

The upturn in world crude oil prices expected to create a price floor effect for international sugar prices

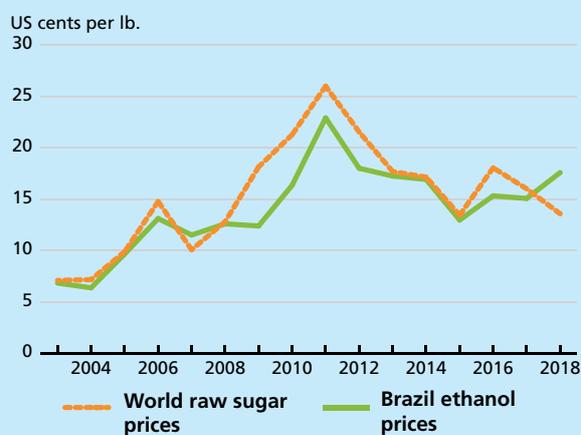
One of the key features of the sugar market is its strong linkage with energy markets, mainly because sugar crops can also be processed into ethanol – a product that can be used as an engine fuel. While most countries use an E10 ethanol fuel mixture (blend of 10 percent ethanol and 90 percent gasoline) and, to a much lesser extent, E85 (85 percent ethanol), Brazil, the largest sugar producing and exporting country in the world, uses hydrous ethanol (95 percent ethanol and 5 percent water) that can be utilised directly as a fuel for the vast majority of new gasoline-based cars sold in the country. Consumers there have the flexibility, at the pump, between fuelling their car with sugarcane based ethanol or with gasoline. This choice has a direct impact on the level and direction of international sugar prices.

The decision on which type of fuel to use is based on the relative price of ethanol to gasoline, on an energy equivalent basis. The lower the price ratio, the greater the incentive to substitute ethanol for gasoline, and vice versa. As more ethanol is consumed, a larger share of sugarcane is used to produce ethanol rather than sugar, reducing sugar availability for export to the world market. Given the importance of Brazil in the sugar export market, with a 48 percent share in 2016/17, a contraction in its supplies tends to raise world sugar quotations. In the current context of weak world sugar prices, the question is to what extent steady gasoline prices can provide support to the sugar market. One element of the response lies in what sugar experts refer to as the ethanol parity price. This is the price of raw sugar below which it becomes profitable to produce ethanol instead of sugar. FAO's estimates show that, currently, the parity price hovers around US 17.53 cents per pound. This parity level is itself dynamic and depends on changes in the energy markets, movements in the Brazilian currency (Real) against the US dollar, the ethanol import regime, and other factors (e.g. sugar and ethanol production costs).

Evidently, current international raw sugar prices (US 11-13 cents per pound) are far below the parity level. This shows that the relationship between ethanol and sugar prices is much more complex,

and is contingent on additional factors. For example, the relationship tends to weaken during the sugarcane harvest season in Brazil, when both ethanol and sugar prices mainly reflect prevailing supply and demand market situations. Also, bumper harvests in other major sugar producers, such as India, Thailand and the EU, weaken the effect of crude oil/gasoline markets on sugar quotations, with sugar prices more responsive to the physical market. In general, however, the price correlation tends to hold in the long run, as the figure below illustrates. Assuming higher oil prices to persist, this should support strengthening sugar prices over the medium term. The ethanol-sugar price relationship is also likely to become stronger, given the recent decision by the Government of Brazil to allow domestic gasoline prices to track those of the international market. Typically, ethanol prices hover around 70 percent of gasoline prices, with values below that share enticing flex-fuel car owners to shift from gasoline to ethanol, a move that also prevents ethanol prices from falling too far below those of gasoline. Brazil's ethanol market, therefore, is also an automatic stabiliser for world sugar markets. Without the dynamics of the ethanol/sugar complex, international sugar prices would have dropped much more, given the prospect of surging sugar production in the EU, India, and Thailand for the 2017/18 marketing season.

World sugar prices and Brazil ethanol prices, in raw sugar equivalent



Sources: Intercontinental Exchange (ICE), FAO