



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



Farm Sector Debt, Interest Expenses, Liquidity, and Solvency

Dipak Subedi and Anil K. Giri, USDA, Economic Research Service

Implications on Solvency and Liquidity

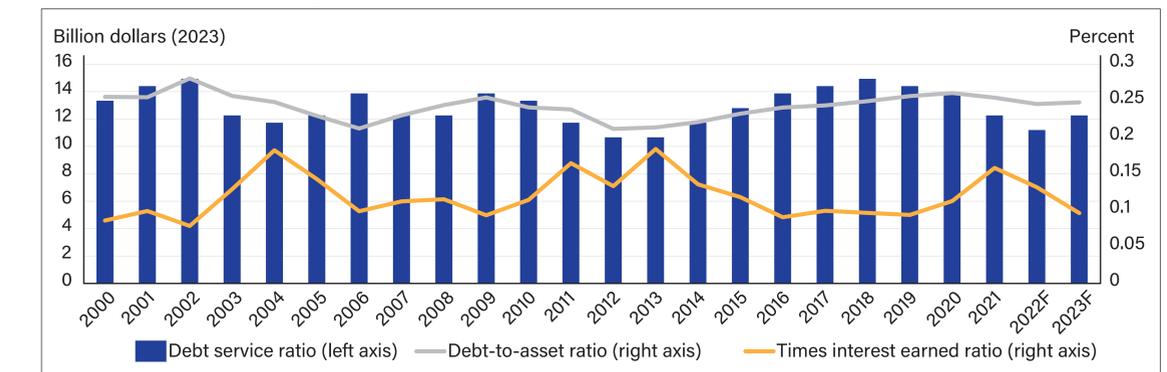
Solvency refers to the ability of a farm or ranch operation to satisfy its debt obligations when due. Liquidity refers to the amount of assets that can be converted into cash. Liquidity indicators are focused on the ability to meet short-term debt.

Debt service ratio measures the share of production, plus direct Government payments, used for debt payments. Lower values indicate better financial position and performance. The debt service ratio was 0.25 in 2000 and is forecast at 0.23 for 2023.

Times interest earned ratio measures the ability to cover debt payments, specifically interest payments. The forecasted value for this particular ratio is lower than the 2000 level and is below recent years.

Debt-to-asset ratio measures the proportion of assets owed to creditors to cover outstanding debt obligations. The 2023 forecasted value of this ratio is 13.22, which is slightly lower than 2000 level of 13.62. This suggests that increased asset values mostly offset the increase in debt level.

Figure 4 Ratios that factor interest expenses and debt do not show elevated rate of financial stress in the short-run



Note: F= Forecast. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2023.

Conclusion

In sum, the total farm sector debt is forecast to increase to record highs in 2023 and, at the same time, the Federal funds rate has been increased significantly over the last year.

Higher interest rates in the face of lower forecasted profits suggest greater use of credit and even higher spending on interest expenses.

However, when the potential impact of increases in interest expenses is measured using solvency and liquidity ratios, the potential impact (at least in the short-term) is nominal.

Total Farm Sector Debt

Total farm sector debt in inflation adjusted 2023 dollars is forecast to increase in 2023 to record high at \$535.09 billion, up by \$16.95 billion, or 3.27 percent, compared with 2022 levels.

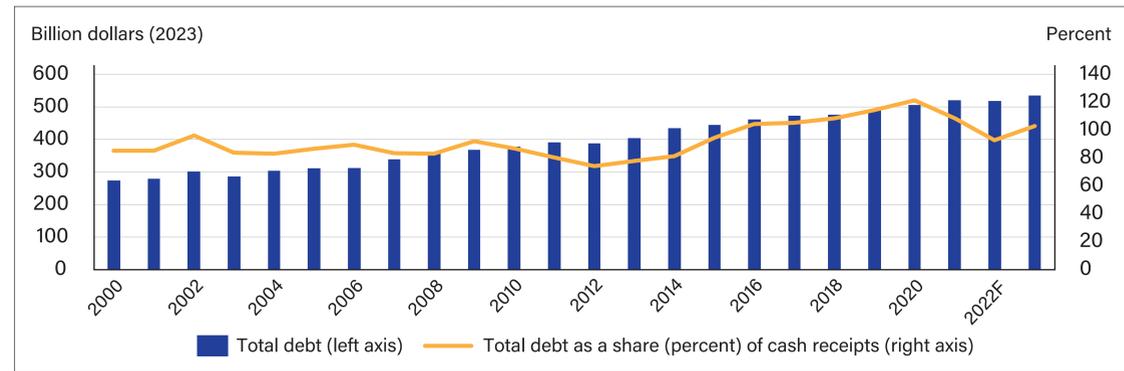
This forecasted increase would result in an almost doubling of the total sector debt in inflation adjusted terms from the 2000 level of \$274.22 billion.

Both components of total debt--real estate debt and non-real estate debt--are forecast to increase and contribute to the cumulative increase in the sector's debt in 2023.

Although the absolute magnitude of debt is forecast to reach a record high in 2023, the relative measure (debt as a percent of cash receipts) is still below the historic high of 121 percent in 2020.

The total sector level debt is forecast to be 103 percent of cash receipts in 2023, a modest increase after annual decreases in 2021 and 2022, relative to 2020.

Figure 1 2023 total farm sector debt forecasted to be slightly above the total cash receipts



Note: F= Forecast. Cash receipts for agricultural commodities are defined as the gross income from sales of crops, livestock, and livestock products during a calendar year. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2023.

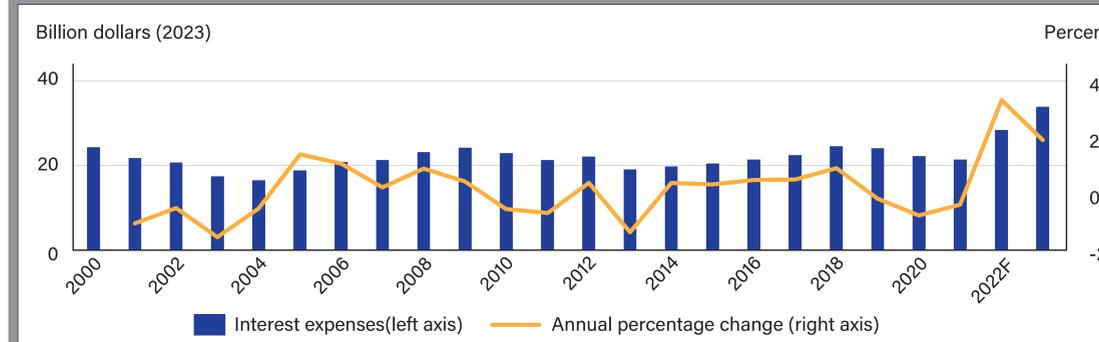
Interest Expenses

Interest expenses represent the third-largest and the fastest-growing source of total production expenses at 7.37 percent for 2023.

Total interest expenses in 2023 are forecasted at \$33.85 billion, an increase of 19 percent compared with the 2022 level of \$28.43 billion in inflation adjusted 2023 dollars.

In inflation adjusted terms, total interest expenses in 2000 were \$24.37 billion. Therefore, the forecasted 2023 interest expenses are higher by \$9.48 billion, or 38.91 percent, compared with 2000. This increase in interest expenses is still lower than the increase in total debt, which doubled compared to 2000, primarily because of low interest rates, including record low interest rates in 2020.

Figure 2 Interest expenses forecasted to increase by 19 percent to almost \$34 billion in 2023



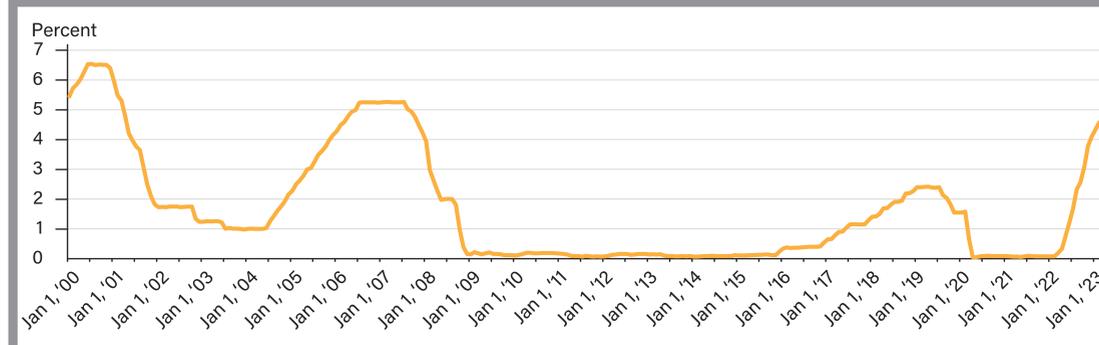
Note: F= Forecast. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2023.

Federal Funds Effective Rate

The tighter monetary policies of the Federal Reserve, including increasing the short-term Federal funds rate to tame high and persistent inflation has resulted in an upward pressure on both real and non-real estate interest rates of the farm sector.

The last Federal Open Market Committee (FOMC) meeting in March 2023 increased the Federal funds rate by 0.25 percent to a target range of 4.75-5.0 percent. This increase was the eighth increase after record low rates during the first (2020) and second year of the Coronavirus (COVID-19) pandemic (2021).

Figure 3 Federal funds rate have increased significantly since March 2022



Note: The rates are seasonally unadjusted monthly rates. Source: Federal Reserve Bank of St. Louis, Economic Data. Data as of April 7, 2023.