
Agriculture

AN EIGHTH DISTRICT PERSPECTIVE

FALL 1986

Aggregate Farm Finances: Another Look

The nature of the farm financial problem can be stated simply: farmers who assumed debt to purchase farmland at inflated values are in financial trouble, and those who did not, are not. Because farm debt expanded in the 1970s by the amount of asset appreciation rather than at a rate consistent with the ability to repay debt, the 27 percent average decline in farmland values since 1981 has precipitated a major restructuring of the farm sector's balance sheet. As one study at the University of Missouri has demonstrated, many producers who financed current consumption and offset operating losses by taking on additional debt against inflated asset values are unable to repay their current debt load even at zero interest.¹ For these farmers, the only solution has been, or will be, bankruptcy.

The financial stress of a relatively small share of farm operations, however, has generated in some circles the impression that the entire farm sector is unhealthy. For example, studies by Wharton Econometrics and the Food and Agricultural Policy Research Institute (FAPRI) have alleged that the sector's financial problems are so severe that they threaten the entire U.S. economy. A careful analysis of the data, however, suggests that whatever financial stress the sector faces is concentrated among a relatively small share of farm operators. Moreover, it is clear that, even for a worst-case scenario, the farm debt problem holds little consequence for the aggregate economy.

Farm Financial Stress: Some Common Misperceptions

Attempts to analyze the scope of the farm financial problem can make a number of false starts. The two most common distort the picture by including individuals not really engaged in farming. Typically, total farm debt has been cited as \$212 billion as of December 31, 1984. This figure, however, includes much more than the debt of

¹Bruce Bullock, *Farm Credit Situation: Implications for Agricultural Policy*, FAPRI #4, University of Missouri-Columbia, March 1985.

farm operators related to their farm businesses. Also included is the debt of individuals who have borrowed to purchase farm assets but who are not engaged in farming (e.g., individuals who farmed the tax code by purchasing and renting farmland) and the debt of farmers held for non-farm purposes. When this debt, unrelated to farm operations, is excluded from the total, farm sector debt falls to \$119 billion. It declines further, to \$99 billion, when the debt of "lifestyle" farms, those with less than \$40,000 in annual sales, is excluded. Limiting the discussion to only commercial-size farms with annual sales of at least \$40,000 provides the financial summary shown in the table on page 2. At the end of 1984, about 633,000 businesses were classified as commercial farms and held \$99 billion in debt.

Using the traditional criterion that farmers with debt-to-asset ratios of 40 percent or less are experiencing no financial stress, the data indicate that 69 percent (436,000) of commercial farms were unstressed. These financially healthy operators owned 75 percent of commercial farm assets, held 36 percent of commercial farm debt and had an average debt-to-asset ratio of 13 percent. In dollar terms, farmers in this category had average assets valued at \$649,800 and debts of \$83,900. In other words, the 69 percent of commercial-size farms under little or no financial stress had an average net worth of \$570,250 at the end of 1984. In comparison with the median U.S. household net worth of \$39,000, these farmers might be classified as quite wealthy businessmen.

The 'Problem' Farm Debt

The table also shows that 5 percent of commercial farms, which held \$13.4 billion in debt, were technically insolvent at the end of 1984. An additional 7 percent of farms, whose debt-to-asset ratios of 70 to 99 percent suggest a high probability of bankruptcy in the near future, held about \$16.2 billion in debt. Within the category of stressed farm operators, then, it might be reasonable to say that 12 percent (74,000) of commercial farms holding \$29.6 billion in debt have failed or are likely to fail soon, while another 19 percent



Table 1

An Overview of the Commercial Farm Balance Sheet: Average Values of Debt and Assets by Sales Class and Debt-to-Asset Ratios, 12/31/84 (dollar values are in thousands)

Sales Class (thousands)		Debt-to-Asset Ratio				Average for Sales Class
		0-39%	40-69%	70-99%	100% +	
\$500 or more	Number of farms:	19,654	6,340	2,536		
	Average debt:	\$322	990	1,181	2,392	665
	Average assets:	\$2,316	1,905	1,461	1,517	2,104
\$250-\$499	Number of farms:	42,478	15,850	6,340		
	Average debt:	\$185	435	550	566	298
	Average assets:	\$1,118	823	680	411	969
\$100-\$249	Number of farms:	152,794	48,184	16,484	10,778	
	Average debt:	\$84	268	345	356	155
	Average assets:	\$638	507	431	257	577
\$40-\$99	Number of farms:	221,266	51,988	18,386	13,948	
	Average debt:	\$39	150	199	198	75
	Average assets:	\$390	281	234	145	351

SOURCE: Farm Debt, Government Payments, and Options to Relieve Financial Stress, GAO/RCED-86-126BR, March 1986.

(122,000) of farms, with debt-to-asset ratios between 40 and 69 percent and \$34 billion in debt, have a significant probability of failing. Without further analysis, these data imply a debt default of between \$13.4 and \$63.6 billion and the loss of nearly 200,000 farmers, almost one-third of the total. But, even under some worst-case assumptions, there appears to be little likelihood that these losses will unduly burden either farm production or aggregate economic activity.

First, consider the dimensions of the bad debt. If it is assumed that all commercial farms with debt-to-asset ratios greater than 40 percent eventually default on their debt, the write-off would be about \$64 billion. But, it is important to recall that the assets pledged as collateral for the debt have some value so that the commercial bank, Farm Credit System or other lender will lose only a fraction of the loan amount. Assuming, conservatively, that lenders recover only 50 cents on the dollar for their bad loans reduces the actual loss to \$32 billion. If the bad farm debt were held entirely by commercial banks, this \$32 billion loss would represent only about 1.6 percent of the \$2 trillion in loans and securities held by the commercial banking system. Expressed as a share of assets held by the much larger aggregate financial community, this loss clearly can be absorbed with little *aggregate* impact on credit markets. Certainly, some individual banks and, perhaps, even the Farm Credit System, will fail if a loss of this magnitude is realized, but the overall soundness of the financial system is in no jeopardy.

To understand this point better, recall the mechanics of

bankruptcy. If a farmer defaults on his debt, his creditor assumes ownership of the assets pledged as collateral, such as farmland, buildings and equipment. If these assets were purchased at the inflated prices of the late 1970s or early 1980s, they will be revalued at substantially lower prices consistent with their capacity to generate income employed in farming (or in a higher-valued alternative activity). While one farmer leaves the industry by virtue of his bankruptcy and the creditor absorbs a loss approximately equal to the downward adjustment in asset prices, a new farmer enters the industry (or a current operation expands) by purchasing the bankrupt farm's assets and employing them in farming. Although the worst case indicates the loss of 200,000 farmers, their replacement by new individuals implies only small changes in the total number of farmers and little effect on farm output. In fact, it is reasonable to expect that many of the owner-operators who become insolvent would continue to work as farmers, either by renting land or working as hired labor.

A similar process would govern the adjustment of farm lenders that fail. If commercial banks or the Farm Credit System incur farm loan losses that render them insolvent, other financial institutions will purchase the remaining good assets and write off losses on the bad loans. For the most part, the end result of a farm bank failure will be a similar institution (under a different name and management) providing the same services formerly supplied by the insolvent institution.

—Michael T. Belongia

Agriculture—An Eighth District Perspective is a quarterly summary of agricultural conditions in the area served by the Federal Reserve Bank of St. Louis. Single subscriptions are available free of charge by writing: Research and Public Information Department, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, Missouri 63166. Views expressed are not necessarily official positions of the Federal Reserve System.

EIGHTH DISTRICT AGRICULTURAL DATA

<u>Prices and Costs¹</u>	Jun. 1986	Jul. 1986	Aug. 1986	Average for 1985	Percent Change	
					Year-To-Date 1986 ²	Same Month Year Ago
CONSUMER PRICE INDEX (% change)						
Nonfood	0.6%	-0.2%	0.0%	0.3%	-0.4%	1.0%
Food	0.0	1.3	1.2	0.2	2.2	4.4
PRODUCTION COSTS FOR FARMERS (% change)						
Agricultural machinery and equipment	0.2	-0.1	0.2	0.0	0.7	0.7
Mixed Fertilizers	0.2	-0.3	-0.9	-0.2	-1.0	-2.8
Other Agricultural chemicals	0.9	0.9	0.2	-0.1	5.6	3.6
Gasoline	3.7	-19.2	-2.0	0.3	-45.6	-46.0
PRICES RECEIVED BY FARMERS (% change)						
All products	-1.6	3.3	0.0	-0.4	-2.3	-3.3
Livestock	1.5	7.5	3.5	-0.5	8.0	15.6
Crops	-4.4	-3.7	-4.8	-0.5	-15.3	-12.3
FEEDER CATTLE						
Wholesale price - Kansas City (\$/cwt.)	\$58.50	\$61.00	\$65.75	\$64.55	7.8	6.9
FEEDER PIGS						
Wholesale price - So. Missouri (\$/head)	\$41.92	\$50.76	\$56.64	\$37.11	97.7	65.8
BROILERS						
Wholesale price - 12-city (¢/lb.)	58.29¢	69.13¢	69.72¢	50.81¢	43.1	39.2
TURKEYS						
Wholesale price - New York, 8-16 lb. young hens (¢/lb.)	73.83¢	77.85¢	80.46¢	75.48¢	-7.4	2.7
CORN						
Wholesale price - No. 2, yellow - St. Louis (\$/bu.)	\$ 2.52	\$ 2.01	\$ 1.67	\$ 2.66	-35.5	-32.4
SOYBEANS						
Wholesale price - No. 1, yellow - Central Illinois (\$/bu.)	\$ 5.43	\$ 5.33	\$ 5.00	\$ 5.56	-6.0	-3.9
WHEAT						
Wholesale price - No. 1, hard winter - Kansas City (\$/bu.)	\$ 2.80	\$ 2.50	\$ 2.48	\$ 3.39	-27.5	-18.2
LONG-GRAIN RICE						
Wholesale price - Arkansas (\$/cwt.)	\$13.00	\$13.00	\$11.88	\$17.70	-31.1	-33.1
COTTON						
Average price received by U.S. Farmers (¢/lb.)	56.40¢	58.60¢	47.20¢	55.84¢	-11.4	-15.7
					Percent Change	
<u>U.S. Exports</u>	Jun. 1986	Jul. 1986	Aug. 1986	Average for 1985	Year-To-Date 1986 ²	Same Period Year Ago
Corn (mil. bu.)	57.0	45.0	52.0	145.8	-71.0%	-43.5%
Soybeans (mil. bu.)	28.7	26.6	31.0	53.7	-67.1	17.9
Wheat (mil. bu.)	85.6	110.4	124.2	81.7	72.5	38.0
Rice (rough equivalent, mil. cwt.)	6.5	9.6	N.A.	5.1	108.7	91.1
Cotton (thou. bales)	68.9	23.0	272.0	418.7	38.8	31.5

Non-Real-Estate Farm Debt Outstanding

	<u>Banks</u>			<u>PCAs³</u>		
	<u>Outstanding (\$ millions)</u>	<u>Percent Change</u>		<u>Outstanding (\$ millions)</u>	<u>Percent Change</u>	
		<u>6/85 - 6/86</u>	<u>6/84 - 6/86</u>		<u>6/85 - 6/86</u>	<u>6/84 - 6/86</u>
U.S.	\$34,215	- 10.5%	- 17.1%	\$12,708	- 23.9%	- 35.3%
Eighth District ⁴	2,684	0.5	- 11.4	NA	NA	NA
Arkansas	507	16.4	- 7.2	238	- 29.1	- 43.1
Kentucky	601	6.5	- 1.2	243	- 26.8	- 46.6
Missouri	1,197	- 15.8	- 23.0	249	- 30.2	- 46.0
Tennessee	324	- 4.0	- 17.7	244	- 23.9	- 43.1

Agricultural Bank Loan Performance⁵

	<u>Percent of Farm Loans Overdue at Agricultural Banks</u>			<u>Percent of Total Loans Written Off at Agricultural Banks</u>		
	<u>6/86</u>	<u>6/85</u>	<u>6/84</u>	<u>6/86</u>	<u>6/85</u>	<u>6/84</u>
	U.S.	3.9%	6.1%	3.1%	.96%	.33%
Eighth District ⁴	4.3	7.1	3.5	.58	.30	.32
Arkansas	1.7	8.5	2.2	.39	.42	.24
Kentucky	4.9	6.3	4.4	.44	.13	.34
Missouri	3.8	8.3	4.0	.90	.44	.51
Tennessee	1.4	5.8	2.9	.56	.27	.58

Agricultural Production Loan Interest Rate⁶

	<u>Banks</u>		<u>PCAs</u>	
	<u>8/86</u>	<u>8/85</u>	<u>9/86</u>	<u>9/85</u>
Eighth District Average	10.2%	11.8%	11.5%	11.7%

¹ The consumer price index components are seasonally adjusted. All other data are not seasonally adjusted.

² Percent change from December of previous year, based on the most recent month available.

³ Source: Farm Credit Banks of Louisville and St. Louis, Farm Credit Administration.

⁴ Includes all of AR and parts of IL, IN, KY, MO, MS and TN.

⁵ Agricultural banks are defined as those with more than 25 percent of total loans in agricultural loans.

⁶ Interest rate data are for different dates. PCA rates are weighted averages for Arkansas and Missouri, not adjusted for stock purchase requirements. Source: Farm Credit Banks of St. Louis.