



Analysis: Why Aren't the Financial Markets Coming to the Aid of the Ethanol Industry?

by Todd E. Alexander and Lee Gordon

As evidenced by the recent bankruptcy filings by several ethanol producers, including VeraSun Energy Corporation, one of the largest ethanol producers in the U.S., it has become increasingly clear that the ethanol industry is in turmoil.

This was brought about, in part, by significant increases in the production of ethanol, which combined with historically high volatility in the price of corn to put pressure on the margins of most ethanol producers.

In addition, these struggling producers have been unable to obtain sufficient injections of debt or equity to stabilize their operations.

In such an environment, consolidation of the ethanol industry—a commodity business, with corn as its primary input and ethanol as its primary output—in order to capitalize on economies of scale would seem more likely than ever.

However, unlike other commodity businesses, the ethanol industry has not experienced a significant level of consolidation.

In fact, the **Federal Trade Commission** in its 2007 report on concentration in the ethanol industry concluded that not only does the ethanol industry lack concentration, but that it had become even more unconcentrated since its previous report in 2006. This article discusses several of the financial impediments, policy uncertainties and emerging technologies that have combined to prevent the ethanol industry from attracting the additional capital necessary to facilitate its consolidation.

As the credit crisis subsides and increased regulatory certainty returns as a result of the presidential election, we expect these issues to resolve themselves and consolidation of the industry to proceed.

Financial Impediments

The U.S. ethanol industry increased production in 2007 by nearly 2 billion gallons to more

than 7.8 billion gallons annually, with an additional estimated 4 billion gallons of production capacity to be developed in 2008.

As production has increased, it has become increasingly clear that many participants in the ethanol industry underestimated the working capital requirements of the industry.

Working capital is needed to allow companies to properly hedge their commodity positions and cover their margin calls.

Hedging is an important aspect of the ethanol production business, especially in times of increased volatility—over last twelve months, corn prices have risen by almost \$4.00, and subsequently fallen by an equal amount.

However, just as this problem was coming to light, the credit markets started to contract, which has made it extremely difficult for ethanol producers to obtain the working capital necessary to efficiently operate their businesses.

Without injections of capital, mergers between companies that face similar working capital constraints are not a possible means of achieving the economies of scale necessary to maintain long-term viability.

The general lack of liquidity in the credit markets has also prevented many potential acquirers from obtaining acquisition financing at interest rates of less than 10%, which is required by many investors to satisfy the hurdle rates for many proposed acquisitions.

From the commercial banks' perspective, this lack of liquidity is very understandable: the debt of many of the ethanol producers is trading at less than 50% of par in the secondary market, which in turn drives up yields on this debt to more than 15%.

As a result of these higher yields in the secondary market, interest rates in the primary market must rise correspondingly to compete for these limited funds.

Compounding the problems of lack of access to additional working capital and a lack of liquidity in the credit markets is the fact that many ethanol producers are already highly leveraged, which in turn makes it more difficult to engineer gains from financing or refinancing the terms of an acquired company's debt following a merger or acquisition.

It also makes the short-term increases in costs associated with many mergers more risky by reducing cash that is available for debt service.

Political Uncertainty

From its inception, the ethanol industry has been a creature of politics.

Three policies in particular provide incentives that are critical to the industry's success: a tariff on imported ethanol, a tax credit for ethanol blenders and a mandate for ethanol

blending.

Under 2008 duty rates, imported ethanol for use in fuel is subject to a tariff of 54 cents per gallon, which applies to most ethanol imported into the U.S. from abroad.

The second is the Volumetric Ethanol Excise Tax Credit, a tax credit of 51 cents per gallon, which provides an incentive to blenders to add ethanol as a feedstock in their gasoline blends.

The third is the Renewable Fuels Standard, which currently requires that transportation fuels sold in the U.S. contain a minimum of 9 billion gallons of renewable fuel in 2008, increasing to 11.1 billion gallons in 2009.

Each of these incentives has come under attack of late.

As recently as 2006, President Bush has proposed that the tariff on imported ethanol be suspended in an effort to lower the price of gasoline.

Although the proposal was rejected by the House of Representatives, the tariff continues to face opposition, and in July of this year, the Federal Reserve Chairman, **Ben S. Bernanke**, suggested that there would be definite benefits from removing the 54 cent tariff.

Also, the Renewable Fuels Standard faced opposition earlier this year from the Governor of Texas, **Rick Perry**.

Governor Perry requested that the U.S. Environmental Protection Agency reduce the mandates for renewable fuel production under the Renewable Fuels Standard from 9 billion gallons to 4.5 billion gallons, in part due to its perceived effect on corn prices.

This request was supported by the Governor of Connecticut, M. Jodi Rell.

Although the U.S. **Environmental Protection Agency** eventually rejected the request, there continues to be pressure to reduce the mandates.

Finally, the blenders' credit is scheduled to decrease from 51 cents to 45 cents on January 1, 2009.

Underpinning much of the opposition to federal incentives for ethanol production is what has been termed the food versus fuel debate, a debate that centers on the relationship between ethanol production and the price of food, and in particular on the price of corn.

Ethanol production has been attacked on the basis that using corn to produce ethanol directly drives up the price of corn, hurting consumers.

However, many of these attacks have subsided as the price of corn has fallen from a high

of over \$7.50 to under \$4.00, and as a result, it has become apparent that much of the recent increase in corn prices was not attributable to the ethanol industry.

Nevertheless, their criticism appears to have dampened the public's enthusiasm for biofuels in general.

Given that the viability of the ethanol industry is to a great extent reliant on these incentives, these doubts have had an impact on decisions related to incremental investment in the ethanol industry, including investment needed to fund the consolidation of ethanol producers.

Long-Term Demand for Corn-based Ethanol

Even if the financial problems affecting ethanol producers dissipate and the political bases for the ethanol industry are strengthened, corn-based ethanol may face a longer term challenge from the development of technologies that promise to replace corn-based ethanol in the medium-term.

One such technology is cellulosic ethanol, a biofuel that can be made from such varied inputs as algae, garbage, wood-chips and switchgrass.

Among the benefits of cellulosic ethanol is its ability to at least partly address the criticisms that have plagued corn-based ethanol—its inputs do not directly compete with and take away from food supplies.

Also, cellulosic ethanol may ultimately offer a source of lower-cost ethanol, as a result of being able to substitute low cost feedstocks in place of corn.

In addition to cellulosic ethanol, advances in competing technologies such as compressed natural gas, as advocated by **T. Boone Pickens**, and advanced batteries for plug-in vehicles may also have significant impacts on the corn-based ethanol industry, because they serve to shrink the overall demand for gasoline.

Prospects for Consolidation

Despite the multiple impediments to consolidation, as the credit crisis subsides and political uncertainty diminishes, we expect that ethanol producers will be able to gain access to the funds they need to consolidate and better address their working capital needs.

However, in the short-term, we expect the current industry turmoil to continue.

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