and are intermediate- to long-term in maturity. The overhead and servicing costs of a large loan are not that much different than a smaller loan. In contrast, the FCS is a farmer-owned cooperative that serves all sizes of farms. In 1975, the average farm mortgage loan size for life insurance companies was 1.67 times that of the FCS. This increased to 6.49 in 1994. The life insurance companies, with

their increased emphasis on large loans, have vastly outpaced the FCS in average loan size growth. In 1994, the average life insurance company farm mortgage loan was $556,459, an increase of 298.2 percent from 1980. In recent years, more emphasis has been placed on agribusiness and commercial timber lending (classified as agricultural loans) and less on conventional farm lending. Companies also now have more stringent lending standards than before the mid-1980's.

The life insurance industry now has a more complicated relationship with agriculture than existed prior to the farm financial crisis of the 1980's. Seven major companies continue to offer farm mortgage loans, and such loans held by all companies in the industry total $9.6 billion. The industry also now holds $2.6 billion in direct farmland investment, up almost tenfold since 1979. The creation of the Farmer Mac secondary market added to the range of activities vis-a-vis agriculture. It appears that the life insurance industry has weathered the farm financial crisis of the 1980's as well as other subsequent market changes and will continue to serve U.S. agriculture.

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**Appendix table 1--Total real estate farm debt (including operator households) by lender, December 31, 1910-94**

| Year | Farm Credit System[1] | Farm Service Agency[2] | Life insurance companies | Commercial banks[3] | Individuals and others | CCC storage and drying facilities | Total |
|---|---|---|---|---|---|---|---|
| | | | | *Million dollars* | | | |
| 1910 | NA | NA | 423 | 478 | 2,621 | NA | 3,522 |
| 1911 | NA | NA | 480 | 580 | 2,870 | NA | 3,930 |
| 1912 | NA | NA | 550 | 674 | 3,124 | NA | 4,348 |
| 1913 | NA | NA | 597 | 724 | 3,386 | NA | 4,707 |
| 1914 | NA | NA | 670 | 746 | 3,575 | NA | 4,991 |
| 1915 | NA | NA | 766 | 776 | 3,715 | NA | 5,256 |
| 1916 | NA | NA | 861 | 934 | 4,031 | NA | 5,826 |
| 1917 | 41 | NA | 956 | 1,008 | 4,532 | NA | 6,537 |
| 1918 | 165 | NA | 1,018 | 1,030 | 4,924 | NA | 7,137 |
| 1919 | 354 | NA | 975 | 1,204 | 5,916 | NA | 8,449 |
| 1920 | 428 | NA | 1,206 | 1,447 | 7,140 | NA | 10,221 |
| 1921 | 518 | NA | 1,432 | 1,540 | 7,212 | NA | 10,702 |
| 1922 | 858 | NA | 1,556 | 1,506 | 6,865 | NA | 10,786 |
| 1923 | 1,190 | NA | 1,792 | 1,388 | 6,294 | NA | 10,665 |
| 1924 | 1,370 | NA | 1,943 | 1,200 | 5,400 | NA | 9,913 |
| 1925 | 1,544 | NA | 2,030 | 1,178 | 4,960 | NA | 9,713 |
| 1926 | 1,701 | NA | 2,214 | 1,144 | 4,690 | NA | 9,658 |
| 1927 | 1,815 | NA | 2,173 | 1,097 | 4,672 | NA | 9,757 |
| 1928 | 1,839 | NA | 2,139 | 1,047 | 4,732 | NA | 9,757 |
| 1929 | 1,840 | NA | 2,118 | 997 | 4,675 | NA | 9,631 |
| 1930 | 1,803 | NA | 2,087 | 947 | 4,561 | NA | 9,389 |
| 1931 | 1,733 | NA | 2,037 | 940 | 4,384 | NA | 9,094 |
| 1932 | 1,622 | NA | 1,898 | 889 | 4,057 | NA | 8,466 |
| 1933 | 1,741 | NA | 1,698 | 711 | 3,536 | NA | 7,685 |
| 1934 | 2,842 | NA | 1,302 | 499 | 2,943 | NA | 7,584 |
| 1935 | 3,108 | NA | 1,112 | 488 | 2,715 | NA | 7,423 |
| 1936 | 3,152 | NA | 1,015 | 488 | 2,499 | NA | 7,154 |
| 1937 | 3,084 | NA | 989 | 501 | 2,381 | NA | 6,955 |
| 1938 | 2,978 | 10 | 983 | 519 | 2,289 | NA | 6,779 |
| 1939 | 2,815 | 32 | 984 | 534 | 2,221 | NA | 6,586 |
| 1940 | 2,716 | 66 | 1,016 | 543 | 2,152 | NA | 6,493 |
| 1941 | 2,572 | 116 | 1,063 | 535 | 2,090 | NA | 6,376 |
| 1942 | 2,299 | 159 | 1,043 | 477 | 1,979 | NA | 5,957 |
| 1943 | 1,893 | 174 | 987 | 448 | 1,894 | NA | 5,396 |
| 1944 | 1,562 | 196 | 938 | 450 | 1,795 | NA | 4,941 |
| 1945 | 1,322 | 184 | 891 | 507 | 1,856 | NA | 4,760 |
| 1946 | 1,125 | 192 | 889 | 683 | 2,008 | NA | 4,897 |
| 1947 | 997 | 198 | 960 | 841 | 2,069 | NA | 5,065 |
| 1948 | 947 | 197 | 1,036 | 898 | 2,211 | NA | 5,289 |
| 1949 | 965 | 202 | 1,172 | 932 | 2,308 | 7 | 5,586 |
| 1950 | 991 | 257 | 1,353 | 986 | 2,526 | 18 | 6,131 |
| 1951 | 1,027 | 291 | 1,542 | 1,017 | 2,786 | 26 | 6,689 |
| 1952 | 1,095 | 330 | 1,716 | 1,069 | 3,030 | 28 | 7,268 |
| 1953 | 1,187 | 352 | 1,893 | 1,092 | 3,216 | 29 | 7,769 |
| 1954 | 1,280 | 378 | 2,052 | 1,161 | 3,374 | 41 | 8,286 |
| 1955 | 1,480 | 413 | 2,272 | 1,275 | 3,572 | 37 | 9,049 |
| 1956 | 1,722 | 463 | 2,477 | 1,298 | 3,862 | 29 | 9,851 |
| 1957 | 1,897 | 541 | 2,579 | 1,316 | 4,050 | 25 | 10,408 |
| 1958 | 2,065 | 608 | 2,661 | 1,408 | 4,349 | 31 | 11,122 |
| 1959 | 2,335 | 676 | 2,820 | 1,523 | 4,728 | 44 | 12,126 |

Continued--

**Appendix table 1--Total real estate farm debt (including operator households) by lender, December 31, 1910-94--continued**

| Year | Farm Credit System[1] | Farm Service Agency[2] | Life insurance companies | Commercial banks[3] | Individuals and others | CCC storage and drying facilities | Total |
|---|---|---|---|---|---|---|---|
| | | | | *Million dollars* | | | |
| 1960 | 2,539 | 723 | 2,975 | 1,592 | 4,992 | 48 | 12,868 |
| 1961 | 2,803 | 948 | 3,162 | 1,639 | 5,345 | 69 | 13,966 |
| 1962 | 3,024 | 1,058 | 3,391 | 1,870 | 5,824 | 74 | 15,242 |
| 1963 | 3,282 | 1,171 | 3,781 | 2,137 | 6,433 | 60 | 16,863 |
| 1964 | 3,687 | 1,285 | 4,288 | 2,417 | 7,218 | 44 | 18,938 |
| 1965 | 4,240 | 1,497 | 4,802 | 2,607 | 8,040 | 34 | 21,221 |
| 1966 | 4,915 | 1,663 | 5,214 | 2,770 | 8,516 | 32 | 23,110 |
| 1967 | 5,563 | 1,847 | 5,540 | 3,061 | 9,135 | 61 | 25,207 |
| 1968 | 6,081 | 2,058 | 5,764 | 3,333 | 10,165 | 147 | 27,548 |
| 1969 | 6,671 | 2,280 | 5,734 | 3,545 | 10,953 | 170 | 29,353 |
| 1970 | 7,145 | 2,440 | 5,610 | 3,772 | 11,378 | 146 | 30,492 |
| 1971 | 7,880 | 2,618 | 5,564 | 4,218 | 11,911 | 190 | 32,381 |
| 1972 | 9,050 | 2,835 | 5,643 | 4,792 | 12,774 | 266 | 35,361 |
| 1973 | 10,901 | 3,013 | 5,965 | 5,458 | 14,190 | 278 | 39,806 |
| 1974 | 13,470 | 3,215 | 6,297 | 5,966 | 15,757 | 217 | 44,922 |
| 1975 | 16,029 | 3,369 | 6,726 | 6,296 | 17,262 | 170 | 49,853 |
| 1976 | 18,565 | 3,657 | 7,400 | 6,781 | 18,864 | 144 | 55,412 |
| 1977 | 21,541 | 3,982 | 8,819 | 7,780 | 21,335 | 492 | 63,949 |
| 1978 | 24,816 | 4,120 | 10,478 | 8,557 | 23,638 | 1,148 | 72,756 |
| 1979 | 29,820 | 6,875 | 12,165 | 8,623 | 27,880 | 1,391 | 86,755 |
| 1980 | 36,196 | 8,163 | 12,928 | 8,571 | 30,180 | 1,456 | 97,495 |
| 1981 | 43,825 | 8,977 | 13,074 | 8,349 | 31,770 | 1,342 | 107,237 |
| 1982 | 47,822 | 9,170 | 12,802 | 8,392 | 32,000 | 1,127 | 111,313 |
| 1983 | 48,929 | 9,550 | 12,718 | 9,317 | 32,320 | 888 | 113,722 |
| 1984 | 49,078 | 10,073 | 12,443 | 10,186 | 29,900 | 623 | 112,303 |
| 1985 | 44,584 | 10,427 | 11,836 | 11,385 | 27,200 | 307 | 105,739 |
| 1986 | 37,758 | 10,349 | 10,940 | 12,711 | 24,000 | 123 | 95,881 |
| 1987 | 32,638 | 10,083 | 9,896 | 14,455 | 20,600 | 46 | 87,718 |
| 1988 | 30,327 | 9,607 | 9,582 | 15,417 | 18,000 | 21 | 82,953 |
| 1989 | 28,507 | 8,720 | 9,598 | 16,646 | 17,000 | 12 | 80,482 |
| 1990 | 27,390 | 8,093 | 10,186 | 17,227 | 16,000 | 7 | 78,903 |
| 1991 | 26,760 | 7,462 | 10,029 | 18,437 | 16,612 | 4 | 79,305 |
| 1992 | 26,886 | 6,780 | 9,208 | 19,863 | 17,681 | 2 | 80,420 |
| 1993 | 26,460 | 6,216 | 9,469 | 20,848 | 18,200 | 0 | 81,194 |
| 1994 | 26,300 | 5,853 | 9,563 | 22,555 | 18,700 | 0 | 82,971 |

NA = Not applicable because no program existed.

[1] Federal Land Banks debt prior to 1988. Includes loans of the Federal Farm Mortgage Corporation, 1935-55, and Joint-Stock Land Banks, 1917-50. Federal Farm Mortgage Corporation loans were $713 million or 10.8 percent of the total farm mortgage debt in 1940 and Joint Stock Land Bank loans were $638 million or 6.6 percent of the total farm mortgage debt in 1930.

[2] Farmers Home Administration prior to 1994. The origins of Farmers Home Administration go back to Executive Order 7072 signed April 30, 1935 creating the Resettlement Administration as an independent agency. Farm loans originated with the Bankhead-Jones Farm Tenant Act of July 22, 1937.

[3] Before 1935, open State and national banks; 1935-47, insured commercial banks; and 1948 to date, all operating commercial and savings banks.

Sources: U.S. Department of Agriculture, Economic Research Service, *Agricultural Finance Statistics,* AFS-3, July 1976; U.S. Department of Agriculture, Economic Research Service, *Agricultural Finance Statistics, 1960-83,* Stat. Bul. No. 706, April 1984; U.S. Department of Agriculture, Economic Research Service, *Economic Indicators of the Farm Sector; National Financial Summary,* ECIFS, various issues and U.S. Department of Agriculture, Economic Research Service, *Agricultural Income and Finance: Situation and Outlook Report,* various issues.

**Appendix table 2--Distribution of real estate farm debt (including operator households) by lender, December 31, 1910-94**

| Year | Life insurance companies | Farm Credit System[1] | Commercial banks[2] | Farm Service Agency[3] | Individuals and others | CCC storage and drying | Total loans |
|---|---|---|---|---|---|---|---|
| | | | | *Percent* | | | |
| 1910 | 12.0 | NA | 13.6 | NA | 74.4 | NA | 100.0 |
| 1911 | 12.2 | NA | 14.8 | NA | 73.0 | NA | 100.0 |
| 1912 | 12.6 | NA | 15.5 | NA | 71.8 | NA | 100.0 |
| 1913 | 12.7 | NA | 15.4 | NA | 71.9 | NA | 100.0 |
| 1914 | 13.4 | NA | 14.9 | NA | 71.6 | NA | 100.0 |
| 1915 | 14.6 | NA | 14.8 | NA | 70.7 | NA | 100.0 |
| 1916 | 14.8 | NA | 16.0 | NA | 69.2 | NA | 100.0 |
| 1917 | 14.6 | 0.6 | 15.4 | NA | 69.3 | NA | 100.0 |
| 1918 | 14.3 | 2.3 | 14.4 | NA | 69.0 | NA | 100.0 |
| 1919 | 11.5 | 4.2 | 14.3 | NA | 70.0 | NA | 100.0 |
| 1920 | 11.8 | 4.2 | 14.2 | NA | 69.9 | NA | 100.0 |
| 1921 | 13.4 | 4.8 | 14.4 | NA | 67.4 | NA | 100.0 |
| 1922 | 14.4 | 8.0 | 14.0 | NA | 63.6 | NA | 100.0 |
| 1923 | 16.8 | 11.2 | 13.0 | NA | 59.0 | NA | 100.0 |
| 1924 | 19.6 | 13.8 | 12.1 | NA | 54.5 | NA | 100.0 |
| 1925 | 20.9 | 15.9 | 12.1 | NA | 51.1 | NA | 100.0 |
| 1926 | 22.0 | 17.6 | 11.8 | NA | 48.6 | NA | 100.0 |
| 1927 | 22.3 | 18.6 | 11.2 | NA | 47.9 | NA | 100.0 |
| 1928 | 21.9 | 18.8 | 10.7 | NA | 48.5 | NA | 100.0 |
| 1929 | 22.0 | 19.1 | 10.4 | NA | 48.5 | NA | 100.0 |
| 1930 | 22.2 | 19.2 | 10.1 | NA | 48.6 | NA | 100.0 |
| 1931 | 22.4 | 19.1 | 10.3 | NA | 48.2 | NA | 100.0 |
| 1932 | 22.4 | 19.2 | 10.5 | NA | 47.9 | NA | 100.0 |
| 1933 | 22.1 | 22.7 | 9.3 | NA | 46.0 | NA | 100.0 |
| 1934 | 17.2 | 37.5 | 6.6 | NA | 38.8 | NA | 100.0 |
| 1935 | 15.0 | 41.9 | 6.6 | NA | 36.6 | NA | 100.0 |
| 1936 | 14.2 | 44.1 | 6.8 | NA | 34.9 | NA | 100.0 |
| 1937 | 14.2 | 44.3 | 7.2 | NA | 34.2 | NA | 100.0 |
| 1938 | 14.5 | 43.9 | 7.7 | 0.1 | 33.8 | NA | 100.0 |
| 1939 | 14.9 | 42.7 | 8.1 | 0.5 | 33.7 | NA | 100.0 |
| 1940 | 15.6 | 41.8 | 8.4 | 1.0 | 33.1 | NA | 100.0 |
| 1941 | 16.7 | 40.3 | 8.4 | 1.8 | 32.8 | NA | 100.0 |
| 1942 | 17.5 | 38.6 | 8.0 | 2.7 | 33.2 | NA | 100.0 |
| 1943 | 18.3 | 35.1 | 8.3 | 3.2 | 35.1 | NA | 100.0 |
| 1944 | 19.0 | 31.6 | 9.1 | 4.0 | 36.3 | NA | 100.0 |
| 1945 | 18.7 | 27.8 | 10.7 | 3.9 | 39.0 | NA | 100.0 |
| 1946 | 18.2 | 23.0 | 13.9 | 3.9 | 41.0 | NA | 100.0 |
| 1947 | 19.0 | 19.7 | 16.6 | 3.9 | 40.8 | NA | 100.0 |
| 1948 | 19.6 | 17.9 | 17.0 | 3.7 | 41.8 | NA | 100.0 |
| 1949 | 21.0 | 17.3 | 16.7 | 3.6 | 41.3 | 0.1 | 100.0 |
| 1950 | 22.1 | 16.2 | 16.1 | 4.2 | 41.2 | 0.3 | 100.0 |
| 1951 | 23.1 | 15.4 | 15.2 | 4.4 | 41.7 | 0.4 | 100.0 |
| 1952 | 23.6 | 15.1 | 14.7 | 4.5 | 41.7 | 0.4 | 100.0 |
| 1953 | 24.4 | 15.3 | 14.1 | 4.5 | 41.4 | 0.4 | 100.0 |
| 1954 | 24.8 | 15.4 | 14.0 | 4.6 | 40.7 | 0.5 | 100.0 |
| 1955 | 25.1 | 16.4 | 14.1 | 4.6 | 39.5 | 0.4 | 100.0 |
| 1956 | 25.1 | 17.5 | 13.2 | 4.7 | 39.2 | 0.3 | 100.0 |
| 1957 | 24.8 | 18.2 | 12.6 | 5.2 | 38.9 | 0.2 | 100.0 |
| 1958 | 23.9 | 18.6 | 12.7 | 5.5 | 39.1 | 0.3 | 100.0 |
| 1959 | 23.3 | 19.3 | 12.6 | 5.6 | 39.0 | 0.4 | 100.0 |
| 1960 | 23.1 | 19.7 | 12.4 | 5.6 | 38.8 | 0.4 | 100.0 |
| 1961 | 22.6 | 20.1 | 11.7 | 6.8 | 38.3 | 0.5 | 100.0 |

Continued--

**Appendix table 2--Distribution of real estate farm debt (including operator households) by lender, December 31, 1910-94--continued**

| Year | Life insurance companies | Farm Credit System[1] | Commercial banks[2] | Farm Service Agency[3] | Individuals and others | CCC storage and drying | Total loans |
|---|---|---|---|---|---|---|---|
| | | | | *Percent* | | | |
| 1962 | 22.2 | 19.8 | 12.3 | 6.9 | 38.2 | 0.5 | 100.0 |
| 1963 | 22.4 | 19.5 | 12.7 | 6.9 | 38.1 | 0.4 | 100.0 |
| 1964 | 22.6 | 19.5 | 12.8 | 6.8 | 38.1 | 0.2 | 100.0 |
| 1965 | 22.6 | 20.0 | 12.3 | 7.1 | 37.9 | 0.2 | 100.0 |
| 1966 | 22.6 | 21.3 | 12.0 | 7.2 | 36.9 | 0.1 | 100.0 |
| 1967 | 22.0 | 22.1 | 12.1 | 7.3 | 36.2 | 0.2 | 100.0 |
| 1968 | 20.9 | 22.1 | 12.1 | 7.5 | 36.9 | 0.5 | 100.0 |
| 1969 | 19.5 | 22.7 | 12.1 | 7.8 | 37.3 | 0.6 | 100.0 |
| 1970 | 18.4 | 23.4 | 12.4 | 8.0 | 37.3 | 0.5 | 100.0 |
| 1971 | 17.2 | 24.3 | 13.0 | 8.1 | 36.8 | 0.6 | 100.0 |
| 1972 | 16.0 | 25.6 | 13.6 | 8.0 | 36.1 | 0.8 | 100.0 |
| 1973 | 15.0 | 27.4 | 13.7 | 7.6 | 35.6 | 0.7 | 100.0 |
| 1974 | 14.0 | 30.0 | 13.3 | 7.2 | 35.1 | 0.5 | 100.0 |
| 1975 | 13.5 | 32.2 | 12.6 | 6.8 | 34.6 | 0.3 | 100.0 |
| 1976 | 13.4 | 33.5 | 12.2 | 6.6 | 34.0 | 0.3 | 100.0 |
| 1977 | 13.8 | 33.7 | 12.2 | 6.2 | 33.4 | 0.8 | 100.0 |
| 1978 | 14.4 | 34.1 | 11.8 | 5.7 | 32.5 | 1.6 | 100.0 |
| 1979 | 14.0 | 34.4 | 9.9 | 7.9 | 32.1 | 1.6 | 100.0 |
| 1980 | 13.3 | 37.1 | 8.8 | 8.4 | 31.0 | 1.5 | 100.0 |
| 1981 | 12.2 | 40.9 | 7.8 | 8.3 | 29.6 | 1.3 | 100.0 |
| 1982 | 11.5 | 43.0 | 7.5 | 8.2 | 28.7 | 1.0 | 100.0 |
| 1983 | 11.2 | 43.0 | 8.2 | 8.4 | 28.4 | 0.8 | 100.0 |
| 1984 | 11.1 | 43.7 | 9.1 | 9.0 | 26.6 | 0.6 | 100.0 |
| 1985 | 11.2 | 42.2 | 10.8 | 9.9 | 25.7 | 0.3 | 100.0 |
| 1986 | 11.4 | 39.4 | 13.3 | 10.8 | 25.0 | 0.1 | 100.0 |
| 1987 | 11.3 | 37.2 | 16.5 | 11.5 | 23.5 | 0.1 | 100.0 |
| 1988 | 11.6 | 36.6 | 18.6 | 11.6 | 21.7 | -- | 100.0 |
| 1989 | 11.9 | 35.4 | 20.7 | 10.8 | 21.1 | -- | 100.0 |
| 1990 | 12.9 | 34.7 | 21.8 | 10.3 | 20.3 | -- | 100.0 |
| 1991 | 12.6 | 33.7 | 23.2 | 9.4 | 20.9 | -- | 100.0 |
| 1992 | 11.4 | 33.4 | 24.7 | 8.4 | 22.0 | -- | 100.0 |
| 1993 | 11.7 | 32.6 | 25.7 | 7.7 | 22.4 | 0 | 100.0 |
| 1994 | 11.5 | 31.7 | 27.2 | 7.1 | 22.5 | 0 | 100.0 |

NA = Not applicable because no program existed.

[1] Federal Land Banks debt prior to 1988. Includes loans of the Federal Farm Mortgages Corporation, 1935-55, and Joint-Stock Land Banks, 1917-50. Federal Farm Mortgage Corporation loans were $713 million or 10.8 percent of the total farm mortgage debt in 1940 and Joint Stock Land Bank loans were $638 million or 6.6 percent of the total farm mortgage debt in 1930.

[2] Before 1935, open State and national banks; 1935-47, insured commercial banks; and 1948 to date, all operating commercial and savings banks.

[3] Farmers Home Administration prior to 1994. The origins of Farmers Home Administration go back to Executive Order 7072 signed April 30, 1935 creating the Resettlement Administration as an independent agency. Farm loans originated with Bankhead-Jones Farm Tenant Act of July 22, 1937.

-- = Less than 0.05 percent.

Sources: U.S. Department of Agriculture, Economic Research Service, *Agricultural Finance Statistics*, AFS-3, July 1976; U.S. Department of Agriculture, Economic Research Service, *Agricultural Finance Statistics, 1960-83*, Stat. Bul. No. 706, April 1984; U.S. Department of Agriculture, Economic Research Service, *Economic Indicators of the Farm Sector; National Financial Summary*, ECIFS, various issues and U.S. Department of Agriculture, Economic Research Service, *Agricultural Income and Finance: Situation and Outlook Report*, various issues.

## Appendix table 3--Life insurance company agricultural and nonagricultural mortgage loans outstanding, 1960-94

| Year[1] | Nonagricultural mortgages | | Agricultural mortgages | |
|---|---|---|---|---|
| | *Number* | *$1,000* | *Number* | *$1,000* |
| 1960 | 2,324,854 | 30,602,984 | 176,513 | 2,492,478 |
| 1961 | 2,393,558 | 33,332,366 | 175,892 | 2,652,627 |
| 1962 | 2,385,314 | 35,291,499 | 174,883 | 2,845,398 |
| 1963 | 2,381,159 | 37,875,089 | 174,705 | 3,145,100 |
| 1964 | 2,516,780 | 43,427,504 | 190,398 | 4,000,631 |
| 1965 | 2,495,833 | 46,839,852 | 188,997 | 4,501,750 |
| 1966 | 2,464,332 | 50,258,760 | 186,595 | 4,903,383 |
| 1967 | 2,382,757 | 52,321,188 | 183,312 | 5,182,666 |
| 1968 | 2,292,363 | 54,078,091 | 177,420 | 5,458,699 |
| 1969 | 2,185,363 | 55,599,772 | 170,429 | 5,446,126 |
| 1970 | 2,086,294 | 57,778,948 | 162,244 | 5,338,620 |
| 1971 | 1,920,230 | 58,298,462 | 153,527 | 5,307,434 |
| 1972 | 1,755,378 | 59,450,206 | 144,543 | 5,412,998 |
| 1973 | 1,600,696 | 62,497,166 | 135,524 | 5,742,029 |
| 1974 | 1,451,383 | 65,147,725 | 126,059 | 6,072,139 |
| 1975 | 1,364,026 | 68,554,861 | 116,159 | 6,493,883 |
| 1976 | 1,251,733 | 69,825,312 | 107,651 | 7,173,081 |
| 1977 | 1,152,795 | 73,010,379 | 102,474 | 8,572,373 |
| 1978 | 1,074,724 | 79,218,915 | 98,057 | 10,229,913 |
| 1979 | 1,009,086 | 87,837,591 | 94,398 | 11,925,090 |
| 1980 | 953,554 | 97,948,810 | 90,384 | 12,632,166 |
| 1981 | 932,676 | 103,443,089 | 85,607 | 12,798,246 |
| 1982 | 890,523 | 106,019,697 | 80,434 | 12,429,452 |
| 1983 | 798,551 | 113,764,899 | 74,708 | 12,434,006 |
| 1984 | 694,032 | 118,152,412 | 68,223 | 12,184,356 |
| 1985 | 548,000 | 131,695,592 | 60,918 | 11,403,465 |
| 1986 | 490,964 | 154,205,068 | 52,898 | 10,480,030 |
| 1987 | 419,019 | 165,642,004 | 46,518 | 9,290,852 |
| 1988 | 386,059 | 199,337,813 | 41,264 | 9,114,070 |
| 1989 | 357,772 | 212,136,796 | 37,168 | 8,991,090 |
| 1990 | 315,589 | 220,865,097 | 33,539 | 9,566,460 |
| 1991 | 262,329 | 218,766,774 | 28,589 | 9,459,524 |
| 1992 | 210,436 | 200,087,476 | 20,571 | 8,313,492 |
| 1993 | 172,131 | 185,517,596 | 17,689 | 8,843,134 |
| 1994 | 141,433 | 177,161,929 | 15,922 | 8,859,939 |

[1] December 31.

Source: American Council of Life Insurance, *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures*, various issues.

## Appendix table 4--Life insurance company agricultural and nonagricultural average mortgage loan sizes in current and constant dollars, 1960-94

| Year[1] | Nonagricultural loans | | Agricultural loans | |
|---|---|---|---|---|
| | *Current dollars* | *Constant dollars 1987=100* | *Current dollars* | *Constant dollars 1987=100* |
| 1960 | 13,163 | 50,627 | 14,121 | 54,312 |
| 1961 | 13,926 | 52,951 | 15,081 | 57,342 |
| 1962 | 14,795 | 55,205 | 16,270 | 60,709 |
| 1963 | 15,906 | 58,478 | 18,002 | 66,184 |
| 1964 | 17,255 | 62,292 | 21,012 | 75,856 |
| 1965 | 18,767 | 66,081 | 23,819 | 83,870 |
| 1966 | 20,394 | 69,367 | 26,278 | 89,381 |
| 1967 | 21,958 | 72,469 | 28,272 | 93,307 |
| 1968 | 23,591 | 74,420 | 30,767 | 97,057 |
| 1969 | 25,442 | 76,402 | 31,955 | 95,961 |
| 1970 | 27,695 | 78,903 | 32,905 | 93,746 |
| 1971 | 30,360 | 82,054 | 34,570 | 93,432 |
| 1972 | 33,867 | 87,286 | 37,449 | 96,518 |
| 1973 | 39,044 | 94,538 | 42,369 | 102,588 |
| 1974 | 44,887 | 99,971 | 48,169 | 107,281 |
| 1975 | 50,259 | 102,152 | 55,905 | 113,628 |
| 1976 | 55,783 | 106,660 | 66,633 | 127,405 |
| 1977 | 63,333 | 113,297 | 83,654 | 149,649 |
| 1978 | 73,711 | 122,240 | 104,326 | 173,012 |
| 1979 | 87,047 | 132,896 | 126,328 | 192,867 |
| 1980 | 102,720 | 143,264 | 139,761 | 94,925 |
| 1981 | 110,910 | 140,570 | 149,500 | 189,480 |
| 1982 | 119,053 | 142,068 | 154,530 | 184,403 |
| 1983 | 142,464 | 163,376 | 166,435 | 190,866 |
| 1984 | 170,241 | 187,078 | 178,596 | 196,259 |
| 1985 | 240,320 | 254,576 | 187,194 | 198,299 |
| 1986 | 314,086 | 324,134 | 198,118 | 204,456 |
| 1987 | 395,309 | 395,309 | 199,726 | 199,726 |
| 1988 | 516,340 | 496,959 | 220,872 | 212,581 |
| 1989 | 592,659 | 546,229 | 241,904 | 222,953 |
| 1990 | 699,853 | 617,699 | 285,234 | 251,751 |
| 1991 | 833,940 | 708,530 | 330,880 | 281,121 |
| 1992 | 950,823 | 786,454 | 404,137 | 333,722 |
| 1993 | 1,077,770 | 872,688 | 499,923 | 402,514 |
| 1994 | 1,252,621 | 993,355 | 556,459 | 441,284 |

[1] December 31

Source: American Council of Life Insurance, *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures*, various issues. U.S. Council of Economic Advisors, *Economic Report of President*, Washington, DC, Feb. 1995.

**Appendix table 5--Life insurance company farm real estate loans outstanding (including operator households), by State, selected years, December 31, 1960-94**

| State | 1960 | 1970 | 1980 | 1990 | 1994 |
|---|---|---|---|---|---|
| | | | *$1,000* | | |
| Alabama | 20,637 | 45,900 | 103,300 | 48,700 | 34,486 |
| Alaska | 0 | 0 | 14,000 | 8,100 | 1,121 |
| Arizona | 47,903 | 106,100 | 217,100 | 200,500 | 161,732 |
| Arkansas | 108,681 | 261,600 | 429,400 | 294,100 | 259,892 |
| California | 184,894 | 592,600 | 1,810,400 | 2,577,200 | 2,904,916 |
| Colorado | 72,777 | 156,200 | 401,700 | 213,400 | 165,255 |
| Connecticut | 2,090 | 1,600 | 400 | 300 | 0 |
| Delaware | 561 | 1,100 | 1,100 | 100 | 16,943 |
| Florida | 70,815 | 198,200 | 493,000 | 875,200 | 1,297,366 |
| Georgia | 33,216 | 62,700 | 253,700 | 150,800 | 124,257 |
| Hawaii | 0 | 2,000 | 15,300 | 31,300 | 28,380 |
| Idaho | 62,480 | 140,000 | 256,200 | 166,300 | 180,764 |
| Illinois | 219,452 | 321,000 | 779,700 | 456,700 | 307,004 |
| Indiana | 142,115 | 176,600 | 525,700 | 281,300 | 295,091 |
| Iowa | 350,213 | 467,100 | 948,200 | 571,800 | 416,604 |
| Kansas | 112,469 | 239,600 | 449,400 | 205,800 | 145,377 |
| Kentucky | 52,175 | 71,500 | 186,500 | 125,800 | 59,711 |
| Louisiana | 26,813 | 139,200 | 317,100 | 168,900 | 146,327 |
| Maine | 461 | 300 | 5,700 | 0 | 21,054 |
| Maryland | 7,345 | 6,400 | 21,900 | 11,300 | 21,712 |
| Massachusetts | 675 | 200 | 2,200 | 22,200 | 26,283 |
| Michigan | 21,330 | 36,600 | 79,600 | 38,100 | 66,529 |
| Minnesota | 148,695 | 203,100 | 456,600 | 226,100 | 225,107 |
| Mississippi | 80,405 | 196,900 | 376,900 | 312,200 | 258,603 |
| Missouri | 129,288 | 212,700 | 479,900 | 220,400 | 178,434 |
| Montana | 47,864 | 109,500 | 377,200 | 204,100 | 184,257 |
| Nebraska | 128,620 | 241,300 | 695,300 | 365,700 | 273,031 |
| Nevada | 14,042 | 33,300 | 91,900 | 39,500 | 16,482 |
| New Hampshire | 62 | 900 | 5,700 | 600 | 0 |
| New Jersey | 12,931 | 5,000 | 4,000 | 500 | 5,929 |
| New Mexico | 44,715 | 82,500 | 104,400 | 70,800 | 65,517 |
| New York | 13,803 | 8,400 | 30,600 | 9,600 | 4,258 |
| North Carolina | 36,883 | 56,900 | 119,500 | 90,200 | 73,492 |
| North Dakota | 13,289 | 24,400 | 68,400 | 36,300 | 26,974 |
| Ohio | 82,733 | 103,900 | 298,000 | 137,300 | 91,731 |
| Oklahoma | 81,861 | 169,600 | 217,600 | 169,000 | 95,065 |
| Oregon | 45,239 | 88,700 | 233,000 | 477,700 | 235,246 |
| Pennsylvania | 10,054 | 14,200 | 35,800 | 12,300 | 7,047 |
| Rhode Island | 0 | 0 | 100 | 0 | 0 |
| South Carolina | 12,428 | 25,300 | 23,800 | 16,700 | 8,018 |
| South Dakota | 50,340 | 81,600 | 127,100 | 51,100 | 56,491 |
| Tennessee | 23,519 | 32,500 | 81,300 | 41,400 | 28,117 |
| Texas | 305,380 | 586,000 | 993,600 | 575,900 | 425,273 |
| Utah | 12,167 | 14,300 | 27,400 | 11,600 | 11,876 |
| Vermont | 1,599 | 400 | 1,200 | 0 | 0 |
| Virginia | 26,153 | 33,800 | 39,500 | 94,600 | 48,476 |
| Washington | 47,646 | 148,700 | 421,600 | 338,100 | 350,292 |
| West Virginia | 2,219 | 2,000 | 13,900 | 90,100 | 81,439 |
| Wisconsin | 31,580 | 47,800 | 148,700 | 63,500 | 65,878 |
| Wyoming | 33,984 | 60,100 | 143,200 | 83,100 | 65,004 |
| U.S | 2,974,609 | 5,610,300 | 12,927,800 | 10,186,300 | 9,562,841 |

Sources: George Amols and Wilson Kaiser, *Agricultural Finance Statistics, 1960-83,* Stat. Bul. 706. U.S. Dept. Agr., Econ. Res. Serv., Economic Research Service, April 1984, and U.S. Department of Agriculture, Economic Research Service, *Economic Indicators of the Farm Sector: State Financial Summary.* ECIFS series, various issues.

**Appendix table 6--Life insurance company farm real estate loans by State as a percentage of total U.S. life insurance farm real estate loans, selected years, December 31, 1960-94**

| State | 1960 | 1970 | 1980 | 1990 | 1994 |
|---|---|---|---|---|---|
| | | | *Percent* | | |
| Alabama | 0.69 | 0.82 | 0.80 | 0.48 | 0.36 |
| Alaska | 0.00 | 0.00 | 0.11 | 0.08 | 0.01 |
| Arizona | 1.61 | 1.89 | 1.68 | 1.97 | 1.69 |
| Arkansas | 3.65 | 4.66 | 3.32 | 2.89 | 2.72 |
| California | 6.22 | 10.56 | 14.00 | 25.30 | 30.38 |
| Colorado | 2.45 | 2.78 | 3.11 | 2.09 | 1.73 |
| Connecticut | 0.07 | 0.03 | 0.00 | 0.00 | 0.00 |
| Delaware | 0.02 | 0.02 | 0.01 | 0.00 | 0.18 |
| Florida | 2.38 | 3.53 | 3.81 | 8.59 | 13.57 |
| Georgia | 1.12 | 1.12 | 1.96 | 1.48 | 1.30 |
| Hawaii | 0.00 | 0.04 | 0.12 | 0.31 | 0.30 |
| Idaho | 2.10 | 2.50 | 1.98 | 1.63 | 1.89 |
| Illinois | 7.38 | 5.72 | 6.03 | 4.48 | 3.21 |
| Indiana | 4.78 | 3.15 | 4.07 | 2.76 | 3.09 |
| Iowa | 11.77 | 8.33 | 7.33 | 5.61 | 4.36 |
| Kansas | 3.78 | 4.27 | 3.48 | 2.02 | 1.52 |
| Kentucky | 1.75 | 1.27 | 1.44 | 1.23 | 0.62 |
| Louisiana | 0.90 | 2.48 | 2.45 | 1.66 | 1.53 |
| Maine | 0.02 | 0.01 | 0.04 | 0.00 | 0.22 |
| Maryland | 0.25 | 0.11 | 0.17 | 0.11 | 0.22 |
| Massachusetts | 0.02 | 0.00 | 0.02 | 0.22 | 0.27 |
| Michigan | 0.72 | 0.65 | 0.62 | 0.37 | 0.70 |
| Minnesota | 5.00 | 3.62 | 3.53 | 2.22 | 2.35 |
| Mississippi | 2.70 | 3.51 | 2.92 | 3.06 | 2.70 |
| Missouri | 4.35 | 3.79 | 3.71 | 2.16 | 1.87 |
| Montana | 1.61 | 1.95 | 2.92 | 2.00 | 1.93 |
| Nebraska | 4.32 | 4.30 | 5.38 | 3.59 | 2.86 |
| Nevada | 0.47 | 0.59 | 0.71 | 0.39 | 0.17 |
| New Hampshire | 0.00 | 0.02 | 0.04 | 0.01 | 0.00 |
| New Jersey | 0.43 | 0.09 | 0.03 | 0.00 | 0.06 |
| New Mexico | 1.50 | 1.47 | 0.81 | 0.70 | 0.69 |
| New York | 0.46 | 0.15 | 0.24 | 0.09 | 0.04 |
| North Carolina | 1.24 | 1.01 | 0.92 | 0.89 | 0.77 |
| North Dakota | 0.45 | 0.43 | 0.53 | 0.36 | 0.28 |
| Ohio | 2.78 | 1.85 | 2.31 | 1.35 | 0.96 |
| Oklahoma | 2.75 | 3.02 | 1.68 | 1.661 | 0.99 |
| Oregon | 1.52 | 1.58 | 1.80 | 4.69 | 2.46 |
| Pennsylvania | 0.34 | 0.25 | 0.28 | 0.12 | 0.07 |
| Rhode Island | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| South Carolina | 0.42 | 0.45 | 0.18 | 0.16 | 0.08 |
| South Dakota | 1.69 | 1.45 | 0.98 | 0.50 | 0.59 |
| Tennessee | 0.79 | 0.58 | 0.63 | 0.41 | 0.29 |
| Texas | 10.27 | 10.45 | 7.69 | 5.65 | 4.45 |
| Utah | 0.41 | 0.25 | 0.21 | 0.11 | 0.12 |
| Vermont | 0.05 | 0.01 | 0.01 | 0.00 | 0.00 |
| Virginia | 0.88 | 0.60 | 0.31 | 0.93 | 0.51 |
| Washington | 1.60 | 2.65 | 3.26 | 3.32 | 3.66 |
| West Virginia | 0.07 | 0.04 | 0.11 | 0.88 | 0.85 |
| Wisconsin | 1.06 | 0.85 | 1.15 | 0.62 | 0.69 |
| Wyoming | 1.14 | 1.07 | 1.11 | 0.82 | 0.68 |
| U.S. | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

Sources: George Amols and Wilson Kaiser, *Agricultural Finance Statistics, 1960-83,* Stat. Bul. 706. USDA, Economic Research Service, April 1984, and U.S. Department of Agriculture, Economic Research Service, *Economic Indicators of the Farm Sector: State Financial Summary,* ECIFS series, various issues.

**Appendix table 7--Market share of life insurance company farm real estate loans (including operator households) as a percentage of total real estate loans, by State, selected years, 1960-94**

| State | 1960 | 1970 | 1980 | 1990 | 1994 |
|---|---|---|---|---|---|
| | | | *Percent* | | |
| Alabama | 12.1 | 11.0 | 8.3 | 6.5 | 4.6 |
| Alaska | 0.0 | 0.0 | 54.1 | 33.1 | 10.4 |
| Arizona | 38.0 | 35.2 | 33.1 | 31.8 | 33.4 |
| Arkansas | 38.7 | 35.1 | 21.8 | 16.9 | 13.1 |
| California | 14.0 | 24.2 | 25.0 | 32.8 | 34.8 |
| Colorado | 28.5 | 22.9 | 18.0 | 13.7 | 10.1 |
| Connecticut | 7.1 | 3.9 | 0.4 | 0.3 | 0.0 |
| Delaware | 3.8 | 2.6 | 0.8 | 0.1 | 10.1 |
| Florida | 27.9 | 30.6 | 21.1 | 31.9 | 41.9 |
| Georgia | 14.8 | 10.0 | 11.2 | 8.8 | 6.9 |
| Hawaii | 0.0 | 8.7 | 12.4 | 13.5 | 16.5 |
| Idaho | 24.0 | 22.6 | 14.3 | 12.8 | 12.8 |
| Illinois | 34.2 | 20.7 | 13.6 | 10.5 | 6.5 |
| Indiana | 30.9 | 15.7 | 12.4 | 9.3 | 9.1 |
| Iowa | 38.5 | 20.5 | 12.1 | 10.2 | 6.6 |
| Kansas | 30.1 | 22.5 | 13.7 | 8.0 | 5.4 |
| Kentucky | 21.5 | 11.4 | 8.7 | 7.3 | 3.2 |
| Louisiana | 18.3 | 29.0 | 20.3 | 21.2 | 18.6 |
| Maine | 1.8 | 0.5 | 3.4 | 0.0 | 17.1 |
| Maryland | 8.1 | 2.7 | 3.4 | 1.9 | 3.1 |
| Massachusetts | 2.8 | 0.5 | 2.3 | 17.8 | 18.9 |
| Michigan | 6.7 | 5.2 | 3.8 | 2.4 | 4.2 |
| Minnesota | 23.4 | 14.7 | 9.1 | 6.1 | 5.5 |
| Mississippi | 30.0 | 30.2 | 20.5 | 23.5 | 19.3 |
| Missouri | 28.1 | 19.8 | 13.5 | 7.8 | 5.8 |
| Montana | 22.1 | 16.6 | 16.7 | 12.4 | 11.0 |
| Nebraska | 34.1 | 21.0 | 18.4 | 13.0 | 8.4 |
| Nevada | 30.8 | 39.0 | 32.7 | 20.8 | 9.7 |
| New Hampshire | 0.7 | 4.7 | 10.2 | 1.6 | 0.0 |
| New Jersey | 18.8 | 4.1 | 1.2 | 0.2 | 2.2 |
| New Mexico | 32.0 | 28.7 | 14.5 | 11.0 | 10.6 |
| New York | 6.4 | 1.9 | 2.5 | 1.0 | 0.4 |
| North Carolina | 17.1 | 12.0 | 6.3 | 5.8 | 4.8 |
| North Dakota | 7.5 | 4.4 | 3.5 | 2.1 | 1.6 |
| Ohio | 20.2 | 11.7 | 10.6 | 6.8 | 4.2 |
| Oklahoma | 27.0 | 21.1 | 9.0 | 9.3 | 5.3 |
| Oregon | 17.4 | 16.0 | 11.8 | 27.3 | 15.5 |
| Pennsylvania | 4.8 | 3.3 | 2.4 | 0.9 | 0.4 |
| Rhode Island | 0.3 | 0.0 | 0.9 | 0.0 | 0.0 |
| South Carolina | 12.5 | 11.3 | 2.9 | 2.9 | 1.7 |
| South Dakota | 20.6 | 13.7 | 6.6 | 3.5 | 3.6 |
| Tennessee | 11.1 | 5.7 | 5.1 | 3.5 | 2.3 |
| Texas | 31.0 | 25.2 | 18.0 | 11.8 | 8.9 |
| Utah | 12.8 | 9.9 | 5.0 | 2.9 | 3.3 |
| Vermont | 4.1 | 0.5 | 0.6 | 0.0 | 0.0 |
| Virginia | 18.6 | 9.3 | 3.4 | 7.5 | 3.9 |
| Washington | 18.2 | 24.0 | 21.7 | 21.5 | 21.2 |
| West Virginia | 5.9 | 2.7 | 5.9 | 29.4 | 26.5 |
| Wisconsin | 6.9 | 5.2 | 4.5 | 2.4 | 2.4 |
| Wyoming | 33.6 | 24.9 | 22.2 | 17.6 | 15.4 |
| United States | 23.1 | 18.4 | 13.3 | 12.9 | 11.5 |

Sources: George Amols and Wilson Kaiser, *Agricultural Finance Statistics 1960-83*, Stat. Bul. 706. U.S. Dept. Agr., Econ. Res. Serv., April 1984, and U.S. Department of Agriculture, Economic Research Service, *Economic Indicators of the Farm Sector: State Financial Summary*, ECIFS series, various issues.

**Appendix table 8--Life insurance company agricultural loans by U.S. Bureau of the Census geographic division, December 31, 1994**

| Geographic division | Loans | Distribution of loans | Principal outstanding | Distribution of principal | Average loan size |
|---|---|---|---|---|---|
| | *Number* | *Percent* | *$1,000* | *Percent* | *Dollars* |
| New England | 4 | -- | 41,837 | 0.5 | 10,459,250 |
| Middle Atlantic | 71 | 0.4 | 10,792 | .1 | 152,000 |
| East North Central | 2,725 | 17.1 | 747,816 | 8.4 | 274,428 |
| West North Central | 5,804 | 36.5 | 1,155,096 | 13.0 | 199,017 |
| South Atlantic | 668 | 4.2 | 1,565,204 | 17.7 | 3,343,120 |
| East South Central | 550 | 3.5 | 329,374 | 3.7 | 598,862 |
| West South Central | 1,755 | 11.0 | 866,678 | 9.8 | 493,834 |
| Mountain | 1,509 | 9.5 | 804,801 | 9.1 | 533,334 |
| Pacific | 2,829 | 17.8 | 3,324,093 | 37.5 | 1,175,006 |
| Other | 6 | -- | 14,240 | .2 | 2,373,333 |
| Total | 15,922 | 100.0 | 8,859,939 | 100.0 | 556,459 |

-- = Less than .05 percent.

Note: New England = CT, ME, MA, NH, RI, VT. Middle Atlantic = NJ, NY, PA. East North Central = IL, IN, MI, OH, WI. West North Central = IA, KS, MN, MO, NE, ND, SD. South Atlantic = DE, DC, FL, GA, MD, NC, SC, VA, WV. East South Central = AL, KY, MS, TN. West South Central = AR, LA, OK, TX. Mountain = AZ, CO, ID, MT, NV, NM, UT, WY. Pacific = AK, CA, HI, OR, WA. Other = PR, U.S. Territories and Possessions, Canada, Other Foreign.

Source: American Council of Life Insurance, *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures*, No. 1289, March 9, 1995, p. 8.

## Appendix table 9--Life insurance company mortgage loan delinquencies, 1960-94[1]

| Year[2] | Nonagricultural mortgages | | Agricultural mortgages | |
|---|---|---|---|---|
| | *Number* | *$1,000* | *Number* | *$1,000* |
| 1960 | 17,917 | 187,487 | 268 | 5,316 |
| 1961 | 21,182 | 235,162 | 216 | 4,829 |
| 1962 | 22,424 | 257,636 | 253 | 11,039 |
| 1963 | 25,138 | 374,679 | 239 | 5,938 |
| 1964 | 23,734 | 417,633 | 245 | 7,580 |
| 1965 | 22,387 | 433,302 | 405 | 12,557 |
| 1966 | 21,069 | 433,098 | 305 | 12,234 |
| 1967 | 17,903 | 418,487 | 364 | 31,243 |
| 1968 | 14,654 | 341,301 | 315 | 31,142 |
| 1969 | 14,378 | 317,073 | 287 | 19,791 |
| 1970 | 16,269 | 493,652 | 551 | 80,363 |
| 1971 | 16,107 | 523,214 | 638 | 84,537 |
| 1972 | 17,018 | 669,924 | 498 | 74,949 |
| 1973 | 15,455 | 982,644 | 300 | 44,648 |
| 1974 | 14,237 | 1,675,310 | 291 | 43,301 |
| 1975 | 14,790 | 2,524,260 | 253 | 82,550 |
| 1976 | 13,817 | 2,351,279 | 340 | 148,400 |
| 1977 | 13,366 | 1,757,752 | 577 | 99,602 |
| 1978 | 11,283 | 1,308,256 | 526 | 265,003 |
| 1979 | 10,229 | 668,720 | 376 | 173,138 |
| 1980 | 10,114 | 875,344 | 486 | 252,159 |
| 1981 | 10,389 | 710,668 | 659 | 471,738 |
| 1982 | 9,523 | 883,733 | 1,338 | 795,791 |
| 1983 | 8,765 | 1,027,676 | 1,968 | 1,027,729 |
| 1984 | 8,609 | 1,066,534 | 2,578 | 1,166,835 |
| 1985 | 7,819 | 1,530,252 | 3,861 | 1,716,968 |
| 1986 | 8,029 | 4,080,954 | 4,388 | 1,782,817 |
| 1987 | 6,704 | 4,321,988 | 3,178 | 1,329,842 |
| 1988 | 6,697 | 4,859,002 | 1,834 | 807,982 |
| 1989 | 6,014 | 5,029,860 | 997 | 426,179 |
| 1990 | 6,639 | 7,946,219 | 806 | 403,692 |
| 1991 | 6,986 | 12,665,515 | 668 | 363,582 |
| 1992 | 6,417 | 13,006,480 | 543 | 277,016 |
| 1993 | 4,885 | 8,316,299 | 352 | 195,818 |
| 1994 | 3,971 | 5,922,709 | 202 | 230,461 |

[1] Delinquent Loans (including loans in the process of foreclosure).A delinquent loan is a nonfarm mortgage with interest payments in arrears at least 2 months (60 days if other than a monthly pay) or a farm loan with interest in arrears more than 90 days. Reporting companies account for approximately 80 to 85 percent of the mortgages held by U.S. life insurance companies depending on the date of the survey.

[2] December 31.

Source: American Council of Life Insurance, *Investment Bulletin: Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures,* various issues.

## Appendix table 10--Life insurance company mortgage loans foreclosed, 1960-94[1]

| Year | Nonagricultural mortgages | | Agricultural mortgages | |
|---|---|---|---|---|
| | *Number* | *$1,000* | *Number* | *$1,000* |
| 1960 | 2,983 | 36,192 | 34 | 418 |
| 1961 | 5,558 | 66,872 | 39 | 1,005 |
| 1962 | 7,420 | 165,247 | 43 | 1,143 |
| 1963 | 8,762 | 112,283 | 26 | 460 |
| 1964 | 10,320 | 138,846 | 33 | 664 |
| 1965 | 10,318 | 165,117 | 33 | 1,097 |
| 1966 | 10,012 | 191,671 | 23 | 1,437 |
| 1967 | 7,960 | 145,189 | 25 | 1,910 |
| 1968 | 5,236 | 121,310 | 30 | 5,521 |
| 1969 | 3,258 | 92,234 | 35 | 8,057 |
| 1970 | 2,815 | 91,211 | 67 | 8,564 |
| 1971 | 2,591 | 97,481 | 94 | 23,537 |
| 1972 | 2,461 | 165,646 | 75 | 12,897 |
| 1973 | 2,296 | 143,907 | 53 | 12,021 |
| 1974 | 1,745 | 229,320 | 25 | 3,546 |
| 1975 | 1,884 | 583,272 | 32 | 23,902 |
| 1976 | 1,409 | 475,001 | 35 | 24,166 |
| 1977 | 1,226 | 421,312 | 17 | 5,455 |
| 1978 | 952 | 247,259 | 26 | 17,169 |
| 1979 | 686 | 150,202 | 24 | 19,319 |
| 1980 | 549 | 63,237 | 26 | 18,160 |
| 1981 | 552 | 58,491 | 47 | 55,741 |
| 1982 | 760 | 131,392 | 167 | 170,310 |
| 1983 | 868 | 114,993 | 306 | 347,002 |
| 1984 | 1,024 | 242,428 | 475 | 289,251 |
| 1985 | 1,033 | 328,558 | 1,000 | 530,235 |
| 1986 | 1,541 | 1,143,082 | 1,654 | 827,472 |
| 1987 | 2,048 | 1,580,027 | 1,515 | 691,914 |
| 1988 | 1,196 | 2,530,105 | 727 | 364,414 |
| 1989 | 1,098 | 2,178,949 | 356 | 204,361 |
| 1990 | 1,018 | 3,042,171 | 122 | 85,281 |
| 1991 | 1,284 | 4,942,349 | 125 | 94,875 |
| 1992 | 1,365 | 6,665,288 | 88 | 148,006 |
| 1993 | 1,159 | 6,013,084 | 79 | 96,318 |
| 1994 | 844 | 4,463,787 | 31 | 41,745 |

[1] Loans foreclosed include those for which title to the property or entitling certificate was acquired during the period shown, either through foreclosure or voluntary conveyance in lieu of foreclosure. Dollar amounts include principal outstanding at the time of the foreclosure, amounts capitalized for interest, foreclosure costs and any advances made to protect the collateral. Data beginning in 1988 are not strictly comparable with earlier years because of changes in the survey sample. Beginning in 1988 loans in redemption are classified as loans in process if foreclosure; in earlier years these loans were reported as loans foreclosed. For this reason there may be some double counting of foreclosed loans, particularly agricultural properties, in 1988.

Source: American Council of Life Insurance, *Investment Bulletin:Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures,* various issues.

**Appendix table 11--Life insurance company average mortgage loan size for delinquent, foreclosed, and all outstanding loans, 1960-94**

| Year | Delinquent loans | | Foreclosed loans | | All outstanding loans | |
|---|---|---|---|---|---|---|
| | Nonagricultural | Agricultural | Nonagricultural | Agricultural | Nonagricultural | Agricultural |
| | | | *Dollars* | | | |
| 1960 | 10,464 | 19,836 | 12,133 | 12,294 | 13,163 | 14,121 |
| 1961 | 11,102 | 22,356 | 12,032 | 25,769 | 13,926 | 15,081 |
| 1962 | 11,489 | 43,632 | 22,270 | 26,581 | 14,795 | 16,270 |
| 1963 | 14,905 | 24,846 | 12,815 | 17,692 | 15,906 | 18,002 |
| 1964 | 17,596 | 30,939 | 13,454 | 20,121 | 17,255 | 21,012 |
| 1965 | 19,355 | 31,005 | 16,003 | 33,242 | 18,767 | 23,819 |
| 1966 | 20,556 | 40,111 | 19,144 | 62,478 | 20,394 | 26,278 |
| 1967 | 23,375 | 85,832 | 18,240 | 76,400 | 21,958 | 28,272 |
| 1968 | 23,291 | 98,863 | 23,168 | 184,033 | 23,591 | 30,767 |
| 1969 | 22,053 | 68,958 | 28,310 | 230,200 | 25,442 | 31,955 |
| 1970 | 30,343 | 145,849 | 32,402 | 127,821 | 27,695 | 32,905 |
| 1971 | 32,484 | 132,503 | 37,623 | 250,394 | 30,360 | 34,570 |
| 1972 | 39,366 | 150,500 | 67,308 | 171,960 | 33,867 | 37,449 |
| 1973 | 63,581 | 148,827 | 62,677 | 226,811 | 39,044 | 42,369 |
| 1974 | 117,673 | 148,801 | 131,415 | 141,840 | 44,887 | 48,169 |
| 1975 | 170,673 | 326,285 | 309,592 | 746,938 | 50,259 | 55,905 |
| 1976 | 170,173 | 436,471 | 337,119 | 690,467 | 55,783 | 66,633 |
| 1977 | 131,509 | 172,620 | 343,648 | 320,882 | 63,333 | 83,654 |
| 1978 | 115,949 | 503,808 | 259,726 | 660,346 | 73,711 | 104,326 |
| 1979 | 65,375 | 460,473 | 218,953 | 804,958 | 87,047 | 126,328 |
| 1980 | 86,548 | 518,846 | 115,186 | 698,462 | 102,720 | 139,761 |
| 1981 | 68,406 | 715,839 | 105,962 | 1,185,979 | 110,910 | 149,500 |
| 1982 | 92,800 | 594,762 | 172,884 | 1,019,820 | 119,053 | 154,530 |
| 1983 | 117,248 | 522,220 | 132,480 | 1,133,993 | 142,464 | 166,435 |
| 1984 | 123,886 | 452,612 | 236,746 | 608,949 | 170,241 | 178,596 |
| 1985 | 195,709 | 444,695 | 318,062 | 530,23 | 240,320 | 187,194 |
| 1986 | 508,277 | 406,294 | 741,779 | 500,285 | 314,086 | 198,118 |
| 1987 | 664,688 | 418,452 | 771,498 | 456,709 | 395,309 | 199,726 |
| 1988 | 725,549 | 440,557 | 2,115,472 | 501,257 | 516,340 | 220,872 |
| 1989 | 836,358 | 427,461 | 1,984,471 | 574,048 | 592,659 | 241,904 |
| 1990 | 1,196,900 | 500,859 | 2,988,380 | 699,025 | 699,853 | 285,234 |
| 1991 | 1,812,985 | 544,284 | 3,849,181 | 759,000 | 833,940 | 330,880 |
| 1992 | 2,026,879 | 510,158 | 4,882,994 | 1,681,886 | 950,823 | 404,137 |
| 1993 | 1,702,415 | 556,301 | 5,188,166 | 1,219,215 | 1,077,770 | 499,923 |
| 1994 | 1,491,491 | 1,140,896 | 5,288,847 | 1,346,613 | 1,252,621 | 556,459 |

Source: American Council of Life Insurance, *Investment Bulletin:Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures*, various issues.

**Appendix table 12--Ratio of average-sized nonagricultural mortgage loans to average-sized agricultural mortgage loans, 1960-94**[1]

| Year | Delinquent loans | Foreclosed loans | All outstanding loans |
|---|---|---|---|
| | | *Ratio* | |
| 1960 | 53 | .99 | .93 |
| 1961 | .50 | .47 | .92 |
| 1962 | .26 | .84 | .91 |
| 1963 | .60 | .72 | .88 |
| 1964 | .57 | 67 | .82 |
| 1965 | .62 | .50 | .79 |
| 1966 | .51 | .31 | .78 |
| 1967 | .27 | .24 | .78 |
| 1968 | .24 | .13 | .77 |
| 1969 | .32 | .12 | .80 |
| 1970 | .21 | .25 | .84 |
| 1971 | .25 | .15 | .88 |
| 1972 | .26 | .39 | .90 |
| 1973 | .43 | .28 | .92 |
| 1974 | .79 | .93 | .93 |
| 1975 | .52 | .41 | .90 |
| 1976 | .39 | .49 | .84 |
| 1977 | .76 | 1.07 | .76 |
| 1978 | .23 | .39 | .71 |
| 1979 | .14 | .27 | .69 |
| 1980 | .17 | .16 | .73 |
| 1981 | .10 | .09 | .74 |
| 1982 | .16 | .17 | .77 |
| 1983 | .22 | .12 | .86 |
| 1984 | .27 | .39 | .95 |
| 1985 | .44 | .60 | 1.28 |
| 1986 | 1.25 | 1.48 | 1.59 |
| 1987 | 1.59 | 1.69 | 1.98 |
| 1988 | 1.65 | 4.22 | 2.34 |
| 1989 | 1.96 | 3.46 | 2.45 |
| 1990 | 2.39 | 4.28 | 2.45 |
| 1991 | 3.33 | 5.07 | 2.52 |
| 1992 | 3.97 | 2.90 | 2.35 |
| 1993 | 3.06 | 4.26 | 2.16 |
| 1994 | 1.31 | 3.93 | 2.25 |

[1] Nonagricultural loans divided by agricultural loans for each year of the different categories. For example, in 1994 the average nonagricultural loan size ($1,252,621) divided by the average agricultural loan size ($556,459) equals 2.25.

Source: American Council of Life Insurance, *Investment Bulletin:Quarterly Survey of Mortgage Loan Delinquencies and Foreclosures*, various issues.

**Appendix table 13--Total value of farm real estate owned by U.S. life insurance companies, by State 1979, 1984, 1989, and 1994**

| State | 1979 | 1984 | 1989 | 1994 |
|---|---|---|---|---|
| | | *$1,000* | | |
| Alabama | 1,000 | 16,500 | 84,940 | 100,405 |
| Alaska | 0 | 0 | 16,595 | 0 |
| Arizona | 4,000 | 2,700 | 22,031 | 64,648 |
| Arkansas | 23,000 | 138,900 | 93,139 | 104,819 |
| California | 63,900 | 281,400 | 264,840 | 466,868 |
| Colorado | 13,700 | 38,200 | 54,801 | 1,360 |
| Connecticut | 0 | 0 | 0 | 0 |
| Delaware | 0 | 0 | 0 | 0 |
| Florida | 5,700 | 66,400 | 118,381 | 254,804 |
| Georgia | 3,400 | 35,500 | 52,010 | 43,332 |
| Hawaii | 0 | 0 | 0 | 9,571 |
| Idaho | 4,000 | 8,500 | 24,516 | 515 |
| Illinois | 17,300 | 102,500 | 112,628 | 51,297 |
| Indiana | 2,600 | 119,400 | 101,006 | 42,330 |
| Iowa | 200 | 21,100 | 111,766 | 4,294 |
| Kansas | 0 | 16,400 | 15,743 | 0 |
| Kentucky | 0 | 14,200 | 21,988 | 0 |
| Louisiana | 300 | 80,100 | 67,163 | 83,293 |
| Maine | 0 | 0 | 0 | 58,552 |
| Maryland | 100 | 5,100 | 3,416 | 1,522 |
| Massachusetts | 0 | 0 | 0 | 0 |
| Michigan | -- | 13,500 | 21,699 | 1,959 |
| Minnesota | 100 | 33,100 | 55,332 | 4,082 |
| Mississippi | 44,500 | 166,900 | 126,721 | 199,870 |
| Missouri | 2,400 | 39,100 | 42,204 | 502 |
| Montana | 1/ | 16,300 | 89,578 | 830 |
| Nebraska | 700 | 18,800 | 31,604 | 1,651 |
| Nevada | 1,100 | 5,100 | 7,464 | 4,520 |
| New Hampshire | 0 | 0 | 0 | 13,321 |
| New Jersey | -- | 0 | 0 | 0 |
| New Mexico | 100 | 1,500 | 5,960 | 0 |
| New York | 0 | 1,100 | 279 | 0 |
| North Carolina | 20,000 | 96,700 | 60,387 | 49,944 |
| North Dakota | 0 | 2,800 | 7,173 | 150 |
| Ohio | 500 | 71,100 | 63,096 | 24,241 |
| Oklahoma | 200 | 4,500 | 10,650 | 27,252 |
| Oregon | 12,100 | 38,500 | 63,171 | 108,429 |
| Pennsylvania | 0 | 900 | 0 | 0 |
| Rhode Island | 0 | 0 | 0 | 0 |
| South Carolina | 4,100 | 13,900 | 93,012 | 140,573 |
| South Dakota | 0 | 4,800 | 28,186 | 218 |
| Tennessee | 2,800 | 21,200 | 8,668 | 3,569 |
| Texas | 8,400 | 55,000 | 115,922 | 47,302 |
| Utah | 700 | 5,400 | 476 | 0 |
| Vermont | 0 | 0 | 0 | 4,662 |
| Virginia | 700 | 1,000 | 824 | 70,755 |
| Washington | 1,500 | 49,500 | 363,215 | 611,539 |
| West Virginia | 0 | 0 | 0 | 0 |
| Wisconsin | 1,400 | 3,700 | 25,284 | 10,188 |
| Wyoming | 900 | 11,000 | 24,300 | 3,037 |
| United States | 241,400 | 1,622,300 | 2,410,168 | 2,616,206 |

-- = Less than $500,000.

Source: American Council of Life Insurance, *Life Insurance Fact Book*, 1980, 1986, 1990, and 1995.