Agricultural Restructuring Requirements by Farm Credit System District

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Farm financial stress in the United States is a persistent problem that remains to be reckoned with by agricultural policymakers, agricultural lenders, and rural communities. A surge of farm income in 1986 afforded temporary relief to some operators; the long-term projections, however, indicate that farm financial stress will continue to affect a sizable segment of the farm population (FAPRI Staff Report 3-86).

Recent national and state surveys show that unserviceable debt levels continue to plague significant numbers of farmers. Banks are failing at high rates, and record numbers of farm bankruptcies are being filed in some states. States and communities are struggling to provide services to those who continue to experience trauma associated with the current transition in agriculture. Policymakers are considering measures that will affect agricultural credit markets and perhaps the future structure of agricultural lending institutions.

Farm financial stress--whether due to declines in asset values, low incomes, overleveraging, or inclement weather--and the ensuing farm responses may result in shifts in distributions of farm operators, assets, and debts. Since the incidence and severity of financial stress varies in the United States, its impact is expected to vary regionally. Prolonged financial stress in the farm sector, and sectors linked economically to it, suggest that an analysis of agriculture's financial transition is needed. Policymakers and the agricultural community will benefit from a better understanding of the potential impacts of financial stress and proposed intervention policies.

The purpose of this paper is to estimate the impacts of financial restructuring on farm operators under different economic scenarios and policies. The aggregate effects of microeconomic adjustments are estimated for the United States and for geographic regions defined by Farm Credit System (FCS) districts (Figure 1). The aggregate effects measured include: the number of farmers selling out because of financial failure; changes in levels and percentages of owned assets; the magnitude of annual principal and interest payment shortfalls and unrecovered debts; and the volume of assets sold or potentially purchased. The results of this enquiry should provide insights on the potential changes in the structure of agriculture and information on the costs and benefits of intervening to alleviate farm financial stress.

MODEL AND DATA DESCRIPTION

Since the transition in agriculture occurs because of responses to financial stress at the farm level, some integration of microeconomic and macroeconomic modeling techniques are needed. A simulation model, which evolved from earlier work by Jolly and Doye (1985) and Doye (1986), incorporates farm-level balance sheet data and net cash flow projections in this analysis. Here, net cash flow (NCF) for the farm operator family combines farm and non-farm sources and uses of funds. NCF is defined as:

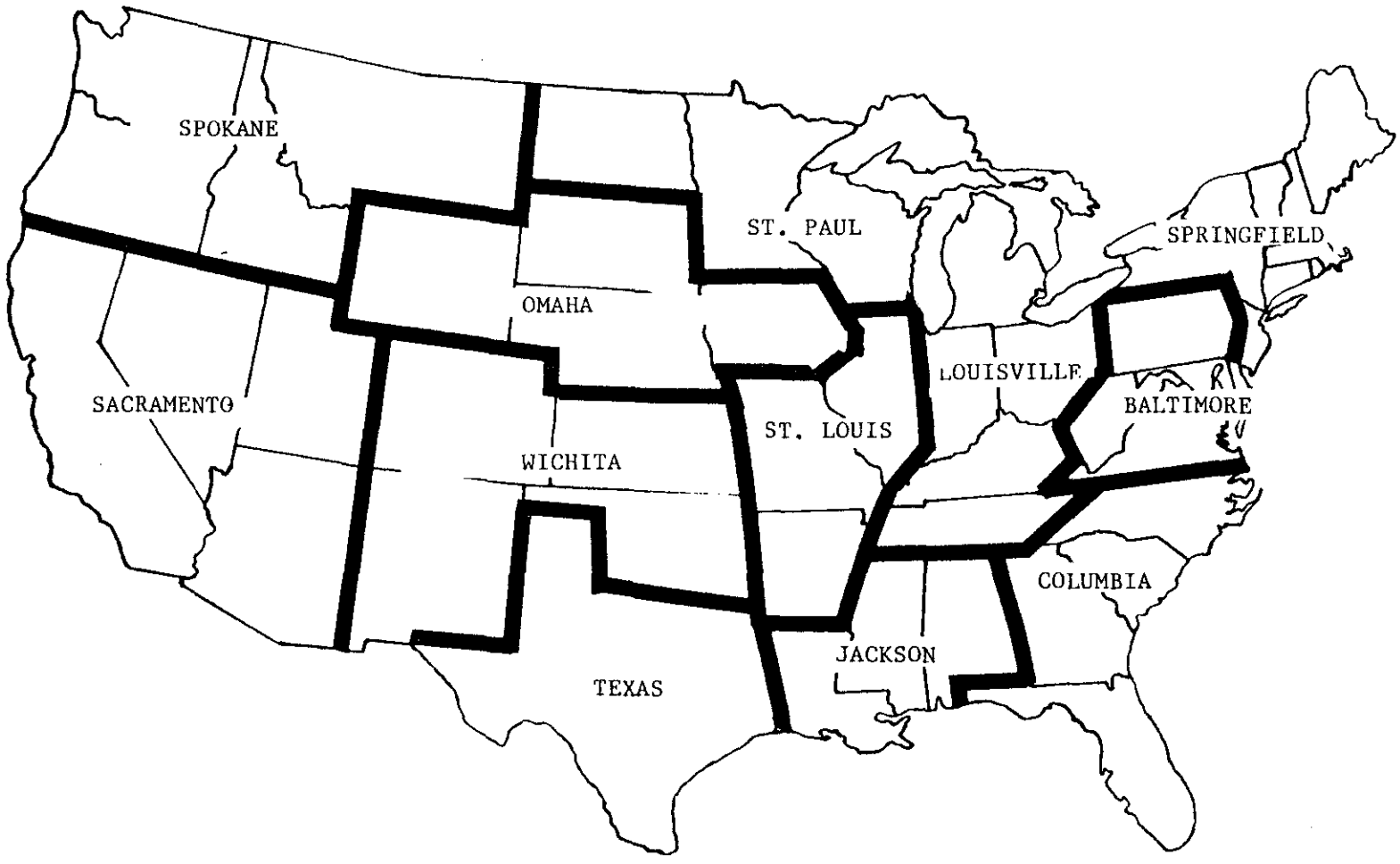

FIGURE 1. FARM CREDIT SYSTEM DISTRICTS, UNITED STATES.

$$NCF = R_{op}*(A_o + A_r) - c*A_r - (i+p)*D - CONS + OFI - TAX \qquad (1)$$

where R_{op} = cash rate of return to operated assets
A_o = value of owned assets
A_r = value of rented assets
c = cash rental rate on rented assets
i = average rate of interest paid on outstanding debt
p = average rate of principal repayment on outstanding debt
D = level of outstanding debt
CONS = consumption expenditures for the farm family
OFI = off-farm income earned by the operator and spouse
TAX = federal income taxes paid by the farm family.

Rather than construct representative farms that reflect typical debt and asset positions for different types and sizes of farms, we use a sample of U.S. farm operators as a basis for analysis. Actual survey data embodies the heterogeneous attributes of the farm population. Data used in the simulation are the results of the 1985 Farm Costs and Returns Survey conducted in February and March of 1986 by the National Agricultural Statistics Service (NASS). The survey yielded 11,497 sample observations, which were used in the simulation of farm financial restructuring. Survey weights were used to expand the sample to approximately 1.55 million farms for the United States. Additional information on the survey and sampling procedure can be found in Johnson, et al. (1986). The number of farm operators and value of their owned assets and debts by FCS district are listed in the Appendix Table A.1.

Values for a farm's A_o, D, and OFI were taken from FCRS responses. R_{op} was estimated from the FCRS data by type of farm (cash grain; tobacco or cotton; vegetable, fruit, or nut; nursery or greenhouse; other crop; beef, hog, or sheep; dairy; poultry; other livestock) and by farm size where farm size was defined by the value of assets operated. The value of assets rented was estimated from survey data using the value of real estate owned, the number of acres owned, and the number of acres rented. Cash rental rates were estimated by United States Department of Agriculture production region and by type of farm (crop, livestock, or other) from FCRS data on cash values of rents paid. The average rate of interest paid on all debt was set at a fixed level as was the principal repayment rate. The average interest rate in the baseline scenario was 10 percent and the principal repayment rate in all simulations was 5 percent. Family living expenditures (CONS) were set at a minimum of $15,400 on all farms.

In the simulation model, the farms with negative NCF are forced to restructure as necessary (and as possible) to cover interest and principal payment shortfalls. The necessary restructuring is achieved by minimizing family living expenditures, increasing cash inflows by improving returns to farm assets or increasing off-farm earnings, restructuring asset holdings by changing the amount of assets rented or owned, and restructuring debt either through debt retirement or debt discharge by the lender. Farms with a negative NCF are assumed to have no tax liability. Farms with a positive cash flow pay taxes, add to family living expenditures up to $30,000, and purchase additional assets with residual cash. More detail on the model can be found in Doye (1986).

In some cases, restructuring cannot make the farm financially viable. Farm financial failure in the simulation occurs if any one of three criteria are met:

- The current market value of assets, net of selling costs, is less than outstanding debt. These farms are technically insolvent.
- All operator owned assets are sold to project a positive cash flow.
- The ratio of NCF to equity is less than -0.2. A negative NCF of this size would quickly add to debt and erode remaining equity.

DEFINITIONS USED IN REPORTING RESULTS

The percent of assets sold includes both assets sold by farms that fail financially and assets sold by farms as part of the restructuring process to remain viable.

The percent of debt liquidated is debt retired using proceeds from asset sales and debt retired through restructuring or repayment.

Debt written off is the amount of debt that remains after proceeds from asset sales are applied to debt retirement on financially failing farms.

The percent of operators selling out shows the fraction of total operators which are operators of financially failing farms.

Operators scaling back are those operators who sell assets (or would sell assets if allowed) to reduce debt but maintain ownership of at least some assets.

Operators with negative NCF is the sum of operators selling out, operators who improve their cash flow through restructuring to increase off-farm and farm earnings, and operators scaling back to project a positive cash flow.

The percent of assets purchased indicates the potential purchasing power of farms with positive cash flows.

Operators not servicing debt who qualify for an interest rate buydown are those who are unable to pay interest fully. Operators who are unable to repay principal but are able to make interest payments are not eligible for an interest buydown.

Total costs of the buydown indicate the amount of interest costs shifted from the farm operator to some other entity. Total costs are the difference between the interest shortfall in the "do nothing" strategy and the interest shortfall with the buydown. No attempt is made to estimate the administrative costs of the various government programs.

Average payment per farm is the total costs of the buydown divided by the number of operators receiving the buydown.

Sector interest shortfalls are estimates of the difference between interest due and interest paid based on the summation of the differences on individual farms. Similarly, principal shortfalls for the farm sector

indicate the difference in principal due and principal paid based on the percentage difference projected from the sample. Total credit repayment shortfalls are the sum of interest and principal repayment shortfalls.

The value of real estate assets sold by farms with interest payment shortfalls as part of the restructuring process is listed as assets sold to the land holding company (LHC).

Debt liquidated through the LHC shows the amount of debt retired with proceeds from assets sold to the LHC.

LHC maintenance costs indicates the difference in costs of funds to the LHC for operation and the rental income from land held by the LHC.

The number of acres of land sold to the LHC by financially stressed farms is listed in land held by LHC.

The average amount of land sold per farm is calculated by dividing the number of acres of land held by the LHC by the number of operators using the LHC.

SIMULATION RESULTS

Simulation results point to the severity of farm financial stress in the United States, particularly in the Midwest. Tables 1 and 1B list liquidations required to service remaining debt from projected cash flows with current cash recovery rates and rates of return, assuming that financially stressed farms can sell an unlimited amount of their owned assets. Table 1 lists statistics as percentages of categories; Table 1B lists actual dollars of debts and assets of numbers of operators in various categories. Reported results are based on projections using rates of Cost and Return Survey (FCRS) data. Cash recovery rates are based on changes in asset values reported by the Economic Research Service (1986). An average interest rate of 10 percent for all debt is assumed.

Table 1 and 1B show the amount of operators, assets, and debts liquidated if all relevant markets could adjust instantaneously to accommodate the needed farm financial adjustments. Given current levels of farm incomes, large shifts in asset and debt holdings are expected as the agricultural sector moves toward a more stable financial equilibrium. Nearly 11 percent of the assets may be sold and more than half of the debt held by farm operators may be liquidated in the transition. As farmers attempt financial restructuring the shifts in holdings are projected to be much larger than historical annual volumes of farm assets sold and debt liquidated. Hence, symptoms of financial stress in the farm sector are not expected to disappear soon.

Almost 39 percent of the farm operators in the United States (603,000) have NCFs cash flows. About 29 percent of the farms are expected to sell assets to reduce outstanding debt to serviceable levels. Nearly 10 percent of the farms nationwide (248,000) are in such dire financial straits that they are expected to fail in the near future. About 11 percent of all farm assets are expected to be sold and 37 percent of farm operator debt

liquidated in financial restructuring. With farm failure, 4.6 percent of farm operator debt may be written off by creditors. The $5.2 billion debt write-off occurs because proceeds from assets sales are not sufficient to retire debt.

Doye (1986) estimated similar results using data from a survey conducted by Farm Journal magazine and the Food and Agricultural Policy Institute at the University of Missouri and Iowa State University (FAPRI Staff Report 9-85 Revised). In that study, 34 percent of U.S. farm operators were projected to have a negative NCF, 25 percent of the farms were expected to scale back by selling assets, and 9 percent of the operators were projected to fail financially. Using the Farm Journal data, Doye estimated that 17 percent of the assets would be sold in financial restructuring, 51 percent of the debt would be liquidated, and 3.7 percent of the debt would be written off--higher percentages than indicated in this study.

Although the symptoms of financial stress are widespread, some areas have been harder hit than others. The reasons for "pockets" of severe stress vary. Factors that contribute to severe stress may include relatively large declines in asset values, highly leveraged farms, low returns to the predominate type of farm, general economic conditions or the business climate, or lack of off-farm employment and income opportunities. Not surprisingly, given the concentration of farms and the incidence of financial stress in the Midwest, liquidations of farms, assets, and debts are largest in that region. The St. Louis, St. Paul, Omaha, and Wichita districts account for slightly more than one-half of the operators with negative NCF. These same four regions are projected to have nearly three-fourths of the U.S. debt liquidations and debt written off.

Conditions are particularly severe in the Omaha Farm Credit System (FCS) district where nearly 17 percent of the farm operators are projected to fail financially. In the Omaha district, more than one-fourth of the assets may be sold and 63 percent of the debt liquidated before all farms are stabilized financially. Liquidations in several other regions are also expected to be well above the U.S. average, indicating a disproportionate share of financially stressed farms. More than 10 percent of the farms in the St. Paul, St. Louis, and Louisville FCS districts are also projected to fail. The largest percentage of debt expected to be written off with farm failures (nearly 8 percent of all debt) is in the Jackson and Omaha FCS districts. The Omaha district has the distinction of being the only FCS district where the volume of assets sold is expected to exceed the capacity of existing farms to purchase the assets.

At the other extreme, the projected liquidations of farms, assets, and debts in percentage terms in the Springfield, Baltimore, Columbia, Texas, and Sacramento FCS districts are well below the U.S. averages. Less than 5 percent of the operators in the Springfield, Texas, and Sacramento FCS districts are expected to fail financially. Three percent or less of the farm operator debt is expected to be written off in the Springfield, Baltimore, Louisville, Texas, Sacramento, and Spokane FCS districts.

The sector restructuring requirements are sensitive to changes in income to the farm sector and to farm operators. The sensitivity of results to average rates of return to farm sector are demonstrated in Table 2, 2B, 3, and 3B. In Tables 2 and 2B, the results are based on projections using rates of return that are 10 percent higher than those estimated from the FCRS data, and cash recovery rates that are 10 percent higher than the expected rates. In Table 3 and 3B, results are based on projections using rates of return that are 10 percent lower than those estimated from FCRS data, and cash recovery rates that are ten percent lower than the expected rates.

Compared with the current income scenerio, lower rates of return to farm assets and lower cash recovery rates on assets sold result in more assets sold and more debt liquidated before farms will project a positive cash flow. A larger percentage of the debt is expected to be uncollectable. Rates of return and cash recovery rates lower than current levels mean more operators will be forced to sell out and more operators will scale back. Conversely, higher rates of return and cash recovery rates improve the debt servicing capability of financially stressed farms and reduce total financial restructuring requirements.

Sector results are much more sensitive to assumptions about prevailing rates of return and cash recovery rates on assets sold than to assumed average interest rates. In the baseline run, an average interest rate of 10 percent was assumed. To determine the sensitivity of the projections to the assumed interest rate, projections were made using higher and lower rates. Tables 4 and 4B list results based on simulations using current rates of return and cash recovery rates with average interest rates of 8 percent. Table 5 and 5B list results based on projections using current rates of return and cash recovery rates with average interest rates of 12 percent.

Reductions in average interest rates improve debt servicing capability and thus reduce the amount of restructuring needed to project a positive cash flow. At the sector level, percentages of assets sold, debt liquidated, and operators with negative NCF change only slightly with average interest rate changes. Average interest rates above or below the baseline assumption of 10 percent do, however, significantly affect the ability of solvent operators to purchase additional assets. With higher interest rates, the potential for existing farms to purchase assets decreases.

Tables 6 and 6B list expected liquidations when only failing farms (rather than all farms with negative NCFs) sell assets. Results are based on assumptions used in Table 1 and 1B with the restriction that assets are sold as part of the restructuring process only when the farm is failing financially. Since this scenario does not assume that all farms needing financial restructuring can adjust in one year, it may more accurately represent one year's liquidations and shortfalls. In regions, asset markets may be saturated with sales from complete farm liquidation. Farm operators who wish to only partially liquidate may delay restructuring and hope for recovery in sales or prices in the asset markets. Since fewer farms are allowed to sell assets the volume of assets sold and debt

liquidated is lower in Table 6 than in Table 1. Because of the constraint on asset sales for farms that are not failing, more debt is written off.

The results in Table 6 and 6B are used in comparisons with interest rate buydown programs and are listed under the "do nothing" strategy heading.

Interest Rate Buydown Programs

Tables 7.1 through 7.13 summarize expected impacts of various interest rate buydown programs for the United States by FCS district. Baseline assumptions are used in conjunction with a limit on assets sold and interest rate buydown program specific details. The buydown in all cases is limited to the amount of interest due. Thus, no farm receives a payment that can be used to reduce the principal amount. Only farms showing a negative NCF who are unable to pay all interest costs are eligible for the buydown programs. No attempt was made to estimate the administrative costs of any of the interest rate buydown programs.

In the fixed rate buydown, the federal government is assumed to buy down interest rates up to a maximum of 2 percentage points with the agricultural lender providing an additional buydown of up to 4 percentage points. In the limited targeted buydowns, a general interest rate buydown of up to $10,000 (not restricted by a maximum rate) is provided through a federal agency to farms meeting equity requirements. In one scenario, the farm's equity or net worth must be less than $100,000. In the other scenario, the limited buydown is restricted to farms with less than $50,000 in net worth. Costs to the federal government are contained by establishing maximum buydown rates, or maximum buydown amounts, or by targeting the program to individuals meeting specific criterion. The cost of a government interest buydown program to eliminate interest payment shortfalls would equal the interest payment shortfall in the "do nothing" scenario.

Government programs to buydown interest rates show some potential for reducing the expected liquidations of farms. One percent fewer farms (about 16,000 farms) sell out in the United States with the fixed rate buydown program (8.3 percent instead of 9.3 percent). Targeted buydowns that are also limited to a maximum amount, while potentially buying time for financial restructuring, may do little to reduce either the number of farms that fail or the volume of assets and debts liquidated. With the buydown targeted to operators with net worth of less than $50,000, the percentage of farms selling out decreases from 9.3 to 8.8. When the buydown is limited to all operators with less than $100,000 equity, the failure rate falls to 8.4 percent.

The financial characteristics of the farms within the subset of the population qualifying for the buydown influence the total interest rate buydown costs and the average payment per farm. U.S. cost estimates range from $215 million to $2 billion, depending on the target group and restrictions on the buydown. To eliminate interest payment shortfalls for one year would cost approximately $2 billion; a buydown targeted to farm operators with small but positive net worths would cost approximately $215 million. Generally, the average buydown payment per farm is highest under

the fixed rate buydown program. The government's share (2 points of up to 6 percentage points) of the fixed rate buydown results in larger government outlays than in the targeted general interest buydown programs with an individual payment maximum. Costs of the programs by FCS district are summarized in Table 8. Roughly one-half of all U.S. interest rate buydown proceeds would accrue to farms in the St. Paul and Omaha FCS districts.

Land Holding Company Programs

A federally chartered limited life entity to acquire land from financially stressed farmers has been proposed as a policy to alleviate farm stress (Harl, 1985; Farm Credit Council, 1985). A land holding company (LHC) would provide a ready buyer for farm real estate assets even in areas where asset sales have flooded the market. The LHC could purchase assets at current market value and rent the assets to farmers at a fair rental rate. Lenders holding loans transferred with collateral to the LHC would be expected to reduce the loan obligation or interest rate charged as a requirement for participation. Prior owners of assets who continued to meet the asset rental obligation could be eligible to repurchase the assets at fair market value at the end of the LHC life.

In the simulation, farmers unable to make interest payments are eligible to sell some or all of their real estate assets to the LHC at current market value. If it is profitable to maintain control of the assets (i.e., returns to the assets exceed rental costs), the financially stressed farm leases back the assets sold. The lender is assumed to write down debts by 10 percent of the value of assets sold to the LHC. A LHC stock margin of 10 percent of the value of the assets sold is required by all farms not liquidating completely (failing financially). Costs of funds to the LHC were assumed to be 7.75 percent.

Projected liquidations with a land holding company indicate slight increases in the volume of assets sold and also in the debt liquidated compared with the current income scenerio. Because of the stock margin requirement for LHC users, more assets must be sold to project a positive cash flow and less debt can be liquidated with a given amount of asset sales. Fewer operators liquidate because of financial failure. As with the fixed rate buydown, all operators with an interest payment shortfall (51.6 percent of the operators with a negative NCF) are eligible for assistance. Interest payment shortfalls decline but principal payment shortfalls to the lender increase because of the required debt write off.

Total costs of the LHC include the costs of purchasing assets sold to the LHC plus the costs of financing those purchases, less rental income earned and less proceeds from sale of assets on or before the end of the entity's limited life. The maintenance costs (difference in costs of financing asset purchases and rental income earned on assets held) are projected to be $315 million, less than most of the interest rate buydown programs. More than $11 billion (the amount of debt liquidated through the LHC) is needed to purchase the assets being sold to the LHC. The amount of the purchase price that is recovered when the land is sold depends on whether land values increase or decrease over the life of the LHC. In

areas where land prices continue to decline, the program's costs could exceed the maintenance costs substantially. On the other hand, where land values appreciate over time, the program could be self-sufficient or even revenue generating.

About 20 million acres (2 percent of the land in farms in the United States) are projected to be sold to the LHC. Nearly 8 million acres (38 percent of the United States total) might be sold in the Omaha district. The St. Paul and Wichita districts are second and third, respectively, with roughly 3.5 million acres each being sold to the LHC.

IMPLICATIONS OF FINANCIAL RESTRUCTURING

Restructuring by financially stressed farm operators has broad implications for the agricultural sector. Asset liquidations are projected to be larger than historical annual agricultural real estate sales, indicating that a significant number of farm operators may be forced to sell out because of severe financial problems. Such potentially large shifts in the distribution of owned assets and debts are likely to test the resiliency of regional agricultural asset and credit markets and institutions.

The results of this study, reported by FCS district, highlight the disparity in financial conditions across the United States. Consequently, some regions must undergo greater financial adjustment than others. Of all the regions, the Midwest is projected to experience largest changes in farm ownership, absorb the largest losses in agricultural lending, and experience the largest number of farm failures. It is understandable, therefore, that concern about the future of agriculture and agricultural lenders has been expressed most vocally in the Midwest.

Government intervention to alleviate financial stress could reduce the number of farms failing and the interest payment shortfalls experienced by agricultural lenders. Interest rate buydown programs administered by the government would allow the government to share the costs of financial stress with farm operators and agricultural lenders. The size of government outlays for an interest rate buydown program depend on who is targeted to receive buydowns and what restrictions are imposed on the amount of buydown allowed. Generally the annual cost of such policies is small relative to the cost of price support programs. In all likelihood, improved management of existing commodity programs could generate sufficient savings to support a financial assistance program without compromising farm income.

Table 1. Liquidation Required to Service Remaining Debt From Projected Cash Flows With Current Cash Recovery Rates and Rates of Return and Unlimited Asset Sales.

Region	Assets Sold (%)	Debt Liquidated (%)	Debt Written Off (%)	Operators Selling Out (%)	Operators Scaling Back (%)	Operators With Negative NCF (%)	Assets Purchased (%)
Springfield	2.7	14.4	1.3	3.8	19.3	38.7	19.6
Baltimore	4.6	21.6	3.0	6.1	20.9	31.8	31.7
Columbia	6.7	29.9	6.2	7.5	27.3	35.6	33.6
Louisville	10.5	32.5	2.1	11.7	29.3	38.3	42.1
Jackson	6.5	25.6	7.7	7.8	23.2	32.2	37.3
St. Louis	15.8	43.3	4.2	10.7	32.2	41.1	39.4
St. Paul	16.2	39.1	6.2	11.5	34.4	46.5	29.9
Omaha	26.2	63.3	7.8	16.7	49.4	58.6	19.3
Wichita	12.6	37.7	4.9	8.4	28.8	38.2	31.9
Texas	2.8	14.5	0.4	4.6	16.2	23.7	26.3
Sacramento	4.6	25.3	2.1	3.7	15.9	24.4	26.7
Spokane	6.7	21.2	2.0	7.4	24.0	30.8	29.3
U.S.	10.7	37.0	4.6	9.6	29.2	38.9	30.3

Table 18. Liquidation Required to Service Remaining Debt From Projected Cash Flows With Current Cash Recovery Rate and Rate of Return and Unlimited Asset Sales.

Region	Assets Sold[1] ($m)	Debt Liquidated ($m)	Debt Written Off ($m)	Operators Selling Out	Operators Scaling Back	Operators With Negative NCF	Assets Purchased ($m)
Springfield	$ 558	$ 400	$ 35	2,303	11,606	23,345	$ 4,097
Baltimore	1,318	797	110	6,677	23,091	35,185	9,108
Columbia	2,070	1,587	332	7,659	27,962	36,501	10,312
Louisville	5,140	2,986	194	27,122	67,841	88,705	20,492
Jackson	1,149	862	259	5,507	16,476	22,852	6,555
St. Louis	6,901	5,273	511	17,304	51,939	66,222	17,207
St. Paul	10,371	8,664	1,372	25,892	77,037	104,101	19,154
Omaha	14,159	11,727	1,437	28,108	83,139	98,521	10,442
Wichita	5,727	4,733	616	11,658	39,762	52,791	14,573
Texas	1,574	925	23	5,372	18,799	27,499	15,012
Sacramento	2,516	2,337	196	2,349	10,094	15,467	14,549
Spokane	2,598	1,702	158	7,674	24,984	31,978	11,299
U.S.	$54,080	$41,991	$5,244	147,624	452,730	603,168	$152,801

[1] $m signifies millions of dollars.

Table 2. Liquidation Required to Service Remaining Debt From Projected Cash Flows With High Cash Recovery Rates and Rates of Return and Unlimited Asset Sales.

Region	Assets Sold (%)	Debt Liquidated (%)	Debt Written Off (%)	Operators Selling Out (%)	Operators Scaling Back (%)	Operators With Negative NCF (%)	Assets Purchased (%)
Springfield	2.1	11.9	1.2	3.6	16.3	35.0	21.9
Baltimore	3.9	19.3	2.0	5.4	20.6	31.0	34.6
Columbia	5.6	26.4	5.3	6.5	25.4	33.1	36.5
Louisville	8.7	29.5	1.3	8.5	27.8	36.0	47.1
Jackson	5.2	21.1	6.6	7.0	22.0	31.2	39.9
St. Louis	11.6	34.2	2.9	8.2	29.8	38.2	45.0
St. Paul	12.6	32.8	5.0	8.8	30.0	42.8	33.7
Omaha	21.7	55.7	5.3	14.8	45.9	54.4	23.4
Wichita	10.2	33.1	4.2	7.4	26.6	36.1	35.1
Texas	2.2	12.3	0.3	4.0	15.0	22.3	28.5
Sacramento	3.8	21.8	0.8	2.5	13.7	22.6	28.7
Spokane	5.7	19.5	1.3	5.9	23.1	29.4	32.6
U.S.	8.6	31.9	3.4	7.7	27.0	36.4	33.7

Table 2B. Liquidation Required to Service Remaining Debt From Projected Cash Flows With High Cash Recovery Rates and Rates of Return and Unlimited Asset Sales.

Region	Assets Sold[1] ($m)	Debt Liquidated ($m)	Debt Written Off ($m)	Operators Selling Out	Operators Scaling Back	Operators With Negative NCF	Assets Purchased ($m)
Springfield	$ 439	$ 331	$ 34	2,137	9,822	21,088	$ 4,586
Baltimore	1,119	713	72	6,036	22,783	34,285	9,941
Columbia	1,725	1,402	282	6,659	26,018	33,941	11,199
Louisville	4,255	2,707	118	19,652	64,450	83,253	22,938
Jackson	922	711	221	4,973	15,600	22,162	7,027
St. Louis	5,082	4,161	359	13,125	47,940	61,559	19,663
St. Paul	8,044	7,256	1,102	19,701	67,120	95,924	21,562
Omaha	11,717	10,316	977	24,811	77,237	91,407	12,620
Wichita	4,662	4,156	522	10,173	36,790	49,855	16,019
Texas	1,278	786	18	4,691	17,440	25,950	16,252
Sacramento	2,065	2,018	77	1,617	8,712	14,341	15,687
Spokane	2,210	1,565	105	6,143	24,009	30,583	12,552
U.S.	$43,518	$36,123	$3,888	119,719	417,920	564,348	$170,045

[1] $m signifies millions of dollars.

Table 3. Liquidation Required to Service Remaining Debt From Projected Cash Flows With Low Cash Recovery Rates and Rates of Return and Unlimited Asset Sales.

Region	Assets Sold (%)	Debt Liquidated (%)	Debt Written Off (%)	Operators Selling Out (%)	Operators Scaling Back (%)	Operators With Negative NCF (%)	Assets Purchased (%)
Springfield	3.6	18.5	1.3	5.1	21.4	40.1	17.3
Baltimore	5.5	23.1	3.4	6.6	22.0	34.2	28.9
Columbia	8.2	34.3	7.2	8.3	29.2	37.5	30.7
Louisville	12.6	36.9	3.0	11.6	32.4	42.0	37.8
Jackson	8.3	30.9	8.8	8.3	24.2	34.0	34.6
St. Louis	19.7	51.1	5.9	13.0	34.8	44.7	34.3
St. Paul	21.9	49.0	8.7	14.8	40.7	51.8	26.6
Omaha	31.7	70.7	10.5	21.3	55.2	64.1	16.0
Wichita	15.8	43.6	6.1	9.6	32.0	41.4	29.0
Texas	3.5	18.2	1.3	5.2	17.7	26.3	24.2
Sacramento	5.5	27.1	2.2	3.7	17.4	25.3	24.8
Spokane	8.2	24.3	2.7	8.9	24.8	32.0	26.1
U.S.	13.4	43.1	6.1	11.1	32.3	42.2	27.2

Table 3B. Liquidation Required to Service Remaining Debt From Projected Cash Flows With Low Cash Recovery Rates and Rates of Return and Unlimited Asset Sales.

Region	Assets Sold[1] ($m)	Debt Liquidated ($m)	Debt Written Off ($m)	Operators Selling Out	Operators Scaling Back	Operators With Negative NCF	Assets Purchased ($m)
Springfield	$ 744	$ 512	$ 37	3,075	12,880	24,175	$ 3,621
Baltimore	1,568	855	125	7,316	24,332	37,940	8,314
Columbia	2,530	1,820	384	8,509	29,893	38,458	9,429
Louisville	6,138	3,387	275	27,010	74,899	97,168	18,421
Jackson	1,463	1,039	297	5,895	17,142	24,166	6,095
St. Louis	8,609	6,216	716	20,999	56,089	72,054	14,966
St. Paul	14,018	10,861	1,935	33,155	91,202	115,874	17,041
Omaha	17,139	13,099	1,938	35,868	92,864	107,628	8,668
Wichita	7,230	5,477	759	13,220	44,172	57,149	13,243
Texas	2,008	1,165	80	6,066	20,556	30,524	13,817
Sacramento	3,015	2,502	207	2,361	11,066	16,037	13,505
Spokane	3,138	1,949	213	9,341	25,776	33,275	10,062
U.S.	$ 67,601	$ 48,882	$6,967	172,814	500,872	654,446	137,181

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Table 4. Liquidation Required to Service Remaining Debt From Projected Cash Flows With Low Interest Rates.

Region	Assets Sold (%)	Debt Liquidated (%)	Debt Written Off (%)	Operators Selling Out (%)	Operators Scaling Back (%)	Operators With Negative NCF (%)	Assets Purchased (%)
Springfield	2.5	12.3	1.3	5.1	16.4	37.3	23.6
Baltimore	4.8	19.0	2.3	6.6	20.6	31.3	38.4
Columbia	6.7	27.5	5.8	8.7	26.2	34.8	40.6
Louisville	10.6	31.0	2.1	12.7	28.4	37.5	56.3
Jackson	5.9	21.4	7.4	8.1	22.5	31.9	45.0
St. Louis	14.9	39.1	4.1	11.5	31.3	40.5	53.8
St. Paul	14.9	35.5	6.1	12.1	30.6	43.5	40.9
Omaha	25.9	61.1	7.4	18.0	47.8	56.2	27.1
Wichita	11.9	35.1	4.8	9.1	27.7	37.0	40.7
Texas	2.6	12.7	0.4	4.6	15.7	22.7	31.4
Sacramento	4.2	23.0	2.1	3.7	14.7	23.0	32.7
Spokane	6.6	19.5	1.9	9.4	23.2	29.6	36.0
U.S.	10.3	34.4	4.5	10.4	27.8	37.5	38.9

Table 4B. Liquidation Required to Service Remaining Debt From Projected Cash Flows With Low Interest Rates.

Region	Assets Sold[1] ($m)	Debt Liquidated ($m)	Debt Written Off ($m)	Operators Selling Out	Operators Scaling Back	Operators With Negative NCF	Asets Purchased ($m)
Springfield	$ 529	$ 342	$ 35	3,067	9,880	22,471	$ 4,941
Baltimore	1,368	702	85	7,287	22,821	34,638	11,025
Columbia	2,062	1,462	310	8,923	26,829	35,623	12,467
Louisville	5,185	2,851	197	29,355	65,852	86,690	27,428
Jackson	1,030	720	247	5,762	15,999	22,614	7,910
St. Louis	6,498	4,760	495	18,462	50,408	65,321	23,491
St. Paul	9,558	7,874	1,347	27,254	68,551	97,468	26,165
Omaha	14,016	11,334	1,369	30,297	80,366	94,522	14,648
Wichita	5,413	4,410	600	12,517	38,295	51,133	18,584
Texas	1,486	809	24	5,372	18,272	26,389	17,929
Sacramento	2,318	2,128	191	2,363	9,313	14,592	17,852
Spokane	2,530	1,566	155	9,740	24,088	30,753	13,860
U.S.	$51,994	$38,958	$5,056	160,399	430,674	582,213	$196,300

[1] $m signifies millions of dollars.

Table 5. Liquidation Required to Service Remaining Debt From Projected Cash Flows With High Interest Rates.

Region	Assets Sold (%)	Debt Liquidated (%)	Debt Written Off (%)	Operators Selling Out (%)	Operators Scaling Back (%)	Operators With Negative NCF (%)	Assets Purchased (%)
Springfield	2.9	17.0	1.3	3.8	20.4	40.0	16.6
Baltimore	4.5	23.1	3.0	5.6	22.4	32.4	26.9
Columbia	6.8	32.0	6.3	6.8	27.9	36.0	28.5
Louisville	10.4	34.8	2.1	9.4	30.1	39.1	33.6
Jackson	7.1	29.1	8.0	7.2	23.3	33.6	31.8
St. Louis	16.3	46.7	4.4	9.2	32.8	42.8	31.0
St. Paul	17.5	43.0	6.9	11.4	37.3	49.2	23.4
Omaha	26.6	65.0	8.1	16.5	51.7	60.7	14.9
Wichita	13.2	40.0	5.0	8.1	30.7	39.7	26.3
Texas	2.9	16.5	0.3	3.9	16.8	24.8	22.6
Sacramento	5.0	27.5	2.1	3.4	16.9	25.6	22.6
Spokane	7.0	23.5	2.0	5.8	24.7	31.9	24.6
U.S.	11.1	39.7	4.9	8.6	30.5	40.3	24.8

Table 5B. Liquidation Required to Service Remaining Debt From Projected Cash Flows With High Interest Rates.

Region	Assets Sold ($m)[1]	Debt Liquidated ($m)	Debt Written Off ($m)	Operators Selling Out	Operators Scaling Back	Operators With Negative NCF	Assets Purchased ($m)
Springfield	$ 609	$ 470	$ 36	2,303	12,291	24,098	$ 3,480
Baltimore	1,292	852	110	6,213	24,727	35,784	7,725
Columbia	2,097	1,698	335	6,939	28,574	36,905	8,759
Louisville	5,085	3,200	192	21,822	69,565	90,538	16,355
Jackson	1,244	978	270	5,085	16,561	23,868	5,593
St. Louis	7,106	5,685	537	14,750	52,779	69,014	13,517
St. Paul	11,193	9,535	1,517	25,558	83,472	110,188	15,006
Omaha	14,347	12,043	1,504	27,810	86,965	102,134	8,032
Wichita	6,010	5,019	622	11,139	42,391	54,787	11,988
Texas	1,679	1,056	22	4,542	19,567	28,851	12,873
Sacramento	2,721	2,541	197	2,173	10,722	16,237	12,309
Spokane	2,683	1,887	159	6,066	25,702	33,119	9,466
U.S.	$ 56,066	$ 44,964	$5,502	134,400	473,316	625,523	$125,103

[1] $m signifies millions of dollars.

Table 6. Expected Liquidation Given Projected Cash Flows When Only Failing Farms Sell Assets.

Region	Assets Sold (%)	Debt Liquidated (%)	Debt Written Off (%)	Operators Selling Out (%)	Operators Scaling Back (%)	Operators With Negative NCF (%)	Assets Purchased (%)
Springfield	1.6	9.6	2.4	5.1	19.3	38.7	19.6
Baltimore	2.4	15.6	4.2	6.8	20.9	31.8	31.7
Columbia	3.3	20.7	8.3	7.5	27.3	35.6	33.6
Louisville	5.8	25.9	4.1	8.6	29.3	38.3	42.1
Jackson	4.5	27.4	11.4	7.7	23.2	32.2	37.3
St. Louis	7.2	24.1	6.6	10.6	32.2	41.1	39.4
St. Paul	9.7	28.8	9.2	12.1	34.4	46.5	29.9
Omaha	13.5	37.1	11.1	18.7	49.4	58.6	19.3
Wichita	5.5	20.8	7.4	10.0	28.8	38.2	31.9
Texas	0.6	4.7	1.6	3.5	16.2	23.7	26.3
Sacramento	3.5	20.3	3.2	4.0	15.9	24.4	26.7
Spokane	2.9	13.1	3.3	5.2	24.0	30.8	29.3
U.S.	5.6	24.0	7.0	9.3	29.2	38.9	30.3

Table 6B. Expected Liquidation Given Projected Cash Flows When Only Failing Farms Sell Assets.

Region	Assets Sold[1] ($m)	Debt Liquidated ($m)	Debt Written Off ($m)	Operators Selling Out	Operators Scaling Back	Operators With Negative NCF	Assets Purchased ($m)
Springfield	$ 330	$ 266	$ 66	3,056	11,606	23,345	$ 4,097
Baltimore	677	578	154	7,535	23,091	35,185	9,108
Columbia	1,011	1,097	443	7,639	27,962	36,501	10,312
Louisville	2,806	2,375	375	20,037	67,841	88,705	20,492
Jackson	797	922	384	5,498	16,476	22,852	6,555
St. Louis	3,132	2,932	800	17,085	51,939	66,222	17,207
St. Paul	6,191	6,380	2,027	27,108	77,037	104,101	19,154
Omaha	7,278	6,870	2,055	31,605	83,139	98,521	10,442
Wichita	2,515	2,615	935	13,880	39,762	52,791	14,573
Texas	338	299	105	4,114	18,799	27,499	15,012
Sacramento	1,916	1,878	295	2,552	10,094	15,467	14,549
Spokane	1,121	1,050	264	5,454	24,984	31,978	11,299
U.S.	$ 28,112	$ 27,262	$7,903	145,562	452,730	603,168	$152,801

[1] $m signifies millions of dollars.

Table 7.1 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Springfield.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	1.6	1.1	1.2	1.2
$m[2]	$ 330	$ 237	$ 249	$ 252
Debt Liquidated				
Percent	9.6	7.2	7.5	7.6
$m	$ 266	$ 200	$ 209	$ 211
Debt Written Off				
Percent	2.4	2.0	2.1	2.1
$m	$ 66	$ 54	$ 57	$ 58
Operators Selling Out				
Percent	5.1	4.3	4.3	4.3
Number	3,056	2,549	2,569	2,585
Operators Not Servicing Debt				
Percent	19.3	19.3	19.3	19.3
Number	11,606	11,606	11,606	11,606
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	28.3	17.4	12.2
Number	0	3,280	2,020	1,417
Buydown Costs				
Federal ($m)	$ 0	$ 7	$ 11	$ 9
Lender ($m)	$ 0	$ 8	$ 0	$ 0
Total ($m)	$ 0	$ 15	$ 11	$ 9
Average Payment per Farm ($m)	$ 0	$4,573	$5,446	$6,351
Interest shortfall ($m)	$ 19	$ 4	$ 8	$ 10
Principal shortfall ($m)	$ 29	$ 29	$ 29	$ 29
Total shortfall ($m)	$ 48	$ 33	$ 37	$ 39

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.2 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Baltimore.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	2.4	2.0	2.0	2.4
$m[2]	$ 677	$ 578	$ 582	$ 677
Debt Liquidated				
Percent	15.6	13.6	13.7	15.6
$m	$ 578	$ 502	$ 505	$ 578
Debt Written Off				
Percent	4.2	3.6	3.9	4.1
$m	$ 154	$ 133	$ 145	$ 152
Operators Selling Out				
Percent	6.8	6.4	6.4	6.8
Number	7,535	7,132	7,131	7,535
Operators Not Servicing Debt				
Percent	20.9	20.9	20.9	20.9
Number	23,091	23,091	23,091	23,091
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	32.9	16.4	1.3
Number	0	7,607	3,781	306
Buydown Costs				
Federal ($m)	$ 0	$ 12	$ 13	$ 2
Lender ($m)	$ 0	$ 15	$ 0	$ 0
Total ($m)	$ 0	$ 27	$ 13	$ 2
Average Payment per Farm ($m)	$ 0	$3,549	$3,438	$ 6,536
Interest shortfall ($m)	$ 33	$ 6	$ 20	$ 31
Principal shortfall ($m)	$ 38	$ 38	$ 38	$ 38
Total shortfall ($m)	$ 71	$ 44	$ 58	$ 69

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.3 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Columbia.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	3.3	2.5	2.6	3.2
$m[2]	$1,011	$ 774	$ 810	$ 969
Debt Liquidated				
Percent	20.7	17.9	18.4	20.3
$m	$1,097	$ 950	$ 978	$ 1,077
Debt Written Off				
Percent	8.3	7.2	8.0	8.2
$m	$ 443	$ 385	$ 425	$ 435
Operators Selling Out				
Percent	7.5	6.1	6.1	6.9
Number	7,639	6,234	6,152	7,015
Operators Not Servicing Debt				
Percent	27.3	27.3	27.3	27.3
Number	27,962	27,962	27,962	27,962
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	42.8	23.1	9.9
Number	0	11,955	6,468	2,758
Buydown Costs				
Federal ($m)	$ 0	$ 27	$ 17	$ 6
Lender ($m)	$ 0	$ 43	$ 0	$ 0
Total ($m)	$ 0	$ 70	$ 17	$ 6
Average Payment per Farm ($m)	$ 0	$5,855	$2,628	$ 2,175
Interest shortfall ($m)	$ 91	$ 21	$ 74	$ 85
Principal shortfall ($m)	$ 88	$ 88	$ 88	$ 88
Total shortfall ($m)	$ 179	$ 109	$ 162	$ 173

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.4 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Louisville.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	5.8	4.8	5.6	5.6
$m[2]	$2,806	$2,344	$2,742	$ 2,742
Debt Liquidated				
Percent	25.9	22.2	25.5	25.5
$m	$2,375	$2,036	$2,344	$ 2,344
Debt Written Off				
Percent	4.1	3.2	3.8	3.8
$m	$ 375	$ 294	$ 345	$ 351
Operators Selling Out				
Percent	8.6	8.3	8.1	8.1
Number	20,037	19,292	18,739	18,739
Operators Not Servicing Debt				
Percent	29.3	29.3	29.3	29.3
Number	67,841	67,841	67,841	67,841
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	37.7	24.3	16.6
Number	0	25,588	16,514	11,256
Buydown Costs				
Federal ($m)	$ 0	$ 47	$ 39	$ 26
Lender ($m)	$ 0	$ 57	$ 0	$ 0
Total ($m)	$ 0	$ 104	$ 39	$ 26
Average Payment per Farm ($m)	$ 0	$4,064	$2,362	$ 2,310
Interest shortfall ($m)	$ 132	$ 28	$ 93	$ 106
Principal shortfall ($m)	$ 163	$ 163	$ 163	$ 163
Total shortfall ($m)	$ 295	$ 191	$ 256	$ 269

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.5 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Jackson.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	4.5	4.1	4.4	4.4
$m[2]	$ 797	$ 722	$ 782	$ 782
Debt Liquidated				
Percent	27.4	25.7	27.2	27.2
$m	$ 922	$ 863	$ 914	$ 914
Debt Written Off				
Percent	11.4	10.7	11.3	11.4
$m	$ 384	$ 359	$ 382	$ 382
Operators Selling Out				
Percent	7.7	7.6	7.3	7.3
Number	5,498	5,393	5,229	5,229
Operators Not Servicing Debt				
Percent	23.2	23.2	23.2	23.2
Number	16,476	16,476	16,476	16,476
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	30.6	13.2	6.5
Number	0	5,035	2,182	1,067
Buydown Costs				
Federal ($m)	$ 0	$ 11	$ 2	$ 1
Lender ($m)	$ 0	$ 18	$ 0	$ 0
Total ($m)	$ 0	$ 29	$ 2	$ 1
Average Payment per Farm ($m)	$ 0	$ 5,760	$ 917	$ 937
Interest shortfall ($m)	$ 36	$ 7	$ 34	$ 35
Principal shortfall ($m)	$ 53	$ 53	$ 53	$ 53
Total shortfall ($m)	$ 89	$ 60	$ 87	$ 88

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.6 Projected Liquidations and Costs of Intervention for One Year with Different Programs, St. Louis.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	7.2	5.3	6.6	6.9
$m[2]	$3,132	$ 2,299	$2,893	$ 3,025
Debt Liquidated				
Percent	24.1	19.3	23.0	23.5
$m	$2,932	$ 2,349	$2,803	$ 2,865
Debt Written Off				
Percent	6.6	5.7	6.2	6.4
$m	$ 800	$ 688	$ 758	$ 774
Operators Selling Out				
Percent	10.6	9.1	9.2	9.8
Number	17,085	14,637	14,874	15,767
Operators Not Servicing Debt				
Percent	32.2	32.2	32.2	32.2
Number	51,939	51,939	51,939	51,939
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	55.6	28.8	16.3
Number	0	28,865	14,968	8,476
Buydown Costs				
Federal ($m)	$ 0	$ 71	$ 41	$ 26
Lender ($m)	$ 0	$ 90	$ 0	$ 0
Total ($m)	$ 0	$ 161	$ 41	$ 26
Average Payment per Farm ($m)	$ 0	$ 5,578	$2,739	$ 3,067
Interest shortfall ($m)	$ 218	$ 57	$ 177	$ 192
Principal shortfall ($m)	$ 259	$ 259	$ 259	$ 259
Total shortfall ($m)	$ 477	$ 316	$ 436	$ 451

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.7 Projected Liquidations and Costs of Intervention for One Year with Different Programs, St. Paul.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	9.7	8.8	8.9	9.4
$m[2]	$ 6,191	$ 5,642	$5,674	$6,030
Debt Liquidated				
Percent	28.8	27.2	27.3	28.3
$m	$ 6,380	$ 6,022	$6,053	$6,277
Debt Written Off				
Percent	9.2	8.0	8.8	9.0
$m	$ 2,027	$ 1,780	$1,950	$1,986
Operators Selling Out				
Percent	12.1	10.7	10.4	11.3
Number	27,108	24,049	23,190	25,207
Operators Not Servicing Debt				
Percent	34.4	34.4	34.4	34.4
Number	77,037	77,037	77,037	77,037
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	58.7	29.3	16.3
Number	0	45,201	22,563	12,525
Buydown Costs				
Federal ($m)	$ 0	$ 133	$ 89	$ 44
Lender ($m)	$ 0	$ 176	$ 0	0
Total ($m)	$ 0	$ 309	$ 89	$ 44
Average Payment per Farm ($m)	$ 0	$ 6,836	$3,945	$3,513
Interest shortfall ($m)	$ 389	$ 81	$ 300	$ 345
Principal shortfall ($m)	$ 477	$ 477	$ 477	$ 477
Total shortfall ($m)	$ 866	$ 558	$ 777	$ 822

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.8 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Omaha.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	13.5	10.4	12.7	13.2
$m[2]	$ 7,278	$ 5,605	$6,874	$7,129
Debt Liquidated				
Percent	37.1	31.3	35.7	36.5
$m	$ 6,870	$ 5,810	$6,626	$6,770
Debt Written Off				
Percent	11.1	9.3	10.6	10.7
$m	$ 2,055	$ 1,724	$1,962	$1,989
Operators Selling Out				
Percent	18.7	16.0	17.1	18.0
Number	31,605	26,957	29,279	30,370
Operators Not Servicing Debt				
Percent	49.4	49.4	49.4	49.4
Number	83,139	83,139	83,139	83,139
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	71.0	28.5	17.4
Number	0	59,051	23,762	14,507
Buydown Costs				
Federal ($m)	$ 0	$ 182	$ 98	$ 68
Lender ($m)	$ 0	$ 274	$ 0	0
Total ($m)	$ 0	$ 456	$ 98	$ 68
Average Payment per Farm ($m)	$ 0	$ 7,722	$4,124	$4,687
Interest shortfall ($m)	$ 584	$ 128	$ 486	$ 516
Principal shortfall ($m)	$ 550	$ 550	$ 550	$ 550
Total shortfall ($m)	$ 1,134	$ 678	$1,036	$1,066

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.9 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Wichita.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	5.5	4.2	5.1	5.4
$m[2]	$ 2,515	$ 1,920	$2,345	$2,476
Debt Liquidated				
Percent	20.8	17.5	20.0	20.6
$m	$ 2,615	$ 2,196	$2,508	$2,588
Debt Written Off				
Percent	7.4	6.6	7.1	7.3
$m	$ 935	$ 830	$ 896	$ 911
Operators Selling Out				
Percent	10.0	9.2	9.3	9.8
Number	13,880	12,824	12,958	13,567
Operators Not Servicing Debt				
Percent	28.8	28.8	28.8	28.8
Number	39,762	39,762	39,762	39,762
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	57.8	25.1	18.4
Number	0	22,969	9,996	7,323
Buydown Costs				
Federal ($m)	$ 0	$ 87	$ 39	$ 26
Lender ($m)	$ 0	$ 119	$ 0	$ 0
Total ($m)	$ 0	$ 206	$ 39	$ 26
Average Payment per Farm ($m)	$ 0	$ 8,970	$3,902	$3,550
Interest shortfall ($m)	$ 256	$ 50	$ 217	$ 230
Principal shortfall ($m)	$ 283	$ 283	$ 283	$ 283
Total shortfall ($m)	$ 539	$ 333	$ 500	$ 513

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.10 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Texas.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	0.6	0.5	0.5	0.5
$m[2]	$ 338	$ 304	$ 281	$ 303
Debt Liquidated				
Percent	4.7	4.5	4.3	4.4
$m	$ 299	$ 290	$ 278	$ 281
Debt Written Off				
Percent	1.6	1.5	1.5	1.6
$m	$ 105	$ 96	$ 97	$ 101
Operators Selling Out				
Percent	3.5	3.3	3.0	3.2
Number	4,114	3,791	3,432	3,744
Operators Not Servicing Debt				
Percent	16.2	16.2	16.2	16.2
Number	18,799	18,799	18,799	18,799
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	36.6	13.9	7.6
Number	0	6,879	2,605	1,426
Buydown Costs				
Federal ($m)	$ 0	$ 18	$ 3	$ 2
Lender ($m)	$ 0	$ 22	$ 0	$ 0
Total ($m)	$ 0	$ 40	$ 3	$ 2
Average Payment per Farm ($m)	$ 0	$ 5,815	$1,152	$1,403
Interest shortfall ($m)	$ 50	$ 10	$ 47	$ 48
Principal shortfall ($m)	$ 68	$ 68	$ 68	$ 68
Total shortfall ($m)	$ 118	$ 78	$ 115	$ 116

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.11 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Sacramento.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	3.5	3.3	3.5	3.5
$m[2]	$ 1,916	$ 1,789	$1,809	$1,916
Debt Liquidated				
Percent	20.3	19.4	20.2	20.3
$m	$ 1,878	$ 1,789	$1,867	$1,878
Debt Written Off				
Percent	3.2	2.4	3.1	3.2
$m	$ 295	$ 221	$ 288	$ 293
Operators Selling Out				
Percent	4.0	3.6	3.6	4.0
Number	2,552	2,299	2,312	2,552
Operators Not Servicing Debt				
Percent	15.9	15.9	15.9	15.9
Number	10,094	10,094	10,094	10,094
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	55.8	21.0	5.3
Number	0	5,630	2,119	531
Buydown Costs				
Federal ($m)	$ 0	$ 42	$ 10	$ 2
Lender ($m)	$ 0	$ 60	$ 0	$ 0
Total ($m)	$ 0	$ 102	$ 10	$ 2
Average Payment per Farm ($m)	$ 0	$ 18,117	$4,719	$3,766
Interest shortfall ($m)	$ 118	$ 16	$ 108	$ 116
Principal shortfall ($m)	$ 152	$ 152	$ 152	$ 152
Total shortfall ($m)	$ 270	$ 168	$ 260	$ 268

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.12 Projected Liquidations and Costs of Intervention for One Year with Different Programs, Spokane.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	2.9	2.3	2.7	2.8
$m[2]	$ 1,121	$ 889	$1,034	$1,096
Debt Liquidated				
Percent	13.1	11.2	12.5	13.0
$m	$ 1,050	$ 897	$1,002	$1,038
Debt Written Off				
Percent	3.3	2.7	3.2	3.2
$m	$ 264	$ 213	$ 253	$ 260
Operators Selling Out				
Percent	5.2	4.3	4.6	4.9
Number	5,454	4,528	4,775	5,145
Operators Not Servicing Debt				
Percent	24.0	24.0	24.0	24.0
Number	24,984	24,984	24,984	24,984
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	36.5	15.9	3.3
Number	0	9,123	3,964	834
Buydown Costs				
Federal ($m)	$ 0	$ 31	$ 13	$ 3
Lender ($m)	$ 0	$ 46	$ 0	$ 0
Total ($m)	$ 0	$ 77	$ 13	$ 3
Average Payment per Farm ($m)	$ 0	$ 8,440	$3,280	$3,597
Interest shortfall ($m)	$ 103	$ 26	$ 90	$ 100
Principal shortfall ($m)	$ 106	$ 106	$ 106	$ 106
Total shortfall ($m)	$ 209	$ 132	$ 196	$ 206

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 7.13 Projected Liquidations and Costs of Intervention for One Year with Different Programs, United States.

	Do Nothing	Fixed Rate Buydown	Limited Targeted Buydown (NW <$100,000)[1]	Limited Targeted Buydown (NW <$50,00)
Assets Sold				
Percent	5.6	4.6	5.2	5.4
$m[2]	$ 28,112	$ 23,103	$26,154	$ 27,397
Debt Liquidated				
Percent	24.0	21.1	23.0	23.7
$m	$ 27,262	$ 23,905	$26,086	$ 26,820
Debt Written Off				
Percent	7.0	6.0	6.7	6.8
$m	$ 7,903	$ 6,779	$ 7,559	$ 7,692
Operators Selling Out				
Percent	9.3	8.3	8.4	8.8
Number	145,562	129,686	130,189	137,457
Operators Not Servicing Debt				
Percent	29.2	29.2	29.2	29.2
Number	452,730	452,730	452,730	452,730
Operators Not Servicing Debt Who Qualify for Buydown				
Percent	0	51.1	24.5	13.8
Number	0	231,183	110,942	62,425
Buydown Costs				
Federal ($m)	$ 0	$ 668	$ 377	$ 215
Lender ($m)	$ 0	928	0	$ 0
Total ($m)	$ 0	$ 1,596	$ 377	$ 215
Average Payment per Farm ($m)	$ 0	$ 6,904	$ 3,398	$ 3,444
Interest shortfall ($m)	$ 2,030	$ 435	$ 1,653	$ 1,815
Principal shortfall ($m)	$ 2,267	$ 2,267	$ 2,267	$ 2,267
Total shortfall ($m)	$ 4,297	$ 2,702	$ 3,920	$ 4,082

[1] NW = Net Worth
[2] $m = Millions of Dollars

Table 8. Summary of Costs of Interest Rate Buydown by FCS Region (Millions of Dollars)

	"Do Nothing" Interest Shortfalls	Fixed Rate Buydown			Limited Targeted Buydown (NW <$100,000)	Limited Targeted Buydown (NW <$50,000)
		Federal Government	Agricultural Lender	Total		
Springfield	$ 19	$ 7	$ 8	$ 15	$ 11	$ 9
Baltimore	33	12	15	27	13	2
Columbia	91	27	43	70	17	6
Louisville	132	47	57	104	39	26
Jackson	36	11	18	29	2	1
St. Louis	218	71	90	161	41	26
St. Paul	389	133	176	309	89	44
Omaha	584	182	274	456	98	68
Wichita	256	87	119	206	39	26
Texas	50	18	22	40	3	2
Sacramento	118	42	60	102	10	2
Spokane	103	31	46	77	13	3
U.S.	$2,030	$668	$928	$1,596	$377	$215

Table 9. Projected Liquidations and Costs of Intervention by FCS District with a Land Holding Company.

	Springfield	Baltimore	Columbia	Louisville	Jackson	St. Louis
Assets Sold (%)	0.9	1.6	1.8	5.1	4.3	4.9
(%M)	$196	$462	$552	$2,500	$756	$2,149
Assets Sold and Leased back to LHC (%)	1.0	1.6	2.4	2.3	1.3	3.7
($M)	$214	$458	$730	$1,136	$237	$1,614
Debt Liquidated (%)	7.5	12.7	17.3	26.4	27.5	22.0
($M)	$208	$469	$921	$2,421	$924	$2,672
Debt Liquidated through LHC (%)	7.5	11.6	11.9	10.7	6.0	11.1
($M)	$209	$429	$633	$985	$202	$1,352
Debt Written Off (%)	2.6	4.7	8.3	4.0	11.6	6.4
($M)	$71	$172	$440	$372	$391	$782
Operators Selling Out (%)	4.2	6.6	6.3	9.3	9.0	9.9
(Number)	2,541	7,274	6,389	21,643	6,385	15,860
Operators Not Servicing Debt (%)	19.3	20.9	27.3	29.3	23.2	32.2
(Number)	11,606	23,091	27,962	67,841	16,476	51,939
Operators Not Servicing Debt Who Use LHC (%)	31.6	33.0	44.3	37.9	30.6	55.6
(Number)	3,662	7,610	12,395	25,709	5,035	28,865
LHC Maintenance Costs ($M)	$12	$25	$29	$23	$13	$27
Land Held by LHC (acres)	125,000	352,000	614,000	986,000	205,000	1,640,000
Land Sold (acres/farm)	34	46	50	38	41	57
Interest Shortfall ($M)	$16	$24	$87	$123	$36	$205
Principal Shortfall ($M)	35	60	117	196	62	323
Total Shortfall ($M)	$51	$84	$204	$319	$98	$528

Table 9 cont.d.

	St. Paul	Omaha	Wichita	Texas	Sacramento	Spokane	U.S.
Assets Sold (%)	7.3	10.7	4.2	0.5	3.3	2.0	4.3
($M)	$4,652	$5,793	$1,898	$272	$1,785	$763	$21,779
Assets Sold and Leased back to LHC (%)	4.8	6.8	3.2	0.6	0.8	1.7	2.8
($M)	$3,054	$3,649	$1,462	$362	$412	$670	$13,998
Debt Liquidated (%)	27.5	36.3	20.1	4.7	20.4	12.0	23.0
($M)	$6,089	$6,721	$2,524	$298	$1,883	$962	$26,093
Debt Liquidated through LHC (%)	10.4	14.9	9.0	4.3	3.8	7.1	9.9
($M)	$2,309	$2,760	$1,130	$276	$348	$566	$11,198
Debt Written Off (%)	9.1	11.2	7.8	1.9	3.2	3.3	7.0
($M)	$2,022	$2,067	$973	$120	$300	$261	$7,972
Operators Selling Out (%)	11.2	17.3	8.8	3.7	3.9	6.2	9.0
(Number)	25,106	29,121	$12,124	$4,281	$2,433	$6,512	$139,668
Operators Not Servicing Debt (%)	34.4	49.4	28.8	16.2	15.9	24.0	29.2
(Number)	77,037	83,139	39,762	18,799	10,094	24,984	452,730
Operators Not Servicing Debt Who Use LHC (%)	59.2	71.7	58.8	37.1	55.8	36.5	51.6
(Number)	45,573	59,590	23,370	6,971	5,630	9,123	233,533
LHC Maintenance Costs ($M)	$48	$34	$42	$17	$17	$28	$315
Land Held by LHC (acres)	3,628,000	7,767,000	3,484,000	372,000	394,000	843,000	20,409,000
Land Sold (acres/farm)	80	130	149	53	70	92	87
Interest Shortfall ($M)	383	576	252	48	118	106	$1,975
Principal Shortfall ($M)	560	686	334	82	171	130	$2,757
Total Shortfall ($M)	$943	$1,262	$586	$130	$289	$236	$4,732

Appendix Table A.1 Farm Operators, Assets, and Debts by Farm Credit System District

FCS District	Operators	Assets (Billions of Dollars)	Debts (Billions of Dollars)
Springfield	60,282	$ 20.9	$ 2.8
Baltimore	110,562	28.7	3.7
Columbia	102,468	30.7	5.3
Louisville	231,470	48.7	9.2
Jackson	70,974	17.6	3.4
St. Louis	161,126	43.7	12.2
St. Paul	223,875	64.0	22.1
Omaha	168,171	54.0	18.5
Wichita	138,166	45.6	12.5
Texas	116,142	57.0	6.4
Sacramento	63,494	54.6	9.2
Spokane	103,913	38.5	8.0
U.S.	1,550,643	$504.1	$113.4

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