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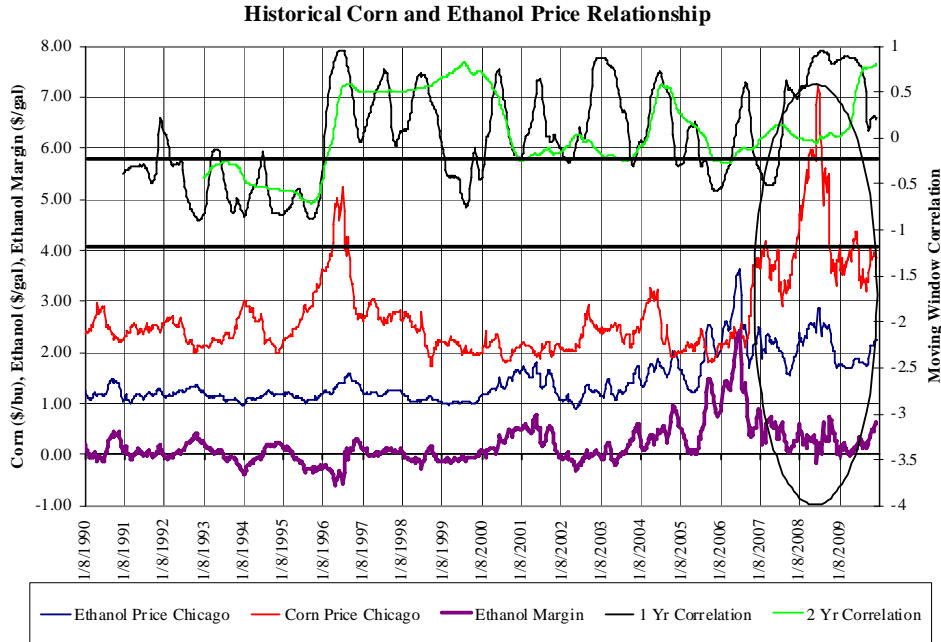
## Ensuring Adequate Working Capital to Support the Business in Good Times—and Bad

A systematic approach incorporating operating history with financial and statistical methods helps in forecasting liquidity needs in volatile markets.

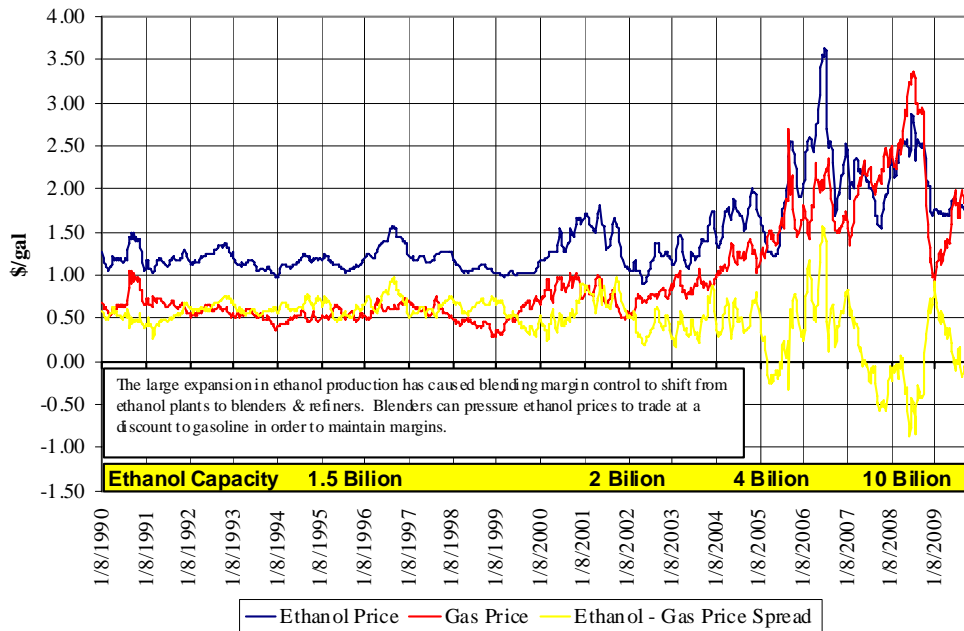
By Scott McDermott

If there is one thing ethanol plant managers and boards have learned through the recent challenging market environment, it is the importance of ensuring adequate cash reserves. We've all heard the phrase "cash is king," but it takes on a whole new meaning when you find yourself running short.

Over the past year, too many plants learned the hard lessons of what happens when you run out of cash. The fact is that the worst time to raise cash or working capital is when you need it. And, when you run out of cash, your options become rather limited. The BFO here (blinding flash of the obvious) is make sure you don't run out of cash by ensuring you have sufficient working capital—before you need it. To do that, it is of the utmost importance to forecast cash sources and uses for the future and then ensure there are adequate cash resources on hand to fund those future needs. Of course, this is easier said than done, especially given today's market volatility and uncertainty.



### Historical Ethanol and Gas Price Relationship



The goal is to balance shareholder demands for dividends with ensuring adequate working capital to protect the core business. Anticipating and translating market volatility and risk to define implications for the company's working capital is no small task. That said, just because it is difficult does not mean it is impossible. In fact, many successful commodity trading organizations and banks have developed sophisticated programs to ensure their organizations have the liquidity required to support their operations in good markets—and bad.

Ascendant Partners has been working with independent ethanol plants and their banks to develop a systematic approach for a company to use to ensure it has adequate liquidity to support the business. The program incorporates a combination of operating history with sound financial and statistical methods to provide information the company can employ to minimize the risk of a cash shortfall. The program does not replace board and management experience and intuition or their commodity risk management programs. It simply provides another tool for the board and management to use in guiding the business through challenging waters.

The program consists of two key elements: a working capital reserve fund to protect the core business and an early warning system that helps ethanol companies anticipate cash shortfalls utilizing Ascendant's financial simulator, a sound financial and statistical modeling approach. The outcome of the simulation is a risk adjusted, free cash flow forecast.

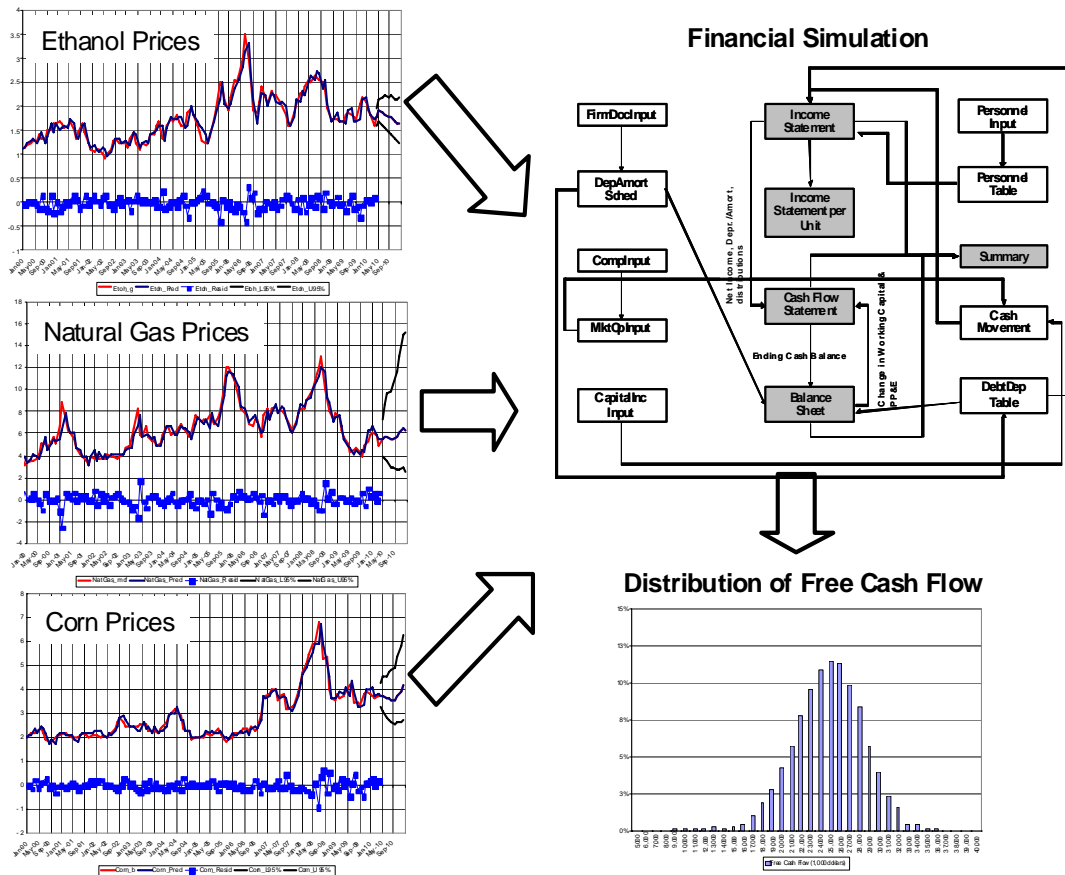
Value-at-risk systems are common at large commodity-based companies, trading companies and banks. These systems range from daily market capital-at-risk systems in trading organizations to stress testing and portfolio capital allocation systems in banks. From its experience working with the ethanol companies and banks in the industry, Ascendant came away with a comprehensive understanding of the important concepts. The best concepts from each were leveraged to develop a solution for the ethanol production companies to better manage working capital in the face of external risks such as policy changes or financial shocks, and the more direct risks of large hedging losses, negative margin environments, plant disruptions or even plant idling.

To determine the right funding level for the working capital reserve fund, Ascendant works with the board and management through a disciplined process to define their risk tolerance; to look at use history, which helps in identifying the probability and duration of negative markets/events; and to quantify the likely impact of those factors on working capital. This systematic approach to defining the need for a reserve fund better positions management to communicate and support the value of the fund with key stakeholders.

The second part of the process is to develop a disciplined, sound approach for forecasting expected cash sources and uses given market conditions and outlook. There are a number of ways in which market and operational volatility and risk impact the business. The obvious one is how prices and ethanol production margins affect the business, but there are other factors to take into consideration as well.

Recently we saw commodity prices run higher and many plants found themselves short on working capital because of the additional cash requirement of the higher value of inventories and accounts receivable. The higher prices also increased working capital needs due to margin calls on hedging positions. In addition to the above considerations, it is important to look at the working capital implications of an operational disruption or sustained negative margin environment that may suggest idling plant operations. It is also important to proactively work with lenders to ensure the revolving working capital lines are adequate to support the business in volatile markets. Remember, the worst time to raise cash is when you need it.

The Ascendant financial simulator uses 20 years of history to capture the interrelationship between ethanol, gasoline, corn and natural gas. The historical prices are used to project the distribution of potential prices given the interrelationship between markets. The forecasted price distributions for ethanol, corn and natural gas are run through the company's financial pro forma (see Figure 1) to produce the probability of free cash flow or risk-adjusted free cash flow for three and six months. The new price distributions and updated financials are revised on a regular basis so the system can serve as an early warning system for free cash flow.



The outcome of the simulation is a risk-adjusted series of free cash flow forecasts that management can use to anticipate cash needs going forward. Figure 2 illustrates one of the summary tables produced as part of the process.

### 6 Month Risk Adjusted Free Cash Flow Summary (July 31, 2010)

*1,000 dollars, except where noted different*

	Budget	50% Probability	75% Probability	95% Probability	99% Probability
Free Cash Available for Financing					
Activities(1)	15,940	16,668	16,021	15,094	14,114
(less) WC Reserve Fund(2)	(3,960)	(3,960)	(3,960)	(3,960)	(3,960)
<b>Ending Free Cash Available for Financing Activities</b>	<b>11,980</b>	<b>12,709</b>	<b>12,061</b>	<b>11,134</b>	<b>10,154</b>

*(1) Free Cash Flow Before Deducting Working Capital Reserve Fund and After Allocating Distributions Monthly @ 40%*

*(2) Working Capital Reserve Fund consists of cash requirements to sustain a 3 month plant idle*

Managing cash flow can be challenging, but there tools available to assist ethanol plant management and boards in determining the appropriate cash reserve fund level. For further information on managing your working capital or to obtain a free copy of a case study demonstrating how this tool works, please contact the author. EP

Scott McDermott is a partner in Ascendant Partners Inc. Reach him at [custserve@ascendantpartners.com](mailto:custserve@ascendantpartners.com) or (303) 221-4700.