

Getting A Bounce From Rubber

One of the crises from the early days of World War II in the Pacific theater was the Japanese invasion of the Dutch East Indies, now Indonesia, and the British colony of Malaya, now the core of Malaysia. The loss of crude oil from the Dutch East Indies – Royal Dutch Petroleum, the Dutch half of what became Royal Dutch Shell in 1890 - was bad enough, but other sources of crude oil were available. The loss of the rubber plantations of South Asia was critical, though, and it took a crash effort to develop a large-scale synthetic rubber industry for wartime purposes.

Everyone cites the wheel as a great invention, but without rubber tires to grip roads at high speeds and to cushion rides, the wheel just would not be as useful. About 1.7 billion tires are expected to be sold globally in 2013; more than one billion tires per annum wind up discarded in landfills, shredders and recycling centers. The very characteristics that allow tires to roll for thousands of miles, such as steel or polyester belts and the resilience of vulcanized rubber make it one of the more vexing problems for the recycling industry.

You might think any industry this large whose natural source of production is confined to a limited area would have seen substantial long-term price increases. Not so: Even as the prices of smoked rubber sheets climbed to nominal records in early 2011 as heavy monsoon rains in Thailand disrupted supplies, the average annual rate of increase in constant-dollar terms since 1947 was a mere 0.64%. This is quite a tribute to productivity and to the powers of substitution.

Let's shorten the timeframe and focus on the Tokyo Commodity Exchange's contract for No. 3 smoked ribbed sheets. This contract is for 5,000 kilograms and is priced in Japanese yen; we can convert this to January 1985 U.S. dollars first by currency conversion and then by adjusting it for changes in the Producer Price index. The steady rise between 2002 and 2008, which preceded the price drop of 2008-2009, the subsequent rebound in 2010 and yet another sharp drop in 2011-2013, is quite easy to spot. Someone given to bad puns might say rubber bounces around a lot. The usual suspects are involved: As China overtook the U.S. as the world's largest automobile market and as the rest of emerging Asia came along for the ride, demand for rubber shot higher.

Can price spikes of the sort seen in 2010 be sustained? The answer depends on the timeframe. Over the short-term, a tire manufacturer will be willing to pay almost anything for rubber in the knowledge that cost can be passed on to customers. A car without tires may make for an amusing sight-gag in *Flintstones* cartoons, but is impractical otherwise, and the price of tires will remain but a small fraction of the price of a new car. The tire buyer thus becomes the manufacturer's risk manager; this is a situation very much akin to residential natural gas customers acting as utilities' risk managers.

Over the long-term, however, the situation is and always will be different. Remember the analogy to the loss of colonial rubber plantations in the early days of World War II: That was a crisis. Synthetic rubber met the Allies' needs in wartime, and both the petrochemical industry and the science of genetic engineering have come a long ways since then. Researchers are trying to induce dandelions, which produce a latex-like sap, into producing something more akin to natural rubber; only a fool would bet against an eventual breakthrough somewhere along the line.

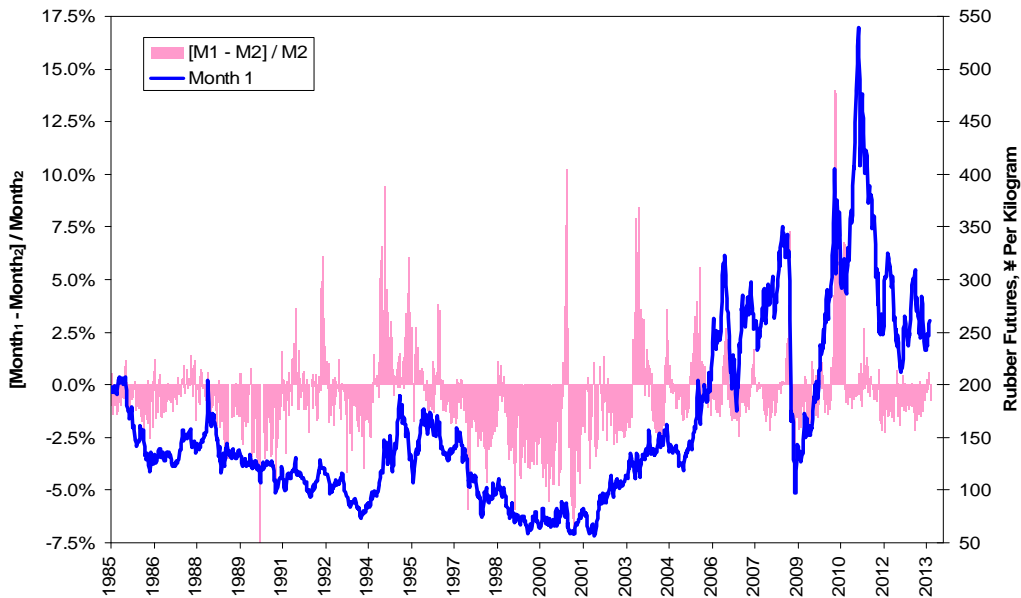
**Constant-Dollar Price Of Tokyo Rubber Futures
(Converted From JPY To USD)**



The Classic Squeeze

Rubber futures give us an important insight into the behavior of producers and buyers alike: Rubber exhibits many of the classic signs of backwardation. A market where the buyers are content to maintain a just-in-time inventory policy and where the cheapest place of storage for the source of the latex is the rubber trees themselves should see the front-month futures rise over the second month futures whenever the price trend moves higher. As we can see below, this certainly was the case during the supply-shock driven rally of late 2010. The opposite, a reversion of the forward curve into a carry structure, happened during the 2011-2013 price decline.

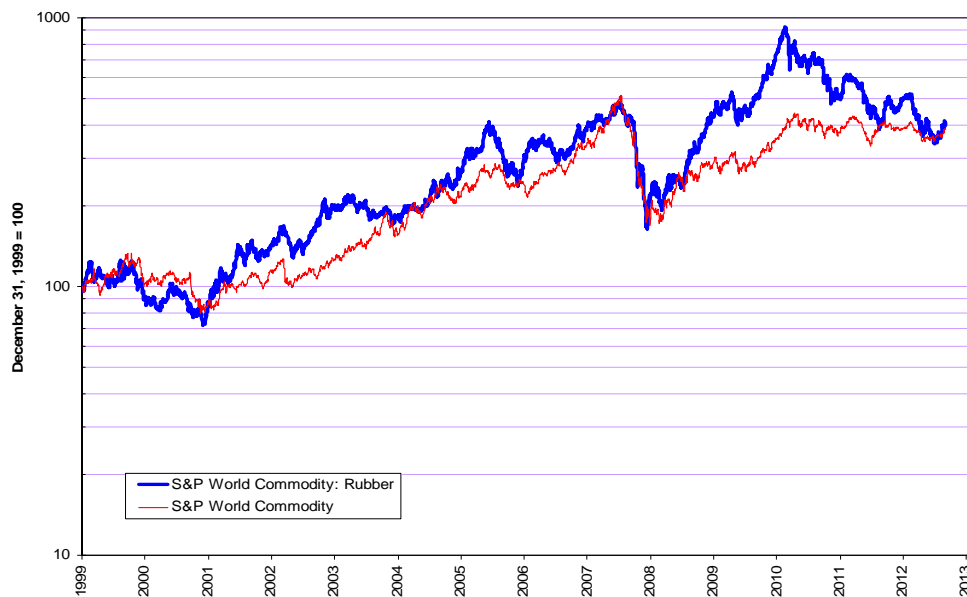
Rubber Futures Exhibit Classic Backwardation



Productivity, But...

The 2009-2010 surge in rubber prices not only put the long-term constant-dollar price growth rate of rubber back into positive territory, it propelled the S&P World Commodity sub-index for rubber well past the comparable price path for the S&P World Commodity index itself. As we can see below, rubber had outpaced the broad World Commodity index for protracted periods previously, including 2002-2003 and 2006-2007, but on a much more limited scale. Once prices peaked in February 2011, rubber prices converged downward to the World index.

Rubber Outpaced Other Commodities For A While



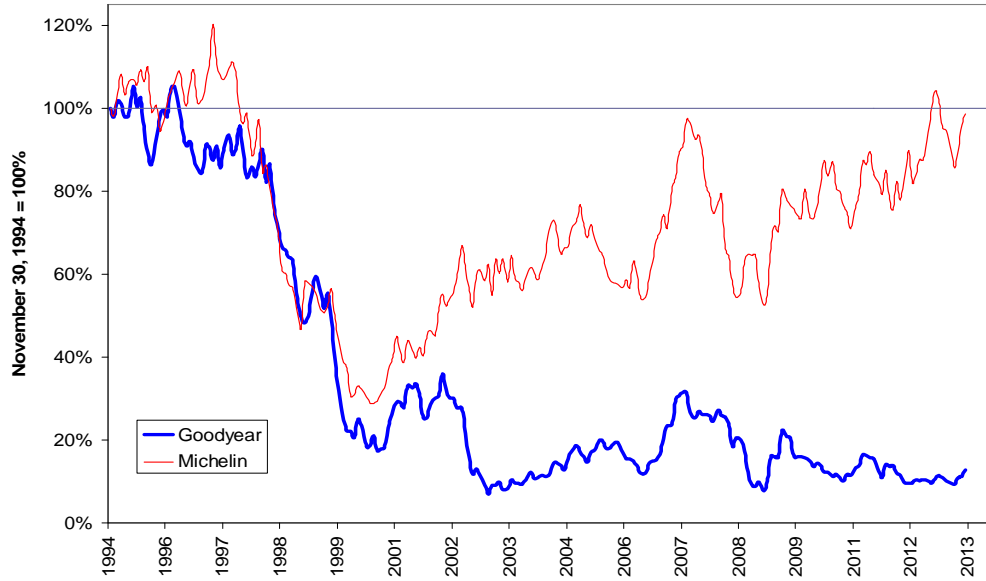
Don't Tread On Them

One of the more lamentable trends of the current millennium in the world of finance is for investors to treat commodities and commodity-linked equities as substitutes for one another. While we are (hopefully) a long ways away from a rubber ETF, the mere mention of rubber is likely to send some scurrying toward the stocks of tire manufacturers such as Goodyear in the U.S. or Michelin in France. Resist the temptation. Rubber is a cost to these firms, and while they can pass on much of the cost of higher rubber prices to their customers, they are imperfect pass-through vehicles at best. Moreover, they are far more susceptible in their performance relative to their national benchmark indices to factors such as labor costs, energy costs and the general health of the automobile and truck manufacturing industries. In addition, tires are a global industry and the manufacturers in both Europe and the U.S. have had to face down waves of far lower-cost tires from, in succession, Japan, Korea and China.

As an aside, the U.S. has filed some successful complaints against the Chinese tire industry before the World Trade Organization. This is a double-edged sword at best: History has shown one of the better ways for an industry to lose its competitive edge is to become the beneficiary of import quotas, tariffs and other protective barriers. The U.S. steel, automobile and chemical industries won repeated victories of this nature en route to losing their global pre-eminence.

If we map the relative performance of these two stocks over time reindexed to November 1994, we see just how poor the tire industry has done against the base case of simply investing in a national index fund.

**Relative Performance Against National Indices:
Selected Tire Manufacturers**



There are direct plays on rubber via the stocks of various plantation owners that trade in London, but while this may appeal to your general sense of exotic adventure, it is probably going too far afield. If trading rubber futures is something you really wish to do, stay awake for Japanese trading hours and trade rubber futures.