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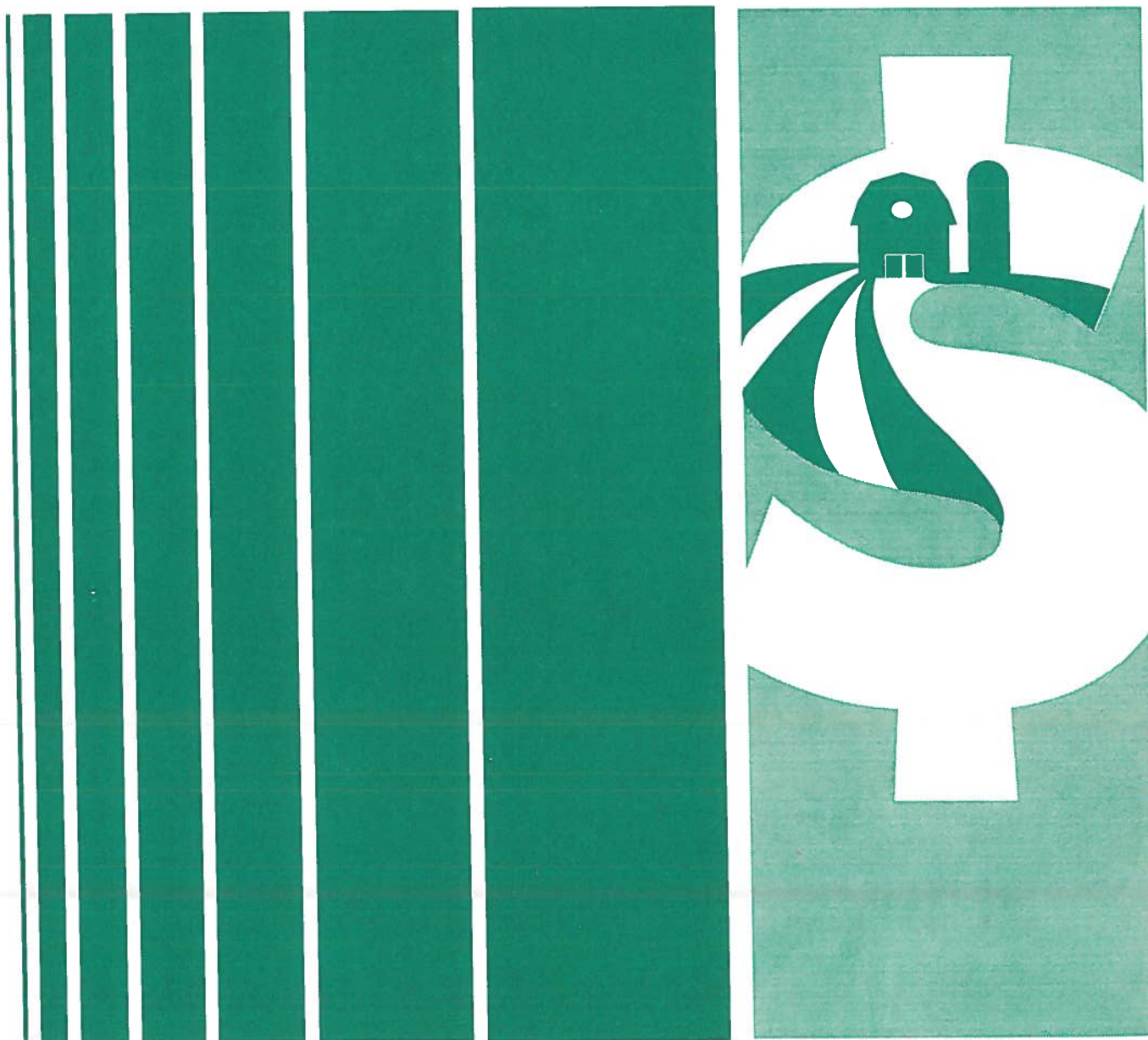


Agriculture
Information
Bulletin
Number 722

An Economic Research Service Report

Farm Credit System Safety and Soundness

Robert N. Collender
Audrae Erickson



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Farm Credit System Safety and Soundness. By Robert N. Collender and Audrae Erickson, Rural Economy Division, Economic Research Service, U.S. Department of Agriculture. Agriculture Information Bulletin No. 722.

Abstract

The Farm Credit System (FCS) is safer and sounder than it was before the farm financial crisis of the mid-1980's, but important issues related to the safety, soundness, and viability of the system warrant continuous attention. These issues involve finding a balance between regulation and regulatory burden, resolving the relationships among capital and accounting standards and risk exposure, and finding policies that expose FCS institutions to efficiency-enhancing market forces. This report explores issues related to FCS safety and soundness, particularly the role of Farm Credit System Insurance Corporation (FCSIC), Farm Credit Administration (FCA), and voluntary mechanisms. The report also compares FCS safety and soundness mechanisms to those of other financial institutions.

Keywords: Farm Credit System, Farm Credit System Insurance Corporation, Farm Credit Administration, prudential regulation, safety and soundness, government-sponsored enterprises

Acknowledgments

The authors wish to thank officers of the Farm Credit System Insurance Corporation, the Farm Credit Administration, the Federal Farm Credit Banks Funding Corporation, the Federal Deposit Insurance Corporation, and the National Credit Union Administration for their helpfulness and thoughtful suggestions.

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Summary

The Farm Credit System is safer and sounder than it was before the farm financial crisis of the mid-1980's, but important issues related to the safety, soundness, and viability of the system warrant continuous attention. According to this report, these issues involve finding a balance between regulation and regulatory burden, resolving the relationships among capital and accounting standards and risk exposure, and questions of managerial control and efficiency.

The Farm Credit System (FCS) is a federally chartered network of cooperatively owned lending associations and banks and is one of the Nation's primary lenders to farmers and rural America. The farm debt crisis of the mid-1980's led to large financial losses at, and in some cases liquidation of, FCS institutions.

The debt crisis worsened problems inherent in FCS's structure and management. For instance, the system was inefficiently organized into units based on geography and function. Operational problems included emphasis on collateral value rather than repayment ability in underwriting decisions, average cost pricing of loans, and lack of asset/liability management. These policies led to high default rates, loss of market share, borrower flight, low operating income, and capital losses.

In the mid-1980's, Congress began passing legislation designed to address problems inherent in the FCS, starting with the establishment of the Farm Credit System Insurance Corporation (FCSIC). Its primary mission is to insure timely payment of principal and interest on insured obligations issued on behalf of FCS banks. FCSIC also assists distressed FCS institutions, reducing the likelihood of future calls for Federal assistance.

Other legislation transformed the Farm Credit Administration (FCA) into an independent, arm's-length regulator with new oversight and enforcement powers. The Federal Farm Credit Banks Funding Corporation was required to determine the conditions of participation by banks in issues of systemwide securities. In addition, FCS banks developed a system of economic incentives for individual banks to achieve and maintain strong financial standards.

Yet, the report notes, important issues related to FCS safety, soundness, and competitiveness need continuous attention:

- The mechanisms to deal with conflicts of interest in the system's management structure.
- The need to deter banks from taking imprudent, unnecessary risks after they obtain insurance.
- The distribution of insured liabilities across FCS banks.
- The location of at-risk capital within the system.
- The separation of ownership and managerial control.

List of Acronyms

ACB	Agricultural Credit Bank
BC	Bank for Cooperatives
BIF	Bank Insurance Fund
CPA	Capital Preservation Agreement
CIPA	Contractual Interbank Performance Agreement
FCA	Farm Credit Administration
FCB	Farm Credit Bank
FCIF	Farm Credit Insurance Fund
FCS	Farm Credit System
FCSCC	Farm Credit System Capital Corporation
FCSIC	Farm Credit System Insurance Corporation
FDIC	Federal Deposit Insurance Corporation
FFCBFC	Federal Farm Credit Banks Funding Corporation
FFIEC	Federal Financial Institutions Examination Council
FICB	Federal Intermediate Credit Bank
FLB	Federal Land Bank
FLBA	Federal Land Bank Association
FRB	Federal Reserve Board
FSLIC	Federal Savings and Loan Insurance Corporation
GAAP	Generally accepted accounting principles
MAA	Market Access Agreement
NCUA	National Credit Union Administration
NCUSIF	National Credit Union Share Insurance Fund
OCC	Office of the Comptroller of the Currency
OTS	Office of Thrift Supervision
PCA	Production Credit Association
RAP	Regulatory accounting principles
SAIF	Savings Association Insurance Fund

Farm Credit System Safety and Soundness

Robert N. Collender
Audrae Erickson*

Introduction

In the mid-1980's, turmoil arose within the Farm Credit System (FCS), a federally chartered network of cooperatively owned lending associations and banks. In response, Congress established the Farm Credit System Insurance Corporation (FCSIC), required increased control over access to the federally sponsored agency funds market, and reorganized the Farm Credit Administration (FCA) as an independent, arm's-length regulator. In addition, FCS institutions voluntarily adopted other mechanisms to promote financial safety and soundness. This report explores issues of FCS safety and soundness, particularly the roles of the FCSIC, FCA, and the FCS's voluntary mechanisms. The report also compares financial institution insurance mechanisms in the United States and discusses unresolved issues specifically related to FCS safety and soundness.

A deep agricultural recession, macroeconomic policy shifts, unexpected macroeconomic events, and unsound practices at many financial institutions combined in the mid-1980's to create a farm debt crisis that resulted in large losses for the FCS (fig. 1). Losses were large enough in some FCS institutions to impair the value of stock or to force liquidation. FCS managers, regulators, and Congress took action to stanch the red ink. However, both bondholders (the primary source of loanable funds) and borrowers resisted these efforts until Congress legislated a Federal rescue in 1987.

Reports of large, unanticipated losses caused bondholders to demand a substantial premium for FCS securities, despite existing protections. Bondholders

were protected by joint liability of all FCS banks for outstanding bonds and by an implicit Federal guarantee on FCS debt. Yield spreads between short-maturity FCS securities and comparable Treasury issues widened. Spreads, which had averaged about 10 basis points, rose to as much as 140 basis points before narrowing again as Congressional action took shape. (A basis point is one one-hundredth of a percentage point.) Less pronounced but still significant shifts in the level and structure of spreads (cost over comparable Treasury issues) occurred for securities from other government-sponsored enterprises (Duncan and Singer). Rising spreads in the agency market aroused fears of spillover effects that could harm the interest-sensitive housing sector.

FCS borrowers were divided, but many resisted FCS efforts to control losses. In a futile effort to maintain profits, FCS associations raised the interest rates charged to borrowers above the prevailing rates at competing institutions. Some FCS institutions, in a corresponding effort to control risk, took aggressive action against troubled borrowers and required more documentation for all loans. Many borrowers chafed when a cooperative, which they nominally owned, took aggressive action and/or resented the added burden of the required documentation. Borrowers also had to invest in stock of their local cooperative lending associations. Borrower fears that FCS failures would result in the loss of their FCS stock, combined with availability of less costly credit elsewhere, led to record repayment of FCS loans, causing loan volume and market share to plummet (fig. 2).

These events precipitated calls for financial assistance, which set the stage for the overhaul of FCS safety and soundness mechanisms. Congress passed major FCS-related legislation in 1985, 1986, and 1987. (See box, "Farm Credit System History and Periods of Financial Distress.")

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Figure 1

Farm Credit System net income, loan loss provisions, and net chargeoffs

Million dollars

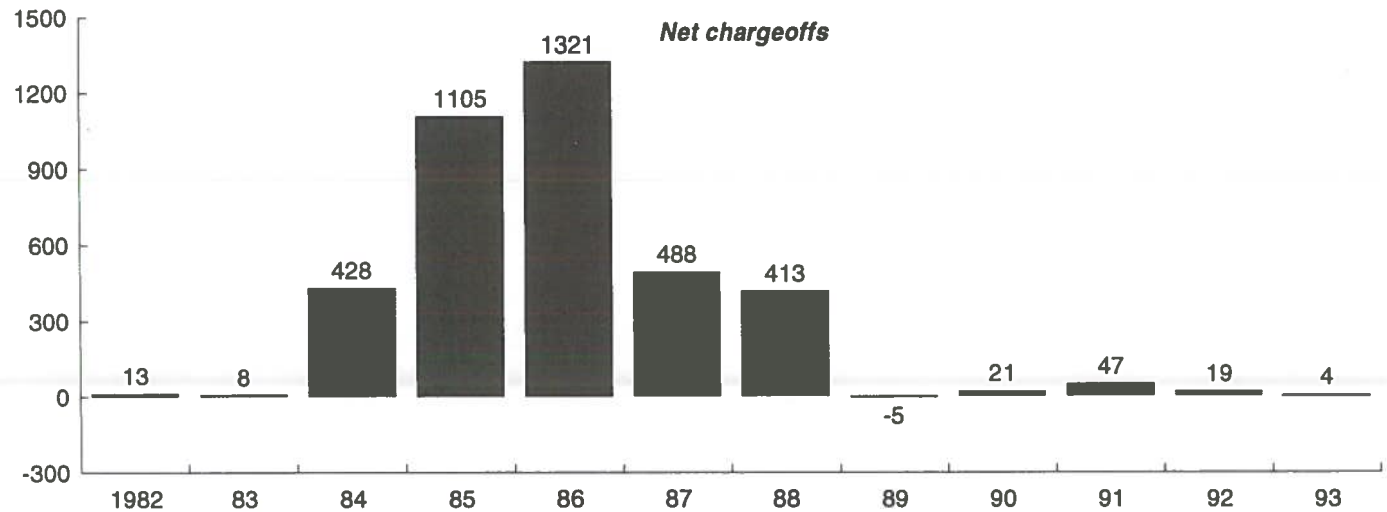
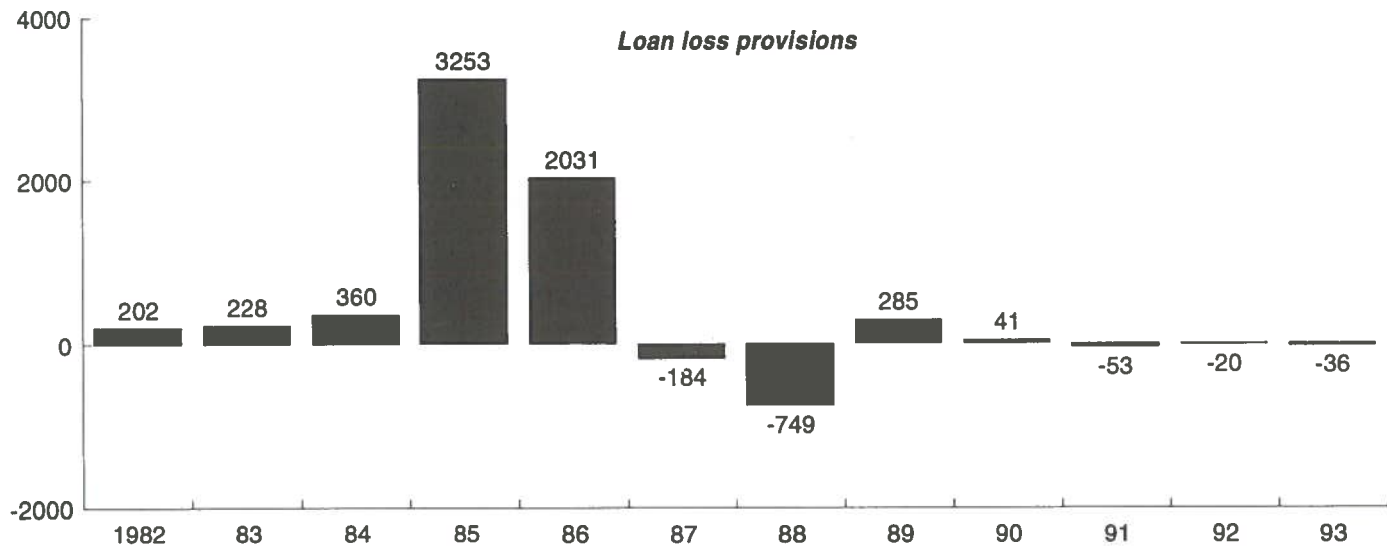
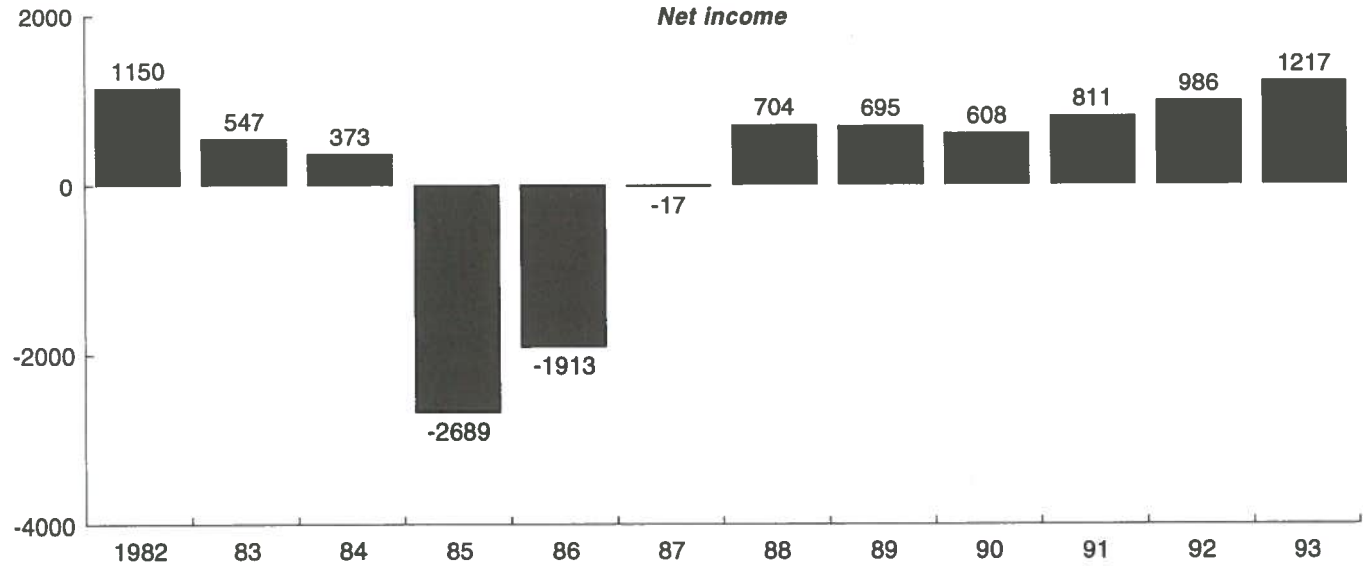
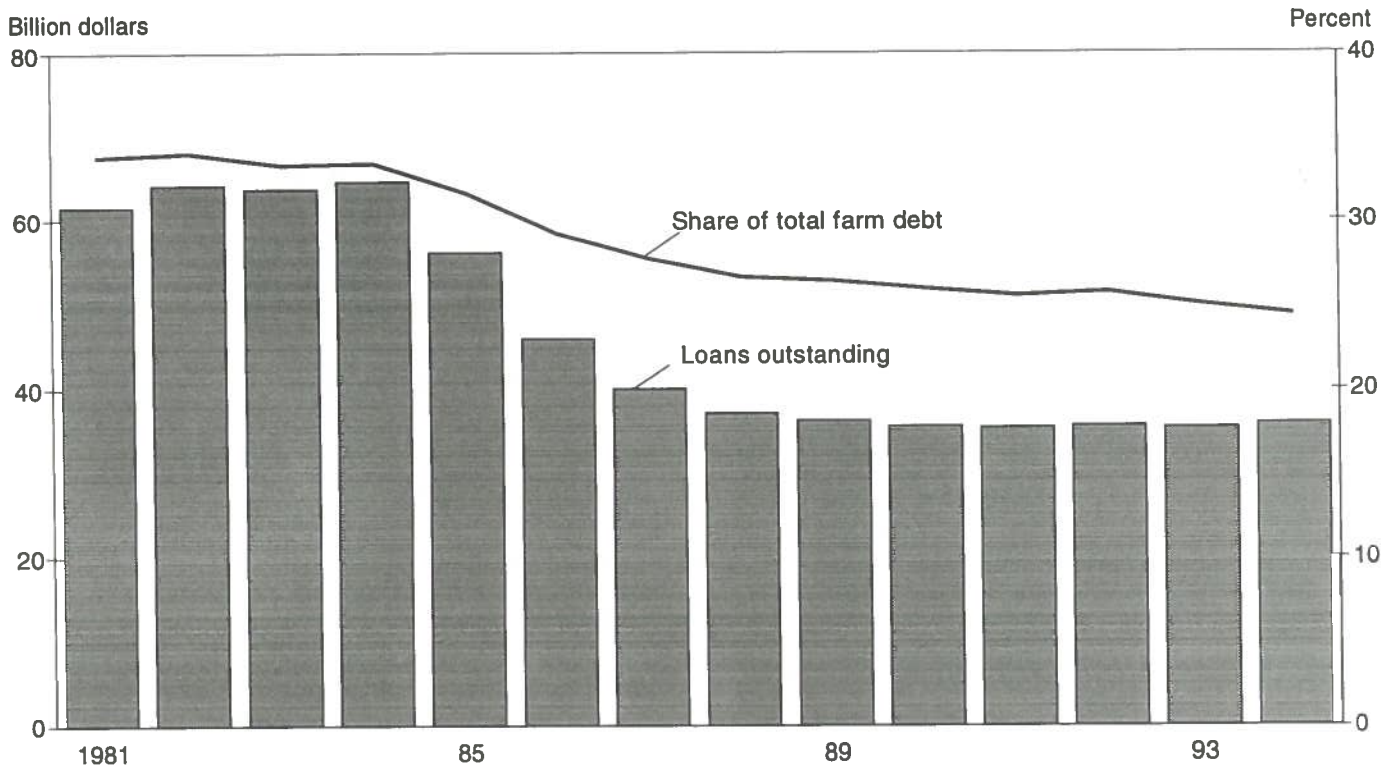


Figure 2
Farm Credit System losing market share of loans



Source: Federal Farm Credit Banks Funding Corporation.

FCSIC Protects Bondholders and Taxpayers, Helps Distressed FCS Institutions

The Farm Credit System Insurance Corporation (FCSIC) is an independent Federal Government corporation. Its primary mission is to insure timely payment of principal and interest on insured obligations issued on behalf of FCS banks. Congress also intended for FCSIC to provide a permanent mechanism to assist distressed FCS institutions and to reduce the likelihood of future calls for Federal assistance. FCSIC also satisfies any defaults on Financial Assistance Corporation bonds (used to finance the 1988 Federal rescue of some beleaguered FCS components) and provides funds to ensure retirement of protected borrower stock.¹

¹Protected borrower stock refers to certain voting and nonvoting stock, equivalent contributions to a guaranty fund, participation certificates, allocated equities, and other similar equities issued by any FCS institution and held by any person other than any FCS institutions that, per the provisions of the Farm Credit Act of 1987, is not at risk and must be redeemed at par. Stock eligible for protection includes (1) stock outstanding as of the enactment of the Farm Credit Act of 1987, (2) stock issued or allocated after enactment but not more than 9 months after enactment or before adoption of new capitalization requirements by the relevant bank or association, (3) stock frozen by an institution placed in liquidation between January 1, 1983, and enactment, or (4) stock retired at less than par value by an institution placed in liquidation between January 1, 1983, and enactment.

To accomplish its mission, FCSIC must exercise its authority to prudently manage the Farm Credit Insurance Fund (FCIF) and minimize FCIF's exposure to risk. FCIF is FCSIC's main asset for accomplishing its functions of insuring timely payments to bondholders and providing assistance to distressed FCS institutions. FCA cannot invoke joint and several liability until the FCIF is exhausted. Thus, FCIF also reduces the risk that poor performance at one or more FCS banks will affect others. This buffering function of FCIF is important because resistance to capital sharing among associations and banks generated costly, time-consuming litigation during the 1980's. (See section, "Failure of Existing Protections, Fear of Contagion in Agency Bond Market Spurred Creation of FCSIC.")

A three-member, presidentially appointed board of directors manages the FCSIC. The FCSIC board currently has the same members as the FCA board but was scheduled to become fully independent as of January 1, 1996. (Congress is currently considering changes to this requirement.) Figure 3 puts the protections provided by the FCIF in the context of sources of losses and other levels of protection that shield bondholders.

Farm Credit System History and Periods of Financial Distress¹

- 1916-17 Federal Land Banks (FLB's) and Federal Land Bank Associations (FLBA's) created by an act of Congress and chartered to make long-term real estate loans to farmers.
- 1923 Federal Intermediate Credit Banks (FICB's) created to provide operating credit for farmers through commercial banks.
- 1925** FLB of Spokane unable to meet scheduled interest payments because of farmer defaults. Other FLB's purchase the acquired real estate, which was later sold. FLB of Spokane repays all FLB's with interest.
- 1933 Production Credit Associations (PCA's) established to make short-term operating loans to farmers. Banks for Cooperatives (BC's) set up to finance purchasing and marketing cooperatives.
- 1968 Federally funded startup capital refunded in full.
- 1971 Farm Credit System charter expanded, loan limits of FLB's raised to 85 percent of property market value. FLB's and PCA's start making rural home loans. Most FCS institutions authorized to make aquatic loans. BC's get initial authority to lend to rural utilities.
- 1978 PCA's authorized to extend maturities of aquatic loans to 7-15 years.
- 1983 FCS loans outstanding peak at \$82 billion.
- 1983-85** Eleven PCA's in the Spokane, Omaha, and Louisville districts placed in liquidation.
- 1984** Spokane PCA losses stemming largely from aquatic loans, result in \$25 million loss-sharing agreement with other FCS banks; resignation of Spokane's district board. Omaha district PCA's are unable to redeem stock at par.
- 1985** Capital preservation (loss-sharing) agreements triggered, and FCS Capital Corporation chartered. FCS announces loss of \$2.7 billion. Cost of FCS borrowing on capital markets rises almost to the level of high grade, taxable corporate securities despite agency status. Federal assistance authorized. FCS Capital Corporation allowed to receive Treasury funds.
- 1985-86** Stronger FCS banks transfer \$1 billion to weaker banks. Strong banks mount a court challenge over requirement to continue assisting weak banks. Amarillo PCA tries to leave FCS to avoid loss sharing. One Louisville district FLBA placed in liquidation.
- 1987-88** Congress authorizes \$4 billion in Treasury-guaranteed bond, of which \$1.26 billion is issued to aid restructuring. FCS Insurance Corporation (FCSIC) authorized. FCS Assistance Board established—assists four Farm Credit Banks (formerly FLB's). FCS Financial Assistance Corporation created to issue Treasury-guaranteed bonds. Jackson FLB and FLBA both placed in receivership.
- 1989** \$260 million transferred from Farm Credit Administration's revolving fund to FCS Insurance Corporation as initial capital. Two Texas district PCA's placed in liquidation.
- 1992 Contractual Interbank Performance Agreement signed by all FCS banks. FCS Assistance Board terminates operations at yearend in accordance with sunset clause.
- 1993 FCSIC fully operational. FCS develops specific schedule to repay assistance.
- 1994 Market Access Agreement adopted. All individual, continuing FCS entities that received Federally funded assistance have arranged repayment.

¹Periods of distress are highlighted in bold.

Sources: Hoag; Sunbury; Federal Farm Credit Banks Funding Corporation.

Figure 3

Four levels of protection for FCS bondholders

FCS banks or associations experience losses because of the risks inherent in lending, including credit risk, interest rate risk, liquidity risk, managerial risks, and policy risks. As losses accrue to FCS institutions, four levels of protection are consecutively activated to safeguard bondholders and taxpayers:

Level One

The Market Access Agreement (MAA) and Contractual Interbank Performance Agreement (CIPA) provide incentives for FCS banks to maintain financial strength and mechanisms to ensure that problems are addressed in a timely manner.



Level Two

Capital and Loan Loss Reserves are available to absorb losses, while allowing FCS institutions to continue operations until capital falls below regulatory requirements.



Level Three

The Farm Credit System Insurance Fund is authorized to:

- Provide financial assistance to or liquidate distressed institutions.
- Make payments on security obligations.
- Make payments on Finance Assistance Corporation obligations.
- Retire protected stock at par.



Level Four

Joint and Several Liability—the obligation of every FCS bank to pay off the unmet obligations of other FCS banks—can be invoked by the FCA once the Insurance Fund is depleted and/or Congress can choose to provide Federal assistance.

FCSIC has two distinct roles with respect to insured system institutions. It serves, first, as the insurer of systemwide obligations and, second, as the conservator or receiver for FCS institutions.

As the insurer of systemwide obligations, FCSIC assesses premiums, continuously analyzes systemic risk, examines system institutions when needed, and may provide financial assistance to troubled FCS banks and direct-lending associations. However, assistance cannot be provided if FCSIC determines that liquidation would be less costly and that adequate agricultural credit services are locally available.

Assistance from FCSIC can take many forms:

- Provide direct loans or contributions to a troubled institution.
- Help an FCS institution to merge or consolidate with a troubled one.
- Help an institution (hereafter referred to as the continuing institution) in purchasing a troubled institution's assets or in assuming its liabilities, possibly by using FCIF assets.
- Purchase debt securities of the continuing bank.
- Make loans or contributions directly to a troubled bank.
- Guarantee the continuing bank against losses on the merger transaction.

The FCA board can appoint the FCSIC as the receiver or conservator of any distressed FCS bank or association. A receiver serves as trustee of a failed institution's estate for the benefit of its creditors. The receiver is charged with terminating business operations, which involves collecting debts owed to the estate, liquidating assets, and paying creditors as funds allow. In contrast, a conservator is responsible for continuing the institution's operations until the FCA board decides for or against liquidation. The conservator must preserve the institution's assets and protect its interests and those of its creditors and stockholders. FCSIC is the only entity that can perform these functions for FCS institutions.

Managing Fund Assets

The FCIF's multiple uses mean that its assets may not be sufficient for every need, including the insurance of principal or interest on FCS obligations. Unlike deposit insurance funds for banks, thrifts, and credit unions,

FCSIC has neither a standing line of credit with the Treasury nor authority to impose a special assessment on FCS banks to replenish the FCIF if it is depleted. Congress has instructed the General Accounting Office to study the issue of special assessment authority.

The FCIF's assets depend on the rates of accumulation and disbursement. Fund assets have three primary sources: (1) \$260 million initially transferred from an existing revolving fund previously administered by the FCA, (2) premiums assessed on FCS banks, and (3) earnings on FCIF assets.

The annual premium is collected from insured FCS banks and is based on loans made by the banks and their related direct-lending associations. FCB's and Agricultural Credit Banks (ACB's) may, in turn, assess their direct-lending associations for premium payments. (FCB's cannot assess associations for obligations that arise when joint and several liability is invoked.) Different rates are assessed on average accrual loans outstanding (15 basis points, a basis point being one one-hundredth of a percentage point), average nonaccrual loans outstanding (25 basis points), and average accrual loans outstanding in Federal- and State-government-guaranteed programs (1.5 and 3 basis points, respectively). These premiums will accrue until the FCIF reaches 2 percent of total outstanding insured obligations or until the FCSIC determines the FCIF to be actuarially sound.

FCIF assets not needed for current FCSIC operations must, by law, be invested in obligations guaranteed as to principal and interest by the U.S. Government (U.S. Treasury securities or Government National Mortgage Association securities). FCSIC's primary investment objective is to ensure adequate liquidity to meet its statutory obligations. FCSIC also has a fiduciary responsibility to keep FCIF payouts to a minimum while meeting these obligations. To meet these aims, FCSIC must monitor risks within the FCS and use least-cost methods to control or resolve financial distress among insured entities. The net result is that FCSIC manages FCIF assets so as to give greater weight to liquidity over investment income and growth.

Changes Were Needed Within FCS To Limit Risk

Declining farm income, falling asset values, and widespread financial distress among farm borrowers charac-

terized the agricultural recession. Macroeconomic policies changed as well. The Federal Reserve Board (FRB) emphasized controlling inflation, and Federal fiscal policy shifted toward “supply-side” economic stimulus as embodied in the 1981 tax cuts. These events were overwhelming and beyond FCS control. FCS and many other financial institutions failed to effectively manage their risk exposure.

The ability of the FCS to control, through sound business practices, the impact of changes in its operating environment on its fiscal health is critical. FCS performance fell short in the 1980’s. In hindsight, this underperformance was linked both to discretionary policies adopted by FCS institutions and to inefficiencies inherent in the institutional design of the FCS.

FCS History and Cooperative Structure Led to Inherent Riskiness and Inefficiency

FCS institutions often practiced flawed operating policies. Examples include emphasis on collateral value rather than repayment ability in underwriting decisions, average-cost pricing of loans regardless of date originated or risk, and lack of asset/liability management to control interest rate risk exposure. When the agricultural sector suffered severe financial stress, these policies led to high default rates, loss of market share, borrower flight, low operating income, and capital losses.

Heavy reliance on collateral in loan underwriting made FCS institutions particularly vulnerable when the value of agricultural assets began to erode. In addition, average-cost pricing, coupled with a lack of interest-rate risk management, made the FCS vulnerable to the sharp shifts in interest rates.

The FCS followed a pricing strategy that, as interest rates kept rising, resulted in underpricing its competition. In keeping with cooperative principles, all borrowers were charged the average (rather than marginal) interest cost, plus a markup for operating expenses.

Interest rates generally had been rising since the mid-1960’s, but the portfolio of FCS securities included long-term, older securities with low interest rates. The average price the FCS paid on its debt securities thus became less than the marginal cost of new funds. This marginal cost of new funds was, in turn, the major factor determining interest rates charged by the FCS’s commercial competitors, especially in the market for real estate loans.

This strategy worked as long as interest rates were rising. When rates grew volatile in the late 1970’s, such practices became very dangerous. By the mid-1980’s, interest rates had started falling, but the FCS had issued many high-cost, long-term bonds at the start of the decade. The impact of this large overhang of high-cost bonds was magnified by falling aggregate loan volume. The drop in loan volume kept FCS banks from blending in lower cost funds as interest rates fell because maturing bonds were retired rather than replaced.

In this falling-interest-rate environment, average-cost pricing of loans overpriced the market. Many good-quality borrowers, who could qualify for loans elsewhere, left the FCS. The General Accounting Office estimates that the FCS paid \$3.4 billion in excess interest expenses in 1985 and 1986 alone. This poor asset/liability management may have cost the FCS almost as much as direct charge-offs (U.S. General Accounting Office, 1986). Charge-offs are actual losses of principal from a loan portfolio.

Since the 1950’s, FCS institutions had offered variable-rate loans to control interest rate risk, and by the 1970’s, most loans carried variable interest rates. Such loans shift interest rate risk from the lender to borrowers because the lender can reprice variable rate loans as its cost of funds changes. This strategy also became a problem. As interest rates rose at the same time farm income fell in the early 1980’s, interest rate risk was transformed into credit risk because some borrowers were unable to make the higher payments associated with higher interest rates.

Among the flaws in the FCS’s institutional design was its organization into units based on both geography and function. Piecemeal creation of FCS institutions from 1916 through the 1930’s led to three sets of banks and two sets of associations to service the agricultural sector. Some districts had already recognized the inherent inefficiency of this arrangement and had put both district banks and local associations under joint managements. Other districts continued to operate independently each bank and association.

These inefficiencies came from three basic sources. First, many associations could not reach the size necessary to fully realize economies of scale. Efficient businesses operate at sizes that bring neither scale economies nor diseconomies. Evidence from the literature on commercial banks suggests scale economies persist at least through \$100 million in asset size

(Clark). Even FCS associations with portfolios of \$100 to \$200 million exhibit increasing economies of scale (Collender).

Second, many associations and districts were unable to diversify risks across regions or commodities. Most agricultural areas are dominated by the production of a few commodities. The historical development of the FCS precluded associations and banks from diversifying across loan types—for example, for cooperatives, for real estate purposes, and for non-real-estate purposes. The FCS's traditional emphasis on local control of the cooperative associations limited their size and, thus, their diversification potential.

Third, some sister associations failed to communicate with each other. At the time of the crisis, separate associations offered long-term and short-term credit. A borrower could, thus, use loan proceeds from one association to stay current on loans from another. This practice delayed recognition of credit quality problems, which sometimes became overwhelming.

Failure of Existing Protections, Fear of Contagion in Agency Bond Market Spurred Creation of FCSIC

The FCS would seem to be an unlikely candidate for an insurance corporation. Concerns over macroeconomic stability and fairness to small savers have justified financial insurance corporations, such as the Federal Deposit Insurance Corporation (FDIC), the National Credit Union Administration (NCUA), and the former Federal Savings and Loan Insurance Corporation (FSLIC).² The concern about macroeconomic stability stems from the influence of deposit-taking financial intermediaries on the money supply, which in turn affects the entire U.S. economy.

In contrast, the failure of the FCS would have little effect on the entire U.S. economy compared with the failure of other systems of financial intermediaries. FCS lending peaked in 1982 at \$80 billion and FCS liabilities outstanding peaked at \$73 billion compared with about \$5 trillion in assets at other financial intermediaries. (Of this amount, commercial banks had assets of \$1,757 billion and the savings and loan industry had assets of \$822 billion in 1982/83.)

A decrease in lending would not directly affect the money supply, because the FCS raises funds through the bond market rather than through deposit-taking. Similarly, it is hard to argue that holders of FCS bonds are in greater need of protection than are holders of municipal or corporate bonds. Fear of imminent failure might cause bondholders to sell off their holdings at steep discounts, but a selloff would have less impact than a bank run. Bondholders, unlike depositors, are not guaranteed the value of their initial investment. If they choose to sell after learning bad news, they will have to take a loss. Such a selloff does not immediately drain the liquid reserves of FCS banks or associations. Therefore, these lenders are not forced to call in loans as banks have done during runs and panics.

If bondholders take large losses or lose confidence in a bond issuer, they could make raising cash difficult by demanding a higher return and more protections. The FCS might be unable to renew some loans and might have to raise interest rates on its large portfolio of variable-rate loans. The results would be twofold. First, loan volume would fall as creditworthy borrowers seek more liquid lenders from which to borrow. Second, the quality of the remaining loan portfolio would decline as better borrowers voluntarily pay off debts to lower their interest expenses. Both of these consequences occurred during the 1980's crisis. However, the macroeconomic effects would be minimal as long as the crisis was viewed as limited to the FCS.

Because bondholders are more at risk than insured depositors, the FCS and Congress have created mechanisms to provide them with some protection and assurance of stability. These mechanisms include joint liability on systemwide obligations, capital preservation (loss-sharing) agreements among FCS banks, and the FCS Capital Corporation (FCSCC). These mechanisms seemed insufficient during the farm financial crisis and Congress chose to intervene.

Congressional intervention was based on fear of macroeconomic consequences from inaction. The consequence of greatest concern was a possible contagion effect in the market for agency bonds. Investors widely assume that such bonds are backed by the Federal Government. Some feared that failure of a government-sponsored enterprise would prompt investors to demand a higher return on all agency issues, especially the housing agencies, Fannie Mae and Freddie Mac. The cost of funds to these agencies would substantially raise the cost of home mortgages, many

²FDIC insures deposits at commercial banks, NCUA insures deposits at credit unions, and FSLIC insured deposits at thrifts until this responsibility was shifted to FDIC in 1989.

of which are bought by Freddie Mac and Fannie Mae. Some feared that a rise in the cost of mortgages could cause a recession, despite lack of empirical evidence of either a contagion effect or its magnitude, duration, or consequences. (See Peoples and others.)

Existing Protections Failed To Reassure Bondholders

FCS institutions had little experience with risk sharing before the crisis of the mid-1980's. The joint liability feature of FCS consolidated bonds had been tested only once—in 1925, when the FLB of Spokane was unable to meet its scheduled interest payments because of farmer defaults and subsequent foreclosures. To rescue the distressed bank, other FLB's bought the acquired real estate inventory and wrote down its value to \$1 on their books. A commission was later created to sell the acquired properties. The FLB of Spokane repaid the other 11 banks with interest (Hoag).

In contrast, the protections available by the 1980's worked much less smoothly. By 1985, two main mechanisms—capital preservation (loss-sharing) agreements and the FCSCC, which was chartered in response to the building crisis—had evolved to enable financially strong institutions to support weaker ones.

Capital Preservation (Loss-Sharing) Agreements

All FCS banks were parties to Capital Preservation Agreements (CPA's). These agreements provided assistance to any bank with net losses severe enough to impair borrower stock. In 1985 and 1986, \$1.1 billion in financial assistance through the CPA's was transferred as income to the FLB's of Jackson, Louisville, Omaha, St. Louis, St. Paul, and Wichita (fig. 4).

Financial assistance under the CPA's continued to be recorded through September 30, 1986, when the Farm Credit Amendments of 1986 took effect. This legislation established regulatory accounting principles (RAP), modeled after similar practices in the Savings and Loan industry that permitted delaying the recognition of losses for many years. The law also rechartered the FCSCC as a mechanism for banks' mutual financial assistance.

Farm Credit System Capital Corporation

The FCS banks formed the FCSCC in 1985 to purchase and manage nonperforming assets from troubled institutions. The FCSCC was rechartered in 1986 in accordance with the 1985 Farm Credit Amendments

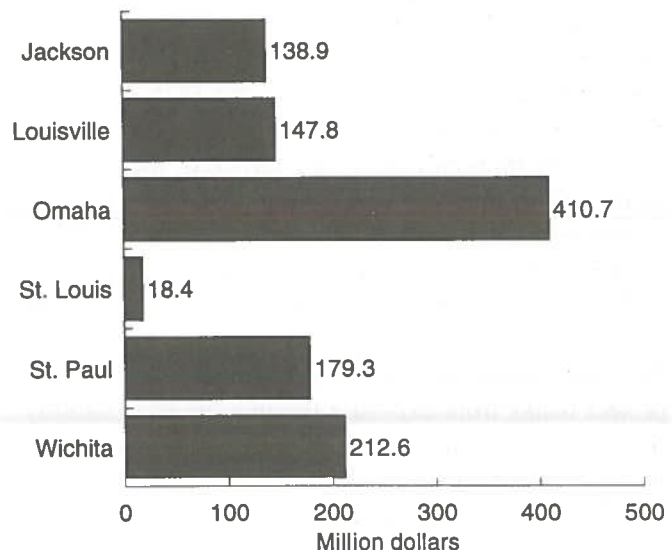
passed by Congress. This act authorized the corporation to assess stronger institutions to fund corporation activities. The initial assessment was \$297 million. However, by yearend 1986, only \$122 million had been collected. More would have been collected had it not been for court-imposed restrictions and refusals by some strong institutions to pay. Collected assessments were recorded as investments in FCSCC and were used to fund financial assistance (through the purchase of preferred stock) to weak institutions that agreed to execute assistance agreements with the FCSCC.

The FCSCC structured financial assistance plans to benefit the Federal Intermediate Credit Banks (FICB's) of Spokane and Omaha. Contributing banks, through the FCSCC, provided direct assistance of \$102 million. They also paid \$135 million for high-risk loans and related assets from FICB Spokane in 1985 and \$126 million for distressed assets from FICB Omaha in 1986.

Problems Arose Among Banks and Associations Providing Aid

This plan was interrupted by several legal actions filed by banks and associations. These suits challenged the validity of the FCA's regulations, the constitutionality of those portions of the 1985 amendments that authorized the FCSCC's assessments and fund transfers, and the legality of the FCSCC assessment procedures.

Figure 4
Capital Preservation Agreement assistance to various Federal Land Banks, 1985 and 1986



Implementing the Farm Credit Amendments of 1986, the FCA issued temporary regulations barring any reversals of financial assistance provided under the CPA's before October 1, 1986. This action led to several suits by banks that sought to reverse assessments under the CPA's.

By January 31, 1988, \$622 million had been paid for CPA's and \$486 million was still owed. Legal actions filed in 1987 affected \$415 million of the amount due. FCA regulations prohibiting reversal of intrasystem assistance conflicted with a resolution adopted by the FCS's finance committee (which administered CPA's) that specified conditions required for a reversal. These conditions had been met in some instances, leading some contributing banks to challenge FCA's regulations. This led the receiving banks to countersue the FLB's of Baltimore, Columbia, SC, Texas, and Spokane, and FCA itself to negate the impending reversals. The Farm Credit Act of 1987 resolved this dispute by directing the Financial Assistance Corporation to fund the unpaid CPA assessments of \$415 million through the sale of U.S. Treasury-guaranteed bonds.

Thus, FCSIC was created to provide a permanent apparatus for assistance to distressed FCS institutions, preventing intrasystem feuding and reducing the possibility of spillover effects on other government-sponsored enterprises active in the bond market.

Many Other Mechanisms Now Protect FCS Bondholders and Taxpayers

FCS structure and regulation have changed much since the mid-1980's to address safety and soundness concerns. Congress passed the Farm Credit Act Amendments of 1985 to transform the FCA into an independent, arm's-length regulator patterned after such other financial regulators as the Office of the Comptroller of the Currency (OCC) and the FDIC. Congress granted several new authorities to the FCA, including the ability to issue cease-and-desist orders and to impose civil fines and penalties.

FCS institutions have also adopted other measures to protect banks from exposure through the joint liability feature of systemwide FCS obligations to mismanagement or risktaking by other FCS banks. The Farm Credit Act of 1987 required the Federal Farm Credit

Banks Funding Corporation (FFCBFC—see glossary) to determine the conditions under which banks could participate in issues of joint, consolidated, or system-wide obligations. To fulfill this mandate, the FFCBFC developed the Market Access and Risk Alert Program (MARAP), which was replaced by the Market Access Agreement (MAA) in November 1994. In addition, FCS banks voluntarily adopted a Contractual Interbank Performance Agreement (CIPA) to provide economic incentives for banks to reach and maintain high financial standards.

These multiple protection mechanisms modify and enhance FCSIC's role. For example, FCA's responsibility to collect uniform financial information, to examine FCS institutions for safety and soundness, and to share such information with FCSIC as needed, makes duplication by FCSIC unnecessary in most cases. Similarly, the procedures adopted in the CIPA and MAA provide additional penalties for unsafe operations, thereby reinforcing FCSIC's basic objectives.

Farm Credit Administration as an Arm's-Length Regulator

Before its 1985 reorganization as an arm's-length regulator, FCA played the conflicting roles of both regulator of and advocate for the FCS (table 1). FCA's enabling legislation and structure had reinforced these roles. Although FCA was aware of the potential conflict of interest, the issue did not become important until the mid-1980's crisis. The subsequent reorganization was designed to make FCA focus on safety and soundness concerns. Congress restructured the FCA board to reduce political and FCS influence, required independent audits of FCS institutions using generally accepted accounting principles (GAAP), removed FCA's responsibility for FCS management decisions and advocacy, removed FCA's ability to delegate supervisory responsibilities to FCS banks, provided FCA with enforcement authority, and required FCA to examine annually every direct-lending association.

The reorganization gave FCA a structure and enforcement mechanisms similar to other financial regulators, and it specifically legislated the separation of the supervisory and advocacy roles (table 2).

Structure

FCA is now governed by a full-time, three-member board of directors. The board is appointed by the President and confirmed by the Senate. Each member is appointed for a 6-year term, and no more than two

members can be from the same political party. Requisite qualifications for board members include experience or knowledge of agricultural economics and financial reporting and disclosure, experience in regulation of financial entities, or a strong background in financial, legal, or regulatory practices.

Before 1985, FCA was governed by a 13-member board, 12 members each representing an FCS district and 1 member being appointed by the Secretary of Agriculture. The FCA board appointed the governor of the FCA. Under the old structure, the President was required to consider nominations from the relevant district, one selected by the Federal Land Bank,

one selected by the Federal Intermediate Credit Bank, and one selected by the Bank for Cooperatives. In practice, district nominees were usually appointed, except during the Carter and Reagan Administrations (Sunbury, p. 9ff). This arrangement magnified the conflict of interest as the appointees identified closely with the FCS in general and their own districts in particular. During the 1980's, this arrangement led to regulatory decisions and forbearance that only made FCS losses worse.

The present board approves rules and regulations to implement the Farm Credit Act of 1971, as amended; provides for examining the condition of FCS institu-

Table 1—Changes in FCA authorities due to 1985 Farm Credit Act amendments

Changes	Authorities before 1985	Authorities after 1985
Modify district boundaries and approve mergers	X	X
Make annual reports to Congress	X	X
Approve issuance of systemwide obligations	X	X
Establish loan security requirements and conduct loan and collateral security review	X	X
Require surety bonds against losses	X	X
Place banks in conservatorship/receivorship	X	X
Approve interest rates on FCS obligations and other charges to borrowers	X	
Make investments in stock of the institutions	X	Moved to FCSIC
Prepare and disseminate information to the public on the merits of FCS securities	X	Modified to regulate dissemination of information by system institutions
Approve Farm Credit Bank presidents' salaries	X	
Coordinate lending standard studies of banks and conduct research on rural credit	X	
Initiate permanent and temporary cease-and-desist orders		X
Establish financial and operating reporting requirements		X
Impose civil fines and penalties for specific violations		X
Initiate proceedings to remove a director or officer of an institution		X
Prescribe minimum capital levels for system institutions		X

Sources: Farm Credit Act of 1971; Farm Credit Administration, 1985; Farm Credit Amendments Act of 1985.

Table 2—Structure and enforcement mechanisms of U.S. financial regulators

Agency/power	Farm Credit Administration (FCA)	Federal Deposit Insurance Corporation (FDIC)	Office of the Comptroller of the Currency (OCC)	Office of Thrift Supervision (OTS)	National Credit Union Administration (NCUA)
Structure	3-member, presidentially appointed Board of Directors; no more than 2 from same party	5-member board—3 presidential appointees plus the directors of OTS and OCC	Part of Treasury Department. No board, director appointed by president	Same as OCC	3-member, presidentially appointed board
Cease-and-desist orders	Yes	Yes	Yes	Yes	Yes
Criminal penalties	Yes	No	No	No	Yes
Civil penalties	Yes	No	Yes	Yes	Yes

tions; provides for regulating the powers, functions, and duties of the FCS institutions; and provides for the performance of all the powers and duties of the FCA.

Powers Related to Safety and Soundness

Since 1985, the role of advocacy on behalf of the FCS has been shifted to the Farm Credit Council, and FCA has been more narrowly focused on FCS safety and soundness. FCA has many specific powers related to safety and soundness. The primary ones are listed below.

- Annually reports on the condition of the FCS and its institutions, based on examinations.
- Recommends legislative changes, as needed.
- Approves issuance of systemwide obligations.
- Prescribes collateral for systemwide obligations.
- Grants approvals provided for under the Farm Credit Act of 1971, as amended.
- Establishes standards for FCS institutions on loan security requirements.
- Regulates the borrowing, repaying, and transferring of funds and equities between FCS institutions.
- Reviews loan and collateral security.
- Regulates the preparing and the distributing of information on the financial condition and operations of FCS institutions to stockholders and investors.
- Requires surety bonds or other provisions for protection of assets of FCS against losses through employees.

The FCA also is charged with examining all FCS institutions at least once yearly, except for Federal Land Bank Associations, which must be examined at least once every 3 years. (Congress is currently considering relaxing this requirement.) Examinations include analyzing the quality of credit, collateral, and capital. Examinations also may include an appraisal of management performance, policies to achieve FCS’s legislative mandate, compliance with FCA regulations, and the quality of service to all eligible borrowers. Examinations must also analyze the compensation paid to the CEO and other employees. When its board so directs, FCA must examine any organization (other than federally regulated financial institutions) to, for, or with which any FCS institution plans making a loan or discounting paper. Other Federal regulators must share their examination reports with FCA for financial institutions doing business with the FCS. State-regulated or unregulated intermediaries must make reports available to FCA upon request or submit to FCA examination if they wish to do business with the FCS.

FCA examiners have the same powers and privileges as examiners from other Federal financial regulators such as OCC, the Federal Reserve, FDIC, or the Office of Thrift Supervision (OTS). FCA’s examiners are also subject to the same requirements, responsibilities, and penalties.

FCA establishes uniform financial reporting instructions for all FCS institutions to aid in the reporting of FCS data. In addition, each FCS institution is required by FCA to publish an annual report. Financial statements must be prepared according to GAAP and

audited by an independent public accountant. Before 1987, these institutions were required to follow RAP, and independent audits were not used or required.

The importance of uniform and timely call reports is illustrated by the experience of the Jackson FLB, which was placed in receivership by FCA in 1987. Neither the Jackson FLB nor FCA were aware of the deteriorating credit because, at the time, only district banks examined local associations, and reporting requirements were not uniform across districts.

Enforcement Mechanisms

FCA uses a range of enforcement mechanisms, including issuing and enforcing cease-and-desist orders, removing or suspending officers or directors, assessing civil penalties, and publishing examination reports of FCS institutions that do not meet FCA's recommendations within a specified time. FCA also has subpoena powers to compel testimony or the provision of relevant documents or other evidence.

Cease-and-desist orders are the mainstay of financial regulators in enforcing safety and soundness regulations. Cease-and-desist orders prevent or halt unsafe or unsound business practices. These orders are also used to force compliance with laws, rules, regulations, or other written restrictions. Cease-and-desist orders may apply to an institution, director, officer, employee, agent, or other person responsible for the violation and may require action to correct the consequences of any violation or unsafe practice. Although temporary cease-and-desist orders are a regulator's most powerful tool to stop an immediate crisis, this power is rarely used. Its very existence is a sufficiently strong threat so that issues are more commonly settled by negotiated consent.

Directors or officers may be suspended or removed for many reasons:

- The violation of a law, rule, regulation, or cease-and-desist order.
- A felony involving dishonesty or breach of trust.
- Engaging in unsafe or unsound practices.
- A breach of fiduciary duty that leads to harmful consequences, including substantial financial loss by the FCS institution that seriously jeopardizes the interests of FCS shareholders or investors in FCS obligations, and personal financial gain.

To further enforce its actions, FCA can impose civil penalties with fines of no more than \$1,000 per day for violating the terms of any finalized order and of no more than \$500 per day for violating any legislation or regulation pertaining to the FCS.

Contractual Interbank Performance Agreement (CIPA)

On January 1, 1992, all FCS banks, the FFCBFC, and Financial Assistance Corporation entered into a CIPA that provides incentives for each bank to maintain adequate levels of financial performance. CIPA was created for several reasons: (1) Congressional concern about FCS's ability to repay Federal Assistance Corporation Bonds, (2) FCS concern about joint liability for system-wide bonds, which could enable one or two unsound banks to cause systemwide problems, and (3) FCS concerns about loss of credibility in Congress, which could hinder action on FCS's legislative agenda. The agreement will terminate either on December 31, 2011, or by a three-fourths vote of all banks.

CIPA established standards of financial condition and performance for all banks to meet and maintain and a schedule of improvements expected for underperforming or risky banks. Banks not meeting and maintaining CIPA targets must put aside a specified amount of assets, which may be forfeited if the deficiency does not improve within 5 years. Forfeited assets and all earnings on set-aside assets (whether or not such assets are forfeited) must be used to repay principal and interest on Financial Assistance Corporation bonds or, after their repayment, for other FCS purposes as agreed to by the FCS banks. As of December 31, 1994, all banks met CIPA targets.

CIPA is basically a financial performance scoring model that evaluates each bank's financial condition and performance at the end of each calendar quarter. This model was developed in consultation with Standard and Poor's (S&P) ratings group and with Thomson Bankwatch, Inc. Both firms have expertise providing credit ratings for both commercial banks and other financial service companies in the bond market. CIPA contains restrictions on disclosures of individual bank scores and on various other matters.

The CIPA model rates a bank's financial condition and performance by giving a score for capital (30 possible points), asset quality (45 possible points), earnings (25 possible points), interest rate risk (points deducted for excessive exposure to interest rate fluctuation).

tuations), and liquidity (points deducted if excessive or deficient). The total score cannot exceed 100 points. Because of operational and economic interdependence among FCS banks and their related lending associations, CIPA scores generally reflect the combined condition and performance of all FCS institutions in a district. The CIPA model is designed to closely correlate a bank's score with S&P's letter-credit-rating designations. The FFCBFC is designated as the official "scorekeeper."

Market Access Agreement (MAA)

As a condition of its approval by FCA, the MAA was published for public comment in the *Federal Register*. It is, therefore, public information, unlike MARAP and CIPA. MAA was jointly developed by the banks and the FFCBFC, both of which approved it on November 23, 1994. MAA, like CIPA, will also end either on December 31, 2011, or by a three-fourths vote of the banks.

MAA is structured to take advantage of CIPA. As with CIPA, all banks and the FFCBFC are signatories, with the latter acting as "scorekeeper." In addition, MAA uses CIPA's financial performance scoring model to help judge whether any given FCS bank should continue to have unrestricted access to financial instruments that bear joint liability. MAA provides powerful incentives to maintain CIPA scores through a structure of three penalty-bearing categories.

The categories are defined in terms of the following: net composite scores and average net composite scores from the CIPA financial performance model, collateral levels available to support bank obligations, and risk-adjusted permanent capital (table 3). If a bank's scores are higher than those in category I, the bank is not classified in any category. Requirements

and restrictions placed on banks in each category reinforce the CIPA incentives to maintain high scores under the CIPA financial performance model (tables 4 and 5).

FCSIC Inspired by Bank and Thrift Deposit Insurance

Congress established FCSIC and reorganized FCA to restore investor and borrower confidence after the FCS's heavy losses during the farm debt crisis. FCSIC was modeled on the deposit insurance systems of the 1930's on. These systems included the FDIC, the now-defunct FSLIC, and the NCUA, which were founded to insure depositors in banks, thrifts, and credit unions, respectively. FCSIC is very similar to other U.S. financial insurance systems (tables 6 and 7). However, its target amount per \$100 assessment base is higher, and it has less access to funding sources other than premiums.

How Deposit Insurance Works

From its inception until the 1980's, deposit insurance, combined with prudent regulation, had been successful in stabilizing insured financial institutions by preventing bank runs. Bank runs are caused by a sudden loss of depositor confidence, which leads to heavy withdrawals. Investor and depositor confidence in financial institutions and in the Nation's financial system depends on perceptions of general economic conditions and on the stability of individual financial institutions. Gross mismanagement (including fraud, embezzlement, and losses from risky investments or strategies), stock market crashes, and economic downturns can weaken perceptions and increase the chances that depositors or investors will withdraw funds en masse.

Table 3—Market Access Agreement penalty-bearing category definitions

Category ¹	Average net composite score ²	Most recent net composite score ²	Collateral level	Permanent capital
	Number		Percent	
I	35.0 to 45.0	30.0 to 40.0	102.00 to 103.00	5.50 to 8.00
II	25.0 to 35.0	20.0 to 30.0	101.00 to 102.00	3.50 to 5.50
III	Less than 25.0	Less than 20.0 ³	Less than 101.00	Less than 3.50

¹A bank is classified in the highest category to which any one of the four measures corresponds. It is not classified if it scores higher than each category I measure.

²Average net composite score and net composite score refer to scores from the CIPA model and are defined in the CIPA, which is confidential.

³Computed without making any liquidity deficiency deduction, as defined in the CIPA.

Source: Farm Credit Administration, May 1994.

Table 4—Market Access Agreement restrictions on market access by category

Category	Interim restriction	Final restriction	Additional restriction
I	None.	None.	None.
II	May participate in issues of systemwide debt securities only to extent necessary to roll over principal of maturing debt unless committee specifically authorizes greater participation. Must comply with the additional restrictions. Interim restrictions do not apply if a continued access request has already been granted in anticipation of formal notice of category II status. Interim period lasts either 10 days from receipt of notice of category II status or 7 days after denial of a continued access request.	Participation in issues of systemwide debt securities limited to extent necessary to roll over the maturing principal (net of any original issue discount). Must comply with the additional restrictions.	Must not increase and should strive to eliminate any interest rate sensitivity deduction in its net composite score. Must not increase the dollar amount of liabilities or create any liability senior to systemwide debt securities, with the following exceptions: (1) MAA exempts specified events in the ordinary course of business; (2) MAA allows for refinancing to repay outstanding systemwide debt securities if the value of collateral securing new debt issuances does not exceed the principal repaid.
III	Same as II. Interim period lasts either 25 days from receipt of notice of category III status or 7 days after denial of a continued access request.	Prohibited from participating in issues of systemwide debt securities. Must comply with the additional restrictions.	Same as II.

Source: Farm Credit Administration, May 1994.

Table 5—Market Access Agreement information to be provided by category

Category	Information requirement
I	(1) Detailed explanation of the causes of being in category I. (2) An action plan to improve financial condition so as not to be in any of the three categories. (3) A timetable for achieving that result. (4) Other pertinent materials and information as requested. (5) Data summarized, aggregated, or analyzed and raw data provided as requested. (6) Information updated as facts significantly change or as reasonably requested.
II, III	In addition to information required from category I banks: (1) Copies of complete business plan as revised to take account of the financial difficulties the bank is facing. (2) A report on the status of any discussions with FCSIC concerning possible assistance or other steps to improve the bank's financial condition. (3) A detailed list of all materials provided by the bank to FCSIC. (4) Prompt updates as facts significantly change or as reasonably requested.

Source: Farm Credit Administration, May 1994.

Bank runs can cause both troubled and healthy banks to fail. During 1933 alone, 4,004 banks closed their doors, resulting in depositor losses of \$540 million, about 1 percent of the total gross national product of that year (Cranford, p. 522). If the central bank can not bring about stability, failing banks must call in loans and curtail any new lending activity. Such actions, if pervasive, can sharply diminish the money supply. A liquidity crisis results, which forces busi-

nesses and consumers to reduce their economic activity, as happened during the Great Depression. However, deposit insurance prevents bank runs by shielding depositors from losses, thus removing their incentive to withdraw deposits.

Problems With Insurance Systems

Any insurance erodes the incentives of the insured to behave in a prudent manner. Deposit insurance is no ex-

Table 6—Comparison of the financial structure of Federal insurance systems

System feature	FCIF—Farm Credit Insurance Fund	BIF—Bank Insurance Fund	SAIF— Saving Association Insurance Fund	NCUSIF—National Credit Union Share Insurance Fund
Date started	1989	1989 ¹	1989 ¹	1970
Whom it insures	FCS bondholders	Depositors at insured banks	Depositors at insured thrifts	Depositors at insured credit unions
Fund balance as of June 30, 1995	\$956 million	\$24.7 billion	\$2.6 billion	\$3.28 billion
Fund balance per \$100 assessment base	\$1.72	\$1.29	36.5 cents	\$1.31
Target amount per \$100 assessment base	\$2.00 ²	\$1.25	\$1.25	\$1.25-\$1.30
Year expected to achieve secure base amount	January 31, 1997	Already reached	Target date to be set in 1996	Already reached
Fund assessments	Basis points/loan type: 15/accrual loans 25/nonaccrual loans 1.5/government-guaranteed loans 3/State-guaranteed loans	Averages 0.43 basis points on assessable deposits	Averages 23.7 basis points	1/12 of 1 percent assessed annually. Last assessment was in 1991 due to size of fund

¹FDIC and FSLIC insurance systems merged in 1989. They both dated from the 1930's.

²Can be changed at the discretion of FCSIC.

Sources: Federal Farm Credit Banks Funding Corporation, Farm Credit Administration, Federal Deposit Insurance Corporation, National Credit Union Administration.

ception. The major problems of insurance systems arise from three sources. First, depositors no longer need to monitor risk at financial institutions. Second, insured institutions can profit if they increase business risk while concealing these risks from the insurers. Third, insurers cannot perfectly monitor or control risky behavior.

As they protect depositors, insurance systems take on considerable liability. This liability is compounded because the act of protecting depositors from losses eliminates the incentive to monitor bank management for safety and soundness. Without deposit insurance, the threat of a bank run exerts a powerful control against excessive risktaking. Removing this threat shifts the burden of ensuring safety and soundness to other stakeholders, including investor-owners and regulators.

The inability of insurers to perfectly monitor and control risky behavior leads to a problem known as "moral hazard," which is an ongoing concern of deposit insurance systems. Moral hazard occurs when

the insured party increases its risky behavior after obtaining insurance. The insured could profit from this risky behavior and is covered by the insurance company if any losses result. The insured, in this case banks, stands only to gain.

Insurance systems, to protect their assets, must discourage risky or fraudulent banking practices. Private insurance systems protect themselves by designing "incentive compatible" policies, policies that align the interests of the insured with the interests of the insurer. Such policies include actuarially fair risk-based premiums—that is, premiums high enough to cover projected losses and provide a competitive profit. These premiums pay for loss reserves or an insurance fund. Adequate loss reserves for private insurance funds are necessary to maintain public confidence and prevent bank runs or panics.

Incentive compatible policies also discourage insured parties from engaging in risky ventures. Private insur-

Table 7—Regulations and authorities of Federal insurance systems

System feature	FCIF—Farm Credit Insurance Fund	BIF—Bank Insurance Fund	SAIF—Savings Association Insurance Fund	NCUSIF—National Credit Union Share Insurance Fund
Insured institutions regulated by	FCA	FDIC, OCC ¹ , FRB ² , and/or State banking authorities	FDIC and OTS	NCUA
Board member relationships to regulator	Same board until 1996 ³	Member FFIEC ⁴	Member FFIEC	Member FFIEC
Line of credit with Treasury	No	\$30 billion credit line for FDIC	\$30 billion credit line for FDIC	\$100 million—never tapped
Special assessment authority to replenish fund	No	Yes	Yes	Yes
Capital requirements	7% of risk-adjusted assets ⁵	8% of total capital to risk-based assets ⁶	8% of total capital to risk-based assets ⁶	6 and 10 percent ⁷
Primary loan type and percentage of total loans, June 30, 1995	Loans secured by farm real estate—50.3%	Loans secured by real estate—44.9%	Loans secured by real estate—93.9%	Auto loans—40%
Insurance coverage limits	Not applicable	\$100,000 per account	\$100,000 per account	\$100,000 per account

¹Office of the Comptroller of the Currency.

²Federal Reserve Board.

³Congress is currently (1995) reconsidering FCSIC board structure.

⁴Federal Financial Institutions Examination Council.

⁵Deemed comparable by FCA to 8 percent requirement of other institutions due to differences in items included.

⁶For an adequately capitalized institution. Well capitalized institutions must maintain 10 percent total capital to risk-based assets. Excludes "Tier" capital requirements established by FDIC.

⁷Credit unions with more than 4 years of operation and greater than \$500,000 in assets are required to maintain capital reserves of 6 percent. Those with less than 4 years of operation or less than \$500,000 in assets must maintain capital reserves of 10 percent.

Sources: Federal Farm Credit Banks Funding Corporation, Farm Credit Administration, Federal Deposit Insurance Corporation, National Credit Union Administration.

ance systems impose deductibles or copayments, which require the insured to share in losses; refuse or cancel coverage to those with a high probability of incurring losses; and require the insured to maintain an equity stake. The threat of refusal or cancellation of insurance discourages risktaking. Equity in deposit and thrift institutions helps reduce potential losses to the insurance system. The higher the equity level, the greater losses must be before insurance is used to pay depositors. In this sense, equity functions much like a deductible or copayment.

Insured institutions must hide their risky financial behavior, or other negative information, from insurers for increased risktaking to be profitable. If insurers are aware of the behavior or negative information, they will maintain profitability by assessing risk-

based premiums, increasing copayments or deductibles or canceling insurance. These measures also keep the interests of the insurer and the insured compatible with one another. Therefore, private insurance systems usually require external audits to prevent the insured from concealing pertinent information.

In contrast, government-sponsored deposit insurance systems rely heavily on regulation and other government powers to maintain public confidence and fund liquidity. Public confidence in deposit insurance systems is also based on faith in the Federal Government rather than on the reserves established from premiums collected. In government systems, historically, premiums have been set to preserve the competitive position of insured institutions. But this practice then precludes using premiums to fairly price insurance or to discourage risktaking.

Federal deposit insurance systems can deny coverage to unqualified applicants and can automatically cancel insurance for unsafe practices. But the systems do not use selective measures to screen institutions that are already chartered. When coverage is granted, full coverage is the rule, regardless of the level of risk in the institution's portfolio. Moreover, when the insured amount on each account was raised to \$100,000, premium assessments did not change, even though the chance of loss to the insurance fund was increased. These policies mean that Federal deposit insurance does not harmonize the interests of the insurer with those of the insured financial institutions, even when risky behavior has already been discovered.

Because Federal deposit insurance does not rely on incentive compatibility to control risktaking, regulation alone polices the flow of information and determines the range of acceptable practices. Regulators themselves must prohibit or punish practices that increase risks in insurance. For example, most regulators can issue cease-and-desist orders, assess civil or criminal penalties, and remove officers or directors for just cause.

The Savings and Loan Crisis: A Worst-Case Scenario

The thrift industry was relatively stable for several decades following its creation in 1934. Savings and loans, as the primary provider of home mortgages, enjoyed government protections that seemed to assure solid returns and a captive customer base. In its prolonged stability and its benefits from government sponsorship, the thrift industry was comparable to the FCS.

By 1980, however, the savings and loan industry was in trouble. Some 85 percent of thrifts were found to be losing money due to rapidly declining deposit balances (Pizzo, Fricker, and Muolo, p. 11). This discovery marked the beginning of the crisis that eventually saw the failure of more than 2,900 banks and thrifts (table 8). Insurance fund losses totaled \$200 billion (U.S. General Accounting Office, 1993, p. 1).

Moral hazard was prevalent in the savings and loan crisis. During the 1980's, the penalties for making risky loans were not harsh enough to discourage banks and thrifts from such behavior. Relaxed supervision, meaningless capital standards, and deposit insurance premiums that were unaffected by risk spurred the incidence of moral hazard. Many thrifts with little or even negative capital took on increasingly risky ventures. When these ventures succeeded, the institutions reaped above-normal

profits; if they failed, FSLIC was left to reimburse depositor losses. In the then-prevalent environment of deposit insurance and lax regulation, there was much to gain and little to lose for thrift managers and shareholders who indulged in risky behavior.

Legislation Fuels the Crisis

The origins of the savings and loan crisis can be found in the inflationary period of the 1960's, when Congress, fearful of rising housing costs, capped interest rates paid on deposits. Congress intended to prevent residential mortgage rates from rising. But by the end of the 1970's, this interest rate cap was well below the inflation rate, leading many depositors to seek other investments for their savings. The Consumer Price Index had registered double-digit increases in inflation in 1974 and again from 1979 through 1981. The Federal Reserve reacted by tightening the money supply, which caused interest rates to rise above the level that thrifts and banks could legally pay. As a consequence, brokerage firms developed new money market accounts for savers seeking to earn market rates of interest on their deposits. Depositors transferred their savings into these new accounts, causing a funding crisis at depository institutions.

The tightening of the money supply had a second effect that also reduced thrifts' profitability. The

Table 8—Failed thrifts and banks by year, 1980-93

Year	Failed S&L's	Failed banks
	<i>Number</i>	
1980	11	11
1981	28	10
1982	74	42
1983	55	48
1984	27	80
1985	49	120
1986	85	145
1987	71	203
1988	222	221
1989	329	207
1990	213	169
1991	144	127
1992	59	122
1993	9	41
Total	1,376	1,546

Sources: Congressional Budget Office, 1990; Federal Deposit Insurance Corporation, *Quarterly Banking Report* and *Annual Report*, 1993.

tightening was so severe that short-term rates rose above long-term rates, the inverse of the usual case. At the time, thrifts typically prospered by making 30-year fixed rate mortgages with short-term deposits. Thrifts profited because depositors would accept lower rates of interest on their accounts than home buyers would pay for long-term mortgages. When rates inverted, thrifts were forced to pay more for deposits than existing borrowers with fixed-rate mortgages were paying to borrow, thus creating losses. The problem was worsened by the fact that borrowers with older, relatively low-rate loans were unwilling to prepay, while many depositors were seeking higher interest alternatives for their savings.

Congress, to address this problem, passed the Depository Institutions Deregulation and Monetary Control Act in 1980 and the Garn-St. Germain Act in 1982. The Depository Institution Deregulation and Monetary Control Act phased out interest-rate ceilings on deposits, increased the basic insurance coverage to \$100,000, and allowed thrifts to offer adjustable-rate mortgages. The first two of these measures were designed to stem the flow of deposits from thrifts into money market mutual funds. The third measure, adjustable-rate mortgages, reduced the thrifts' exposure to fluctuations in the spread between long- and short-term interest rates.

The Garn-St. Germain Act allowed thrifts themselves to offer money market funds and to invest up to 40 percent of their assets in nonresidential real estate lending. Some States also authorized direct equity investments. The act was designed to provide greater diversification of risks and to strengthen profits by allowing access to new sources of revenue.

However, the act also allowed rapid and dangerous deregulation. It authorized thrifts to lend federally insured funds for enterprises in which the thrifts had no previous expertise. Because many of the thrifts were already facing bankruptcy, they had strong motivation to seek the higher returns of increasingly risky loan ventures.

Congress had assumed that thrift institutions would continue as the primary provider of home mortgages after deregulation. However, a new financial innovation, the bundling of home mortgages securities for resale in secondary markets, decreased the need for savings and loan institutions to hold mortgage debt until the loans matured. In addition, the creation of mortgage companies increased competition for home loans, further eroding the profits of the industry.

Shortly after passage of the Garn-St. Germain Act in 1982, Congress passed a resolution that allowed individual shareholders to own thrifts. It also allowed thrifts to be capitalized with land or noncash assets, offer 100-percent loan financing, and engage in real estate loan ventures outside of their market area. Each of these changes encouraged thrift owners and managers to engage in moral hazard behavior by reducing their share of losses in the event of failure or by increasing the range of risky investments they could make.

Regulatory Changes Exacerbated the Crisis

Changes in regulations on net worth standards and accounting practices, changes in tax policies on real estate investments, and reductions in the number of financial institution examiners contributed to the rise in moral hazard and, thus, to the extent of the crisis.

The Federal Home Loan Bank Board regulated savings and loan institutions from 1934 to 1989. It changed the regulatory and accounting rules governing thrift institutions, thereby artificially increasing their solvency and allowing greater losses. First, capital requirements were reduced from 5 percent of liabilities to 3 percent, which in effect, lowered the cost of risktaking.

Second, accounting standards were changed from the use of GAAP to the use of RAP. RAP let thrifts remove nonearning assets from their books and recognize the loss over a longer period than had been previously allowed under GAAP. This change was meant to induce thrifts to restructure their portfolios into higher earning assets. However, this practice allowed thrifts to carry assets on their balance sheets that no longer had market value. This artificially inflated capital when, instead, these assets should have been written off as losses. The combination of RAP and reduced capital standards induced further risktaking and so increased FSLIC's exposure to losses.

Third, the board wanted to entice solvent thrifts to acquire insolvent ones. Accounting principles were changed to allow goodwill assets to be established to compensate the solvent thrift for the shortfall in the insolvent thrift's assets, less its liabilities. However, this attempt at goodwill further inflated capital values, thus increasing the incidence of moral hazard and eventually increasing FSLIC losses.

At the same time these changes allowed thrifts to hold increasingly risky assets, the Administration

sharply reduced the number of thrift examiners. Thrifts were suddenly under less scrutiny and control, which opened the door even wider to fraud and mismanagement. This reduction was responsible for an estimated 10 to 15 percent of the thrift industry's total losses ("Deposit Insurance, Gas on S&L Fire").

Many FCS Safety and Soundness Issues Require Continuous Attention

Congress and regulators responding to these lessons reformed the U.S. financial system to help prevent further crises. More supervision, higher capital requirements, and risk-based insurance premiums have been mandated for all federally chartered or insured U.S. financial institutions, including the FCS. Some of the changes increase incentive compatibility between the FCS and public interest, while many still rely primarily on powers to police and punish.

These reforms have been associated with improved performance of FCS institutions (Collender, Erickson, and Adams). Many issues of safety and soundness, however, require continuous attention. Such issues fall into three categories:

- Balancing safety and soundness considerations with the regulatory burden that diminishes FCS competitiveness and reduces benefits for farmers and other rural residents.
- Strengthening policies on capital standards, accounting standards, risk exposure to derivatives, and FCSIC issues, including special assessment authority, access to association capital, and flexibility of insurance premiums.
- Resolving issues of control and capitalization that increase FCS vulnerability to problems rising from differing interests among managers and owner/borrowers. Such "agency" problems are worsened by the lack of intrasystem competition, weak competition for managerial control of system institutions, concentration of managerial power compared with ownership power, and some policies regarding cooperative capitalization.

Striking a Balance Between Regulation and Regulatory Burden

The dynamics between regulators and the regulated industries is complex, and the relationship between FCA and the FCS is no exception. Regulators must

balance safety and fiscal soundness against the institutions' competitiveness to deliver public policy benefits. For example, sometimes a short-term trade-off pits safety and soundness against the FCS program mission of reliably providing competitively priced credit to farmers in bad times and good. Political pressures have sometimes led to policies of forbearance, policies that ultimately increased losses.

FCA was faulted during the 1980's farm financial crisis for poor supervision and lenient lending policies. It failed on both counts partly because its board was susceptible to political pressures and partly because authorizing legislation failed to endow it with enforcement powers. The board was vulnerable to political pressure because of both the nomination process and FCA's dual roles as FCS advocate and FCS supervisor. Before 1985, FCS banks nominated candidates for the FCA board. Although the President could appoint someone else, usually the FCS nominees were confirmed. As a result, these board members closely identified with their FCS districts, sometimes at the expense of the FCS as a whole. The lack of enforcement powers meant that even when FCA board members and staff saw unsafe and unsound practices in the FCS, they had no authority to force changes on the FCS institutions.

After the crisis and the reorganization of FCA in 1985, the pendulum swung toward a very strong focus on safety and soundness. A fundamental part of the FCA reorganization involved breaking the close link between FCS institutions and FCA board members. FCA, thus, minimized its contact with FCS management to avoid the appearance of conflicts of interest. FCA was now granted powers similar to those of other financial regulators. Also, FCS's formal role in nominating candidates for the FCA board was eliminated. This made them equal with other interest groups that might participate in the process and broke the link between the districts and individual board members.

The crisis abated, and FCS institutions rebuilt their profitability and capital. The focus then shifted to improving FCS performance and reducing the burden of regulation as much as possible to match other financial regulators in the early 1990's. FCA has since established a reputation as a forward-looking activist agency that encourages FCS and FCA restructuring and cost cutting. This reputation is reflected in such initiatives as negotiated rulemaking, remote examination, and other programs that enhance FCA efficiency and accommodate FCS interests without compromising safety and soundness.

The pendulum is now swinging back toward closer links between FCA and FCS institutions. The two current (1995) FCA board members are former officers from FCS banks, for the first time since reorganization. In addition, FCA has recently been advocating expansion of FCS powers. While such action is consistent with FCA's legislative mandate "from time to time, [to] recommend directly legislative changes" to Congress, it is a change from its recent reticence to take positions on issues only remotely connected to safety and soundness.

The potential for conflicts of interest is always present because FCA has no mechanism to monitor and minimize them. For example, if FCA takes an advocacy role for the FCS, it also gains because FCA's size and influence are directly related to the FCS's size and success. Thus, FCA's own interests would be served by supporting FCS expansion, even when such expansion has no public benefits consistent with the Farm Credit Act.

Strengthening Policies

Legislative and regulatory changes since 1985 have established a base for sound regulation. However, many details remain controversial or undetermined. Of greatest concern are capital standards, insurance premiums, accounting standards, and the secure-base amount for the insurance fund.

One of the major criticisms of the FSLIC and the FDIC during the 1980's was that their flat rate structure and weak capital standards led banks to take actions that had a high likelihood of insurance payouts—that is, to engage in moral hazard behavior. Capital standards have since been strengthened, and both capital standards and insurance premiums are now risk based.

However, many economists still question whether the penalties of risk-based standards are sufficient to offset moral hazard (Shadow Financial Regulatory Committee). Ideally, risk-based insurance premiums and risk-based capital standards should rise as risks rise to cover the expected additional costs to the insurance fund and to prevent moral hazard.

For these mechanisms to prevent moral hazard, other dimensions of risk need to be incorporated into the standards. Current policies probably cannot effectively limit risktaking because little is known about the precise relationship between certain risks and insurance fund costs. FCSIC regulations, similar to those of other financial insurers, try to tie credit risk

to insurance fund premiums and capital standards. But other risks, including interest rate risks, risks from derivatives, and risks associated with geographic and sectoral concentration of loan portfolios, have yet to be incorporated. Such risks are primarily managed through internal controls in FCS institutions, such as asset/liability management practices and loan underwriting standards, and are subject to review by FCA.

Risk-based premiums could become less effective because, as the fund nears its 2-percent secure-base amount, premiums may be suspended. Doing so, of course, would eliminate any effectiveness of the premium structure and leave capital standards as the major supervisory tool for influencing risktaking.

Accounting standards must be updated constantly because they are closely related to capital standards and the setting of insurance premiums. Accounting standards determine whether and how risks and risk exposure are measured. The FCS no longer uses RAP, but the earlier discussion of their injurious effect serves as an example of the hazards possible in accounting practices. Other accounting practices can lead to mismeasurement of capital when losses or contingent liabilities are not recognized in a timely manner. Such practices include accounting for interest-rate-sensitive assets and liabilities and for exposure to risks associated with derivatives.

Questions remain about the appropriate level of the secure-base amount of the FCS insurance fund. Only FCSIC, among all Federal financial insurance corporations, has been granted by Congress discretion to decide the actuarially sound target size of the insurance fund relative to insured liabilities. This discretion affords FCSIC a valuable additional tool, unavailable to other financial insurance corporations, with which to improve FCS safety and soundness.

Some unresolved issues concern the interaction between the size of the insurance fund and other regulations. For example, the more lenient forbearance policies become and the weaker capital standards are set, the larger the insurance fund must be to afford a given level of protection to bondholders. This is true of the same relationship between fund size and the sensitivity of insurance premiums to risk (until premiums are suspended when the fund reaches its target secure-base amount as required by current law). Such interactions are not factored into current regulations, premiums, or capital standards.

However, the most important issue related to the secure-base amount concerns its relationship to FCS structure. In most insurance funds, the size of any individual risk is small relative to the size of the total fund. This is certainly the case with the bank and thrift insurance funds, which now insure roughly 10,000 and 1,600 institutions, respectively. FCSIC, in contrast, insures eight banks (as of October 30, 1994). (Merger activity has reduced the number of insured

banks from 15 since 1991.) Thus, on average, each insured commercial bank represents 0.01 percent of the liabilities of the Bank Insurance Fund, while each insured thrift represents 0.06 percent of the liabilities of the thrift insurance fund. But each insured FCS bank represents 12.5 percent of the liabilities of FCSIC.

Figure 5 illustrates the distribution of FCSIC-insured liabilities across banks and gives the degree of concen-

Figure 5
Farm Credit System notes and bonds by district 1/

Billions of dollars outstanding and as a percentage of total insured obligations, as of June 1995



1/ Territories are approximate.

2/ FCS lending in Louisiana, Mississippi, and Alabama is divided between the Texas (mostly real estate lending) and AgFirst (non-real-estate lending) districts.

3/ St. Paul BC and CoBank, ACB both have national charters, primarily to service farmer-owned cooperatives.

Source: Federal Farm Credit Banks Funding Corporation, June 30, 1995.

tration of these liabilities. The two largest banks represent 51 percent of insured liabilities, and further consolidations are likely. In contrast, among the commercial banks, the one with the greatest amount of insured deposits represents about 3 percent of the insured liabilities of FDIC's Bank Insurance Fund.

This uneven distribution of insured liabilities across FCS banks means that the failure of just one bank could deplete the entire insurance fund. Although important differences exist between FCS institutions and commercial banks or thrifts, it is pertinent to consider the historical ratio of FDIC payouts on insured liabilities of failed institutions (now FDIC's Bank Insurance Fund, or BIF) and FSLIC (now FDIC's Savings Association Insurance Fund, or SAIF). This ratio has hovered around 15 percent (table 9). Thus, failure of any one of the three largest FCS banks could threaten insurance fund solvency even at the targeted secure-base amount of 2 percent of liabilities.

This consideration underscores how critical the financial soundness of the largest FCS banks is to preserving the fund. FCSIC and the smaller FCS banks have even

stronger incentives to promote more conservative policies on safety and soundness than do the largest FCS banks. The ratio also demonstrates the relationship between FCS structure and the need for safety and soundness. When FCSIC's authorizing legislation was written in 1987, the FCS included 37 banks and 387 lending associations. Few observers anticipated that mergers and consolidations would leave just 8 FCS banks and 228 associations less than a decade later.

The rapid change in FCS structure has focused attention on the location of at-risk capital within the system. Capital performs several functions that include protecting bondholders (and potentially taxpayers) from losses and providing a buffer against fluctuations in business profitability for owner-customers and managers. Bondholders are best protected by capital at FCS banks, while owner-customers are best protected by capital at their lending associations. This dichotomy stems from the separation of lending activities, which are at the association level, from borrowing activities, which are at the bank level.

Association capital is the bulk of FCS capital. This capital is available to protect against losses from risks

Table 9—Estimated Bank Insurance Fund (BIF) losses as a percentage of insured deposits of failed banks, 1981-93

Year	Insured deposits of failed banks	Estimated losses to BIF ¹	BIF losses as a percentage of insured deposits	Estimated losses to BIF from failed banks	Losses from failed banks as a percentage of insured deposits
	<i>Million dollars</i>		<i>Percent</i>	<i>Million dollars</i>	<i>Percent</i>
1981	3,826	776	20.29	3	0.08
1982	9,908	1,148	11.59	130	1.31
1983	5,442	1,419	26.07	1,355	24.89
1984	2,883	1,497	51.94	517	17.93
1985	8,059	1,099	13.63	647	8.02
1986	6,471	1,722	26.61	1,624	25.10
1987	6,282	2,007	31.96	1,847	29.41
1988	24,931	6,721	26.96	5,166	20.72
1989	24,091	6,273	26.04	6,270	26.03
1990	14,473	2,856	19.73	2,853	19.72
1991	53,752	6,739	12.54	6,766	12.53
1992	41,151	4,695	11.41	4,694	11.41
1993	3,132	567	18.11	567	18.11
Total	204,401	37,519	NA	32,439	NA
Average	15,723	2,886	18.36	2,493	15.86

NA = Not applicable.

¹Total BIF losses include losses from assistance to banks that did not fail as well as losses to failed banks.

Source: Federal Deposit Insurance Corporation, 1993.

faced at the association level, but not from risks at the bank level. However, FCSIC-insured liabilities are held by FCS banks. These banks, therefore, face risks for which association capital may be inadequate or unavailable. And, as the previous discussion illustrated, the failure of banks that are sufficiently large relative to the insurance fund would threaten its ability to protect bondholders from losses.

Several options can strengthen this aspect of FCS safety and soundness. These options include providing FCSIC with (1) statutory access to association capital under certain circumstances, (2) permanent, flexible authority to invoke special assessments if insolvency in the insurance fund is threatened, and (3) a permanent line of credit with the U.S. Treasury similar to those of FDIC or NCUA. Such options could provide FCSIC the flexibility it needs to maintain its viability as FCS structure continues to evolve in response to economic, demographic, and technological changes in the markets it serves.

Control and Capitalization Policies May Aggravate Agency Problems

As with any large organization, FCS institutions are vulnerable to problems caused or worsened by the separation of ownership and managerial control. These problems stem from the divergent interests of managers and owners. For example, managers may inefficiently expand or fail to expand operations, inefficiently run up high operating expenses, or overretain surplus labor or capital. Inefficiencies can happen, however, without any ill intent on the part of managers to defraud owners; inefficiencies can happen simply from managers doing what they are being rewarded to do. Many managers are paid to develop the business or reduce risk exposure. Too much of either can harm owners' interests, as some FCS associations discovered in the 1980's.

All businesses that separate ownership and management face similar problems. A number of mechanisms, which fall into four broad categories, have evolved to mitigate these problems:

- Using external debt to induce creditors to monitor managerial performance.
- Setting managerial compensation that is competitive with that in other businesses (for example to reward managers for performance rather than for their connections, personalities, or factors irrelevant to owner interests).

- Allowing the market for corporate control (take-over specialists) to remove poorly performing managers and encourage the firm's large shareholders and board members to monitor managers.
- Concentrating ownership among officers and directors, institutional investors, or other large blockholders and hiring directors from outside the firm whose interests are more independent of management.

Of the mechanisms just listed, the use of outside directors and, to a limited extent, the market for corporate control most effectively limit owner/manager conflicts within the FCS. In addition, FCA, FCSIC, and cross-institution monitoring through CIPA, MAA, and other contractual relations among FCS banks and associations further limit harmful effects on safety and soundness. The mechanisms, however, are unlikely to address inefficiencies that do not threaten safety and soundness.

However, the very structure of the FCS as a government-sponsored enterprise, based on cooperative ownership and capitalization, eliminates or diminishes the usefulness of other mechanisms. For example, the ability of the FCS to issue debt as an agency of the U.S. Government deters any diligent monitoring by bondholders. In addition, chartering FCS associations with exclusive territory and limiting the ownership of voting stock to borrowers severely restricts hostile changes in management when warranted by poor managerial performance. (Recent restructuring, however, is evidence that boards of directors do seek to control operating costs.)

The exercise of power varies widely between boards of FCS directors and managers, but the cooperative principles on which system institutions are run eliminate the possibility of concentrating ownership among officers, directors, or outside managers. Cooperative principles dictate that only users exercise ownership control, that only patrons receive dividends, and that democratic rather than equity voting determines ownership control. Thus, officers and other insiders are limited in the amount of shares they may hold and in the rewards they may receive from shareholding. Outside shareholders barely exist in this sense; they would receive no benefits from shareholding because they would not qualify for patronage dividends.

As the preceding discussion shows, agency problems are closely linked to capitalization policies. In a joint

stock company, as opposed to a cooperative, stockholders' wealth will fluctuate with the fortunes of the company. If the company is profitable and grows, retained earnings become part of stockholder wealth. If the company is unprofitable and suffers losses, stockholder wealth is diminished. This ownership stake in company performance gives stockholders a strong incentive to monitor company efficiency, including management performance. Companies with more concentrated ownership have fewer agency problems. Cooperatives, by design, are characterized by very diffuse ownership, which decreases the incentive for any set of individuals to closely monitor performance. Ownership became even more diffuse when legislative changes in 1987 decreased the minimum required stock purchase, further dampening the incentive for borrower/owners to monitor management performance.

FCS capitalization policies may have other difficulties as well. In the FCS, as in many other cooperatives, nominal ownership rests with the patrons. This creates a unique problem because patron-owners are simultaneously borrowing money and (nominally) providing capital to the enterprise. Often borrowers buy stock at par with borrowed funds, and the FCS then retires stock at par when a loan is paid off. Stock prices, historically, have not fluctuated with the performance of FCS institutions, even though the 1987 Farm Credit Act dictated that purchased stock should be at risk. However, such a feature is difficult to impose because a borrower could default on that portion of the loan that represented the stock. And FCA regulations afford FCS institutions the right (but not the obligation) to retire outstanding stock at par in full or partial liquidation of defaulted debt. Other legal remedies, in many cases, would be too expensive for the FCS to pursue.

In any case, the 1987 act dictates downside risk, but is silent about upside reward. The purchase or sale of FCS stock has no markets, all borrowers must purchase stock, and only farm borrowers can hold voting stock. In addition, once a borrower pays off the loan, the stock is retired, and the nominal ownership claim is then at an end. No mechanism ensures that borrowers receive the benefits of earnings retained when they had loans outstanding or permits them to retain ownership rights once all loans are paid off. However, some FCS institutions have developed programs to limit or eliminate these problems. These programs involve regular recycling of paid-in capital and the regular payment of patronage dividends.

Over the years, retained earnings have become a substantial portion of FCS capital. Without mandatory recycling of paid-in capital or regular patronage dividends, the only way for borrowers to directly benefit from this capital is to dissipate as much of it as possible while their loans are outstanding by minimizing interest rates or maximizing patronage dividends. Such incentives restrict the development of reasonable capital policies that are consistent with long-term stability. This has hampered FCS's drive for fiscal safety and soundness.

Certain options could reduce for FCS both agency problems and problems associated with capitalization policies: encouraging further competition for control of system institutions, developing classes of equities independent of patronage, mandatory equity recycling, establishing clear policies on patronage and equity dividend, and limiting reliance on unallocated surplus within FCS institutions. Many of these alternatives are common among other agricultural cooperatives (Royer).

Conclusions

Issues examined here illustrate that the FCS and other depository institutions have major differences that affect FCS safety and soundness. These differences mean that problems will sometimes arise when policies designed for depository institutions are applied to the FCS. Differences of this sort include corporate and system structure, loan portfolio diversity, competitiveness, and political environment, all of which affect the incentives or the ability of individual institutions to take or control risk. These factors can change the strength of procedures and regulations. The result can be to undermine the ability of FCSIC and FCA to protect borrowers, liability holders, and taxpayers.

The lesson from the FCS and thrift crises is clear: The financial institutions and the governments or insurance systems that back them could sustain huge losses unless the interests of the insured and the insurer are made compatible, information is diligently monitored, and the system is prudently regulated. Without such protections, moral hazard and poor controls on management could threaten the stability of the system. The challenge is to design mechanisms that maximize fiscal safety and soundness while avoiding concurrent hazards to efficiency and competitiveness.

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Glossary

Agricultural Credit Bank (ACB): An FCS bank created from the merger of a Farm Credit Bank and a Bank for Cooperatives and retaining the authorities of these FCS banks to provide funds to FCS associations, to agricultural cooperatives, and for other authorized purposes allowed to either FCB's or BC's.

Bank for Cooperatives (BC): An FCS bank originally chartered to provide loans to agricultural cooperatives.

Bank Insurance Fund (BIF): Fund that insures deposits at commercial banks. BIF is operated by the Federal Deposit Insurance Corporation, which assesses premiums from member banks to capitalize the fund.

Borrower Stock: Investment in FCS institutions required to take out a loan. Borrower stock purchased before 1988 was protected from loss by the Farm Credit Act of 1987.

Capital Preservation Agreement (CPA): A form of loss-sharing agreement, whereby stronger Farm Credit System banks financially assisted FCS banks that were experiencing severe capital losses. During the farm credit crisis, the stronger banks heavily contested CPA's, which were terminated in 1988.

Contractual Interbank Performance Agreement (CIPA): A contractual mechanism initiated voluntarily within the Farm Credit System to improve safety and soundness. CIPA sets performance standards for all FCS banks and uses a scoring model to evaluate quarterly each bank's financial condition and performance. Banks that do not meet CIPA standards are subject to disciplinary action.

Farm Credit Administration (FCA): An independent Federal agency that regulates and examines Farm Credit System entities to ensure safety and soundness.

Farm Credit Bank (FCB): Any Farm Credit System bank originally created from the merger of a Federal Land Bank and Federal Intermediate Credit Bank, as required under the Agricultural Credit Act of 1987. These banks provide loanable funds and other services to FCS associations.

Farm Credit Council: The trade association representing the Farm Credit System.

Farm Credit Insurance Fund (FCIF): The major asset of the Farm Credit System Insurance Corporation for accomplishing its functions of insuring timely payment to holders of FCS bonds and providing assistance to distressed FCS institutions.

Farm Credit System (FCS): All FCS institutions combined.

Farm Credit System Associations: Cooperatively owned lending associations, including Agricultural credit Associations, Federal Land Credit Associations, Federal Land Bank Associations, and Production Credit Associations. These associations are the retail lending arm for borrowers other than eligible agricultural cooperatives.

Farm Credit System Banks: All FCS banks, including Farm Credit Banks, Federal Intermediate Credit Banks, Federal Land Banks, and Banks for Cooperatives.

Farm Credit System Capital Corporation (FCSCC): Formed in 1985 and dissolved in 1988, organization that oversaw transfer of resources from financially stronger FCS institutions to those requiring financial assistance.

Farm Credit System Insurance Corporation (FCSIC): Authorized in 1987, organization that ensures timely payment of principal and interest on systemwide debt securities and is funded by annual assessments based on loan volumes. It oversees the Farm Credit Insurance Fund and may also provide financial assistance to FCS institutions under certain circumstances.

Federal Deposit Insurance Corporation (FDIC): An independent Federal agency that insures bank deposits and acts as a Federal regulator of State-chartered, insured banks that are not members of the Federal Reserve System. FDIC administers both the Bank Insurance Fund and the Savings Association Insurance Fund.

Federal Farm Credit Banks Funding Corporation (FFCBFC): The fiscal agent that sets the amounts, maturities, terms, and conditions for issuing debt securities to fund Farm Credit System lending activities.

Federal Financial Institutions Examination Council (FFIEC): Organization that coordinates the regulatory activities of the agencies that supervise financial institutions and promotes uniformity among them.

Federal Intermediate Credit Bank (FICB): Financial intermediaries that provided credit to Production Credit Associations and other financial institutions outside of the Farm Credit System. FICB's merged with Federal Land Banks to form Farm Credit Banks following the Agricultural Credit Act of 1987.

Federal Land Bank (FLB): Financial intermediaries that provided funds for and held real estate loans made by Federal Land Bank Associations. FLB's merged with Federal Intermediate Credit Banks to become Farm Credit Banks after the Agricultural Credit Act of 1987.

Federal Land Bank Association (FLBA): See *Farm Credit System Association*.

Federal Savings and Loan Insurance Corporation (FSLIC): Before 1989, the administrator of the insurance fund for thrifts. In 1989, the FSLIC fund was placed under Federal Deposit Insurance Corporation management and its name was changed to the Savings Association Insurance Fund.

Financial Assistance Corporation: Organization that assisted financially distressed Farm Credit System institutions during the farm credit crisis by issuing federally guaranteed securities. Created by the Agricultural Credit Act of 1987, FAC ceased operation December 31, 1993, in accordance with the sunset clause written into the legislation.

Generally Accepted Accounting Principles (GAAP): Accounting standards set by the Financial Accounting Standards Board, a panel of experts. Publicly traded companies and, since 1988, the Farm Credit System are required to use these standards.

Government-Sponsored Enterprise: Any of several enterprises created by Congress to improve credit availability and financial market competition to specific sectors of the economy, including farming and rural areas, housing, and education. Government-sponsored enterprises include the Farm Credit System and Federal Agricultural Mortgage Corporation (Farmer Mac) serving agriculture and rural areas; the Federal National Mortgage Association (Fannie Mae), Federal Home Loan Banks, and Federal Home Loan Mortgage Corporation (Freddie Mac) serving housing; and the Student Loan Marketing Association (Sallie Mae) and College Construction Loan Insurance Corporation (Connie Lee) serving higher education.

Joint and Several Liability: An arrangement in which all Farm Credit System banks are jointly and individually liable for bondholder losses on systemwide debt securities. Since creation of the Farm Credit Insurance Fund, joint and several liability will be invoked only after the fund has been depleted.

Market Access Agreement (MAA): A voluntary agreement that involves Farm Credit System banks and the Federal Farm Credit Banks Funding Corporation and has been approved by the Farm Credit Administration. MAA establishes criteria for bank participation in issuing systemwide securities consistent with the Contractual Interbank Performance Agreement.

Moral Hazard: When people or institutions make investments or operating decisions that raise their risk level after they obtain insurance or a loan.

National Credit Union Administration (NCUA): An independent Federal agency created in 1970 to supervise and regulate credit unions. The NCUA also administers the National Credit Union Share Insurance Fund.

National Credit Union Share Insurance Fund (NCUSIF): The insurance fund for all federally chartered credit unions administered by the National Credit Union Administration.

Office of the Comptroller of the Currency (OCC): An agency of the U.S. Department of the Treasury established in 1863. OCC charters and supervises national banks to provide and promote a stable national currency.

Office of Thrift Supervision (OTS): A bureau of the U.S. Department of the Treasury established in 1989. OTS is the primary regulator of federally and State-chartered thrifts belonging to the Savings Association Insurance Fund.

Production Credit Association: See *Farm Credit System Association*.

Protected Stock: Capital stock, participation certificates, and allocated equities that were outstanding as of January 6, 1988, or were issued or allocated before October 6, 1988. Protected stock is insured against financial losses and must be retired at par or stated value regardless of the prevailing book value. See also *Unprotected Stock*.

Regulatory Accounting Principles (RAP): Accounting standards mandated by regulatory agencies or Congress to allow thrifts and the Farm Credit System to spread a loss (on a sold asset, the book value of which exceeded its market value) over an extended period of time. This practice overstated assets, which in turn, falsely elevated net worth. RAP also authorized a one-time increase in the value of thrift premises to reflect current market values, and allowed subordinated debt to qualify as net worth for regulatory purposes.

Savings Association Insurance Fund (SAIF): The insurance fund for federally chartered thrifts. The Federal Deposit Insurance Corporation, the successor to the bankrupt Federal Savings and Loan Insurance Corporation, has managed SAIF since 1989.

Shadow Financial Regulatory Committee: A committee of independent experts on the financial services industry and its regulatory structure. Its purpose is to effect national public policy in the public interest.

Unprotected Stock: Capital stock, participation certificates, and allocated equities that were issued or allocated after October 6, 1988. Unprotected stock may be used to cover financial losses. See also *Protected Stock*.

SUMMARY OF REPORT SB-882

Scaled-Back Farm Credit System Rebounds From 1980's Farm Crisis

May 1994

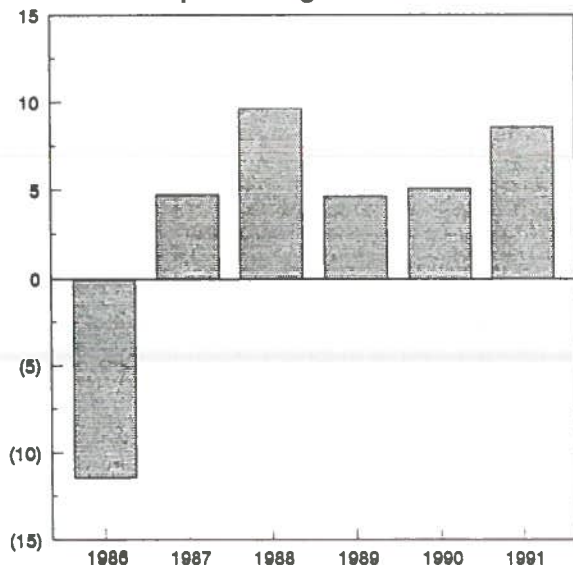
Contact: Bob Collender/Audrae Erickson, 202-219-0893

The U.S. Farm Credit System sustained some of the largest losses, during the 1980's, among institutions lending to agriculture. But it has now regained financial strength because of rebounding land values, wider net interest margins, and a significant decline in nonaccrual loan rates (*net interest margins* are the difference between interest paid to account holders and interest collected on loans; *nonaccrual loans* are loans for which payment is uncertain because of lapses in payments or loan security).

The Farm Credit System is an important lender to agriculture, providing over a fourth of total farm debt and a third of farm real estate debt in 1991. The system's recovery to financial health is documented in a series of financial statistics compiled in *Farm Credit System Bank and Association Operating Statistics, 1986-91*, recently published by the U.S. Department of Agriculture's Economic Research Service. The statistics also reveal differences in financial stress and recovery by geographic area and by type of institution.

Total lending through the Farm Credit Banks and their related associations (excluding the Banks for Cooperatives) dropped from \$50.5 billion in 1986 to \$40 billion in 1988 (and stabilized at that level through 1991), while nonaccrual loans shrank as a percent of loans outstanding from 13.9 percent in 1986 to 5.5 percent in 1991. Short and intermediate-term loans made up 26.6 percent of total FCS loans in 1991, up from 20.5 percent in 1986. Short-term or production loans are made for periods up to one year and are generally used to finance a crop or livestock production cycle. Intermediate-term loans have maturities up to 10 years and are used to finance machinery, equipment, some buildings, and breeding stock. The share of long-term farm mortgages, traditionally the mainstay of the FCS portfolio, by contrast, declined from 68.9 percent to 66.7 percent of total FCS loans. The Farm Credit System's rate of return on equity improved from -11.5 percent in 1986 (weighted average for direct-lending associations, that is, those that make loans) to 8.6 percent in 1991.

**FCS Weighted-average return on equity
as a percentage of assets**



To Order This Report...

The information presented here is excerpted from *Farm Credit System Bank and Association Operating Statistics, 1986-91*, SB-882, by Robert N. Collender, Audrae Erickson, and Mark A. Adams. The cost is \$12.00 (\$15 for foreign addresses, including Canada).

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Life Insurance Companies Maintain Substantial Role in Farm Lending

December 1995

Contact: Jerome M. Stam, (202) 219-0722

The life insurance industry held \$9.6 billion in U.S. farm real estate debt (11.5 percent of the total) in 1994, down about a fourth from their 1980 level of \$12.9 billion (13.3 percent of the total), according to *Life Insurance Company Mortgage Lending to U.S. Agriculture: Challenges and Opportunities*, a new report from USDA's Economic Research Service.

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

Most life insurance companies were conservative farm mortgage lenders going into the farmland price boom of the 1970's, and did not become more aggressive lenders until well into the decade. As a result, they found themselves competing for riskier loans at the high end of the cycle of land prices and interest rates.

Farm borrowing and land values dropped abruptly during the farm recession of the 1980's. Insurance company farm mortgage portfolios often experienced greater financial stress than those of the Farm Credit System or commercial banks.

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

estimated at \$859 million for the 1984-89 period, or 6.8 percent of the farm loan portfolio at the beginning of 1984.

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

Life insurance company farm mortgage loans are spread throughout the Nation. The concentration has been shifting away from the Corn Belt to the Southeast and Pacific Coast farm production regions. This trend accelerated during the 1980's as companies divested troubled midwestern loans, sought larger loans, and invested more in mortgages backed by timber or agribusiness assets.

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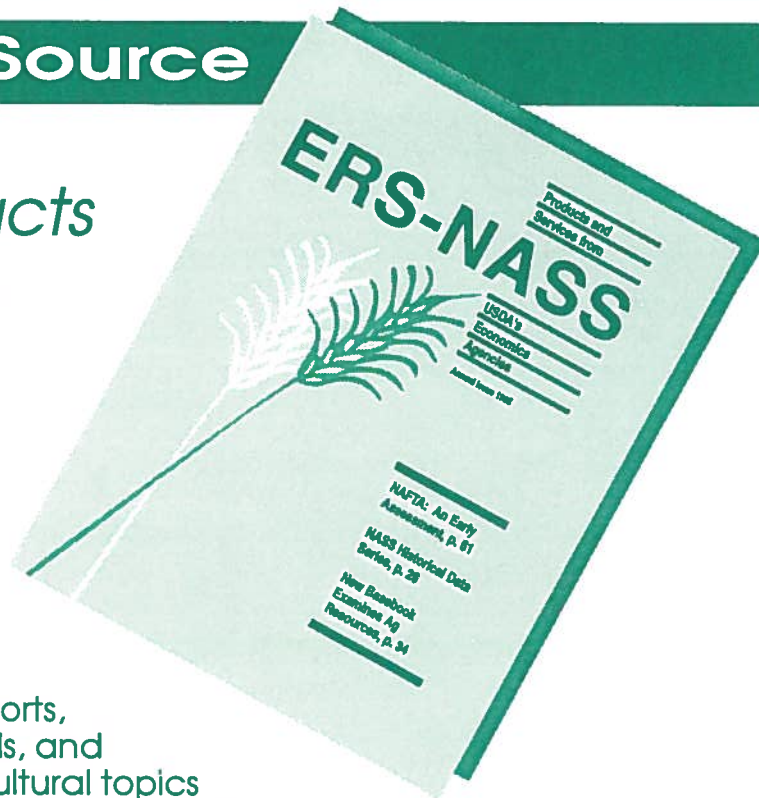
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