Comparing Interest Rates Paid by Farmers

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Introduction

Debt capital is important for farmers to build an asset base that is sufficient for their farming operation. The average Kansas Farm Management Association (KFMA) farm has $2.7 million in assets with $600,000 of these assets in borrowed funds (i.e., debt capital). The median debt to asset ratio is 20%. Even with the current historically low interest rates, interest expense is a significant item for most farmers. The average KFMA farm paid $26,000 in interest expense in 2016 which is the highest amount ever.

Because interest on borrowed capital can be a major expense on a farm, anything a farmer can do to lower their interest rate can improve overall profitability. With $600,000 in debt on the average KFMA farm, a 1% change in the interest rate will result in a $6,000 change in the interest expense. The purpose of this article is to examine the rate of interest that farmers are paying to see if it is comparable to other in-

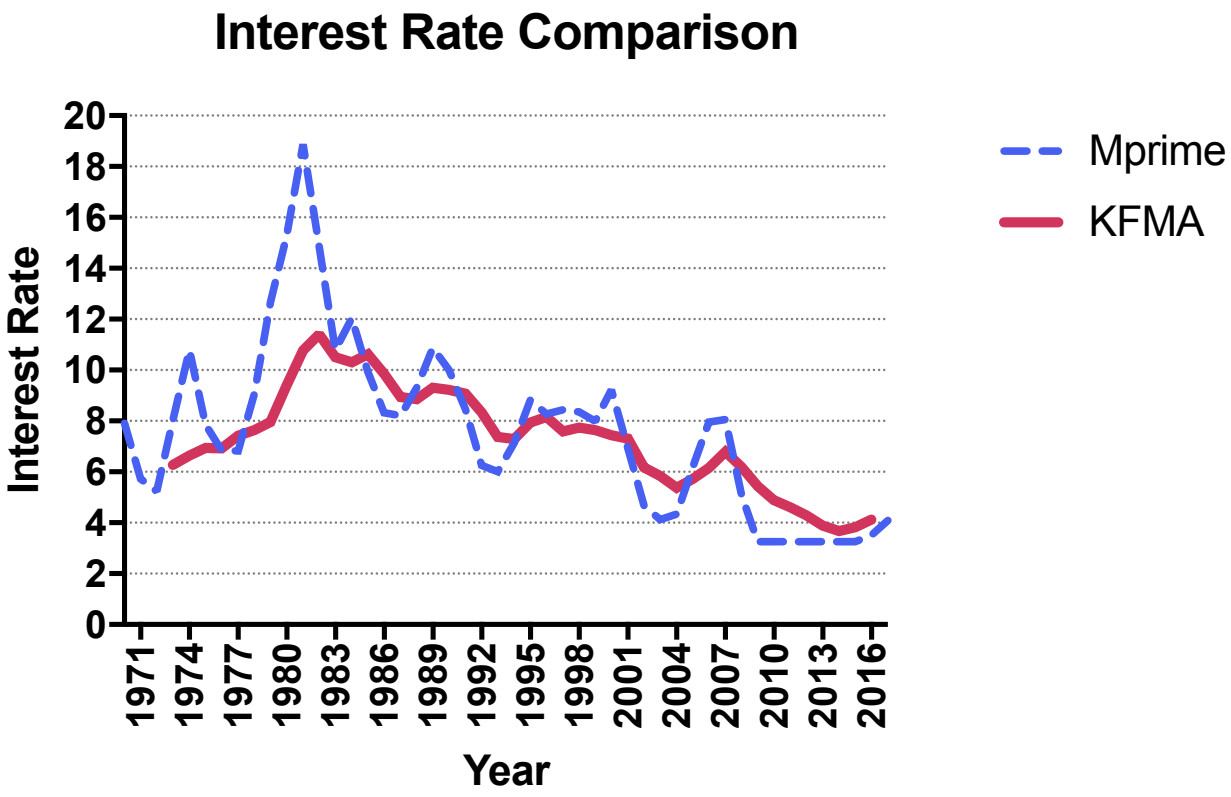

Figure 1. Comparison of interest rate paid by KFMA farms vs MPrime rate

terest rate benchmarks that banks charge to other non-farm customers.

Procedure

The KFMA effective interest rate is compared to the Bank Prime Loan Rate (PRIME or MPRIME for monthly data). Prime is a Rate posted by a majority of top 25 (by assets in domestic offices) insured U.S.-chartered commercial banks. Prime is one of several base rates used by banks to price short-term business loans. (Board of Governors of the Federal Reserve System (US), Bank Prime Loan Rate [MPRIME], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MPRIME, April 5, 2018.)

The Prime rate is posted daily and the monthly reported figures, Mprime are an average of daily figures. In this paper, the KFMA effective interest rate can only be computed once a year so the monthly Mprime rate is averaged across months to get a yearly value.

The KFMA effective interest rate is computed on a farm by farm level by taking the total intest expense (both cash and accrued interest) and dividing by the total amount of debt on the farm. The total debt is an average of the beginning and ending balance sheet numbers. The yearly numbers are aggregated by using the median effective interest rate.

Results

The comparison of the bank Mprime rate and the KFMA effective interest rate is shown in Figure 1. As can be seen, the rate paid by Kansas farmers matches very closely to the Mprime rate. Since 1983, the correlation between the two rates is 0.91. The KFMA rate appears to have less volitality which is probably due to the combination of long-term and short-term borrowing combined together while the Mprime rate is a short-term rate. Thus it appears Kansas farmers have been doing a good job of controlling their borrowing rates. With the federal funds rate on the rise, farmers who haven't done so may want to look at rolling shorter term loans into longer term loans.