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The 2024-25 Financial Downturn: Who is the Most Vulnerable

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Midwest crop producers have experienced a significant downturn in corn, soybean, and wheat prices since the beginning of the year and farm incomes are expected to be much lower in 2024 than they have been the last three to four years. Moreover, current expectations are that prices will continue to remain at or below the cost of production for at least a couple more years. Consequently, a key question being asked is as follows: "who is the most vulnerable financially during this downturn"?

Financial stress or vulnerability is typically measured using a profitability measure and a solvency measure. Profitability is typically measured using the operating profit margin ratio and solvency is measured using the debt to asset ratio. The operating profit margin ratio is computed by adding interest expense and subtracting unpaid family and operator labor from net farm income and then dividing the result by either value of farm production or gross revenue. For the operating profit margin to be positive, net farm income plus interest expense has to be large enough to cover unpaid family and operator labor. A long-run benchmark for the operating profit margin ratio is 20 percent. The debt to asset ratio is computed by dividing total farm debt by total farm assets. Given the importance of land to total farm assets, land values are an extremely critical determinant of a farm's debt to asset ratio. Farms with little to no owned land tend to have relatively higher debt to asset ratios.

Farms are said to be financially stressed if the operating margin is relatively low and the debt to asset ratio is relatively high. Specifically, a farm is said to be financially stressed if the operating profit margin is negative and the debt to asset ratio is above 0.70. Measuring financial stress is not the same thing as measuring credit quality or the probability of default. Measures involving credit quality and probability of default typically include the percentage of assets owned, repayment capacity, and working capital (Featherstone and Langemeier, 2017). Comparing the two concepts, financial stress provides a warning signal whereas credit quality reflects the risk that a farm may not be able to repay short-term and long-term debt.

The discussion below will discuss operating profit margin and debt to asset ratio for crop farms using FINBIN data summarized by the Center for Farm Financial Management at the University of Minnesota. One of the most vulnerable groups is farms that lease the vast majority of their operating acres. Farm categories using leasing proportions are currently not available in the FINBIN database. Therefore, we use farms that have less than 10 years of experience (the lowest experience category in the FINBIN database) as a proxy for this group. In addition to those with less experience, farms with relatively high debt to asset ratios are also a particularly vulnerable group. Therefore, we examine financial performance for farms with less experience and high debt to asset ratios.

Operating Profit Margin Ratio

Using FINBIN data summarized by the Center for Farm Financial Management at the University of Minnesota, the average operating profit margin ratio for crop farms was 23.0 percent for the 2019 to 2023 period. Average rates for individual years were as follows: 2019 = 10.8 percent; 2020 = 19.3 percent; 2021 = 31.8 percent; 2022 = 30.1 percent, and 2023 = 16.1 percent. The operating profit margin ratio varies widely among farms. In 2023, 42 percent of the farms had an operating profit margin that was negative while 23 percent of the farms had an operating profit margin above 20 percent.

We will use 2023 data to focus on farms that are particularly vulnerable (i.e., farms with managers that only have a few years of experience and farms with debt to asset ratios above 60 percent). Ideally, we would like to examine the performance for farms with a debt to asset ratio above 0.70. Since this category does not exist in the FINBIN database, we used 60 percent as the debt to asset threshold. The average operating profit margin ratio for farms with managers with less experience and a debt to asset ratio above 60 percent in 2023 (9.6 percent of all crop farms) was 9.5 percent, considerably lower than the average for all crop farms. Approximately one-third of these farms had a negative operating profit margin ratio.

Debt to Asset Ratio

The average debt to asset ratio from 2019 to 2023 for all crop farms summarized in the FINBIN database was 30 percent. Approximately 17 percent of all crop farms had a debt to asset ratio above 60 percent in 2023. Farms with a debt to asset ratio of 60 to 80 percent represented 13.8 percent of all crop farms while farms with a debt to asset ratio of over 80 represented 3.3 percent of all crop farms.

The farms with less experienced managers and a debt to asset ratio above 60 percent had an average debt to asset ratio of 75 percent in 2023. The average debt to asset ratio for farms with less experience was 49 percent, emphasizing the fact that this group of farms is more vulnerable to financial stress than the average crop farm.

Financial Stress

Using FINBIN data for 2023, approximately 40% of the farms with a debt to asset ratio above 60 percent also had a negative operating profit margin ratio. This represents approximately 6.8 percent of all crop farms. Of the farms with managers that had less than 10 years of experience, 47 percent had a debt ratio above 0.60 in 2023, and 35 percent had a negative operating profit margin ratio.

Putting the pieces together, in 2023, using the FINBIN database, approximately 3 to 5 percent of the crop farms were financially stressed. Although this is not a high percentage by historical standards, the expected low net returns in 2024/25 could dramatically increase the percentage of farms that are financial stressed by the end of 2025.

Concluding Comments

Farms with low profitability and high solvency are typically financially stressed. This article used the operating profit margin ratio and the debt to asset ratio to create a measure of financial stress. Specifically, farms with a negative profit margin ratio and a debt to asset ratio above 0.60 were defined as being financially stressed.

After averaging over 30 percent in 2021 and 2022, the average operating profit margin for crop farms in the FINBIN database dropped to 16 percent in 2023. Given large expected declines in average crop prices, the operating profit margin is expected to drop again in 2024 leading to increased concerns pertaining to financial stress. By examining farm level data for 2023, this article provides an important baseline for upcoming financial stress discussions.

We will conclude with a brief discussion of the farm types that are the most vulnerable to financial stress. These farm types include, but are not necessarily limited to, farms with less experienced operators, farms that lease a vast majority of their ground, farms with high debt to asset ratios, and farms with little to no off-farm income. Due to data limitations, we were not able to examine potential financial stress for those that lease most of their ground. It should be noted, however, that farms with less experience tend to lease a relatively higher proportion of acres operated. If the proportion of owned land on the balance sheet is low, you are left with assets such as machinery and buildings that depreciate, and that tend to lose value more rapidly during periods of low net returns. Moreover, these assets typically do not provide a strong base for refinancing or restructuring the debt which is one of the common strategies lenders use to relieve financial stress.

References

Center for Farm Financial Management, University of Minnesota, FINBIN database, accessed September 10, 2024.

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