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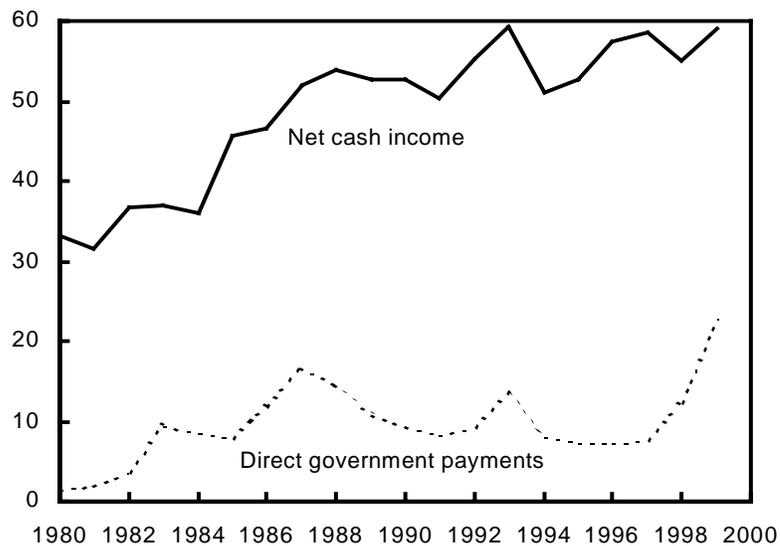
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Agricultural Income and Finance

Situation and Outlook Report

Direct government payments are important to farmers

\$ billion



Annual Lender Issue

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Situation Coordinators

Jerome Stam (202) 694-5365
Daniel Milkove (202) 694-5357

Principal Contributors

Jerome Stam (Lender Overview, Credit Demand and Supply, Life Insurance
Companies, Farm Debt) (202) 694-5365
Daniel Milkove (Commercial Banks, Financial Reform, Camera Copy, Graphics) (202) 694-5357
Robert Collender (Farm Credit System, Financial Reform) (202) 694-5343
Steven Koenig (Farm Service Agency, Farmer Mac, Federal Farm Assistance) (202) 694-5353
Ted Covey (Interest Rates) (202) 694-5344
James Ryan (Farm Debt, Repayment Capacity) (202) 694-5586
Charles Barnard (Farmland Values) (202) 694-5602
Robert Hoppe (Off-Farm Income) (202) 694-5572

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Demand for Farm Credit Declines, Farm Lenders Continue To Show Caution

Measures of loan quality do not indicate serious problems for the major farm lenders.

Generally favorable conditions experienced by the farm economy during 1990-98 contributed to a strengthening financial condition for most farm lenders. Net cash farm income, which measures sales during the year, was \$55 billion in 1998, and is expected to be a near record \$59 billion in 1999. But challenges have emerged. Continued low prices for many key agricultural commodities and weather and disease problems in some regions have created concerns about the ability of some farmers to repay new or existing loans. Many of the concerns focus on producers' ability to obtain and retain production credit.

In 2000, lenders will be dealing with a farm sector whose net cash income is forecast to decline roughly 16 percent to \$49.7 billion, significantly below the 1990-98 average of \$55.1 billion. The impact of this decline will not be evenly distributed across all U.S. farm operations. Producers specializing in food grains, feed grains, cotton, oil crops, tobacco, and dairy will likely experience additional financial stress in 2000. However, beef, poultry, vegetable, fruit, nursery, and greenhouse operations are less likely to experience financial difficulties in 2000.

Low commodity prices are hurting farm operating incomes, but widespread effects on farm lenders have yet to materialize. Financial institutions serving agriculture continued to experience improved conditions in 1999 and some additional gains are expected in 2000. The position of agricultural lenders reflects the generally healthy state of farmers' finances in recent years. All major institutional lender groups except the Farm Service Agency continue to experience historically low levels of delinquencies, foreclosures, net loan charge-offs, and loan restructuring. These aggregate farm lender indicators will remain favorable barring a sustained increase in farm financial stress. Furthermore, there will be a lag before any significant farm financial stress affects financial institution performance at the national level.

Total farm business debt at yearend 1999 is estimated at \$172.8 billion, down slightly after increasing nearly 5 percent in 1998. The dollar volume of farm loans outstanding declined for all lender categories, except the Farm Credit System (FCS) and life insurance companies. Farm loan volume held by commercial banks declined less than 1 percent while it increased 2 percent for the FCS. Together commercial banks and the FCS held 67 percent of all farm debt at the end of 1999. Commercial banks have gained farm debt market share for 12 of the past 15 years and now hold 40 percent of outstanding farm business debt. FCS market share dropped for 9 of 10 years before increasing during 1995-99 to 27 percent.

Farm business debt is expected to decline slightly in 2000, the second consecutive decrease following 6 years of expansion. Nonreal estate loans are forecast to decrease

about 1 percent while real estate loans should increase by less than 1 percent. Both forecasts are roughly comparable to 1999's trends. Farm loan volume held by commercial banks is projected to decrease slightly while the FCS's total farm lending is expected to hold steady. The projected decline in farm debt for 2000 totals about \$300 million and follows a 1992-98 expansion of \$33.8 billion or 24 percent. Some \$16.8 billion (about half) of the increase came in 1997-98 as farmers optimistically reacted to the planting flexibility allowed by the 1996 Farm Bill and the relatively high commodity prices of 1996-97.

The outlook for 2000 indicates that loan demand will continue to moderate because farmers do not know how long depressed commodity prices and weak export demand will persist. The forecast decline in debt during 2000 implies fewer new capital investments will be financed by debt and relatively few farms will try to borrow their way out of cash-flow problems. The sector learned during the farm financial crisis of the 1980's that ill-advised borrowing cannot substitute for adequate cash flow and profits. In addition to gains in farmland values, cautious borrowing has helped keep the farm sector's balance sheet strong. Adequate working capital, additional government support, and off-farm earnings buoyed by a strong economy are helping reduce loan balances and new borrowing. Expected 2000 price and income levels and uncertainty about the economic recovery of major importers of U.S. farm products are also causing farmers to be cautious about debt use.

Government assistance has been important in stabilizing farm income, particularly for grain, soybean, and cotton farms. Direct government payments to farmers totaled \$12.2 billion in 1998, \$22.7 billion in 1999, and are projected at \$17.2 billion for 2000. Farmers received an annual average of \$8.8 billion in direct payments during 1990-97, but this increased to a yearly average of \$17.4 billion for 1998-2000. The high levels of direct government payments are reducing demand for credit. Farmers have maintained or improved their balance sheets by using some of their government payments to pay down existing debt or avoid new debt. Actual changes in farm business debt in 1999 and 2000 will depend heavily on the timing of government assistance payments and the extent to which farmers use them to reduce outstanding loan balances.

Lenders continue to be more cautious in extending agricultural credit. The current situation cannot be called a crisis, but the farm loan portfolio losses of the early to mid-1980's are a recent memory. Many lenders have begun considering improved measures of "repayment capacity" rather than cash flow alone to assess the ability of farmers to handle a given level of debt. The persistence of low commodity prices in 2000 will aggravate cash-flow problems for farm businesses. About 14 percent of all farm businesses are forecast to have debt repayment problems in

2000. Overall farmer use of net repayment capacity is forecast to rise to 66 percent in 2000, up from 56 percent in 1999 (lowered because of large Federal payments) and 59 percent in 1998. Availability of funds is not a problem as lenders currently have more money available to them than they can profitably lend. What is clear is the current credit situation varies considerably by region, commodity, farm size, and farm type, and that lenders are dealing with more internal variation in farm sector economic performance.

Today, despite low prices, lenders appear confident about the vast majority of their farm customers. Most farmers are not as heavily leveraged as they were a decade ago. Veteran lenders cite significant differences from the 1980's, including lower interest rates, more owner equity, better credit analysis and monitoring methods, and the financial health of their borrowers. Lenders thus will work with most of their customers to restructure debt and provide credit for operating expenses.

Interest rates on farm loans "bottomed out" by the first quarter of 1999, then rose throughout the year. The increases were due mainly to four 25-basis-point jumps in the Federal funds target rate instituted by the Federal Reserve. Further increases in the Federal funds rate are anticipated in 2000, while the cost of lending to farmers will probably rise relative to other nonfarm investments. Hence, average interest rates on new farm loans are expected to continue rising.

Agricultural banks remained very profitable through the middle of 1999. Their annualized rate of return on assets was 1.2 percent, in line with their strong performance in recent years. At 12 percent, return on equity also remained strong. Nonperforming loans increased to 1.2 percent of total loans, but loan loss provisions were only 0.3 percent of total loans. These results indicate that problems in the farm sector had not yet seriously affected farm bank loan portfolios. Loan losses at agricultural banks will increase if farm sector problems persist over an extended period, but government assistance has helped farmers repay their loans and the strong capital position of farm banks will allow most to survive. Only one agricultural bank failed in 1999 and only five failed during 1994-99.

The average loan-to-deposit ratio for agricultural banks was nearly 72 percent on June 30, 1999, about the same as a year earlier and up from 57 percent at the end of 1992. In the current financial environment, commercial banks can easily access nondeposit sources of funds, and profitable, well-managed banks often have very high loan-to-deposit ratios. The Gramm-Leach-Bliley Act of 1999 provides farm banks access to a stable source of long-term funds from the Federal Home Loan Bank System to supplement their traditional sources of loanable funds.

The financial condition of the FCS remains solid as it enters 2000. Loan volume and at-risk capital continue to grow while income for the first 9 months of 1999 remained solid but below a year earlier. Loan portfolio quality is strong and has improved since December 1998. In the last 2 years, higher provisions for loan losses, mostly in conjunction with

problem loans originated by the St. Paul Bank for Cooperatives, have reduced reported income. Volume growth has supported the System's earnings, while net interest margins have declined. Despite increased loan volume, retained earnings for the first 9 months of 1999 remained sufficient to raise the ratio of at-risk capital to assets.

Life insurance companies historically have provided mortgage credit to the farm sector. Their total farm lending activity was up more than 1 percent in 1999. Approximately \$2.5 billion in new farm mortgage loans was closed in 1999, roughly the same as in 1998. During 1982-92 total industry farm mortgage holdings declined most years for an overall drop of 28 percent, so the 1992-99 increase of 24 percent is significant. Life insurance companies report adequate funds for the credit applications that meet their quality standards. Their farm lending is forecast to increase nearly 2 percent in 2000.

Congress has authorized over \$4.0 billion in Farm Service Agency (FSA) guaranteed loan program lending and \$1.7 billion in FSA direct loan program lending for fiscal 2000. This authority is \$1.9 billion greater than actual obligations during fiscal 1999. If all of the \$5.7 billion authorized for fiscal 2000 is obligated, it would be the most FSA lending since the farm financial stress of the mid-1980's. The existing budget authority appears sufficient to meet demand for most program areas.

FSA's loan delinquency rate showed little evidence of growing debt repayment problems among its borrowers at the end of fiscal 1999. The volume of delinquent loan payments in the direct loan portfolio fell for the 11th consecutive year. Extensive use of loan servicing tools might help explain the decline. Guaranteed loan program delinquencies have been inching up for the past few years. While delinquent volume remains relatively low at 2.4 percent, this was the highest percentage reported since the guarantee programs received greater funding beginning in fiscal 1985.

Farmer Mac purchased or guaranteed over \$1.2 billion in loans during 1999, up sharply from the \$424 million recorded in 1998. Loans purchased through its open window program rose more modestly to \$392 million in 1999. The majority of the big volume increase came from the issuance of \$812 million in long-term standby purchase commitments and loan swaps. Several Farm Credit System associations were prominent users of these programs.

The quality of Farmer Mac's loans and the loans it has guaranteed remained sound in 1999, with just 1 percent of its volume delinquent at yearend. Nonetheless, Farmer Mac added \$3.7 million to its provisions for loan losses in 1999, up from \$1.7 million in 1998.

The annual lender issue of Agricultural Income and Finance Situation and Outlook Report features a special article that details financial stress in agriculture, as reported by agricultural banks during 1982-99.

Lenders Benefit from Government Payments to the Farm Sector

Net cash farm income is estimated at \$59.1 billion in 1999, the second highest on record. But this level includes total direct government payments that added approximately \$22.7 billion in assistance to the agricultural sector. In 2000, net cash income may slip to \$49.7 billion.

The financial condition of agricultural lenders was stable in 1999, and no major decline is forecast for 2000. But each of the four major institutional farm lender categories--commercial banks, the Farm Credit System (FCS), the Farm Service Agency (FSA), and life insurance companies--faces some unique challenges.

Lenders Served a Farm Sector Coping with Low Commodity Prices in 1999

Generally favorable conditions experienced by the farm economy during 1990-98 contributed to the strengthening financial condition of farm lenders. But more recently some challenges have emerged. Net cash farm income, which measures sales during the year, was \$55 billion in 1998, and is expected to be a near record \$59.1 billion in 1999. But in 2000, farm lenders will be dealing with a farm sector whose net cash income is forecast to decline nearly 16 percent to \$49.7 billion, significantly below the 1990-99 average of \$55.1 billion. Net farm income, which assesses the net value of calendar-year production, including the portion placed in storage, is forecast to increase from \$44.1 billion in 1998 to \$48.1 billion in 1999, but could drop 16 percent to \$40.4 billion in 2000. Net farm income averaged \$45.8 billion in 1990-99.

The viability of the farm economy, from a lender's perspective, continues to rest on its sound balance sheet. The value of farm assets increased 48 percent from 1986 to 1999 and now totals over \$1 trillion. Farm equity increased nearly 59 percent during the same period and was \$894.4 billion at the end of 1999. Total farm assets should continue to increase in value, although at a slower rate than in recent years. Farm debt declined slightly in 1999 and is forecast to do so again in 2000, adding further to farm equity.

Although aggregate farm sector performance has been strong in recent years, 1998 and 1999 were characterized by increasing variability in economic performance by region, commodity, farm type, and farm size. While production of many farm commodities remained high, depressed prices led to lower income for producers. The affected commodities include corn, cotton, wheat, oil crops, dairy, and hogs. Adverse weather conditions in 1999 also affected producers. A total of 1,383 counties suffered some drought. Drought zones centered in eastern Oregon, Southern Texas, and the Northeast, while hurricane-induced flooding centered

in the Carolinas. While the weather caused severe financial difficulties in affected regions, the national impact was limited. Numerous farm subsectors were profitable in 1999 and have a favorable outlook in 2000. These include beef cattle, broilers, vegetables, fruits, nursery, and greenhouse products.

Congress elected in 1998 and 1999 to address the low farm commodity prices and weather problems affecting selected commodities with additional financial support. Under the existing 1996 Farm Act, the farm sector received \$6 billion in production flexibility payments (which replaced most commodity programs) in calendar 1998 and an estimated \$5.1 billion in calendar 1999. The omnibus appropriations bill (P.L. 105-277), enacted in October 1998, included an additional \$5.8 billion in total assistance for agriculture, with half of these payments made to farmers in 1998.

The supplemental payments under P.L. 105-277, on top of previously authorized production flexibility payments and larger loan deficiency payments due to falling prices, substantially boosted Federal payments. Federal direct payments to farmers totaled \$12.2 billion in 1998. About \$2.8 billion in additional government direct payments (mostly marketing loss payments) for 1998 and another \$2.8 billion (mostly from disaster payments) for 1999 were distributed to farmers because of this legislation. Nearly half of the fiscal 1998 production flexibility payments went to major grain-producing regions, such as the Corn Belt and the Northern Plains.

The Agriculture Appropriations Act (P.L. 106-78), signed into law in October 1999, contained emergency farm assistance of an additional \$8.7 billion for fiscal 2000. In addition, P.L. 106-113, enacted in November 1999, added \$186 million in production loss payments and \$10 million for livestock producers. When added to previous legislative authorities, the 1999 legislation brought total direct payments for farmers in 1999 to \$22.7 billion. For 2000, the payout is forecast at \$17.2 billion (assuming no other emergency assistance is authorized). Farmers received an annual average of \$8.8 billion in direct payments during 1990-97, but this jumped to a yearly average of \$17.4 billion for 1998-2000. Both in nominal and real terms, the direct payments received by farmers in 1999 topped the previous record set in 1987.

The farm sector's aggregate financial indicators continued to show strength in 1999 due in large part to generally favorable yields and government payments. Total farm business debt increased \$33.8 billion or 24 percent during 1992-98, but the expansion stalled in 1999, as farmers responded to commodity price pressures by paying down loan balances and reducing financial risk. Total farm assets exceeded \$1 trillion in 1999 as farm equity increased for the 13th straight year (47 percent during the span). The sector's debt load relative to income and the debt-to-asset ratio are both steady. The total rate of return on assets has ranged from 3 to nearly 6 percent since 1992.

Figure 1
Total farm business debt remains below early 1980's levels
 \$ billion

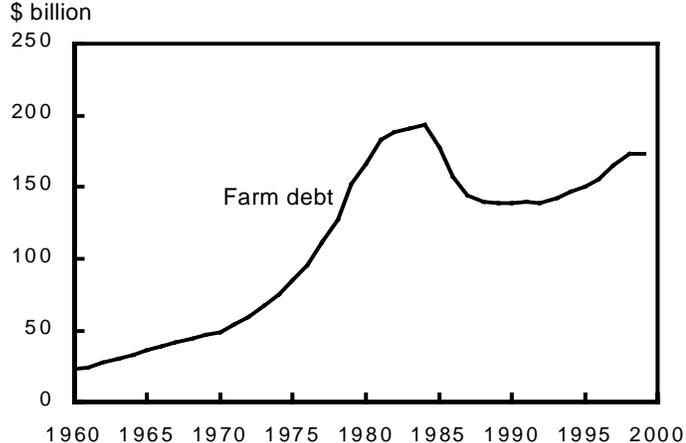


Figure 2
Annual growth in farm debt stalls in 1999
 \$ billion

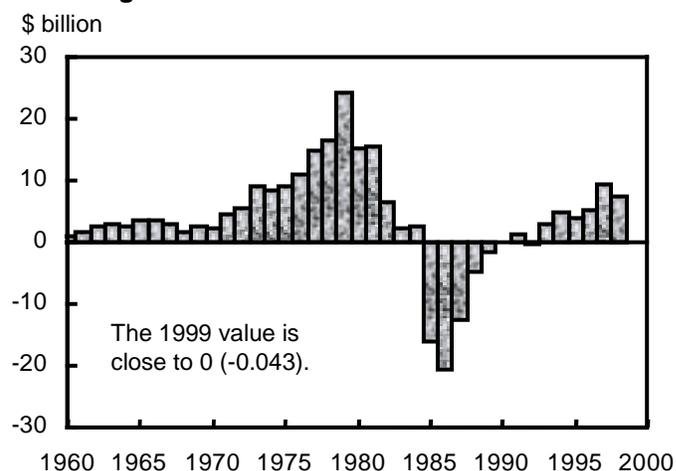


Figure 3
Farm sector balance sheet shows equity growth
 \$ billion

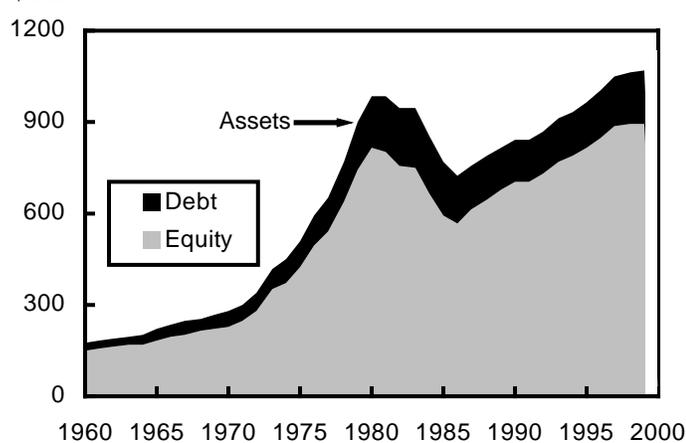


Figure 4
Farmers' debt load is about 3 times their net cash income
 Ratio of debt to income

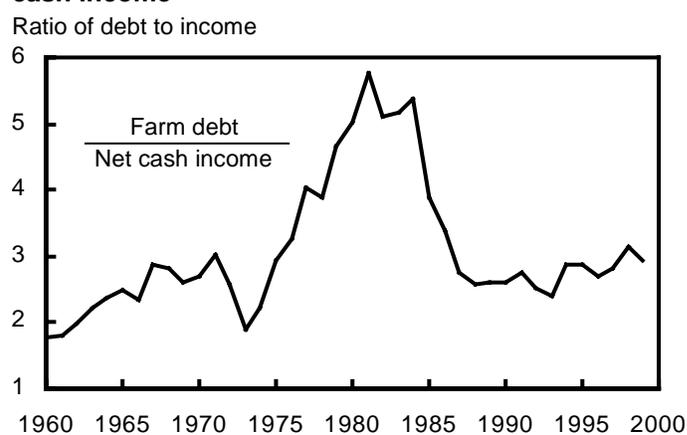


Figure 5
Real net farm and real net cash incomes increase in 1999
 Billion 1996 dollars

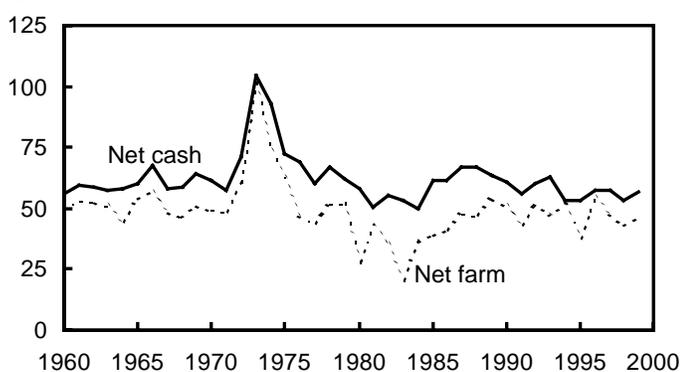
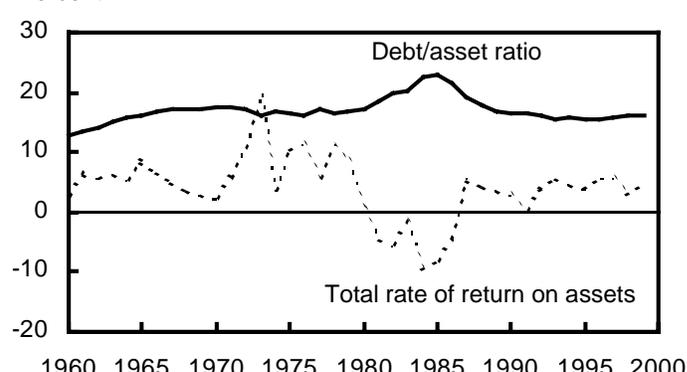


Figure 6
Farm sector rate of return on assets remains normal and debt/asset ratio is steady
 Percent



Source: Economic Research Service, USDA.

Lenders' Financial Performance Strong

Farm lenders experienced another profitable year and entered 2000 in financially sound condition. Low commodity prices are hurting farm operating incomes, but widespread effects on farm lenders have yet to materialize.

The distribution of the farm sector's estimated \$172.8 billion in farm business debt among the six lender categories on December 31, 1999, is summarized in table 1. Commercial banks account for 40 percent of all farm debt outstanding, making them the leading agricultural lender, followed by the Farm Credit System (FCS) with 27 percent. Individuals and others (merchant and dealer credit, land purchase credit contracts) held an estimated 22 percent, with the remaining categories holding lesser market shares.

Lenders' Financial Position Continues Strong

The position of commercial agricultural lenders in 1999 reflected the generally healthy state of farmers' finances in the 1990's. To date, farm borrowers have generally been able to weather current stressful conditions due to their strong financial positions and an increase in payments received from the Federal government. As a result, commercial farm lending institutions have been able to continue to build capital and maintain favorable credit quality in their loan portfolios.

Commercial farm lenders have benefited from improved management, higher loan standards, and tighter regulator oversight compared with the 1980's. All major institutional lender groups except the Farm Service Agency (the government "lender of last resort") continued to experience historically low levels of delinquencies, foreclosures, net loan charge-offs, and loan restructuring (tables 2 and 3). Any farm financial stress must be sustained to significantly affect aggregate national farm lender indicators such as loan delinquency rates (that is, they are lagging indicators of financial stress). How long prices for several major farm commodities will remain near their 1998 and 1999 lows is unknown, but there is no indication of a problem in the national farm lender performance data to date. The overall performance of farm lenders is vastly superior to that experienced during the farm financial crisis of the 1980's (app. table 6). In 1986, farm lenders held over \$3.7 billion in property due to loan defaults or foreclosures. In 1999 the amount was \$197 million.

The financial health of the FCS and commercial banks remains strong. FCS net income through the third quarter of 1999 was \$934 million, compared with \$1 billion a year earlier. FCS net interest margin (spread on total investable funds) for the first 9 months of 1999 was under 2.8 percentage points, compared with 2.9 a year earlier. The spread has remained at this level to above 3 percent since the first quarter of 1993, helping to maintain profits. The narrowing experienced in 1999 stemmed from reduced interest income earned on capital in a lower interest rate environment and from a 7-basis-point decrease in net interest spreads for the 9 months ending September 30, 1999, compared with a year earlier. Net interest income was

\$1.7 billion for the 9 months ending September 30, 1999, nearly identical to a year earlier.

Total FCS capital increased to \$13.1 billion on September 30, 1999, up from \$12.4 billion a year earlier. Nonaccrual loans as a percentage of total loans outstanding decreased from 1.26 percent on September 30, 1998, to 1.23 percent a year later. Much of the decrease was attributable to payments received and, to a lesser extent, charge-offs on certain large nonaccrual loans to a few processing and marketing cooperatives during the first 9 months of 1999. Nonaccrual loans related to long term real estate remained fairly stable. Nonperforming loans as a percentage of capital declined from 8.8 percent on September 30, 1998, to 8.1 percent a year later.

Recent performance by agricultural banks indicates that problems in the farm sector had not seriously affected farm bank loan portfolios. Delinquent loans and loan charge-offs did increase modestly, and bank examiners noted greater carryover debt at farm banks. But agricultural banks reported high average returns on equity and assets for the 6 months ending June 30, 1999, and loan loss provisions of just 0.3 percent in the first half of 1999 were consistent with an optimistic outlook regarding future loss rates. Surveys of farm banks found that while bankers were concerned about low farm prices, they wanted to work with their farmer borrowers and maintain relatively high rates of farm lending. Only one agricultural bank failed in 1999 and only five failed during 1994-99.

USDA's Farm Service Agency (FSA) holds a direct loan portfolio that showed little evidence of widespread repayment problems at the end of fiscal 1999. The volume of delinquent loan payments fell for the 11th consecutive year to \$1.4 billion. Outstanding direct loan volume also slipped as loan repayments and losses exceeded new lending activity. Extensive use of loan servicing options has helped keep FSA delinquency rates from rising. In contrast, the guaranteed FSA loan program delinquency rate continued to inch up during 1999. Nearly 2.4 percent of the guaranteed loan program volume is now delinquent. While the increase was small, the delinquency rate at the start of fiscal 2000 is the highest since the guarantee programs received greater funding beginning in fiscal 1985. Modest loan interest rates, large Federal payments, and stable farmland prices have helped maintain the creditworthiness of many FSA borrowers.

The agricultural situation facing lenders today differs from that of the early to mid-1980's by being one of widespread low prices rather than an overcommitment to borrowing by a large subset of farmers. For example, the ratio of farm debt to net cash farm income was less than 3 percent in 1999, compared with the high of nearly 6 percent in 1981. The

increase in farm debt in recent years has been restrained compared with the 1970's, with only a 25-percent increase during 1990-99, compared with a 211-percent increase during 1970-79. FSA's direct farm loans outstanding as a share of total sector farm debt have dropped from a high of over 16 percent in 1987 to less than 5 percent in 1999 as many financially vulnerable farmers retired or otherwise left the sector.

Farm lenders have undergone considerable restructuring and consolidation since 1980, and have thus spread their risk over a more diversified and geographically dispersed borrower clientele. Farm lenders also learned the risks of lending on the basis of collateral in the 1980's and have instituted better loan analysis tools based on cash flow and other criteria. Farm lender regulation is much improved over the 1970's. In a nutshell, low prices and poor weather conditions caused most financial problems faced by farm producers in 1998 and 1999. Lenders likely will find that these farmers will not gain much relief in the form of

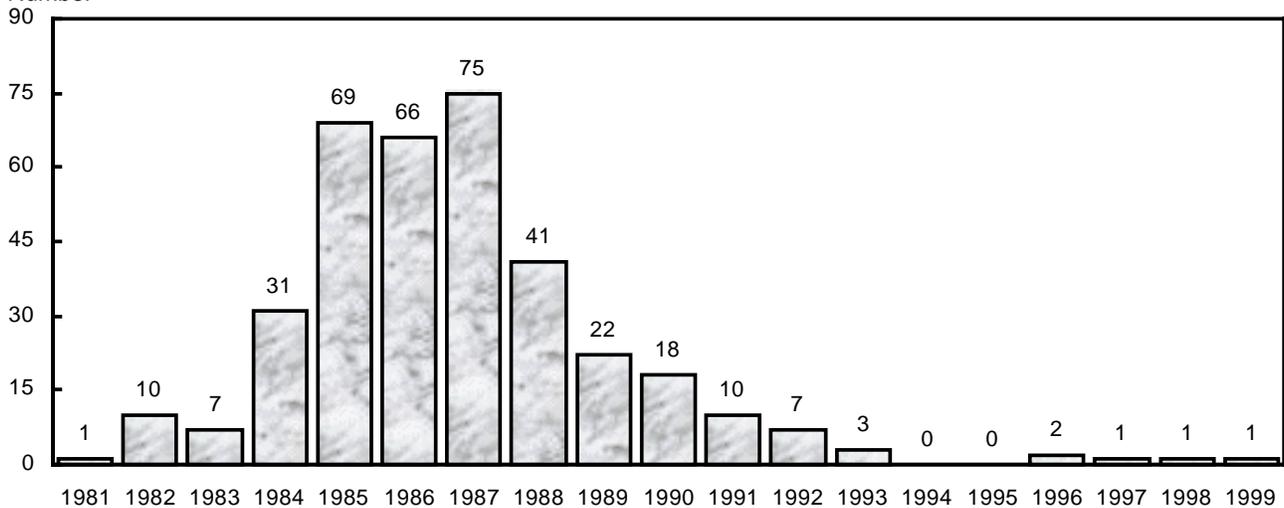
higher commodity prices in 2000. With market prices for most farm commodities in a deep slump, some erosion in agriculture's financial foundation is under way.

Agricultural lender performance depends in large part on an environment characterized by the 1996 Farm Act, written in a time of prosperity. The bill was intended to make U.S. agriculture more market-oriented and reduce Federal spending over time. But the collapse of farm prices over the past 2 years has led to a concern that the farm program safety net provided by the 1996 legislation is inadequate. Despite the concern, there is no consensus on how the 1996 Farm Bill should be modified. If Congress passes an emergency aid package this year, it would be for the third straight year. Many feel that relying on ad hoc assistance provided by annual emergency aid legislation is not in the best interests of producers or taxpayers. They argue that lenders, producers, and others need to know how much farm income and other support will be provided by the government so they can plan for the future.

Figure 7

Agricultural bank failures, 1981-99

Number

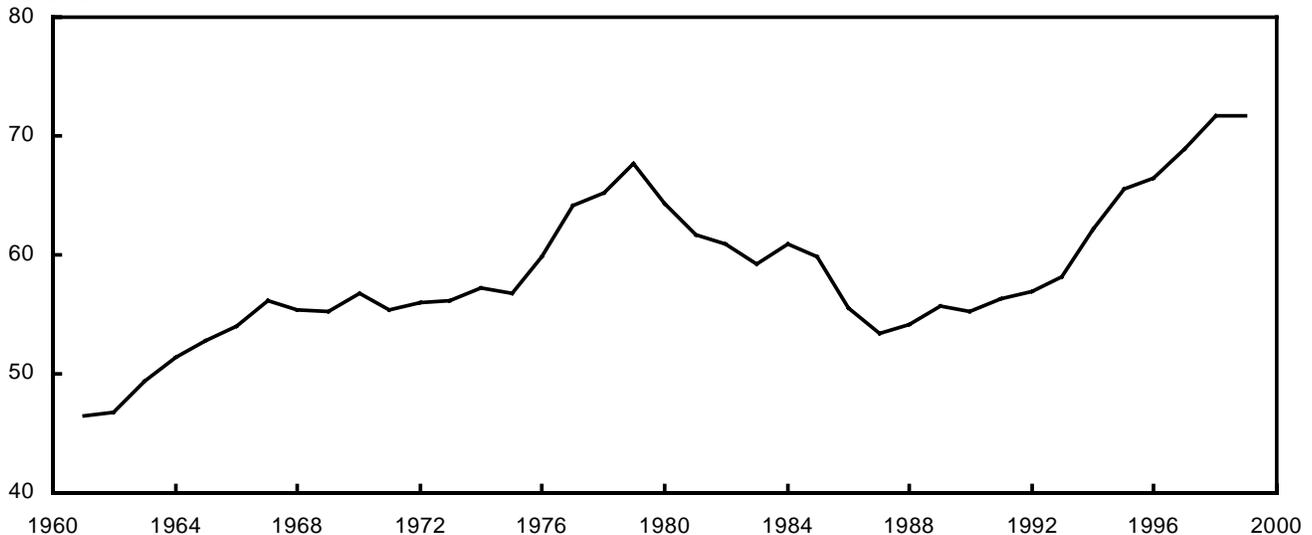


Source: Federal Deposit Insurance Corporation and Board of Governors of the Federal Reserve System.

Figure 8

Agricultural banks' aggregate loan-to-deposit ratio, 1961-99

Percent



Source: Board of Governors of the Federal Reserve System.

Table 1—Distribution of farm business debt, by lender, December 31, 1999 1/

Lender	Type of debt		Total
	Real estate	Nonreal estate	
	<i>Percentage of total</i>		
Commercial banks	16.3	24.0	40.2
Farm Credit System	17.1	9.9	27.0
Farm Service Agency	2.2	2.3	4.6
Life insurance companies	6.3	---	6.3
Individuals and others	10.4	11.6	22.0
Commodity Credit Corporation	0.0	---	2/
Total	52.2	47.8	100.0

1/ Preliminary. Due to rounding, subcategories may not add to totals. 2/ This excludes CCC crop loans, which are estimated at \$1 billion at the end of calendar 1999.

Table 2—Delinquent farm loan volume, by lender, 1990-99

Lender	Yearend 1/									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999 2/
	<i>Billion dollars</i>									
Commercial banks 3/ 4/	0.7	0.7	0.7	0.6	0.5	0.5	0.6	0.5	0.6	0.8
Farm Credit System 5/	2.5	2.2	1.9	1.5	1.1	0.8	0.6	0.5	0.8	0.6
Life insurance companies 6/	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2
Farm Service Agency 7/	8.1	7.3	6.6	5.8	4.4	4.5	3.5	2.6	2.3	2.0
	<i>Percentage of outstanding loans</i>									
Commercial banks 3/ 4/	2.0	2.0	1.9	1.5	1.2	1.2	1.4	1.2	1.3	1.8
Farm Credit System 5/	6.1	5.4	4.6	3.6	2.7	1.8	1.3	1.1	1.5	1.2
Life insurance companies 6/	4.2	3.8	3.3	2.2	2.6	2.7	0.9	1.0	1.4	1.4
Farm Service Agency 7/	41.3	41.7	42.5	41.0	34.8	39.0	32.6	26.8	24.9	22.2

1/ End of fiscal year (Sept. 30) for the Farm Service Agency (FSA) and end of the calendar year (Dec. 31) for the other lenders. 2/ June 30 except for FSA. 3/ Delinquencies were reported by institutions holding most of the farm loans in this lender group. Data shown are obtained by assuming that the remaining institutions in the group experienced the same delinquency rate. 4/ Farm nonreal estate loans past due 90 days or more or in nonaccrual status, from the Reports of Condition submitted by insured commercial banks. 5/ Data shown are nonaccrual loans, which include accrued interest receivable and exclude loans of the Banks for Cooperatives, Ag Credit Banks, and affiliated associations. 6/ Loans with interest in arrears more than 90 days. 7/ A loan is delinquent if a payment is more than 30 days past due. Data shown are for September 30; thus, they avoid the yearend seasonal peak in very short-term delinquencies and so are more comparable with those shown for other lenders. The FSA data reflect the total outstanding amount of the loans that are delinquent (as do the data shown for other lenders), rather than the smaller amount of delinquent payments that is often reported as FSA "delinquencies."

Table 3—Farm loan losses (net charge-offs), by lender, 1987-99

Year	Commercial banks 1/	Farm Credit System 2/	Farm Service Agency 3/	Exhibit: Life insurance company foreclosures 4/
	<i>Million dollars (Percent of loans outstanding at end of period) 5/</i>			
1987	540 (1.8)	488 (0.9)	1,199 (4.3)	692 (7.5)
1988	142 (0.5)	413 (0.8)	2,113 (8.4)	364 (4.0)
1989	98 (0.3)	-5 (-0.0) 6/	3,297 (12.4)	204 (2.3)
1990	57 (0.2)	21 (0.0) 6/	3,199 (13.5)	85 (0.9)
1991	139 (0.4)	47 (0.1)	2,289 (10.4)	95 (1.0)
1992	93 (0.3)	19 (0.0) 6/	1,887 (9.1)	148 (1.8)
1993	60 (0.2)	-2 (-0.0) 6/	1,768 (9.4)	96 (1.1)
1994	75 (0.2)	-26 (-0.1)	1,353 (7.5)	42 (0.5)
1995	63 (0.2)	-5 (-0.0) 6/	1,041 (6.0)	73 (0.8)
1996	109 (0.3)	48 (0.1)	1,344 (7.9)	82 (0.8)
1997	79 (0.2)	27 (0.0) 6/	825 (5.0)	16 (0.2)
1998	102 (0.2)	68 (0.0) 6/	735 (4.7)	27 (0.2)
1999 7/	125 (0.3)	152 (0.2)	586 (3.6)	1 (0.0)

1/ Calendar year data for nonreal estate loans, estimated for banks not reporting this data. 2/ Calendar year data. 3/ Fiscal year data beginning October 1. Includes data on the insured (direct) and guaranteed farm loan programs. FSA data are not directly comparable with commercial lenders because of some accounting differences. 4/ Loan charge-off data are not available for life insurance companies. 5/ Loan loss data rounded to nearest million dollars. 6/ Less than 0.05 percent. 7/ Commercial bank data through June 30, 1999, and Farm Credit System and life insurance company data through September 30, 1999.

Sources: American Council of Life Insurance, Board of Governors of the Federal Reserve System, The Farm Credit Council, and the Farm Service Agency.

Farmers' Use of Repayment Capacity Rises

Farmers' use of available credit lines expected to increase substantially in 2000.

Debt Stable but Repayment Problems to Intensify

Lower income will reduce farm operators' ability to fully meet debt service payments on their loans in 2000.

Anticipated interest rate rises are not expected to be large enough to cause a substantial increase in total farm sector interest payments, as any rate increase is likely to be offset by a declining level of total farm sector debt. Although some operators may experience difficulty in meeting principal and interest payments, widespread financial stress is unlikely. U.S. farmland values increased over 67 percent during 1987-99, and growing equity supported additional farm borrowing. However, lower profitability beginning in 1998 led to slower rates of farmland value growth (including declines in some areas) that will continue into 2000, thus affecting credit demand.

Farmers are expected to increase their use of repayment capacity substantially in 2000. Farm debt repayment capacity use (actual debt expressed as a percentage of maximum debt that could be repaid from current income) effectively measures the extent to which farmers are using their available lines of credit. This ratio indicates that, in 2000, farmers are expected to use almost 66 percent of the debt that could be supported by their current incomes. Use of debt repayment capacity rose from 45 percent in 1993 to 56 percent in 1995. Despite the 1996 rise in farm business debt, high net cash income and lower interest rates reduced repayment capacity use to 51 percent. Use of debt repayment capacity measured 53 percent in 1997 and 59 percent in 1998. It declined to 56 percent in 1999, as farm incomes were bolstered by the infusion of government emergency assistance payments. The 2000 level is expected to be the highest since 1986, barring additional emergency assistance legislation.

Lenders generally require that no more than 80 percent of a loan applicant's available income be used for repayment of principal and interest. For farm operators, this income available for debt service (measured as net cash income plus interest) determines the maximum loan payment the farmer could make. Given current market interest rates and an established repayment period, the maximum debt that the farmer could carry with this loan payment can be determined. Using current bank interest rates and a 7-year repayment period, maximum feasible debt conceptually measures the line of credit that could be available to farmers. Debt repayment capacity use is a measure of actual debt relative to this theoretical maximum feasible debt.

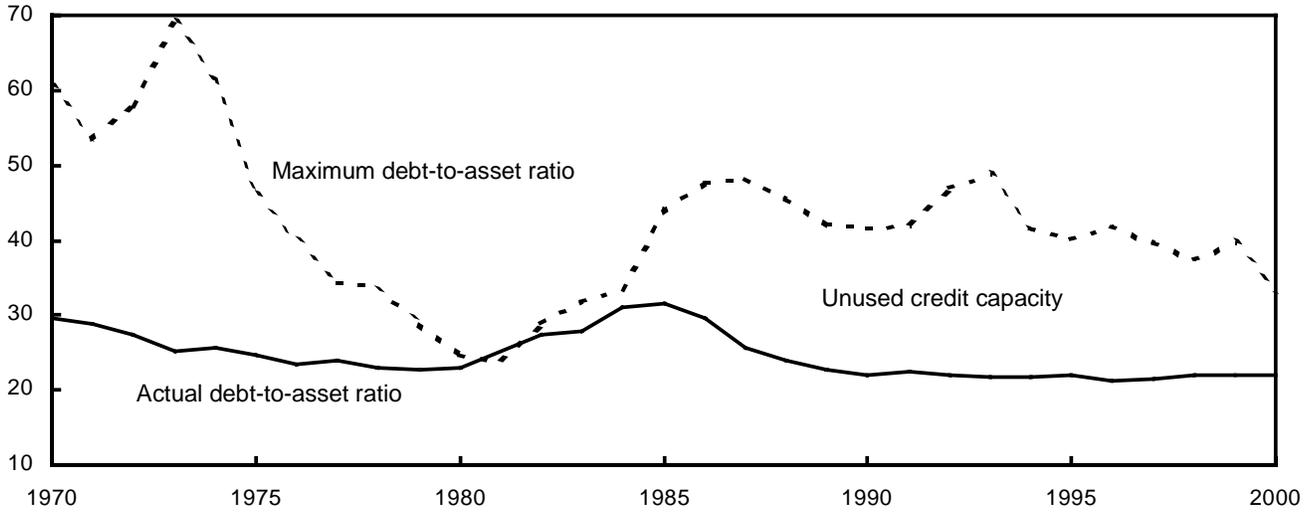
Despite the rise in use of available credit capacity, the traditional debt-to-asset ratio indicates that farmers' financial position is not expected to deteriorate in 2000. The aggregate farm operator debt-to-asset ratio is projected to decrease slightly from its current 22 percent by the end of 2000, as farm asset values are anticipated to rise slightly and debt levels stabilize. The ratio appears to suggest a continuing improvement in farm financial conditions.

However, substitution of maximum debt into the debt-to-asset ratio computation indicates that any improvement due to rising asset values may be potentially offset by lower cash incomes. The maximum debt-to-asset ratio that could be supported from current cash income fluctuated around 0.4 in 1997-99. In 2000, it is expected to decline to 0.3--the lowest since 1984. The difference between actual and maximum debt-to-asset ratios suggests that farmers, in total, have the capability to safely manage existing debt. However, lower income available to service debt and lenders' emphasis on loan approval based on repayment ability rather than collateral values will probably restrain any increase in farmers' borrowing activities.

Figure 9

Farm borrowing is below estimated credit limits, 1970-2000

Percent



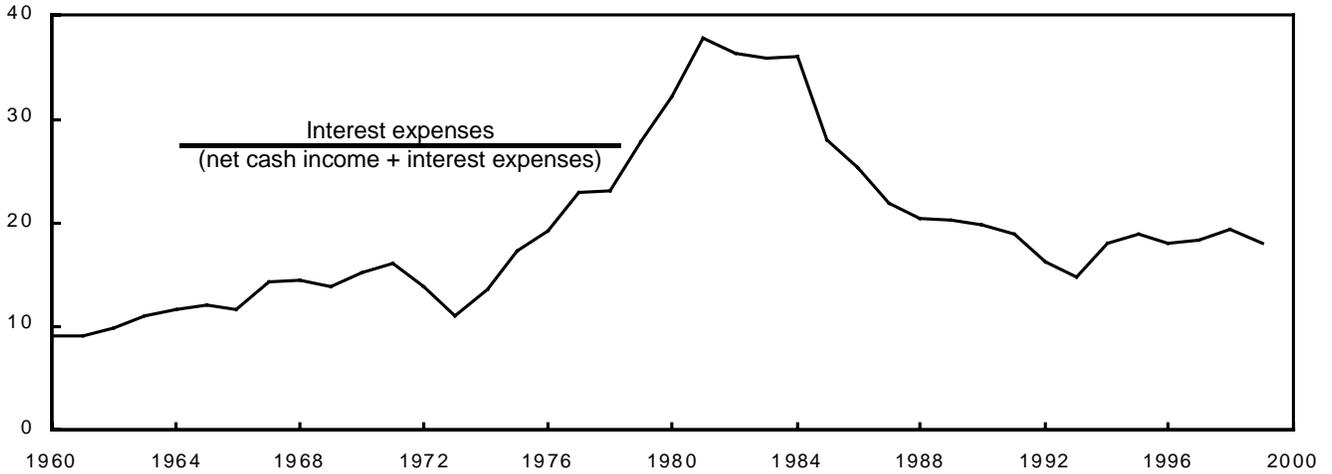
Values for 1999 and 2000 are forecasts.

Source: Economic Research Service, USDA.

Figure 10

Interest expenses as a share of net cash income, 1960-99

Percent



Source: Economic Research Service, USDA.

Agricultural Loan Rates End 2-Year Downward Trend in Mid-1999

Interest rates expected to increase in 2000.

The downward trend in quarterly farm loan rates that began in mid-1997 bottomed out by mid-1999. Agricultural loan rates trended upward starting in the second quarter of 1999. Fourth-quarter 1999 nonreal estate rates were up around 35 basis points (a basis point is 1/100 of 1 percent) from fourth-quarter 1998. Real estate loan rates were up about 45 basis points for the same period. These trends reflected Federal Reserve-led increases in market interest rates and heightened concerns of default risk on farm loans. These upward pressures have been somewhat offset by the ready availability of loan funds and the decreased demand for debt by farmers. Loan rates and volatility are still low compared with the double-digit levels of the early 1980's (see fig. 11).

The past year saw the Federal Reserve switch from a growth-oriented to an inflation-oriented emphasis in its monetary policy. Continuing economic strength and concerns about inflationary pressures led the Federal Reserve to increase the Federal funds rate by 25 basis points four times beginning in the second quarter of 1999. This led to increases in other short-term market interest rates such as Treasury yields.

A rise in market interest rates will lead to a rise in farmers' cost of debt. This occurs for two reasons. First, higher interest rates mean agricultural lenders face a higher cost of funds. Second, higher interest rates on nonfarm interest-bearing securities, such as bonds and nonfarm loans, mean farm loan rates must increase in order for farmers to compete for a share of agricultural lenders' asset portfolio.

Increases in the perceived likelihood of farmer default can also lead to greater costs of farm debt through increased collateral requirements and/or increased loan rates. However, government support payments have likely kept farm loan rates and farm interest expenses low.

Continued low commodity prices have led to increases in farm loan extensions, renewals, and delinquencies. Some lenders report weakened loan asset quality in 1999, which will worsen if farm income weakens in 2000. Lenders have responded by increasing the amount of staff time allocated towards dealing with potential problem farm loans. This

will increase the cost of farm lending relative to other uses of lender funds.

Rising interest rates are a double-edged sword in the farm sector. A rise in rates leads to an increase in farm business and household interest expenses, for a given level of debt (fig. 12). But debt-free farmers feel the effect of higher interest rates. Increases in interest rates tend to reduce farmland values by reducing the present value of expected future cash flows generated from the use of farmland.

Higher interest rates reduce the value of fixed-rate financial securities held in farmers' portfolios, reducing their net worth and increasing their vulnerability to reductions in their future cash inflows. This negative effect is partially offset by the fact that future cash inflows can be reinvested at higher rates of return.

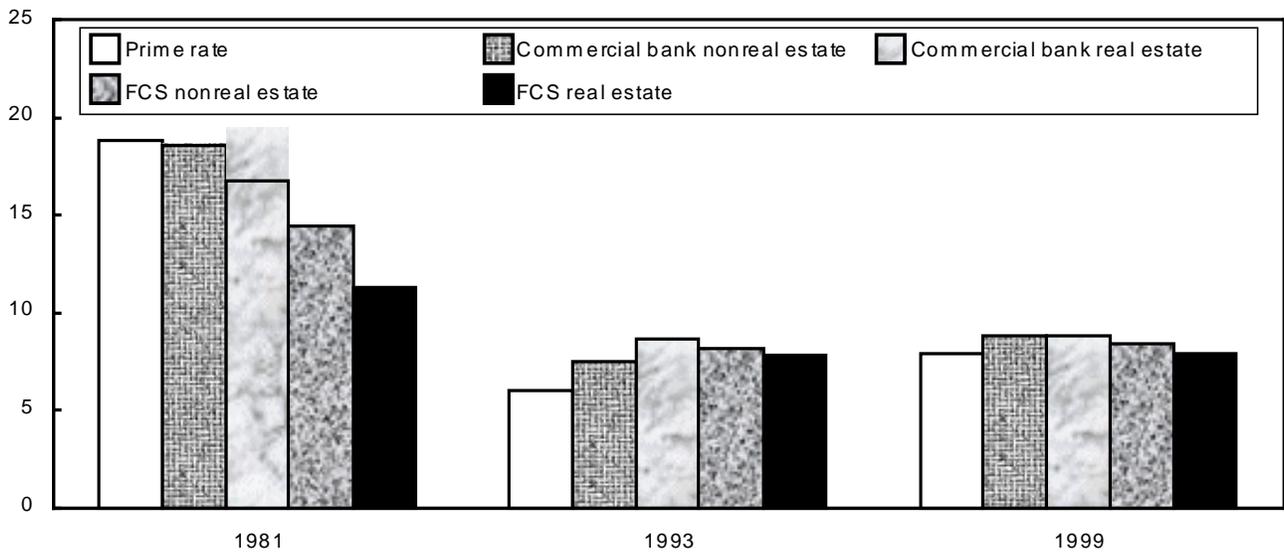
Data for fourth-quarter 1999 suggest commercial bankers anticipate rising loan rates in 2000. The percentage of farm loans made with floating rates by commercial banks rose, reversing an earlier movement toward fixed rates. Lenders tend to shift to variable-rate loans when they anticipate rising interest rates. In addition, agricultural bankers in the Minneapolis Federal Reserve District reported fixed-rate premiums of about 10 to 20 basis points. The fixed-rate premium is the difference between a fixed interest rate and a variable interest rate for the same loan. Lenders charge lower interest rates on variable-rate loans when rates are expected to rise in the future. Lower rates on variable-rate loans encourage farmer-borrowers to assume the risk of higher future interest costs.

Given the prospects for continued strong growth in the Nation's economy and continued low commodity prices in the agricultural sector, the best bet is that agricultural interest rates will trend upwards during 2000. Four increases in short-term rates by the Federal Reserve since June 1999 have failed to align the growth in the Nation's aggregate demand with the growth in potential supply. By fourth-quarter 2000, interest rates on both short- and long-term farm loans could well be 100 basis points over their fourth-quarter 1999 levels.

Figure 11

Selected interest rates, selected years

Percent

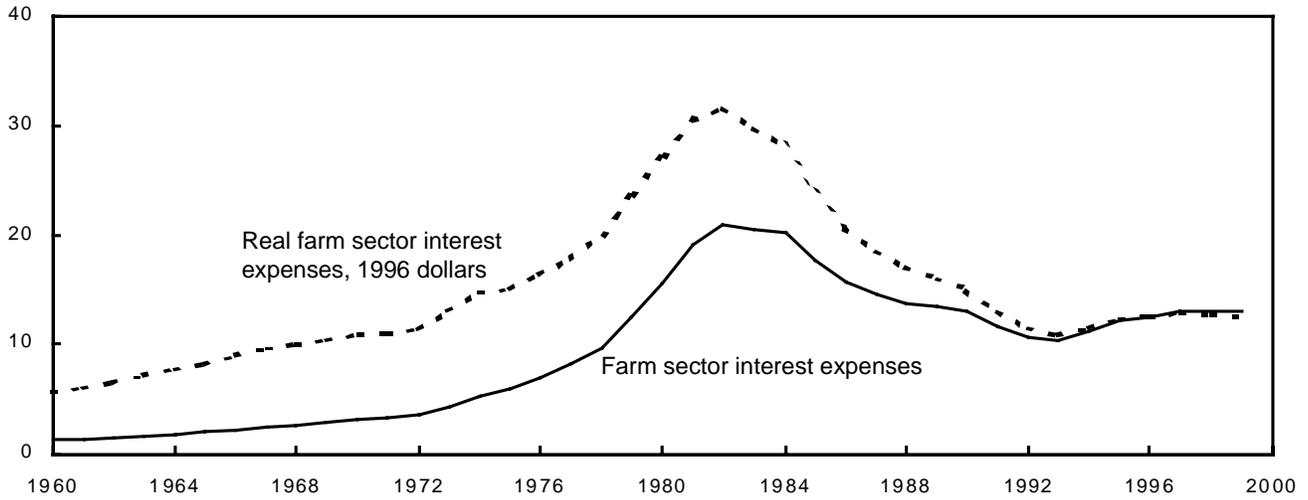


Source: Board of Governors of the Federal Reserve System and various Farm Credit District Banks.

Figure 12

Farm sector interest expenses, 1960-99

\$ billion



Source: Economic Research Service, USDA.

Agricultural Banks Remain Highly Profitable

Problems in the farm sector are not reflected in aggregate data for farm banks.

Agricultural banks remained very profitable through the middle of 1999. Low loan loss provisions and good interest rate spreads supported large profits for agricultural lenders. An annualized mid-1999 rate of return on assets (ROA) of 1.2 percent is about the same as it has been since 1992, and return on equity capital (ROE) rose to 12 percent (table 6).

Continued strength in ROA reflects substantial quality in farm bank loan portfolios. Loans in nonperforming status at midyear were 1.2 percent of total loans, above the average of 0.8 percent for small nonagricultural banks but just marginally above the low values of recent years (table 4). As measured by ROA and loan quality, agricultural bank performance was similar to that of the small nonagricultural banks to which they are often compared. ROE for small nonagricultural banks exceeded the midyear ROE for agricultural banks, but their ROA was the same. Agricultural banks maintained high average capital-to-asset ratios during 1999. These ratios help explain why, on average, agricultural banks had the same ROA but a smaller ROE than small nonagricultural banks.

Agricultural banks' loan-to-deposit ratios averaged 72 percent in June 1999, compared with 74 percent at small nonagricultural banks and 94 at large nonagricultural banks. While loan ratios typically decline between June and December at agricultural banks as farmers repay their loans, 72 percent is high by historical standards. Because this is an average, higher loan ratios at some farm banks may lead their managers to consider slowing lending activity. However, several surveys conducted by Federal Reserve District Banks suggest that most agricultural banks are comfortable with their current loan ratios. These surveys demonstrate that bankers are aware of the effects of low commodity prices on their farmer customers, noting that loan repayment rates were dropping. But the bankers expressed a willingness to extend additional farm credit overall and to work with their borrowers to get past problems caused by low prices.

What Is an Agricultural Bank?

The Board of Governors of the Federal Reserve System (FRB) classifies a bank as agricultural if its ratio of farm loans to total loans exceeds the unweighted average of the ratio at all banks on a given date--16.16 percent on June 30, 1999 (table 5). The Federal Deposit Insurance Corporation (FDIC) criterion is a constant 25-percent ratio of agricultural loans to total loans. Unless otherwise indicated, the FRB definition is used throughout this report. Most farm banks retain much larger agricultural shares in their loan portfolios and therefore remain sensitive to conditions in the agricultural sector of the economy. Farm loans averaged 35

percent of total loans at all farm banks in 1999, and reached 48 percent for farm banks with below \$25 million in assets (table 7).

The dollar amount of farm loans outstanding typically peaks in the summer and declines the rest of the year as production loans are paid down. Thus the use of June data rather than end-of-year data in the last column of table 5 distorts recent trends in the number of agricultural banks. For the 6 months ending June 30, 1999, farm banks declined by only 32 to 2,942 using the FRB definition and decreased by 18 to 2,252 using the FDIC definition. Both definitions show much larger declines when comparing June 1999 to June 1998 (not shown in the table); 123 fewer FRB farm banks and a drop of 139 in FDIC's count of agricultural banks. The trend toward fewer agricultural banks reflects an industry-wide drop in the number of commercial banks over the last decade due largely to mergers and some failures.

Farm Loan Quality Declines Slightly

In spite of moderately greater loan delinquencies and charge-offs, farm loan quality continued to look solid through the first half of 1999. About 2 percent of all commercial bank agricultural production loans were delinquent as of June 1999 (table 2), up about 0.4 percent from June 1998 (not shown). Net charge-offs of farm production loans totaled \$123 million on an annualized basis at all commercial banks in the first 6 months of 1999 (table 3), up from \$42 million in the first half of 1998 (not shown). However, recent charge-offs are negligible relative to outstanding loans and charge-offs observed during the farm crisis of the mid-1980's. Loan loss provisions were only 0.3 percent of outstanding loans for agricultural banks, reflecting management's continued positive outlook for future loss rates (table 6).

One agricultural bank failed in 1999, the same number as in 1997 and 1998 (appendix table 10). This reflects continued strength in farm bank loan quality and wide net interest margins, but also follows national trends of a very strong performance in the banking industry. Six nonagricultural banks failed in 1999, compared with none in 1997 and two in 1998. No agricultural banks and just five nonfarm banks had nonperforming loans exceeding their capital at midyear, down from two farm banks and six nonfarm banks at the end of 1998 (appendix table 9). Based on examinations by Federal regulators, the FDIC rated only 69 commercial banks as problem institutions at the end of September 1999. This is well within the range of 62-82 problem banks since December 1996. While the identity of these banks is not made public, even an increasing proportion of agricultural banks on the list would not signify widespread troubles for farm banks.

Strong profits and loan quality, and low expectations for future loss rates allowed commercial banks to keep loan loss provisions low.

Table 4—Nonperforming loans as a percentage of total loans, by type of bank, 1991-99 1/

Type of bank	1991	1992	1993	1994	1995	1996	1997	1998	1999 2/
	<i>Percent</i>								
Agricultural									
Total nonperforming 3/	1.7	1.4	1.2	1.0	1.0	1.1	1.0	1.1	1.2
Past due 90 days 4/	0.5	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.5
Nonaccrual	1.2	1.0	0.8	0.7	0.7	0.7	0.6	0.7	0.7
Small nonagricultural 5/									
Total nonperforming 3/	2.1	1.7	1.5	1.1	1.0	1.0	0.9	0.9	0.8
Past due 90 days 4/	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nonaccrual	1.5	1.3	1.1	0.8	0.7	0.7	0.6	0.6	0.5

1/ Data are weighted by bank asset size using month-end June balances. 2/ 1999 figures are for June 30; all others are December 31.
3/ Columns may not equal totals due to rounding. 4/ Still accruing interest. 5/ Banks with less than \$500 million in assets that were not agricultural by the Federal Reserve Board definition.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Table 5—Number of agricultural banks, by definition, 1991-99 1/

Item	1991	1992	1993	1994	1995	1996	1997	1998	1999 2/
Commercial banks (Number)	11,852	11,401	10,916	10,401	9,892	9,476	9,080	8,703	8,605
FRB Agricultural banks (Number)	3,953	3,853	3,723	3,548	3,363	3,250	3,108	2,974	2,942
FRB farm loan ratio (Percent)	16.57	16.73	17.05	16.99	16.72	16.35	16.34	16.24	16.16
FDIC Agricultural banks (Number)	3,114	3,019	2,947	2,826	2,642	2,480	2,374	2,271	2,253

1/ Includes domestically chartered FDIC-insured commercial banks with non-zero deposits, assets, and loans. 2/ 1999 figures are for June 30; all others are December 31.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Table 6—Selected bank performance measures, by type of bank, 1991-99 1/

Performance measure	1991	1992	1993	1994	1995	1996	1997	1998	1999 2/
	<i>Percent</i>								
Rate of return on equity capital									
Agricultural banks	11.2	13.0	12.8	12.0	11.9	11.8	12.1	11.8	12.1
Nonagricultural small banks	9.1	11.8	12.8	12.8	13.0	12.9	13.1	12.4	12.3
Rate of return on assets									
Agricultural banks	1.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Nonagricultural small banks	0.7	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2
Provisions for loan losses as a percentage of loans									
Agricultural banks	0.5	0.5	0.3	0.2	0.3	0.3	0.3	0.4	0.3
Nonagricultural small banks	1.0	0.8	0.5	0.4	0.4	0.4	0.5	0.5	0.4
Capital as a percentage of assets									
Agricultural banks	10.1	10.4	10.9	10.8	11.3	11.1	11.4	11.2	11.1
Nonagricultural small banks	9.3	9.6	10.1	10.1	10.6	10.7	10.8	10.8	10.7

1/ Rate of return on equity is net income after taxes as a percentage of the average of total equity capital at the beginning and end of the year. Rate of return on total assets is net income after taxes as a percentage of total assets on December 31. 2/ 1999 ratios are June 30 data, annualized; all others are December 31.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Small Agricultural Banks Are the Biggest Farm Lenders

Nonagricultural banks held an increased, but still slightly smaller share of all commercial bank farm loans.

Agricultural banks reported a \$700-million decline to \$40.2 billion (table 7) in the total value of their farm lending portfolios during June 1998-June 1999, compared with a solid \$3.2-billion increase the previous year. A \$1.8-billion gain for nonagricultural banks left them with 47 percent of commercial bank farm loans (table 7), up from 46 percent the previous year. The decline in farm loans outstanding at agricultural banks is somewhat surprising given reports of increased carryover debt due to low farm prices. It probably reflects a reduction in the number of farm banks and efforts by farmers to minimize debt in response to low prices.

The largest nonagricultural banks (assets over \$500 million) hold nearly one-third of all commercial bank farm debt (table 7). With less than 15 percent of this debt, the other five nonagricultural bank classes trail the combined 15-percent market share held by the two smallest classes of agricultural banks.

Solvency Measures Look Good for All Bank Groups

Bank capital reduces the risk of bank failure by cushioning losses and supports liquidity by maintaining depositor confidence. Capital-to-asset ratios for midyear 1999 show that commercial banks--regardless of size--have sufficient capital to handle any reasonable projected loan losses (table 8). Small commercial banks had capital-to-asset ratios ranging from 11 to 15 percent, compared with 10 to 11 percent for the three largest bank categories. A narrower measure, the ratio of equity capital to assets, averaged 14 percent for the smallest banks, but only 8 percent for banks with assets above \$500 million. Large banks tend to be highly leveraged, with more loans outstanding per dollar of equity capital.

Lower loan-to-deposit ratios suggest that small commercial banks are more liquid than larger banks. However, nondeposit funding sources and secondary markets for loan sales have weakened the loan-to-deposit ratio's traditional role as a liquidity measure. Some banks hold more loans, resulting in higher loan-to-deposit ratios. Other banks reduce risk and their loan-to-deposit ratios by selling loans and acquiring securities instead. Large banks use nondeposit sources of loanable funds liberally, as witnessed by their much lower value of deposits as a percentage of liabilities (table 8). This ratio was about 70 percent for the largest banks, but 90 percent or more for all other size categories.

Largest Banks Most Profitable

Large banks lend a greater percentage of their asset base, but they used to earn lower rates of return on those assets

(ROA) than did smaller banks. However, in the first part of 1999, the smallest banks easily registered the lowest ROA and the highest came from banks with \$300-\$500 million in assets. Large banks improved their profitability in part due to continued reductions in real estate loan problems. As of June 30, 1999, under 1 percent of big bank real estate loans were nonperforming (appendix table 8), down slightly from a year earlier. Rate of return on equity (ROE) increased uniformly with bank size (table 9), helped by greater leverage in the larger banks.

The smallest banks, those with \$25 million or less in assets, include 758 agricultural banks and 442 nonagricultural banks (table 7). The smallest agricultural banks accounted for less than 5 percent of loans to agriculture held in the portfolios of commercial banks. Agricultural banks achieved an average annualized ROA of 1.2 percent and ROE of 12 percent. Agricultural banks with less than \$25 million in assets earned an ROA of 1 percent, compared with a loss of -0.6 percent for nonagricultural banks of that size class. These small nonfarm banks may be dominated by new banks which typically lose money their first few years.

Current Banking Issues

After years of effort to reform the financial industry, the Gramm-Leach-Bliley Act of 1999 (GLB) was signed into law last November. By repealing the Glass-Steagall Act and related legislation, GLB allows firms in the banking, insurance, and securities industries to join together and provide a wider range of financial services on a one-stop basis. Membership and collateral requirements were liberalized for community banks (less than \$500 million in assets) that wish to join the Federal Home Loan Bank System (FHLBS). Member community banks can now use agriculture and small business loans as well as housing loans as collateral for FHLBS advances. Advances supplement deposits as a stable source of long-term loanable funds. Not all reform proposals made it into the final bill. Banks and industrial corporations still cannot join together. Examinations required by the Community Reinvestment Act were not eliminated for small banks, though the frequency of exams is reduced for banks with assets below \$250 million that maintain satisfactory or better results. The GLB is discussed in greater detail elsewhere in this publication.

Bankers will be following several issues this year. They support an ongoing attempt at bankruptcy reform that would require more individuals filing for bankruptcy to repay part of their debt if they can afford to do so. Banks will again fight any attempts by the Farm Credit System to gain the authority to make nonfarm loans or to allow FCS lenders to compete nationally rather than in prescribed regions.

Agricultural banks with less than \$500 million in assets still hold a slight majority of outstanding bank farm loans, despite the declining number of agricultural banks.

Table 7—Agricultural lending of agricultural and nonagricultural banks, by bank size, June 30, 1999 1/

Total assets	Agricultural banks					Nonagricultural banks				
	Banks	Total ag loans	Avg. ag loans	Ag lending share 2/	Ag loans/total loans	Banks	Total ag loans	Avg. ag loans	Ag lending share 2/	Ag loans/total loans
<i>Million dollars</i>	<i>Number</i>	<i>---Million dollars---</i>	<i>-----Percent-----</i>		<i>Number</i>	<i>---Million dollars---</i>	<i>-----Percent-----</i>			
Under 25	758	3,430	4.5	4.5	47.8	442	173	0.4	0.2	4.6
25-50	937	8,351	8.9	10.9	42.1	932	854	0.9	1.1	4.1
50-100	787	12,268	15.6	16.1	37.4	1,399	2,402	1.7	3.1	3.8
100-300	410	12,246	29.9	16.0	31.6	1,866	5,904	3.2	7.7	3.0
300-500	32	2,037	63.6	2.7	27.8	368	1,832	5.0	2.4	2.0
Over 500	18	1,866	103.6	2.4	22.1	656	24,974	38.1	32.7	0.9
Total	2,942	40,197	13.7	52.7	35.2	5,663	36,138	6.4	47.3	1.1

1/ Figures are weighted within size class. 2/ This represents the percentage of total commercial bank agricultural loans held by this size group of banks.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Table 8—Selected commercial bank solvency and liquidity ratios, by bank size, June 30, 1999 1/

Total assets	Banks	Capital asset 2/	Equity asset	Loan deposit	Loan asset	Deposit liability
<i>Million dollars</i>	<i>Number</i>	<i>-----Percent-----</i>				
Under 25	1,200	15.0	14.0	64.8	54.3	97.5
25-50	1,869	12.0	11.2	68.4	58.6	96.5
50-100	2,186	10.9	10.1	70.9	60.7	95.3
100-300	2,276	10.5	9.5	73.6	62.1	93.3
300-500	400	10.4	9.3	78.0	63.3	89.6
Over 500	674	11.0	8.2	93.7	60.5	70.4
Total	8,605	11.0	8.4	90.0	60.6	73.7

1/ Weighted average within size class. 2/ Total capital includes equity capital, allowance for loan and lease losses, minority interest in consolidated subsidiaries, subordinated notes and debentures, and total mandatory convertible debt.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Table 9—Selected commercial bank profitability and efficiency measures, by bank size, June 30, 1999 1/

Total assets	Return on assets 2/	Return on equity 3/	Asset utilization 4/	Noninterest income to total income	Interest expense to total expense	Interest expense to interest income
<i>Million dollars</i>	<i>Percent</i>					
Under 25	0.41	2.94	7.53	10.21	44.02	43.33
25-50	0.95	8.52	7.97	11.04	48.84	44.40
50-100	1.11	11.05	8.05	10.79	50.50	44.74
100-300	1.21	12.65	8.28	12.97	49.20	43.20
300-500	1.45	15.37	9.32	23.78	44.55	43.44
Over 500	1.29	15.53	9.22	29.62	45.55	47.82
Total	1.28	14.95	9.10	27.64	45.93	47.17

1/ All ratios are on an annualized basis and weighted within class size. 2/ Rate of return on assets is net income after taxes as a percentage of total assets. 3/ Rate of return on equity is net income after taxes as a percentage of total equity. 4/ Asset utilization is gross income as a percentage of total assets.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Financially Strong Farm Credit System Maintains Loan Quality and Profits

The sustained downturn in many commodity prices has not yet diminished overall Farm Credit System financial strength. The Farm Credit Administration focuses on mission and competition issues.

The financial condition of the Farm Credit System (FCS) remains solid as it enters 2000. Loan volume and at-risk capital continue to grow while income for the first 9 months of 1999 remains solid. Loan portfolio quality is strong and has improved since December 1998. In the last 2 years, higher provisions for loan losses, many in conjunction with problem loans originated by the St. Paul Bank for Cooperatives, have reduced reported income. Volume growth has supported the System's earnings, while net interest margins have declined. Despite increased loan volume, retained earnings for the first 9 months of 1999 were high enough to raise the ratio of at-risk capital to assets.

Despite low prices for many commodities, FCS loan volume continues to grow (table 10). Overall volume grew nearly 3 percent during the first 9 months of 1999, with long-term real estate loans growing nearly 4 percent, short- and intermediate-term loans growing over 4 percent, and loans to cooperatives or for their benefit (largely loans connected with international transactions) declining almost 2 percent.

Overall, credit quality remains solid and was improving through September 1999. Over the first 9 months of 1999, nonaccrual loans decreased and the percent of nonaccrual loans that are current on interest and principal payments increased. In 1998, nonaccrual loan volume increased primarily because of problems at a limited number of processing and marketing cooperatives. Nonaccrual loans current as to principal and interest as a percentage of total nonaccrual loans increased to 67 percent on September 30, 1999, from 59 percent on December 31, 1998. As of September 30, 1999, accruing loans 90 days or more past due--loans considered well secured and in the process of collection--increased \$6 million compared with the year earlier, but fell \$69 million from the seasonal peak reached on March 30, 1999.

FCS net income has surpassed \$1 billion each year since 1993 and was running ahead of that pace again in the first 9 months of 1999 (table 11). As of September 30, 1999, the FCS was generating net income at about the same pace as a year earlier. Net interest income increased slightly due to higher loan and investment volume. Net interest rate spreads (the difference between the interest earned on earning assets and the interest paid on interest-bearing sources of funds) declined to 1.90 percentage points during the 9 months ending September 30, 1999 from 1.97 points a year earlier. Spreads declined primarily because yields on earning assets, especially loans, fell faster than the cost of interest-bearing funds. Interest income associated with nonaccrual loans also fell during the period.

Capital adequacy also remains strong. By September 30, 1999, FCS at-risk capital, including loss allowances and the FCS insurance fund, stood at \$15.0 billion or roughly 22 percent of loans outstanding (table 12). Combined surplus capital and loss allowances are now 72 percent above the 1985 peak of \$6.9 billion (not counting the \$1.4 billion balance of the FCS Insurance Fund) while the level of loans outstanding is comparable.

Farm Credit Administration Addresses Mission, Competitiveness Issues

One of the areas Congress has specifically charged the FCS to target is lending to young, beginning, and small borrowers (YBS). Since this charge is framed in the Farm Credit Act as a reporting requirement, FCS lenders have varied widely in their commitment to it. In January 1999, the Farm Credit Administration (FCA)—the independent Federal agency that regulates the FCS—issued new reporting requirements for FCS lenders on lending to young, beginning, and small borrowers. Eligible borrowers include farmers, ranchers and producers or harvesters of aquatic products.

The FCA changed definitions of young, beginning, and small to be more consistent with those used by USDA and the National Commission on Small Farms. Young borrowers are not more than 35 years old. Small borrowers generate less than \$250,000 in annual gross agricultural or aquatic sales. And, beginning borrowers have not more than 10 years of relevant experience. FCS lenders must complete a questionnaire on their business activities with respect to YBS borrowers. FCA has also designated YBS activities as a special examination focus, and examiners will assess each institution's program for furnishing sound credit and related services to these borrowers patterned after Community Reinvestment Act (CRA) exams conducted by commercial bank and thrift regulators.

In July 1998, the board of directors of the FCA adopted a philosophy statement on intra-system competition that could lead to substantial changes in FCS structure and operations. In November 1998, the FCA published a proposed rule to allow eligible borrowers to obtain credit and financial services from FCS lenders of their choice regardless of the location of their residence or agricultural activity--effectively eliminating territorial restrictions on FCS lenders. In January 2000, after an extended comment period that exposed a deep division among FCS institutions and strong opposition from commercial banks, the FCA board of directors was scheduled to take action on the proposed rule. However, FCA's chairman and champion of the proposed rule, Marsha Pyle Martin, died unexpectedly on January 9, 2000. In the aftermath of her untimely death, further action has been indefinitely delayed.

Table 10—Farm Credit System loan volume, by loan type, December 31, 1993-98, and September 30, 1999

Loan type	1993	1994	1995	1996	1997	1998	1999
<i>Billion dollars</i>							
Long-term real estate	28.46	28.40	28.43	29.60	30.66	32.98	34.22
Short and intermediate term	11.59	12.39	13.80	15.11	16.64	17.84	18.62
Loans to or for the benefit of cooperatives	13.86	13.89	16.36	16.47	16.14	17.08	16.82
Total	53.91	54.68	58.59	61.18	63.44	67.90	69.66

Sources: Federal Farm Credit Banks Funding Corporation, Farm Credit System Annual Information Statement and Farm Credit System Quarterly Information Statement, various dates.

Table 11—Farm Credit System income statement, December 31, 1993-98, and September 30, 1999

Item	1993	1994	1995	1996	1997	1998	1999 1/
<i>Billion dollars</i>							
Total interest income	4.35	4.68	5.59	5.78	5.94	6.12	6.04
Interest expense	-2.39	-2.72	-3.57	-3.62	-3.75	-3.88	-3.78
Net interest income	1.96	1.96	2.02	2.16	2.19	2.24	2.26
Provision/reversal for loan losses	-0.04	-0.05	-0.04	-0.14	-0.09	-0.15	-0.18
Loss/gain on other property	0.00	0.00	0.00	0.01	0.01	0.00	0.00
Other income	0.21	0.14	0.17	0.20	0.24	0.31	0.30
Other expense	-0.84	-0.92 2/	-0.84 3/	-0.86	-0.90	-0.97	-0.98
Debt repurchase	-0.02	0.00	-0.01	0.00	0.00	0.00	0.00
Taxes	-0.15	-0.13	-0.14	-0.17	-0.19	-0.18	-0.16
Net income	1.11 4/	1.01	1.17	1.20	1.27	1.25	1.24

1/ Annualized rate based on first three quarters' performance. 2/ Includes \$72 million in one-time merger implementation and restructuring costs. 3/ Includes \$6 million in one-time merger implementation and restructuring costs. 4/ Does not include one-time net income of \$104 million from changes in accounting for income taxes and nonpension post retirement benefits.

Sources: Federal Farm Credit Banks Funding Corporation, Farm Credit System Annual Information Statement and Farm Credit System Quarterly Information Statement, various dates.

Table 12—Farm Credit System financial indicators, December 31, 1993-98, and September 30, 1999

Item	1993	1994	1995	1996	1997	1998	1999
<i>Percent</i>							
At-risk capital/total loans 1/	17.87	19.06	19.42	20.22	21.15	21.15	21.58
Percent of loans in nonaccrual status or over 90 days past due	2.76	1.95	1.42	1.10	0.99	1.83	1.30
Other expense/total loans 2/	1.56	1.55	1.41	1.40	1.41	1.43	1.40 /3

1/ At-risk capital includes allowances for losses on acquired property and loans, surplus and unprotected borrower stock and participation certificates, and the FCS Insurance Fund. 2/ Excludes one-time merger implementation and restructuring costs. 3/ Annualized rate based on first three quarters' performance.

Sources: Federal Farm Credit Banks Funding Corporation, Farm Credit System Annual Information Statement and Farm Credit System Quarterly Information Statement, various dates.

Overall Farm Credit System Strength Masks Weaknesses at Some Institutions

Most districts see substantial rises in nonaccrual loans and flat or falling net income. Consolidation of FCS Banks for Cooperatives, initiated in 1989, reaches its logical conclusion. AgSmart, an attempt to provide a nationwide, point-of-sale financing facility, is closed because of low volume and high losses.

FCS systemwide statistics hide differences in performance among FCS districts and entities. For example, aggregate nonaccrual loans decreased 22 percent for the year ending September 30, 1999, reversing the previous year's deterioration that, in turn, was the first in overall loan quality since 1991. However, while nonaccrual loan levels decreased at least 12 percent in the AgAmerica and Western districts and at CoBank, ACB, they increased at least 24 percent in the AgFirst, AgriBank, Texas, and Wichita districts.

In 1998, the brunt of the deterioration in loan quality was borne by the FCS banks with large lending exposure to agricultural cooperatives—the St. Paul Bank for Cooperatives and CoBank, ACB. This deterioration was a major factor in the merger of the St. Paul Bank for Cooperatives into CoBank, ACB on July 1, 1999. In 1999, credit quality improved substantially at CoBank as it moved to clean up its portfolio and the portfolio it acquired with the St. Paul merger. But, credit quality problems rose in most other districts, except the AgAmerica and Western districts, whose Farm Credit Banks are jointly managed. Both these districts enjoyed healthy increases in loan volume, net income, total at-risk capital, and loan portfolio quality as measured by the portfolio share of nonaccrual loans.

Systemwide, at-risk capital continues to accumulate faster than loans outstanding. However, among the individual districts, at-risk capital is generally accumulating slower than total assets. This paradox is explained primarily by the fact that systemwide at-risk capital includes the balance of the FCS Insurance Fund, but district-level at-risk capital does not include a prorated share of the Fund. At-risk capital measures all resources that can be liquidated without impairing bondholders. Such resources include unprotected borrower stock and allowances for losses on loans as well as surplus. The ratio of at-risk capital to total assets is a measure of the cushion between stockholders and bankruptcy. This ratio exceeded 17 percent for each district not engaged in lending to cooperatives. CoBank, ACB—the only remaining FCS lender to agricultural cooperatives—maintained a lower capital-to-asset ratio of 10 percent. Recently, some FCS lenders have purchased Farmer Mac guarantees (see Farmer Mac section of this report) on portions of their farm mortgage portfolios. These guarantees reduce required capital, allowing lenders to operate both safely and legally with lower overall capital levels.

Systemwide net income before taxes and extraordinary items fell 9 percent from a year earlier for the 9 months ending September 30, 1999. The decrease was unevenly distributed across FCS banks and districts (fig. 14). Net

income fell dramatically in two districts (AgriBank and CoBank) but rose in all others except Wichita. Large loan loss provisions, mostly related to loans originated by the now-defunct St. Paul Bank for Cooperatives, caused the fall in net income at CoBank (21 percent). The fall in net income at AgriBank (15 percent) reflects losses associated with participations in loans originated at the St. Paul Bank for Cooperatives and erosion of both earning assets and interest spreads among affiliated associations. The erosion in earning assets is related to stress among hog, grain, and oilseed producers in some areas of the district, while pressure on interest spreads developed as interest rates charged on loans fell faster than the cost of borrowed funds.

With the merger of the St. Paul Bank for Cooperatives into CoBank, CoBank regained its position as the largest FCS Bank by loan volume (\$18.6 billion) after trailing AgriBank for the previous 2 years (table 13). CoBank also acquired a majority interest in the FCS Leasing Corporation from other system banks. The Texas and Western districts both experienced substantial growth, gaining 14 and 11 percent, respectively, compared with systemwide loan volume growth of 6 percent. The Wichita (-1 percent) and AgriBank (1 percent) districts experienced the lowest loan growth.

Low Volume, Large Losses Lead to AgSmart Closure

Barely 2 years after its inauguration in December 1997, AgSmart, a point-of-sale trade credit program, was shut down on January 1, 2000, with \$18 million in loan charge-offs on a \$119-million portfolio of outstanding loans. AgSmart was initiated as the FCS's first nationwide product and was designed to overcome obstacles to offering consistent lending products and terms across areas served by different FCS institutions. These obstacles reflect complications created by the limited lending authorities and exclusive territorial charters granted to most FCS Banks and associations. FCA's proposed "customer choice" regulation, which is now shelved, would have reduced some of these obstacles.

From the outset, overcoming the obstacles to providing a consistent nationwide product in a customer-friendly credit facility required a complicated structure. AgSmart sought to provide dealers with a uniform, nationally available program with attractive and flexible terms while protecting FCS institutions from poor credit risks. Program managers had hoped to capture 15 percent of the farm trade credit market within 5 years and to use AgSmart as a model for marketing other Farm Credit products.

Nonaccrual loans increase in the AgFirst, AgriBank, Texas, and Wichita districts. Loan quality continued to improve dramatically in the CoBank and Western districts. Net incomes fall in most districts while total at-risk capital increases in all districts except CoBank.

Table 13—Farm Credit System district-level financial statistics, September 30, 1998-99

	Total loans	Nonaccrual loans	Nonaccrual loans' share	Net income before taxes and extraordinary Items 1/	Total at-risk capital 2/	At-risk capital/ assets
	\$1,000	\$1,000	Percent	\$1,000	\$1,000	Percent
-----Nine months ending September 30, 1999-----						
AgAmerica	8,602,709	79,830	0.93	131,445	1,924,034	19.95
AgFirst	10,467,127	98,431	0.94	180,897	2,330,353	18.45
Agribank	17,909,281	305,072	1.70	225,332	3,801,788	17.61
Texas	4,957,146	76,622	1.55	68,959	1,145,570	21.58
Wichita	4,467,535	80,940	1.81	72,998	1,296,682	24.21
Western	6,224,019	29,080	0.47	87,585	1,282,781	17.55
CoBank, ACB 3/	18,575,320	186,629	1.00	180,258	2,317,081	10.44
All Districts	71,203,137	645,976	0.91	917,373	14,104,031	16.78
-----Nine months ending September 30, 1998-----						
AgAmerica	7,912,610	90,682	1.15	126,129	1,789,463	20.10
AgFirst	10,073,589	79,085	0.79	179,465	2,266,419	19.04
Agribank	17,810,029	195,893	1.10	265,746	3,675,284	17.19
Texas	4,333,239	39,299	0.91	70,087	1,096,890	23.18
Wichita	4,502,498	57,459	1.28	76,778	1,224,085	22.80
Western	5,624,694	35,505	0.63	78,686	1,202,970	18.23
CoBank, ACB 3/	17,072,354	333,080	1.95	228,729	2,389,403	11.39
All Districts	67,329,013	831,003	1.23	1,012,690	13,578,635	17.02
-----Percent change, September 30, 1998 to September 30, 1999-----						
AgAmerica	8.72	-11.97	-19.03	4.21	7.52	-0.76
AgFirst	3.91	24.46	19.78	0.80	2.82	-3.11
Agribank	0.56	55.73	54.87	-15.21	3.44	2.42
Texas	14.40	94.97	70.43	-1.61	4.44	-6.90
Wichita	-0.78	40.87	41.97	-4.92	5.93	6.20
Western	10.66	-18.10	-25.98	11.31	6.63	-3.74
CoBank, ACB 3/	8.80	-43.97	-48.50	-21.19	-3.03	-8.35
All Districts	5.75	-22.27	-26.49	-9.41	3.87	-1.39

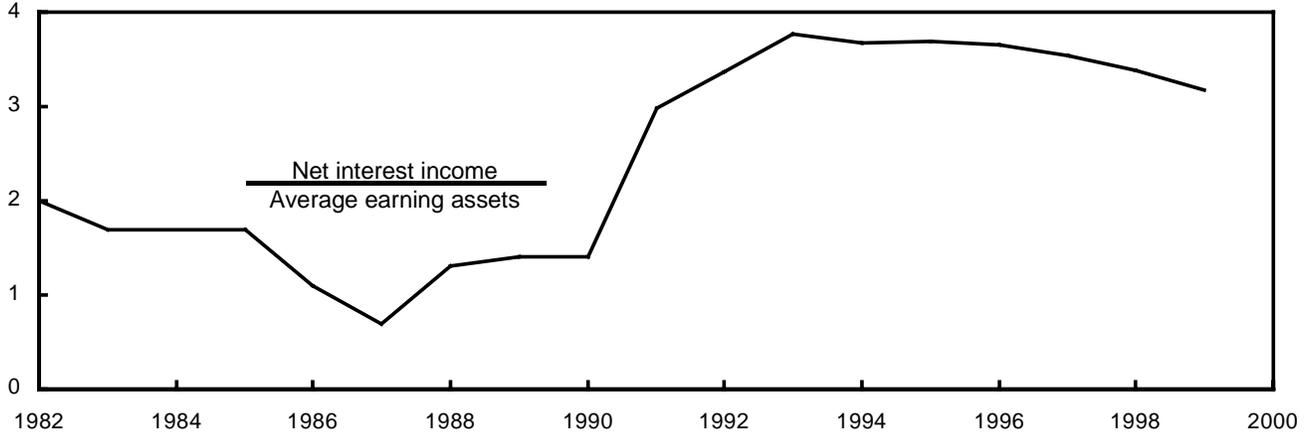
1/ Excludes expenses associated with early payment of Financial Assistance Corporation Bonds. 2/ At-risk capital includes allowances for losses on acquired property and loans, surplus and unprotected borrower stock. 3/ The St. Paul Bank for Cooperatives merged with CoBank, ACB on July 1, 1999. To facilitate comparison, the performances of these banks are combined for periods before the merger.

Source: Federal Farm Credit Banks Funding Corporation, Summary Report of Condition and Performance of the Farm Credit System, various dates.

Figure 13

Interest margins for Farm Credit Banks, 1982-99*

Percent

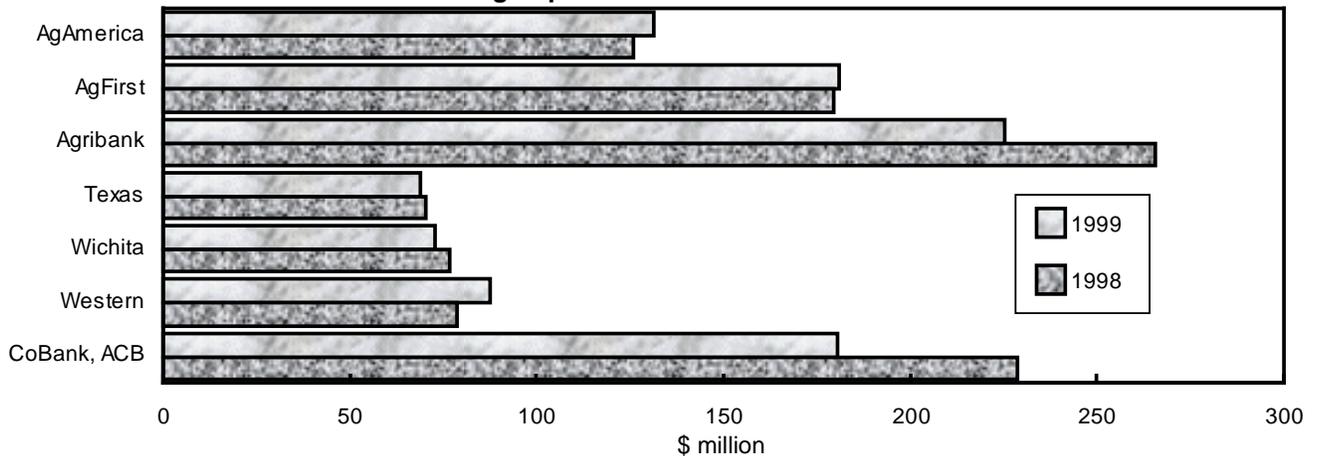


* Net interest income as a percentage of average earning assets. Average earning assets consist of gross loans plus cash and investments. Data represent combined totals for Farm Credit Banks and Associations, excluding those Associations affiliated with CoBank, ACB. Data for 1999 are through September 30.

Source: "Summary Report of Condition: Performance of the Farm Credit System," Various Dates, Federal Farm Credit Banks Funding Corporation, Jersey City, NJ.

Figure 14

District net income for 9 months ending September 30



Source: Federal Farm Credit Banks Funding Corporation, Summary Report of Condition and Performance of the Farm Credit System, various dates.

Life Insurance Company Farm Loan Portfolios Remain Strong

Life insurance companies closed \$2.5 billion in new farm mortgage loans in 1999, largely unchanged from 1998. Loan demand is expected to weaken in 2000.

Historically, agricultural real estate mortgages have been an important investment for life insurance companies, which have been a key source of farm real estate loan funds. On June 30, 1999, approximately 20 life insurance companies held 15,500 agricultural loans. During 1999, the quality of agricultural mortgage portfolios of life insurance companies remained high.

Low Delinquency and Foreclosure Rates

Agricultural mortgage delinquency rates remained low in 1999. The agricultural loan delinquency rate based on dollar volume was 1.4 percent on June 30, 1999, down from 1.8 a year earlier. The June 30, 1999, nonagricultural rate was 0.3 percent (table 14). During 1991-97, the agricultural delinquency rate was generally lower than the nonagricultural rate, both in number of loans and dollar volume. But beginning in 1998, agricultural loan delinquency rates, in terms of dollar volume, exceeded nonagricultural rates, although both are now low. Some \$164.6 million in agricultural mortgage debt held by life insurance companies was delinquent on June 30, 1999, a modest level for the industry.

The share of agricultural mortgage loans, based on dollar volume, in the process of foreclosure stood at a little over 0.2 percent on June 30, 1999. The share was below the nonagricultural rate during 1990-98, but the quarterly report for the industry on June 30, 1999 showed that it had moved slightly above the 0.2-percent nonagricultural foreclosure rate (table 15). The agricultural rates remain at the lowest levels since 1980. A total of \$28.8 million in life insurance company farm mortgage loans was in the process of foreclosure on June 30, 1999, down from \$90.1 million 5 years earlier. The number of agricultural mortgage loans in foreclosure totaled 38 on June 30, 1999, down from 482 on December 31, 1989 and 108 on December 31, 1994.

The number of agricultural loans actually foreclosed has generally declined since 1986 (table 16). They are now running at low levels comparable to 1980 and earlier.

Important Trends Affect Lending

While the life insurance industry's relationship with agriculture has changed rapidly in recent years, life insurance companies have been resilient lenders to the farm sector, occupying an important market segment. They held 12 percent of farm mortgage debt (including operator households) at yearend 1999, identical to their share when the USDA data series began in 1910, but far below their high of 25 percent in 1955-56. Life insurance company outstanding farm loan portfolios have trended up since the end of 1992, gaining nearly 24 percent by yearend 1999.

Approximately 20 companies now hold farm mortgages. The number of life insurance companies making new farm mortgage loans declined from 12 in 1980 to 6 in late 1996,

with most departures occurring in 1986. In 1998 Citicorp and Travelers Group merged to form Citigroup, Inc., one of the world's largest financial services companies. Some of the investment activities from each organization were combined under the name Citigroup Investments, of which the AgriFinance Group is a part.

The six companies (AEGON USA, Citigroup Investments AgriFinance, Lend Lease Agri-Business, Metropolitan Life, MONY Life Insurance, and Prudential) currently active in farm lending account for about 85 percent of the industry's farm mortgages and generally have 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 loans to agribusiness, timber, and specialty enterprises. These companies emphasize larger (\$500,000 or more) agricultural loans with an industry average of \$779,450 on September 30, 1999. The nominal average farm loan size increased over 450 percent since 1980.

Since 1980 the concentration of life insurance company farm mortgage holdings has shifted from the Corn Belt to the Southeast and Pacific Coast farm production regions. The Corn Belt's share of the industry's outstanding mortgage loan volume declined from nearly 24 percent in 1980 to under 13 percent in 1998, while the Pacific region's share increased from 19 percent to nearly 37 percent. At 1998 yearend (based on the most recent State-level data), the Pacific region, Florida, and Texas together accounted for almost 53 percent of total outstanding dollar volume of life insurance farm mortgages.

The life insurance industry's relationship with agriculture has grown more complicated recently with the direct acquisition of farmland in addition to the expansion of farm loan portfolios. Total loans held by life insurance companies (excluding households) at yearend 1999 are estimated at \$10.9 billion. The industry's estimated \$2.6 billion in direct farmland investments is up almost tenfold since 1979.

Demand for New Loans To Weaken in 2000

Life insurance companies will have opportunities to make profitable farm mortgage loans in 2000, but competition for the better-quality loans will remain keen, particularly from the FCS. Active companies continue to have sufficient loanable funds for qualified applicants and are aggressively competing on rate, terms, and loan-to-value ratio. The demand for life insurance company farm loans is expected to weaken in 2000 due to multiple causes, including reduced exports, excess inventory, and low commodity prices. However, the life insurance industry farm loan situation should be rosier than that facing many other agricultural lenders because of the amount of specialty crop and livestock lending conducted by life insurance companies.

Table 14—Life insurance company mortgage loan delinquencies, 1992-99 1/

End of month		Rates by number of loans		Rates by amount	
		Nonagricultural mortgages	Agricultural mortgages	Nonagricultural mortgages	Agricultural mortgages
<i>Percent</i>					
1992	June	2.87	4.07	7.35	5.48
	Dec.	3.05	2.64	6.50	3.33
1993	June	2.78	3.47	6.23	4.06
	Dec.	2.84	1.99	4.48	2.21
1994	June	2.94	2.51	5.00	3.77
	Dec.	2.81	1.27	3.34	2.60
1995	June	2.67	1.67	3.53	2.85
	Dec.	2.51	1.14	3.43	2.72
1996	June	2.48	1.57	2.58	2.92
	Dec.	2.50	0.83	1.81	0.92
1997	June	2.66	0.96	1.57	0.94
	Dec.	2.13	0.69	0.92	0.97
1998	June	2.01	1.19	0.82	1.80
	Dec.	2.09	0.82	0.51	1.35
1999	June	1.63	1.27	0.33	1.39

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.

Table 15—Life insurance company mortgage loans in the process of foreclosure, 1992-99 1/

End of month		Rates by number of loans		Rates by amount	
		Nonagricultural mortgages	Agricultural mortgages	Nonagricultural mortgages	Agricultural Mortgages
<i>Percent</i>					
1992	June	0.77	1.74	3.40	3.11
	Dec.	0.76	1.57	3.08	2.32
1993	June	0.84	1.52	2.89	1.93
	Dec.	0.80	1.04	2.14	1.30
1994	June	0.82	0.97	2.46	1.04
	Dec.	0.82	0.68	1.77	1.11
1995	June	0.80	0.62	2.05	1.02
	Dec.	0.68	0.32	1.42	1.17
1996	June	0.70	0.42	1.52	1.26
	Dec.	0.66	0.30	1.09	0.32
1997	June	0.61	0.26	0.90	0.33
	Dec.	0.54	0.19	0.58	0.18
1998	June	0.53	0.25	0.46	0.20
	Dec.	0.50	0.22	0.32	0.24
1999	June	0.49	0.25	0.18	0.24

1/ Reporting companies account for approximately 85 percent of the mortgages held by U.S. life insurance companies depending on the date of the survey. Loans in foreclosure include those on which foreclosure action has been authorized, including any involved in a subsequent filing of bankruptcy. Beginning in 1988, loans in the foreclosure category include loans in redemption period.

Table 16—Life insurance company mortgage loans foreclosed, 1986-99 1/

Year	Nonagricultural mortgages		Agricultural mortgages	
	Number	Thousand dollars	Number	Thousand dollars
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
1995	640	3,055,039	21	73,258
1996	400	1,661,973	23	81,538
1997	285	1,373,452	14	15,949
1998	168	746,232	7	26,690
1999 2/	69	397,903	0	0

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. 2/ January 1 through June 30.

Source: American Council of Life Insurance, Investment Bulletin: Mortgage Loan Portfolio Profile, various issues.

Farm Service Agency Loan Authority Soars to \$5.7 Billion for Fiscal 2000

Farm loan program lending is the greatest since the mid-1980's.

Congress has authorized over \$4.0 billion in guaranteed loan program lending and \$1.7 billion in direct loan program lending for fiscal 2000 (table 17). This is \$1.9 billion over the \$3.8 billion obligated during fiscal 1999. In the last 2 fiscal years, Congress has provided large supplemental appropriations for FSA farm loan programs. In November 1999, emergency supplemental appropriations for fiscal 2000 (P.L.106-113) provided an additional \$2.5 billion in loan authority. Under the terms of both supplemental appropriations, unused lending authority can be transferred for use in the next fiscal year.

Much of the increase in lending authority comes from greater operating loan funding. There is \$3.0 billion in guaranteed operating loan (OL) authority for fiscal 2000, or more than \$1.2 billion more than was obligated in fiscal 1999. Of this amount, \$919 million can be made with interest rate assistance. In fiscal 1999, \$526 million in OL loans were made with interest rate assistance. FSA interest rate assistance provides a 4-percent interest rate subsidy to eligible borrowers. Under current interest rates, eligible borrowers can pay less than 6 percent on their loans.

The increased authorities represent a large shift in FSA's presence in farm credit markets. As recently as fiscal 1998, FSA had obligated only \$2.2 billion in direct and guaranteed loan programs (table 18). If the fiscal 2000 authority were all obligated, FSA would experience the greatest lending activity since the farm financial problems of the mid-1980's.

Loan Delinquencies Remain Subdued

FSA's loan delinquency rate showed little evidence of growing debt repayment problems among its borrowers at the end of fiscal 1999. The volume of delinquent loan payments in the direct loan portfolio fell for the 11th consecutive year (table 19). Extensive use of loan servicing tools might help explain the decline. Guaranteed loan program delinquencies have been inching up for the past few years (table 20). While delinquent volume remains relatively low at 2.4 percent, this was the highest percentage reported since the guarantee programs received greater funding beginning in fiscal 1985.

Because of the higher obligation amounts, FSA's presence in farm credit markets in 1999 rose for the first time since 1986. Outstanding direct and guaranteed loan volume rose to \$16.3 billion at fiscal yearend, or about 9 percent of total U.S. farm debt. Loan volume had been declining since 1996 because new lending activity was not keeping pace with loan repayments and loan write-off volume.

Net loan write-offs (principal and delinquent accrued interest payments) on direct loans fell 22 percent to \$518 million and on guaranteed loans rose 12 percent to \$68

million. Loan losses are heavily influenced by farm asset values, and so far relatively stable farmland prices have provided at least some equity available to repay loans that go into liquidation. FSA acquired fewer farms during fiscal 1999, a trend that has continued since fiscal 1991. FSA had only about 600 farms in inventory at fiscal yearend, and many of these were under leaseback or buyback arrangements.

Emergency Loan Authority Rises

FSA has \$584 million in emergency loan (EM) funding available for fiscal 2000. This is up sharply from last year and in sharp contrast to the \$98 million obligated in fiscal 1998. Because these loans have the highest amount of subsidy, program demand usually exceeds supply if large enough areas of the country experience natural disasters. For those unable to obtain credit in disaster-designated counties, EM loans to restore or replace essential property, finance production costs associated with the disaster, and refinance debts are available at 3.75 percent interest in amounts up to \$500,000 per borrower.

FSA is in the process of updating and streamlining its lending regulations for the emergency programs. The new regulations, which should be released later this year, could increase program demand by removing barriers to eligibility and increasing coverage. Legislation in 1998 likely increased borrower eligibility in 1999, by eliminating the requirement that the loans be fully secured with collateral.

Share Appreciation Agreements Come Due

Beginning in fiscal 1989, FSA began discharging indebtedness of borrowers under loan restructuring rules established by the Agricultural Credit Act of 1987. Some of these debt write-downs were made with shared appreciation agreements that required the borrower to repay all or a portion of the write-down at the end of a 10-year period if the real estate security appreciated. The number of FSA borrowers with these contracts totals 10,600 and the average write-down per borrower totals nearly \$145,000.

The majority of the shared appreciation contracts are now coming due, placing an additional financial burden on affected borrowers. Because nearly two-thirds of the contracts were made in the late 1980's and early 1990's when farm real estate values were depressed, many borrowers with shared appreciation agreements have seen the value of their farmland appreciate sharply during the 1990's and now owe a substantial payment to FSA. For borrowers unable to provide FSA a lump sum payment at the end of the 10-year period, FSA can amortize the payments over 25 years using nonprogram loan authority.

Table 17—Farm Service Agency major farmer program level and obligations, fiscal 1999, and program level, fiscal 2000

Program	Fiscal 1999 program level 1/	Fiscal 1999 obligations 2/	Fiscal 2000 program level 1/
<i>Thousand dollars</i>			
Farm ownership (FO)			
Direct	177,451	170,526	177,500
Guaranteed	775,031	774,170	1,002,466
Operating loans (OL)			
Direct	818,799	788,535	935,291
Guaranteed	1,939,981	1,776,233	3,040,011
Subsidized	541,705	525,508	918,622
Unsubsidized	1,398,276	1,250,725	2,121,389
Emergency disaster (EM)	337,064	329,849	583,961
Total	4,048,326	3,839,314	5,739,229

1/ Budgetary appropriations setting limits on the volume of new loans that can be issued during the fiscal year. Includes supplemental appropriations. Some funding is transferable between programs and some programs have unused funding available from previous years.

2/ Actual amount of lending authority committed to new loans or loan guarantees.

Source: Farm Service Agency.

Table 18—Farm Service Agency farmer program obligations, September 30, 1986, to September 30, 1999

Fiscal year	Obligations 1/			Outstanding principal of farmer programs 2/	
	Total	Direct (Insured)	Guaranteed		
			Amount	Share of total	
	<i>-----Million dollars-----</i>			<i>Percent</i>	<i>Mil. dol.</i>
1986	4,367.5	2,807.9	1,569.1	35.9	29,240.4
1987	3,080.5	1,515.0	1,587.4	51.5	28,147.6
1988	2,320.7	1,065.8	1,271.4	54.8	28,242.6
1989	2,229.6	1,030.1	1,199.5	53.8	26,525.6
1990	2,193.2	921.3	1,271.9	58.0	23,684.0
1991	2,124.1	633.7	1,490.4	69.2	21,992.1
1992	2,306.4	714.5	1,591.9	69.0	20,460.6
1993	2,135.2	672.7	1,432.5	67.1	18,815.5
1994	2,725.6	881.9	1,843.7	67.6	18,040.1
1995	2,501.9	563.6	1,938.3	77.5	17,451.1
1996	2,683.2	832.3	1,850.9	69.0	16,940.5
1997	2,319.3	744.8	1,574.5	67.9	16,342.7
1998	2,174.1	738.7	1,435.4	66.0	15,687.3
1999	3,839.3	1,288.9	2,550.4	66.4	16,262.3

1/ Obligations are the dollar amounts of funds loaned or guaranteed, including the dollar amount of interest rate assistance provided on guaranteed loans for years prior to 1993. Excludes obligations for credit sales of acquired property, Indian land acquisition loans, and agricultural resource conservation demo loans. 2/ Total outstanding principal balance of direct or insured and guaranteed program loans at yearend.

Sources: Farm Service Agency, 616 Report, 4067C Report, and 205 Report, various issues.

Table 19—Farm Service Agency direct farmer loan program delinquencies, September 30, 1986, to September 30, 1999

Year 1/	Number of active cases 2/			Principal outstanding		
	Total	Delinquent 3/		Total	Delinquent 4/	
		Total	Proportion		Amount	Share of total
	-----Number-----	Percent		-----Million dollars-----	Percent	
1986	421,651	134,565	31.9	27,575.9	6,276.5	22.8
1987	388,833	127,577	32.8	25,763.7	6,592.0	25.6
1988	376,388	137,958	36.7	25,065.0	8,321.7	33.2
1989	346,442	114,737	33.1	23,281.9	8,005.6	34.4
1990	299,069	80,341	26.9	19,544.2	6,138.8	31.4
1991	280,528	79,204	28.2	17,465.5	5,507.5	31.5
1992	251,892	73,657	29.2	15,536.7	4,804.8	30.9
1993	224,739	56,099	25.0	13,775.5	4,116.2	29.9
1994	208,130	47,723	22.9	12,622.6	3,569.9	28.3
1995	193,963	52,627	27.1	11,518.0	3,198.8	27.8
1996	182,238	42,101	23.1	10,580.2	2,419.6	22.9
1997	170,422	32,039	18.8	9,837.5	2,035.7	20.7
1998	158,863	28,005	17.6	9,149.7	1,691.6	18.5
1999	148,829	24,821	16.6	8,935.4	1,398.3	15.6

1999 by major programs

Farm ownership 5/	54,424	5,752	10.6	3,576.7	173.7	4.8
Operating loans 6/	46,779	10,594	22.6	2,699.0	415.2	15.4
Emergency-disaster	31,123	5,781	18.6	1,981.3	629.6	31.7

1/ September 30 of year shown. 2/ May include duplications because some borrowers have loans under several different programs. Prior to 1988 active cases excluded those borrowers who are in foreclosure, bankruptcy, or liquidation status. Active cases do not include loans made to associations. Excludes nonprogram loans. 3/ Prior to 1988 a case was considered delinquent when a payment was more than \$10 and 15 days past due. Beginning in 1988, a case is delinquent if a payment is more than 30 days past due. 4/ Past due principal and interest payments. 5/ Excludes loans for nonfarm enterprise purposes. 6/ Excludes loans to youths.

Source: Farm Service Agency, 616 report, various issues.

Table 20—Farm Service Agency guaranteed farmer loan program delinquencies, September 30, 1986, to September 30, 1999

Year 1/	Number of active cases			Principal outstanding		
	Total 3/	Delinquent		Total	Delinquent 2/	
		Total	Proportion		Amount	Share of total
	-----Number-----	Percent		-----Million dollars-----	Percent	
1986	NA	NA	NA	1,664.5	31.4	1.9
1987	18,887	1,052	5.6	2,384.0	42.6	1.8
1988	27,519	1,298	4.4	3,177.6	54.1	1.7
1989	30,016	1,580	5.3	3,243.7	60.6	1.9
1990	36,955	1,681	4.6	4,139.8	58.5	1.4
1991	40,169	1,904	4.7	4,526.6	59.3	1.3
1992	42,189	2,376	5.6	4,923.9	102.8	2.1
1993	42,475	2,077	4.9	5,044.8	98.5	2.0
1994	44,129	1,659	3.8	5,417.5	82.3	1.5
1995	46,838	1,821	3.9	5,933.1	91.3	1.5
1996	48,468	2,311	4.8	6,360.3	112.5	1.8
1997	49,512	2,540	5.1	6,505.2	124.5	1.9
1998	48,795	2,759	5.7	6,537.7	135.4	2.1
1999	49,279	2,925	5.9	7,326.9	172.2	2.4

1999 by major program area

Farm ownership	20,937	955	4.6	3,231.1	48.3	1.5
Operating loans	28,279	1,955	6.9	4,090.0	123.6	3.0

1/ September 30 of year shown. 2/ Amount delinquent includes past payments of principal and accrued interest. 3/ May include duplications because some borrowers have loans under several different programs. NA = Not Available.

Source: Farm Service Agency, 4067 Report, various issues.

Farmer Mac Loan Purchase Volume Up in 1999

Guarantee volume soars as some Farm Credit System (FCS) lenders use the secondary mortgage market.

The Federal Agricultural Mortgage Corporation (Farmer Mac) purchased or guaranteed over \$1.2 billion in loans during 1999, up sharply from the \$424 million recorded in 1998. Loans purchased through its open window program rose more modestly from \$340 million in 1998 to \$392 million in 1999. The majority of the big volume increase came from the issuance of \$635 million in long-term standby purchase commitments (LTSPC) and \$177 million in loan swaps. Under an LTSPC, Farmer Mac accepts the credit risk of qualified loans or groups of in exchange for an annual guarantee fee paid by the seller. Under a swap, the seller exchanges loans for a Farmer Mac guaranteed security as an alternative to selling them outright or pledging them as collateral.

FCS lenders were instrumental in providing Farmer Mac with the sharp increase in swap and LTPSC transaction volume during 1999. The Central Coast Federal Land Credit Association (California), the Northwest Agricultural Credit Association (Washington), and the AgStar Agricultural Credit Association (Minnesota) entered into swaps or LTSPCs with Farmer Mac.

An LTSPC provides the seller with an unconditional commitment by Farmer Mac to purchase identified agricultural mortgages under specified circumstances over the life of the loan. Essentially, Farmer Mac is guaranteeing the identified loans against default, while the seller retains interest rate risk. This eliminates credit risk for the seller and therefore reduces the capital required to hold the loans in portfolio. While the capital levels for these FCS associations were well above statutory minimums going into 1999, they were low relative to their peers. Northwest and Central Coast had permanent capital ratios of just over 12 percent, while AgStar reported a 10.5 percent ratio. Out of 45 Federal Land Credit Associations, Agricultural Credit Associations, and Production Credit Associations in the AgriBank Farm Credit Bank district, only one other association had a lower capital ratio than AgStar.

FCS transactions with Farmer Mac represented only about 2 percent of the FCS's \$33 billion in outstanding farm real estate loans at the beginning of 1999. Therefore, Farmer Mac could potentially guarantee a much greater volume of FCS mortgages. However, most FCS lenders are very well capitalized and loan growth is modest, so there is not a pressing need to boost capital at this time. Yet, if there is a wide-scale adjustment in how capital is deployed within the System, use of Farmer Mac by FCS lenders could continue to grow rapidly.

Risk-Based Capital Rules Proposed

In November 1999, the Farm Credit Administration's Office of Secondary Market Oversight (OSMO) promulgated a proposed risk-based capital rule for Farmer Mac. The rules

were originally required in 1991 legislation, but their implementation was delayed until February 1999 by 1996 legislation. The proposed rule has a comment period that ends in March 2000 and a final rule will be implemented sometime thereafter. OSMO was required to establish a risk-based capital stress test to determine the amount of regulatory capital necessary for Farmer Mac to maintain positive capital during a 10-year period when stressful credit and/or interest rate conditions occur.

Farmer Mac has been operating under statutory capital standards. Those rules required that it maintain a minimum capital level equal to 2.75 percent of the corporation's aggregate on-balance sheet assets and 0.75 percent of the corporation's aggregate off-balance sheet obligations, such as an LTSPC. Critical capital was defined as 50 percent of the total minimum capital requirement.

OSMO reports that if the proposed risk-based regulatory capital standards were applied to Farmer Mac's current asset structure and risk profile, it would not have to increase its capital. Farmer Mac uses hedging techniques to minimize interest rate risk and has adopted fairly conservative loan underwriting standards to minimize credit risk. However, if the risk profile of Farmer Mac assets increase in the future, its regulatory capital requirement may rise and exceed statutory standards. If this occurs or volume growth accelerates, Farmer Mac may have to raise new capital in the equity market or divest balance sheet assets. Farmer Mac ceased its sales of mortgage-backed securities (MBSs) to investors in 1998 and has since been retaining purchased loans, typically in the form of a MBS, on its balance sheet ever since. Because retaining the loans on balance sheet assets requires 2.75 percent capital as opposed to 0.75 percent for MBSs sold to investors, Farmer Mac could boost its capital ratios quickly by selling off its MBS portfolio.

Besides reducing program-related assets from its balance sheet, Farmer Mac could also reduce its sizable nonprogram investments to boost its capital ratios. Farmer Mac had \$1.2 billion in cash and investments at yearend, unchanged from the level reported at the end of 1998. However, altering the composition of its balance sheet assets would have a material impact on future income. The large investment portfolio contributes significantly to net interest income. Net interest income for Farmer Mac rose from \$10.6 million in 1998 to \$15 million in 1999.

Loan Quality Remains Sound; Farmer Mac II Volume Stable

The quality of Farmer Mac's loans and loan guarantees remains sound, with 1 percent of its volume reported as delinquent at yearend. Nonetheless, Farmer Mac added \$3.7 million to its provisions for loan losses in 1999, up from \$1.7 million in 1998. A softening farm economy and a

greater number of its loans at an age where default is more common might explain the precautions Farmer Mac is taking. Generally, the probability of default follows a distribution, where recent loans and older loans are least likely to default.

Another important component of Farmer Mac's total business is the USDA guaranteed loans it purchases under the Farmer Mac II program. Because Farmer Mac purchases only the USDA guaranteed portion of these loans, the purchases essentially carry no credit risk. With greater guaranteed lending activity expected in 2000, volume growth might rise. However, greater FSA guaranteed loan volume in 1999 did not translate into greater Farmer Mac II purchases. Farmer Mac purchased \$116 million in USDA guaranteed loans in 1999, down from the \$120 million purchased in 1998. Outstanding Farmer Mac II volume stood at \$383 million at the end of 1999.

Some Growth Factors Going Forward

Growth in Farmer Mac volume for 2000 will be affected by the overall demand for farm mortgage credit as well as the competitiveness of farm credit markets. Rising interest rates in late-1999 and into 2000 could dampen demand for fixed-rate loan products offered by Farmer Mac. As rates rise many farmers might be reluctant to lock in fixed interest rates, especially if they come with prepayment penalties. In early February, Farmer Mac loans with rates fixed for 15 years were being priced between 9 and 10 percent, up substantially over the past year. Future participation by the FCS, which was instrumental to the large volume increases in 1999, is also another important factor. Of course any deterioration in the financial strength of the farm sector would also affect demand for Farmer Mac products and the quality of its portfolio.

A development that could affect Farmer Mac is a change to the Federal Home Loan Bank charter. The change could provide for greater competition in the marketplace and hence lower lending rates for farm borrowers.

On November 12, Congress passed the Gramm-Leach-Bliley Act of 1999 (P.L. 106-102). This sweeping financial

modernization legislation included provisions that expand commercial bank access to Federal Home Loan Bank (FHLB) funding. Now banks and thrifts with under \$500 million in assets can pledge small business and agricultural loans as collateral when borrowing from this government sponsored enterprise (GSE). In addition, the legislation eliminates the requirement that at least 10 percent of a bank's assets be in housing loans or housing-related assets to qualify for FHLB membership.

The changes will mean many more banks, especially rural banks, will have easier access to FHLB funding. Research conducted by the Federal Reserve Bank of Minneapolis found that 500 additional farm banks (FDIC definition) will become eligible for membership because of the legislation. The study also showed that use of FHLB funding has been growing more rapidly at farm banks than at nonfarm banks in recent years. Yet, the significance of the changes is still uncertain. Under the old 10-percent FHLB eligibility test, those banks that had insufficient housing-related assets could fairly easily adjust their portfolios to meet the membership requirement. Also, many farm banks in recent years have had sufficient funding to support credit demand and have not needed the extra liquidity offered by Farmer Mac, FHLBs, or other funding sources. Furthermore, if capital conservation or credit risk management rather than liquidity is the bank's objective when seeking GSE funds, it may still seek a Farmer Mac guarantee.

The issuance of proposed risk-based capital rules for banks and thrifts in February 2000 might encourage development of private MBS markets by making private label MBSs more attractive investments for these lenders. The regulatory proposal would provide greater flexibility in assigning capital requirements for assets-backed securities, recourse obligations, and direct credit substitutes owned by a bank or thrift. Under current rules, private label MBSs are assigned a higher risk weight by regulators, so banks and thrifts must hold more capital for these investments than they do for a GSE issued MBS. Under the new rules, purchases of certain high-quality privately issued MBSs would require the same level of capital as MBSs purchased from a GSE.

Accumulated Farm Real Estate Value Will Help Farmers and Their Lenders Through Period of Declining Cash Receipts

Farm real estate values, which increased strongly for most of the 1990's, are expected to be nearly flat for 1999 and 2000. The growth in farm real estate values over most of the decade has strengthened the farm sector's balance sheet and will help farmers and lenders weather the current period of low prices and lower cash receipts from crops.

Farmland currently accounts for roughly 77 percent of farm sector assets. Some 52 percent of total farm sector debt at the end of 1998 was real estate debt, composed of either mortgages for purchase of farmland or short- or intermediate-term debt secured by farmland. Consequently, the financial security of farm sector borrowers and their lenders is affected by changes in farm real estate values.

Farm real estate values have increased at an average compound rate of over 4 percent since 1987, significantly improving the financial position of many farm businesses. With the recent declines in prices for major field crops, the rate of growth in farmland values declined markedly in 1998. While average farmland values increased 5 percent from January 1997 to January 1998, the increase from January 1998 to January 1999 was less than 2 percent. Nonetheless, USDA's estimated value of all agricultural real estate achieved a high of \$992 per acre as of January 1, 1999 (table 21). The market value of farmland nationally is not expected to decline during 1999 and 2000, but any growth in value is likely to be minimal.

Because financial performance varies across farming regions, depending partially upon the major commodities produced, varying farm income expectations will result in differing rates of change in farmland values from region to region. Farmland values in the Corn Belt, the region with historically the most volatile changes in land values, were up nearly 8 percent during calendar year 1997. In that same year, cash receipts from crops in the Corn Belt were record high. Crop cash receipts in the Corn Belt for 1998, although still well above the 1990-97 average, declined \$ 3.2 billion from the year before. The rate of growth in Corn Belt farmland values reflected that decline, dropping to just over 2 percent in 1998 (table 21). Growth rates fell across all regions during calendar year 1998. Growth rates of farmland values in the less volatile regions, such as the Northeast, Southeast, and Appalachian, were notably smaller during 1997, and declined relatively less from 1997 to 1998.

The average U.S. farmland value for January 1, 1999, was 66 percent above the trough of \$599 per acre reached in early 1987 following the 1980's "farm crisis." Since 1987, every region except the Southern Plains had exhibited gains of more than 50 percent in land values (fig. 15). Most regions have regained all that they lost during the 1980's. The Northern and Southern Plains are the exceptions. Farmland values in the heavily populated Northeast declined very little in the 1980's, amounting to only a slight detour from a long steady path of growth since 1970.

Although average agricultural land values nationally are determined primarily by the income earning potential of the land, nonagricultural factors appear to be playing an important role in many local areas. To some extent, the buoying effect of these nonagricultural factors on agricultural land values could be partially offsetting the effect of lower returns from agricultural production.

In rural areas, agricultural land values are primarily determined by the income earning potential of the land, as measured by expected returns from crops and livestock. But, fewer and fewer areas are entirely rural. With the increasing urbanization of the United States, residential, commercial, and industrial development has spread further from city centers, consuming more agricultural land, and increasingly interspersing urban activities with farm activities in traditionally rural areas. In Ohio, for instance, where farmland is subject to the sometimes overlapping influence of three large, yet widely-spaced metropolitan areas, a large proportion of the State's farmland is urban-influenced.

ERS classifies only 515 counties as being both completely rural (contains no part of a city with at least 2,500 residents) and not adjacent to a metro area. In the remaining counties, where nonfarm influences are involved, agricultural land is often withdrawn from agricultural production and developed for residential, commercial, or recreational uses. The market value for undeveloped farmland in these areas often begins to rise above its value based on agricultural returns alone, reflecting anticipation of eventual nonagricultural uses. These premiums above the purely agricultural value of the land represent the value of potential nonagricultural development. Such trends are most common in rapidly urbanizing areas or in areas popular as recreation destinations. In States where farmland is in greater demand for conversion to urban use, a relatively large share of the market value of farmland is attributable to nonfarm demand.

Urbanization Affects a Large Share of Farmland

A recent ERS study used data on farmland values for 1994-96, in conjunction with a Geographic Information System (GIS), to examine two aspects of urbanization: How large is the urban-influence zone in terms of farmland acres? And how much does this influence change farmland values?

While the effect of population on the per acre value of farmland can be substantial for individual parcels, small areas around cities, and even counties within a metropolitan area, the total farmland area subject to urban influences is small compared with total farmland in the United States.

ERS estimates that about 17 percent of U.S. farmland acres are subject to urban influence (fig. 16). The average value of parcels not subject to urban influence is \$640 per acre (fig. 17). The average value is nearly three times higher for those parcels classified as “urban-influenced,” averaging \$1,880 per acre. Combining those two categories, the average value for “all” farmland is \$850 per acre. Assuming that the effect of urbanization on each parcel can be estimated by finding the difference between its actual market value and its agricultural value, urban influence accounts for an estimated 25 percent of the market value of all U.S. farmland (\$210 of the \$850 per acre average) (fig. 18). For parcels within the urban-influence zone, urban influence constitutes 66 percent of market value (\$1,240 of the \$1,880 per acre average).

The national perspective obscures a wide regional variation in urban influence that is attributable to differences in geography and distribution of population. One would expect that the most heavily populated areas, such as along the eastern seaboard, would yield the largest effects on farmland value and the largest percentages of farmland acres that are subject to urban influence. This is borne out by results from an analysis of 20 Land Resource Regions as defined by the Natural Resources Conservation Service, a USDA agency. Figure 19 illustrates four regions for which results are reported in table 22: the predominantly agricultural Northern Plains, which includes North Dakota and parts of South Dakota and Montana; the moderately urbanized Corn Belt, covering Iowa and significant portions of Illinois, Indiana, Minnesota, Missouri, and Ohio; a heavily urbanized area labeled the North Atlantic Slope, covering parts of Virginia, Maryland, New Jersey, and southeastern Pennsylvania; and the Northeastern Forage and Forest area, which includes New England, and parts of New York, New Jersey, and Pennsylvania.

In the Northern Plains very little farmland is subject to urban influence. Only 9 percent of acres are classified as urban-influenced (table 22). In this region the average value of all farmland is only 6 percent higher than the average value of strictly agricultural land. However, for the 9 percent of farmland classified as urban-influenced, the urban influence accounts for nearly 40 percent of its market value.

The Corn Belt has large amounts of rural farmland, but is subject to considerably higher levels of urban influence than the Northern Plains. In the Corn Belt, the urban influence component is about 14 percent of the market value of all farmland, about twice that of the Northern Plains. For the 22 percent of farmland acres that are subject to urban influence, that influence accounts for nearly 42 percent of market value, a percentage that is similar to the corresponding effect in the Northern Plains.

The North Atlantic Slope is one of the most urban-influenced regions in the United States. For this region, urban influence accounts for about 48 percent of market value of the region’s farmland. About 55 percent of the

region’s farmland is classified as urban-influenced. For urban-influenced parcels, about 63 percent of farmland’s market value is attributable to the urbanization effect.

Urban influence appears to have its largest effect on farmland values in the Northeastern Forage and Forest region, the only region where the urban component of the market value of farmland land is greater than the agricultural production component.

A Look Ahead

While the majority of States experienced increases in estimated farmland values during 1998, recent market conditions suggest that fewer States will show growth during 1999 and 2000. The Federal Reserve Banks of Chicago, Dallas, and Minneapolis conduct quarterly surveys of agricultural bankers in their regions. The November report from the Chicago Federal Reserve Bank indicates that bankers believed the price of “good” farmland in two Corn Belt States, Illinois and Iowa, had fallen 3 and 1 percent respectively over the last 12 months. At the same time, the Chicago FRB reported that farmland values in Indiana had increased slightly and land prices in Michigan and Wisconsin were up strongly.

Indications from the Dallas Federal Reserve Bank are that most bankers surveyed in October 1999 expected Texas land prices to be stable to declining. A recent study of farmland transactions indicates that farmland values have been holding steady over the previous 6 months in the Iowa, Nebraska, South Dakota, and Wyoming region served by the Omaha-based Farm Credit Services of America. By contrast, farmland prices in the Minneapolis District are expected to rise for non-irrigated cropland and pasture. The size and extent of changing values by State during 1999, and how they balance out at the national level, remain to be seen. (The National Agricultural Statistics Service plans an April release of USDA’s State estimates of farmland values for 1999.) As of now, farmland values at the national level are forecast to be flat for 1999 and 2000.

Decreasing farmland values, if not widespread or very large, may not be a major financial concern. Since the mid-1980’s, farmland values increased in all States only once---in 1995. This is remarkable considering the strong farmland market conditions of just a few years ago, indicating that even in the best of years, farmland values across the Nation exhibit both positive and negative changes. How long the unfavorable outlook for some key crop exports and prices continues will have an important impact on the direction of farmland values in 2000 and beyond. More important is information that the farm sector is facing the current economic downturn in a strong debt-to-asset position. During the “farm crisis” of the 1980’s, farm debt was equivalent to 30 percent of the farm sector’s total asset value. In 1998 the debt/asset ratio stood at 16 percent. Debt/asset ratios for 1999 and 2000 are forecast to remain at this level.

Table 21—Average per acre value of farm real estate, by farm production region, 1987, 1998, and 1999

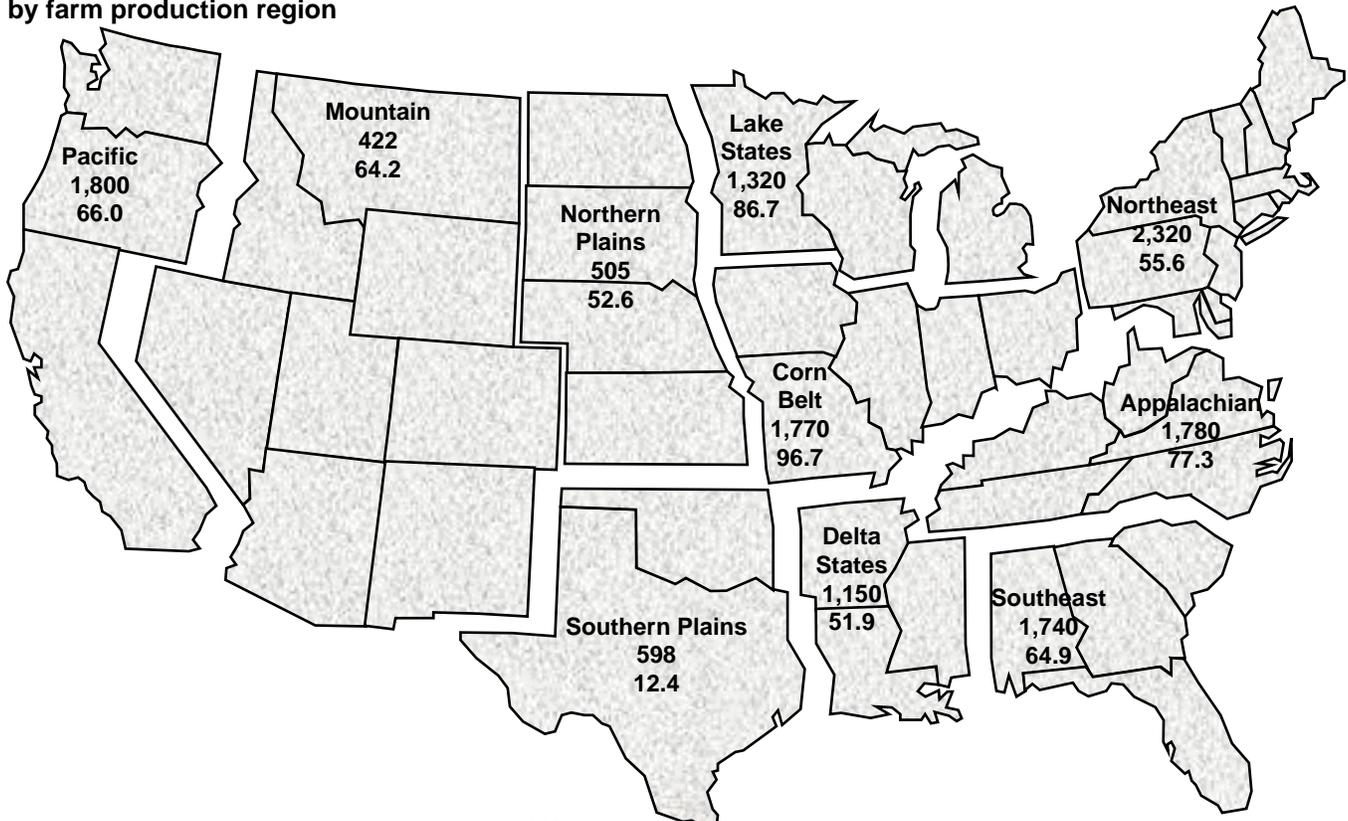
Region	1987	1998	1999	Change 1998-99	Change 1987-99
	-----Dollars-----			-----Percent-----	
Northeast	1,491	2,280	2,320	1.8	55.6
Lake	707	1,280	1,320	3.1	86.7
Corn Belt	900	1,730	1,770	2.3	96.7
Northern Plains	331	499	505	1.2	52.6
Appalachian	1,004	1,720	1,780	3.5	77.3
Southeast	1,055	1,700	1,740	2.4	64.9
Delta	757	1,130	1,150	1.8	51.9
Southern Plains	532	596	598	0.3	12.4
Mountain	257	415	422	1.7	64.2
Pacific	1,084	1,780	1,800	1.1	66.0
U.S.	599	974	992	1.8	65.6

1/ Value data are as of February 1 for 1987 and January 1 for 1998-99.

Source: National Agricultural Statistics Service.

Figure 15

Average per acre value of farm real estate, 1999, and percent change, 1987-99, by farm production region



Top number: Value of real estate per acre, January 1999
 Bottom number: Percent change, February 1, 1987 - January 1, 1999

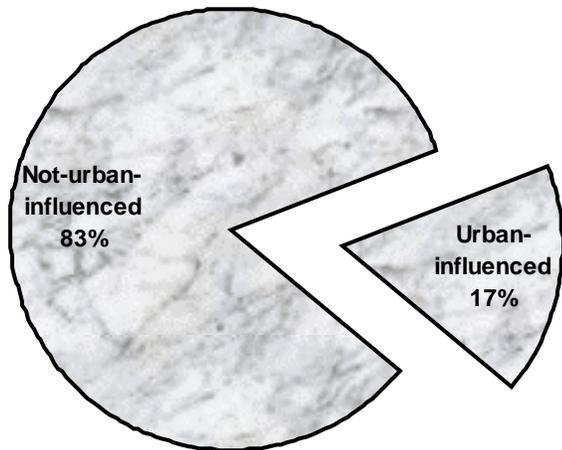
Source: National Agricultural Statistics Service.

Table 22—Indicators of urban-influence for four selected regions, 1994-96

	Urban-influence component of market value			Market value of farmland		
	Acres influenced	All farmland	Urban-influenced	Not urban-influenced	Urban-influenced	All farmland
	<i>Percent of agricultural land base</i>	<i>Percent</i>		<i>Dollars per acre</i>		
Northern Plains	9	6	40	290	480	310
Corn Belt	22	14	42	1,090	1,860	1,260
North Atlantic Slope	55	48	63	1,970	5,300	3,790
Northeastern Forage and Forest	41	62	80	730	3,640	1,910

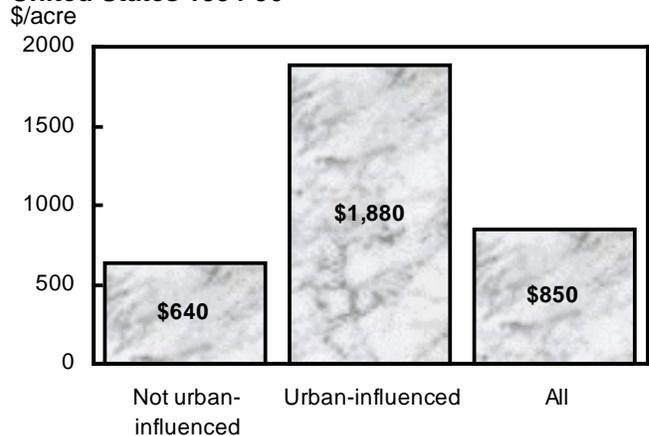
Source: Estimated by ERS from USDA's National Agricultural Statistics Service, June Agricultural Survey data.

Figure 16
Rural versus urban-influenced farmland, United States 1994-96



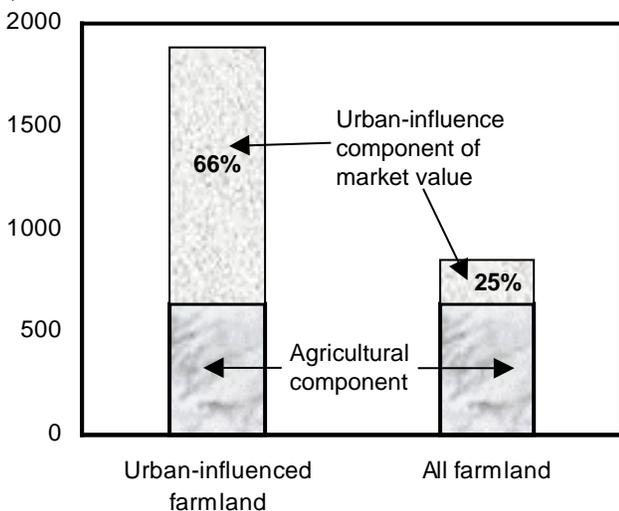
Source: Calculated by ERS from USDA's National Agricultural Statistics Service, June Agricultural Survey data.

Figure 17
Average farmland values, by classification, United States 1994-96



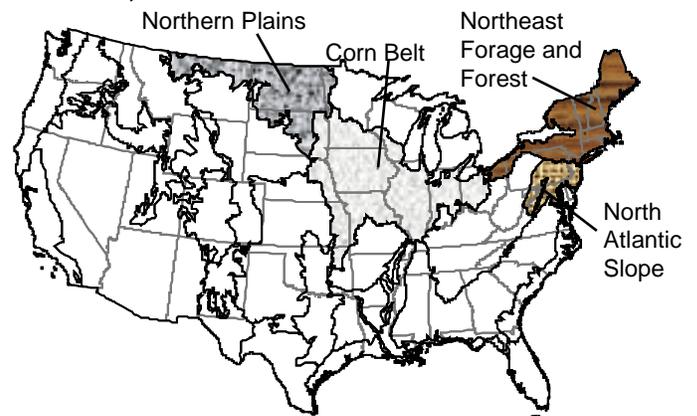
Source: Estimated by ERS from USDA's National Agricultural Statistics Service, June Agricultural Survey data.

Figure 18
Urban-influenced and rural components of average farmland values, United States 1994-96



Source: Estimated by ERS from USDA's National Agricultural Statistics Service, June Agricultural Survey data.

Figure 19
Four selected regions contrasting urban influence, 1994-96



Record Direct Federal Payments Bolster Farm Creditworthiness

An estimated \$22.7 billion in direct payments is supporting farm incomes and collateral values.

A cash infusion of nearly \$23 billion from the Federal government is providing a huge financial safety net for farmers and their lenders. Federal direct farm payments are estimated to push net cash farm income over \$59 billion for 1999, and just shy of the record set in 1993. Supplemental Federal farm payments coming through 1998 and 1999 emergency legislation plus loan deficiency payments (LDPs) account for nearly \$16 billion of the direct farm payments made in 1999. Without these Federal payments, net cash farm income for 1999 would have fallen to levels not experienced since the farm financial problems of the mid-1980's.

USDA's fiscal 2000 appropriations legislation (P.L. 106-78) provided \$8.7 billion in emergency farm spending, of which \$5.5 billion was made as emergency market loss payments in November 1999. For livestock and crop producers suffering from weather-related production losses, \$1.2 billion in production loss payments was authorized. Additional direct payments were targeted to livestock producers and producers of specific crops. This included \$475 million for oilseed producers, \$328 million for tobacco producers, \$200 million for livestock producers experiencing a natural disaster, and \$125 million for dairy producers. The remaining funding is allocated to lowering crop insurance premiums for the 2000 crop year, as well as assisting peanut, sugar, and cotton producers through various mechanisms.

A month after the USDA appropriations bill became law, Congress passed additional emergency supplemental appropriations to aid the farm sector (P.L. 106-113). This legislation added \$186 million to the \$1.2 billion in production loss payments and \$10 million to the \$200 million assistance targeted to livestock producers. The legislation also provided \$179 million in budget authority for FSA farm loan programs to support an additional \$2.5 billion lending authority (see section on FSA). The additional lending authority included \$547 million for emergency loans, which are made at a 3.75-percent interest rate, and \$703 million in subsidized guaranteed farm operating loans, which carry interest rates 4 percentage points less than typically charged. The interest rate subsidies are available to family farms unable to receive financing from conventional sources of credit.

While some of the emergency Federal support is targeted to livestock producers and those that experienced natural disasters, the bulk of the payments go to farms growing corn, soybeans, wheat, and cotton. For these farms, government payments are especially important to their financial well-being. Elimination of just the emergency market loss payments would likely mean that loan default rates for these producers would rise (more on the distribution of government payments can found in the December 1999 issue of *Agricultural Income and Finance*, AIS-73).

Without continued emergency appropriations, net cash farm income is forecast to decline to under \$50 billion in 2000. While this would represent a significant decline in net cash farm income, such income would still equal 90 percent of the 1990-99 average. Therefore, farm loan performance in the absence of further emergency spending in 2000 may not decline as much as the fall in net cash income might suggest.

While total government payments have risen, they remain below the levels of the 1980's. In fiscal 1986, at the peak of the 1980's farm financial stress, net CCC outlays for farm income and price support programs hit \$25.8 billion. During the 1980's, net CCC outlays totaled \$133 billion, with \$82 billion going to farmers in the form of direct cash payments or cash-equivalent commodity certificates. For the 10 years beginning in fiscal 1990, farm revenue and income support mechanisms are estimated to have totaled less than \$100 billion.

Government Payments Support Collateral Value

The record direct government payments to farmers are temporarily propping up farm real estate values in the Corn Belt, the Plains, the Mississippi River Delta, and other regions where Federal payments constitute a large share of gross cash receipts. Maintaining real estate values is important to maintaining farm equity levels and creditworthiness. Farmland represents about 77 percent of the total value of farm business assets and is the primary asset used to secure farm loans.

Most of the \$163 billion increase in farm asset values since 1993 came from higher farmland valuations. If additional emergency payments are not forthcoming for the 2000 crop year and prices for major commodities remain low, farmland bid prices will likely suffer. Because payments authorized under the FAIR Act of 1996 are scheduled to end in 2002, bid prices may weaken going forward due to uncertainty about future farm revenue and price support policies.

Bid prices for farm real estate have been aided by other factors besides direct government income support payments. A booming nonfarm economy has boosted the nonfarm demand for farmland and bolstered incomes from nonfarm sources. For farms with less than \$250,000 in sales, which represent 92 percent of all farms, nonfarm income is far more important to determining total farm household income than earnings from the farming operation. Even for farms with over \$250,000 in farm sales, off-farm income is an important component of total household income and hence debt repayment capacity of the farming operation. Also, in recent years low interest rates have supported farmland values by lowering finance and carrying costs. However, higher farm loan interest rates and slower economic growth in 2000 would reverse the positive effect of these factors on farmland valuations.

Federal Financial Reform Affects Farmers and Agricultural Lenders

More farm banks may choose to join the Federal Home Loan Bank System to have access to relatively cheap and stable long-term funds that can be loaned to farmers and other customers.

The rules governing the financial sector were restructured after years of effort by the Administration, Congress, financial regulators, and trade organizations representing various sectors of the financial services industry culminated in the Gramm-Leach-Bliley Act of 1999, which became Public Law No. 106-102 on November 12, 1999. The formal title is "An Act to enhance competition in the financial services industry by providing a prudential framework for the affiliation of banks, securities firms, and other financial service providers, and for other purposes." This legislation is best known for allowing banks, securities firms, and insurance companies to merge. But, at least in the short run, the most important feature for rural lenders and borrowers may be easier access for most agricultural banks to funding through the Federal Home Loan Bank System that may support additional lending to farmers and other rural businesses.

Difficult Birth

Prospects for a comprehensive legislative solution to reforming the financial industry were complicated by conflicts between the banking, insurance, and securities industries, between regulators, and between small and large banks. Several issues almost derailed the legislation again even after its basic framework was generally agreed upon.

Senator Gramm wanted to exempt rural banks with less than \$100 million in assets from the Community Reinvestment Act (CRA). He believes that small community banks by definition meet the CRA requirement of serving all segments of their communities. The final legislation does not exempt any banks, but the period between CRA examinations was lengthened for small banks with good examination records.

The Federal Reserve Board (Fed) and the Treasury Department disagreed over whether banks wishing to enter insurance and securities industries would provide their newly authorized financial services through nonbank affiliates of their parent bank holding companies (BHCs) or in subsidiaries of the banks themselves. A BHC owns one or more banks and possibly other firms that provide such services as processing checks or offering discount brokerage. In the former case (services offered through nonbank affiliates), the Fed would maintain an important role because it supervises BHCs. In the past, banks could provide certain services that were considered related to banking only through nonbank affiliates of the holding company. While this may sound inefficient, the purpose was to protect the FDIC's bank insurance fund. If an affiliate got in over its head in other activities, in theory the bank would not be harmed because its loan and deposit accounts were handled separately from the other holding company affiliates. The Department of Treasury argued that the same degree of safety could be achieved if banks provide these

services through subsidiaries of the banks. The agencies compromised by allowing banks to provide most activities through either holding company affiliates or bank subsidiaries. But only holding company affiliates may underwrite insurance (both can sell insurance) or participate in real estate development activities.

Major Features

Provisions of Gramm-Leach-Bliley (GLB) have implications for the structure of all U.S. financial markets and for rural areas in particular. Provisions of particular importance to rural areas include Federal Home Loan Bank System modernization, CRA provisions, and changes in bank powers to sell insurance.

GLB repealed the Glass-Steagall Act of 1933 and related legislation that prohibited combinations of banks, securities firms, and insurance companies. The older legislation was a response to the Great Depression of 1929. Many people still feel that these sorts of mergers are not good for the country. In part this reflects an instinctive fear of large firms, based on a belief that they will tend to neglect small businesses and consumers who are not wealthy. Small banks fear that removing all Glass-Steagall barriers would concentrate economic power in a few giant, noncompetitive firms. The Bank Holding Company Act of 1956 prevented combinations of financial and commercial firms, due to an argument that banks may favor businesses in which they have made equity investments. Recent examples of this problem, "dubbed crony capitalism," have been observed in countries such as Indonesia, Korea, and Japan. Hence the new legislation maintains the prohibition against combining financial and commercial firms, though this issue may be addressed again in coming years.

GLB declares that no new unitary thrifts can be created and that firms such as Wal-Mart cannot purchase existing ones. Unitary thrifts, holding companies that own a single savings and loan association, are a byproduct of the process of cleaning up the S&L disaster of the 1980's. They already had many of the characteristics conferred on financial holding companies under GLB, plus the additional feature allowing them to be controlled by nonfinancial firms. Reports that Wal-Mart was planning to acquire a unitary thrift galvanized opposition from the banking industry and others. While farm banks avoid some potential new competition, farmers and other rural borrowers lose the possible benefits of that same competition.

In the modern global economy, anything that affects the overall economy will also affect rural people and businesses. But potentially the most significant section of GLB with respect to rural communities may be Title 6, the Federal Home Loan Bank System Modernization Act of 1999. The

Federal Home Loan Banks (FHLBs) originally served savings and loans (S&Ls) and other thrift financial institutions, which were required to join the Federal Home Loan Bank System (FHLBS) and primarily made home mortgage loans.

The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 permitted commercial banks to join the FHLBS provided they met requirements concerning the extent of their mortgage lending business. The FHLBs make loans (called advances) to their members, giving banks and S&Ls funds to make additional mortgage loans to their customers. Advances represent a stable, national, longer-term source of funds as an alternative to local deposits that can be withdrawn at any time. This helps mitigate the maturity mismatch between short-term deposits and long-term mortgages, which seriously harmed many financial institutions in the 1980's when interest rates paid by banks and S&Ls to their depositors exceeded rates charged on mortgages made a few years earlier.

The new legislation further extends the Federal Home Loan Bank System so that banks with less than \$500 million in assets can use business and agricultural loans in addition to mortgage loans as collateral for FHLB advances. Many small banks are in rural areas and have achieved higher loan-to-deposit ratios in recent years. Whether this is due to slow deposit growth or rapid loan growth, some banks may be more willing to fund additional loans given access to a stable alternative to deposits. Research conducted by the Federal Reserve Bank of Minneapolis estimates that hundreds of additional agricultural banks will be eligible to join the FHLBS, and that existing members will be able to increase their FHLB advances by about 50 percent.

As interpreted by the Supreme Court and Federal regulators, Section 92 of the National Bank Act had previously allowed national banks with branch offices in towns of fewer than 5,000 inhabitants to sell insurance by acting as agents of licensed insurance companies. Policies could be sold to people living elsewhere, but the banks' insurance agents really had to work from the local office. Powers granted to national banks typically apply to State-chartered banks as well, because most States permit State-chartered banks to match the services of national banks. Banks that qualify for this exemption may continue to use it, but GLB allows other banks to sell insurance, too, through either a holding company affiliate or a bank subsidiary. Some rural jobs may be lost since large banks will no longer have to base certain insurance operations in small towns.

A New Financial World?

It remains to be seen whether financial conglomerates created under the reform legislation will succeed. The concept of financial supermarkets has been around for many

years now but previous attempts to actually operate them did not prove very successful. Financial supermarkets stress cross-selling of other financial products. For example, bank tellers and inserts in monthly statements inform us about computer banking, home equity loans, debit cards, and brokerage accounts. While computer software office suites have won out over the "best of breed" approach, it is too soon to say whether that will prove true for financial services.

Technological advances may both help and hurt these efforts. Technology can support efforts at cross-selling a variety of banking, insurance, and investment products. When someone calls or visits a bank branch, or even uses an ATM, the bank will quickly call up information about the customer's current accounts with the bank, and suggest additional services that similar customers have purchased. If bank customers are convinced that these services are priced competitively, provided in a safe and efficient manner, and that they can save time by doing all of their financial shopping in a single location, financial holding companies may succeed.

But technology is also empowering consumers with the ability to search for price information from firms throughout the country and to acquire financial and other products without leaving home. Internet financial web sites present an alternative model to the financial supermarket. By clicking on various links, consumers can select an online brokerage firm, request quotes for mortgage loans and life insurance, and perform many banking functions through the web site of their banks. Financial giants such as Citigroup might be among the companies offering services over the Internet, but specialized banks, insurance companies, and brokerage firms can also compete for specific services.

GLB will likely lead to a series of mergers similar to those that formed Citigroup that combine giant firms in the banking, brokerage, and insurance industries. (Citigroup was created prior to GLB by the 1998 merger of Citicorp and Travelers Group, but the insurance portion of the company would eventually have had to be sold if bank reform legislation had not passed.) But agricultural and other rural community banks will not necessarily lose many customers to these conglomerates. Community banks have a key advantage in that many people prefer to deal with small, locally owned businesses, provided this does not result in lower quality service and products or significantly higher prices. Technology allows small banks to provide advanced services such as Internet banking, since this technology can be acquired at a reasonable cost from third-party providers rather than developed in-house. Groups of small banks can also join together and provide additional services through mechanisms such as subsidiaries of trade associations to compete with much larger firms.

Off-Farm Income Supports Many Farm Households

Farmers have substantial off-farm income that can be used to pay loans, but off-farm income varies substantially by type of farm.

By combining income from farm and off-farm sources, operators averaged \$59,700 in total household income in 1998, about 15 percent higher than the \$51,900 average for all U.S. households. On average, 88 percent of farm operator households' income came from off-farm sources in 1998. Reliance on off-farm income, however, varied widely among different types of farm households. Due to off-farm income, average household income was particularly high in metro areas.

Receipt of off-farm income also varied by farm and operator characteristics. The Economic Research Service (ERS) has developed a typology, or classification system, to divide farms into mutually exclusive, more homogeneous groups (box). For most small farm groups, virtually all income came from off-farm sources. On average, farming made the largest contribution to household income for groups with sales of \$100,000 or more, and farming's contribution increased with sales.

Farmers' wealth consists largely of their farms, however, regardless of typology group. Thus, lenders can assume that most small farms will pay off their loans with off-farm income. But, collateral used to back loans will likely be farm assets, regardless of typology group.

Sources and Level of Income

Households operating very large farms received only 16 percent of their income from off-farm sources, much less than the other groups. In addition, 74 percent of these households relied on farming for at least half of their income. Nevertheless, households in this group received an average of \$33,200 in off-farm income, mostly from earned sources. Households operating very large farms had the highest average household income, \$209,100, about four times the average for all U.S. households.

Households operating residential/lifestyle farms or large farms also had an average income above the average for all U.S. households, but the sources of income differed between the two groups. Households with residential/lifestyle farms received practically all of their income off-farm, largely from earned sources (self-employment or wage or salary jobs). About 71 percent actually lost money farming. One-third of the residential/lifestyle farms specialized in beef, which--in the case of cow-calf enterprises--can have relatively low labor requirements that mesh well with off-farm work.

In contrast, households with large farms received only 44 percent of their income from off-farm sources, and most (62 percent) of these households received at least half of their income from farming. The most common specialization for large family farms was cash grain (44 percent of farms in the group).

Households operating retirement farms or high-sales small farms had an average income that did not differ from the average for all U.S. households by a statistically significant amount. Nearly all the income of households with retirement farms came from off the farm, and 66 percent of their off-farm income came from unearned sources, such as Social Security. About 58 percent of the households operating retirement farms had a loss from farming.

Households operating higher-sales small farms relied much more heavily on farming than their counterparts with retirement farms. Forty-nine percent of the households with higher-sales farms received at least half their income from farming, and farming accounted for 43 percent of the group's total household income, on average. About two-thirds of the farms in this group specialized in cash grains or dairy.

The two remaining groups, lower-sales and limited-resource farm households, received income below the average for all U.S. households. Most of their income came from off-farm sources, with unearned income making up more than half of their off-farm income. This reflects the relatively high percentage of elderly farmers in these groups. Approximately a third of limited-resource farmers reported they were retired. Lower-sales farmers reported farming as their major occupation, but 36 percent were over age 65, compared with 12 percent of all farmers. Many of these older farmers would have received Social Security if they scaled back their farming activities and restricted their off-farm work.

Except for households operating limited-resource farms, each group of households had an average household net worth above the \$282,500 average for all U.S. households. Although many farm households relied heavily on off-farm sources for income, most operator household wealth came from the farm, regardless of typology group.

Geographic Variations

Farm households relied the most on off-farm income in metro counties, where 93 percent of operator household income came from off-farm sources. At the other extreme, only 69 percent of operator household income came from off the farm in farming-dependent counties, largely concentrated in the Northern and Southern Plains.

Average household income was greater in metro counties (\$68,500) than either farming-dependent counties (\$53,900) or other nonmetro counties (\$55,700), largely because of substantially higher off-farm income in metro counties. The higher off-farm income in metro areas probably reflects better employment opportunities in urban areas.

Urban competition for land may also explain why average household net worth was higher in metro areas than in other

nonmetro counties. The difference in average net worth between metro and farming-dependent counties was not statistically significant, however. Although urban pressures may help raise wealth in metro areas, farms in farming-dependent counties are larger, which would raise their value

despite less urban demand for land. About a third of farm households in farming-dependent counties operated higher-sales small farms, large farms, and very large farms, compared with just over one-tenth of households in other nonmetro counties or in metro counties.

Defining the Farm Typology

Small Family Farms (sales less than \$250,000)*

1. **Limited-resource.** Any small farm with: gross sales less than \$100,000, total farm assets less than \$150,000, and total operator household income less than \$20,000. Limited-resource farmers may report farming, a nonfarm occupation, or retirement as their major occupation.
2. **Retirement.** Small farms whose operators report they are retired (excludes limited-resource farms).
3. **Residential/lifestyle.** Small farms whose operators report a major occupation other than farming (excludes limited-resource farms).
4. **Farming occupation/lower-sales.** Small farms with sales less than \$100,000 whose operators report farming as their major occupation (excludes limited-resource farms).
5. **Farming occupation/higher-sales.** Small farms with sales between \$100,000 and \$249,999 whose operators report farming as their major occupation.

Other Farms

6. **Large family farms.** Sales between \$250,000 and \$499,999.
7. **Very large family farms.** Sales of \$500,000 or more.
8. **Nonfamily farms.** Farms organized as nonfamily corporations or cooperatives, as well as farms operated by hired managers.

*The \$250,000 cutoff for small farms was suggested by the National Commission on Small Farms.

Defining Operator Household Income

Operator household income is measured according to the definition of income used in the Current Population Survey (CPS), conducted by the Bureau of the Census. The CPS is the source of official U.S. household income statistics. Calculating an estimate of farm household income that is consistent with CPS methodology allows comparisons between the income of farm households and all U.S. households.

The CPS defines income to include any receipts of cash. The CPS definition departs from a strictly cash concept by deducting depreciation, a noncash business expense, from the income of self-employed people. The derivation of operator household income from the 1998 Agricultural Resource Management Survey is outlined below.

	<i>Dollars per farm</i>
Net cash farm business income	14,357
Less depreciation	7,409
Less wages paid to operator and gross farmland rental income	1,180
Less adjusted farm business income due to other households	1,332
	<i>Dollars per household</i>
Equals adjusted farm business income	4,436
Plus wages paid to operator, net farmland rental income, and other farm-related earnings	2,670
Equals earnings of the operator household from farming activities	7,106
Plus earnings of the operator household from off-farm sources	52,628
Equals average farm operator household income	59,734

Net cash farm business income presented above differs from sector net cash income. Net cash farm business income is a component of farm sector income. It excludes the income of contractors, landlords, farms organized as nonfamily corporations or cooperatives, and farms run by a hired manager.

Table 23—Income and net worth of farm operator households, by farm typology group and county type, 1998

Item	Operator households	Total household income			Off-farm income		Total net worth		
		Average amount	From off-farm sources 1/	Percent of U.S. average household income 2/	Average amount	From earned sources	Average amount	From off-farm sources	Percent of U.S. average household net worth 3/
	<i>Number</i>	<i>Dollars per household</i>	<i>Percent</i>	<i>Percent</i>	<i>Dollars per household</i>	<i>Percent</i>	<i>Dollars per household</i>	<i>Percent</i>	<i>Percent</i>
All operator households	2,022,413	59,734	88.1	115.2	52,628	74.4	492,195	17.0	174.2
Farm typology:									
Small family farms: 4/									
Limited-resource 5/	150,268	9,924	132.5	19.1	13,153	53.3	78,718	16.0	27.9
Retirement 6/	290,938	45,659	103.3	88.1	47,158	34.9	535,943	19.8	189.7
Residential/lifestyle 6/	834,321	72,081	106.0	139.0	76,390	88.7	347,909	26.3	123.2
Farming-occupation: 6/									
Lower-sales	422,205	34,773	106.9	67.1	37,186	57.7	576,402	14.2	204.0
Higher-sales	171,469	50,180	57.2	96.8	28,717	72.3	669,458	10.4	237.0
Large family farms 4/	91,939	106,541	44.4	205.5	47,252	65.7	944,533	9.0	334.3
Very large family farms 4/	61,273	209,105	15.9	403.2	33,240	65.1	1,508,151	6.8	533.9
County type: 7/									
Metro	671,619	68,518	93.4	132.1	64,008	74.6	574,515	17.7	203.4
Nonmetro	1,350,794	55,367	84.8	106.8	46,970	74.3	451,266	16.6	159.7
Farming-dependent	263,517	53,921	69.0	104.0	37,180	70.8	508,380	14.1	180.0
Other nonmetro	1,087,277	55,717	88.6	107.4	49,342	74.9	437,423	17.3	154.8

Note: Household data are not collected for nonfamily farms. 1/ Income from off-farm sources can be more than 100 percent of total household income if earnings of the operator household from farming activities are negative. 2/ Average farm household income divided by U.S. average household income (\$51,855) from the Current Population Survey. 3/ Average farm household net worth divided by U.S. average household net worth (\$282,500) from the Survey of Consumer Finances. 4/ Family farms include farms organized as sole proprietorships, partnerships, or family corporations. Farms operated by hired managers are excluded. As defined here, small farms have gross sales of less than \$250,000. Large family farms have sales between \$250,000 and \$499,999. Very large farms have sales of \$500,000 or more. 5/ Limited-resource farms meet three conditions: household income less than \$20,000, farm assets less than \$150,000, and gross sales less than \$100,000. 6/ Small farms other than limited-resource farms are classified according to the major occupation of their operators. Operators of retirement farms are retired. Operators of residential/lifestyle farms report a nonfarm occupation. Operators of farming-occupation farms report farming as their major occupation. Farming-occupation farms are further divided into two groups: lower-sales (sales less than \$100,000) and higher-sales (sales between \$100,000 and \$250,000). 7/ Metro areas are defined by the U.S. Office of Management and Budget as geographic areas with a large population nucleus (generally at least 50,000 inhabitants), plus adjacent communities that are socially and economically integrated with that nucleus. Metro designations as of 1993, which identified 813 metro counties, are used here. The 2,276 nonmetro counties are a residual, the part of the Nation lying outside metro areas. There are 556 farming-dependent nonmetro counties where farming accounted for at least 20 percent of earned income over the 3 years from 1987 to 1989.

Source: 1998 Agricultural Resource Management Study, Current Population Survey, and Survey of Consumer Finances.

Demand for Farm Credit Declines in 1999

Farm debt edged down slightly in 1999 after increasing over 4 percent in 1998. The dollar volume of farm loans outstanding decreased for all lender categories except the Farm Credit System and life insurance companies.

Total Farm Debt Projected To Decrease Slightly

The expected slight decline in farm business debt, to about \$172.5 billion by yearend 2000, will be the second consecutive decrease in farm debt outstanding following 6 years of expansion. The expected decline of about \$300 million during 2000 follows an expansion of \$33.8 billion, or 24 percent, during 1992-1998. Some \$16.8 billion (or half) of this increase came in 1997-98 as farmers optimistically reacted to the planting flexibility allowed by the 1996 Farm Bill and the relatively high commodity prices of 1996-97. The 6- and 4.5-percent increases in farm debt outstanding in 1997 and 1998, respectively, were the two largest annual gains since 1981.

The forecast decline for farm debt in 2000 reflects a change in farmers' outlook toward debt. The sector learned during the farm financial crisis of the 1980's that borrowing cannot substitute for adequate cash flow and profits. Expected 2000 price and income levels and uncertainty about the economic recovery of major importers of U.S. farm products are fueling farmers' caution concerning debt use. The forecast decline reflects fewer new capital investments given today's uncertain commodity markets, and a relatively low incidence of farms borrowing their way out of cash-flow problems. Adequate levels of working capital, additional government support, and off-farm earnings buoyed by a strong economy are also helping to reduce loan balances and new borrowing.

Total direct government payments to farmers were \$12.2 billion in 1998, \$22.7 billion in 1999, and are projected at \$17.2 billion for 2000. Farmers received an annual average of \$8.8 billion in direct payments during 1990-97, but this increased to a yearly average of \$17.4 billion for 1998-2000. This high level of government support is reducing the demand for credit. Farmers have been maintaining or improving their balance sheets by using some of their government payments to pay down existing debt. Actual changes in farm business debt in 1999 and 2000 will depend heavily on the timing of government assistance payments and the extent to which farmers use these payments to reduce outstanding loan balances.

The outlook for 2000 indicates that loan demand will continue to moderate because farmers do not know how long depressed prices and export problems will last. Trends in the general economy indicate that interest rates may increase somewhat, which will also tend to dampen farm loan demand. Both net farm and net cash incomes will decline in 2000. With the reduction in income and narrowing of margins in 2000, farmers will be managing tighter cash flows. A higher proportion of debt service capacity will be used, reducing farmers' credit reserves and exposing a larger share of farms to potential debt repayment

problems. Farmers' use of net repayment capacity is thus forecast to rise to 66 percent in 2000, compared with 56 percent in 1999 (lowered because of the large Federal payments) and 59 percent in 1998. About 14 percent of all farm businesses are forecast to have debt repayment problems in 2000.

Demand for Credit Lessens for Both Production and Real Estate Loans

Agricultural lenders generally found that demand for agricultural credit moderated across the board in 1999. Outstanding real estate loan volume increased less than 1 percent while that for nonreal estate decreased less than 1 percent. This was down from the respective 5- and 4-percent gains of a year earlier. On a calendar year basis, outstanding total loan volume decreased in 1999 for all lenders except the FCS and life insurance companies.

Nonreal estate loan volume decreased about \$700 million in 1999. This change in the short- to intermediate-term nonreal estate loan portfolio is in sharp contrast with an increase of \$3.2 billion in loans outstanding in 1998. Outstanding nonreal estate loan volume of the FCS increased \$276 million, or about 2 percent, compared with a decline of \$1.4 billion, or 3 percent, for commercial banks. With expanded FSA loan authority in fiscal 1999, total FSA nonreal estate loans outstanding are forecast to increase about 1 percent in calendar 1999 to \$4 billion.

FSA made direct operating loans during fiscal 1999 of \$818.8 million, up 47 percent from fiscal 1998. Total direct FSA obligations (operating, ownership, and emergency) increased 80 percent from fiscal 1998, to \$1.3 billion.

Nonreal estate business loans outstanding should decrease about 1 percent in 2000 because of a number of factors affecting demand for production credit. Farmers are expected to spend about \$192.3 billion for agricultural inputs in 2000, up less than 1 percent from 1999 and comparable with the less than 1-percent increases of 1997 and 1998. Total cash production expenses are forecast to increase only 1 percent (\$1.5 billion) in 2000. Expenditures for seeds, fertilizer, and agricultural chemicals, at \$26.8 billion, are forecast to be up slightly from 1999. Fuel prices and interest rates at the end of 1998 were the lowest in recent years, but they now are moving up. Fuel costs are forecast to increase from \$6.4 billion in 1999 to \$7.4 billion in 2000 and farm interest expenses are forecast to increase 2 percent to \$13.3 billion.

Total planted acres for principal field crops in 2000 are forecast to decline, but continued use of the same production practices will likely cause the quantities of inputs used to remain near 1999 levels. Planted acreage in 2000 for the

eight major crops (corn, sorghum, barley, oats, wheat, rice, upland cotton, and soybeans) is projected to decline 900,000 acres to 250.8 million. The largest projected decrease from 1999 is 800,000 acres (down 1 percent) for wheat followed by 500,000 acres (down 5 percent) for cotton. Soybean acreage is forecast to increase 1.2 million acres (2 percent) and barley 200,000 acres (4 percent). Rice, corn, sorghum, and oats acreage are all forecast to decline slightly. These eight crops accounted for virtually all of the changes in principal crop acreage in recent years.

In the January issue of *Winter Wheat and Rye Seedings*, USDA reported that the area seeded to winter wheat in the fall of 1999 totaled 42.9 million acres, down 1 percent from a year earlier. This acreage has been decreasing in recent years and now is the smallest since 1972. The initial acreage projections for spring wheat and other field crops will be issued in USDA's *Prospective Plantings* report to be released on March 31.

Unit sales of farm tractors, combines, and other farm machinery dropped in late 1998. But slackening demand came so late that the overall 1998 sales of wheeled farm tractors increased nearly 6 percent and combines 8 percent from 1997. The story was different in 1999, however. Purchases of wheeled farm tractors totaled 139,684 units, up 3 percent from 1998, but this was induced by the 24-percent jump in sales of small tractors under 40 HP boosted by strong off-farm income. Combine purchases were down 47 percent to 5,462. Sales of 2-wheel drive tractors of 100 HP and over declined 29 percent and 4-wheel drive tractor sales dropped 26 percent after dropping 30 percent in 1998. There is widespread expectation that 2000 will experience weak demand across a range of equipment. The Equipment Manufacturers Institute projects year 2000 declines for 11 of the 16 equipment categories other than tractors and combines.

Lessened or moderated sales in 1999 will affect the demand for short- and intermediate-term farm loans. A larger share of this demand is now met by "captive" finance companies, such as those owned by machinery companies, as opposed to the more traditional institutional lenders. This debt appears in the "individual and others" category in ERS's farm nonreal estate debt data series.

Real estate farm loan volume increased about \$660 million in calendar 1999. Outstanding FCS real estate loans increased 2 percent and accounted for \$640 million of the change while commercial banks' loan volume increased 3 percent or \$900 million. Both the FSA (-6 percent) and individuals and others (-4 percent) categories experienced

declines. Among life insurance companies, total lending activity was up 1 percent during calendar 1999.

Farm real estate loans outstanding should increase less than 1 percent in 2000. Activity in the land market is likely to reduce the demand for mortgage loans (real estate credit) in 2000. Total U.S. farmland values as reported in USDA's farm sector balance sheet increased an estimated 2 percent in 1998 and 1 percent in 1999, and are expected to advance slightly in 2000. This will make 14 straight years (1987-2000 inclusive) of increases, but the recent rate of increase has slowed. During 1992-97 the average annual increase was 5.2 percent for the strongest yearly gains, in both nominal and real terms, since values began to recover in 1987. Recent farmland value growth rates are down, but they have been buoyed by government payments, off-farm employment, and urban influences in many areas.

The forecast increase of 0.5 percent in 2000 farmland values is not only lower than in recent years, but as an aggregate number it masks much regional variation. Recent 1999 farmland value surveys showed some weakening, even declines in some areas, but increases in most States. A November Chicago Federal Reserve Bank survey indicates that farmland values had fallen over the previous 12 months in Illinois and Iowa. That contrasts, however, with strong upward trends for Michigan and Wisconsin. A statewide November survey by Iowa State University showed that farmland values in Iowa declined for the second consecutive year with a statewide decline of \$20 per acre or 1 percent for 1999. An October survey by the Dallas Fed indicates that Texas farmland values were stable to declining over the previous year. Lower prices for key farm commodities and uncertainties about the duration of this downturn apparently are having an impact and should mute farm real estate credit demand.

It continues to be unclear, however, if the recent farmland value increases have led to corresponding increases in the demand for farm mortgage credit even in the most favorable years. There are reports that a significant portion of the price gains were driven by outside nonfarm investors and not by farmers. Moreover, there are reports that a good share of the farmer buyers were larger operators who were able to pay in large part or in whole with cash and not via borrowing. For mid-size to smaller farms, off-farm earnings have been strong in recent years, allowing them to bid higher on farmland tracts than would be indicated by agricultural use values. The farmland market historically has been thin with only 2-4 percent of the land changing hands in any one year. Today, wide areas are subject to urban pressures that tend to override the components of farmland value that are driven primarily by the land's agricultural use value.

Farm Lenders Address the Farm Sector's Credit Supply Challenges

All farm lender categories work to furnish adequate access to credit while maintaining loan portfolio quality.

Farm Lenders Continue To Show Some Caution

Low prices for several key agricultural commodities and significant weather problems in several regions continue to raise concerns about the ability of some farmers to repay new or existing loans. Many of these concerns are focused on the ability of farmers to obtain and retain production credit. What is clear is the current credit situation varies considerably by region, commodity, farm size, and farm type and that lenders will be dealing with more internal variation in farm sector economic performance.

Lenders continue to exhibit caution in extending agricultural credit. The current situation does not merit the label of crisis, but the farm loan portfolio losses of the early to mid-1980's are a recent memory (app. table 6). Lenders were able to manage most 1999 farm loan repayment problems given the relatively healthy farm incomes in 1997, 1998, and 1999. It is not expected that the 2000 farm financial situation will lead to unmanageable deterioration in lenders' portfolios. But, if farm commodity prices remain low, lenders increasingly will face renewal requests for substandard loans and new customers that are less creditworthy. In this scenario, some farmers would also need to reconsider their plans to use debt capital. In many ways, 2000 may prove to be a more important year than 1999 in determining the proper course of action for lenders and borrowers.

Much consolidation, streamlining of procedures, and improved oversight have occurred in the lending industry over the past two decades. The new, larger lending firms tend to be more professional in their loan making activities and apply more stringent loan criteria than 20 years ago. Larger lending firms also make greater use of information technology, stricter verification of information, separation of the appraisal and loan analysis functions, and more frequent use of borrower accrual financial statements. The loan evaluation process has become more standardized among different types of lenders, with increasing attention on risk factors. Fewer and larger commercial banks now hold a larger percentage of agricultural loans. Commercial banks have become more important to agriculture in recent decades, but agriculture has become less important to banks.

Two farm lender lessons from the 1980's are: (1) credit cannot be used as a replacement for lost earnings, and (2) lenders will insist on earnings, not asset inflation, to insure repayment. The 1980's made it clear that farm businesses need to be profitable to successfully manage debt obligations. This was a hard-earned lesson. Today, despite low prices, lenders appear confident about most of their farm customers given the level of Federal farm assistance. Most farmers took a lesson from the last farm crisis and are not as heavily leveraged as they were a decade ago. Veteran

lenders cite significant differences from the 1980's, including lower interest rates, more owner equity, better credit analysis and monitoring methods, and the better management ability of their producer customers. Lenders thus will work with most of their customers to restructure debt and will continue to provide credit for operating expenses.

The 1990's have seen a general enhancement of loan oversight and tighter regulations for all types of agricultural lenders. The farm loan process changed (tightened) as lenders shifted from equity- to income-based lending. The application procedures became more complex. The lending game continues to change due to the emphasis on risk. Examiners currently see few problems with underwriting practices for agricultural loans.

Farm Lenders Have Adequate Capacity To Supply Credit

Currently, the availability of funds is not the problem as lenders have more money available than they can profitably lend. It is clear that what borrowers may consider a credit crunch in agriculture has been caused more by changes in the loan process and loan analysis than by changes in the availability of funds. Also, these changes have been influenced by changes in the current risk environment surrounding agricultural credit.

Agricultural lenders are expected to go the extra mile to lend farmers for 2000 production, but they will be looking closely at the profit margin of farmers' operations. Credit will not be used to replace earnings. If a borrower does not show a profit in 2000, chances are the bank will not lend money in 2001. The borrower's ability to generate income is the key. But lenders appear to have enough money to lend.

Farm lenders have responded to the increased demand for loans that began in 1993. Between 1992 and 1998, total farm debt grew \$33.8 billion or 24 percent. Commercial banks led with \$18.3 billion, followed by the FCS with \$9.9 billion and the individuals and others category with \$9.0 billion. The increased demand for farm loans during 1992-98 affected the nonreal estate farm production loan category much more than the real estate mortgage loan category. The former rose nearly 31 percent while the latter increased 19 percent. But total farm business debt is forecast to be about \$172.8 billion by yearend 1999, essentially flat (down slightly) and ending a 6-year increase. A further decline is forecast by yearend 2000.

The FCS is well positioned to supply farmers' future credit needs. It has demonstrated financial strength in recent years as it underwent massive restructuring of its organization and

procedures. The FCS has access to national money markets and can provide needed farm credit at competitive rates. In 2000 FCS farm business debt is forecast to be flat, following a rise of 2 percent in 1999. FCS gained farm loan market share over the past 5 years after a gradual loss of share during the previous 12 years. FCS mortgage debt is expected to increase 1 percent in 2000 and FCS nonreal estate loans are forecast to decline about 2 percent.

The recent growth in farm loan demand experienced by commercial banks is reflected in their loan-to-deposit ratios. Average loan-to-deposit ratios grew to nearly 74 percent for agricultural banks in the year ending September 30, 1999, from 57 percent 7 years earlier. Average loan-to-deposit ratios reported by the Federal Reserve System for agricultural banks increased during the year ending September 30, 1999 for all eight reporting districts. The growing demand for farm loans and increasing farm loan-to-deposit ratios at agricultural banks might be expected to have taken much of the slack out of the lending system regarding farm loans. But this has not generally been the case. High loan-to-deposit ratios do not necessarily constrain the origination of new loans in today's banking system.

Commercial banks have many nondeposit sources of funds, such as the Federal Home Loan Bank System, and may sell farm mortgage loans to Farmer Mac. Thus, profitable, well-managed agricultural banks often have very high loan-to-deposit ratios. Although rural banks make considerably less use of nondeposit funds than banks headquartered in metropolitan areas, most rural banking markets are served by banks that use nonlocal sources of funds to some extent. Overall, adequate funds are available from banks for agricultural loans, with few banks reporting a shortage of loanable funds.

The availability of direct FSA loans to family-sized farmers unable to obtain credit elsewhere was enhanced a great deal in 1999 through the increased availability of guaranteed loans. This enables lenders to make loans to farmers who otherwise would be commercially unacceptable and also eases the concerns of the lenders' regulators. FSA began to emphasize guaranteed in favor of direct government loans in the mid-1980's. FSA held less than 5 percent of all farm business debt in 1999, down from 16 percent in 1987.

FSA's authority to guarantee loans made by commercial and cooperative lenders is up 50 percent in fiscal 2000, while authority to issue direct loans (ownership, operating, and emergency) is up 27 percent for fiscal 2000. FSA loan activity in 2000 is difficult to predict because it depends in part on the extent of adverse weather as well as on economic conditions that affect the farm sector. FSA will use all of its loan serving authorities, including debt rescheduling and forgiveness, to assist needy farmers.

Among life insurance companies, total farm lending activity was up over 1 percent in 1999. During 1982-92 total industry farm mortgage holdings actually declined in 8 of the 11 years for an overall drop of 28 percent. Therefore, the 1992-99 increase of 24 percent is significant. Life insurance companies report adequate funds for the credit applications that meet their quality standards. Their farm lending is forecast to increase about 2 percent in 2000.

The general financial health of agriculture today is stronger than in the mid-1980's when the sector last experienced significant financial stress. Customers, in general, are less leveraged and more liquid. Those customers who survived the 1980's are better financial managers. Agricultural lending has entered an era of increased uncertainty that translates into more stress for specific portfolio segments. Many of the contributing factors are beyond the control of individual customers and lenders. Furthermore, these factors, such as weakened worldwide demand, will take time to recover.

FCS Market Share Holds

While farm credit use has risen during most of the 1990's, substantial changes have occurred in the market shares of farm business debt among the four classes of traditional farm lenders. The composition of loans made by each class has also changed. It is important to note the interplay between two key lender classes, commercial banks and the FCS, which together held 70 percent of farm debt at yearend 1999. Commercial banks have consistently (with the single exception of slight dips in 1996 and 1999) raised their share of total farm loans outstanding from 21 percent in 1981 to 40 percent in 1999. Much of this shift occurred at the expense of the FCS, whose market share dropped from a high of 34 percent in 1982 to 24 percent in 1994, before increasing to 27 percent in 1999.

Commercial banks' total farm loan portfolio grew 67 percent during 1982-98, before dropping about 1 percent in 1999. At the same time, the FCS portfolio dropped 45 percent from a 1982 high to a 1993 low, before increasing nearly 32 percent in 1993-99. The farm financial crisis of the early 1980's adversely affected the FCS, causing many farmer borrowers to leave, fearing they could lose their stock in failed FCS units. Commercial banks also experienced financial stress but were able to compete effectively in the crisis's aftermath to build market share. During 1994-99, FCS farm lending grew 30 percent (\$10.8 billion) while commercial bank farm loans increased 20 percent (\$11.7 billion). In 1999, commercial banks' holdings of farm loans declined about \$500 million while the FCS farm lending increased about \$900 million. Both lenders are forecast to experience slight declines in 2000.

Indicators of Financial Stress in Agriculture Reported by Agricultural Banks, 1982-99

by Jerome M. Stam, Daniel L. Milkove, and George B. Wallace¹

The American Bankers Association (ABA) has conducted annual farm credit situation surveys for many years. Survey results provide a picture of changing farm credit conditions as viewed by agricultural banks through time. Results show the levels of farm financial stress by most indicators were high during the 1982-86 period with a peak in 1985-86. A period of strengthening farm sector fundamentals in 1987-89 was followed by a period of relative financial stability in 1990-95 and very favorable economic times in 1996-97. Since 1987 all stress indicators have been much lower than during 1982-86. Exceptions exist for the loaned-up-to-the-limit and bankruptcy rates indicators that took some more time to subside through the late 1980's and into the 1990's. More recently in 1998-99, according to the agricultural bankers, there is some increase in the agricultural sector's stress levels based on recent low agricultural commodity prices beginning in 1997. Data are presented for both the United States and five ABA regions.

Introduction

This article analyzes the results of a unique source of information regarding farm sector and agricultural lender performance, namely the American Bankers Association's (ABA's) annual midyear agricultural credit situation survey. Midyear surveys of agricultural banks conducted by the ABA are unique in that the focus is not strictly on the farm sector or agricultural banks. Beginning in 1982, questions on farm financial stress were added to the ABA survey and ERS began purchasing the results. There have been numerous changes to the survey through time as different issues are addressed annually. This article focuses on the farm financial stress questions that were maintained throughout the period of analysis.

Agricultural lenders have faced a rapidly evolving farm sector lending environment during the past 25 years (9, 10, 11).² In a nutshell, the 1975-79 period was one of escalating farm sector costs following the boom period of the early 1970's. A farm recession followed during the early to mid-1980's with a cost squeeze, plummeting asset values, and problems with excess debt. The 1984-86 period was one of farm debt restructuring followed by strengthening economic fundamentals during 1987-89. The 1990's were characterized by a more conservative farm lending mode. Agricultural lending did not return to the way it was prior to the event-filled 1980's. Producers were careful in acquiring new debt and lenders were more careful in scrutinizing the creditworthiness of borrowers. An emphasis on cash-flow lending displaced the 1970's and early 1980's stress on collateral-based lending. Credit standards were tightened but farmers who were good credit risks were able to acquire credit.

The Setting: Farm Financial Stress in the 1980's and 1990's

The farm financial stress questions in the 1982-99 surveys cover almost two decades in which farmers experienced

substantial financial ups and downs. The 1982-86 farm debt crisis period was followed by the 1987-89 period of recovering economic fundamentals. The 1990-95 span featured relative financial stability that built to generally very favorable economic times for the farm sector in 1996-97. Substantial price declines for key commodities beginning in 1996 led to lower farm commodity receipts and a concern in some quarters during the post-1997 period of another farm financial crisis. It is thus important to compare the farm debt crisis period of the early to mid-1980's with the post-1997 period.

The Farm Debt Crisis: 1982-86. The farm sector's financial problems in the 1980's had their genesis much earlier. The 1970's were generally good times for agriculture, with optimistic expectations of world demand for U.S. farm products. Agricultural exports expanded as the dollar declined in value. Prices for farm commodities rose early in the decade in response to strong demand for feed grains and wheat. Production and investment expanded in a climate of low, and at times negative, real interest rates. In this economic boom, farm borrowing grew and land values increased rapidly. Lenders, consultants, and others often encouraged additional borrowing to finance expansion. Rising machinery investment, combined with land price and other cost increases, led to a generally higher cost structure for agriculture.

The early 1980's saw a rapid turnaround in the forces that had caused the rapid economic expansion. Back-to-back recessions in 1980 and 1981-82 hit the farm sector hard. A large increase in the value of the dollar reduced the demand for U.S. farm exports. 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 costs increased, while net farm income generally fell. Returns to land declined due to a reduction in exports and commodity prices, a high cost structure, and even lower returns expected in the future. The declining farmland values weakened farmers' equity positions. Some farmers were unable to make principal and

¹ Leader, Finance Team, financial economist, and economist, respectively, Food and Rural Economics Division.

² Italicized numbers in parentheses identify literature cited in the Reference section at the end of the article.

interest payments on the large debt acquired during the 1970's boom period.

These numerous interrelated economic changes in the 1980's led to the most severe financial stress to hit the farm sector since the Great Depression of the 1930's. The financial problems of the farm sector were increasingly passed to farm lenders in the 1980's. Losses of principal and interest payments on delinquent, uncollectible farm loans increased during the 1980's. One estimate indicates a cumulative farm loan loss (net charge-offs) for all farm lenders during 1984-89 of \$19.8 billion (11). During the 1980's, agricultural bank failures became a concern as 304 failed during 1984-89, the Farm Credit System (FCS) encountered such major challenges that \$1.26 billion in Federal assistance was required, USDA's Farmers Home Administration (FmHA) experienced major loan write-offs, and insurance companies faced their biggest farm loan difficulties in 50 years.

Low Farm Prices: 1997-Present. Since the end of 1997, many farmers have experienced reduced cash receipts from farm marketings due to falling prices for certain key commodities. The deterioration in commodity prices following several years of healthy gains in farmland values and rising debt levels led to the speculation that agriculture could be entering a contraction similar to that of the 1980's. Prices for many key agricultural commodities (especially grains, oilseeds, and hogs) fell dramatically. For example, October 1999 prices reported by USDA were down from earlier highs (month and year given) by 54 percent for all wheat (May 1996), 65 percent for corn (August 1996), 66 percent for soybeans (May 1997), 39 percent for upland cotton (April 1996), and 43 percent for hogs (June 1996).

The reasons for these changes are complex, but the changes were initiated in large part by global financial adversity. On July 2, 1997, the Thai baht declined 15 percent against the U.S. dollar. Thus began a series of crises that started in Asia, but spread to Russia and Latin America. This series of challenges raised questions not only about development strategies in a set of countries that were heretofore referred to as the Asian Tigers, but also about the international policy and response to financial difficulties by the International Monetary Fund and the U.S. Treasury. Although the full story of what caused the crises may never be fully agreed upon, the resultant economic instability significantly threatened the global economy.

Had the crises not undermined the demand for U.S. agricultural exports at a time of already low prices, it would be only a curiosity for U.S. agriculture. However, the economic instability reinforced a set of factors that played more significantly on rural America than in the overall U.S. economy. The depression in commodity prices also has been exacerbated by overproduction in world agriculture. Further, weather-induced reductions in crop yields in certain regions of the United States have lowered incomes of some farmers.

Because agricultural lenders may refuse to extend loans to agricultural borrowers who cannot demonstrate solid repayment capacity, some have characterized the current

low-price downturn as a "credit crisis." Despite low commodity prices, there is little reason to believe that the current situation is a repeat of the 1980's farm financial crisis (6, 7). While agricultural conditions in the last decade have in some ways been similar to those contributing to the boom and bust cycle of the 1970's and 1980's, important differences exist. The 1980's farm financial crisis was characterized by events not present in the current situation: high and volatile inflation, a national economic recession, declining farmland prices, and record debt. Consolidation, financial innovations and improved risk management, closer regulatory scrutiny, higher capital ratios, and better quality capital and internal controls have improved lender risk management capabilities. Risk-based capital standards and insurance make lenders more sensitive to loan credit quality.

Lenders appear confident about most farm borrowers. Lenders learned the risk of collateral-based lending and now stress cash flow and credit checks (such as credit card balances) in their loan analysis. Interest rates are lower and less volatile than in the earlier period. Farmers and lenders have better equity positions, and credit analysis and monitoring are better in the agricultural sector than was the case in the 1980's. But the situation is still unfolding. Whether reduced incomes create financial hardship depends on initial farm financial strength, how far income falls and how long it remains low, and the decisions that farmers and lenders make as events unfold. Generally favorable yields for most major crops in most regions and direct Federal payments of \$12.2 and \$22.7 billion in 1998 and 1999, respectively, also have helped stabilize the farm sector.

Bankers Survey Tracked Stress

The ABA agricultural credit survey project was initiated in the 1950's and has been conducted generally in the same manner since the early 1960's. The 1999 survey was the thirty-sixth of the current series of ABA's midyear farm credit survey, which for the past decade has been called ABA's farm credit situation survey (1, 2, 3). The purpose of the survey is twofold: to provide information on current and developing credit conditions and to focus on key management and policy issues identified by agricultural bankers (1, 2, 3). Many of the questions selected vary from year to year depending on the problems and issues of the day. Throughout the 1982-99 period of fluctuating conditions for the farm sector the ABA has surveyed agricultural banks concerning the condition of their agricultural loans and customers.

Each year a questionnaire is distributed to a sample of commercial banks that qualify as agricultural banks according to the ABA's criteria. To qualify as a farm bank, the institution must either have \$2.5 million or more in farm production or real estate loans or have more than 50 percent of its loan portfolio in farm loans. This definition is somewhat broader than the ones used by the bank regulatory agencies to define agricultural banks. For example, the ABA identified 4,380 farm banks for its mid-1999 survey (based on bank data at the end of 1998), compared with June 1999 counts of 2,942 for the Federal Reserve and 2,253 for the Federal Deposit Insurance Corporation (FDIC). The FDIC criterion is a 25-percent or greater ratio of agricultural to total loans.

The ABA uses a stratified random sample of agricultural banks grouped by total asset size, region, and the most important type of farming in the bank's market area. (ABA regions are discussed below.) Fifty percent of the universe is sampled most years. During 1982-99, the only deviation from the 50 percent standard was for 1995 to 1998 when the sampling rate varied from 42 to nearly 54 percent (table A-1). (ABA's sampling records are incomplete for 1983-85.) In 1999, 2,190 of the 4,380 banks identified as agricultural banks were surveyed; usable questionnaires were received from 481 banks or 22 percent of the sample. Response rates obtained by the ABA vary depending on the length and complexity of the questionnaire, survey topic(s), bankers' perception of survey utility, project schedule (time of year), the selection of target groups, and the follow-up efforts of the ABA. ABA reports that each year a majority of returned surveys represent different banks than the prior year.

Completion rates for the various surveys (not just the annual midyear farm credit situation survey) conducted by the ABA generally range from 15 to 70 percent, depending on the criteria mentioned above. For a survey with more than 100 questions, the response rate could fall to 10 percent, but for a short survey the response rate could be over 90 percent. The midyear farm credit situation survey has quite a good response rate considering its length (table A-1). A key factor influencing the response rate is the degree to which follow-up questionnaires were sent to first-round nonrespondents. In the 1990's a lack of funds often limited follow-up activity. Currently, the ABA typically sends one questionnaire and one follow-up. Depending on the response rate, the ABA also sometimes sends reminder cards and conducts telephone follow-ups. The 1999 survey was conducted with two mailings. Historically, the response rate has been higher because of better follow-up. For example, in 1982 some 960 banks responded for a 36 percent rate. Also, during 1986-91, the response rate was 33 percent or higher. The data each year are compiled into total, average, or median responses that can only be used to represent the respondent banks.

Questions in the ABA farm credit situation survey have varied over the years in response to changes in the issues facing agricultural bankers. During 1982-99, questionnaires have requested information on: the quality of the loan portfolio, losses, borrowers' ability to obtain financing, farmers going out of business and bankruptcy, business development and competition, interest rates/loan fees, cost of regulatory maintenance, Farmers Home Administration/Farm Service Agency guaranteed loans, appraisals, the Financial Standards Task Force Report, the examination process, and crop insurance. The 1999 survey featured questions on bank funding sources, bank business development and competition, bank portfolio quality, Farm Credit System, Farm Service Agency, farmers going out of business and beginning farmers, bank nonfarm business lending, and rural housing.

Beginning in 1982, the survey has included questions about the discontinuance of financing, liquidations, bankruptcies, and other financial stress items. ERS has purchased selected items from the ABA survey data each year since then. The

results permit the examination of credit conditions at agricultural banks through time. A core of financial stress questions has remained intact throughout 1982-99, despite many other changes in the questionnaire. Portions of the survey results have been presented earlier in various other outlets, but ABA has no standard annual outlet or format because the survey is proprietary to its operations (1, 2, 3, 4, 8, 12, 15, 16). Results of the financial stress questions for 1982-99 are reported in their entirety in this article.

Some caveats regarding the survey are important to note. Bankers' responses to the survey likely focus on commercial-sized farms that are viewed as actual or potential bank customers. In all likelihood, survey respondents are not concentrating on the smaller part-time, hobby, or limited-resource farms that account for the majority of farm operations but have limited net cash income from farming. Therefore, the stress numbers should not be multiplied by the total census number of farms but instead be viewed as relative indicators through time. In addition, since bankruptcy typically is a complex process that is contemplated for some time before actually being used, bankers may report the same farm bankruptcy action in more than one survey year (13, 14). Chapter 12 farmer bankruptcy provisions allow a 3- to 5-year workout and even Chapter 7 liquidation action may be contemplated for some time with the actual legal action spilling over into a later time frame.

It is important to note the characteristics of the agricultural bank universe and, hence, farm bank respondents when interpreting the data presented in this article. The universe of ABA agricultural banks is biased toward smaller banks, as one would expect given the selection criteria. The ABA's 1999 universe of 4,380 agricultural banks represented 50 percent of the 8,756 U.S. banks operating at the beginning of the year. Some 34 percent of the 481 respondent banks had \$50 million or less in assets (30 percent had assets of \$50-99 million). A total of 28 percent of the respondents were located in the Corn Belt and another 31 percent in the Plains. Thus, the sample population tends to reflect small Midwestern and Plains banks. The agricultural banks of the South and West are more concentrated in the larger asset categories.

U.S. Farm Credit Situation Survey Results

The indicators of farm financial stress for the Nation as a whole are given in the first panel of table A-2. The various indicators show a picture of stress in 1982 when the series begins. The results reflect the farm recession and cost squeeze phase of the 1980's. The stress increased through 1985-86 as the farm sector adjusted its cost structure, including restructuring its debt load. Stress indicators generally fell rapidly during the 1987-89 "strengthening fundamentals" phase of the post-crisis and dropped to quite low levels in the 1990's as both lenders and farmers continued a more conservative approach toward credit. The indicators for 1998-99 show some increases in response to the lower farm commodity prices that began to occur in 1996-97.

The national results indicate that *farm loan volume delinquent 30 days or more* peaked at 6 percent in 1986. It

Table A-1—American Bankers Association’s annual farm credit situation survey response rate, 1982 and 1986-99

Year 1/	Agricultural banks 2/	Sampled banks 3/	Sampling rate 4/	Responding banks	Response rate 5/
	Number	Number	Percent	Number	Percent
1982	5,290	2,645	50.0	960	36.3
-----	-----	-----	-----	-----	-----
1986	5,488	2,744	50.0	939	34.2
1987	4,515	2,258	50.0	961	42.6
1988	4,547	2,273	50.0	749	33.0
1989	4,929	2,464	50.0	657	26.7
1990	4,910	2,455	50.0	809	33.0
1991	4,878	2,439	50.0	823	33.7
1992	5,012	2,506	50.0	415	16.6
1993	4,920	2,460	50.0	484	19.7
1994	4,838	2,419	50.0	446	18.4
1995	4,769	2,551	53.5	372	14.6
1996	4,682	2,465	52.7	539	21.9
1997	4,639	1,945	42.0	380	19.5
1998	4,481	2,236	49.9	424	19.0
1999	4,380	2,190	50.0	481	22.0

1/ The American Bankers Association’s (ABA’s) sampling records for the annual midyear farm credit situation survey are incomplete for the 1983-85 period. 2/ The ABA defines agricultural banks according to established criteria: the institution either had more than \$2.5 million in farm production and farm real estate loans, or it had more than 50 percent of its loan portfolio in farm lending. 3/ Banks are stratified by asset size and region. 4/ The number of sampled banks divided by total agricultural banks. In 1995 and 1996, the ABA oversampled banks with \$500 million or more in assets in an effort to increase response rates from these banks. In 1997, the ABA did not survey savings banks at all. 5/ Responding banks divided by sampled banks.

Source: (5).

Figure A-1

American Bankers Association farm credit situation survey regions

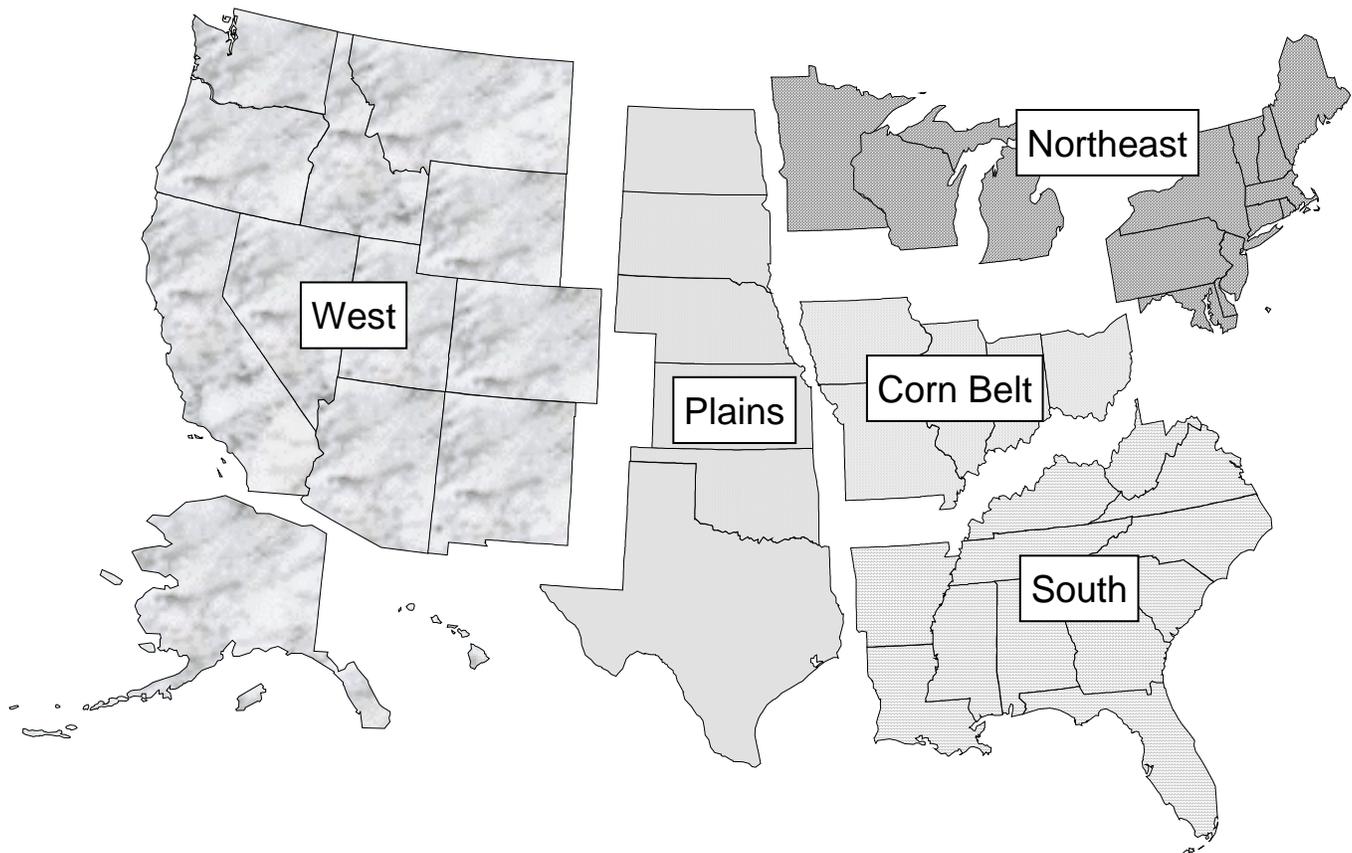


Table A-2 -- Indicators of financial stress in agriculture as reported by agricultural banks, by region, 1982-99 1/

	United States																	
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	<i>Percent</i>																	
Farm loan volume delinquent 30 days or more (June) 2/	3.9	3.7	4.5	5.3	6.0	2.7	1.6	1.5	1.3	1.8	1.2	1.1	1.2	1.1	1.5	1.3	4.8	2.4
Banks' farm borrowers who had bank financing discontinued (during year ending in June) 3/	3.3	2.9	3.4	4.5	5.6	3.2	1.7	1.3	1.4	1.3	1.5	1.7	1.4	1.6	1.7	1.7	2.6	2.2
Farm borrowers banks expect to discontinue (during year ending next June) 4/	4.4	2.0	3.1	5.7	6.7	2.1	1.5	1.7	1.5	1.6	NA	NA	1.8	2.2	1.8	2.1	4.6	4.3
Banks' farm borrowers loaned-up to practical limit in June 3/	31.9	28.1	32.8	36.7	38.8	28.8	22.6	24.6	31.0	32.7	32.5	34.6	32.1	33.4	34.4	34.6	38.8	39.2
Farmers in bank lending area who went out of business (year ending June) 3/	2.2	2.3	3.6	4.8	6.2	4.6	2.8	2.4	2.2	2.4	2.4	3.1	2.0	2.2	2.4	2.2	3.0	3.2
Liquidation categories (sum equals 100%)																		
Normal attrition	NA	37.7	31.3	27.7	28.9	38.4	50.2	58.5	63.8	54.3	60.5	62.0	56.1	60.6	61.2	62.4	56.4	43.9
Voluntary liquidation	NA	42.4	44.0	44.3	41.7	35.8	30.6	27.6	25.6	30.4	28.0	28.0	34.3	29.2	27.4	28.9	34.2	44.9
Legal foreclosure	NA	18.1	22.3	25.8	26.3	23.6	17.7	12.7	8.9	12.4	9.2	7.2	8.1	7.3	9.1	7.6	8.1	9.5
Other	NA	1.8	2.4	2.2	3.1	2.3	1.6	1.2	1.7	3.0	1.3	2.9	1.6	2.9	2.3	1.1	1.3	1.7
Banks' farm borrowers who filed for bankruptcy (year ending in June) 3/	NA	NA	NA	1.5	2.2	1.4	0.7	0.4	0.3	0.3	0.4	0.5	0.3	0.5	0.4	0.3	0.8	0.6
Farmers in bank lending area who filed for bankruptcy (year ending in June) 3/	0.8	1.1	2.6	3.8	4.2	3.3	2.2	1.7	1.0	1.4	1.4	1.9	1.0	1.2	1.2	1.1	1.7	1.6

1/ See footnotes at end of table.

Continued --

Table A-2 -- Indicators of financial stress in agriculture as reported by agricultural banks, by region, 1982-99 1/--continued

	Northeast 5/																		
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
	<i>Percent</i>																		
Farm loan volume delinquent 30 days or more (June) 2/	3.4	3.5	5.3	6.9	6.9	2.9	1.4	1.9	1.6	2.5	1.5	1.8	1.7	1.7	1.5	1.8	6.3	1.8	
Banks' farm borrowers who had bank financing discontinued (during year ending in June) 3/	2.8	2.7	3.5	4.7	6.2	3.3	1.8	1.4	1.5	1.4	1.7	3.1	1.9	2.3	1.6	2.3	2.5	1.8	
Farm borrowers banks expect to discontinue (during year ending next June) 4/	3.5	1.8	3.2	6.0	6.8	2.3	1.6	1.9	1.5	1.7	NA	NA	2.1	2.7	2.0	2.8	4.9	4.3	
Banks' farm borrowers loaned-up to practical limit in June 3/	26.1	26.7	30.1	34.4	37.1	38.3	20.1	22.2	28.1	26.3	26.1	30.5	29.2	31.6	33.7	29.3	35.1	30.5	
Farmers in bank lending area who went out of business (year ending June) 3/	1.8	2.0	3.4	4.9	7.1	5.5	3.3	3.1	2.4	2.7	3.0	4.7	2.6	3.0	2.6	3.0	4.9	3.5	
Liquidation categories (sum equals 100%)																			
Normal attrition	NA	43.3	32.1	30.5	28.2	37.7	48.6	54.8	65.0	58.6	57.7	58.3	49.9	55.4	57.5	58.7	53.4	43.6	
Voluntary liquidation	NA	38.9	45.3	46.0	41.7	36.9	35.0	30.3	24.8	29.7	31.3	31.7	40.9	32.4	28.8	34.6	38.7	45.3	
Legal foreclosure	NA	15.9	20.7	21.9	26.3	23.4	15.4	13.1	8.9	10.8	10.5	6.8	8.3	8.4	10.2	6.3	6.1	9.3	
Other	NA	2.4	1.0	1.5	3.8	2.1	1.0	1.8	1.4	1.0	0.5	3.1	0.8	3.8	3.5	0.3	1.8	1.8	
Banks' farm borrowers who filed for bankruptcy (year ending in June) 3/	NA	NA	NA	2.0	1.7	1.4	0.7	0.4	0.3	0.3	0.4	0.7	0.5	0.7	0.4	0.4	0.5	0.3	
Farmers in bank lending area who filed for bankruptcy (year ending in June) 3/	0.4	1.0	2.6	4.0	3.9	3.3	2.4	1.5	1.2	1.4	1.5	2.5	1.1	1.5	1.0	1.6	2.1	1.4	

1/ See footnotes at end of table.

Continued --

Table A-2 -- Indicators of financial stress in agriculture as reported by agricultural banks, by region, 1982-99 1/--continued

	Corn Belt 6/																	
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	<i>Percent</i>																	
Farm loan volume delinquent 30 days or more (June) 2/	4.0	3.5	4.3	5.2	5.4	2.3	1.5	1.1	1.1	1.5	1.1	1.0	1.2	1.0	1.0	0.8	3.1	1.4
Banks' farm borrowers who had bank financing discontinued (during year ending in June) 3/	2.8	2.5	3.0	3.8	4.8	2.9	1.5	1.1	1.1	1.1	1.1	1.4	1.4	1.4	1.5	1.3	1.9	1.9
Farm borrowers banks expect to discontinue (during year ending next June) 4/	4.2	1.5	3.0	5.3	5.5	1.6	1.6	1.1	1.0	1.4	NA	NA	2.0	1.7	1.6	1.4	3.6	4.1
Banks' farm borrowers loaned-up to practical limit in June 3/	27.3	26.0	31.2	34.7	34.3	24.9	21.9	23.6	29.5	28.1	27.9	30.0	29.1	24.0	27.7	33.1	31.5	35.0
Farmers in bank lending area who went out of business (year ending June) 3/	1.9	2.2	3.6	4.6	5.5	4.1	2.7	2.2	2.1	2.3	2.1	2.8	1.8	1.5	2.3	1.6	1.8	2.5
Liquidation categories (sum equals 100%)																		
Normal attrition	NA	39.5	35.8	29.9	33.8	43.0	58.7	65.6	70.5	59.5	66.3	60.7	62.2	74.1	74.8	68.8	71.7	54.8
Voluntary liquidation	NA	38.6	40.1	42.3	36.9	33.6	26.3	25.1	20.7	28.1	26.2	28.4	31.0	21.5	19.2	21.9	24.1	37.9
Legal foreclosure	NA	20.0	20.4	26.3	25.6	20.7	14.7	8.5	7.6	9.6	6.7	8.0	5.8	3.2	5.6	8.3	3.6	5.3
Other	NA	1.7	3.1	1.5	3.7	2.6	0.4	0.7	1.2	2.7	0.8	3.0	1.0	1.2	0.4	1.0	0.6	1.9
Banks' farm borrowers who filed for bankruptcy (year ending in June) 3/	NA	NA	NA	1.4	2.1	1.5	0.7	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.1	0.2	0.2	0.2
Farmers in bank lending area who filed for bankruptcy (year ending in June) 3/	0.7	1.0	2.3	3.3	4.0	3.4	2.0	1.5	1.1	1.3	1.1	1.7	0.9	0.9	0.9	0.9	0.9	1.2

1/ See footnotes at end of table.

Continued --

Table A-2 -- Indicators of financial stress in agriculture as reported by agricultural banks, by region, 1982-99 1/--continued

	South 7/ Percent																	
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Farm loan volume delinquent 30 days or more (June) 2/	4.6	4.3	4.0	4.2	5.2	3.0	1.3	1.3	0.8	2.1	1.2	0.7	0.7	0.4	0.9	0.9	4.8	3.2
Banks' farm borrowers who had bank financing discontinued (during year ending in June) 3/	6.4	4.4	4.5	6.9	8.6	5.3	1.6	0.9	1.5	1.7	1.8	1.4	1.7	1.6	2.9	2.1	4.5	3.7
Farm borrowers banks expect to discontinue (during year ending next June) 4/	7.7	2.7	2.4	6.9	12.4	3.6	1.5	1.4	2.3	1.8	NA	NA	1.9	1.7	2.6	2.7	5.6	6.7
Banks' farm borrowers loaned-up to practical limit in June 3/	49.0	40.5	45.9	47.4	49.7	38.4	28.7	27.6	43.4	42.1	40.0	40.4	41.2	44.9	44.5	42.9	44.7	57.5
Farmers in bank lending area who went out of business (year ending June) 3/	3.9	3.1	4.4	5.6	8.9	6.5	2.7	2.6	3.3	3.0	3.0	2.5	2.1	1.8	2.9	2.2	3.5	5.4
Liquidation categories (sum equals 100%)																		
Normal attrition	NA	22.8	22.3	19.1	17.9	23.4	32.5	53.3	37.0	28.4	50.5	60.3	46.4	35.8	39.8	62.5	46.2	24.3
Voluntary liquidation	NA	48.3	41.3	44.5	50.7	41.8	34.9	31.3	44.5	38.8	27.4	27.6	38.7	41.5	40.6	31.7	39.6	59.2
Legal foreclosure	NA	25.8	31.4	34.2	28.3	31.6	29.9	14.2	16.1	24.7	13.6	12.1	13.7	20.2	17.5	5.2	11.0	14.9
Other	NA	3.1	5.3	2.2	3.1	2.6	2.7	1.2	2.4	8.0	8.4	0.0	1.2	2.5	2.1	0.6	3.2	1.6
Banks' farm borrowers who filed for bankruptcy (year ending in June) 3/	NA	NA	NA	2.0	2.5	2.0	1.1	0.5	0.2	0.8	0.5	0.4	0.2	0.3	1.0	0.5	1.1	3.0
Farmers in bank lending area who filed for bankruptcy (year ending in June) 3/	0.1	1.9	4.9	5.7	6.5	5.9	3.3	2.0	1.2	2.3	1.8	1.6	1.2	0.8	2.2	1.8	2.2	4.4

1/ See footnotes at end of table.

Continued --

Table A-2 -- Indicators of financial stress in agriculture as reported by agricultural banks, by region, 1982-99 1/--continued

	Plains 8/																	
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Percent																	
Farm loan volume delinquent 30 days or more (June) 2/	3.7	3.5	4.1	4.4	6.6	2.9	1.9	1.7	1.4	1.4	1.0	1.0	1.2	1.3	2.3	1.8	5.9	3.7
Banks' farm borrowers who had bank financing discontinued (during year ending in June) 3/	3.3	3.0	3.7	4.4	5.1	3.2	1.8	1.6	1.7	1.1	1.1	1.4	0.9	1.3	1.5	1.6	2.2	2.5
Farm borrowers banks expect to discontinue (during year ending next June) 4/	4.5	2.6	3.4	5.8	6.5	2.0	1.4	2.4	1.7	1.5	NA	NA	1.5	2.4	1.5	2.2	4.4	4.3
Banks' farm borrowers loaned-up to practical limit in June 3/	31.9	27.0	30.1	35.1	39.8	29.5	22.6	26.3	29.8	39.3	36.5	38.7	34.1	38.3	36.0	36.3	41.4	40.5
Farmers in bank lending area who went out of business (year ending June) 3/	2.1	2.4	3.8	4.9	5.6	4.2	2.7	2.2	1.9	2.2	1.9	2.6	1.9	2.5	2.4	2.3	2.5	3.2
Liquidation categories (sum equals 100%)																		
Normal attrition	NA	38.3	30.0	28.3	30.5	38.8	51.1	58.9	65.1	52.8	62.2	64.5	58.1	57.3	56.0	59.0	54.4	42.1
Voluntary liquidation	NA	45.5	45.5	45.2	42.5	35.2	29.5	26.1	25.8	32.9	28.7	27.1	31.5	30.9	30.5	30.1	33.5	46.4
Legal foreclosure	NA	15.1	23.2	23.9	24.7	23.9	16.5	13.8	7.6	11.4	8.8	4.8	7.5	8.3	9.6	8.9	11.2	9.8
Other	NA	1.1	1.7	2.6	2.3	2.1	3.0	1.2	1.5	3.0	0.4	3.5	2.9	3.6	3.9	2.0	1.0	1.7
Banks' farm borrowers who filed for bankruptcy (year ending in June) 3/	NA	NA	NA	1.0	2.5	1.2	0.7	0.5	0.2	0.2	0.3	0.5	0.2	0.7	0.6	0.3	1.6	0.4
Farmers in bank lending area who filed for bankruptcy (year ending in June) 3/	0.8	0.9	2.3	3.7	3.9	2.6	2.0	1.9	0.8	1.3	1.1	1.6	0.9	1.6	1.4	0.9	2.1	1.5

1/ See footnotes at end of table.

Continued --

Table A-2 -- Indicators of financial stress in agriculture as reported by agricultural banks, by region, 1982-99 1/--continued

	West 9/ Percent																		
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Farm loan volume delinquent 30 days or more (June) 2/	5.0	4.5	5.0	8.0	5.2	3.2	2.3	1.6	1.4	3.0	2.0	1.4	0.3	0.9	1.5	1.2	2.0	1.9	
Banks' farm borrowers who had bank financing discontinued (during year ending in June) 3/	3.3	3.3	2.8	3.8	5.7	2.3	1.7	1.9	1.3	1.7	3.8	1.1	2.0	1.9	1.6	2.0	3.9	1.6	
Farm borrowers banks expect to discontinue (during year ending next June) 4/	2.5	2.1	3.1	4.7	5.9	2.5	2.0	1.0	1.9	2.3	NA	NA	1.8	3.0	2.8	2.1	6.9	2.6	
Banks' farm borrowers loaned-up to practical limit in June 3/	40.9	32.1	39.5	43.8	44.4	34.8	25.0	26.3	35.7	31.7	42.0	40.4	35.6	38.1	58.1	38.5	54.5	46.8	
Farmers in bank lending area who went out of business (year ending June) 3/	2.2	2.3	3.0	4.3	6.3	4.6	2.7	2.1	2.2	2.0	3.3	3.3	1.7	1.7	2.3	2.1	3.3	2.9	
Liquidation categories (sum equals 100%)																			
Normal attrition	NA	30.2	26.7	19.1	17.7	31.5	26.8	43.4	53.5	50.5	47.1	72.8	46.5	32.2	37.3	59.8	27.7	35.4	
Voluntary liquidation	NA	48.7	50.4	45.3	46.7	39.4	41.3	30.8	29.2	23.2	39.0	15.6	39.8	51.2	45.5	32.3	56.0	47.6	
Legal foreclosure	NA	19.4	19.6	20.3	33.2	28.0	29.7	24.0	12.3	22.0	13.5	11.6	13.7	7.8	14.4	7.2	15.0	16.0	
Other	NA	1.7	1.7	5.3	2.4	1.1	2.2	1.7	5.0	4.3	0.5	0.0	0.0	8.8	2.8	0.8	1.3	1.0	
Banks' farm borrowers who filed for bankruptcy (year ending in June) 3/	NA	NA	NA	1.8	1.9	1.3	0.5	0.7	0.3	0.4	1.0	1.0	0.1	0.1	0.6	0.4	0.4	1.0	
Farmers in bank lending area who filed for bankruptcy (year ending in June) 3/	0.5	1.2	2.3	3.5	3.5	3.0	2.0	2.1	1.3	1.2	2.9	2.8	1.5	0.4	1.5	1.5	1.7	1.7	

NA=Not available. 1/ Data are unweighted averages of responses to the American Bankers Associations annual Farm Credit Situation Survey, which uses a stratified random sample based on bank asset size and region. 2/ Data for 1988 and 1989 are as of September 30 and data for 1991 and 1992 are as of December 31. 3/ Data for 1991, 1992, 1993, 1994, and 1995 are as of December 31. 4/ Data for 1991, 1994, and 1995 are as of December 31. 5/ CT, DE, DC, MA, MD, ME, MI, MN, NH, NJ, NY, PA, RI, VT, WI. 6/ IL, IN, IA, MO, OH. 7/ AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV. 8/ KS, NE, ND, OK, SD, TX. 9/ AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY.

Source: (5).

declined to a low of 1 percent in 1993 and 1995, but increased to nearly 5 percent in 1998. The *banks' farm borrowers who had their bank financing discontinued during the current year* peaked at nearly 6 percent in 1986, fell to 1 percent in 1989 and 1991, and climbed to nearly 3 percent in 1998. *Farm borrowers that banks expect to discontinue during the next year* demonstrated a similar pattern with nearly 7 percent in 1986, down to less than 2 percent in 1988, and up to 4 to 5 percent in 1998 and 1999. The nearly 5 percent in 1998 is the third highest for this series during the 1982-99 span. The *proportion of the banks' farm customers loaned up to their practical limit*, another measure of creditworthiness, peaked at 39 percent in 1986, a level nearly matched by 37 percent a year earlier. The rate declined to under 23 percent in 1988, but climbed to a new high of 39 percent in 1999.

Agricultural banks estimated that 6 percent of *farmers in their lending areas went out of business during the year ending in June 1986*, up from 2 percent in 1982. This figure remained low during the relatively stable 1990-96 period, but increased to 3 percent in 1999. There is some evidence that this is a lagging indicator of the farm sector's economic performance. The banks break out their responses for farmers going out of business during the year into four categories based on reasons for leaving: *normal attrition, voluntary liquidation, legal foreclosure, and other*. The combination of the *voluntary liquidation* and *legal foreclosure* categories gives a proxy for farmers leaving the sector because of economic and related difficulties. Some 70 percent of exiting farmers were thought to have left in 1985 because of these two reasons. This compares with roughly 60 percent in 1983 at the beginning of this data series and the low of roughly 34 percent reported in 1990. The measure jumped to over 54 percent in 1999, its highest since 1988.

Responding bankers estimated that 4 percent of *local trade area farm operators filed for bankruptcy during July 1985-June 1986*, up from under 1 percent in 1982. After the 1985-86 peak, the percentage filing for bankruptcy dropped to 1 percent in 1990 and 1994. It jumped to nearly 2 percent in 1998 and 1999. The pattern over time of the *banks' own farm borrowers who filed for bankruptcy* paralleled the bankruptcy rates for all farmers in the trade area, although at lower percentages (table A-2, last two lines of data).

Regional Farm Credit Results

The ABA divides the Nation into five geographic regions--Northeast, Corn Belt, South, Plains, and West--for analytical purposes regarding the farm credit situation survey (fig. A-1). The ABA configuration is unique, following a different breakout than the U.S. Bureau of the Census with its 4 divisions and 9 regions, or the USDA with its 10 farm production regions. The ABA allocates Michigan, Minnesota, and Wisconsin to the 11-State Northeast area to form a unique 14-State Northeast region (fig. A-1). This was initiated a number of years ago in order to combine the three dairy-producing Lake States with the other dairy producing areas of the traditional Northeast.

The survey reveals some diversity in farmers' financial experience (table A-2). Indicators of farm financial stress

generally peaked across the Nation in 1985-86. The South, which generally led in most peak indicators of financial stress, was hard hit by the economic adversity. Drought, financial stress of many cotton farms, and contraction of the energy sector may have accentuated southern farmers' difficulties. Their situation improved dramatically in the late 1980's. For all regions, stress indicators in the early to mid-1990's were low except for the share of farm borrowers loaned up to the practical limit and the bankruptcy rate, both of which took a long time to subside. Bankruptcy rates continued higher than they were in 1982-83 for a period, indicating a lagged response as individual cases were worked out over time. Farm stress indicators rose in all regions during 1998-99 in response to the sharp drop in many key commodity prices. The Northeast had the highest measures of delinquent loans and farmers going out of business, while the South led the discontinued financing and bankruptcy categories.

Conclusions

The ABA's midyear farm credit situation survey is a unique source of information for 1982-99 that enables one to see how farm financial stress was viewed by commercial banks through time. Survey results show that by most measures, farm financial stress peaked in 1985-86. Farm sector economic fundamentals strengthened in 1987-89, so that financial stress levels for most indicators in the 1990's dropped below 1982 levels. Stress indicators for 1990-97 were low except for the share of farm borrowers loaned up to the practical limit and the bankruptcy rate, both of which were slow to recede completely to 1982 levels. The former may reflect bankers employing stricter loan rules. The latter probably indicates a lag as financial problems ultimately leading to bankruptcy are worked out through time. Agricultural bankers' perceptions of farm financial stress have increased in 1998-99 as part of an ongoing concern about lower farm prices beginning in 1996-97 and related matters. It appears that farmers were more reluctant to take bankruptcy in 1996-97 than was the case in the early 1980's. But bankruptcy is a lagging variable and future rates are dependent on how long depressed commodity prices persist.

References

1. American Bankers Association. *1988 Farm Credit Situation Survey: Data Summary*, Washington, D.C., Aug. 1989.
2. American Bankers Association. *Farm Credit Survey Report 1998*, Washington, D.C., 1999.
3. American Bankers Association. *Farm Credit Survey Report 1999*, Washington, D.C., 1999.
4. American Bankers Association. "Grim Outlook Surrounds Ample Funds, Lower Rates In ABA Farm Credit Survey," *Agricultural Banker*, Special Report, Washington, D.C., Nov. 1982.
5. American Bankers Association. *Farm Credit Situation Survey*, unpublished data, 1982-99.

6. Collender, Robert N. "Agricultural Boom and Bust: Will History Repeat in the 1990's?" *Agricultural Outlook*, AO-260. U.S. Dept. Agr., Economic Research Service, Apr. 1999, pp. 22-26.
7. Collender, Robert N. "Farm Credit Conditions Leading to the Agricultural Contraction of the 1980's and Now," in *Agricultural Income and Finance: Situation and Outlook*, AIS-71, U.S. Dept. Agr., Economic Research Service, Feb. 1971, pp. 40-46.
8. Gabriel, Stephen. "Farm Finance Update," *Agricultural Outlook*, AO-82. U.S. Dept. Agr., Economic Research Service, Nov. 1982, pp. 14-16.
9. Hanson, Gregory. "Beyond The Farm Debt Crisis," *Choices*, Fourth Quarter 1990, pp. 33-35.
10. Hanson, Gregory, Richard Kodl, and Gary Lucier. *Recent Financial Gains Helping Farmers Withstand Drought*. AIB-543. U.S. Dept. Agr., Economic Research Service, Aug. 1988.
11. Hanson, Gregory D., G. Hossein Parandvash, and James Ryan. *Loan Repayment Problems of Farmers in the Mid-1980's*. AER-649. U.S. Dept. Agr., Economic Research Service, Sept. 1989.
12. Herr, William McD. "Survey Reports Signs of Slowed Deterioration," *Journal of Agricultural Lending*, Vol. 1, No. 2 (Spring 1987) pp. 23-26.
13. Stam, Jerome M. *Are Farmer Bankruptcies A Good Indicator of Financial Stress?* AIB-724-06. U.S. Dept. Agr., Economic Research Service, Dec. 1996.
14. Stam, Jerome M. *Do Farmers Need A Separate Chapter in the Bankruptcy Code?* AIB-724-09. U.S. Dept. Agr., Economic Research Service, Oct. 1997.
15. Stam, Jerome M., Steven R. Koenig, Susan E. Bentley, and H. Frederick Gale. *Farm Financial Stress, Farm Exits, and Public Sector Assistance to the Farm Sector in the 1980's*, AER-645. U.S. Dept. Agr., Economic Research Service, Apr. 1991.
16. U.S. Department of Agriculture, Economic Research Service. *Agricultural Income and Finance: Situation and Outlook Report*, AFO-25, AFO-26, AFO-27, AFO-28, Dec. 1984, Mar. 1986, Mar. 1987, Apr. 1988.

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Appendix table 1—Total farm business debt by lender, December 31, 1982-99

	Debt owed to reporting institutions				Total institutional	Individuals and others 1/	Total debt
	Farm Credit System	Commercial banks	Farm Service Agency	Life insurance companies			
<i>Million dollars</i>							
1982	64,220	41,890	21,274	11,829	139,214	49,592	188,806
1983	63,710	45,422	21,428	11,668	142,228	48,842	191,070
1984	64,688	47,245	23,262	11,891	147,086	46,701	193,787
1985	56,169	44,470	24,535	11,273	136,447	41,152	177,599
1986	45,909	41,621	24,138	10,377	122,044	34,926	156,970
1987	40,030	41,130	23,553	9,355	114,069	30,342	144,411
1988	37,211	42,742	21,879	9,039	110,873	28,694	139,567
1989	36,440	44,929	19,047	9,113	109,529	28,330	137,859
1990	35,773	47,556	17,014	9,704	110,046	27,916	137,962
1991	35,527	50,271	15,253	9,546	110,598	28,620	139,218
1992	35,753	51,669	13,538	8,765	109,725	29,327	139,052
1993	35,439	54,533	12,076	8,985	111,035	30,929	141,964
1994	35,777	57,809	11,485	9,025	114,096	32,704	146,800
1995	37,324	60,025	10,147	9,092	116,588	34,182	150,769
1996	39,745	61,620	9,316	9,468	120,149	35,925	156,074
1997	42,341	66,952	8,655	9,699	127,647	37,766	165,413
1998	45,699	70,011	8,067	10,723	134,499	38,363	172,862
1999P	46,609	69,497	7,885	10,861	134,852	37,967	172,819
<i>Percent change in year</i>							
1982	4.3	8.0	2.2	-2.6	4.4	1.1	3.5
1983	-0.8	8.4	0.7	-1.4	2.2	-1.5	1.2
1984	1.5	4.0	8.6	1.9	3.4	-4.4	1.4
1985	-13.2	-5.9	5.5	-5.2	-7.2	-11.9	-8.4
1986	-18.3	-6.4	-1.6	-8.0	-10.6	-15.1	-11.6
1987	-12.8	-1.2	-2.4	-9.8	-6.5	-13.1	-8.0
1988	-7.0	3.9	-7.1	-3.4	-2.8	-5.4	-3.4
1989	-2.1	5.1	-12.9	0.8	-1.2	-1.2	-1.2
1990	-1.8	5.8	-10.7	6.5	0.5	-1.4	0.1
1991	-0.7	5.7	-10.3	-1.6	0.5	2.5	0.9
1992	0.6	2.8	-11.2	-8.2	-0.8	2.5	-0.1
1993	-0.9	5.6	-10.8	2.5	1.2	5.5	2.1
1994	1.0	6.0	-4.9	0.5	2.8	5.7	3.4
1995	4.3	3.8	-11.7	0.7	2.2	4.5	2.7
1996	6.5	2.7	-8.2	4.1	3.4	5.1	3.5
1997	6.5	8.7	-7.1	2.4	3.2	5.1	6.0
1998	7.9	4.6	-6.7	10.6	5.4	1.6	4.5
1999P	2.0	-0.7	-2.3	1.3	0.3	-1.0	0.0
<i>Percentage distribution of total debt</i>							
1982	34.0	22.2	11.3	6.3	73.7	26.3	100.0
1983	33.3	23.8	11.2	6.1	74.4	25.6	100.0
1984	33.4	24.4	12.0	6.1	75.9	24.1	100.0
1985	31.6	25.0	13.8	6.3	76.8	23.2	100.0
1986	29.2	26.5	15.4	6.6	77.7	22.3	100.0
1987	27.7	28.5	16.3	6.5	79.0	21.0	100.0
1988	26.7	30.6	15.7	6.5	79.5	20.5	100.0
1989	26.4	32.6	13.8	6.6	79.5	20.5	100.0
1990	25.9	34.5	12.3	7.0	79.8	20.2	100.0
1991	25.5	36.1	11.0	6.9	79.4	20.6	100.0
1992	25.7	37.2	9.7	6.3	78.9	21.1	100.0
1993	25.0	38.4	8.5	6.3	78.2	21.8	100.0
1994	24.4	39.4	7.8	6.2	77.7	22.3	100.0
1995	24.8	39.8	6.7	6.1	77.3	22.7	100.0
1996	25.5	39.4	6.0	6.1	77.0	23.0	100.0
1997	25.6	40.5	5.2	5.9	77.2	22.8	100.0
1998	26.4	40.5	4.7	6.2	77.8	22.2	100.0
1999P	27.0	40.2	4.6	6.3	78.0	22.0	100.0

P = Preliminary. 1/ In addition to individuals, this category includes land for contract, merchants' and dealers' credit, etc., CCC storage and drying facilities loans, and Farmer Mac loans.

Sources: American Council of Life Insurance, Board of Governors of the Federal Reserve System, Farm Credit System, Farm Service Agency, U.S. Census of Agriculture Finance Surveys, and U.S. Department of Agriculture farm operator surveys.

Appendix table 2—Real estate farm business debt by lender, December 31, 1982-99

	Debt owed to reporting institutions					Individuals and others 1/	CCC storage and drying facilities	Total real estate
	Farm Credit System	Farm Service Agency	Life insurance companies	Commercial banks	Total institutional			
<i>Million dollars</i>								
1982	43,661	8,298	11,829	7,568	71,357	29,326	1,127	101,810
1983	44,318	8,573	11,668	8,347	72,906	29,388	888	103,182
1984	46,596	9,523	11,891	9,626	77,636	28,438	623	106,697
1985	42,169	9,821	11,273	10,732	73,994	25,775	307	100,076
1986	35,593	9,713	10,377	11,942	67,725	22,660	123	90,408
1987	30,646	9,430	9,355	13,541	62,972	19,380	46	82,398
1988	28,445	8,980	9,039	14,434	60,898	16,914	21	77,833
1989	26,896	8,203	9,113	15,685	59,898	16,068	12	75,978
1990	25,924	7,639	9,704	16,288	59,556	15,169	7	74,732
1991	25,305	7,041	9,546	17,417	59,308	15,632	4	74,944
1992	25,408	6,394	8,765	18,757	59,324	16,095	2	75,421
1993	24,900	5,837	8,985	19,595	59,317	16,719	0	76,036
1994	24,597	5,465	9,025	21,079	60,166	17,514	0	77,680
1995	24,851	5,055	9,092	22,277	61,275	18,012	0	79,287
1996	25,730	4,702	9,468	23,276	63,176	18,481	0	81,657
1997	27,098	4,373	9,699	25,240	66,409	18,950	0	85,359
1998	28,888	4,073	10,723	27,168	70,852	18,763	0	89,615
1999P	29,521	3,837	10,861	28,077	72,296	17,975	0	90,271
<i>Percent change in year</i>								
1982	8.3	2.5	-2.6	-0.2	4.7	0.0	-16.0	3.1
1983	1.5	3.3	-1.4	10.3	2.2	0.2	-21.2	1.3
1984	5.1	11.1	1.9	15.3	6.5	-3.2	-29.8	3.4
1985	-9.5	3.1	-5.2	11.5	-4.7	-9.4	-50.7	-6.2
1986	-15.6	-1.1	-7.9	11.3	-8.5	-12.1	-59.9	-9.7
1987	-13.9	-2.9	-9.8	13.4	-7.0	-14.5	-62.6	-8.9
1988	-7.2	-4.8	-3.4	6.6	-3.3	-12.7	-54.9	-5.5
1989	-5.4	-8.6	0.8	8.7	-1.6	-5.0	-43.9	-2.4
1990	-3.6	-6.9	6.5	3.8	-0.6	-5.6	-43.8	-1.6
1991	-2.4	-7.8	-1.6	6.9	-0.4	3.0	-41.8	0.3
1992	0.4	-9.2	-8.2	7.7	0.0	3.0	-47.6	0.6
1993	-2.0	-8.7	2.5	4.5	0.0	3.9	-100.0	0.8
1994	-1.2	-6.4	0.5	7.6	1.4	4.8	0.0	2.2
1995	1.0	-7.5	0.7	5.7	1.8	2.8	0.0	2.1
1996	3.5	-7.0	4.1	4.5	3.1	2.6	0.0	3.0
1997	5.3	-7.0	2.4	8.4	5.1	2.5	0.0	4.5
1998	6.6	-6.9	10.6	7.6	6.7	-1.0	0.0	5.0
1999P	2.2	-5.8	1.3	3.4	2.0	-4.2	0.0	0.7
<i>Percentage distribution of debt</i>								
1982	42.9	8.2	11.6	7.4	70.1	28.8	1.1	100.0
1983	43.0	8.3	11.3	8.1	70.7	28.5	0.9	100.0
1984	43.7	8.9	11.1	9.0	72.8	26.7	0.6	100.0
1985	42.1	9.8	11.3	10.7	73.9	25.8	0.3	100.0
1986	39.4	10.7	11.5	13.2	74.8	25.1	0.1	100.0
1987	37.2	11.4	11.4	16.4	76.4	23.5	0.1	100.0
1988	36.5	11.5	11.6	18.5	78.2	21.7	0.0	100.0
1989	35.4	10.8	12.0	20.6	78.8	21.1	0.0	100.0
1990	34.7	10.2	13.0	21.8	79.6	20.3	0.0	100.0
1991	33.8	9.4	12.7	23.2	79.1	20.9	0.0	100.0
1992	33.7	8.5	11.6	24.9	78.7	21.3	0.0	100.0
1993	32.8	7.7	11.8	25.8	78.0	22.0	0.0	100.0
1994	31.7	7.0	11.6	27.1	77.5	22.6	0.0	100.0
1995	31.3	6.4	11.5	28.1	77.3	22.7	0.0	100.0
1996	31.5	5.8	11.6	28.5	77.4	22.6	0.0	100.0
1997	31.8	5.1	11.4	29.6	77.8	22.2	0.0	100.0
1998	32.2	4.5	12.0	30.3	79.1	20.9	0.0	100.0
1999P	32.7	4.3	12.0	31.1	80.1	19.9	0.0	100.0

P = Preliminary. 1/ Including Farmer Mac loans.

Sources: American Council of Life Insurance, Board of Governors of the Federal Reserve System, Farm Credit System, Farm Service Agency, U.S. Census of Agriculture Finance Surveys, and U.S. Department of Agriculture farm operator surveys.

Appendix table 3—Nonreal estate farm business debt by lender, December 31, 1982-99

	Debt owed to reporting institutions				Individuals and others	Total nonreal estate	CCC crop loans
	Commercial banks	Farm Credit System	Farm Service Agency	Total institutional			
<i>Million dollars</i>							
1982	34,322	20,558	12,977	67,857	19,139	86,996	15,204
1983	37,075	19,392	12,855	69,322	18,566	87,888	10,576
1984	37,619	18,092	13,740	69,451	17,640	87,091	8,428
1985	33,738	14,001	14,714	62,453	15,070	77,523	17,598
1986	29,678	10,317	14,425	54,420	12,143	66,563	19,190
1987	27,589	9,384	14,123	51,096	10,916	62,012	15,120
1988	28,309	8,766	12,899	49,974	11,760	61,734	8,902
1989	29,243	9,544	10,843	49,631	12,250	61,881	5,225
1990	31,267	9,848	9,374	50,490	12,740	63,230	4,377
1991	32,854	10,222	8,213	51,289	12,985	64,274	3,579
1992	32,912	10,346	7,143	51,401	13,230	63,631	4,771
1993	34,939	10,540	6,239	51,717	14,210	65,927	3,170
1994	36,730	11,180	6,020	53,930	15,190	69,120	6,237
1995	37,748	12,472	5,092	55,312	16,170	71,482	2,979
1996	38,344	14,015	4,614	57,355	17,444	74,417	2,000
1997	41,713	15,243	4,283	59,263	18,816	80,054	1,000
1998	42,842	16,812	3,993	63,647	19,600	83,247	1,000
1999P	41,420	17,088	4,048	62,556	19,992	82,548	1,000
<i>Percent change in year</i>							
1982	10.0	-3.3	2.1	4.1	4.0	4.1	120.7
1983	8.0	-5.7	-0.9	2.2	-3.0	1.0	-30.4
1984	1.5	-6.7	6.9	0.2	-5.0	-0.9	-20.3
1985	-10.3	-22.6	7.1	-10.1	-14.6	-11.0	108.8
1986	-12.0	-26.3	-2.0	-12.9	-19.4	-14.1	9.0
1987	-7.0	-9.0	-2.1	-6.1	-10.1	-6.8	-21.2
1988	2.6	-6.6	-8.7	-2.2	7.7	-0.4	-41.1
1989	3.3	8.9	-15.9	-0.7	4.2	0.2	-41.3
1990	6.9	3.2	-13.5	1.7	4.0	2.2	-16.2
1991	5.1	3.8	-12.4	1.6	1.9	1.7	-18.2
1992	0.2	1.2	-13.0	0.2	1.9	-1.0	33.3
1993	6.2	1.9	-12.7	0.1	7.4	3.6	-33.6
1994	5.1	6.1	-3.5	4.3	6.9	4.8	96.8
1995	2.7	11.6	-15.4	2.6	6.5	3.4	-52.2
1996	1.6	12.2	-9.4	3.7	7.9	4.2	-32.9
1997	8.8	8.9	-7.2	3.3	7.9	7.6	-50.0
1998	2.7	10.3	-6.8	7.4	4.2	4.0	0.0
1999P	-1.3	1.6	1.4	-1.7	2.0	-0.8	0.0
<i>Percentage distribution of debt</i>							
1982	39.5	23.6	14.9	78.0	22.0	100.0	
1983	42.2	22.1	14.6	78.9	21.1	100.0	
1984	43.2	20.8	15.8	79.7	20.3	100.0	
1985	43.5	18.1	19.0	80.6	19.4	100.0	
1986	44.6	15.5	21.7	81.8	18.2	100.0	
1987	44.5	15.1	22.8	82.4	17.6	100.0	
1988	45.9	14.2	20.9	81.0	19.0	100.0	
1989	47.3	15.4	17.5	80.2	19.8	100.0	
1990	49.5	15.6	14.8	79.8	20.1	100.0	
1991	51.1	15.9	12.8	79.8	20.2	100.0	
1992	51.7	16.3	11.2	79.5	20.8	100.0	
1993	53.0	16.0	9.5	78.4	21.6	100.0	
1994	53.1	16.2	8.7	78.0	22.0	100.0	
1995	52.8	17.5	7.1	77.4	22.6	100.0	
1996	51.5	18.8	6.2	76.7	23.4	100.0	
1997	52.1	19.0	5.4	74.0	23.5	100.0	
1998	51.5	20.2	4.8	76.5	23.5	100.0	
1999P	50.2	20.7	4.9	75.8	24.2	100.0	

P = Preliminary.

Sources: Board of Governors of the Federal Reserve System, Farm Credit System, Farm Service Agency, U.S. Census of Agriculture Finance Surveys, and U.S. Department of Agriculture farm operator surveys.

Appendix table 4—Interest rates on short- and intermediate-term loans, 1960-99

Year	Prime rate	6-month T-Bill 1/	Agricultural nonreal estate						Average on outstanding debt 3/
			Commercial banks			Farm Credit System	FSA 2/		
			All banks	Large banks	Other banks		Regular	Limited resource	
<i>Percent</i>									
1960	4.82	NA	NA	NA	NA	NA	5.00	NA	6.58
1965	4.54	NA	NA	NA	NA	NA	5.00	NA	6.38
1970	7.91	6.87	NA	NA	NA	9.45	6.88	NA	7.84
1975	7.86	6.39	NA	NA	NA	9.11	8.63	NA	8.21
1980	15.27	12.39	15.20	16.70	15.00	12.74	11.00	6.82	11.70
1981	18.87	15.06	18.50	19.80	18.10	14.46	14.04	8.13	13.34
1982	14.86	11.96	16.70	16.10	17.00	14.58	13.73	10.75	13.31
1983	10.79	9.27	13.50	12.10	14.10	11.95	10.31	7.31	12.14
1984	12.04	10.46	14.10	13.10	14.40	12.47	10.25	7.25	11.88
1985	9.93	8.09	12.80	11.20	13.40	12.40	10.25	7.25	10.61
1986	8.33	6.30	11.50	9.60	12.10	11.23	8.66	5.66	10.23
1987	8.21	6.35	10.60	9.20	11.30	10.10	8.12	5.27	10.53
1988	9.32	7.27	11.20	10.20	11.60	10.56	9.02	6.02	10.50
1989	10.88	8.50	12.50	12.10	12.70	11.68	9.10	6.10	10.64
1990	10.01	7.87	11.40	10.90	12.30	11.16	8.90	5.82	10.76
1991	8.47	5.72	9.80	9.00	11.30	10.10	8.25	5.00	9.86
1992	6.25	3.69	7.80	6.80	9.40	8.20	6.79	5.00	8.59
1993	6.00	3.23	7.50	6.70	8.70	8.09	5.88	5.00	8.29
I	6.00	3.20	7.60	6.60	8.80	8.35	6.33	5.00	NA
II	6.00	3.19	7.50	6.70	8.90	8.15	6.00	5.00	NA
III	6.00	3.22	7.50	7.00	8.60	8.08	5.75	5.00	NA
IV	6.00	3.32	7.30	6.70	8.60	7.77	5.42	5.00	NA
1994	7.14	4.83	7.70	7.10	8.75	8.23	6.46	5.00	8.91
I	6.02	3.57	7.20	6.50	8.20	7.46	5.25	5.00	NA
II	6.90	4.61	7.70	6.90	8.60	8.06	6.08	5.00	NA
III	7.50	5.11	7.70	7.30	9.00	8.44	7.25	5.00	NA
IV	8.13	6.02	8.20	7.70	9.20	8.96	7.25	5.00	NA
1995	8.83	5.85	9.50	9.10	10.45	8.89	7.38	5.00	9.56
I	8.83	6.39	10.00	9.70	10.40	9.04	8.25	5.00	NA
II	9.00	5.91	9.40	8.90	10.30	8.96	7.92	5.00	NA
III	8.77	5.60	9.50	9.00	10.50	8.84	6.83	5.00	NA
IV	8.72	5.49	9.20	8.80	10.60	8.73	6.50	5.00	NA
1996	8.27	5.28	8.50	7.80	10.10	8.55	6.58	5.00	9.61
I	8.33	5.07	8.50	7.70	10.00	8.16	6.33	5.00	NA
II	8.25	5.35	8.10	7.40	10.10	8.53	6.17	5.00	NA
III	8.25	5.43	8.60	8.10	10.20	8.75	6.83	5.00	NA
IV	8.25	5.27	8.70	8.00	9.90	8.76	7.00	5.00	NA
1997	8.44	5.39	9.25	8.69	10.03	8.92	6.73	5.00	9.17
I	8.24	5.35	9.10	8.60	9.80	8.94	6.50	5.00	NA
II	8.50	5.49	9.30	8.60	10.10	8.94	6.67	5.00	NA
III	8.50	5.34	9.40	8.90	10.10	8.92	7.00	5.00	NA
IV	8.50	5.38	9.20	8.60	10.10	8.87	6.75	5.00	NA
1998	8.36	5.02	8.95	8.28	9.78	8.59	5.92	5.00	8.89
I	8.50	5.25	9.10	8.20	9.90	8.80	6.25	5.00	NA
II	8.50	5.32	9.20	8.50	9.90	8.58	6.00	5.00	NA
III	8.50	5.06	9.00	8.50	9.90	8.62	6.00	5.00	NA
IV	7.92	4.45	8.50	7.90	9.40	8.41	5.42	5.00	NA
1999P	7.99	4.75	8.80	8.15	9.45	8.41	5.63	5.00	8.79
I	7.75	4.44	8.2	7.4	9.4	8.40	5.00	5.00	NA
II	7.75	4.57	8.8	8.1	9.3	8.42	5.25	5.00	NA
III	8.10	4.80	9.0	8.4	9.6	8.50	6.00	5.00	NA
IV	8.37	5.19	9.2	8.7	9.5	8.33	6.25	5.00	NA

NA = Not Available. P = preliminary for the Farm Credit System. 1/ Auction average investment yield. 2/ New operating loans. 3/ Average on outstanding farm business debt. Note: Because of changes in the practices of agricultural lenders over time and differences in the types of loans used to calculate each lender's interest rate series, interest rates across columns and over time are roughly rather than exactly comparable.

Sources: Board of Governors of the Federal Reserve System, Economic Research Service, various Farm Credit District Banks, and Farm Service Agency.

Appendix table 5—Interest rates on long-term loans, 1960-99

Year	Agricultural real estate							
	U.S. Treasury bond 1/	Commercial banks	Farm Credit System	Life insurance companies	FSA 2/		Average on outstanding debt 3/	Average on total farm debt 4/
					Regular	Limited resource		
Percent								
1960	4.02	NA	NA	NA	5.00	NA	5.01	5.79
1965	4.21	NA	NA	NA	5.00	NA	5.36	5.84
1970	6.58	8.27	8.68	9.31	5.00	NA	5.88	6.73
1975	7.00	9.02	8.69	10.03	5.00	NA	6.98	7.55
1980	10.81	13.76	10.39	13.21	11.05	4.82	8.17	9.82
1981	12.87	16.75	11.27	15.42	13.00	5.50	8.91	10.95
1982	12.23	16.63	12.27	15.51	12.94	6.50	9.60	11.31
1983	10.84	13.76	11.63	12.47	10.79	5.27	9.70	10.83
1984	11.99	14.07	11.76	13.49	10.75	5.25	9.41	10.54
1985	10.75	12.96	12.24	12.61	10.75	5.25	8.73	9.57
1986	8.15	11.56	11.61	11.96	9.13	5.06	8.76	9.39
1987	8.64	11.07	11.10	10.21	8.90	5.00	8.94	9.62
1988	8.98	11.42	10.10	10.05	9.46	5.00	9.22	9.78
1989	8.59	12.08	10.93	10.47	9.46	5.00	9.52	10.02
1990	8.73	11.69	10.56	10.25	8.94	5.00	9.58	10.11
1991	8.16	10.76	9.85	10.01	8.73	5.00	8.93	9.36
1992	7.55	9.45	8.25	8.74	8.13	5.00	8.44	8.51
1993	6.45	8.64	7.83	7.64	7.29	5.00	7.75	8.00
I	6.90	8.88	8.20	8.07	7.75	5.00	NA	NA
II	6.62	8.70	7.80	7.73	7.42	5.00	NA	NA
III	6.15	8.56	7.79	7.45	7.25	5.00	NA	NA
IV	6.14	8.42	7.54	7.30	6.75	5.00	NA	NA
1994	7.41	9.20	8.57	8.97	7.42	5.00	7.97	8.41
I	6.53	8.60	7.99	7.89	6.50	5.00	NA	NA
II	7.41	9.08	8.37	8.91	7.17	5.00	NA	NA
III	7.66	9.26	8.70	9.37	8.00	5.00	NA	NA
IV	8.05	9.86	9.21	9.71	8.00	5.00	NA	NA
1995	6.94	9.97	8.95	8.57	7.96	5.00	8.01	8.74
I	7.71	10.22	9.10	9.44	8.75	5.00	NA	NA
II	7.00	10.08	9.10	8.58	8.25	5.00	NA	NA
III	6.75	9.90	8.85	8.39	7.50	5.00	NA	NA
IV	6.28	9.69	8.74	7.87	7.33	5.00	NA	NA
1996	6.83	9.38	8.08	8.13	7.12	5.00	8.14	8.83
I	6.36	9.34	7.88	7.97	6.83	5.00	NA	NA
II	7.07	9.42	8.06	7.99	6.83	5.00	NA	NA
III	7.07	9.40	8.18	8.20	7.33	5.00	NA	NA
IV	6.83	9.36	8.22	8.42	7.50	5.00	NA	NA
1997	6.67	9.38	8.28	8.09	7.23	5.00	7.92	8.52
I	6.89	9.42	8.21	8.06	7.00	5.00	NA	NA
II	7.00	9.50	8.41	8.43	7.17	5.00	NA	NA
III	6.58	9.34	8.25	7.77	7.50	5.00	NA	NA
IV	6.20	9.26	8.23	8.10	7.25	5.00	NA	NA
1998	5.26	9.07	8.13	7.45	6.29	5.00	7.70	8.27
I	5.57	9.18	8.34	7.75	6.58	5.00	NA	NA
II	5.60	9.24	8.35	7.42	6.50	5.00	NA	NA
III	5.20	9.12	8.28	7.33	6.17	5.00	NA	NA
IV	4.67	8.74	7.78	7.28	5.92	5.00	NA	NA
1999P	5.64	8.85	7.95	7.36	6.15	5.00	7.61	8.18
I	4.98	8.64	7.65	7.20	5.75	5.00	NA	NA
II	5.54	8.74	7.87	7.24	5.75	5.00	NA	NA
III	5.88	8.94	8.13	7.48	6.33	5.00	NA	NA
IV	6.14	9.09	8.14	7.50	6.75	5.00	NA	NA

NA = Not Available. P = preliminary for commercial banks and the Farm Credit System. 1/ Unweighted average of rates on all outstanding bonds neither due nor callable in less than 10 years. 2/ New farm ownership loans. 3/ Average on outstanding farm business debt. 4/ Both real and nonreal estate loans. Note: Because of changes in the practices of agricultural lenders over time and differences in the types of loans used to calculate each lender's interest rate series, interest rates across columns and over time are roughly rather than exactly comparable.

Sources: Board of Governors of the Federal Reserve System, Economic Research Service, various Farm Credit District Banks, and Farm Service Agency.

Appendix table 6—Selected financial indicators for the four institutional farm lender categories, 1984-99

Lender and date 1/	Delinquent loans 2/	Share of portfolio 3/	Net loan charge-offs	Share of portfolio 4/	Value of acquired property 5/
<i>Farm Credit System 6/</i>	<i>Million dollars</i>	<i>Percent</i>	<i>Million dollars</i>	<i>Percent</i>	<i>Million dollars</i>
1984	5,689	8.7	428	0.5	496
1985	6,465	9.7	1,105	1.4	928
1986	8,137	9.4	1,321	1.9	1,093
1987	5,749	11.6	488	0.8	873
1988	3,757	7.3	413	0.8	661
1989	2,812	5.5	-5	0.0 7/	461
1990	2,758	5.4	21	-0.0 7/	344
1991	2,420	4.7	47	0.1	409
1992	2,015	3.8	19	0.0	314
1993	1,488	2.8	-2	-0.0 7/	187
1994	1,067	2.0	-26	-0.0 7/	100
1995	830	1.4	-5	-0.0 7/	59 8/
1996	673	1.1	48	0.1	50 8/
1997	628	1.0	27	0.0	29 8/
1998	1,246	1.8	68	0.0 7/	31 8/
1999	909	1.3	152	0.2	21 8/
<i>Farm Service Agency 9/</i>					
1984	5,086	19.9	117	0.5	NA
1985	5,826	20.8	234	0.9	638
1986	6,277	22.8	379	1.4	758
1987	6,592	25.6	1,119	4.1	777
1988	8,322	33.2	2,022	7.8	633 10/
1989	8,006	34.4	3,229	12.9	609
1990	6,139	31.4	3,142	13.5	474
1991	5,508	31.5	2,237	12.5	404
1992	4,805	30.9	1,824	11.0	382
1993	4,116	29.9	1,702	12.0	344
1994	3,570	28.3	1,353	9.8	298
1995	3,199	27.8	1,003	7.9	262
1996	2,420	22.9	1,298	11.3	243
1997	2,036	20.7	756	7.1	175
1998	1,692	18.5	674	6.9	119
1999	1,398	15.6	518	5.7	94
<i>Commercial Banks 11/</i>					
1984	1,244	3.1	901	2.2	224
1985	2,384	6.6	1,366	3.8	336
1986	2,033	6.4	1,257	4.0	440
1987	1,507	5.1	540	1.8	453
1988	1,061	3.5	142	0.5	416
1989	768	2.5	98	0.3	385
1990	657	2.0	57	0.2	340
1991	699	2.0	139	0.4	341
1992	669	1.9	93	0.3	412
1993	560	1.5	60	0.2	247
1994	468	1.2	75	0.2	173
1995	493	1.2	63	0.2	149
1996	577	1.4	109	0.3	132
1997	548	1.2	79	0.2	94
1998	611	1.3	102	0.2	67
1999	820	1.8	125	0.3	76

Appendix table 6—Selected financial indicators for the four institutional farm lender categories, 1984-99--continued

Lender and date 1/	Delinquent loans 2/	Share of portfolio 3/	Net loan charge-offs	Share of portfolio 4/	Value of acquired property 5/
	<i>Million dollars</i>	<i>Percent</i>	<i>Million dollars</i>	<i>Percent</i>	<i>Million dollars</i>
Life Insurance Companies					
1984	1,167	9.6	NA	NA	NA
1985	1,717	15.1	NA	NA	692
1986	1,783	17.0	NA	NA	1,442
1987	1,330	14.3	NA	NA	1,619
1988	808	8.9	NA	NA	1,226
1989	426	4.7	NA	NA	1,110
1990	404	4.2	NA	NA	569
1991	364	3.8	NA	NA	413
1992	277	3.3	NA	NA	321
1993	196	2.2	NA	NA	135
1994	230	2.6	NA	NA	47
1995	250	2.7	NA	NA	128
1996	91	0.9	NA	NA	97
1997	98	1.0	NA	NA	7
1998	154	1.4	NA	NA	10
1999	165	1.4	NA	NA	6

NA=not available. 1/ Farm Credit System: December 31, 1984-98 and September 30, 1999; Farm Service Agency: September 30, 1984-99 (end of the Federal Government's fiscal year); commercial banks: December 31, 1984-98 and June 30, 1999; and life insurance companies: December 31, 1984-98 and June 30, 1999. 2/ Includes: for commercial banks and the Farm Credit System, loans past due 90 days or more and still accruing interest plus loans in nonaccrual status; for the Farm Service Agency only principal and interest payments more than 15 days past due; for insurance companies, loans past due 90 days or more plus those in process of foreclosure. 3/ As a percentage of all such loans held at the end of the period. 4/ As a percentage of all such loans held at the beginning of the period (end of the period for banks. 5/ Value of agricultural property acquired as the result of agricultural loan defaults and foreclosures. For commercial banks for 1984-91, the values were calculated by computing for each bank the ratio of outstanding farmland real estate loans to total outstanding loans and multiplying these ratios by the other real estate owned. Beginning in 1992 a direct measure of farmland owned is reported in the bank Call reports. For the Farm Credit System, excludes property held by the Banks for Cooperatives. 6/ 1984 figures are not exactly comparable because this was a transition year to new accounting principles. Also, Farm Credit System guidelines changed in 1990. 7/ Less than 0.05 percent. 8/ Does not include the CoBank Agricultural Credit Bank (ACB) or the St. Paul Bank for Cooperatives, although CoBank now services several Agricultural Credit Associations (ACA's) which are direct farm lenders. 9/ Includes only data for direct Farmer Loan programs at the end of the fiscal year. Net loan charge-offs are for the fiscal year ending September 30. 10/ Decrease from the previous period may reflect changes in reporting procedures. 11/ Delinquency and charge-off data are estimates for bank-held farm nonreal estate loans. Beginning in December 1987, charge-offs do not include losses qualified for the loan deferred loan loss program. The value of acquired property column is based on real-estate-backed farm loans.

Sources: American Council of Life Insurance, Board of Governors of the Federal Reserve System, Farm Credit System, and Farm Service Agency.

Appendix table 7—Trends in the numbers of Farm Credit System Associations, 1983-2000

January 1	Federal Land Bank Associations 1/	Production Credit Associations 2/	Agricultural Credit Associations 3/	Federal Land Credit Associations 4/	Total
<i>Number</i>					
1983	474	421	0	0	895
1984	462	399	0	0	861
1985	436	362	0	0	798
1986	306	216	0	0	522
1987	232	155	0	0	387
1988	232	145	0	0	377
1989	154	94	33	0	281
1990	146	84	40	2	272
1991	120	111	44	18	293
1992	85	72	70	23	250
1993	77	70	69	27	243
1994	73	69	66	30	238
1995	71	69	60	32	232
1996	70	66	60	32	228
1997	60	65	61	31	217
1998	48	64	60	31	203
1999	39	63	54	33	189
2000	17	57	49	49	172

1/ Farm Credit Banks (FCB's) make direct long-term agricultural loans secured by farm real estate through FLBA's, provide wholesale loan funds to direct lending associations: Production Credit Associations (PCA's), Federal Land Credit Associations (FLCA's), Agricultural Credit Associations (ACA's), and other financing institutions (OFI's). 2/ Production Credit Associations have direct lending authority to make short- and intermediate-term loans to retail customers with funds obtained from FCB's. 3/ Agricultural Credit Associations have direct lending authority to make short-, intermediate-, and long-term loans to retail customers with funds obtained from FCB's or the CoBank Agricultural Credit Bank. Beginning in the year 2000, 9 of the ACA's have PCA and FLCA subsidiaries. 4/ Federal Land Credit Associations have direct lending authority to make long-term real estate loans to retail customers with funds obtained from FCB's.

Source: Farm Credit Administration.

Appendix table 8—Commercial bank real estate lending, by type of bank, June 30, 1999

Bank group	Commercial banks	Real estate loans/total loans	Nonperforming real estate loans/total real estate loans 1/		Total nonperforming loans/total loans	Nonperforming real estate/nonperforming loans	Weak banks 2/
			<i>Number</i>	<i>Percent</i>			
All banks	8,605	41.4	0.8	0.9	37.2	5	
Agricultural	2,942	49.7	1.0	1.2	40.3	0	
Small nonagricultural	5,007	64.3	0.7	0.8	51.2	5	
Large nonagricultural	656	38.1	0.9	0.9	35.4	0	
Urban	3,828	40.1	0.8	0.9	37.1	4	
Rural	4,777	54.7	0.8	1.1	38.2	1	

1/ Nonperforming loans are loans that are past due 90 days or more and still accruing interest plus loans in nonaccrual status. 2/ Weak banks are banks with total nonperforming loans in excess of total capital.

Source: Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Appendix table 9—Banks reporting nonperforming loans greater than capital, 1986-99 1/

Year 2/	Agricultural banks		Nonagricultural banks		Total banks	
	Number	Percent	Number	Percent	Number	Percent
1986	154	3.27	247	2.63	401	2.84
1987	84	1.87	259	2.84	343	2.52
1988	55	1.26	239	2.75	294	2.25
1989	30	0.72	185	2.19	215	1.70
1990	15	0.37	133	1.62	148	1.21
1991	10	0.25	106	1.34	116	0.98
1992	6	0.16	56	0.74	62	0.54
1993	2	0.05	30	0.42	32	0.29
1994	2	0.06	19	0.28	21	0.20
1995	4	0.12	6	0.09	10	0.10
1996	5	0.15	4	0.06	9	0.09
1997	3	0.10	4	0.07	7	0.08
1998	2	0.07	6	0.10	8	0.09
1999 2/	0	0.00	5	0.09	5	0.06

1/ Nonperforming loans are loans that are past due 90 days or more and still accruing interest plus loans in nonaccrual status. Total capital includes total equity capital, allowance for loan and lease losses, minority interest in consolidated subsidiaries, subordinated notes and debentures, and total mandatory convertible debt. 2/ The 1999 numbers are as of June 30, all others are December 31.

Source: Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Appendix table 10—Commercial bank failures, 1982-99 1/

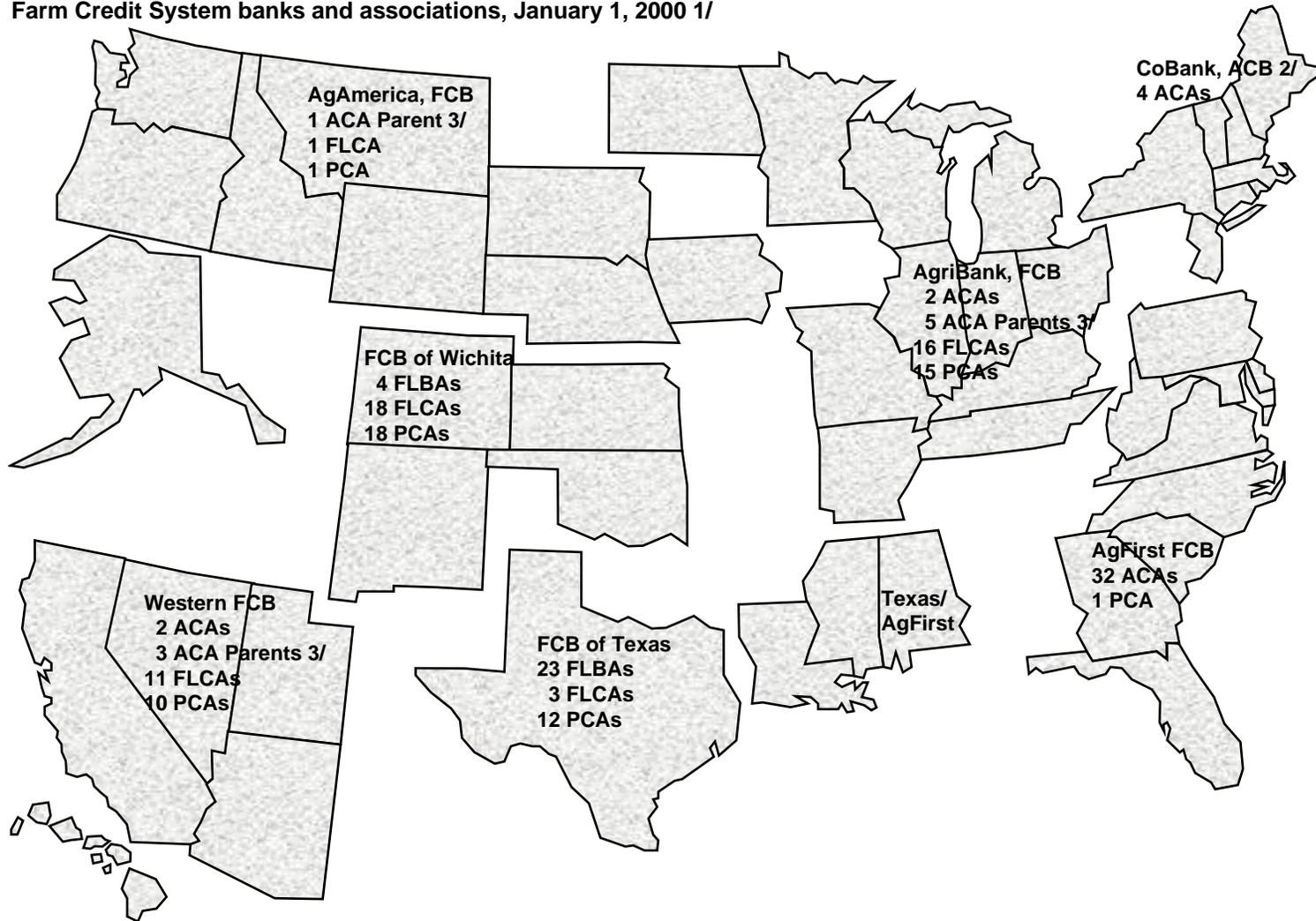
Year	Agricultural banks		Nonagricultural banks		Total banks	
	Number 2/	Percent 3/	Number	Percent 3/	Number	Percent 3/
1982	10	0.19	23	0.25	33	0.23
1983	7	0.14	37	0.40	44	0.31
1984	31	0.62	47	0.50	78	0.54
1985	69	1.42	49	0.52	118	0.83
1986	66	1.41	78	0.84	144	1.03
1987	75	1.67	127	1.41	202	1.50
1988	41	0.95	180	2.09	221	1.71
1989	22	0.53	184	2.18	206	1.63
1990	18	0.44	141	1.76	159	1.30
1991	10	0.25	98	1.24	108	0.91
1992	7	0.18	93	1.23	100	0.88
1993	3	0.08	33	0.46	36	0.33
1994	0	0.00	11	0.16	11	0.11
1995	0	0.00	5	0.08	5	0.05
1996	2	0.06	3	0.05	5	0.05
1997	1	0.03	0	0.00	1	0.01
1998	1	0.03	2	0.03	3	0.03
1999 4/	1	0.03	6	0.11	7	0.08
Total	364	NA	1,117	NA	1,481	NA

NA=Not available. 1/ Counts of failures exclude mutual savings banks, savings and loan associations, commercial banks not insured by the FDIC, and banks headquartered in U.S. possessions and territories. Failures are those declared insolvent and closed by their chartering authorities plus those granted open bank assistance by the FDIC. 2/ Agricultural bank status is based on June loan data from the year prior to the bank's failure. 3/ Failures during the year as a percentage of total banks of this type remaining at the end of the year. 4/ Percentages for 1999 use June 30, 1999, data on numbers of banks in the denominators.

Sources: Calculated from information provided by the Federal Deposit Insurance Corporation and the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Appendix figure 1

Farm Credit System banks and associations, January 1, 2000 1/



1/ Associations affiliated with Texas, FCB, include 2 PCAs in New Mexico, 2 FLBAs in Alabama, 2 FLBAs in Mississippi, and 2 FLBAs and 1 PCA in Louisiana. Associations affiliated with Western, FCB, include 1 PCA in Idaho. Associations affiliated with AgFirst, FCB, include 1 ACA in Ohio, 2 ACAs in Kentucky, 1 ACA in Tennessee, and 1 PCA serving Alabama, Mississippi, and most of Louisiana. As of March 1, 1997 the Western and AgAmerica FCBs are jointly managed but remain separate legal entities. 2/ CoBank ACB serves cooperatives nationwide and ACAs in the indicated area. 3/ Designates ACAs that have PCA and FLCA subsidiaries.

Source: Farm Credit Administration, Office of Policy and Analysis, Risk Analysis Division records.