Farmland Value Drivers and Risks

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Farm Foundation Forum
U.S. Farmland Values: Boom or Bust
Washington, D.C.
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Farmland Values Continue Their Rise

2011 Cropland Value by State
Dollars per Acre and Percent Change from 2010

Source: Land Values 2011 Summary (August 2011), USDA, NASS
Estimates of Farmland Value and Price at Auction, 196 Respondents, Spring 2012

- Resp. Est. of Value
- Resp. Est. of Auction Value

Perception of the value for 80 with a production capability of 165 bushels of corn per acre under normal rain-fed conditions, $’s per acre

65% of respondents felt auction prices were higher than their perception of value
53% of respondents believe farmland prices are in a bubble
73% are interested in purchasing more farmland in the next 5 years
Fundamentals Make Prices Look Attractive

• Today’s earnings and interest rates make prices look attractive
  – Today’s fundamentals were not necessarily yesterday’s
  – Tomorrow’s fundamentals are not necessarily today’s
Factors Driving Farmland Values

• Returns are high driven by
  – Biofuel demand
  – Strong demand from emerging markets
  – Weather shocks/poor yields

• Generally decreasing interest rate environment
  – Rates at 30 year lows
Exports Play a Key Role In Price Increases

Chart 1
U.S. AGRICULTURAL EXPORTS AND INDEX OF PRICES RECEIVED BY U.S. FARMERS

Note: Calculations based on U.S. Census Bureau and USDA data deflated with CPI from the Federal Reserve Bank of Minneapolis.

Budgeted Profit and Loss for High Quality Indiana Farmland, 1991-2012

Source: Derived from Purdue Crop Budgets, ID-166, Corn-Soybean Rotation
Cash rent multiple begins to climb
By this measure farmland looks pricey today
• Reflect expected earnings growth and low interest rates
Land Values Under Alternative Capitalization Rates (Multiples) and Income Levels

- 3% (33)
- 4% (25)
- 5% (20)
- 6% (17)
- 8% (13)

2011 Value HQ IN Farmland $6,521

Current Cash Rental Rate HQ IN Farmland, $230 per Acre
Cap Rate Risk

- Monetary policy change = cap rate ↑
- Economic recovery = cap rate ↑
- Inflation = cap rate ↑
- Increased volatility/risk = cap rate ↑
- Slowing income growth in ag = cap rate ↑
Land rent has averaged 35% of revenue over this period, high = 45%, low = 22%.
So What About Corn Prices?

• Darrel Good and Scott Irwin forecast the new plateau prices as follows:

<table>
<thead>
<tr>
<th></th>
<th>Corn</th>
<th>Soybeans</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Dec 2006 Monthly Price</td>
<td>------</td>
<td>----------</td>
<td>------</td>
</tr>
<tr>
<td>Average</td>
<td>4.60</td>
<td>11.50</td>
<td>5.80</td>
</tr>
<tr>
<td>High</td>
<td>6.70</td>
<td>19.10</td>
<td>10.15</td>
</tr>
<tr>
<td>Low</td>
<td>3.00</td>
<td>8.20</td>
<td>3.30</td>
</tr>
</tbody>
</table>

There is a 1 in 10 chance the average corn price will be less than:
The average corn price will most likely be:
There is a 1 in 10 chance the average corn price will be greater than:
Distribution of Expected Average Cash Corn Prices Over the Next 5 Years, 189 Farmland Value Survey Respondents

Box captures I&G’s corn price range

$'s per Bushel

There is a 1 in 10 chance the average corn price will be less than:
The average corn price will most likely be:
There is a 1 in 10 chance the average corn price will be greater than:

Respondents
Box captures I&G’s corn price range with land receiving 35% of gross revenue @ 188 bu/ac
Two Key Takeaways

• Policy plays a key role in current demand situation
  – Biofuels
  – Crop insurance
  – Environmental policy

• Macro-economics plays a key role in the situation
  – Interest rates
  – Exchange rates
  – Demand (income growth)
Price Risk is Substantial

Weekly Nearby Corn Futures Contract Prices, 2007-2012
<table>
<thead>
<tr>
<th>Factor</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economy</td>
<td>Vibrant</td>
</tr>
<tr>
<td></td>
<td>Sluggish</td>
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<tr>
<td>Outlook</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>Lenders</td>
<td>Eager</td>
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<tr>
<td></td>
<td>Reticent</td>
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<tr>
<td>Capital markets</td>
<td>Loose</td>
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<td></td>
<td>Tight</td>
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<td>Capital</td>
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<td></td>
<td>Scarce</td>
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<td>Terms</td>
<td>Easy</td>
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<td></td>
<td>Restrictive</td>
</tr>
<tr>
<td>Interest rates</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Spreads</td>
<td>Narrow</td>
</tr>
<tr>
<td></td>
<td>Wide</td>
</tr>
<tr>
<td>Investors</td>
<td>Optimistic</td>
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<td></td>
<td>Pessimistic</td>
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<td></td>
<td>Sanguine</td>
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<tr>
<td></td>
<td>Distressed</td>
</tr>
<tr>
<td></td>
<td>Eager to buy</td>
</tr>
<tr>
<td></td>
<td>Uninterested in buying</td>
</tr>
<tr>
<td>Asset owners</td>
<td>Happy to hold</td>
</tr>
<tr>
<td></td>
<td>Rushing for the exits</td>
</tr>
<tr>
<td>Sellers</td>
<td>Few</td>
</tr>
<tr>
<td></td>
<td>Many</td>
</tr>
<tr>
<td>Markets</td>
<td>Crowded</td>
</tr>
<tr>
<td></td>
<td>Starved for attention</td>
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<tr>
<td>Recent performance</td>
<td>Strong</td>
</tr>
<tr>
<td></td>
<td>Weak</td>
</tr>
</tbody>
</table>

**The Poor Man’s Guide to Market Assessment – Adapted from The Most Important Thing: Uncommon Sense for Thoughtful Investors, by Howard Marks**
Final Thoughts

• There is room for land prices to go higher
• There are substantial risks associated with higher moves
  – Interest rates (cap rates)
  – These prices and rates will encourage use of leverage
  – Demand growth will face challenges
  – Export strength
  – Supply response is coming
  – Will we really end up at $4.60+ on corn?
Questions

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