

How the Federal Reserve Can Affect Agriculture

2012-2013 Ag Profitability Conferences

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The Federal Reserve System

- Established in 1913
 - Third attempt at a U.S. 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/>

Background on the Federal Reserve

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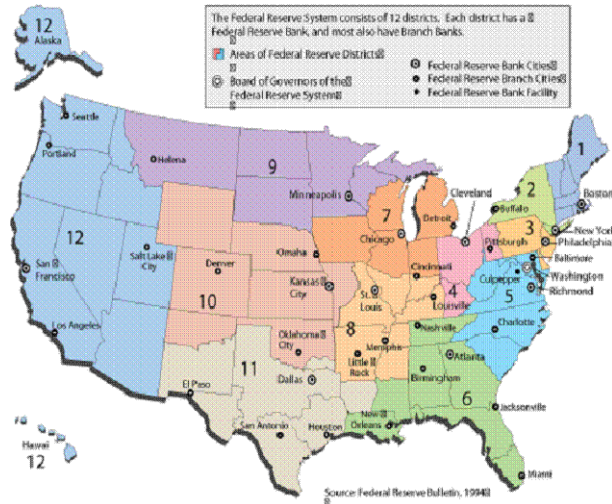
Fed Structure: Board of Governors is Washington, D.C. Representation



Background on the Federal Reserve

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Fed Structure: Regional Reserve Banks is the Wall Street and Main Street Representation



Background on the Federal Reserve



Fed Structure: Primary Decision Making Body is the Federal Open Market Committee (FOMC)



Background on the Federal Reserve



Objectives of Monetary Policy

- Stable prices
 - Keep inflation under control (not too high and not too low)
- Full employment
 - Work to keep unemployment rate from being too high



The Federal Reserve's Monetary Policy Tools

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The Federal Reserve's Monetary Policy Tools

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



The Federal Reserve's Monetary Policy Tools

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The Federal Reserve System and U.S. Agriculture

- Difficult to *definitively* argue causality

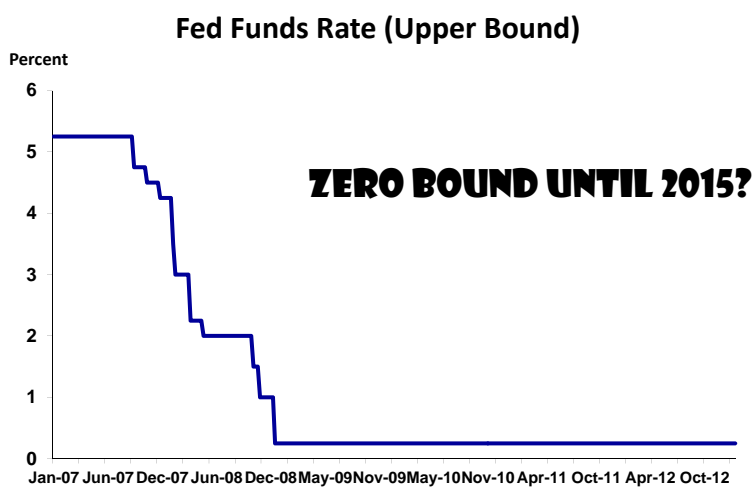
Effects of the Fed on U.S. Ag

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

Effects of the Federal Reserve on U.S. Agriculture

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With the economy still in a sluggish recovery,
the Fed has kept interest rates near zero.

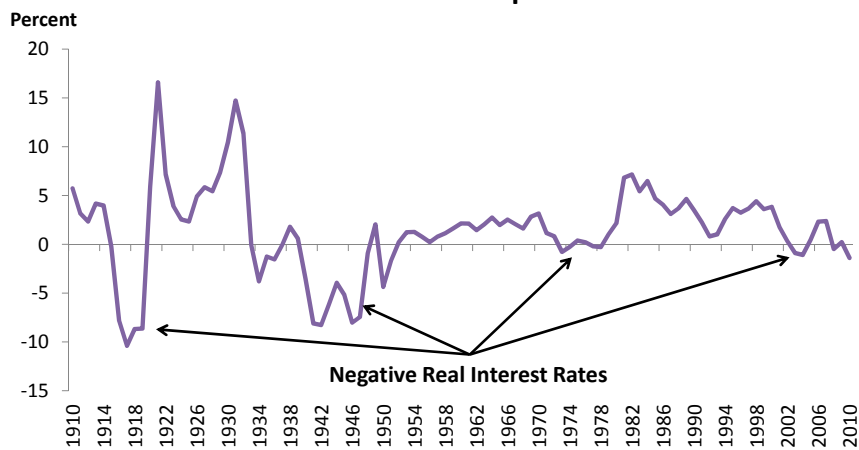


Interest Rates

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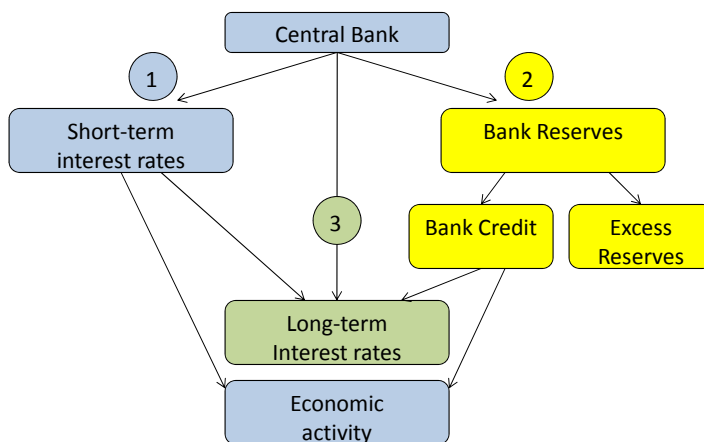
While the zero bound is a new issue in monetary policy, excessively low and negative real interest rates are not.

Real Commercial Paper Rates



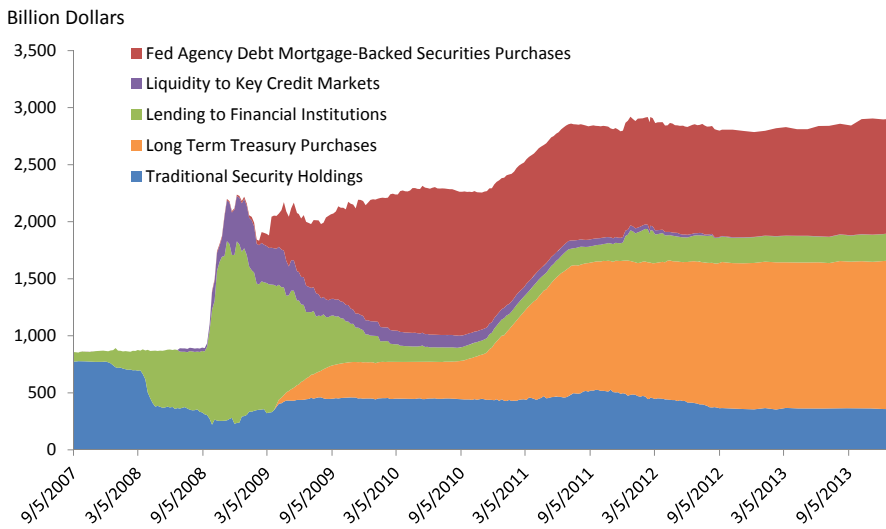
Source: Featherstone, Allen M. and Timothy G. Baker. 1987. "An Examination of Farm Sector Real Asset Dynamics: 1910 - 85." American Journal of Agricultural Economics 69(3): 532-546, and Federal Reserve Board of Governors

How does monetary policy work when nominal short-term interest rates are at the zero bound?



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/Aq03sell.pdf>

The Fed has pumped massive amounts of liquidity into the marketplace.

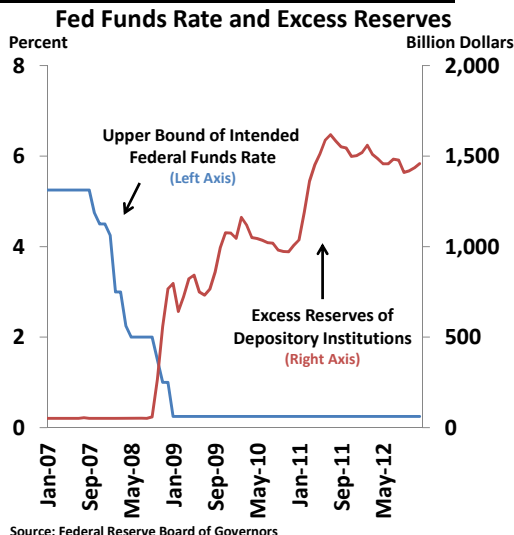


BIG Balance Sheet and Bank Excess Reserves



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 1, 2 and 3).
- 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



BIG Balance Sheet, Bank Excess Reserves and Access to Credit



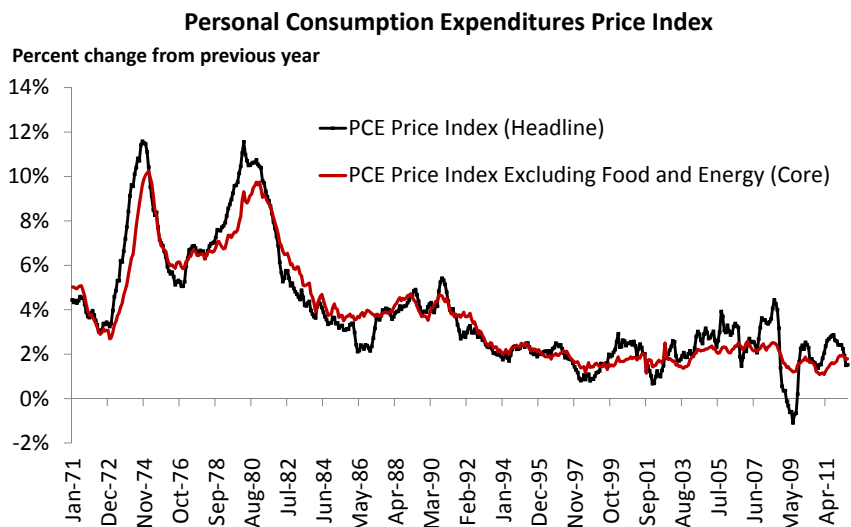
Inflation?

- 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?

BIG Balance Sheet and Bank Excess Reserves

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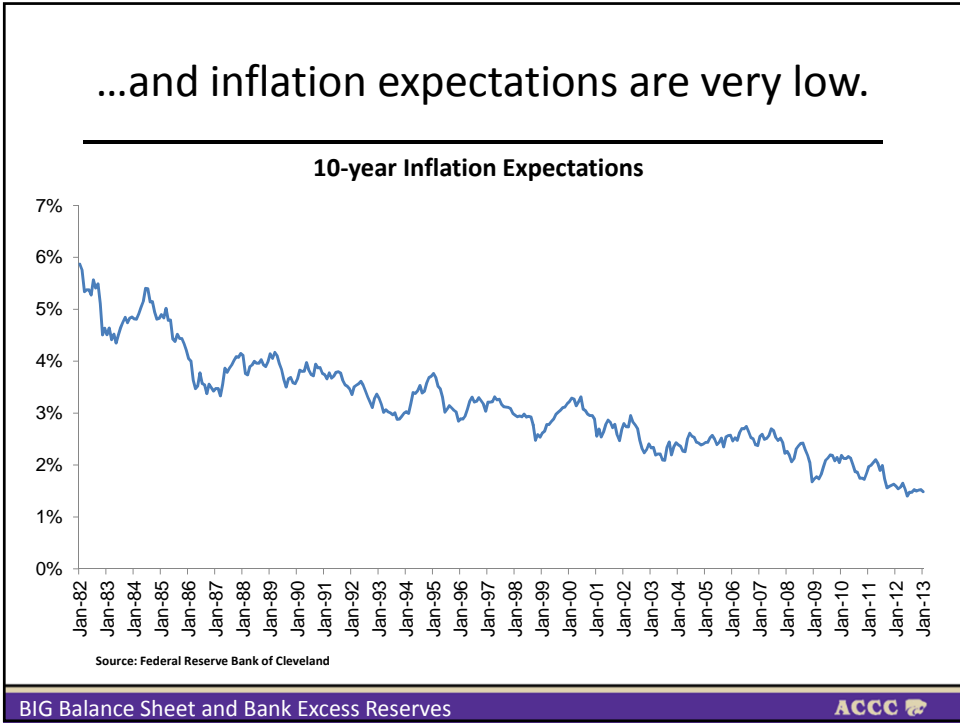
Today's inflation is well below 1970s levels...



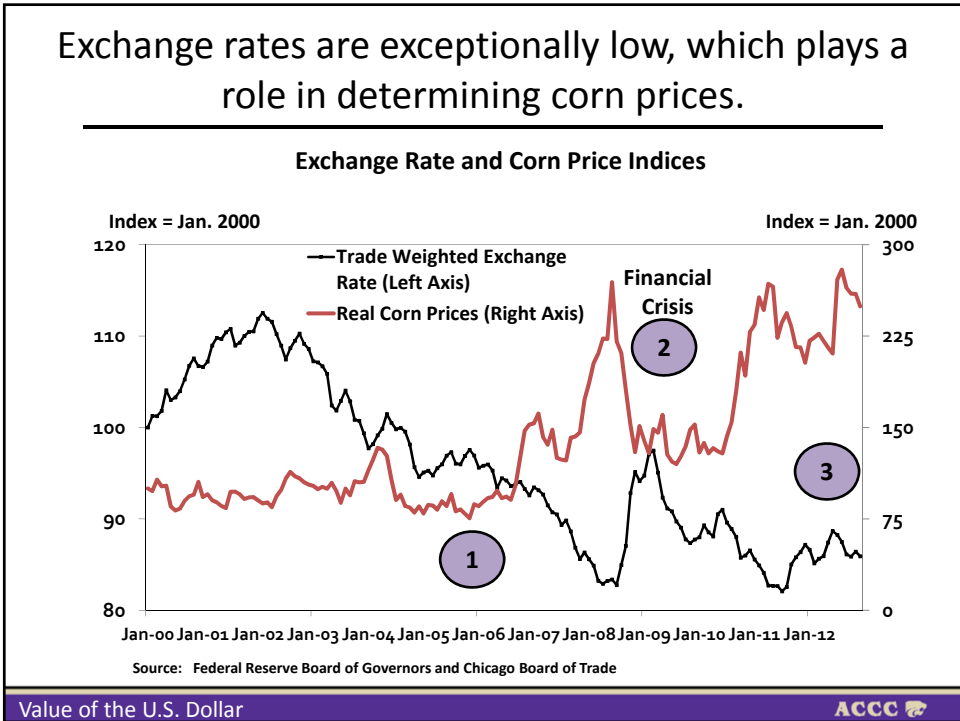
BIG Balance Sheet and Bank Excess Reserves

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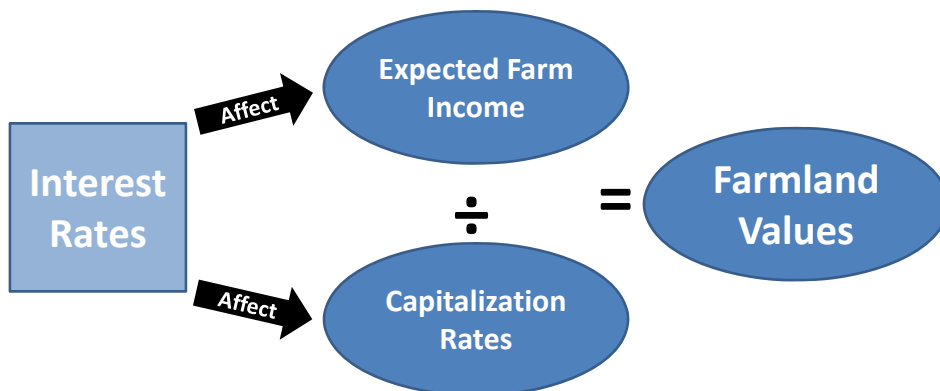
...and inflation expectations are very low.



Exchange rates are exceptionally low, which plays a role in determining corn prices.



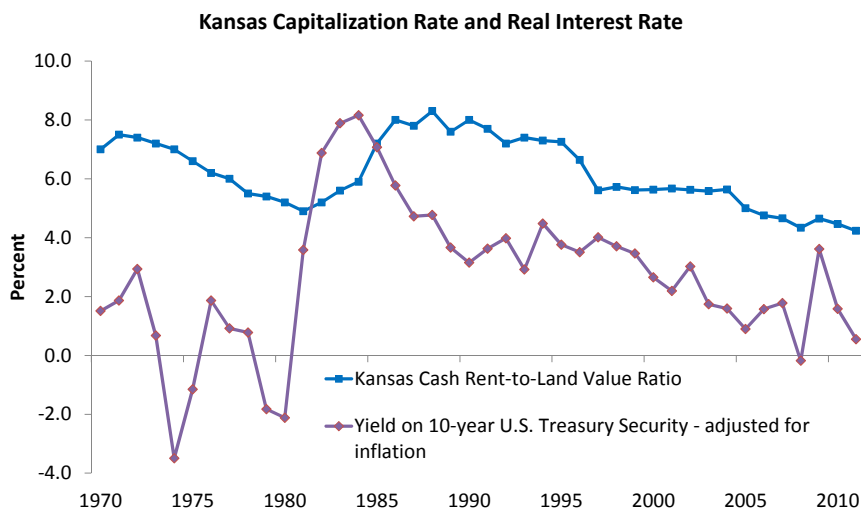
Interest rates can affect farmland values through two avenues.



Value of the U.S. Dollar and Farmland Values



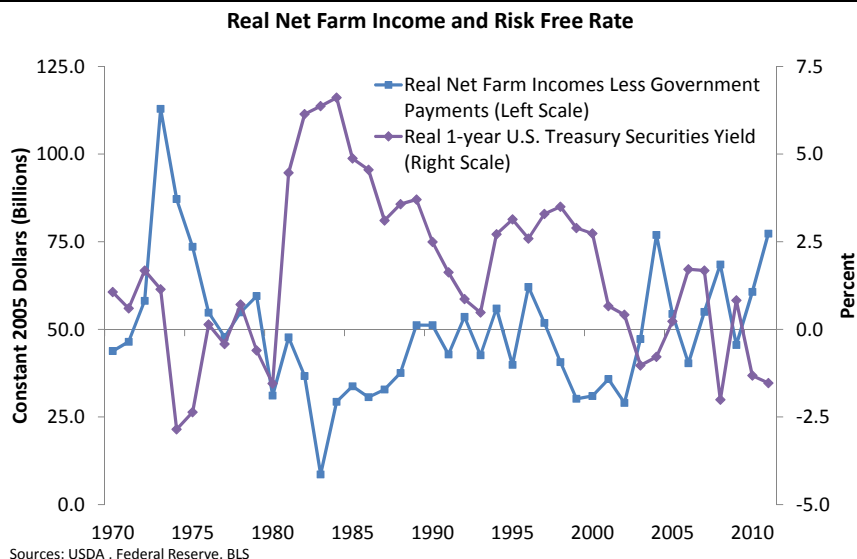
Over time, real interest rates and capitalization rates tend to move together.



Value of the U.S. Dollar and Farmland Values



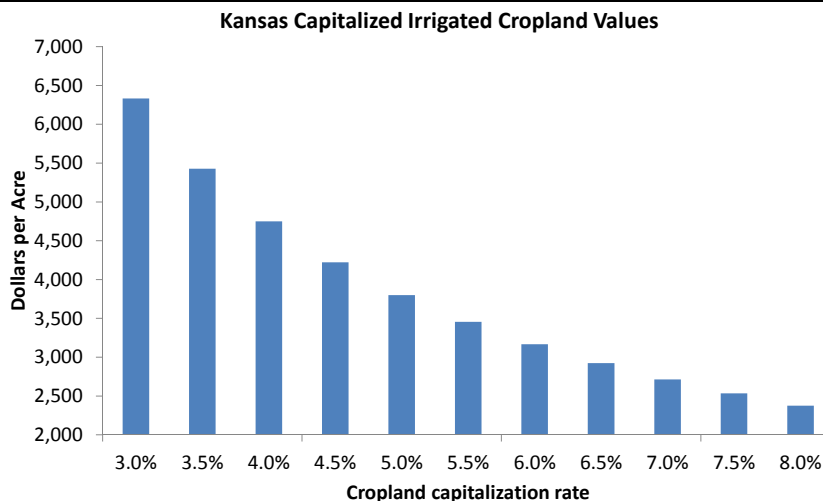
Over time, real interest rates and real net farm income tend to move in opposite directions.



Value of the U.S. Dollar and Farmland Values

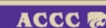


Historically low capitalization rates help support current cropland values.

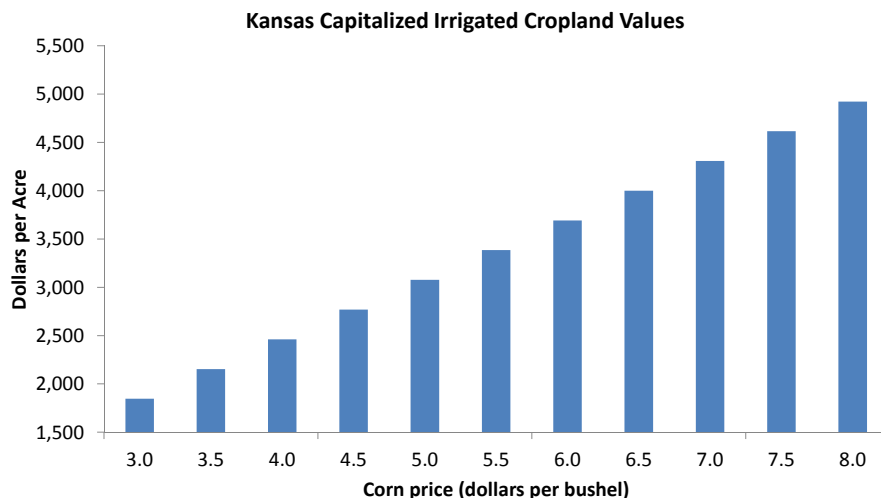


Authors' calculations based on KSU Corn Cost-return Budget in South Central Kansas. Assumed 200 bushels per acre, a corn price of \$4.75 per bushel, and 20% of gross revenues capitalized into land.

Value of the U.S. Dollar and Farmland Values



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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