What Futures Markets Project

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Participants in futures markets have money on the line and therefore, have every incentive to collect and analyze as much information as possible. If a majority of these experts believed the prices quoted for future delivery should be higher, they would buy futures contracts and drive the price up to the level they deem to be correct. In this sense, the prices we see quoted for futures contracts will split the experts.

Academic evidence by Richard Just and Gordon Rausser at Berkeley suggests that futures-based price projections are more accurate than those from econometric models. It is a challenge for anyone to predict future price levels, but futures traders seem to do it better than anyone else.

The speculators who trade options on futures contracts are essentially trading information on the volatility of futures prices and therefore, the implied volatility of these prices also splits the experts. It is possible to generate the distribution of futures prices that futures and options traders agree on using the futures price level as the mean, and the implied volatility as a measure of the dispersion of these prices. This is the procedure used by the USDA RMA when setting premium levels for revenue insurance products.

One problem with the use of futures contracts to project long-term prices is that there is low liquidity for contracts that trade more than three years into the future. Economists at Iowa State have developed a way to extrapolate futures prices for five years into the future (Jin et al). Of course, any projected price level is subject to enormous uncertainty, and this uncertainty expands as one looks further and further into the future. This procedure developed at Iowa State University also provides the entire price distribution.

Figures 1 and 2 show the price levels for corn and soybeans as of February 15, 2013. The projected futures price is expected to fall to a level just below $5 per bushel by December 2017. Soybean prices are expected to fall to about $11 per bushel by November 2017. These prices suggest futures traders expect that continued demand growth will hold prices at what can be considered historically high levels. However, the projected prices are below current levels, indicating traders expect world supply to expand to eliminate the current scarcity of corn and soybeans.
Figure 1. Projected Corn Price

![Projected Corn Price](image)

Figure 2. Projected Soybean Price

![Projected Soybean Price](image)
Figures 3 and 4, panels 1-5, show the distributions of prices these traders expect. Of particular interest for this report is the one in ten year, worst price scenario indicated by the 10% price quantile. The interpretation of this price level is that traders believe there is a 10% probability futures prices will close at this level or below this level.

The one in ten worst case scenarios suggests corn prices as low as $4.27 in 2013, $3.85 in 2014, $3.41 in 2015, $3.12 in 2016 and $2.89 in 2017. The equivalent values for soybeans are $9.69, $8.89, $7.85, $7.09 and $6.55. These extremely low price levels are unlikely, but they do give one pause.

**Figure 3. Corn Price Distribution**

![Corn Price Distribution Graph](image)
Figure 4. Soybean Price Distribution

Mean=$12.62, sd=2.44

10% and 90% Quantiles
Density Function

(9.69, 0.1)
(15.82, 0.06)

Soybean Price in Dollars (2013)
References
