

Outlook for Farm Financial Conditions

by Steven C. Blank

USDA forecasts lower total farm income for 2002 and, for the first time, negative average farm income per farm operator household. Ironically, non-farm income and demand for land are supporting farmers in regions where crop diversification is not readily possible. California is performing better. È

Farm financial conditions depend upon the flow of farm income and farmers' wealth. Therefore, this paper looks briefly at some factors that influence farm income and wealth now and in the future.

Income Issues

Farm income depends upon prices and costs. The trends in these factors illustrate the pressures facing American production agriculture.

Prices for undifferentiated agricultural commodities are determined by global supply and demand factors, and prices are declining as global output expands. The USDA's Index of Prices Received for agricultural output decreased 7% in nominal terms from 1990 to 2000. Global agricultural output is increasing due to expanded production in nearly all parts of the world.

Total costs of production are determined by local supply and demand factors for inputs, and in America those costs are going up as competition for resources expands with alternate uses. The USDA's Index of Prices Paid by farmers for inputs increased 19% from 1990 to 2000. Production costs per unit of output are also influenced by productivity.

Productivity improvements (e.g., yield increases) in American agriculture lower costs per unit of output, but contribute to the global surplus, thus adding downward pressure on prices. Therefore, farm income is the net result of a "race" between falling prices and producers' ability to lower production costs per unit through adoption of new technologies and other means of improving efficiencies.

National Totals. Many analysts have focused on either nominal sales revenues or "net farm income" and concluded erroneously that agriculture's performance was strong. The top portion of Table 1 reports the USDA's total values for various income statement items for 1998-2002. Cash receipts have increased most years. In fact, until the 2002 forecasts were released, it looked like net farm income was on a steady upward trend in recent years. However, those trends are misleading. Much of the reported net farm income came from

sources such as "direct government payments" which, when removed, leave a much less optimistic view of farm income. Adjusted production income calculated in Table 1 is substantially lower.

In real terms the trend in adjusted production income has been downward for half a century. 1973 was the only year over the last 50 to have a higher income than the year 1951.

The farm income totals have not done well when converted into investment performance measures either. The average return on equity in American agriculture has trended downward over the last 40 years, from 2.5% in 1960 to 1.5% in 2000.

Farm-level Averages. Converting the national total income data into averages per farm operator household reveals another downtrend. The middle portion of Table 1 shows that net cash farm income and earnings from farming (which is calculated by subtracting various costs from net cash farm income) are both declining. One alarming result is that, for the first time, earnings from farming are expected to be negative in 2002!

A second alarming result visible in Table 1 is the reliance of farm operator households on off-farm sources of income. Clearly, with forecast average earnings from farming of -\$198 in 2002, the financial condition of the "average" farm would be grim if it were not for off-farm income. On average, agriculture is being subsidized by farmers' other activities. This has been true for decades, but the scale of the subsidy has grown in recent years. The ability of farm operators to subsidize agriculture depends, in part, on the availability of off-farm sources of income. If the general economy of a region weakens, causing off-farm income to decrease, the effects on agriculture could be magnified as operators are forced to leave the industry. That exodus would adversely affect farmland values as farms are sold. In turn, the resulting decline in the agricultural economy of the region could exacerbate the general economy's decline in the area.

Both of the alarming results noted above are due to the structure of American agriculture. On average,

Table 1. U.S. Farm Income and Balance Sheet Items, 1998-2002

	1998	1999	2000	2001F	2002F
<i>Income Totals</i>					
	<i>\$ billion</i>				
Crop receipts	101.7	92.6	94.1	95.8	97.9
Livestock receipts	94.1	95.6	99.5	106.1	106.4
Total cash receipts	195.8	188.1	193.6	201.9	204.3
Net farm income	42.9	44.3	46.4	49.3	40.6
Direct government payments	12.4	21.5	22.9	21.1	10.7
Adjusted production income*	30.5	22.8	23.5	28.2	29.9
<i>Farm Income Averages</i>					
	<i>\$ per farm operator household</i>				
Net cash farm income	14,357	13,194	11,175	10,888	8,006
Earnings from farming	7,106	6,359	2,598	2,447	-198
Off-farm earnings	52,628	57,988	9,349	59,943	59,343
Average farm household income**	59,734	64,347	61,947	62,390	59,145
<i>U.S. Farm Balance Sheet</i>					
	<i>\$ billion</i>				
Farm assets	1,085.3	1,140.8	1,188.3	1,216.6	1,228.1
Real estate	840.4	886.4	929.5	957.3	968.8
Total farm debt	172.9	176.4	184.0	192.8	196.5
Real estate	89.6	94.2	97.5	103.1	104.6
Farm equity	912.4	964.4	1,004.3	1,023.8	1,031.6
<i>F=forecast</i>					
<i>Source: USDA on web at: http://www.ers.usda.gov/Briefing/FarmIncome/fore.htm. (January, 2002)</i>			<i>*This is calculated as net farm income minus direct government payments.</i>		
			<i>** This is the sum of earnings from farming and off-farm earnings.</i>		

large-scale farms are profitable while deriving most of their income from agriculture, and small-scale farms lose money on their agricultural activities, but depend upon off-farm sources for their primary income. "Commercial farms" (the 8.2% of U.S. farms with annual sales of \$250,000 or more) are expected to have average net cash income of \$117,800 in 2002, compared to their 1996-2000 average of \$141,800. Yet, about 50% of "large family farms" (those with sales of \$250,000 to \$499,999) report that either the operator or the spouse did some off-farm work. "Intermediate farms" (the 28.9% of U.S. farms with sales below \$250,000 yet whose operators report farming as their major occupation) are expected to have average net cash income of \$7,200 in 2002, compared to their 1996-2000 average of \$12,300. "Rural residence farms" account for the remaining 62.9% of farms and are expected to have average net cash income of -\$2,800 in 2002, compared to their 1996-2000 average of -\$1,800.

Implications. The structure of American agriculture and the declining income trends combine to create some significant implications for future farm financial conditions. First, in the case of commercial farms, they

often cannot afford to diversify their income sources to include substantial off-farm investments, thus they must diversify and shift their on-farm income sources: the crops produced. Most commercial producers need to reinvest profits back into their operations to expand or maintain their economies of scale in an effort to remain cost competitive. Therefore, commercial operators must look for crops that will provide income levels sufficient to meet their financial obligations. In other words, the portfolios of most commercial farmers include investments in crops and little else. Income pressures are pushing farmers to increasingly shift resources from the production of low-value field crops into the production of high-value specialty crops (e.g. fruits and vegetables). Specialty crops do generate higher average income levels, but are riskier in that there is much more volatility in the income streams over time. Therefore, necessary cropping changes are gradually making large farms more risky.

Ironically, small farms are less risky despite the fact that they lose money on average! The reason? They are diversified such that a large majority of their income

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(>100%) comes from off-farm sources, which may be much less volatile than agricultural markets.

Wealth Issues

The bottom portion of Table 1 shows national total farm equity increasing in recent years. However, some inconsistencies in the income and equity trends may signal future trouble for farm financial conditions.

Most farm equity is in farmland. As shown in Table 1, real estate represents 78.9% of farm assets and 53.2% of total farm debt in 2002. Of interest is that 95% of the increase in farm equity reported over the 1998-2002 period comes from increased equity in farm real estate, meaning that farmland values have been increasing despite declining earnings from farming. If agricultural income has not been strong, as indicated by the falling real cash rents observed over the last two decades, then what has been pushing up farmland values in recent years? One answer was provided by the USDA:

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

What the USDA report called “urban influence” affects only about 17% of U.S. farm acreage, but that acreage is scattered around the country. The USDA classifies only 515 counties in the U.S. as being both completely rural (contains no part of a city with at least 2,500 residents) and not adjacent to a metro area. In all remaining counties, the USDA says there is some degree of urban influence on land values.

Urban influence has a significant impact on farmland values. The USDA estimated that during 1994-96 the value of farmland that was not urban-influenced was \$640 per acre, compared to \$1,880 for urban-influenced farmland. Thus, 66% of urban-influenced farmland market value was due to anticipation of eventual nonagricultural uses.

In some areas, the amount of urban influence on farmland values can be extreme. For example, in California’s Ventura County a 35-acre parcel of farmland was recently valued at about \$300,000 per acre, due almost entirely to its development potential.

The conflicting trends of decreasing farm earnings and increasing farmland values match the pattern of

1973-1983 during which American agriculture slid into its worst financial crisis of the past half-century. During that decade, optimistic farmers borrowed heavily on their inflated equity to expand the scale of their operations. What is different now is that lending is based on income, rather than equity, and that is keeping debt ratios in a conservative range (the USDA forecasts an average debt-to-equity ratio of 19.1 for 2002). In the future, it seems clear that debt management will be important as agriculture’s income continues to decline and farmers seek the funds necessary to shift into the higher-value crops. Specialty crops require substantially more money invested per acre and that investment is at risk for longer periods of time, raising the risk exposure of the industry.

Concluding Comments

To assess future prospects for farm financial conditions, three topics need attention. (1) Government support: U.S. agriculture’s financial condition depends heavily on government support. Direct and indirect government payments have become a significant portion of total farm income in recent years. Those forms of support are unstable in amount and face political scrutiny. (2) Market globalization: Technological advances have created a global market that is providing alternative sources of commodities for U.S. consumers and declining prices for U.S. agricultural producers. (3) Portfolio risk: Cropping pattern changes are making agriculture more risky and having impacts on the value of farmland, but crop diversification is more important. Diversified agricultural producers and geographic regions, like California, have stronger financial conditions, on average. Regions that depend upon a few crops have much more volatility in their income levels.

All three of the topics listed above point to relatively weak future prospects for Midwestern farm financial conditions, compared to the more diversified regions of the country. Midwest agriculture focuses on grain production. Unfortunately, (1) grain crops receive most of the government payments, (2) global grain markets face increasing surpluses, and (3) few Midwestern grain farmers can diversify into other commodities. This means there will be increased income and wealth pressures for producers to diversify into more profitable industries. Thus, America can expect the shift of resources out of production agriculture to continue.

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