

Implications of the Macro Environment on Agriculture

Ag Risk Solutions
2013 Risk & Financial Management Conference

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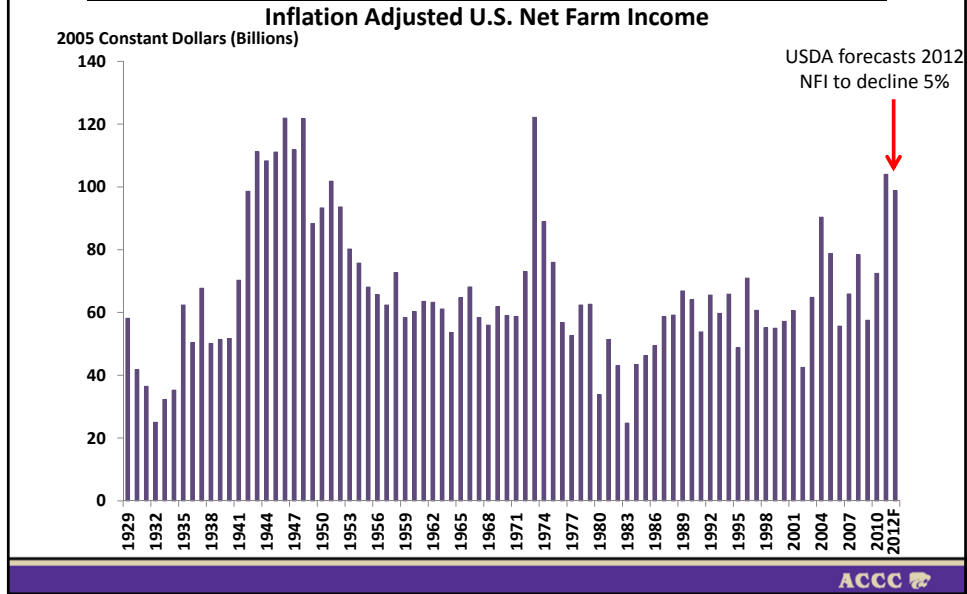
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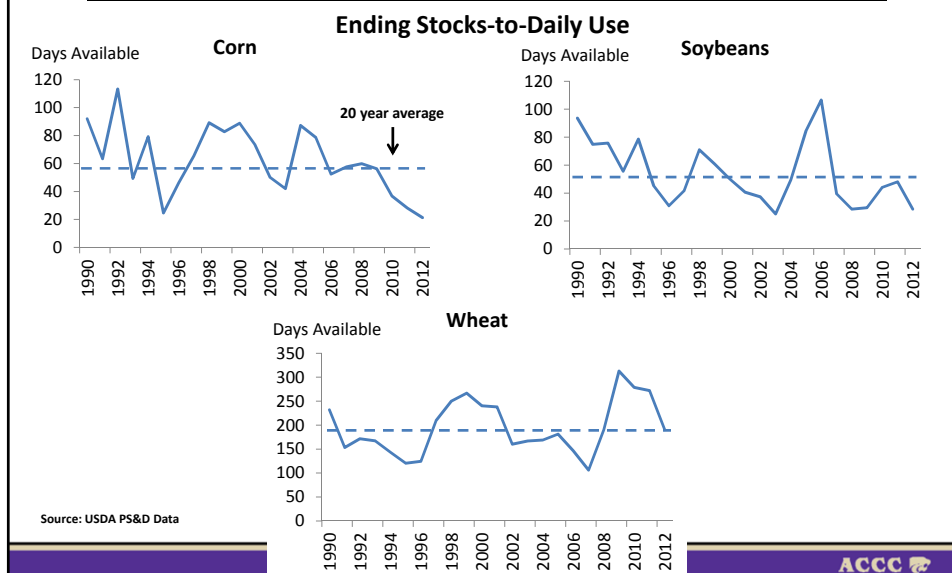
Will agriculture boom or bust in 2013?

- In 2012, the story was the weather
 - Widespread drought
 - Crops were damaged if not completely lost
 - With tight supplies, crop prices soared
 - Higher feed costs put tremendous pressure on livestock net incomes
- In 2013, the story will hinge on:
 1. The weather...will it rain?
 2. Response of producers to higher crop prices (global)
 - Plant fencerow-to-fencerow?
 - Herd liquidation continues?
 3. Uncertainty of macro events outside of producers' control

While the drought dinged net farm incomes in 2012, incomes were some of the largest on record.

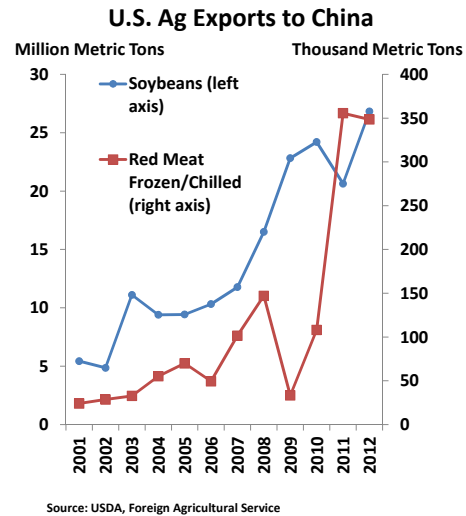


The 2012 drought made an already tight stock situation even tighter.



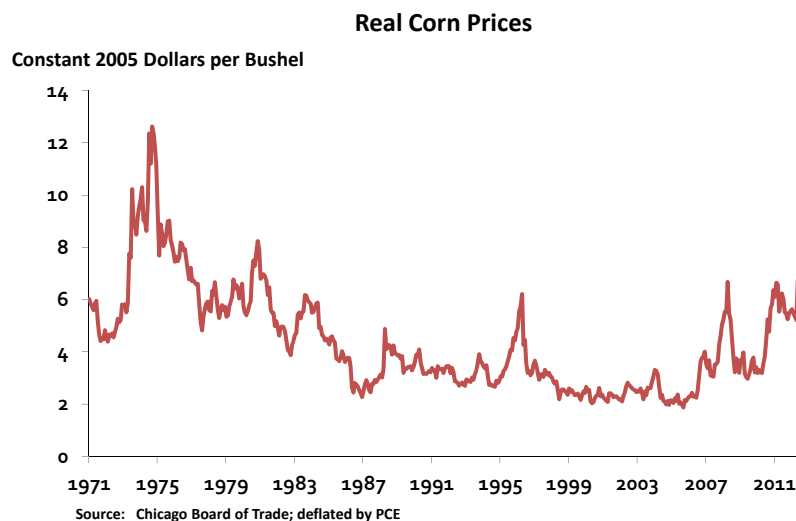
Demand for agricultural products has remained strong, especially international demand.

- Demand is shaped by:
 - Population
 - Income
 - Tastes and Preferences
 - Substitutes
 - Prices
- While U.S. demand remains sluggish with high unemployment, international demand remains strong.



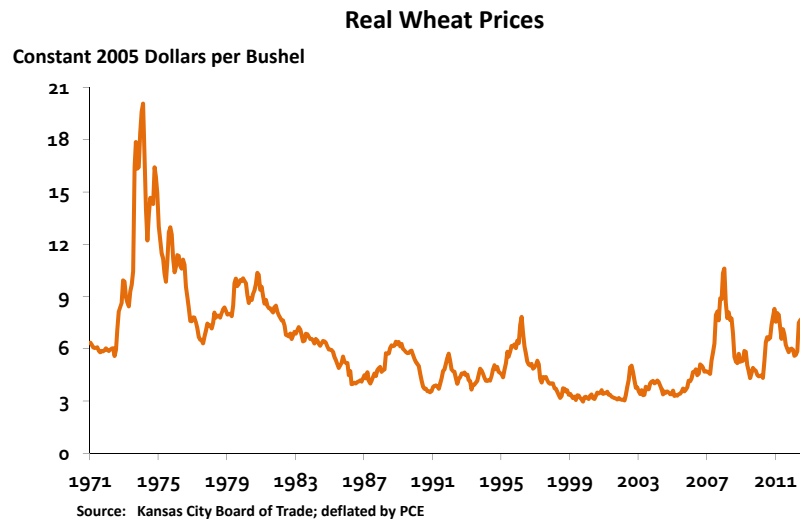
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With tight supplies and strong demand, commodity prices surged and have been quite volatile.



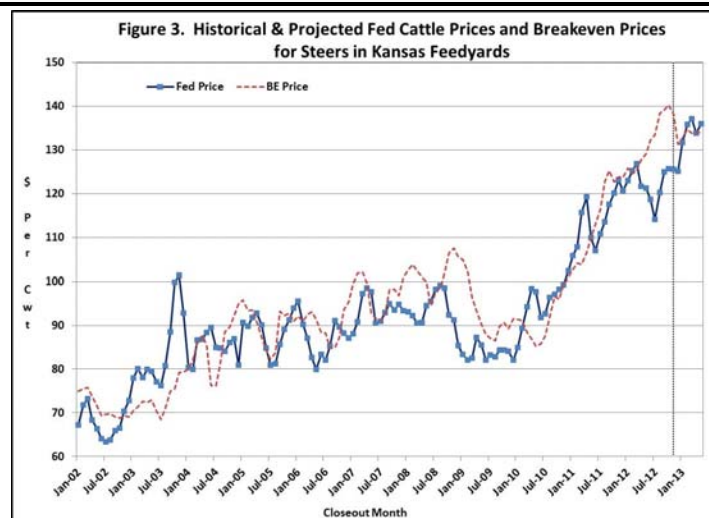
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Similar surge / volatility story in wheat as in corn.



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High crop prices have slashed livestock profits.

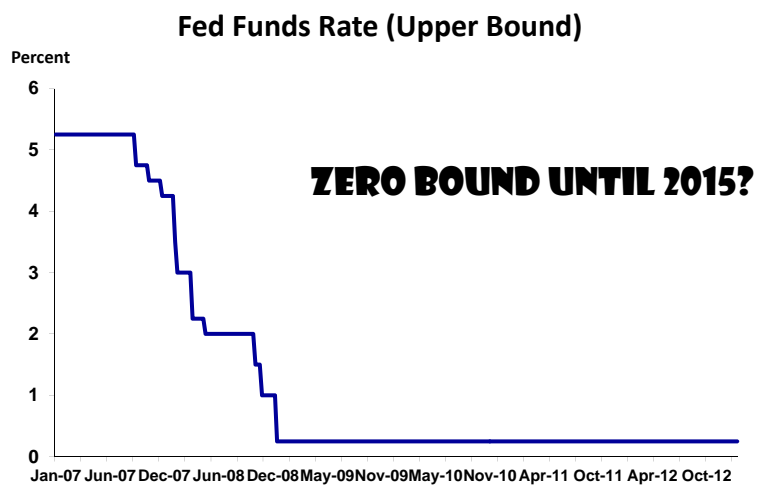


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UNCERTAINTY OF EVENTS OUTSIDE OF PRODUCERS CONTROL

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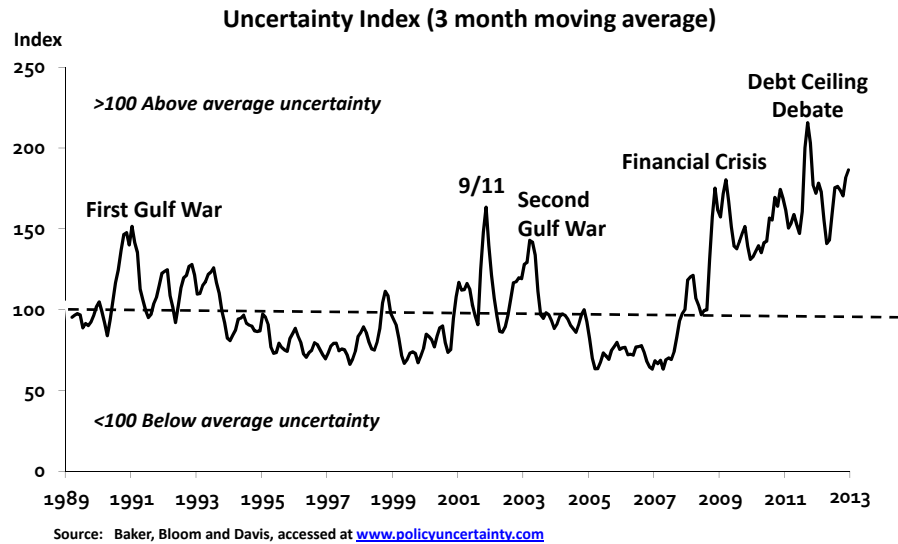
With the economy still in a sluggish recovery, the Fed has kept interest rates near zero.



Source: Federal Reserve Board of Governors

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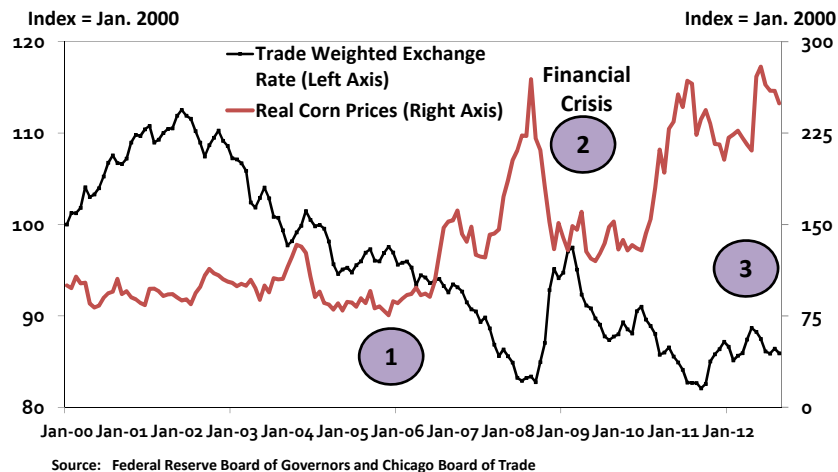
Uncertainty can be quantified.



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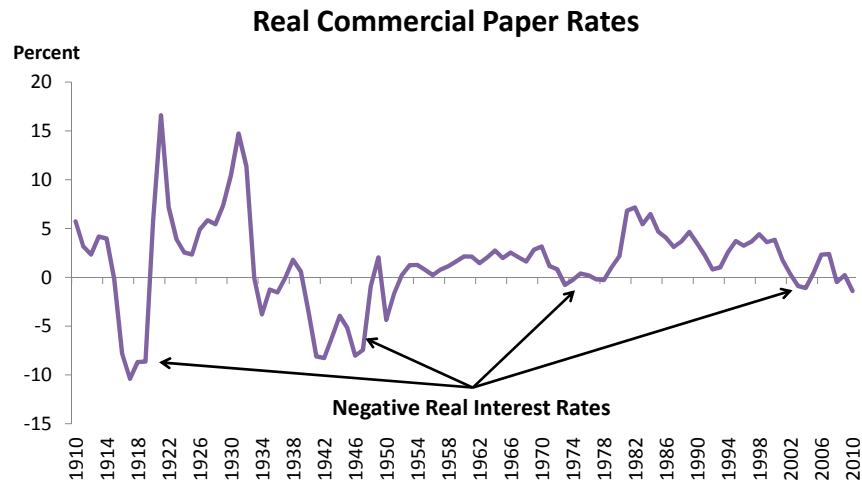
Commodity markets give us some insight into how uncertainty impacts agriculture.

Exchange Rate and Corn Price Indices



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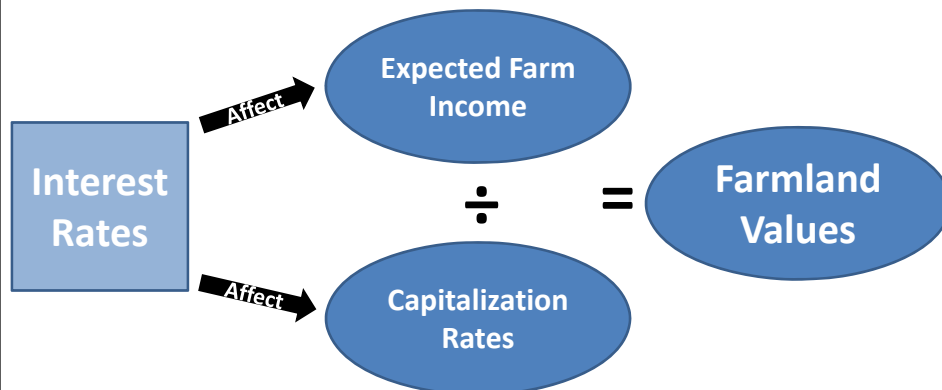
Is uncertainty heightened in periods of negative real interest rates?



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

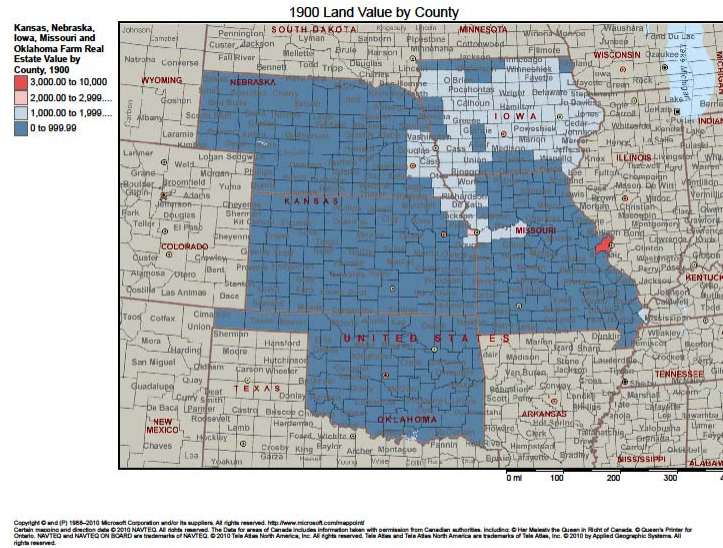
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Interest rate movements have two important impacts on farmland values.



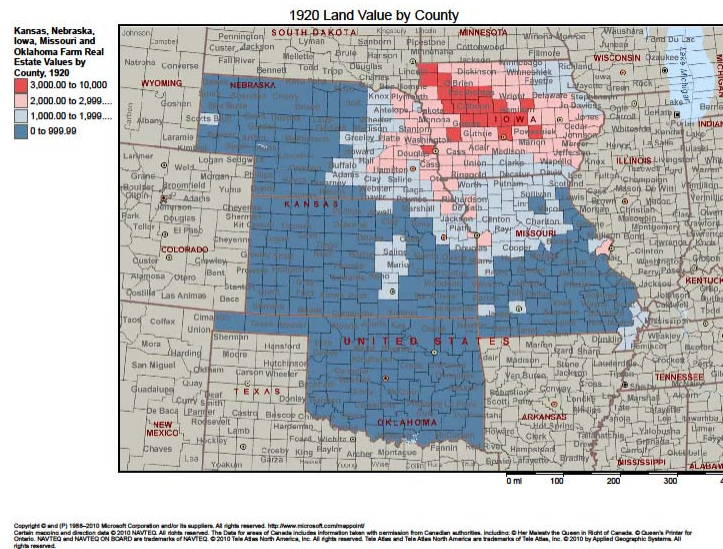
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With the start of the 20th century, farmland values began to heat up.



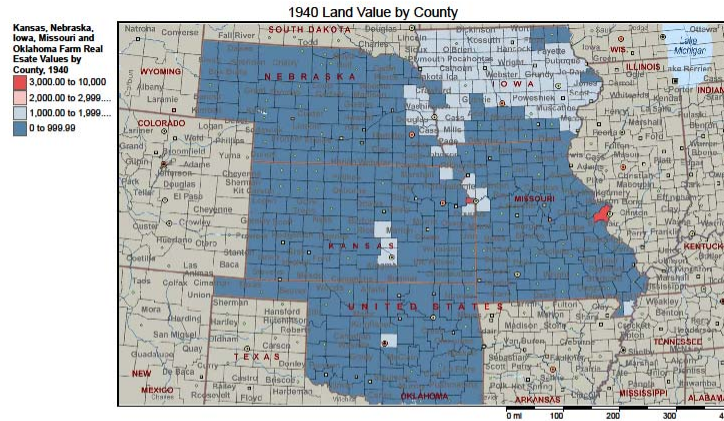
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After World War I, farmland values caught “fire” with surging ag exports and excessively leveraged farms.



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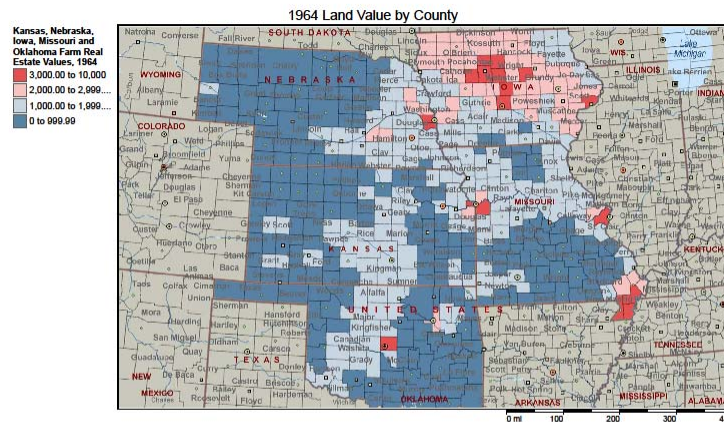
After a surge in bankruptcies and the Great Depression, the “fire” was out.



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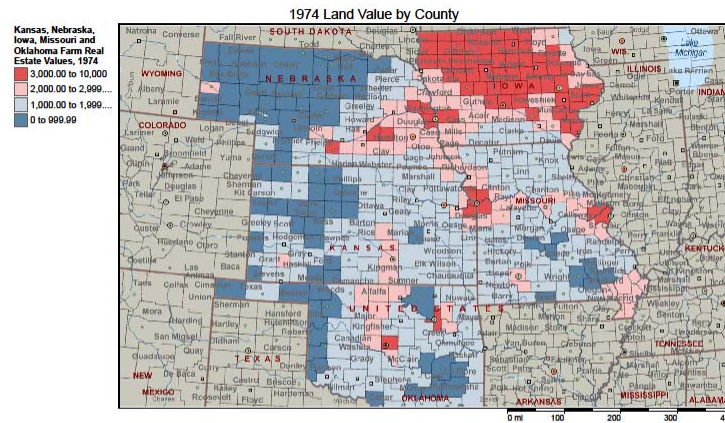
After World War II, farmland values started to heat up again as new technology was adopted.



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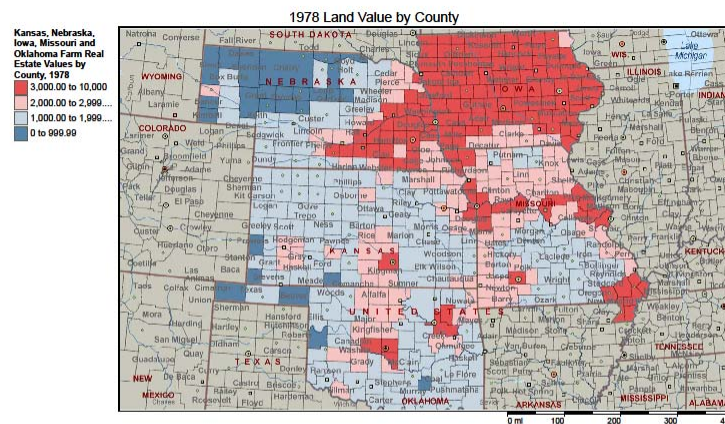
New export markets and easy credit set farmland values ablaze, especially in the corn belt.



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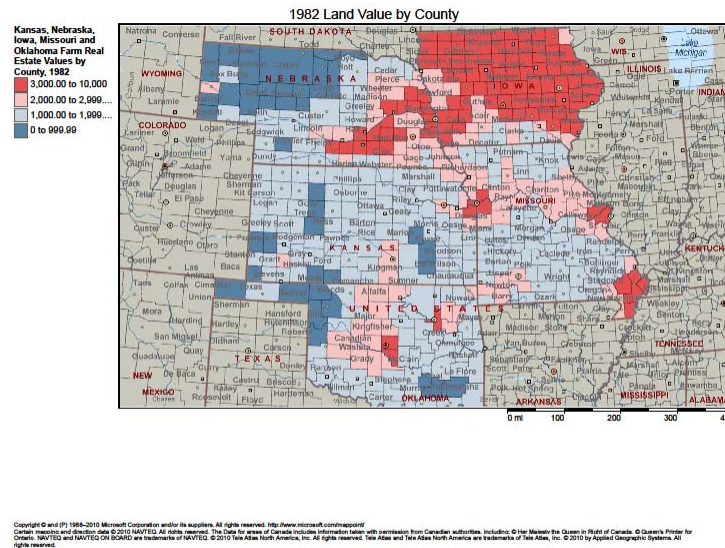
By 1978, Iowa farmland values were “red hot” and it was spreading throughout the region.



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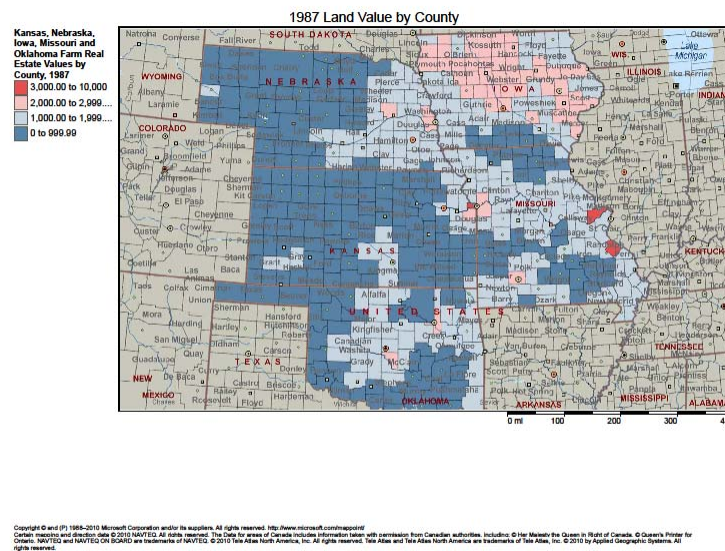
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The start of the 1980s farm debt crisis began to cool the flame surrounding farmland values.



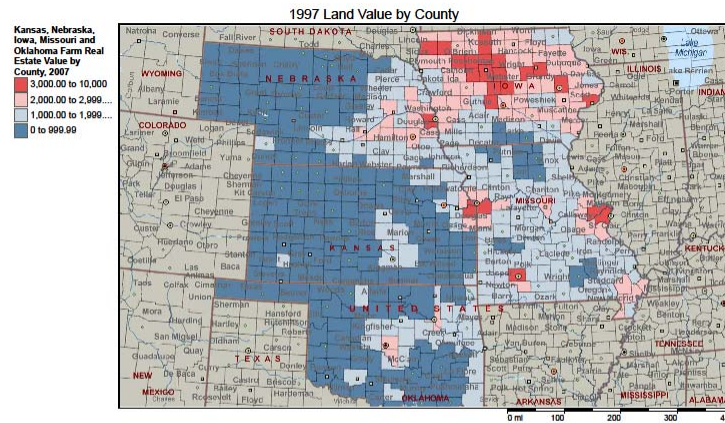
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By 1987, forced land sales and a collapse in farm income put the “fire” out.



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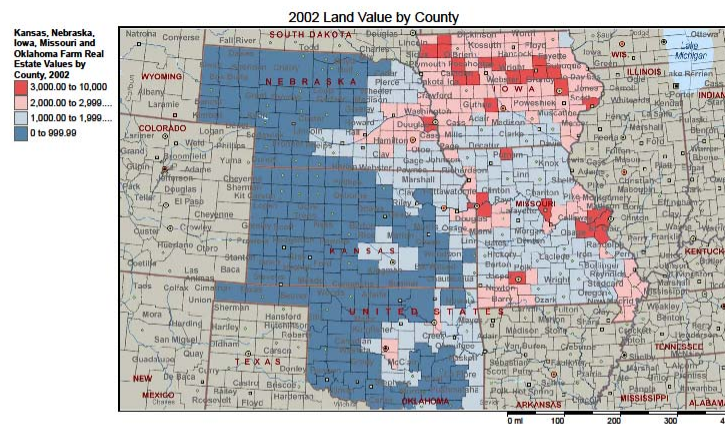
After the 1980s, a slow, steady recovery helped farmland values recover.



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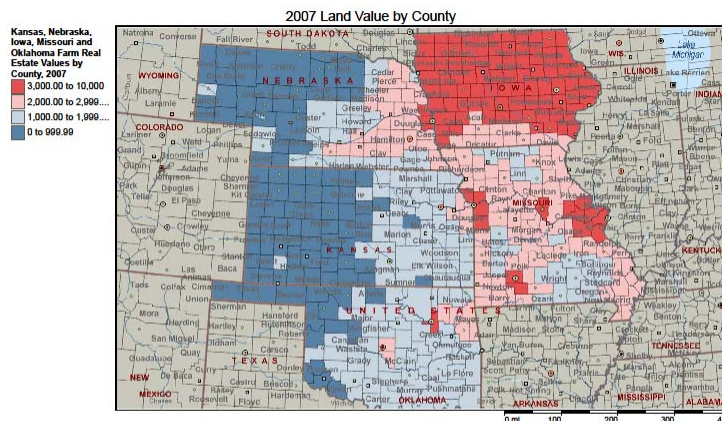
At the turn of the century, farmland values held steady until...



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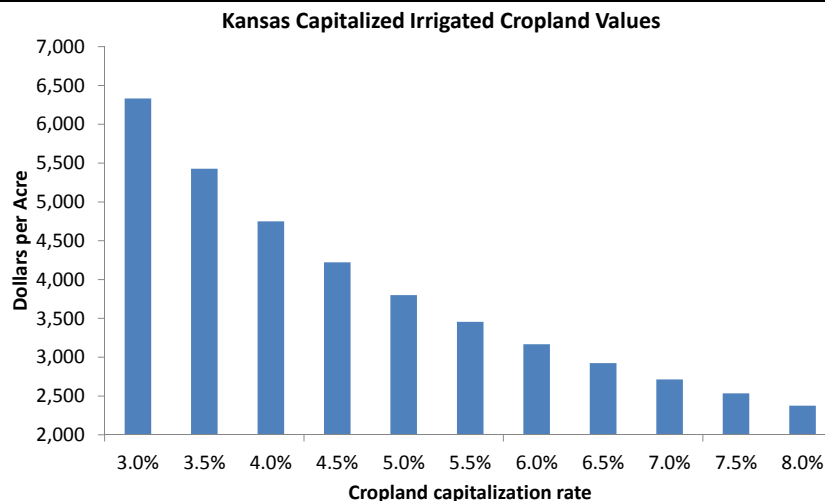
...a booming U.S. housing market as well as surging ag exports lit another “fire” under land values.



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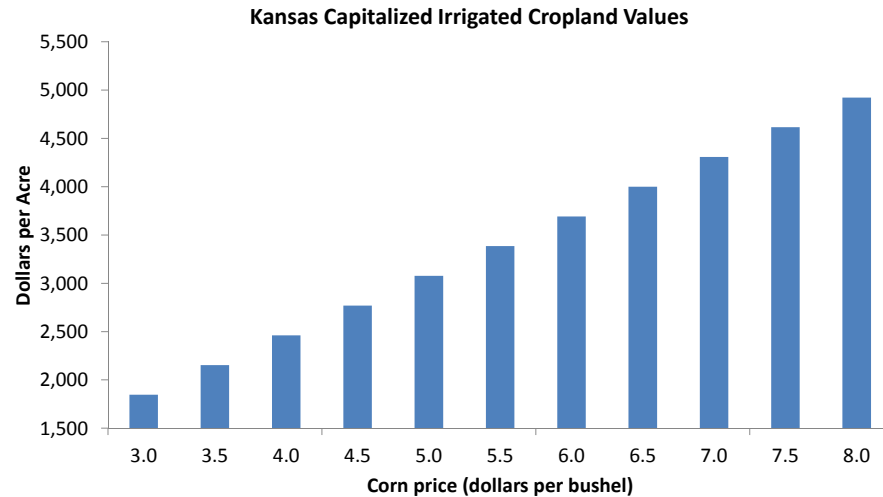
Historically low capitalization rates help support current cropland values.



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.

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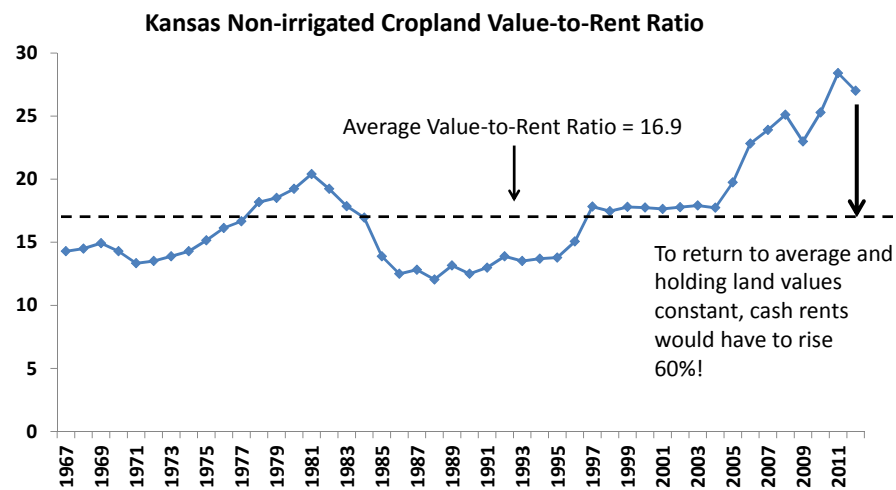
At a historical average cap rate and today's corn prices, current cropland values in Kansas are reasonable.



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%.

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With Kansas cropland values at record high levels, could a "correction" come from rents?



Source: USDA, NASS, Kansas State University

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Will agricultural boom or bust in 2013?

- With normal weather patterns
 - Crop prices would likely come down with bigger global supplies
 - Lower feed costs would be welcomed relief for livestock producers
 - Crop incomes and farmland values would likely moderate, but not crash because of solid global demand
- With another drought
 - More of the same...if not worse...
- For more information: www.agmanager.info

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Thank you

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