



## **Ethanol - Understanding the Market and Prices**

**By Marcos Jank**

A key feature of commodities is their uncontrolled price fluctuations. Except in the case of petroleum products -- which in Brazil are a monopoly with government-controlled prices -- all other commodities suffer from permanent price volatility.

This is the case with fuel ethanol, where prices fluctuate freely with changes in supply and demand. It is true that in the past, the Brazilian government controlled the prices of sugar, ethanol and many other commodities. However, there is broad consensus that deregulation in the 1990s produced significant efficiency gains and production cost reductions that benefit all consumers.

Following the rapid growth of flex-fuel vehicles since 2003, which now account for almost 40% of the total car fleet, ethanol surpassed gasoline in consumer preference and became a remarkable example of a successful effort to replace oil dependency and combat global warming. In the past three years, thanks to the expansion of ethanol production and competitive prices, combined with the recognized environmental value of the fuel, ethanol consumption grew 78%, compared to only 3% for gasoline.

Confirming the rule of volatility, certain specific factors led to an increase in ethanol prices near the end of the current sugarcane harvest. The first factor, which has been widely reported but not clearly explained, is the global rise in sugar prices caused by poor harvests in key producing countries, among them the top two producers in the world, Brazil and India. In fact, Brazilian sugarcane mills have some flexibility between producing sugar or ethanol, but this "migration" is limited by the absence of sugar factories in most new units and a lack of spare capacity in older ones.

Although it hit the industry hard, the key factor driving high ethanol prices in Brazil -- the global financial crisis -- has received little attention. In the first half of 2009, a lack of liquidity in the credit market and high debt levels forced many sugarcane mills to flood the market with large amounts of ethanol at depressed prices just to maintain cash flow. These low prices led consumption to increase by nearly 30% over the same period in 2008, an extraordinary level in the fuels market. Then, excessive rains in the second half of 2009 caused mills to stop processing sugarcane for twice the usual period, compromising projected production and stocks of ethanol for the inter-harvest period, which lasts from December to April.

One could argue that ethanol is today an example of well functioning market forces generating price adjustments. The main pillar of this system is the flex-fuel vehicle, which allows consumers to choose their fuel at the pump according to price and environmental benefits. No country in the world offers this choice in such broad and attractive terms for consumers. In making fuel choices, the drivers of flex-fuel vehicles lead markets to adjust. Therefore, the Brazilian experience is a national technological success, from the competitiveness of sugarcane as a feedstock for ethanol to the efficiency of flex-fuel engines that allow market-based price formation to produce economic, social, environmental and public health benefits.



However, in at least two vital areas improvements are on the way. First, credit availability is going to help in the creation of market-regulating stocks, a feature that did not produce the necessary results in 2009 because of weak corporate balance sheets and a lack of credit availability. Second, the recent decision by the Brazilian Petroleum, Natural Gas, and Biofuels Agency (ANP, in Portuguese) to allow ethanol trading companies to operate in the fuels market, a path until now unfortunately forbidden by existing rules, should improve the way the market functions. Price volatility will continue to exist, because unlike oil, sugarcane production depends on Mother Nature. However, volatility can decrease with the presence of new agents and financing, storage and trading mechanisms.

Another important variable is foreign trade. The Brazilian government and industry are engaged in a broad campaign to consolidate ethanol as a global commodity. This could bring additional investments, jobs, foreign exchange earnings and gains for the planet in terms of climate change. The problem is that the ethanol market is highly protected around the world. The United States is beginning to recognize the benefits of sugarcane ethanol in comparison to other feedstocks, and the tariff it levies on imported ethanol is currently being debated by the U.S. Congress and could be dropped at the end of the year.

If we want to consolidate ethanol as a global energy alternative, it is essential that tariff and non-tariff protection barriers be eliminated, including those imposed by Brazil, which has its own 20% duty on imported ethanol – a move that has been the subject of considerable criticism abroad. Some groups in the U.S. correctly argue that it is incoherent for Brazil to ask for greater trade liberalization and at the same time protect its own market with a high import tariff. Free trade is not a one-way street. If Brazil has the most competitive ethanol industry in the world, why not set the good example that entitles us to call for the opening of the North American market, by far the largest consumer market today?

In summary, ethanol's 35-year old history has been a bumpy one: from intervention to free market, the development of ethanol-only vehicles, back to gasoline-powered cars, to the innovation of flex-fuel vehicles. Today we have motorcycles, bioelectricity and bioplastics. In the future, we see buses, trucks, airplanes, cane-based chemicals and hydrocarbons. Despite this year's hiccup, caused by the financial crisis and the weather, it is essential to continuously improve market conditions and stimulate technological change, competitiveness and sustainability.

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