farmdoc DAILY

Agricultural, Consumer & Environmental Sciences | University of Illinois Urbana-Champaign

The Financial Efficiency of Illinois Grain Farms: Interest Expense Ratio

Gerald Mashange

Department of Agricultural and Consumer Economics
University of Illinois

Bradley Zwilling

Illinois FBFM Association and Department of Agricultural and Consumer Economics
University of Illinois

February 28, 2025

***farmdoc daily* (15): 39**

Recommended citation format: Mashange, G. and B. Zwilling. "The Financial Efficiency of Illinois Grain Farms: Interest Expense Ratio." *farmdoc daily* (15): 39, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, February 28, 2025.

Permalink: https://farmdocdaily.illinois.edu/2025/02/the-financial-efficiency-of-illinois-grain-farms-interest-expense-ratio.html

In March 2022, U.S. consumer food prices rose 8.8% over the previous 12 months—the largest annual increase since May 1981—with food-at-home prices rising by 10.0% and food-away-from-home prices increasing by 6.9% (Bureau of Labor Statistics, April 2022). In the same month, the Personal Consumption Expenditure (PCE) Price Index, the Federal Reserve Bank's (Fed) preferred measure of inflation, had increased by 6.6 percent from a year ago. In response to soaring prices, the Fed began aggressively raising the Federal Funds Rate (FFR) to combat inflation[1]. Between March 2022 and July 2023, the Fed implemented 11 rate hikes, increasing the FFR by 5.25 percentage points—from near 0% to a range of 5.25% to 5.50%. This was the fastest and largest rate hike in four decades. By late summer 2024, there was a growing consensus that interest rates had become too restrictive for borrowers. Inflation was trending closer to the Fed's 2% target, while unemployment was drifting upward. In September 2024, the Fed initiated their rate-cutting cycle, reducing the FFR by 0.5 percentage points to a range of 5.00% to 5.25%. This was followed by two additional rate cuts of 0.25 percentage points each in November and December, bringing the FFR down to a range of 4.25% to 4.50%. However, in January, the Fed announced that they would be pausing their rate-cutting cycle; their 2025 rate cut expectations had been revised from a total of 4 rate cuts to only 2. Although there has been some relief in borrowing costs over the past few months, the Fed stated that the economic outlook is uncertain. For borrowers, this pause means higher rates for longer, with the next rate cut expected to occur in June according to recent data from the CME FedWatch tool.

[1] The Federal Funds Rate is a short-term interest rate in the interbank lending market

We request all readers, electronic media and others follow our citation guidelines when re-posting articles from farmdoc daily. Guidelines are available here. The farmdoc daily website falls under University of Illinois copyright and intellectual property rights. For a detailed statement, please see the University of Illinois Copyright Information and Policies here.

Recent trends in our FBFM dataset show that interest expenses for grain farms have been on an upward trajectory since 2022. In this farmdoc article, we begin our series on farm financial efficiency trends by examining the interest expense ratio. The interest expense ratio measures the share of gross farm income used to make interest payments on debt. It is calculated by dividing accrued interest expense by gross farm returns. According to the Farm Financial Scorecard developed by the Center for Farm Financial Management, a farm with an interest expense ratio that is greater than 10% is categorized as *vulnerable*, a ratio between 5% and 10% is categorized as *cautionary*, and a ratio that is less than 5% is categorized as *strong*.[2] Therefore, the lower the interest expense ratio, the more efficient the farm is.

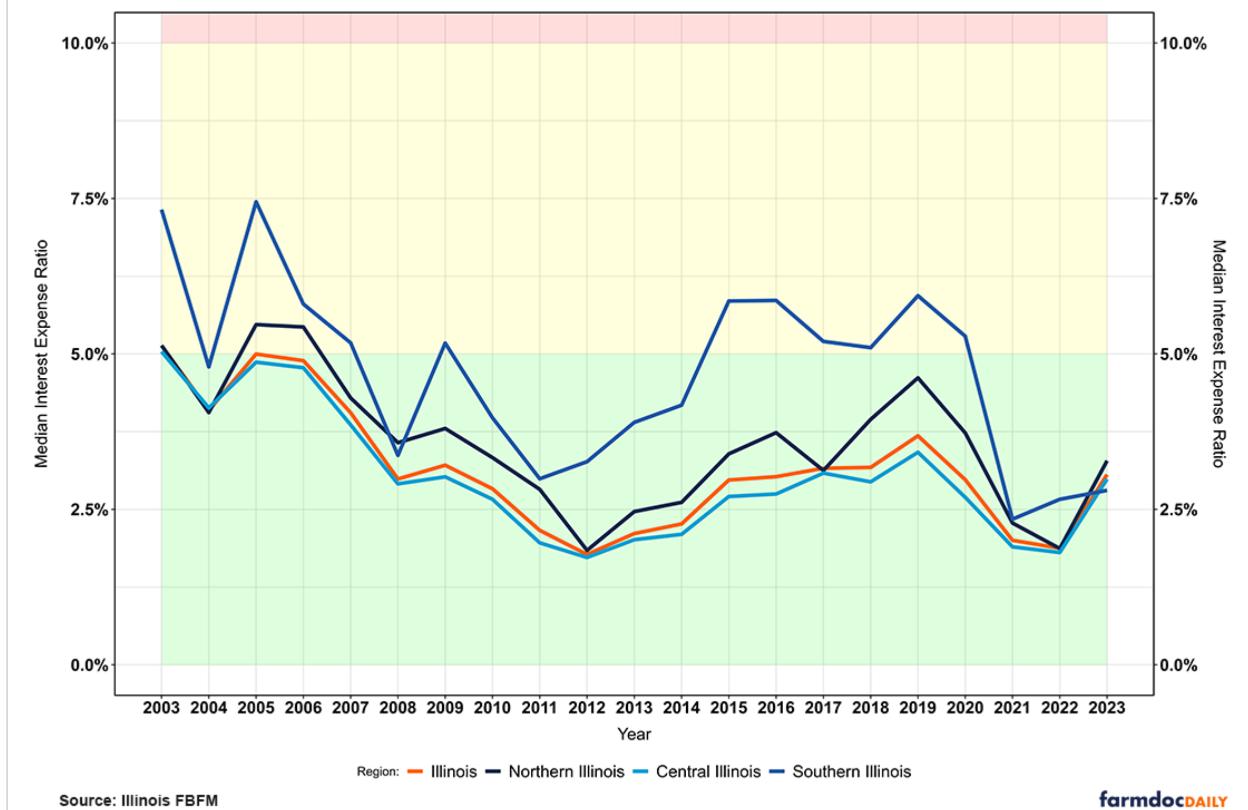
Figure 1 illustrates the trends in the median interest expense ratio for grain farms across 4 regions: (1) all of Illinois, (2) northern Illinois, (3) central Illinois, and (4) southern Illinois over the twenty-one-year period from 2003 to 2023. We use the color-coding system from the Farm Financial Scorecard to indicate the category of each farm's interest expense ratio. The region shaded in red indicates a *vulnerable* ratio, yellow represents a *cautionary* ratio, and green indicates a *strong* ratio.

In 2023, Illinois grain farms enrolled in FBFM reported median total liabilities of $699,800, compared to $304,598 in 2003. This translates to a 129.75% increase in total liabilities. Over the same period, the median interest expense rose 68.06%, increasing from $12,516 in 2003 to $21,034 in 2023. Interestingly, the period from 2008 to 2021 is characterized as having unusually low interest rates due to the Fed's zero interest rate policy (ZIRP), implemented to stimulate economic activity following the Great Financial Crisis of 2008. In that period, the median interest expense declined modestly from $15,120.00 to $15,102.50, a 0.12% decrease, even as median total liabilities grew by 55.72%, rising from $405,019.00 to $630,681.50. This demonstrates how low borrowing costs during this period allowed grain farms to take on higher debt while keeping interest expenses relatively contained.

The other component of the interest expense ratio is (median) gross farm returns, which rose from $249,097 in 2003 to a peak of $942,912 in 2022 before declining to $714,481 in 2023. Over this 21-year period, median gross returns have generally trended upward but experienced significant declines of more than 10% in 2009, 2013, 2015, and 2023, with the steepest drop—over 20%—occurring in 2023. Even during periods of low interest rates, the lower gross returns, particularly between 2013 and 2015, impacted the ratio.

Figure 1 shows that the median interest expense ratio followed a downward trend statewide and across all three regions from 2003 to 2012. In all but one year, central Illinois reported the lowest ratio during this period, followed by northern Illinois. Since approximately 66% of Illinois FBFM grain farms are in central Illinois, this region typically mirrors the statewide trend. On the other hand, southern Illinois reported the highest median interest expense ratio in all but one year compared to the other two regions and displayed the greatest variability from 2003 to 2012. This variability can be attributed to southern Illinois' lower gross returns resulting from lower yields due to the region's more variable and lower-quality soil types. For example, in 2003, southern Illinois had a median interest expense ratio of 7.32% (*cautionary*), compared to 5.14% (*cautionary*) in northern Illinois and 5.04% (*cautionary*) in central Illinois; the statewide average was 5.14% (*cautionary*). By 2012, these ratios had improved by declining substantially. The state median had fallen to 1.77% (*strong*), with central Illinois at 1.73% (strong), while northern and southern Illinois were 1.84% (*strong*) and 3.27% (*strong*) respectively.

[2] The Farm Financial Scorecard adheres to the guidelines set by the Farm Financial Standards Council



From 2012, the interest expense ratio trended upward, with southern Illinois's median value shifting from *strong* to *cautionary* by 2015. Despite the deterioration in financial efficiency, the other two regions remained in the *strong* range as the ratios increased. Then, in response to the unprecedented COVID-19 lockdowns and subsequent recession, the Federal Reserve cut the federal funds rate twice in March 2020, lowering it by a total of 150 basis points to a target range of 0.00% to 0.25%. In Illinois, the median interest expense ratio fell statewide and across all three regions from 2019 to 2020, with further drops in 2021, before the rate of decline slowed in 2022. The median ratio in southern Illinois increased from 2021 to 2022. However, since 2022, the median interest expense ratios have risen as gross farm returns have declined while borrowing costs have increased significantly. Nonetheless, the median ratio for all of Illinois, and the three regions have remained in the *strong* range.

Conclusion

Farm borrowing costs are higher today than they were at the start of 2022. While the recent rate cuts have provided some relief for borrowers, the Fed's decision to pause their rate-cutting cycle in January indicates that elevated borrowing costs will persist for a while longer this year. Indeed, there is plenty of uncertainty ahead, particularly surrounding federal policy and trade. In this environment that includes lower margins due to lower prices and higher borrowing costs, proactive financial management is needed. Farmers can mitigate these pressures by staying informed about market trends and working closely with their lenders and advisors to navigate this period.

Acknowledgment

The authors would like to acknowledge that data used in this study comes from the Illinois Farm Business Farm Management (FBFM) Association. Without Illinois FBFM, information as comprehensive and accurate as this would not be available for educational purposes. FBFM, which consists of 5,000+ farmers and 70 professional field staff, is a not-for-profit organization available to all farm operators in Illinois. FBFM field staff provide on-farm counsel along with recordkeeping, farm financial management, business entity planning and income tax management. For more information, please contact our office

located on the campus of the University of Illinois in the Department of Agricultural and Consumer Economics at 217-333-8346 or visit the FBFM website at www.fbfm.org.

References

Bureau of Labor Statistics, U.S. Department of Labor, The Economics Daily, Consumer prices up 8.5 percent for year ended March 2022 at https://www.bls.gov/opub/ted/2022/consumer-prices-up-8-5-percent-for-year-ended-march-2022.htm (visited February 26, 2025).