Mississippi Agricultural Credit and Lending Conditions: 2017

This report is intended to be an informational guide for producers, lenders, and professionals working in the agricultural finance sector. Included are current interest rates offered on various agricultural loans, funding availability, and returns on equity. The report is based on a survey conducted in June 2017 (IRB# 15-156) by the Mississippi State University Department of Agricultural Economics and the MSU Extension Service. The participants in this survey included agricultural lenders, appraisers, farm managers, and agricultural economists.

U.S. Farm Economic Conditions

In February 2017, the USDA reported "mixed measures" for farm profitability heading into spring planting (**Figure 1**). After reaching record highs in 2013, net cash farm income and net farm income were forecast to increase 1.7 percent and decrease 8.7 percent, respectively.[1] The discrepancy between the two can be partially explained by the fact that inventories produced in previous years are included in the current year's cash receipts for net farm cash income, while net farm income includes inventories produced in the previous year but sold in the current year as last year's income. This implies, for the most part, continued weakness in the U.S. agricultural economy.

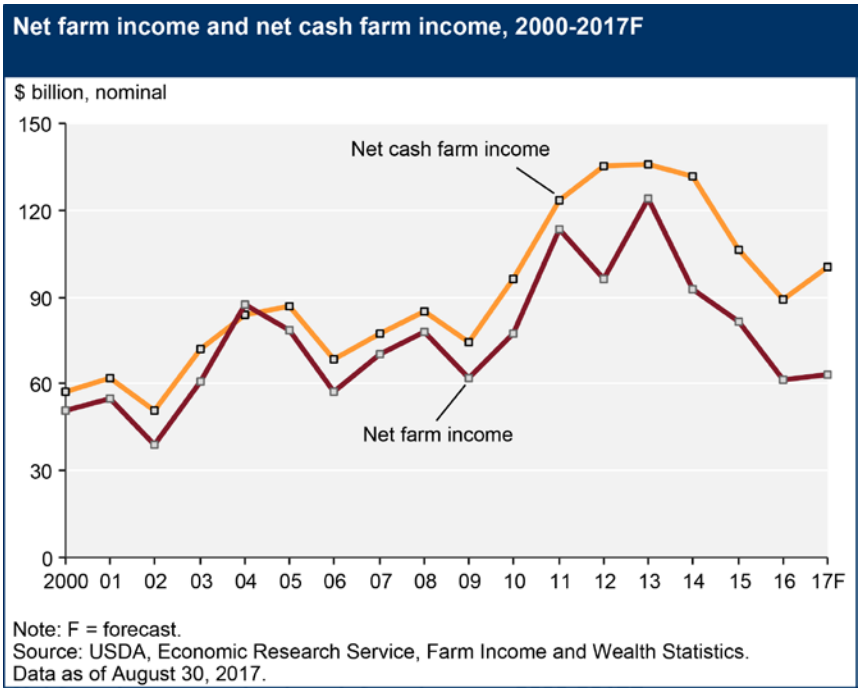

Figure 1. USDA net farm cash income and net farm income for the U.S.
Source: USDA ERS, https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/highlights-from-the-farm-income-forecast/

Commodity price outlooks do not indicate that prices will increase over the next 4 years. The Baseline Update for U.S. Agricultural Markets from the Missouri Food and Agricultural Policy Research Institute (FAPRI) projects most major U.S. agricultural commodity prices will remain flat through the next five years.[2]

Comments from the Kansas City Federal Reserve Bank Credit Conditions Survey detail more FSA-guaranteed loans and more secondary market conventional real estate loans for restructuring debt. Also, with equipment values down as much as 66 percent in some regions of the country, some lenders are beginning to look at land as an alternative for collateral on new loans.[3] In other cases, farmers are using alternative lenders such as equipment dealers, seed dealers, and fertilizer dealers to help carry operating costs and cover gaps in operating capital. Indeed at the end of fiscal year 2016, John Deere held loans and leases totaling $34.7 billion.[4]

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[1]USDA, ERS: Highlights from the February 2017 Farm Income Forecast. https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/highlights-from-the-farm-income-forecast/
[2]University of Missouri, Food and Agricultural Policy Research Institute. August 2016. "Baseline Update for U.S. Agricultural Markets". FAPRI-MU Report #05-16.
[3]KCFED, Ag Credit Survey, 10 August 2017. Retrieved from: https://www.kansascityfed.org/research
[4]Newman, Jesse, and Bob Tita. July 18, 2017. "America's Farmers Turn to Bank of John Deere." The Wall Street Journal.

Within the Delta states region (Arkansas, Mississippi, Louisiana, and West Tennessee), the St. Louis Federal Reserve reports that demand for loans was lower in the second quarter of 2017 than during the same period of 2016. However, loan demand was still well above 2014 and 2015 levels. Also, loan repayment rates in 2017 are higher so far than they were the year before, but still much lower than the years before 2015.[5] However, some may have difficulty securing financing because funds availability region-wide is down through the middle of 2017 relative to the previous year.

2017 Credit and Lending Conditions

Interest Rates

Table 1 shows variable and fixed interest rates from the MSU Department of Agricultural Economics and MSU Extension Service surveys compared to those in the eighth district. Regionally, the 8th Federal Reserve District reported variable and fixed interest rates for operating, intermediate-term, and long-term real estate loans being mostly flat through the first half of 2017. Compared to last year, the 8th Federal Reserve District reports that operating, intermediate-term, and real estate fixed rates are up by as much as 0.2 percent. However, variable rates remain mostly unchanged districtwide.

Table 1. Average variable and fixed interest rates for Mississippi for the second quarter of 2017 for the 8th Federal Reserve District.

	Short-term loans	Intermediate-term loans	Long-term loans
	Fixed interest rates (%)		
Mississippi	4.70	4.85	5.10
8th Federal Reserve	5.73	5.86	5.43
	Variable interest rates (%)		
Mississippi	4.55	4.55	4.55
8th Federal Reserve	5.39	5.48	5.18

In Mississippi, the surveys showed that interest rates are lower than those of the 8th district, with short-term and intermediate-term loans being 1 percent lower and long-term loans almost 0.3 percent lower. Variable rates across Mississippi are the same across each typical term length at 4.55 percent and, again, much lower than those reported across the 8th Federal Reserve District.

The biggest change in fixed interest rates across Mississippi is in long-term or real estate-type loans. The 2016 survey reported an average fixed rate on real estate of 4.61 percent, while 2017 is nearly 0.8 percent higher. The other two loan types remain mostly unchanged, whereas 2016's short-term fixed rate was 4.6 percent and intermediate-length fixed rate was 4.72 percent. Variable rates in Mississippi have edged slightly upward from 4.37 percent in 2016 to 4.55 percent in 2017.

The survey conducted in 2017 by MSU Extension asked lenders their expectation for the movement of interest rates in the next 12 months. Ninety percent of respondents expect interest rates to increase in the next year, while 10 percent expect no change in interest rates across Mississippi.

Mississippi Lending Conditions

Loan-to-value (LTV) rate is the principle percentage of new purchases that lenders are willing to finance. The higher the percentage, the more risk the lender is taking on. High LTVs indicate lender optimism regarding repayment or asset appreciation.

Table 2 shows LTV rates for three typical Mississippi term loans. Average LTV rates were 75 percent for agricultural land or real estate loans, 73 percent for medium-term machinery type loans, and 67 percent for cattle and livestock loans.

Table 2. Loan-to-value ratios for selected 2017 agricultural loans.

	Avg.	Min.	Max.
Land/ real estate	74%	55%	85%
Machinery/medium length	73%	40%	90%
Cattle / livestock	67%	50%	80%

The LTV rates for 2017 loans are down from the rates surveyed in 2016 and remain down from those experienced 2 years ago with respect to long-term and intermediate loans. LTV rates for land and machinery averaged 78 percent and 75.6 percent, respectively (**Table 3**).

It appears, given the stability of LTVs over the last 2 years, that lenders and creditors are waiting on conditions to change. As asset values have remained flat in the Midsouth region over the last 2 years, lender pessimism on farmland appears to have eased some, or at least many are waiting to see a sign of whether or not they should adjust to require more equity up front.

[5]Federal Reserve Bank of St. Louis. Agricultural Finance Monitor. August 2017. https://files.stlouisfed.org/files/htdocs/publications/ag-finance/2017/08/10/2017-second-quarter.pdf

Table 3. Loan-to-value ratios for selected 2015–17 agricultural loans.			
	2017	2016	2015
Land/real estate	74%	75%	78%
Machinery/medium length	73%	73.8%	75.6%
Cattle/livestock	67%	63.5%	66.8%

Operating Capital and Financial Stress

Recently high farmland values and cash purchases for agricultural assets have led to favorable debt-to-asset ratios for farmers over the last decade. However, equity in the form of less-liquid land or machinery means farmers must either borrow against said assets or sell to meet future repayment obligations when costs exceed revenues. Nationally, lenders have moved to farmland rather than equipment to collateralize debt, as the equipment market has soured in the last 2 years.

The MSU Extension survey asked lenders the percentage of borrowers who have less than 1 year's operating capital, 1 to 2 years' operating capital, 2 to 3 years' operating capital, and more than 3 years' operating capital. Lenders across Mississippi stated that, on average, 86 percent of farmers have less than 1 year's operating capital available to meet financial obligations, and 14 percent have 1 to 2 years' operating capital. Compared to last year's survey, where 63 percent of farmers had less than 1 year's operating capital and 27 percent had 1 to 2 years', the survey suggests more farmers have burned through their operating capital reserves built up during the higher farm revenue period.

The 2017 MSU Extension survey also requested the percentage of 2016 operating loans requiring a significant portion to be carried over into 2017, as well as the change in the number of distressed agricultural loans relative to 2016. Respondents reported a range of 2016–17 loan carryover from 18 percent to 70 percent of operating expenses for various farming enterprises. The overall average rate of carryover across the state was nearly 18 percent. Also, 45 percent of lenders report distressed loans have increased across the state, while another 45 percent report no change from the previous year. However, 10 percent report a reduction in distressed loans, though some of the improvement was liquidation of distressed assets.

Equity Returns to Farmland

Table 4 shows the return on equity (ROE) for farmland across Mississippi near the current average prime interest rate shown in **Table 1**. Assumptions used to calculate ROE include a 20-year loan with a 25 percent down payment, and cash rents and sales values from MSU Extension Publication 3118. ROE calculations are often used to calculate the expected returns for an income-generating property without considering the future resale. Resale values are excluded, as it is a relative calculation for asset performance. The equity returns assume that the purchase was made this year at the sales prices and rental rates given.

Table 4. Cap rates and return on equity for 2017 Mississippi farm and pastureland.[6]

Farmland area/type	Land value	Cash rent	ROE
Delta irrigated (breakeven)	$4,453 ($2,686)**	$172 ($267)*	-8.3%
Delta, non-irrigated (breakeven)	$3,287 ($1,867)**	$112 ($197)*	-10%
Non-Delta, irrigated (breakeven)	$3,119 ($2,134)**	$128 ($187)*	-7.3%
Non-Delta, non-irrigated (breakeven)	$2,625 ($1,300)**	$78 ($157)*	-12%
Pastureland (breakeven)	$2,309 ($473)**	$28.33 ($138)*	-19%

*Rents in parenthesis are the required rents for farmland purchased under the assumptions detailed in the footnotes for an even ROE.
**Land values in parentheses are the sales values at the current cash rents required to yield a break-even ROE.

The return on equity is negative for all agriculture-specific Mississippi land, particularly pastureland, where rents do not overcome the relatively high sales price. Equity returns have become particularly poor, as land sales values remain sticky while rents have fallen. This is despite favorable interest rates for borrowers across the country.

The numbers in parentheses in **Table 4** below the land values and rents show either 1) the rental rate necessary to achieve an ROE of 0 at the given sales price, or 2) the sales price needed for an ROE of zero at the current cash renal rate. With the exception of pastureland, the rents required for an ROE of 0 for each land class/region were common before 2014, when commodity prices began to fall. However, an increase in the interest rates of prime borrowers would make ROE much worse, as more money would be required to service any long-term debts.

[6]Return on equity (ROE) calculated using band of investment formula $R_o = R_m + R_E$. Assuming a 5% interest rate, 20-year loan, 75% loan-to-value, and mortgage constant of 0.07919. Average land values and rent from MSU Extension Publication 3118.

Summary and Outlook

While LTVs have remained relatively consistent over the last 3 years, and overall credit criteria has not moved much, the calculated credit-worthiness of many borrowers has worsened. Much of the operating capital reserves built during the peak of the most recent agricultural cycle have been exhausted as banks and farmers look to equity as a means of collateralizing operating lines. New equipment purchases now require more operator cash input or other forms of collateralization. This is compared to 4 years ago when the equipment itself was collateral enough. In other instances where lenders are apprehensive about offering a full complement of operating capital to some clients, agricultural input dealers are offering various forms of financing to cover the deficit.

Aside from commodity prices, perhaps the most important issue moving forward is interest rates, especially given the number of farms unable to cover operating costs over the last couple of years. Historically low interest rates have been a bright spot for producers needing borrowed funds to operate in this climate of relatively high costs and low commodity prices.

It is presumed that interest rates will continue to increase in the coming years, as macroeconomic conditions in the U.S. improve outside of agriculture. An increase in interest rates would make the financing many producers are counting on more expensive and will likely push some farmers over a fiscal cliff where liquidation is the only alternative remaining. However, with equity returns being so low, a large-enough percentage of farmers choosing asset liquidation at the same time would drive land and equipment values down sharply.

For the time being, however, funding continues to be available for those who need it, and farmers and lenders have managed to work together in a difficult agricultural economic climate. But a continuation of low commodity prices or a swift upward movement in interest rates could push many producers past their financial breaking point.

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