TRCC CANADA
Monthly Bulletin

TRCC Canada

Leading World Technologies Through Innovation

November 2016 Issue

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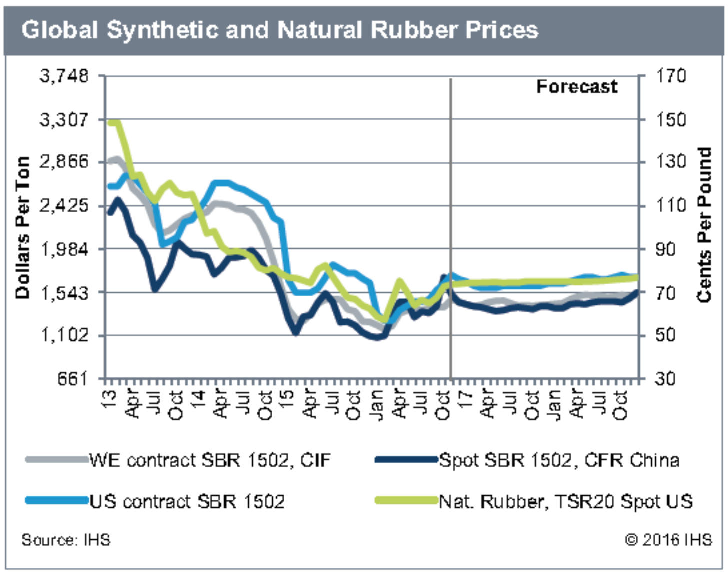
Summary

Butadiene (precursor of synthetic rubber latex HS-SBR):

In the US, IHS Chemical's marker for the November US butadiene contract price increased 6.4 cents per pound to 52.4 cents per pound ($1,155 per ton). In Asia, the Taiwan domestic contract price was $1,491 per ton for October deliveries. In Europe, the November butadiene contract price increased €80/ton to €800 per mt.



Synthetic Rubber:

Synthetic Rubber producers in North America have seen demand hold steady with some marginal upside. The arbitrage opportunity to ship rubber from Asia to North America is closed. In the short term, Asia supply will remain tight due to the unexpected supply issues facing the region, although some producers have resumed production. Natural rubber will continue to weigh on Asia's synthetic rubber demand. European synthetic rubber producers benefit currently from a structurally lower butadiene price level in Europe compared with the Asian and North American markets for butadiene.

Natural Rubber:

The average natural rubber prices continued to increase in all three regions, along with the oil price increase and higher synthetic rubber prices. The lower prices of natural rubber have made it more attractive than synthetic rubber, increasing demand and pressuring inventories.

Tire

HPIB indices increased worldwide, driving the butyl rubber indices up about 6% each. Asian butadiene prices also continued to soar during October, driving up Asian PBR and SBR indices. In November we are expecting cost indices to decrease.

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Crude C4s

Monthly Market Summary

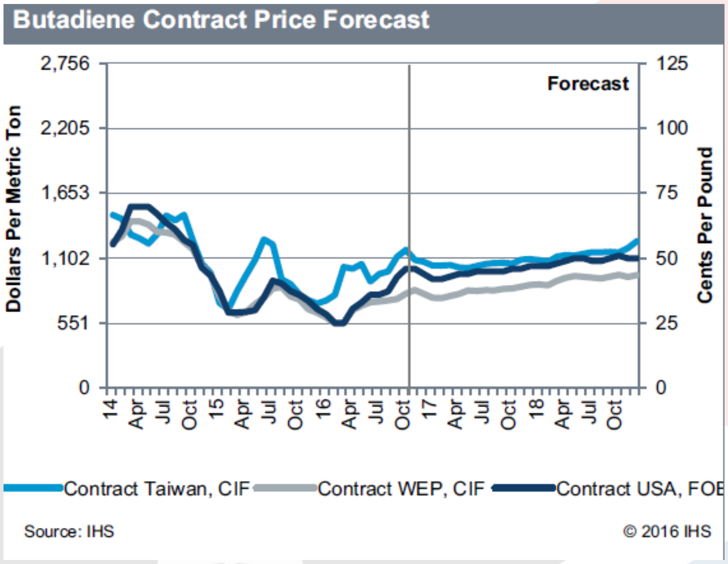
North America

On a net basis, prices for both WTI and Brent declined in October. However, first they increased before falling late in the month. OPEC will meet this month, and the outcome will have a lasting impact on the short- to medium-term oil markets. In September, OPEC ministers agreed in principle to decrease quotas in order to bring the world oil markets into balance. IHS Chemical has described this decision as more of an agreement to agree in the future than a hard and fast commitment. There is a lot of hard work to be done within OPEC to set the actual production levels required to give them certainty of control, and many individual countries' interests will run counter to the objectives of OPEC as a whole. Therefore, this is far from completed. It will be interesting to see what actual agreements, if any, are announced later in the month. Meanwhile, natural gas prices increased again in October. Prices are forecast to trend down in November before increasing with winter demand.

Butadiene (precursor of synthetic rubber latex HS-SBR):

Contract Prices

The Taiwan domestic contract price was $1,115 per ton for September deliveries. The October US butadiene contract price marker posted by HIS Chemical increased 3.2 cents per pound to 46 cents per pound ($1,014 per ton). The nominations were not split. The European contract price for September was €680/ton. The October contract price increased €40/ton to €720/ton.



The US butadiene balance remains relatively tight. In October, any surplus supply was exported to Asia to take advantage of the extremely high prices there. Additional volume could have been exported, but it was not available. Moving into November, the market balance remains tight. Interest in exports to Asia remains, but at a much lower level than was possible even two weeks ago. At current prices in Asia, the netback to US exporters would be just under 50 cents per pound. However, even that appears to be unlikely since prices in Asia are expected to trend downward for the next few months. The lack of spot availability from Europe will

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prevent the market balance from moving long, but supply should improve over the next couple of months as domestic production increases with the end of the fall maintenance schedule in mid-November.

Butadiene demand appears to be holding the gains from recent months. It is unfortunate for consumers that that market strength appeared just as supply became tighter. One thing working in favor of the North American butadiene consumer has been that high prices in Asia and tight supply in Europe have prevented consumers there from being able to increase their presence in the Americas. Interregional competition of butadiene derivatives will continue to be the market defining dynamic.

US spot prices for October increased dramatically. The export parcel was sold at around 54 cents per pound. Shortly thereafter, there was buying interest somewhat higher than that, but there was no material available. As noted previously, the export netback has dropped below 50 cents per pound. Given the current North American supply balance, it seems unlikely that the spot price will drop below the contract level, effectively closing the arbitrage window. Looking forward, the price in Asia should continue to trend down as the spread between butadiene and naphtha is quite high. This will put downward pressure on prices in North America as well.

Feedstocks

Synthetic Rubber

Styrene (precursor of synthetic rubber latex HS-SBR):

In North America, October has proven to be quite an active month for the USGC spot market, in marked contrast to the summer months. Early in the month, spot business was being transacted in the range of $937–940/MT. Towards mid-month prices were being agreed slightly higher ranging up to $950 for October business. Then came a spate of issues globally - the fire at Westlake, the extremely unfortunate explosion and loss of life at BASF's facility in Ludwigshafen and then unplanned shutdowns in Kuwait and Saudi Arabia. Spot prices on the USGC reacted accordingly, with October pricing moving up to $980 and November reaching $1,000. None of these incidents is expected to have a long-term effect however and pries should soften soon. Margins remain positive.

Operationally in North America, Westlake has gone off-line with as of yet no firm date for return to operations. Shell's Scotford facility continues to run at reduced rates, based on imported benzene, awaiting the completion of maintenance work at their adjacent refinery. PEMEX in Mexico remains shut down and is not expected to restart in 2016.

Heading in to the month of November, balances and availability remain in reasonably good shape, albeit a little tighter due to the Westlake outage. Much of the trade and some producers continue to have material available for November business. Once Westlake restarts, along with Shell returning to full rates, product availability should not be an issue.

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North America continues to be a beacon of hope in a world of diminished expectations. However, demand has begun to experience the usual seasonal slowdown as cooler weather approaches. Notwithstanding that normal occurrence, there is no expectation of any imminent extreme demand slump.

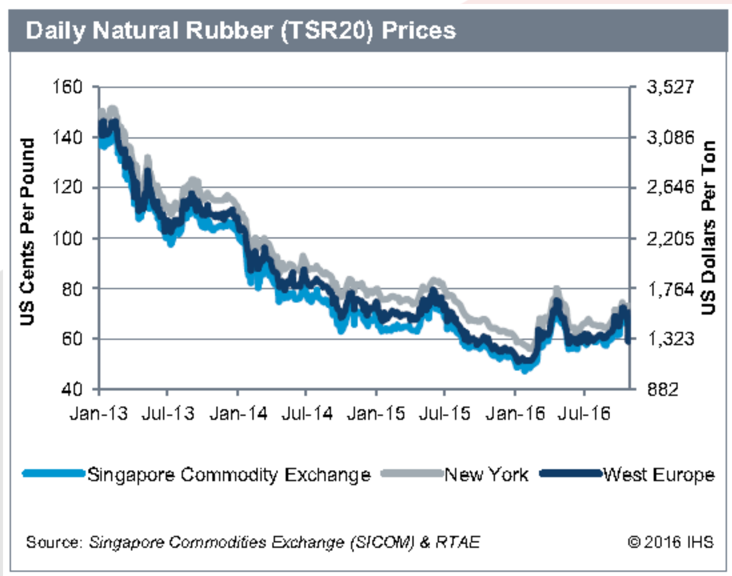
Monthly Market Summary

United States

In the United States, the synthetic rubber volumes remain relatively flat, although there does appear to be a positive bias. In October, the extreme market conditions in Asia were felt globally. As butadiene prices increased rapidly, rubber producers in Asia became less of a presence in the international markets. In fact, they became less of a factor in their domestic markets as rubber demand fell mostly due to substitution by natural rubber. Unfortunately, North American synthetic rubber producers were in a poor position to take advantage of weaker competition from imports as the high cost of incremental butadiene feedstock prevented them from increasing rates.

Natural rubber

Monthly Market Summary



The average natural rubber prices continued to increase in all three regions as the lower prices of natural rubber have made it more attractive than synthetic rubber increasing demand and pressuring inventories. The average price for SICOM increased to 66.67 cents per pound (about $1,470 per ton), increasing about $119 per ton compared with the September average. Prices in Europe and New York also increased, marking 69 cents per pound and 72.7 cents per pound, respectively. TOCOM natural rubber futures, however, decreased slightly in October about 3 yen per kilogram compared with the September closing price. The August RSS3 contract closed at 175.5 yen per kilogram (around $1,720 per ton), while the October contract closed at 172.4 yen per kilogram (around $1,701 per ton). Monthly future prices on the TOCOM are expected to average between 177 and 184 yen per kilogram (around $1,700–1,750 per ton) throughout next 12 months. The price in US dollars will change when converted from Japanese yen, depending on the exchange rates.

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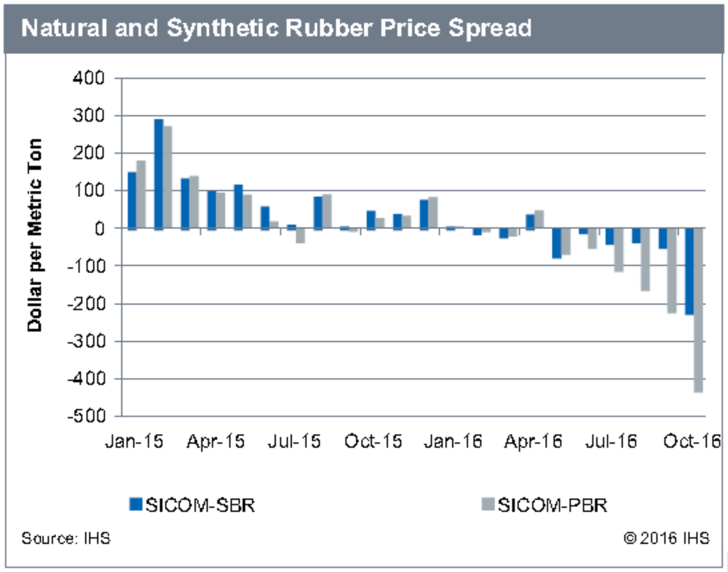
Natural rubber prices increased along with the oil price increase and higher synthetic rubber prices. Some tire producers have shifted from synthetic rubber, especially from PBR, to natural rubber because natural rubber was much cheaper than synthetic rubber. However, this was only possible for low-grade and truck tires, and the substitution is not 100%. Some of the low-grade tires are able to be substituted as much as 50%. The substitution eventually will narrow down the price spread between synthetic and natural rubber, which is currently between $85 and $455 depending on which synthetic rubber it is.

Market Analysis

Recently the price spread between natural and synthetic rubber is widening, especially with PBR. The spread between SICOM and PBR widened more than $400 per metric ton in October. When the price gap widens between natural and synthetic rubber, tire producers start to use cheaper rubbers. Recently, Chinese tire producers started to use more natural rubber to substitute PBR. However, there are limits to the substitution rate; for the high-grade tires in particular, very limited substitution can be applied. In the case of low-grade tires, a higher substitution rate can be applied, which roughly can be up to 50%. Once the substitution starts, the price gap between the two will narrow down eventually. On the other hand, synthetic rubber will be substituted for natural rubber as well, when the natural rubber price becomes much higher than the synthetic rubber price, which happened in early 2015. Therefore, the wide price gap between the rubbers does not persist for long periods because tire producers are able to substitute between the two, depending on the tire grades.



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