2. The Effects of the Federal Reserve System in U.S. Agriculture

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Brian Briggeman is an Associate Professor in Agricultural Economics at KSU, and the Director of the Arthur Capper Cooperative Center. His research and extension program include topics on agricultural finance, agribusiness and cooperative management and macroeconomic implications for U.S. agriculture. He also teaches agricultural finance. Prior to joining KSU, Brian was an economist with the Federal Reserve Bank of Kansas City. He holds a bachelor's degree in agribusiness from KSU, an M.S. degree in agricultural economics from Texas A&M University and a Ph.D. degree in agricultural economics from Purdue University. He is originally from Iuka, Kansas where his parents own and operate the family farm.

Abstract/Summary

As the central bank for the U.S., the Federal Reserve System or Fed serves an important role in the macro economy as well as in agriculture. The Fed's purpose is to foster long-run stable growth, a sound banking system and an efficient financial payment system. Since the Financial Crisis of 2008, the U.S. economy has faced significant challenges, which has led the Fed to execute a number of extraordinary measures—such as zero-bound interest rates and quantitative easing. In this session, a former Fed economist will share his perspectives on the role of the Fed and its effects on U.S. agriculture.

Effects of the Federal Reserve System in U.S. Agriculture

Risk and Profit Conference
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KANSAS STATE UNIVERSITY

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Outline

- Background on the Federal Reserve
- The Federal Reserve's Monetary Policy Tools
- The Federal Reserve System and U.S. Agriculture

The Federal Reserve System

- Established in 1913
  - Third attempt at a central bank
- Four general areas of focus:
  - Conduct monetary policy
  - Supervise and regulate banking institutions
  - Provide financial services
  - Maintain stability of financial system (systemic risk)

An Independent Federal Reserve System

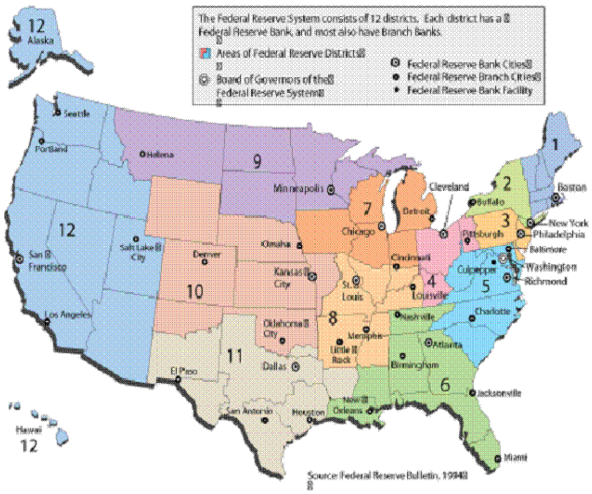
- The Fed generates its own income
  - Service income
  - Interest income
    - Loans and U.S. Treasury securities
- In fact, the Fed is a "for-profit" institution
  - All profits go to the U.S. Treasury
- Balance of Power: The Political Fight for an Independent Central Bank, 1790 – Present
  - http://www.kc.frb.org/

Structure of the Federal Reserve System

- Board of Governors
  - Washington D.C. representation
- Twelve Federal Reserve Banks
  - New York Fed
    - Wall Street representation
  - Eleven remaining Federal Reserve Banks
    - Main Street representation
- Governors and Bank Presidents make up Federal Open Market Committee (FOMC)

Board of Governors

Regional Reserve Banks



Federal Open Market Committee

Two Kinds of Economic Policy Set by Two Different Institutions

- Monetary Policy
  - Federal Open Market Committee sets this policy
  - Changes in the level of money and credit in the economy
- Fiscal Policy
  - Executive and legislative branches set this policy
  - Changes in government spending and taxes

Objectives of Monetary Policy

- Notes state four objectives but really there are two
- Stable prices
- Full employment

The Federal Reserve's Monetary Policy Tools

1. Open Market Operations
2. Discount Rate
3. Bank Reserve Requirements
4. Balance Sheet (Quantitative Easing)

1. Open Market Operations

Expansionary Policy

- Fed purchases Securities
- Payment made by crediting reserve accounts at the Fed
- Additional reserves are available for lending
- Money supply expands
- Interest rates decline

Contractionary Policy

- Fed sells Securities
- Payment received by charging reserve accounts at the Fed
- Fewer reserves are available for lending
- Money supply shrinks
- Interest rates rise

2. Discount rate (primary credit rate)

- Rate of interest the Federal Reserve charges on loans to banks and other financial institutions

Expansionary Policy

- To signal Fed posture as expansionary, the Fed will lower the discount rate

Contractionary Policy

- To signal Fed posture as expansionary, the Fed will raise the discount rate

3. Reserve Requirements

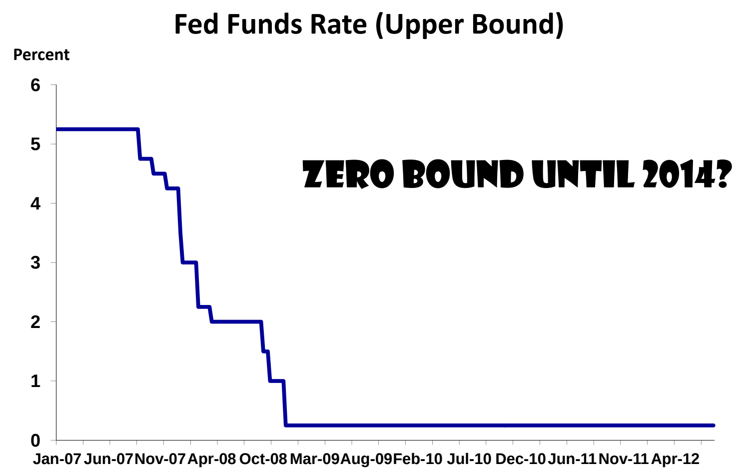
Expansionary Policy

- Decreasing reserve requirements
- More funds available for lending
- Bigger money supply
- Lower interest rates

Contractionary Policy

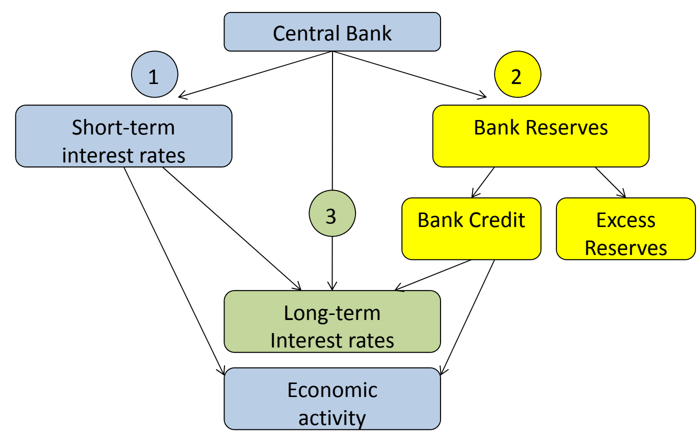
- Increasing reserve requirements
- Fewer funds available for lending
- Smaller money supply
- Higher interest rates

What happens to monetary policy at the zero bound?



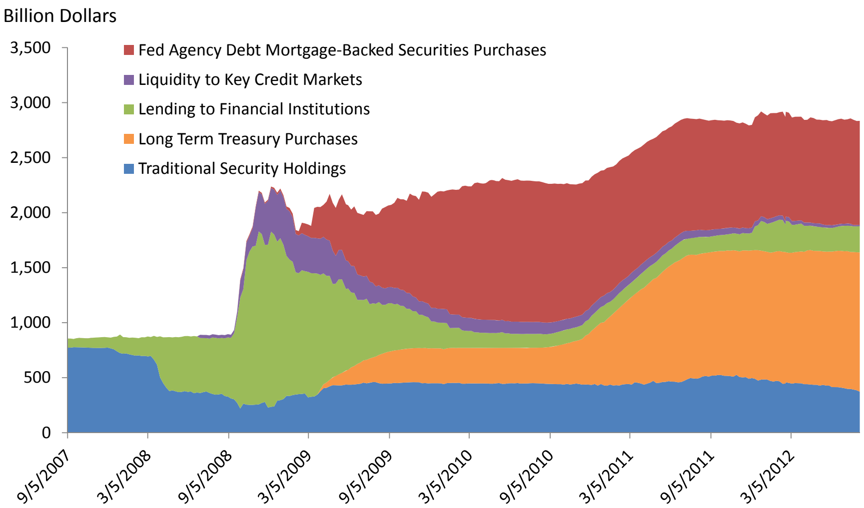
Source: Federal Reserve Board of Governors

Monetary Policy Transmission Mechanisms



Source: Gordon Sellon (2003) "Monetary Policy and the Zero Bound: Policy Options When Short-Term Rates Reach Zero" Economic Review http://www.kansascityfed.org/Publicat/ECONREV/PDF/4q03sell.pdf

4. Balance Sheet



Source: Federal Reserve Bank of Cleveland

The Federal Reserve System and U.S. Agriculture

- Difficult to *definitively* argue causality

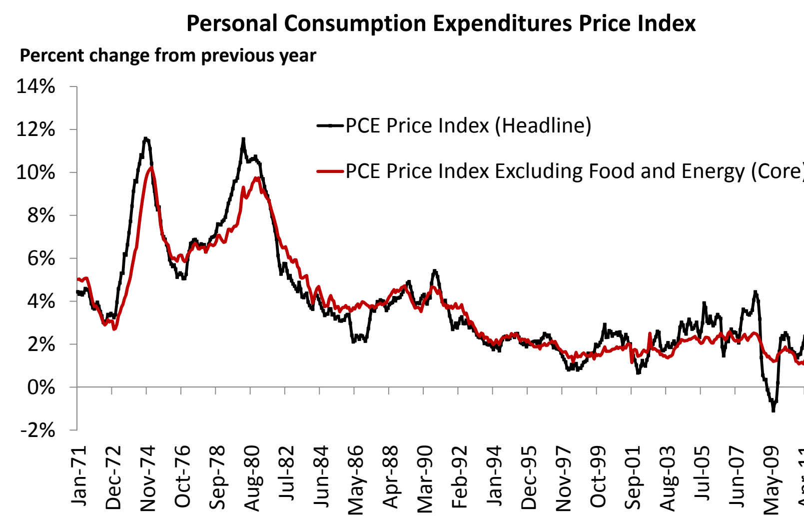
Effects of the Fed on U.S. Ag

1. Interest rates
   a. Arguably most significant driver
2. BIG balance sheet and bank excess reserves
   a. Inflation
3. Access to credit
4. Value of the U.S. dollar
5. Farmland values

Inflation?

- Today, monetary policy is extremely accommodative
- Bank excess reserves are large and interest rates are low
  – Liquidity effect
- So, what about inflation and the expectations of future inflation?

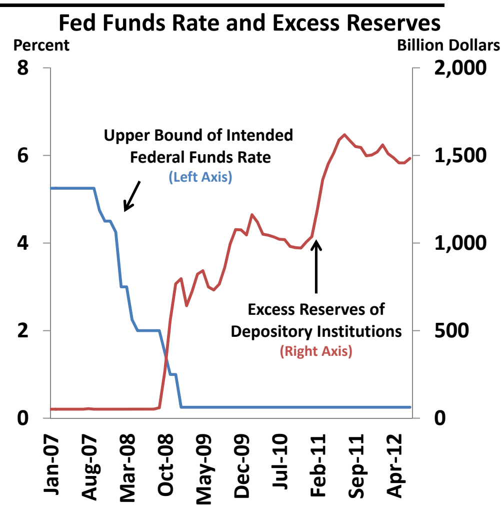
While today's inflation is well below 1970s levels, has headline inflation become more volatile today?



Source: Federal Reserve Economic Data, Federal Reserve Bank of St. Louis

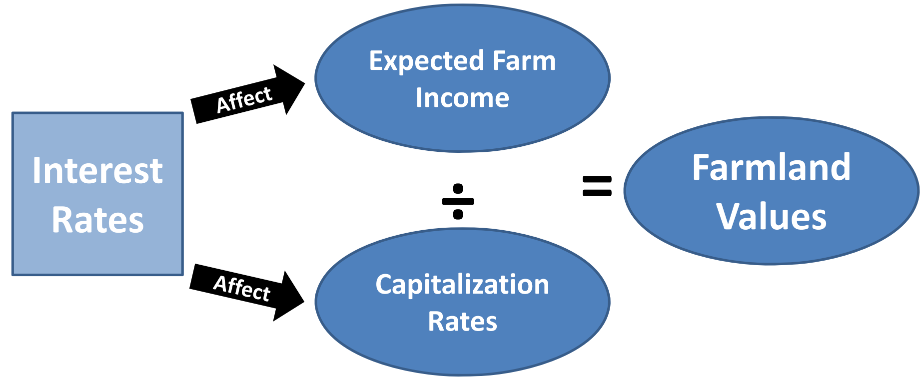
With interest rates at historically low levels, bank liquidity has surged.

- To stimulate the economy, the Federal Open Market Committee (FOMC) dropped the Fed funds rate to the zero bound and pumped liquidity into the market (QE and QE2).
- With low interest rates, large amounts of liquidity and limited to no borrowing activity, excess reserves of depository institutions held at the Fed surged.
- Ample funds are available for businesses and individuals

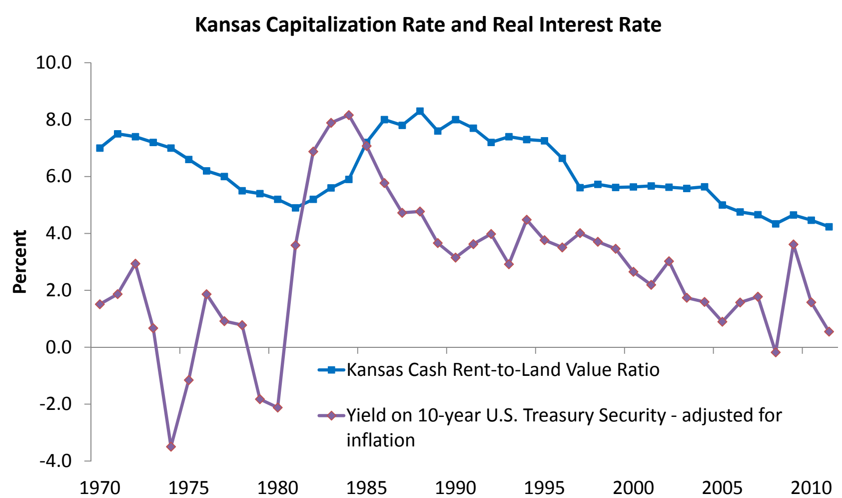


Source: Federal Reserve Board of Governors

Interest rates can affect farmland values through two avenues.

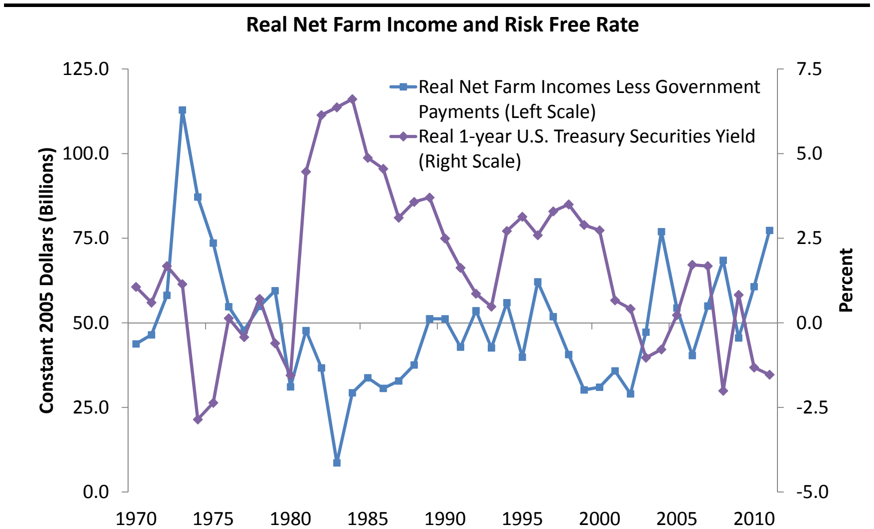


Over time, real interest rates and capitalization rates tend to move together.



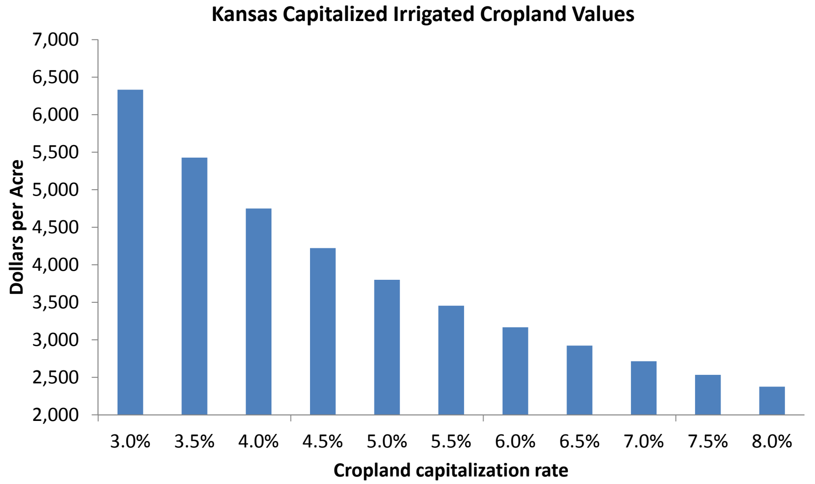
Sources: USDA , Federal Reserve and BLS

Over time, real interest rates and real net farm income tend to move in opposite directions.



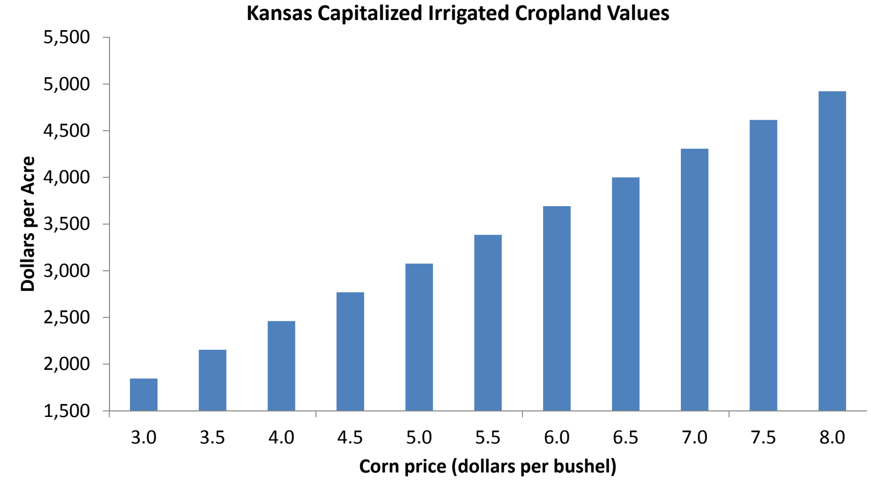
Sources: USDA , Federal Reserve, BLS

Historically low capitalization rates help support current cropland values.



Authors' calculations based on KSU Corn Cost-return Budget in South Central Kansas.
Assumed 200 bushels per acre, a corn price of $4.75 per bushel, and 20% of gross revenues capitalized into land.

At a historical average cap rate and today's corn prices, current cropland values in Kansas are reasonable.



Authors' calculations based on KSU Corn Cost-return Budget in South Central Kansas.
Assumed 200 bushels per acre, a corn price of $4.75 per bushel, 20% of gross revenues capitalized into land, and cap rate of 6.5%.

Thank you.

Questions?

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