AGRICULTURAL FINANCE

Outlook for Agricultural Financing Markets

May 2, 2022

Executive Summary

Agricultural real estate mortgage rates seem likely to rise as the Federal Reserve raises interest rates in an effort to combat elevated inflation. While higher commodity prices positively impact net farm incomes and land values, the rising agricultural interest rates may eclipse that boost and ultimately put agricultural land values under pressure. Additional interest expenses will add to production costs and raise breakeven production levels. USDA projects farm incomes to remain elevated this year, helping offset higher borrowing costs. Still, agricultural producers should use these potential new interest rate forecasts in their budgeting and land purchase calculations.

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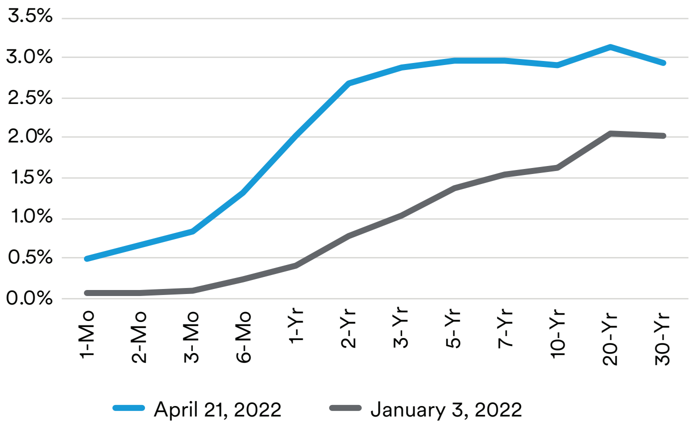
Interest Rates on the Rise

Following two years of holding short-term interest rates near zero, the Federal Reserve raised short-term interest rates in March. Market expectations suggest short-term interest rates are likely to increase further. As of late-April, the Fed Funds Futures market showed the target Fed Funds rate is expected to rise above 2.9% by year-end, up from 1.5% as recently as February.

The recent increase in short term interest rates has occurred alongside rising demand for short-term agricultural financing. Agricultural production loan demand slowed in 2021 as farmers used high farm incomes and COVID government payments to purchase inputs and pay down debts. Farm incomes are forecast to remain high in 2022, but the historic rise in input costs has led to an uptick in production loan demand[1].

Figure 1 | U.S. Treasury Yield Curve



Sources: U.S. Treasury, MIM

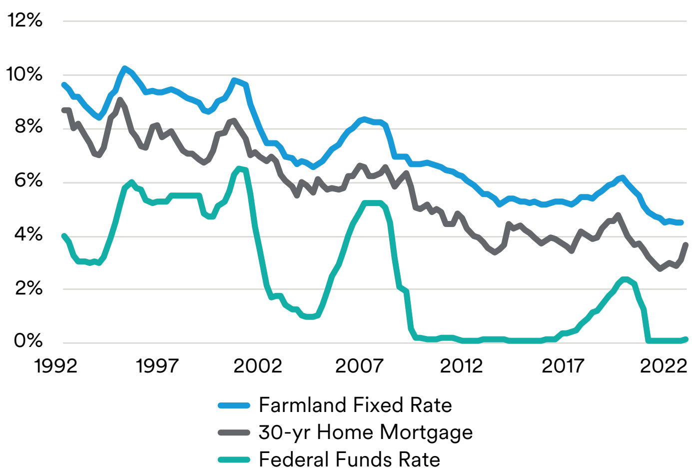
In addition to direct actions to raise short term interest rates, rhetoric from the Federal Reserve has also fueled an increase in long-term interest rates. A stated goal for the Federal Reserve to reduce the size of its balance sheet has sparked the 1.0 percentage point increase in the 30-year UST in 2022[2]. This increase in long-term benchmark rates raises the likelihood of higher farm mortgage rates in the near future.

Long-term Interest Rates

Interest rates on farmland have historically moved mostly in tandem with other long-term interest rates. For example, Figure 2 illustrates the historical relationship between mortgage rates on farmland and private homes. The rates on both types of mortgages have moved closely together for over 30 years. Conversely, the Federal Funds overnight rate has exhibited a much weaker relationship with long-term rates. One reason for the strong relationship between long-term interest rates is that many of the largest agricultural lending institutions issue bonds on Wall Street to fund their loans[3]. As such, broad movements in interest rates can impact interest rates in multiple sectors, related or not.

After spiking in early-2020, farm mortgage rates trended consistently lower through 2021, reaching historic lows. Higher farm profitability helped lead a broad improvement in loan performance and caused competition among agricultural lenders to increase. This caused interest rate margins among agricultural lenders to decline, pushing interest rates even lower. The combination of lower benchmark interest rates and compressed interest rate margins have resulted in historically low farm mortgage rates. Low rates have provided a significant boost to farmland values and allowed many producers to refinance outstanding debt at lower levels.

Figure 2 | Long-term Interest Rate Comparison



Sources: Federal Reserve of K.C., HAVER, U.S. Treasury, Freddie Mac, MIM

Given the relationship between various long-term interest rates, agricultural borrowers can likely expect long-term financing costs to increase in 2022. The Federal Reserve is expected to reduce its direct and indirect support for the economy in 2022[4]. This support had helped keep long-term interest rates low.

The expected pullback by the Federal Reserve has contributed to a broad increase in long-term interest rates over the past several months, including for home mortgages. The average 30-year home mortgage rate surpassed 5.1% in April, the highest level since 2010[5]. A similar increase in the agricultural sector would potentially lift farm mortgage rates to near 6%. While the rate of increase may not be as extreme, farm mortgage rates have already begun to rise and will likely continue to trend in the same direction as home mortgage rates.

Effects of Higher Borrowing Costs

Rising interest rates seem likely to have a minimal impact on agricultural producers in 2022 relative to other input costs. Land costs represent the per acre cost to rent or buy farmland and vary based on interest rates, commodity prices, and other factors. Historically, land costs have increased due to higher cash rents and rising interest rates. However, the increase in land costs in 2022 is dwarfed by the surge in fertilizer, seed, and other input costs. Over the last decade, land has constituted nearly 30% of the average corn production cost per acre (Figure 3). In 2022, however, that proportion is forecast to decline to 24%. Corn operating costs have increased over 23% in the U.S. Midwest relative to 2021[6]. The decline of land as a proportion of costs could indicate that producers are placing a smaller importance on interest rates this year. However, rising farm mortgage rates could cause land to surpass 30% of production costs if other input prices normalize in the coming years.

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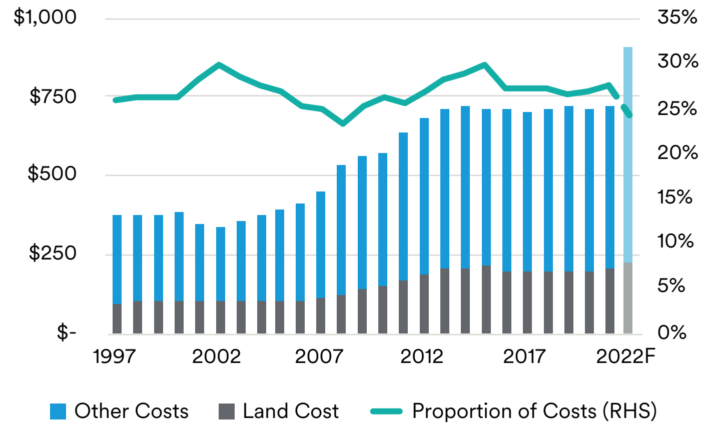
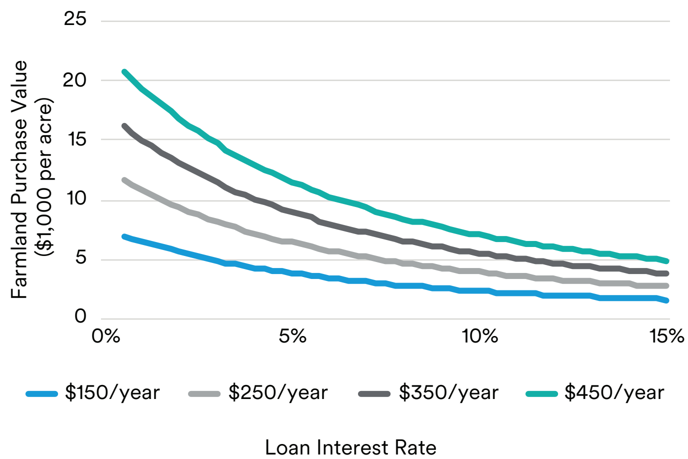
While higher interest rates contribute to elevated operating costs, higher interest rates also affect the long-term value of farmland assets. For the same total yearly payment, a buyer can afford to bid a higher price for an acre of land at a lower interest rate. For example, consider a farmer who puts a 40% down payment on a land purchase (Figure 4). For a total yearly payment of $250 per acre, that farmer can bid about $8,200 per

Figure 3 | Corn Production Costs ($ / acre, U.S. Midwest)



Sources: USDA, farmdoc, MIM

Figure 4 | Farmland Purchase Value by Annual Payment (30-year fixed rate mortgage, 60% LTV loan)



Source: MIM

acre at 3% interest. As the interest rate increases to 5%, the farmer can only bid $6,400 to keep the payment at $250. If the farmer must bid the $8,200 per acre to buy the land, the annual payment at a 5% interest rate would be $319. That is an increase of $69 per acre for the annual land payment.

As one can note from the figure, this relationship is not linear. Increasingly high interest rates add substantial downward pressure on land values. As interest rates and total payments rise, the returns to land are likely to exceed one-third of per acre revenues. At this level, returns to other inputs become increasingly difficult to achieve.

Conclusion

Today, as agricultural borrowers are busy updating crop budgets to account for increases in fertilizer and fuel costs, they should build in additional interest costs. Producers that are considering land acquisitions may need to reassess the cash flow demands at new interest rate levels. Although the downward trend in farm sector interest rates is likely to end in 2022, and may soon begin to rise, rates are not likely to move substantially above long-term averages in the coming year. In an environment where interest rates are not at historic lows, producers may need to be more strategic about their financing plans, potentially reevaluating the trade-off of lower rates when using variable rate debt.

Endnotes

1 Farm Income Forecast, USDA Economic Research Service, February 2022.

2 Daily Treasury Par Yield Curve Rates, U.S. Department of the Treasury, accessed April 2022.

3 Funding the Farm Credit System, Federal Farm Credit Banks Funding Corporation, April 2022.

4 Federal Reserve Press Release, Federal Reserve, March 16, 2022.

5 Primary Mortgage Market Survey, Freddie Mac, accessed April 2022.

6 April Update to 2022 Crop Budgets: Projected Profits Even with Record Costs, farmdoc Daily, April 12, 2022.

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