Cocoa, Sugar And Trying To Make Candy Dandy

While it may seem cocoa and sugar go together like bread and butter or oysters and Chablis, just try giving the latter two combinations as a gift to that special someone. No, cocoa and sugar pair to make sweetened chocolate candy, one of the things that makes life worth living and surely should be given to invading aliens as a gesture of good will.

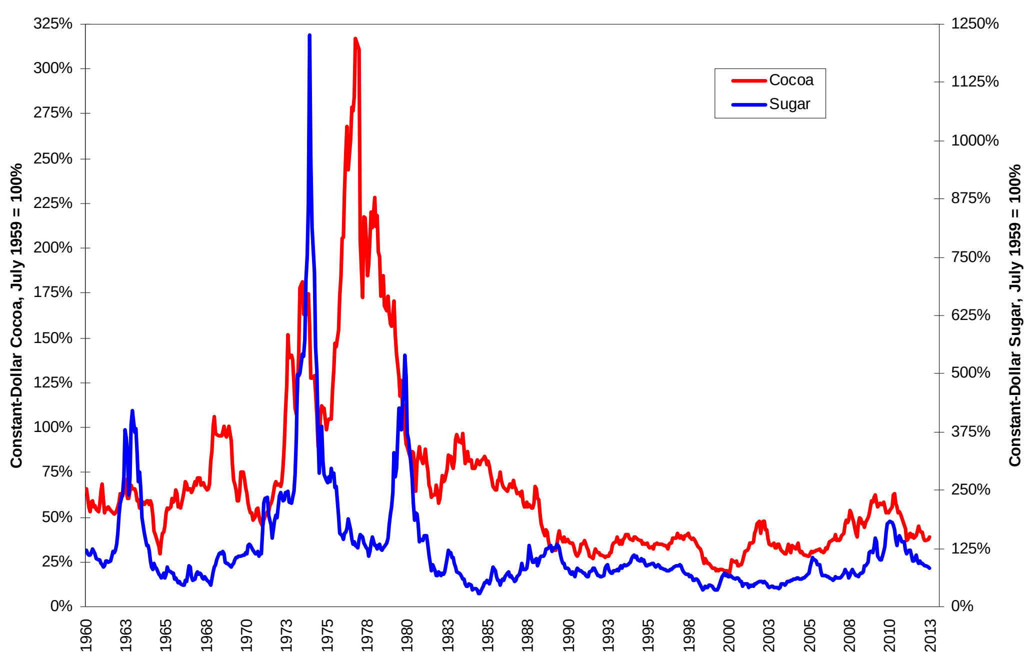
It was not always the case. Back in the day, whenever that was, a mixture of unsweetened cocoa beans and red chili peppers was reserved for Aztec royalty. This must have produced some kind of endorphin rush and while no one has made a connection between this predecessor to Ovaltine and the Aztecs' practice of human sacrifice, who can doubt it made for a cranky disposition, the original Montezuma's Revenge?

Cocoa was part of what has been called the Columbian Exchange, the transfer of various foodstuffs between the Old and New Worlds following Columbus' voyages. It was taken back to Europe along with a few galleon-loads of gold and silver by the Spanish, and while it was taken to various tropical colonies such as the Dutch East Indies and the Philippines, the modern West African countries of Ghana and Cote D'Ivoire were where it made its real mark upon introduction in 1879 and 1905, respectively. For those who believe human progress is a one-way path, it took until 1847 for sweetened chocolate candy to be developed in the U.K. and until 1879 for what we call milk chocolate to be developed in Switzerland. By contrast, it took a mere 66 years between the Wright Brothers' first flight at Kitty Hawk and *Apollo 11's* landing on the moon.

Commodity Markets

One of the long-term truths of commodity markets is the terms of trade do not favor commodity producers over time. Let's take the constant-dollar trends for cocoa and sugar going back to July 1959. The sugar chart is dominated by two gigantic price spikes in the 1970s and early 1980s and the cocoa chart is dominated by one price spike in the late 1970s. Even after the general upswing in many commodity markets beginning in 2003, both markets have yet to take out these highs and have been trending lower since 2011.

Candy Ingredients Still Lower Than Thirty Years Ago

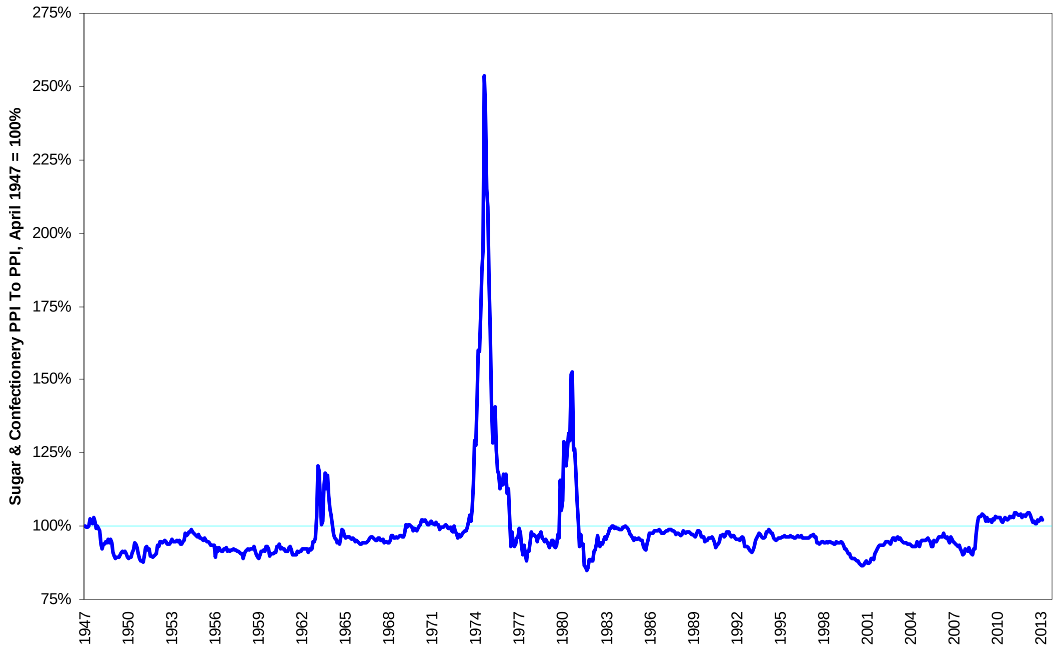


This long-term price trend is even more remarkable when we consider the world's population has added 2.5 billion people over this timeframe, how rising global income levels have allowed people to climb up dietary curves and how sugar has turned into a feedstock for ethanol distillation.

No Sweet Spot For Users

The increased efficiencies on the production side of these soft commodities are match by increased efficiencies on the processing side as well. Our good friends at the Bureau of Labor Statistics maintain a producer price subindex for sugar and confectioneries. Once again, as we can see with the exception of a few hiccups to the upside in the 1970s and early 1980s, this index reflects the inability of confectioners, food processors, bakers and soft drink manufacturers to achieve long-term price gains in excess of the PPI itself.

Confectioners Have Little Pricing Power



Of course, one of the greater difficulties facing large-scale buyers of sugar has been years of sugar quotas. These have forced domestic sugar prices up to levels regularly three times higher than prevailing world prices with the predictable result users either went out of business or substituted high-fructose corn syrup for sugar. It is easy to shake your head at these quotas: Not only do they keep a sugar beet industry viable in the Northern Plains on land that could be devoted to other crops; they hinder exports of sugar from many of the same Caribbean islands the U.S. supports otherwise. The earliest international economists understood the principles of competitive and comparative advantage; the U.S. should not try to grow what it could import for less.

Declining U.S. domestic sugar prices in 2013 have created the public policy conundrum of the Agriculture Department essentially throwing good money after bad so domestic sugar growers can repay crop loans. Let's just say the entire relationship between sugar growers and government officials is not one for the civics textbooks and leave it at that.

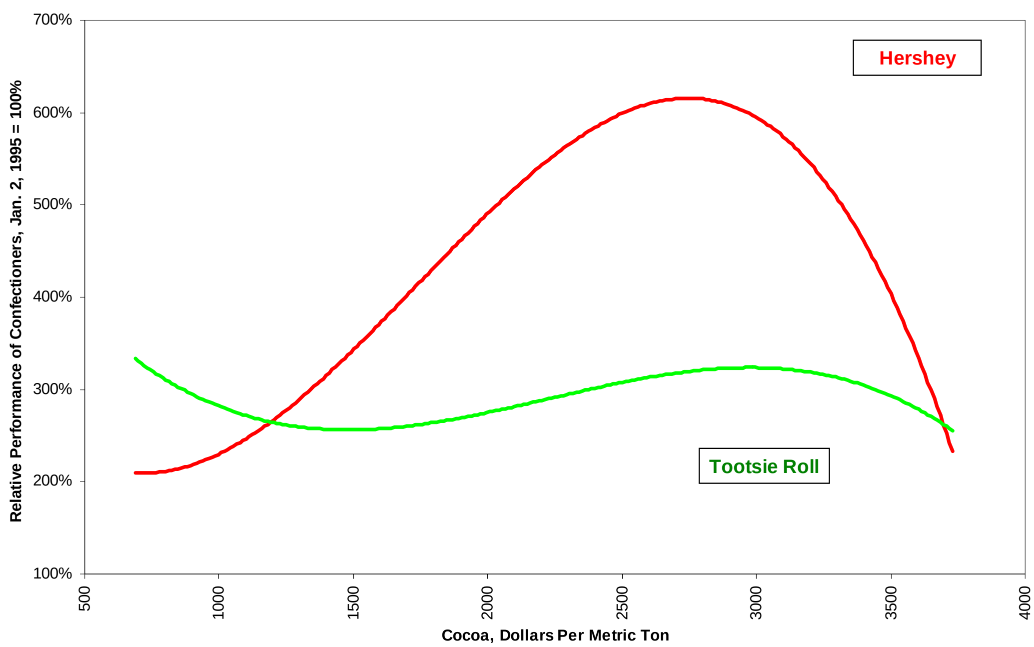
Factor Performance

Commodity-linked firms both on the production and consumption sides often consolidate into large, horizontally integrated firms to quell commodity price volatility via the portfolio diversification effect. Other commodity-related firms such as Cargill and Koch Industries are privately held so as to avoid dealing with shareholder distress over earnings volatility.

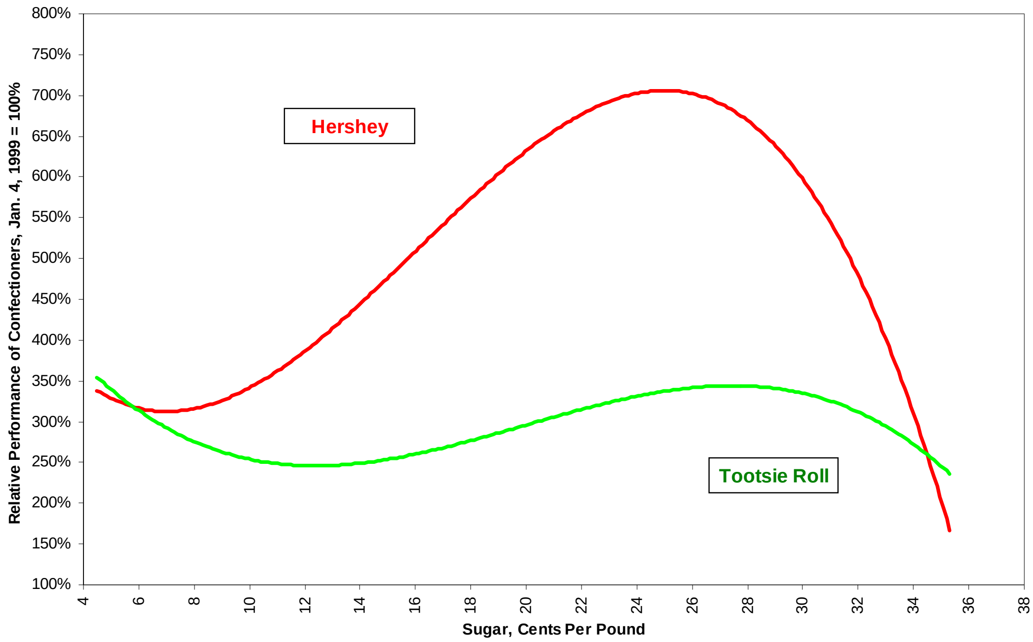
This small detour into industrial organization was designed to excuse the small number of individual firms used in the studies below. The objective is to determine the impact on an individual confectioner's total return relative to the total return of the broad market as a function of cocoa and sugar prices. Ideally, we would like to see a multi-firm index or at least four or five large firms with direct exposure to these commodities. No such luck: Major food processing firms such as Kraft Foods' successor Mondelēz International or Nestle are so diversified chocolate candy is but a small portion of their total enterprise. Other firms in the industry, such as Rocky Mountain Chocolate Factory, are too small for meaningful consideration.

Let's map the relative performance of just two American confectioners, Hershey Foods and Tootsie Roll, as functions of cocoa and sugar prices, respectively. Only the trend-curves of the relationships will be displayed to preserve visual clarity.

Higher Cocoa Prices Affect Confectioners Weakly



Significantly Higher World Sugar Hurts Confectioners



What should we expect to see? As both firms are net buyers of both sugar and cocoa, we should expect to see declining relative performance when prices rise. This does not appear to be the case for either firm until the price of cocoa goes over $3,500 per metric ton. Until such time, Hershey does a much better job of passing along higher cocoa costs to its customers than does Tootsie Roll. We seldom see such examples of commodity buyers not only being able to absorb higher feedstock costs but being able to profit, to a point, from higher prices as well.

The situation is surprisingly similar for sugar. Here again Hershey Foods is able to shrug off higher prices for sugar until they exceed 28¢ per pound and outperform the broad market. All jokes about chocoholics aside, Hershey Foods seems to be operating in a world of very price-inelastic demand: Its consumers are willing to pay and that is that.

Does this mean you should try to trade a commodity such as cocoa or sugar via a confectioner's stock? No, that would be foolhardy when the alternative, trading the futures, is readily available. In addition, forget trying to find a stock on the production side. Both commodities are produced either on small farms or on giant, privately held plantations (yes, they actually do call them "plantations").

One final bit of history is in order. The stimulant in cocoa, theobromine, derives its name via the great naturalist Linnaeus, from a Latin term meaning "food of the gods." That should make for an interesting self-justification for cocoa and sugar traders and consumers alike.