



Financial Conditions in the U.S. Agricultural Sector: Historical Comparisons

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What Is the Issue?

Recent economic conditions have raised concerns about the financial health of the U.S. farm sector. After peaking around 2012, farm sector income declined while farm debt continued to rise. Farm real estate is no longer rapidly appreciating in value, and land prices have declined in some regions. Between 2016 and early 2019, interest rates rose—increasing the cost of borrowing for some farmers. Lower commodity prices in the near future would make it more difficult for some farmers to meet their loan obligations and pay for production expenses. Farmers who made substantial investments in land or machinery when commodity prices and farm incomes were high could face elevated risks of financial insolvency. The objectives of this study are to determine how current economic conditions in the farm sector compare with those in past periods of financial stress, to assess potential problems ahead in terms of loan defaults or bankruptcies, and to determine which types of farms are financially vulnerable now and which would be likely to face the biggest challenges in the years ahead if commodity prices decline further.

What Did the Study Find?

Sectoral measures of farm finances indicate a deterioration in economic conditions since 2012, yet most measures are near long-run (1970-2017) average levels:

- From 2012 to 2017, the farm sector saw the largest multiyear decline in net cash income in percentage terms since the 1970s. However, farm income fell from a near-record level so that, despite the large drop, inflation-adjusted income remains close to the long-run average.
- Farm sector debt is again near peak levels of the late 1970s and early 1980s. In 2018, interest expenses were forecast to be 23 percent above the average levels from 2000 to 2017, but remain 8 percent below long-run average levels because of historically low interest rates.
- In recent decades, farm assets (especially farmland) have appreciated more rapidly than debt. As a result, the farm sector's debt-to-asset ratio has fallen since the mid-1980s and reached a historic low in 2012. Since then, the market for land has weakened in some regions and the debt-to-asset ratio has trended upward. The debt-to-asset ratio is now above its 10-year average, though it remains low compared to the 1970-2017 average.

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Farm-level measures of solvency, liquidity, and repayment capacity indicate that 85-90 percent of farms in each category are not categorized as under financial stress. However, farms with at least \$100,000 in annual sales are more likely to be under financial stress than smaller scale operations because these larger operations derive more of their income from the farm and take on relatively more farm business debt. Among farms with at least \$100,000 in annual sales, the share facing financial stress (having a low repayment capacity or low levels of solvency) has increased since 2012. For example, the share of farms with at least \$500,000 in annual sales with a low repayment capacity (income available to pay debt is less than the principal and interest owed) increased from 8.1 percent in 2012 to 12.4 percent in 2017, and the share with a low level of solvency (debt-to-asset ratio greater than 55 percent) increased from 7.6 to 13.5 percent. However, for these larger farms, the levels of financial stress are currently near 1996-2017 average levels and not as severe as levels seen in 2002 (the year with the lowest net cash farm income since 1996).

Increases in financial stress in the farm sector have recently begun to be reflected in loan delinquency rates. In particular, delinquency rates for both Farm Credit System (FCS) and commercial bank loans have ticked upward since 2015. However, these delinquency rates remain below historical averages and below levels seen from 2010 to 2013, when delinquency rates rose in the wake of the housing crisis and Great Recession.

To gain insight into how farms would be affected if farm income continued to decline in the years ahead, the study simulates the effect of a decline in gross farm income on the share of farms in “extreme financial stress”—defined as not having enough household income to meet current loan payments and a debt-to-asset ratio greater than 55 percent. If gross cash farm income were to fall by 10 or 20 percent from 2017 levels, the share of all farms in extreme financial stress would increase from 1.1 percent in 2017 to 1.3 and 1.6 percent, respectively. However, these effects would increase relatively more for larger scale farms, for farms with a principal operator under age 40, and for dairy farms.

How Was the Study Conducted?

This study examines the financial health of the U.S. farm sector by comparing current measures of farm financial performance relative to those of historic levels and of past periods of extreme financial stress. Using sectoral data, researchers analyzed trends in farm income, debt, interest expenses, interest rates, real estate values, and the debt-to-asset ratio. Farm-level data from USDA’s 1996-2017 Agricultural Resource Management Survey (ARMS) and the 2014 Tenure, Ownership, and Transition of Agricultural Land (TOTAL) survey were used to identify the types of operations currently under the most financial stress. Trends in measures of loan repayment capacity, working capital, and solvency for farms that vary by income, commodity specialization, and operator age and experience were also compared over time. Using data from lenders, researchers also analyzed trends in agricultural real estate and production loan delinquencies for commercial bank, Farm Credit System, and USDA Farm Service Agency loans. Finally, model estimates of the effects of a hypothetical decline in gross farm income were used to identify the types of farm operations most vulnerable to a further downturn in the agricultural economy.