Macroeconomic Risks for Farmer Cooperatives

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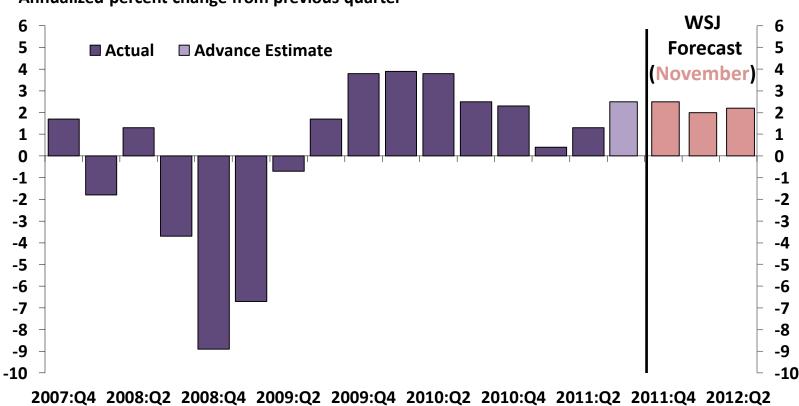
Macroeconomic Risks

- While there are many macro and global factors that can affect your farmer cooperative, I'm going to focus on four that could build on each other:
 - Interest Rates The Good (low), The Bad (low) and The Ugly (surging)
 - 2. Inflation
 - 3. Crop prices
 - 4. Farmland Values



Growth improved in the 3rd quarter of 2011, but is it sustainable as forecasters project?

Real GDP Growth

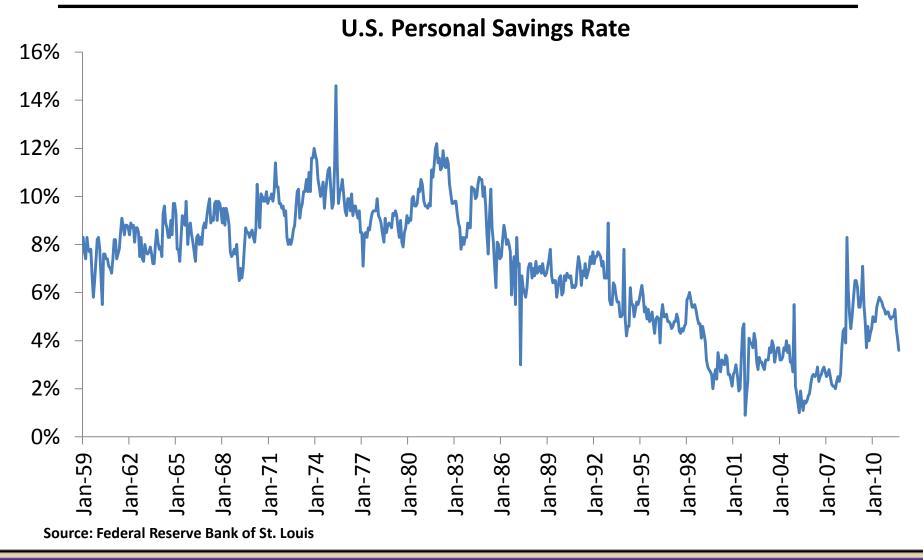


Annualized percent change from previous quarter

Source: Bureau of Economic Analysis and Wall Street Journal November 2011 Forecast Survey (Average)

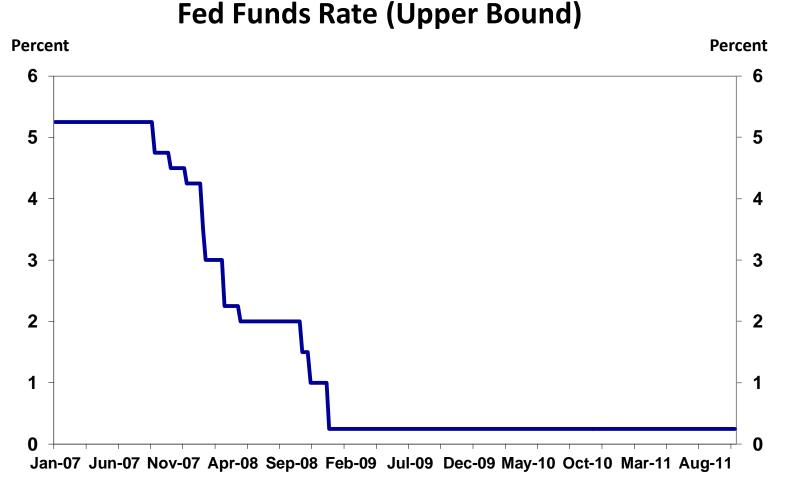


Recent growth, however, came at the expense of savings...



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...but when interest rates are at or near zero, what incentive do consumers have to save?



Source: Federal Reserve Board of Governors





INTEREST RATES – THE GOOD, THE BAD AND THE UGLY

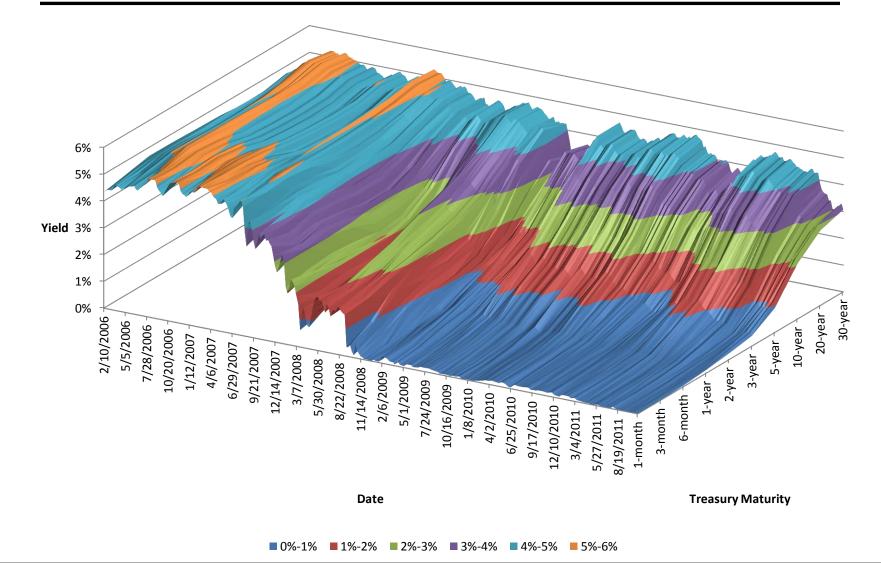
Low interest rates have pushed down the cost of borrowing.

5% 4% 3% 2% 1% 0% 3-month 1-year 5-year 20-year 2009 2007 2008 2010 2011

Yield on U.S. Treasury Securities

Source: Federal Reserve Board of Governors

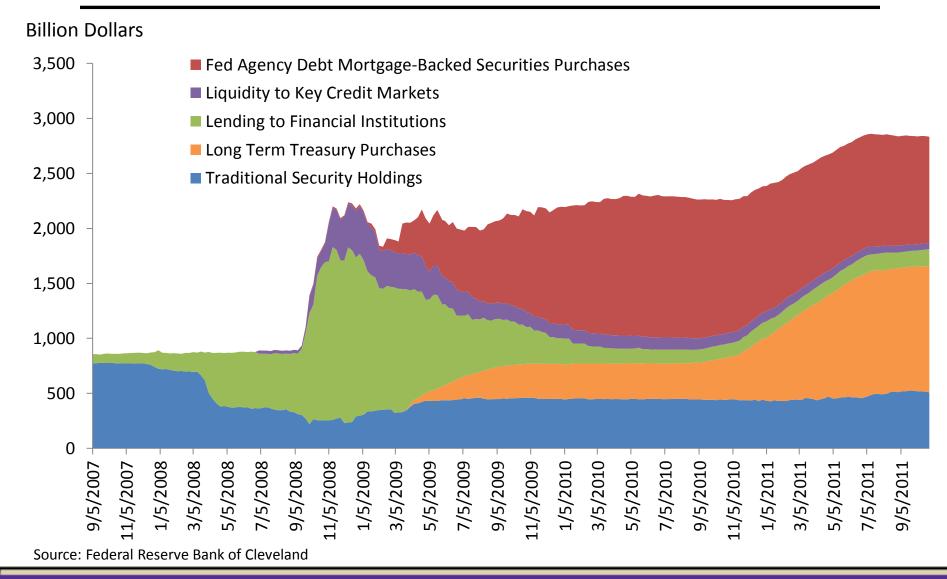
When the Fed is at the zero bound, can the "long-end" of the yield curve move?



Interest Rates – The Bad (low)

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How does the Fed return to a more "normal" balance sheet?



Interest Rates – The Bad (low)

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Today, inflation remains well below the levels experienced during the 1970s and 1980s.

Personal Consumption Expenditures Price Index



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Percent change from previous year

Interest Rates – The Ugly (surging) ... to combat inflation

To understand the current environment for inflation, it is helpful to pull a page from Econ 101.

A rapid rise in inflation occurs when **too much money** *is chasing* **too few goods**.

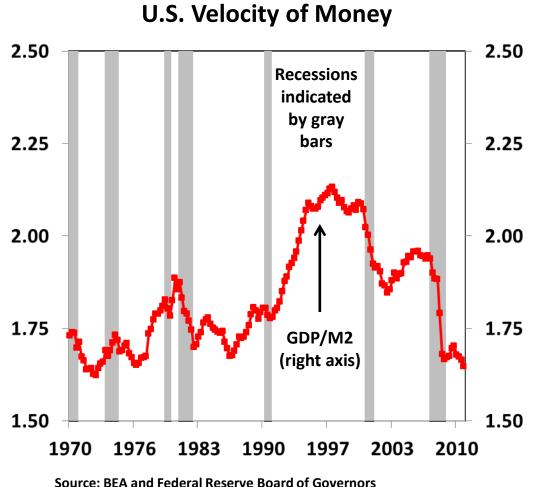
Quantity Theory of Money

$$Price = \frac{Money * Velocity}{Quantity of Goods} = \frac{M * V}{Q}$$

So, for rapid price inflation:

Why is inflation low? Velocity has plummeted.

- One way to measure velocity is by calculating the ratio of gross domestic product (GDP) to money (M2).
- This ratio is essentially a turnover ratio of how 2 quickly money is turned into output.
- Today, velocity is very low. So, what will it take to raise velocity, and when might this happen?



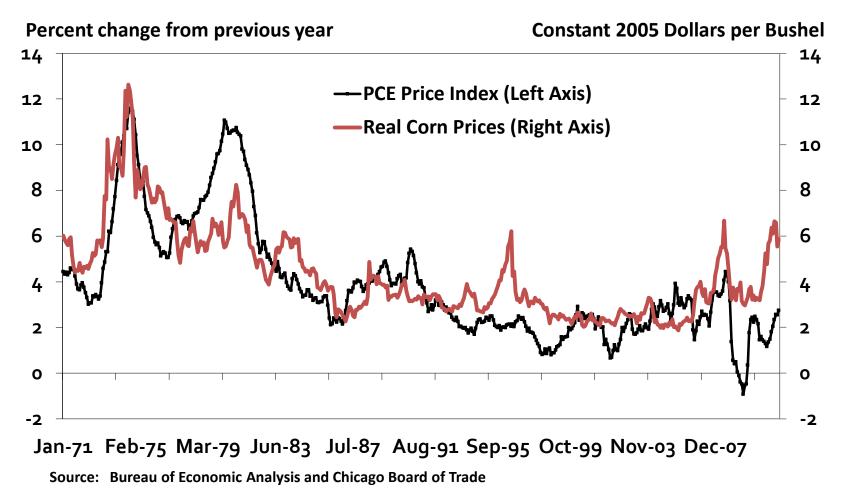
Inflation





POTENTIAL IMPACT OF "THE UGLY"

Personal Consumption Expenditures Price Index



Crop prices and inflation

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How might crop prices respond to a pick up in velocity?

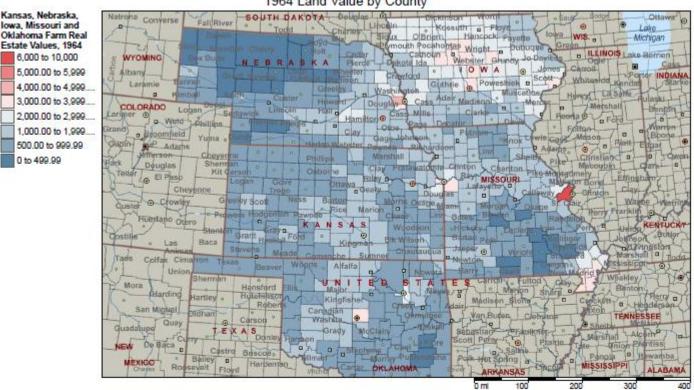
- Based on some of my working research:
 - Steep rise, possibly like the real prices experienced in 1970s...doubling
 - Then, prices would likely plummet as the market searches for equilibrium
 - Bottom line, there would likely be more volatility with potentially bigger swings in crop prices.

• The Federal Reserve's exit strategy is key

FARMLAND VALUES ARE A BELLWETHER FOR THE FINANCIAL HEALTH OF AGRICULTURE



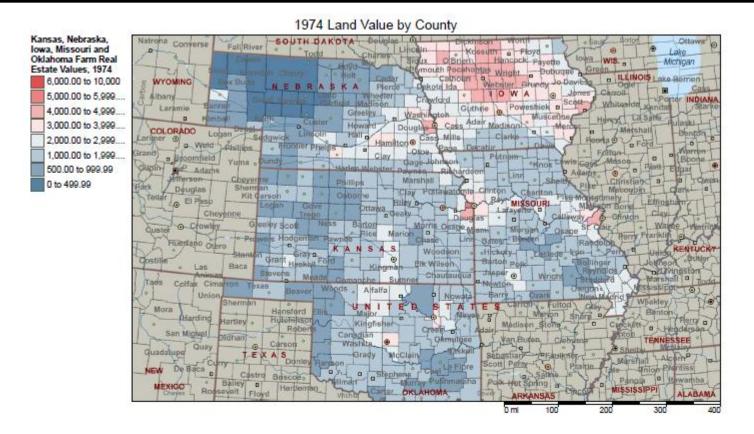
After World War II, farmland values started to heat up as new technology was adopted.



1964 Land Value by County

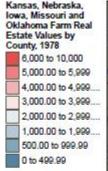


New export markets and easy credit lit a fire under the farmland value market, especially in the corn belt.





By 1978, Iowa farmland values were on "fire" and it was spreading throughout the region.



1978 Land Value by County Natrona SOUTH DAKOTA Ottown Converse Fall River wis. a Michigan ILLINOIS Lake Berrien Ceda . WYOMING Box Butte Plerde BR KA Alban INDIAN Laramie Greelev Custer Howard COLORADO - Metchall Lineotr Hall o Lobar 10 Peorta 💬 o Ford Flonger Phelor a Wetd Otov Follon-. e Adams 0 .ind Marshall Phillips Shen Douglas Clay Postawator Osborne Kit 0 @ El Plasp arsot Billey o Logan Ottawa Cheyenne Trego sby Scott Morris Osage O_Crowle 0 Rice Marion Chase Fluentano Otero ĸ S Woodson Grayn Ford Hankoll K Wilson Baca Las Chaufaudi ۲ Marshall a Taes Colfax Cim Texas Woods Alfalfa Unior Ozark his rende UNI E B. Mora Hansford Elanton Harding Hutomisso artiev Kingfisher Madisen . San Mickel Canadián Okmul TENNESSEE Washita Carson 0 EXAS Grady SehastiarP McClain Alcorit Marshall Parmy 0. 0 7. . Castro Bascoe . 0 Panpia Hot Spring 0 MEXICO MISSISSIPPI Floyd OKLAHOMA ALABAMA RKANSAS 300 100



The start of the 1980s farm debt crisis began to cool the flame surrounding farmland values.

1982 Land Value by County

Kansas, Nebraska, Natrona SOUTH DAKOTA Ottown Converse Fall River Iowa, Missouri and a Ployd D Kdesutt lowa WIS. a Oklahoma Farm Real Hancpold Payette Michigan OBrien Estate Values by mouth Pocahorta D ILLINOIS Lake Berrien County, 1982 Cedar Cathokn Box Butte WYOMING B KA Plerce 6,000 to 10,000 W A Alban Wheeter INDIAN 5,000.00 to 5,999 Laramie Guthele Greeley 4,000.00 to 4,999. Custer Howard Madison COLORADO Metchall 1 3,000.00 to 3,999. Lineolr Loban Halt Clarke Se а. Peorta 💬 Hamilton® a Ford a Wetd untier phelos 2,000.00 to 2,999. Otol Follon . Boon 3aqe 1,000.00 to 1,999. e Adams 0 500.00 to 999.99 Cheyer Phillips Marshall Sherr Douglas Clay Postavatoria Chariton 0 to 499.99 Osborne Kit 0 @ El Plasp oene MISSOURI Billey D Logan Ottawa Cheyenne o Gealty. Tread Bartor O_Crowle say Scot Morgan Marion Rice Fluentano Otero -EL.) K SA S KENFLICK? Hickory Grava. Grant Ford ò Heskol wilson. Baca Las DUPINEStor Stovchs ۲ Marshall a Taes Colfax Cim Texas Alfalfa Oliegon (Unior Ozark Weakley, hormar E B UNI Mora Hansford Banton Harding Hutomisso artiev Kingfisher Madisen Rohe . -101 San Miguel Canadian TENNESSEE Washita, Carson 40 EXAS Grady Setustiar McClain Alcorn Marshall tt Parmy-0 miss. 0 % . Castro Stephe Sallhik Bascoe 0 12 Panpia Imart Hot Spring a 0 MEXICO MISSISSIPPI Floyd OKLAHOMA ALABAMA ARKANSAS

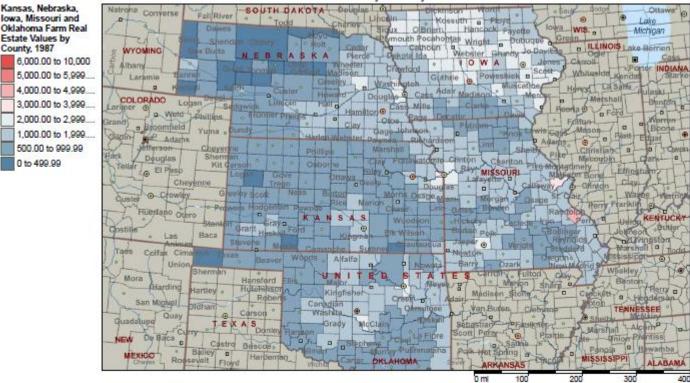
Data is inflation adjusted farmland values from U.S. Agricultural Census. Farmland values are in constant 2011 dollars.



300

100

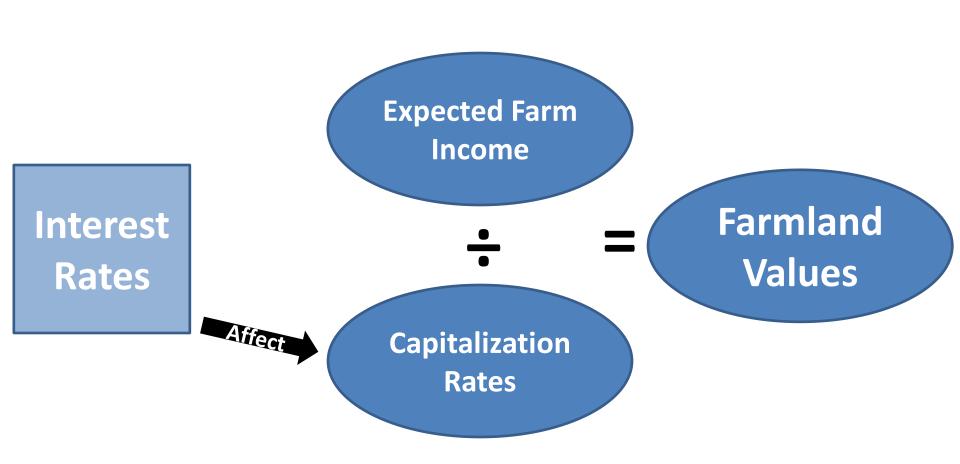
By 1987, the "fire" was out.



1987 Land Value by County

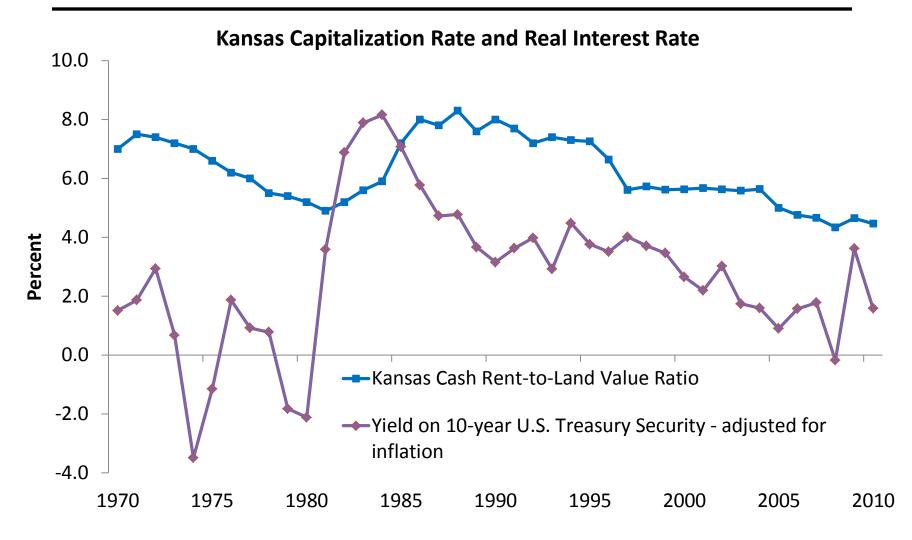


While debt is not fueling the recent surge in farmland values today, ultra low interest rates are playing a significant role.





Capitalization rates and real interest rates tend to move together.

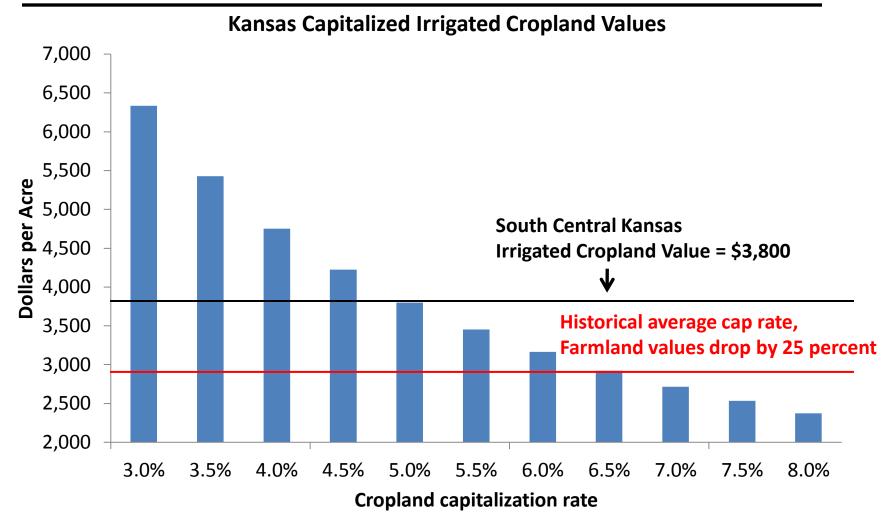


Sources: USDA , Federal Reserve and BLS

Farmland Values



Historically low capitalization rates help support current Kansas cropland values.

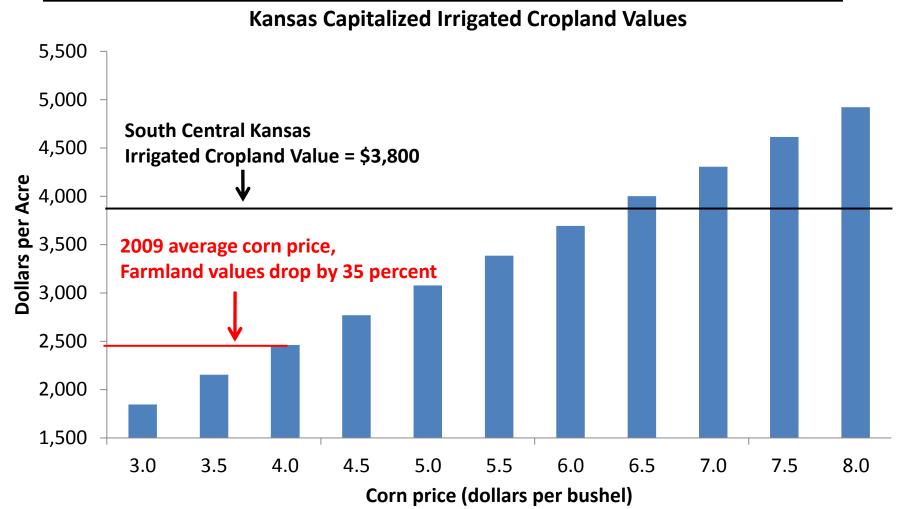


Authors' calculations based on KSU Corn Cost-return Budget in South Central Kansas. Assumed 200 bushels per acre, a corn price of \$4.75 per bushel, and 20% of gross revenues capitalized into land.

Farmland Values



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

Farmland Values



What are the implications of the economic outlook for farmer cooperatives?

- Expectations of the economic outlook are already reflected in current prices and yields
- Make sure your revenue and asset growth outlook is reasonable
 - Difficult in today's volatile climate
- Manage volatility to the best of your ability
 - Lock in margins, fix interest rates, hold working capital, help your members mitigate their risk
- Seize opportunities when they are available
 - New employee talent pool for agriculture is big right now

Thank you.

Questions?

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