

Land Ownership: Should We Keep Buying?

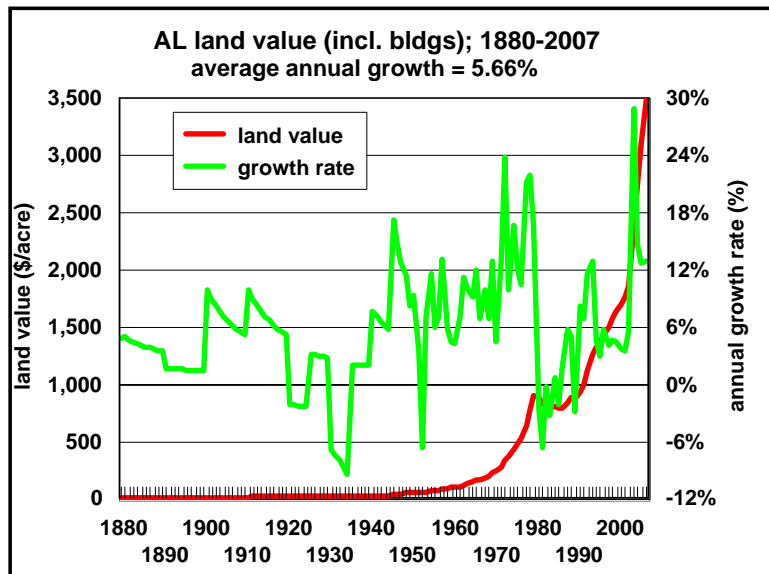
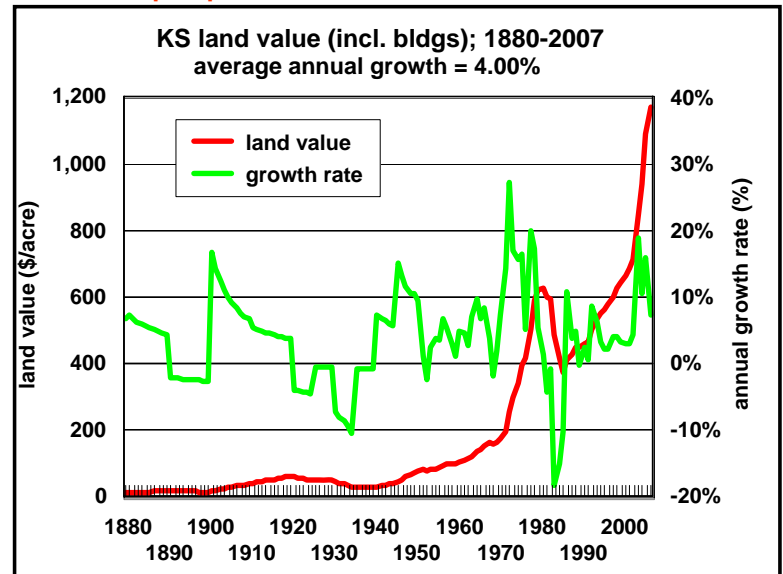
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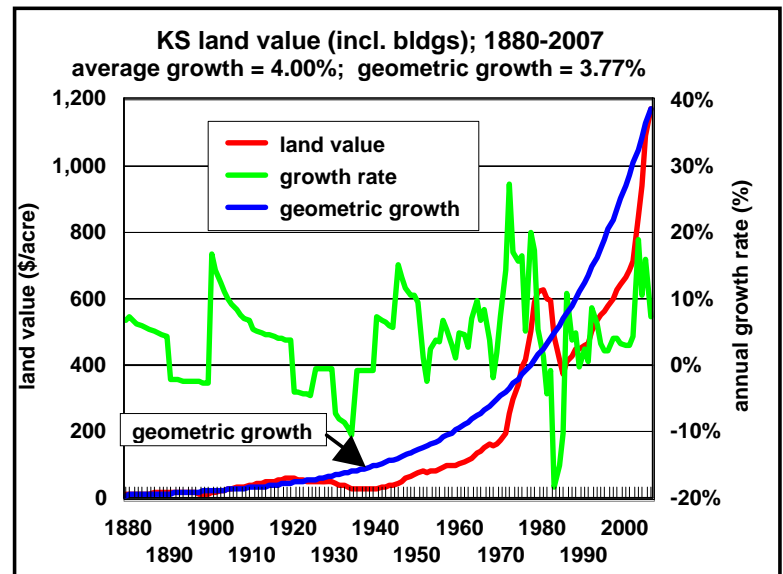
Presented at:
 2009 Ag Profitability Conference
 December 17, 2008; LaCrosse, KS



Historical perspective



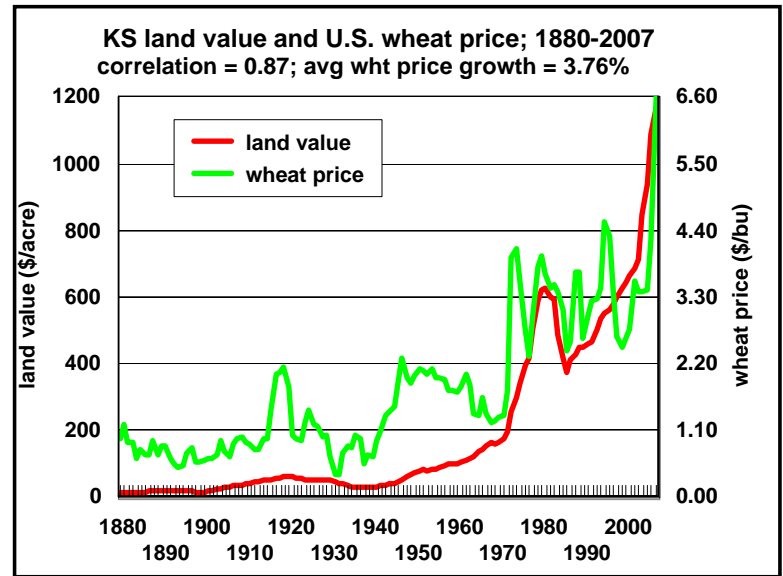
AL did as bad in the 1930s as KS, but not nearly as bad in the 1980s



1879 starting land value for Kansas was \$10.30

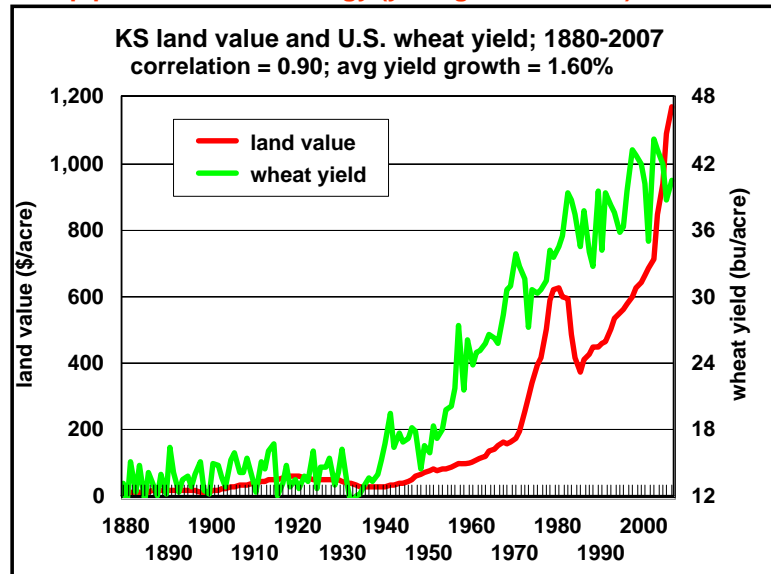
What drives land prices in the long run?

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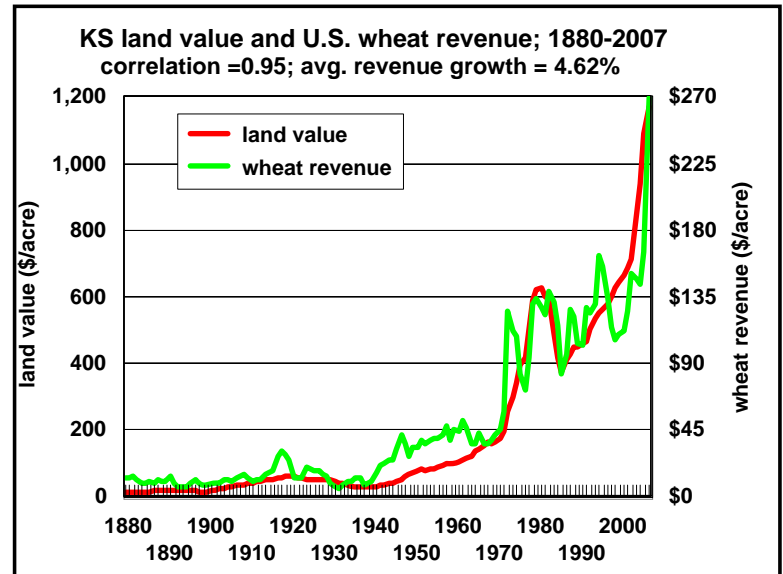


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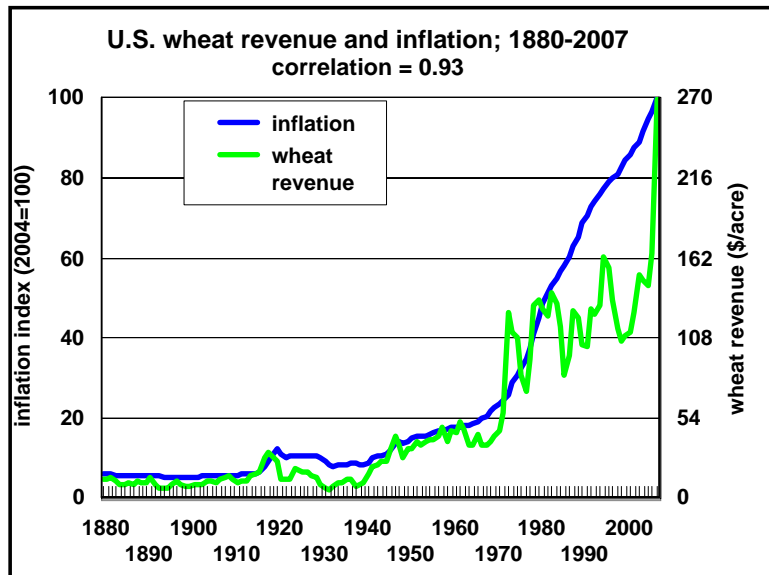
Crop production technology (yield grows at 1.6%)



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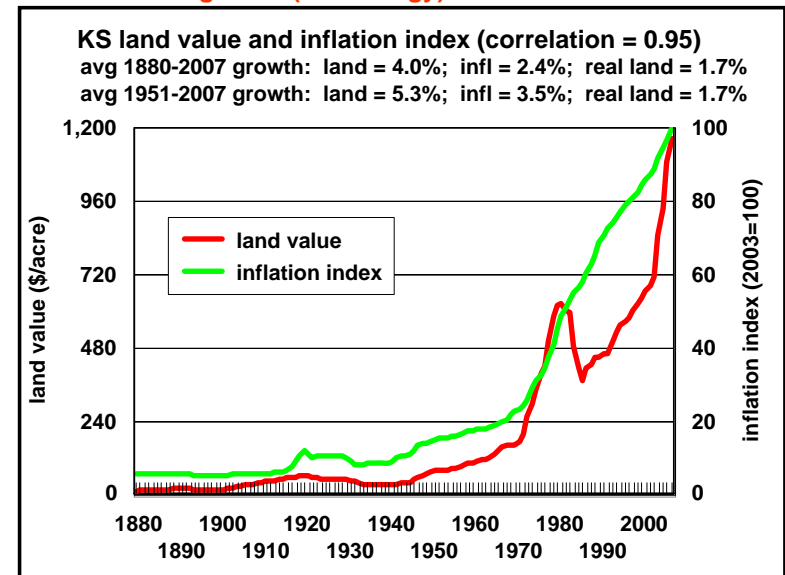


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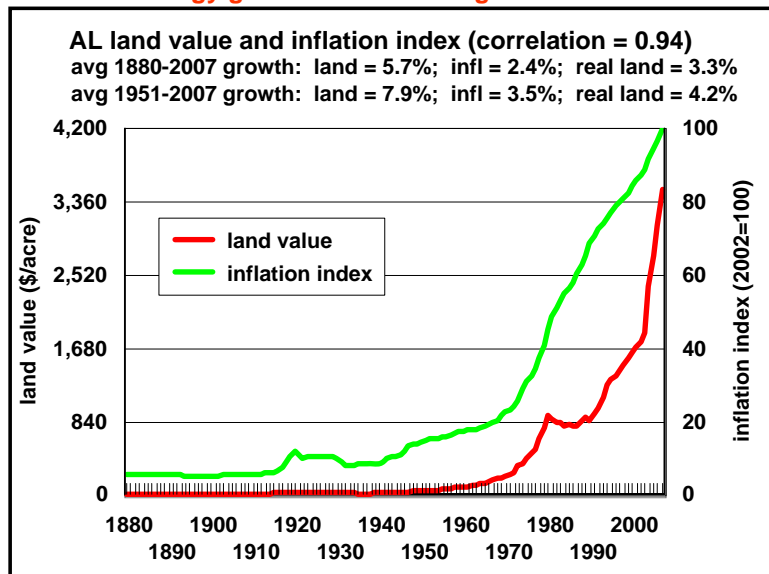
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Just add real growth (technology) to inflation?



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Was technology growth that much higher in AL than KS?



Obviously, something else is going on here . . . we'll come back to this later

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Returns to land

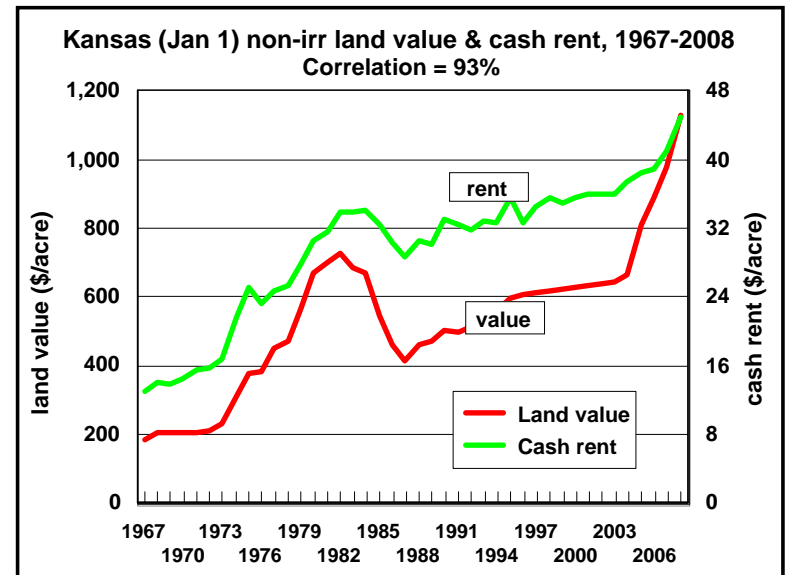
- Capital gains (growth)
- Cash returns (rent)
- The two returns to land are similar to other investments such as the stock market (capital gains and dividends)

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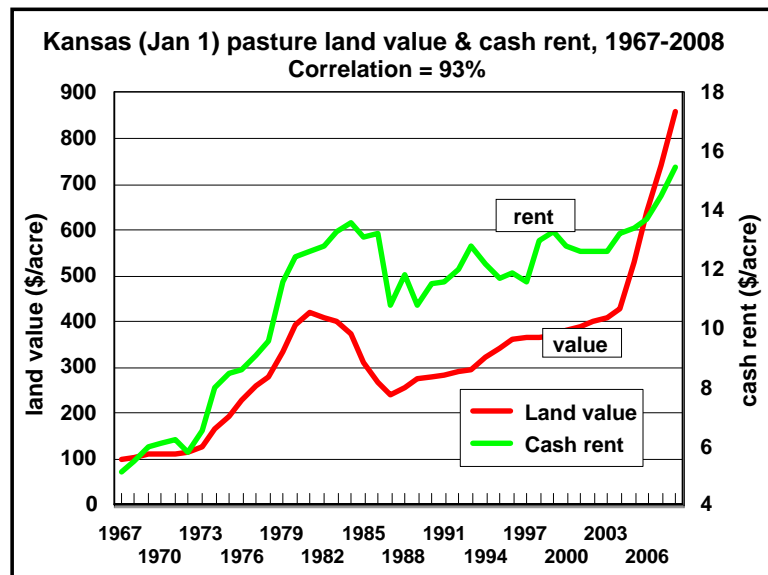
Rent

- KFMA farms with > 100 crop acres (2004-2006 avg)
 - 89% of KFMA farms use rented crop land (range across six regions, 83%-94%)
 - 62% of crop acres farmed by KFMA members are rented (range across six regions, 53%-72%)
- For owner-operators rent is the “profit” assigned to land after all other opportunity costs are considered

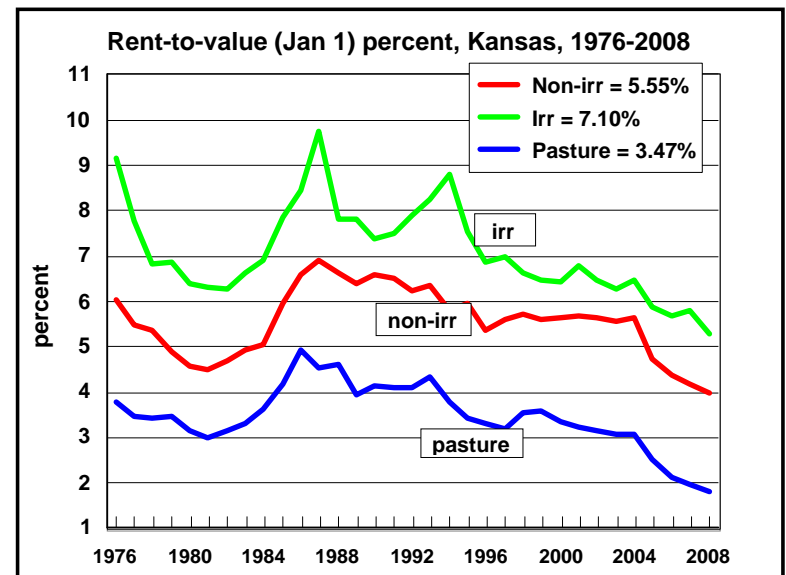
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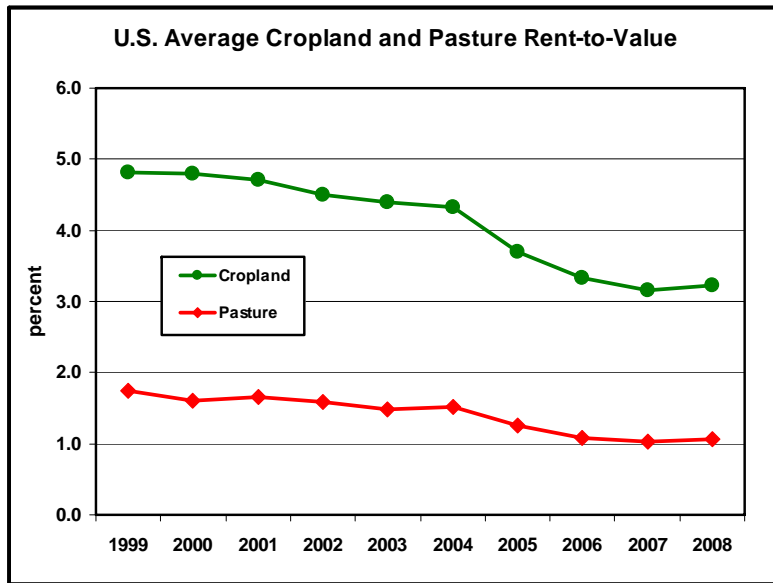


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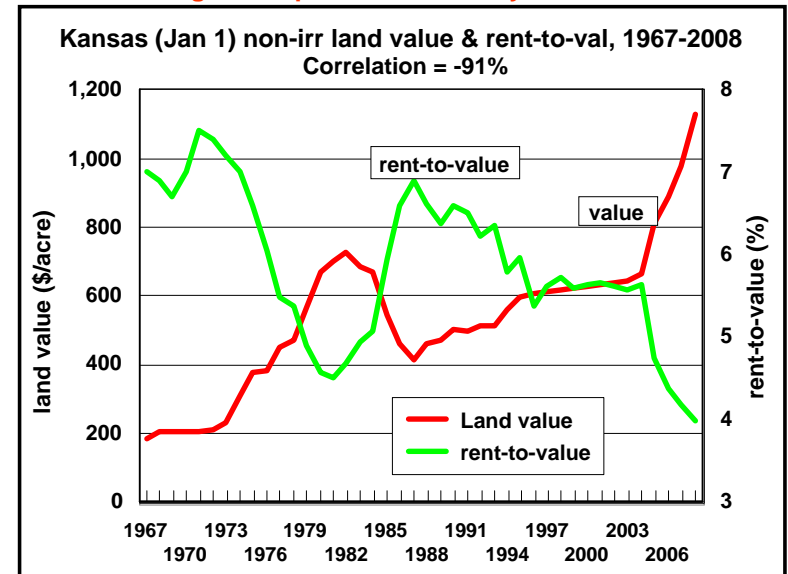
Downtrend hints at something else going on . . .

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Are we seeing a land price bubble today?



We'll come back to rent-to-value issues later . . .

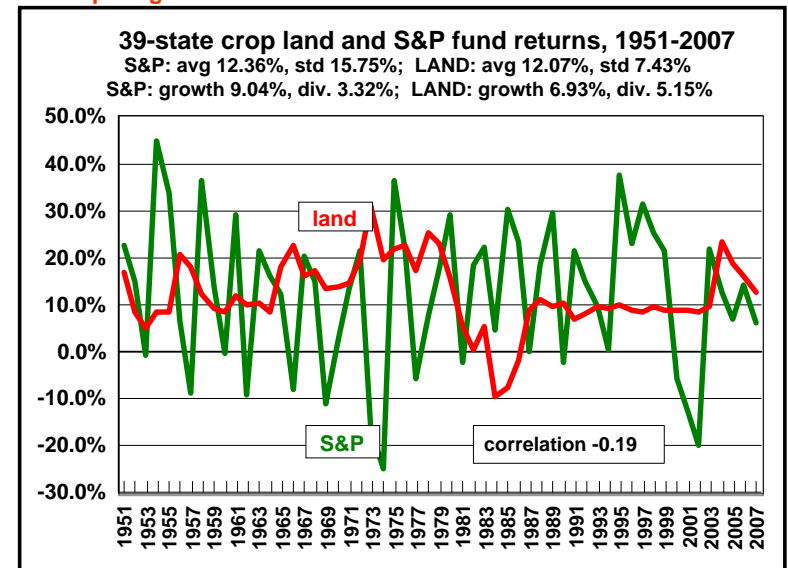
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Returns to Land

- Land
 - Cash returns: rents or rent-equivalents on owned land
 - Non-cash returns: capital gains (growth)
- Stock market
 - Cash returns: dividends
 - Non-cash returns: capital gains (growth)
- Typically, neither land nor stock investments “cash flow”

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Comparing stock and land returns . . .

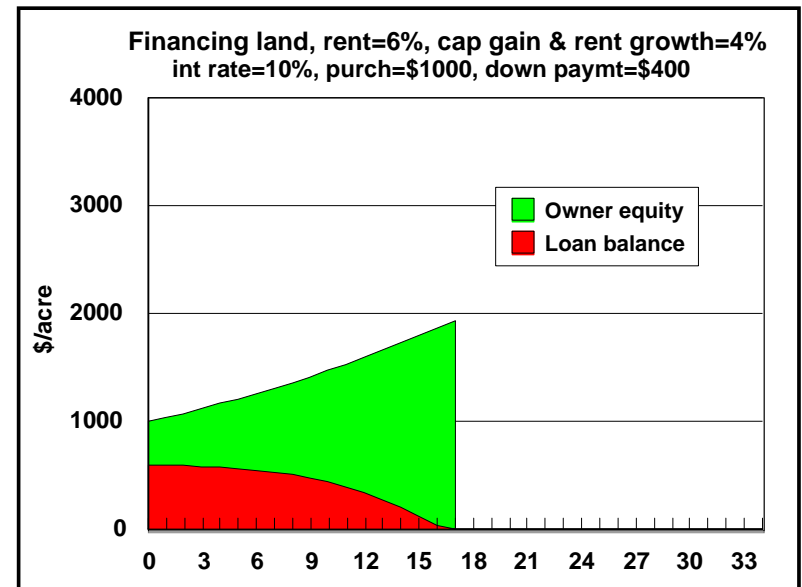


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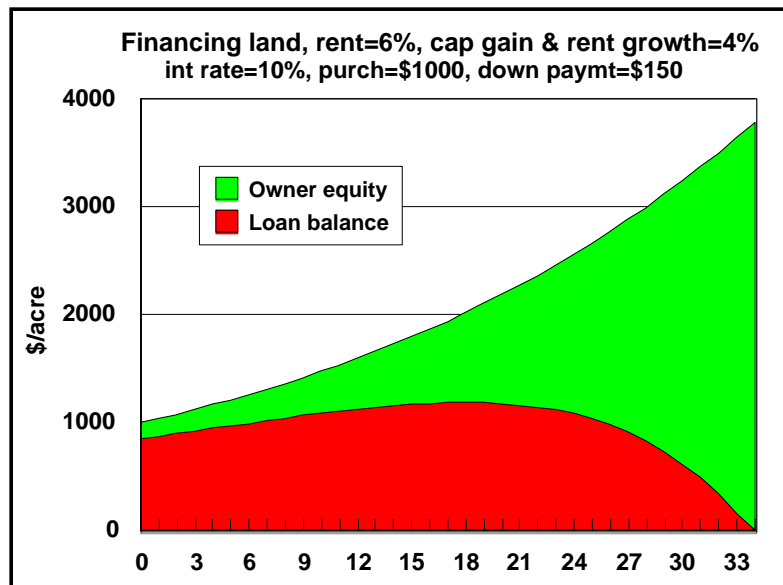
Cash-flowing land

- Total return (profit) = rent + capital gain
- Cash flow is not the same as profitability
- Cash flowing a land purchase
 - Does rent cover a 100% loan? Almost never!
 - Does rent cover a 25% loan? Almost always!
- Land doesn't cash flow when purchased
 - i.e, rents don't cover loan payments
 - rents grow, loan payments don't
 - land eventually cash flows
- A simplistic view follows . . .

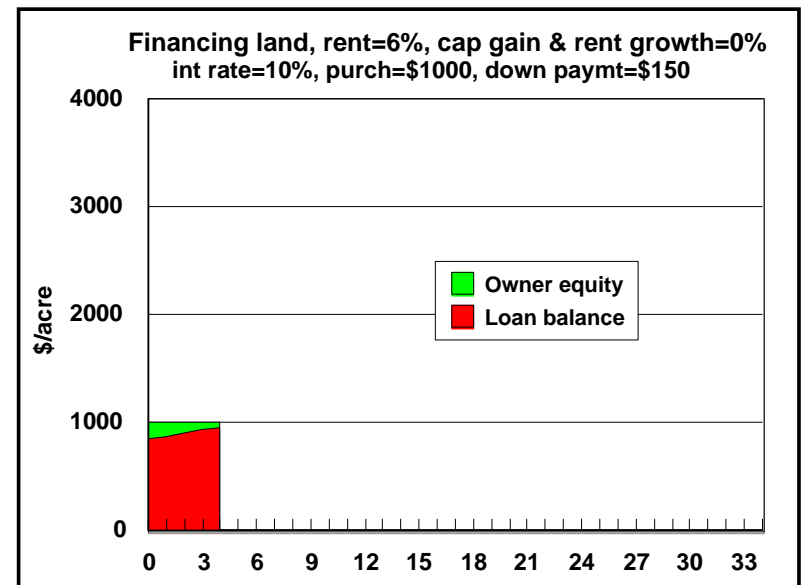
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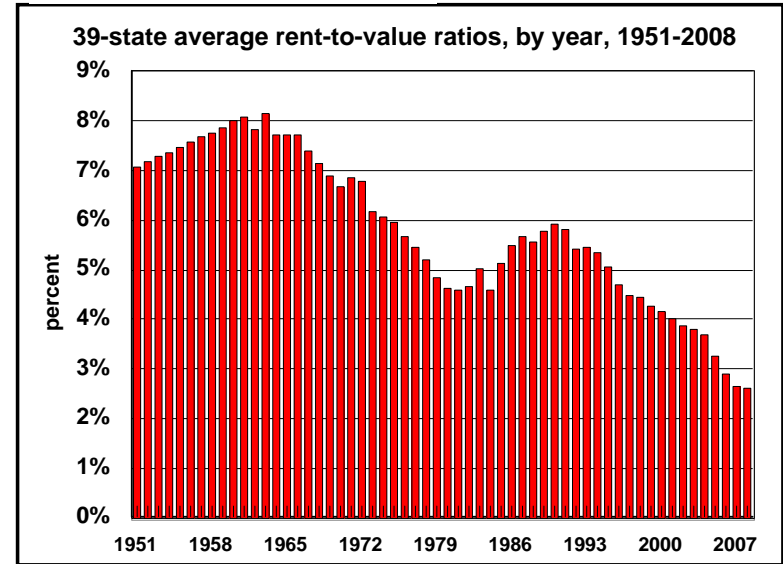
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Preceding slides showed:

- Borrowing too much money AND being too optimistic on expected profit can be disastrous
 - Everybody knows this
- Seasoned farmer landowners often say:
 - “I never bought a piece I didn’t think was too high at the time, yet it always seemed to work out”
 - This one is a hard one for folks to understand
 - Reaction is “I just need to be optimistic enough”
 - Reaction should be “makes sense when I understand”

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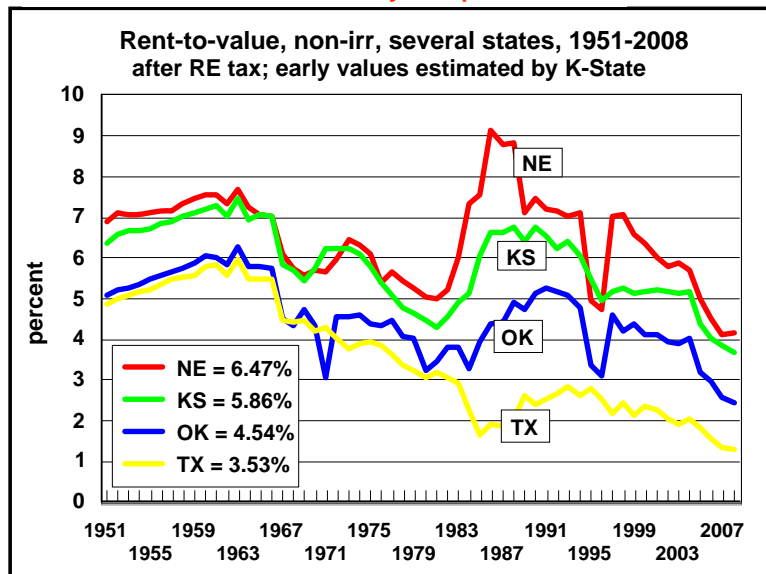
Coming back to rent-to-value (RTV)



Is RTV really a reliable indicator of land price bubbles?

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Still another reason that RTV may be a poor indicator

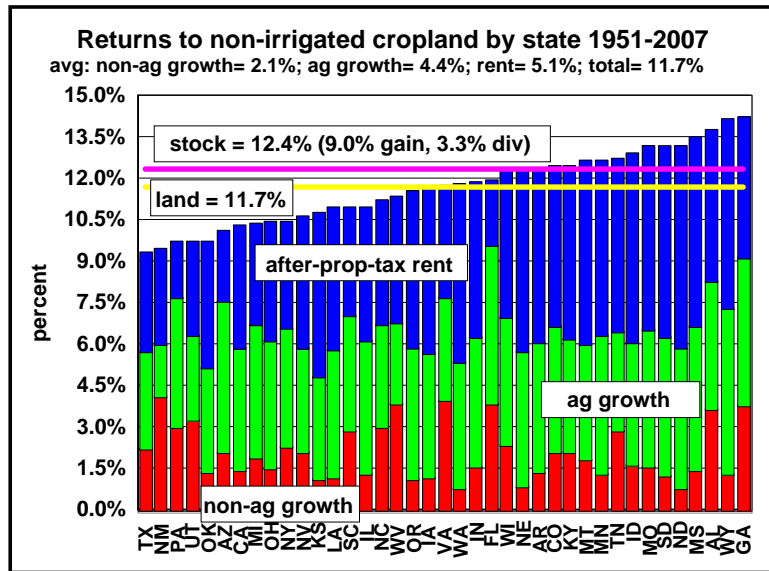


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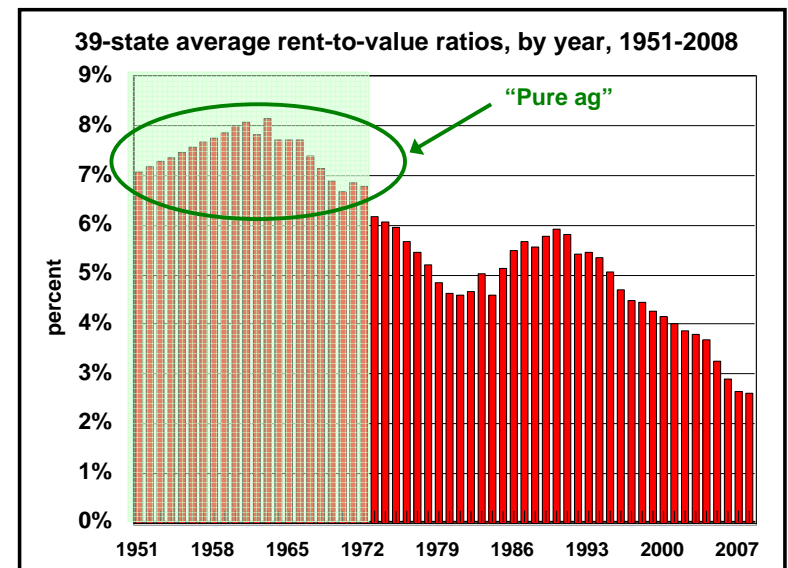
A number of years back we began to incorporate non-agricultural aspects into agricultural land values

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We separated land returns into various components



39 states ranked by total returns to land



Agricultural Market Value of Agricultural Land

- Based on the idea of an ag cap rate
- Used average after-property-tax RTV 1951-72
 - Early on while ag still is dominant
 - Before wild inflation of the 1970’s
- Alabama ag cap rate = 8.03%
- Kansas ag cap rate = 6.64%
- 39-state average cap rate = 6.57%

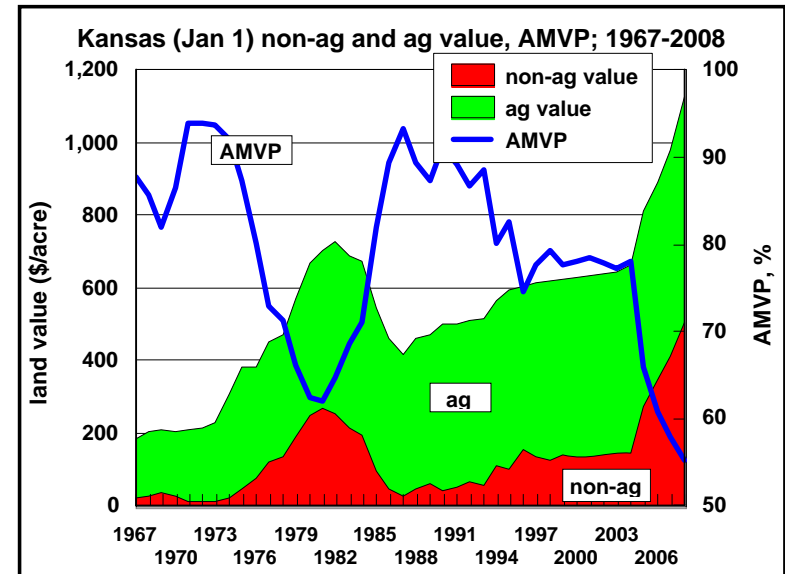
Agricultural Market Value of Agricultural Land using Alabama crop land as an example

- Jan. 1, 2008 crop land value = \$3900 /acre
- Cash rent for 2008 = \$41.00 /acre
- 2008 property tax = \$1.38 /acre
- 2008 after-property-tax rent = \$39.62 /acre
- $\$39.62 / 0.0803 = \$493.40 /acre$
- $AMVP = \$493.40 / \$3900 = 0.1265 = 12.65\%$

Non-ag growth is:

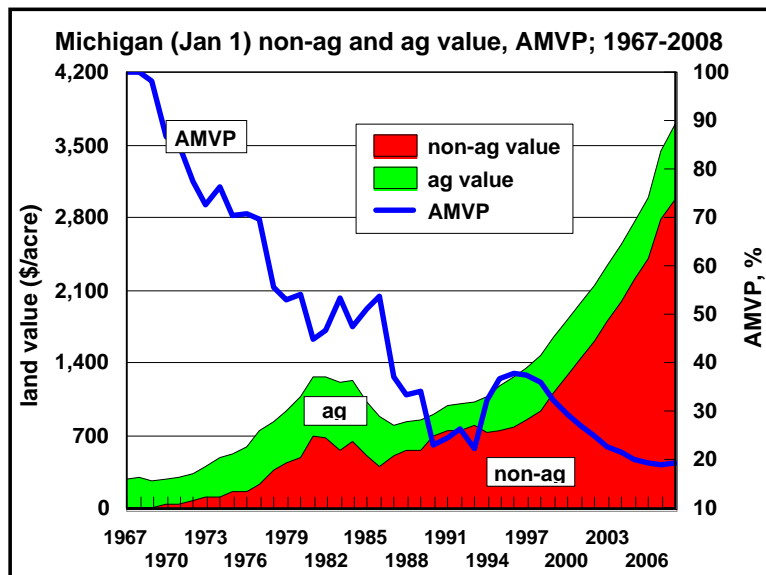
- True non-ag growth
 - Recreation, hunting, homesites, 1031 exchanges
 - Subject to the broader economic forces
 - Unemployment rate, taxation issues, competing investments
- Speculation
 - A portion of true non-ag growth is speculation on future trends about such things
 - Speculation among ag buyers (farmers and investors) about future ag trends
- Not easy to sort out the two!

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AMVP falling indicates increasing non-ag and perhaps speculative bubbling??

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AMVP falling indicates increasing non-ag and perhaps speculative bubbling??

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Are you a macro or micro land investor?

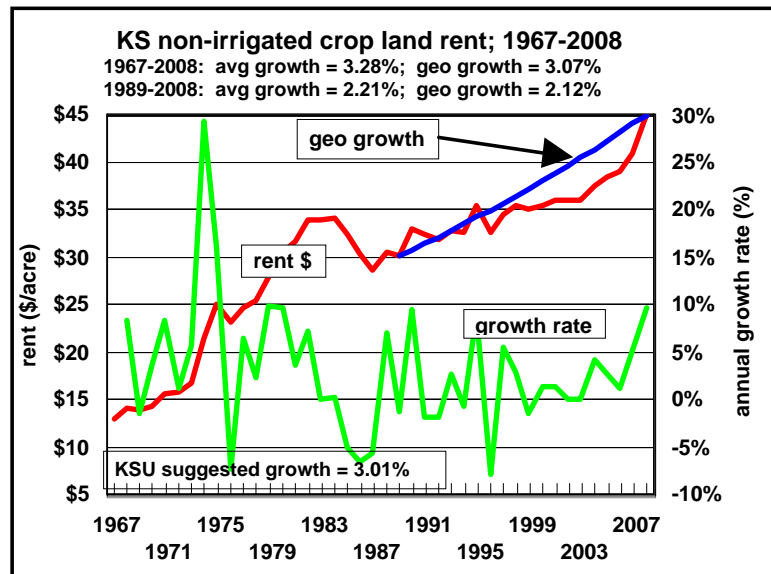
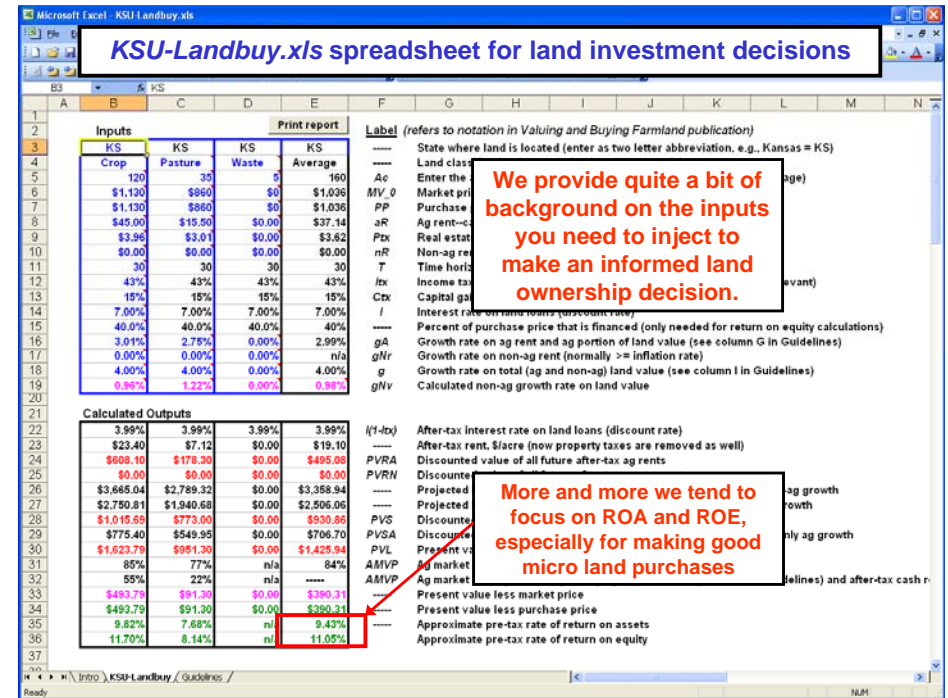
- Macro:
 - Buy or sell land when you believe the “time” is right, i.e., a trend picker or market timer
 - Buy and sell at market; not much micro analysis
- Micro:
 - Decision to buy or sell based on farm business
 - Farm expansion/contraction, mgt ability, age, etc.
 - Buying or selling the right “tract,” i.e., good deals relative to the market
 - Differentiate rental rates across tracts considered
- Most investors a micro-macro combination
 - Good farm managers likely tend to be more micro
 - Think of gains to grain marketing vs. machinery mgt.

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Buying Land – How much can I afford?

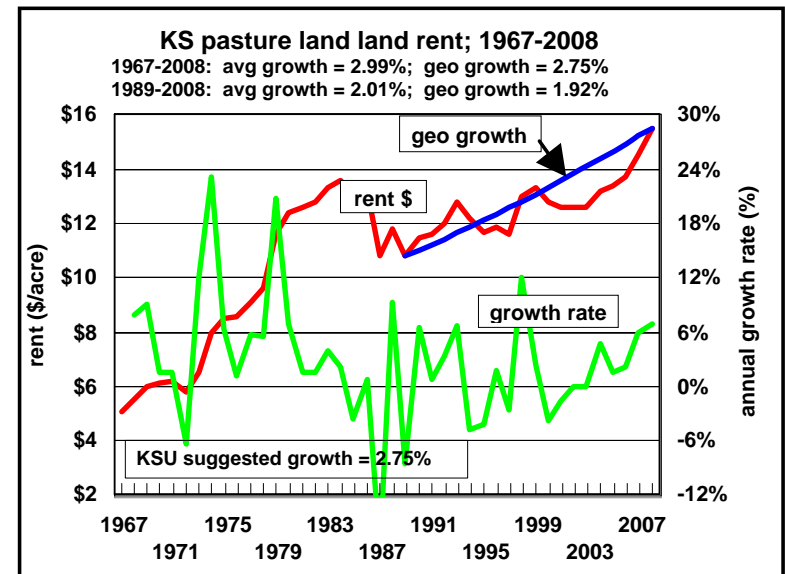
- Valuing the capital gains portion
 - Pick a “selling point,” say 30 years from now
 - What will the land be worth then?
 - Assume some annual capital gain % -- ag and non-ag
 - What is left after “sell” & pay cap gains tax?
 - What is that amount worth today?
- Valuing the rent portion
 - What is cash rent today, ag and non-ag?
 - How will rents evolve (grow) over time?
 - What is the future stream of rents worth today?
- Maximum bid = today’s value of the capital gain + today’s value of the rent stream

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If grain demand comes back, expectation for growth might need to be raised

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If grain demand comes back, expectation for growth might need to be raised

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A little personal experience (NW KS)

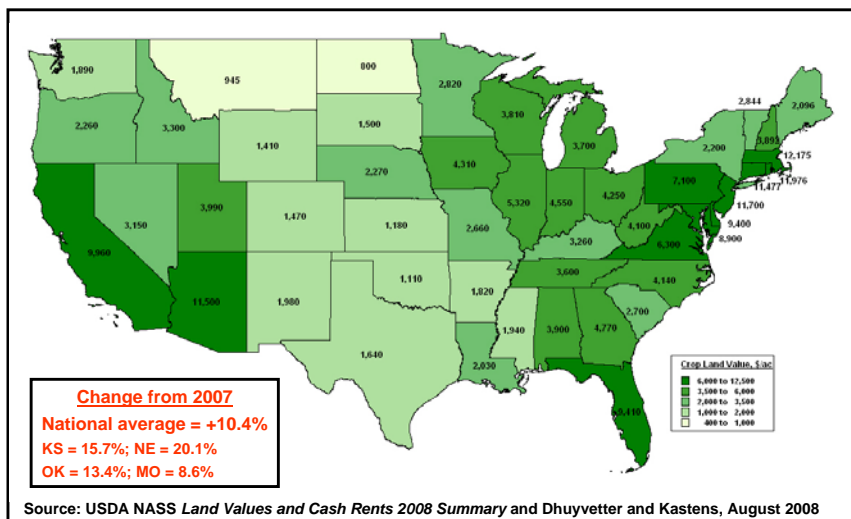
- Target an expected ROA of > 9%, using:
 - Rent and ag growth 3.01%
 - Total growth 4.00%
 - Non-ag growth falls out as residual
 - Property taxes 0.40% to 0.60%
 - Income tax 35%; capital gains tax 10%
- About half the land considered projects out to an ROA > 9%
- Side issues:
 - 50% debt so that cash flows
 - means ROE often considerably higher than ROA, depending upon interest rates of course

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Moving to more current information

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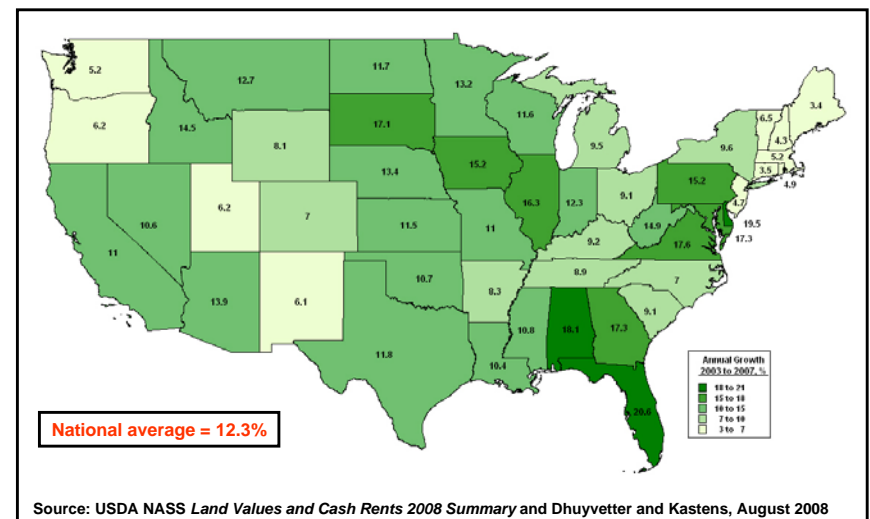
Crop Land Average Value per Acre January 1, 2008



* Corresponding changes in pasture land values were US=6.0%; KS=16.2%; NE=23.3%; OK=11.1%; and MO=5.5%.

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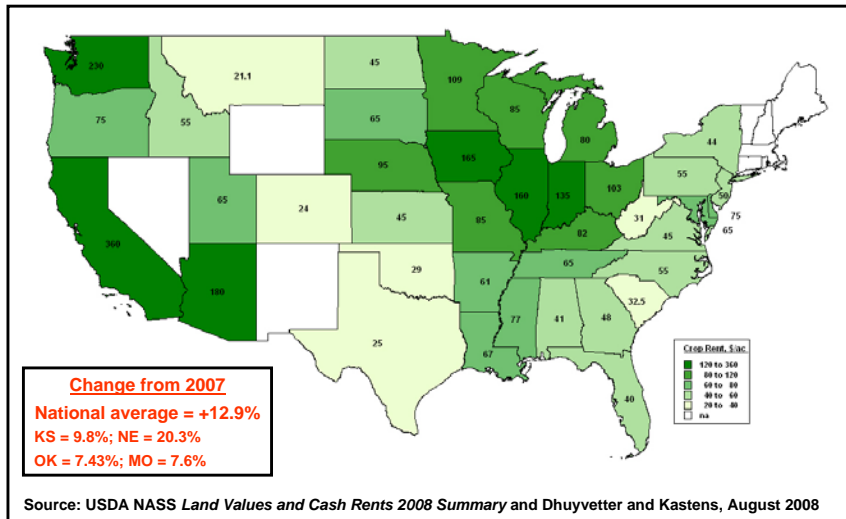
Crop Land Average Annual Growth Rate Jan 1, 2003 to Jan 1, 2008, percent (geo mean)



* Corresponding pasture land growth rates are US=15.2%; KS=16.0%; NE=15.8%; OK=17.3%; and MO=12.8%.

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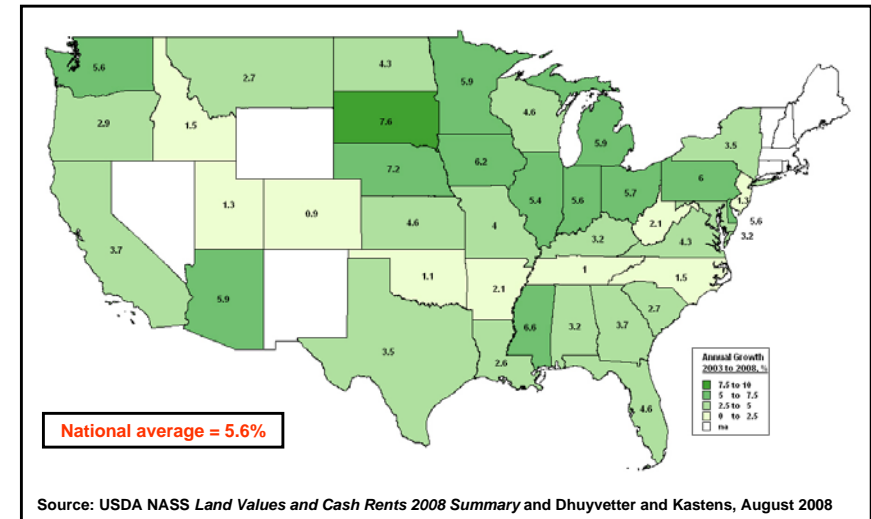
Crop Land Average Rent per Acre 2008



* Corresponding changes in pasture land rents were US=8.3%; KS=6.9%; NE=1.4%; OK=5.3%; and MO=11.5%.

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Crop Land Rent Average Annual Growth Rate Jan 1, 2003 to Jan 1, 2008, percent (geo mean)



* Corresponding pasture rent growth rates are US=7.6%; KS=4.2%; NE=4.3%; OK=3.3%; and MO=4.3%.

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The “new world” (started in 07)

- Landlords detected massive profits
 - Using 3-year expectations, tenants “could” pay as much as 2x-3x of going market rental rates
- Land prices rise
- Cash rents not keeping up
 - Risk? Poor information? Taking advantage?
 - Some landowners wish to go back to crop-share
- Some tenants jumping cash rents
- Some tenants paying bonus rents
 - What are the FSA issues
 - Will bonuses be expected in future?

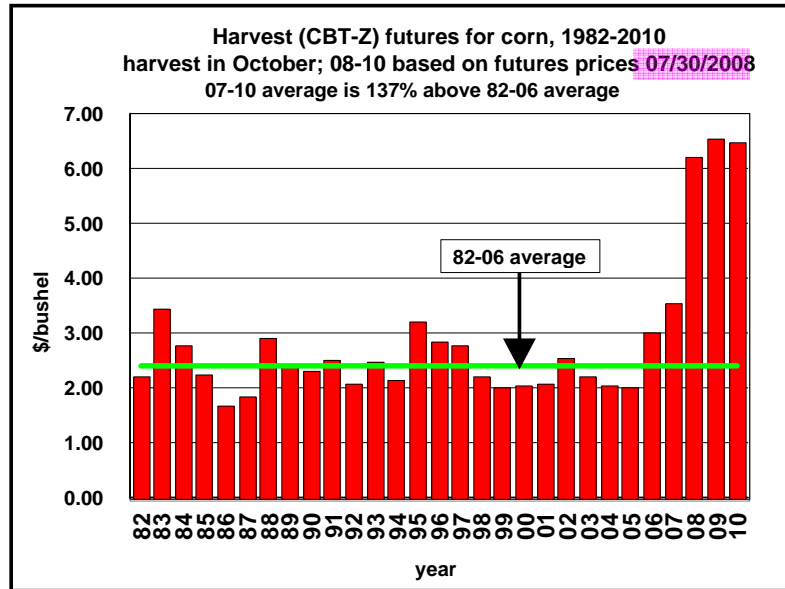
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The “newer” new world (summer 08)

- Fertilizer, herbicide, machinery costs, and fuel, all have taken massive jumps in the last 12 months
 - Availability sometimes bigger worry than price
- Tenant’s risk has greatly increased
 - Less of a problem in crop share leases
- Expected crop prices still swamp input prices but a very large risk premium remains between crop-share and cash rent terms
 - Makes it difficult to determine whether the terms we observe are appropriate or inappropriate

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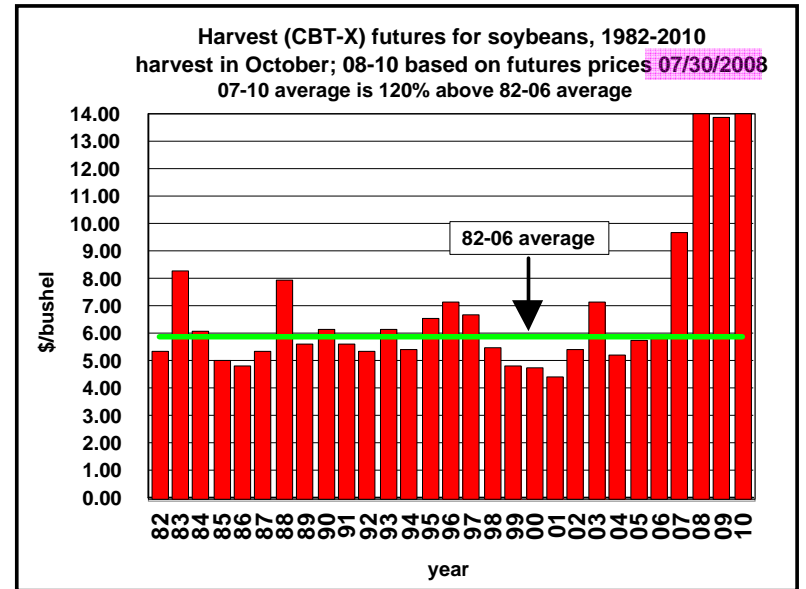
How long will strong crop prices stick around?



... what we were saying mid-summer 2008

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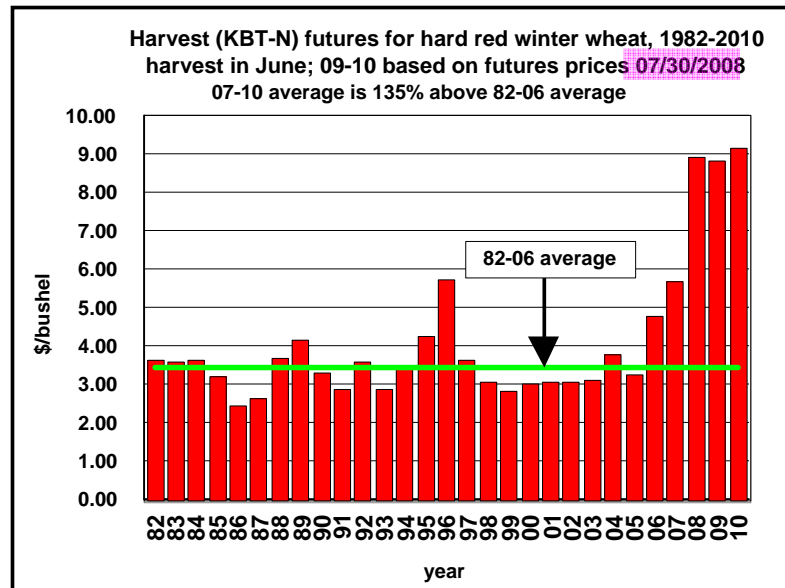
It's not just corn prices...



... what we were saying mid-summer 2008

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It's not just corn prices...



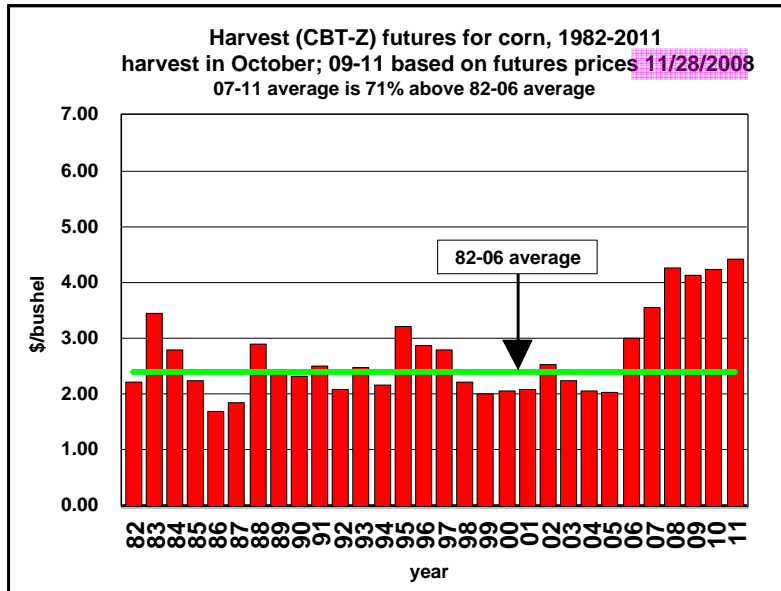
... what we were saying mid-summer 2008

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The "newer" newer new world
(late 2008)

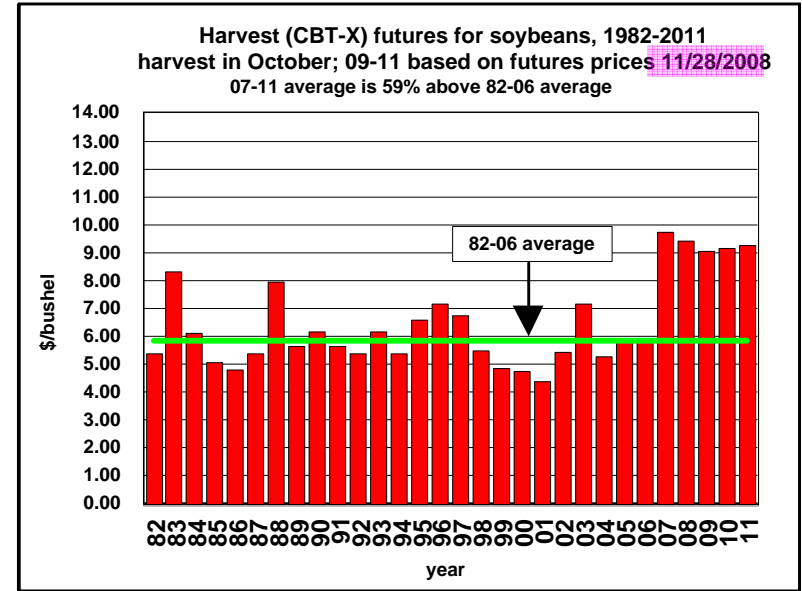
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What a difference 4 months makes!



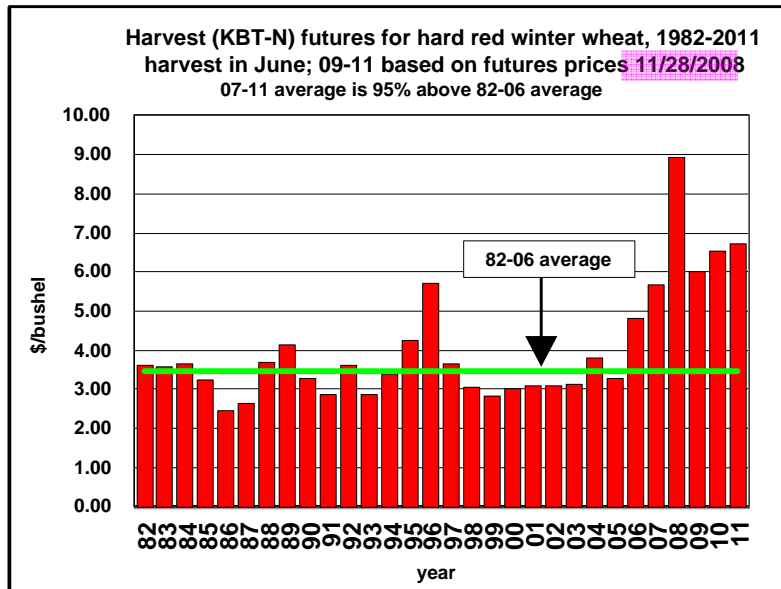
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What a difference 4 months makes!



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What a difference 4 months makes!



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The “newer” newer new world

- Expected crop prices way down
- Fuel costs have fallen way back
 - Will machinery operations cost less in 2009?
- Fertilizer prices are falling. Seed? Herbicide?
 - Where will these input prices be in 2009?
- Will crop prices cover “still high” fertilizer prices?
- Tenants’ risk is still huge

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- Change in expected farming profit, thus rents that **COULD** be paid, varied dramatically the last 12 months, and may continue to do so.
- But, rents don't adjust that fast and neither do land values
 - Faster adjustment in Corn Belt (low risk)
 - Slower adjustment in High Plains (high risk)

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Are land prices overheated?

- Investors began asking earlier this year

Analysis if 2012 corn price is 175% of 2006 (\$3.00 to \$5.25)

Kastens & Dhuyvetter research, 2008 -- expectation of agricultural land returns

	KS	CO	MO	NE	OK
if buy land 1/1/09 this % above the 1/1/08 market >	11.8%	15.6%	12.5%	16.6%	9.5%
we expect this return on equity (50% leveraged) >	12.5%	11.2%	16.3%	15.8%	10.6%

Analysis if 2012 corn price is 133% of 2006 (\$3.00 to \$4.00)

Kastens & Dhuyvetter research, 2008 -- expectation of agricultural land returns

	KS	CO	MO	NE	OK
if buy land 1/1/09 this % above the 1/1/08 market >	11.8%	15.6%	12.5%	16.6%	9.5%
we expect this return on equity (50% leveraged) >	10.3%	8.6%	12.6%	12.7%	8.7%

- The end of the world is NOT nigh!

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Summary

- Land values:
 - Appear to be falling a little in low-risk areas
 - Appear to still be rising in high-risk areas
- It's not the end of the world unless you believe the worst of the economic pessimists
- There are still opportunities to buy land
 - Especially if you do a good micro analysis
 - Land quality & soil fertility, perhaps no-till considerations
 - Economies of size impacts on your farm
 - Machinery efficiency (field size & shape)
 - Distance from headquarters
 - Use this stuff to adjust rents
 - Internally, or in fact so as to appeal to outside investors
 - Do your homework (use KSU-Landbuy.xls!)

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Questions?
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