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Department of Agricultural and Consumer Economics, University of Illinois Urbana-Champaign

IFES 2015: Business and Credit Cycles in Agriculture

Todd Kuethe

Department of Agricultural and Consumer Economics
University of Illinois

Todd Hubbs

Economic Research Service
U.S. Department of Agriculture

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This is a presentation summary from the 2015 Illinois Farm Economics Summit (IFES) which occurred December 14-18, 2015. A complete collection of presentations including PowerPoint Slides (PPT) and printable summaries (PDF) are available here.

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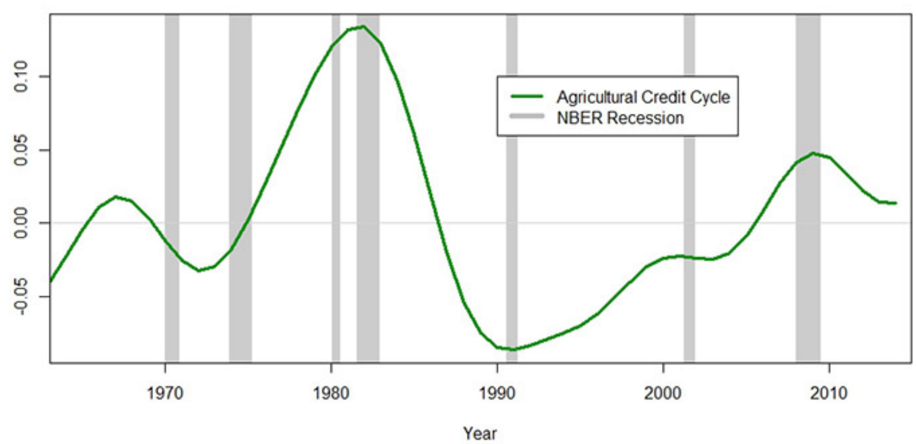
In an era of tightening operator margins and declining farmland values, there is a growing concern that current economic conditions may adversely affect farmers' financial position. Asset prices and credit are intrinsically linked by what economists label the "credit cycle." The basic intuition behind the credit cycle is that an increase in asset prices improves the net worth of potential borrowers and enhances their capacity to borrow and to invest. The increased borrowing capacity leads to an increase in demand for assets, and as the demand for assets increases, so do their market prices. Thus, asset price booms and the demand for credit reinforce one another, as collateral values and leverage increase in lock step. An opposing force is observed when asset prices fall. When asset prices decline, external financing becomes more challenging. This leads to a reduction in both the demand for and the market price of assets, and reduced asset prices lower individual's net worth and access to credit. The dynamic linkages between asset prices and credit therefore drive the rise and fall of the credit cycle. In contrast to the traditional business cycle, the credit cycle ebbs and flows over long periods of time. In addition, credit cycle peaks and troughs are greater than those of the traditional business cycle.

In the wake of the 2008 financial crisis, economists renewed efforts to model the credit cycle to address these asset and credit dynamics. We estimate the agricultural sector's credit cycle between 1965 and 2014 using a similar modeling technique. The model demonstrates the important linkages between asset prices and credit in the agricultural economy and explains many of the important changes in the agricultural sector over the observation period. The Farm Financial Crisis of the 1980s, for example, was believed to have been caused, in large part, by the over investment in agricultural assets through collateralized lending and the rapid rise and fall in farm real estate values. This period of rapid rise and fall in lending and asset prices can be observed in the estimated credit cycle presented in Figure 1.

Figure 1. Credit Cycles in the Agricultural Sector and the Aggregate Economy, 1965-2014



Over the period 1965–2014, the agricultural credit cycle exhibited two complete upturns (from 1973 to 1982 and from 1992 to 2009) with an average duration of 14.5 years and two complete downturns (from 1968 to 1972 and from 1983 to 1991) with an average duration of 7 years. The model also suggests that the agricultural credit cycle is currently exhibiting a downturn, following the previous peak in 2009.

Economists view the credit cycle as a leading indicator of financial distress. When the credit cycle is in an upturn (asset prices are increasing and credit constraints are relaxing), it roughly mirrors the likelihood and size of subsequent credit reversals. Thus, the current downturn in the agricultural credit cycle warns of potential increases in financial distress in the agricultural sector. Figures 2 and 3 plot the agricultural credit cycle along with delinquent real estate loans and nonperforming non-real estate loans as reported by the Federal Reserve’s Agricultural Finance Databook. While the data are not available for the entire observation period, they suggest that credit cycle downturns are associated with increased financial distress and elevated loan repayment issues.

Figure 2. Agricultural Credit Cycles and Delinquent Agricultural Real Estate Loans

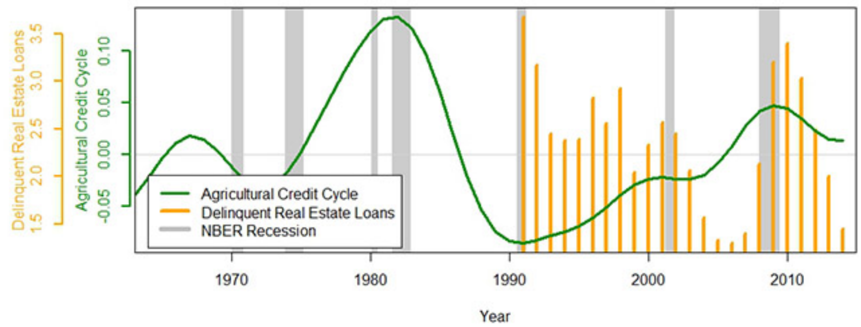
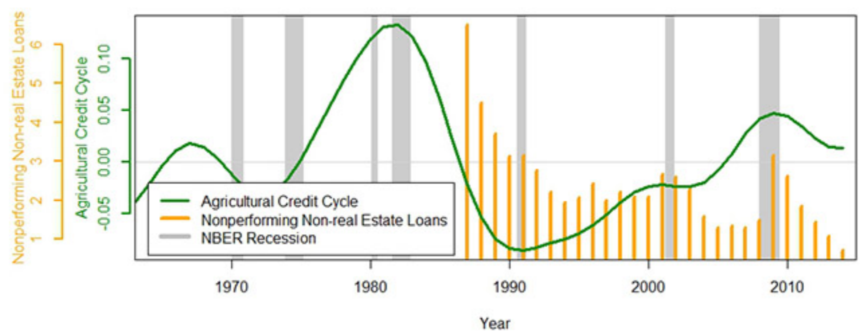


Figure 3. Agricultural Credit Cycles and Nonperforming Agricultural Non-real Estate Loans



Additional Resources

The slides for this presentation can be found at:
http://www.farmdoc.illinois.edu/presentations/IFES_2015

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