

## **RINs Trading Puts Market Forces To Work For The Nation**

The Invisible Hand is connected to the arm of a trader: From applications ranging from emission reduction to wildlife conservation and management, both governments and non-governmental organizations alike have discovered what economists have known for years, market forces produce the lowest-cost and highest-innovation solutions to complex problems.

The U.S. set national goals of reducing both crude oil imports and carbon emissions in the Energy Policy Act of 2005 and later in the Energy Independence and Security Act of 2007 (EISA). This Act set mandates through 2022 for specific categories of renewable fuels, including ethanol, cellulosic ethanol and biodiesel. The Environmental Protection Agency (EPA) has established a system of 38-digit Renewable Identification Numbers (RINs) to track each gallon of renewable fuel produced or imported. Once the renewable fuel is blended into fossil fuel, the RIN can be separated for current or next-year compliance or traded.

### **RIN Market Volume Considerations**

By November of each year, the Department of Energy's Energy Information Administration (EIA) sets a forecast for the total volume of motor gasoline and diesel fuel to be consumed the following year. Rising fuel efficiency, reductions in vehicle-miles driven and the effects of lifestyle changes and other economic factors have made this forecast more uncertain in recent years. The EPA uses this number to calculate a renewable volume obligation (RVO) for each obligated party (refiners, importers, blenders) equivalent to the renewable fuel standard mandate as a percentage of the EIA forecast, multiplied by the volume produced or imported.

Each obligated party accumulates RINs based on their volume of motor fuel sold or imported. The surplus or deficit drives the RINs market. Obligated parties who fall short of their RINs target can carry the deficit forward into the next year so long as both that deficit and the next year's RVO are met by the end of the next year. Obligated parties who exceed their RVO can retain them for the following year, subject to a 20% cap, or sell them to a party in deficit. Non-obligated parties who register with the EPA can enter the market as traders.

### **Role Of Market**

An obligated party has two ways of meeting its RINs requirements, purchasing and blending renewable fuels or buying RINs. If obligated parties are meeting their RVO numbers, the supply of RINs should rise relative to demand and their price should fall. RIN prices rise when obligated parties are failing to meet their RVO requirements for reasons including unexpectedly low motor fuel demand.

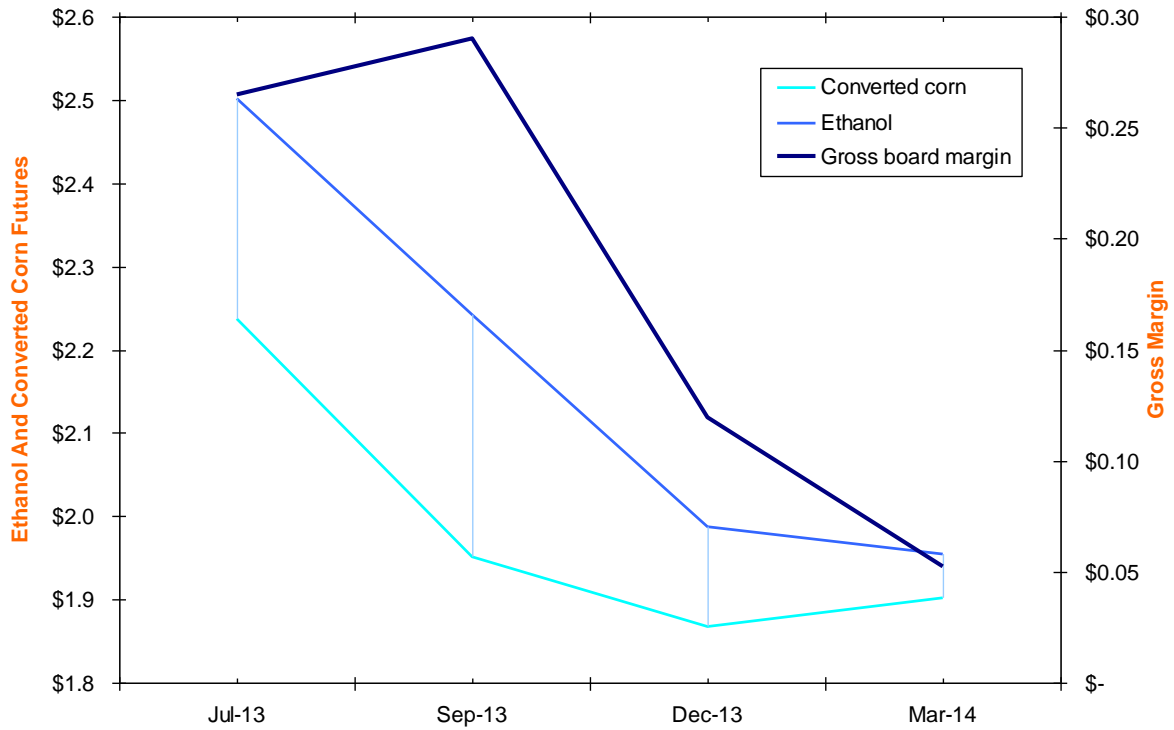
Other, more complex factors affect RIN prices. For example, renewable fuels designated as advanced biofuels count for more than 1.0 RIN. Tax credits designed to encourage the blending of greater quantities of biofuels will increase the RIN supply and lower their traded price as would an increase in the quantity of renewable fuels such as ethanol over and above the commonly used ceiling of 10%.

### **Intermarket Linkages**

Just as corn and sugar traders have learned to keep an eye on the gasoline and ethanol markets, RIN traders will have to pay attention not only to these markets but to forecasts of motor fuel demand as well. As noted above, if gasoline and diesel fuel demand grow beyond forecast levels or if the blending ceiling for ethanol is raised, the supply of RINs will expand and their price will decline. Conversely, poor ethanol distillation economics resulting from higher corn prices, such as happened in the second half of 2012, lowers the incentive to blend more ethanol into gasoline and reduces the supply of RINs.

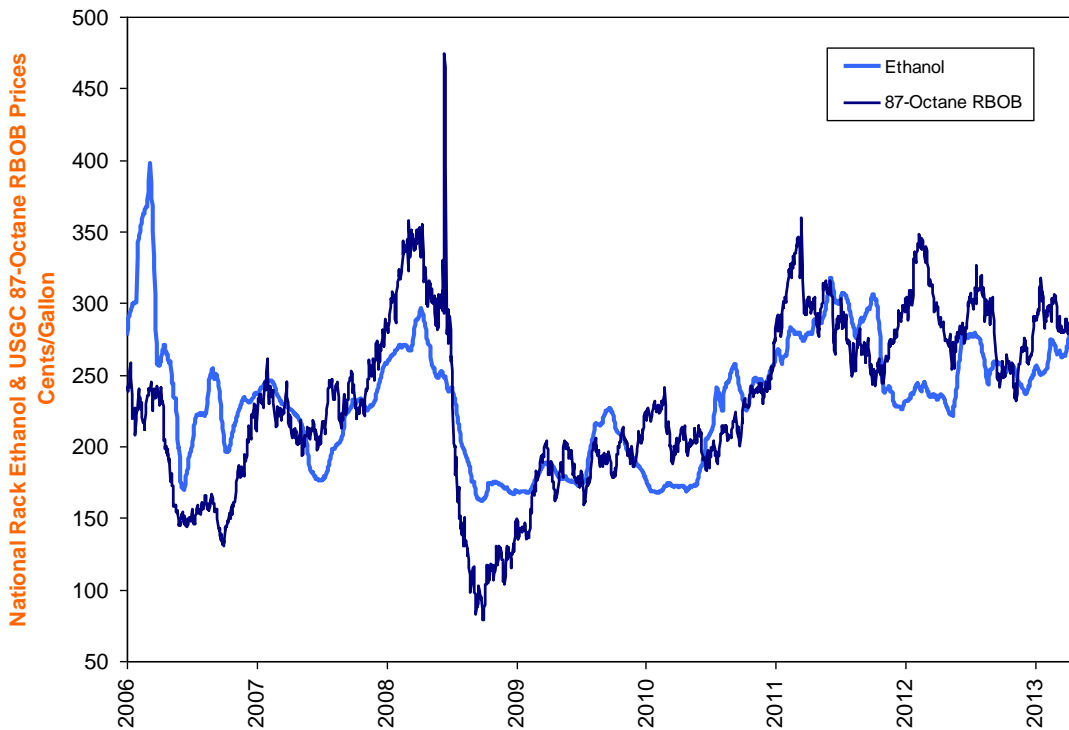
As of early May 2013, the gross board margin for corn-derived ethanol recovered as corn prices fell from their 2012 highs. This removed much of the incentive to reduce distillation; between December 2011 and January 2013, ethanol production declines from 963,000 barrels per day to 770,000 barrels per day, a decline of 20%.

### Gross Ethanol Distillation Margins Positive (May 9, 2013 settlements)



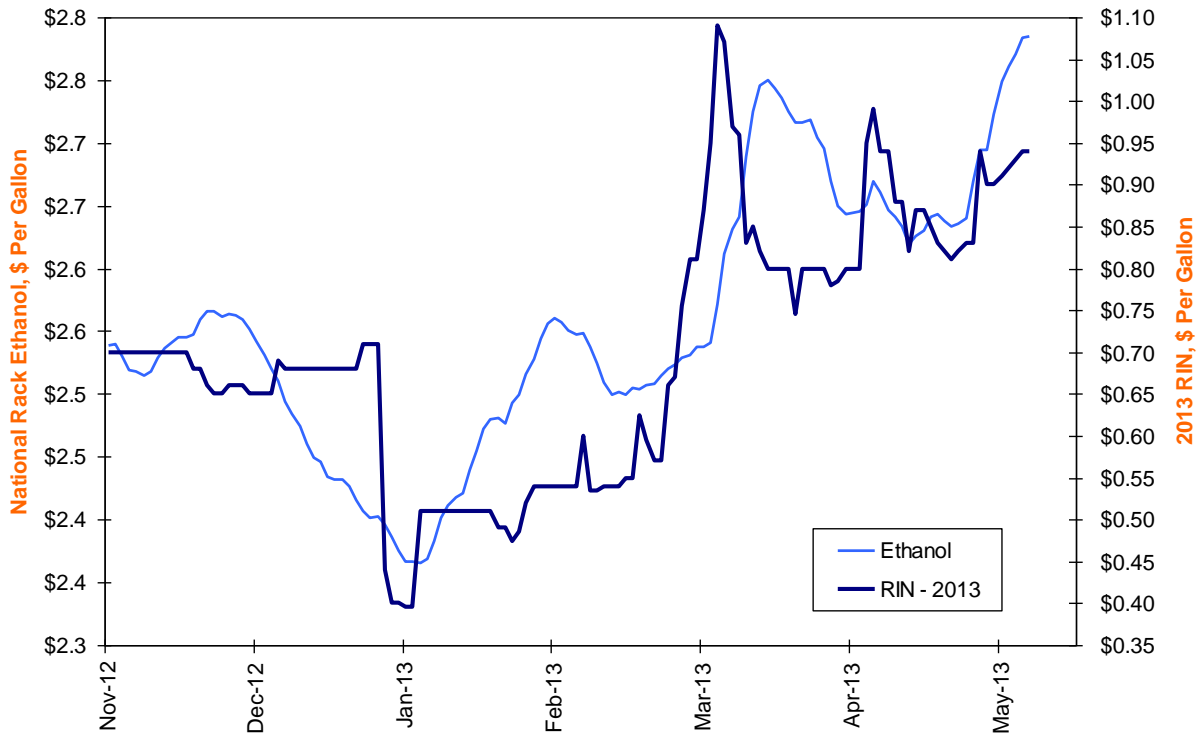
Ethanol prices have tended to track gasoline prices closely over time. Higher prices for RBOB gasoline provide a price ceiling for blenders. The opposite holds true for a declining gasoline market; as ethanol has only about 85% of the energy content of RBOB gasoline, ethanol prices have to fall in response.

### Ethanol And Gasoline Prices



Higher gasoline prices pull ethanol prices higher and discourage greater blending of biofuels, pushing RIN prices higher. If those higher RBOB gasoline prices occur in an environment of lower than expected gasoline demand, a situation prevailing during the late winter and early spring of 2013, blending demand falls and RIN prices rise.

### RIN And Ethanol Prices



If the national goal of increasing biofuel usage remains, the best way to enlist refiners, blenders and importers of fossil fuels to this cause is letting them profit by finding the most innovative and lowest cost path toward altering fuel mixes. As lower blending rates and missed blending goals forces these obligated parties to pay more for RINs, they will be nudged by the profit motive to blend more and pay less.