
FRBSF WEEKLY LETTER

August 30, 1985

Agricultural Credit Conditions

Considerable attention recently has been given to the debt positions of the nation's farmers and the effects on the banking system should farm bankruptcies and loan losses become widespread. In an earlier *Letter* (May 24, 1985), we pointed out that the relative diversity and flexibility of western agriculture afforded the industry in this region some protection from the adverse effects of the strong dollar on the international competitiveness of U.S. agricultural products.

In this companion piece, we review the origins and dimensions of the agricultural debt problem with particular reference to the West and discuss some of the characteristics of the banking system in the West that could partially insulate it from the farm debt situation.

The farm credit market

Agricultural credit is made of two important types. The first is *production credit*, which is extended to finance seed, fertilizer, labor and other farm production expenses that are specific to a particular crop and planting cycle. Farmers obtain production credit either by arranging specific loan contracts or by securing a line of credit upon which they may draw during their production cycle. The second type of credit is *mortgage credit*, most commonly extended to support the purchase of land, farm equipment and other inputs to the farm production process that last beyond a single production cycle. When deciding whether to extend either type of credit, lenders consider a variety of factors including the underlying value of the farm real estate, the level and stability of farm prices and output in the crops involved, and the role of crop insurance.

A variety of financial institutions extend agricultural credit (see Chart 1). On a nationwide basis, there is over \$200 billion of agricultural debt outstanding. Among private lenders, commercial banks are an important group because they accounted for 24 percent of total agricultural credit in December 1984. The Cooperative Farm Credit System, which is comprised of the Federal Land Banks, Production Credit Associations (PCAs), and Federal Intermediate Credit Banks (FICBs), also is a

key source of farm loans, accounting for about 32 percent of total credit. Other notable private lenders include insurance companies and individuals. The Farmers Home Administration (FmHA), and the Commodity Credit Cooperation (CCC) are the main government lenders.

Origins of farm debt problem

During the middle and late 1970s, expectations of rising inflation caused the value of farm land to appreciate rapidly. Indeed, the price of farm land during this period appreciated at a rate of 18.7 percent per year, much faster than the 6.5 percent increase in agricultural commodity prices and the 10.6 percent rise in overall consumer goods prices. By 1980, the average price of an acre of agricultural land in the United States was nearly four times that in 1970.

These appreciating land values represented an increase in farm wealth, and the owners of farm land borrowed extensively against this collateral for both farm and non-farm purposes. As Chart 2 indicates, total farm debt, much of which was secured by farm land, rose steeply through 1982. In the early 1980s, as inflation was being brought under control, inflation expectations dropped sharply and brought down the rapid appreciation of real estate in general. At the same time, ballooning federal deficits accelerated the appreciation of the U.S. dollar in foreign exchange markets. Owners of farm land soon found themselves facing heavy debt obligations, falling prices for their commodities, and deteriorating farm land values.

Cost squeeze

Despite some help from static or falling petrochemical-based fertilizer prices and an extensive program of government assistance through the Payment-In-Kind (PIK) Program, net farm incomes deteriorated in the early 1980s. Nationwide, net farm income for the years 1982 through 1984 averaged almost 33 percent less than in 1981, while in the western states it averaged about 28 percent less. As the dollar continued its rapid rise throughout 1984 and interest rates remained high for most of the year, more farmers were pushed into serious financial trouble. Nationally,

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about 3.6 percent of all farmers went out of business in 1984 compared to 2.3 percent in 1983.

Hit particularly hard by the combined effects of the appreciating dollar, high interest rates, and declining inflation expectations were growers of products whose prices are determined by world, rather than domestic, supply and demand conditions. The appreciating dollar caused the U.S. prices of these products to drop sharply (the price of wheat, for example, averaged about 10 percent less from 1981 through 1984 than its level in 1980). Financial problems grew particularly severe for those farmers unable to diversify away from products with weak prices. According to the U.S. Department of Agriculture (USDA), farmers of field crops, such as wheat and oil-seed crops, experienced the greatest deterioration in earnings.

Assessing problems for banks

It is possible to derive a number of statistics that bear upon the possible effects of the farm debt problem on banking. Economists at the USDA used an approach that examines the problem at the level of the individual farming enterprise. They estimate that, as of 1984, approximately 24 percent of the outstanding debt was to farms with "very high leverage" (a debt-to-asset ratio of 70 percent or more). (In the Pacific region — California, Washington, Oregon — high-leverage farms held 22.5 percent of farm debt.) Lenders holding these loans face the prospects of delayed or failed interest and principal payments.

The drawback to this analytical approach, of course, is that it is difficult to translate the measure into bank risk. Although as much as 25 percent of this troubled debt may be held by commercial banks, it is not possible to assess the effects on banks' portfolios without knowing two things: whether the holders of this debt are diversified and how securely the loans are collateralized. For the banking system as a whole, this estimate of troubled debt represents only about 1 percent of total loans. For it to have significant adverse effects, such debt would have to be concentrated in banks whose portfolios are not well-diversified or which already contain a large amount of other low quality loans.

Among the banks in the West, most of the farm debt is held by highly diversified institutions. Of the almost 800 commercial banks in the Twelfth

Federal Reserve District, only 40 have 25 percent or more of their assets in agricultural loans. (Using this 25 percent of assets measure as a cutoff, fully one-fourth of all banks on the national level are agricultural banks.) Over 65 percent of the outstanding farm debt at western commercial banks is held by banks with 5 percent or less of their total assets in agricultural loans. Thus, the farm debt problem as a whole — as measured by the USDA — should be managed easily by the banking system in the West.

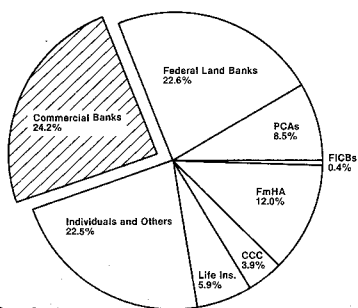
Bank loan performance

A second approach to measuring the agricultural loan risk in the banking system is to look at data from bank examination reports and "Call Reports" that banks are required to submit periodically to the bank regulatory authorities. In their Call Reports, banks must identify categories of "problem loans": loans that are past due and accruing interest (the categories are for repayments 30 to 90 days and 90 days or more behind schedule), non-accruing (loan payments are past due and interest is not accruing), or renegotiated (the bank has restructured the terms of the loan to ease the repayment burden on the borrower).

Unfortunately, data on agricultural loans for all of these categories of problem loans are reported only by large banks, which accounted for only 30 percent of total agricultural lending at the end of 1984. For all of these large banks nationwide, total problem agricultural loans represented 10.1 percent of their farm loans at the end of 1984. In the Twelfth District, by comparison, total problem agricultural loans comprised 12 percent of total agricultural loans at the large reporting banks. It thus might appear that the advantage of greater asset diversification among western banks could be offset to some degree by the greater share of agricultural loans presenting problems. A closer look at these statistics, however, reveals the difficulty in using them in comparisons of regional banking problems.

First, the characterization of a loan as a problem loan depends crucially upon the characteristics of the loan. Loans originally structured with infrequent or delayed repayment features, for example, are by definition slower to become delinquent or non-accruing. In the West, very large commercial banks dominate the agricultural lending marketplace and their lending practices often differ from

Chart 1
Share of Total Agricultural Debt by Lender



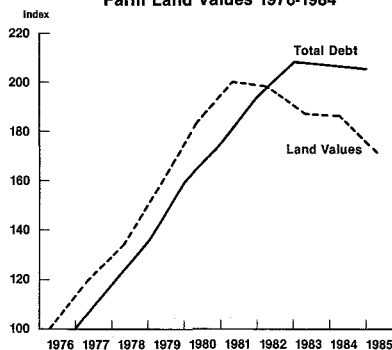
Source: Federal Reserve, December 1984

those of smaller banks. In California, for example, the five largest banks with average domestic assets of \$31 billion account for about 90 percent of the farm lending by banks in the state. By comparison, the remaining large reporting banks in the nation have average assets of only \$5.9 billion. The large California banks are more likely to extend relatively large lines of credit with frequent repayment requirements than to structure smaller individual loans. This is particularly true for farming enterprises that are themselves large, which also is the case in the far West. Therefore, repayment problems will be evident sooner and simultaneously involve a large fraction of a borrower's total debt.

Second, the decision to report loans in the "problem" categories of the Call Report is partly under the control of the reporting bank itself. For a number of reasons, when loans decline in quality, some banks are quicker to reclassify them as problem loans. (Bank examiners, of course, rely on data in addition to the Call Reports to evaluate a bank's condition. Thus, they may choose to downgrade the rating of a bank even if the bank has been conservative in its report of weakening loans.)

Consistent with the view that banks in the West have been quicker to take action with regard to the farm debt problem than banks in other regions, banks in the Twelfth District made a sizeable volume of charge-offs against farm loans in 1984. In that year, charge-offs in the Twelfth District amounted to 4 percent of farm loans compared with 2.2 percent nationwide. As a result, the large banks in the West were able to reduce substantially their outstanding exposure to problem farm loans in 1984. In contrast, the ratio of problem farm loans to total farm loans actually rose in all but one of the other Districts last year.

Chart 2
Growth of Farm Debt and Farm Land Values 1976-1984



Finally, highly diversified banks — such as those that dominate agricultural lending in the West — can be expected to take on riskier loans since their diversification protects their overall portfolio. A higher incidence of problem loans in western banks therefore need not imply that the economic condition of western borrowers has deteriorated more rapidly than that of borrowers elsewhere.

The agricultural banks

As indicated earlier, there are relatively few agricultural banks in the West. Agricultural banks operating in the West, as in the nation, tend to be smaller banks not subject to the same detailed reporting requirements as large banks. Comprehensive public data on the loan quality among these western banks is consequently somewhat scarce. However, a survey conducted earlier this year by the State Banking Commissioner of California suggests that, for California at least, the relatively undiversified agricultural banks do not manifest problems of greater severity than the larger banks. Indeed, consistent with the above argument, the study found generally lower rates of reclassification among these smaller and less diversified banks than among the larger banks.

In summary, the agricultural debt problem is a serious one caused by a contemporaneous decline in inflation expectations and rise in the exchange value of the U.S. dollar. As serious as this problem is, both for individual farmers and for certain financial institutions, the overall scale and distribution of difficulties for the banking system in the West appears manageable.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT
(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 8/14/85	Change from 8/07/85	Change from 8/15/84 Dollar	Percent⁷
Loans, Leases and Investments ^{1 2}	192,131	— 803	10,010	5.4
Loans and Leases ^{1 6}	173,563	— 901	10,354	6.3
Commercial and Industrial	50,708	— 495	1,132	2.2
Real estate	64,206	236	3,454	5.6
Loans to Individuals	35,250	71	6,051	20.7
Leases	5,420	— 1	385	7.6
U.S. Treasury and Agency Securities ²	11,604	26	— 271	— 2.2
Other Securities ²	6,963	71	— 73	— 1.0
Total Deposits	198,057	— 553	8,280	4.3
Demand Deposits	46,906	— 483	1,769	3.9
Demand Deposits Adjusted ³	31,049	— 668	2,443	8.5
Other Transaction Balances ⁴	13,988	— 289	1,655	13.4
Total Non-Transaction Balances ⁶	137,162	218	4,853	3.6
Money Market Deposit Accounts—Total	45,031	39	7,357	19.5
Time Deposits in Amounts of \$100,000 or more	37,956	159	— 2,911	— 7.1
Other Liabilities for Borrowed Money ⁵	22,335	1,568	2,456	12.3
Two Week Averages of Daily Figures	Period ended 8/12/85	Period ended 7/29/85		
Reserve Position, All Reporting Banks				
Excess Reserves (+)/Deficiency (—)	12	67		
Borrowings	59	19		
Net free reserves (+)/Net borrowed(—)	— 46	47		

¹ Includes loss reserves, unearned income, excludes interbank loans

² Excludes trading account securities

³ Excludes U.S. government and depository institution deposits and cash items

⁴ ATS, NOW, Super NOW and savings accounts with telephone transfers

⁵ Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources

⁶ Includes items not shown separately

⁷ Annualized percent change