

Rubber

UBS US Macro Sales

Thursday November 4 2010

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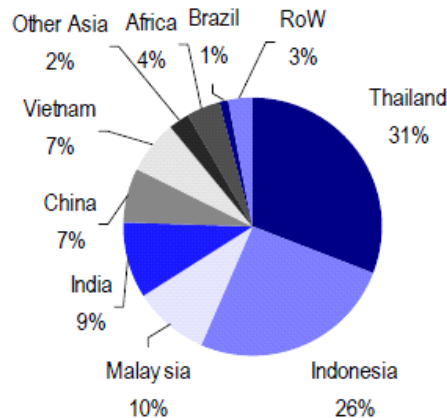
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Hi

Asia accounts for 90% of global rubber output with production concentrated in the tropical regions of Thailand, Indonesia, and Malaysia.



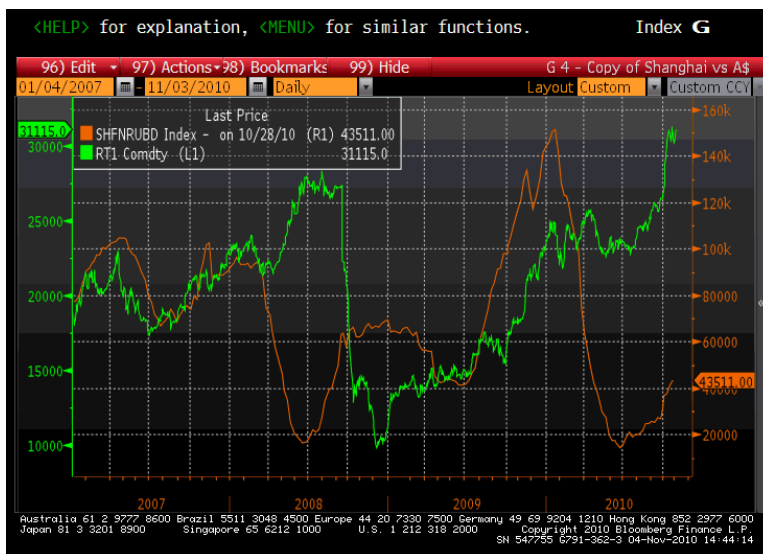
Source: SIPH

Southeastern Asia produced 10.25 million metric tons of natural rubber so far this year, compared with consumption at 10.31 million metric tons according to the Singapore based International Rubber Study Group. Output in Thailand, the largest producer and exporter, is estimated to fall by 3.9 percent in the fourth quarter of 2010 according to the group. In addition, India has scaled down its production forecast this year to 844,000 tons from 879,000 estimated earlier. China has cut its 2010 output forecast to 641,000, a decline of 0.3 percent from 2009 levels, according to the group. Their consumption of natural rubber increased 10.9 percent from the first 9 months of 2009 versus the first 9 months of 2010. India's consumption increased 5.3 percent while Malaysia's consumption increased 2.4 percent during this period.

Consumption and Import up to September 2010

| | Jan. to Sep. 2009 | Jan. to Sep. 2010 | % change |
|---|----------------------|----------------------|----------|
| | ('000 tonnes) | | |
| China | | | |
| Consumption of NR (Includes compound rubber) | 2225 | 2467 | 10.9 |
| Import of NR | 1218 | 1237 | 1.6 |
| Import of compound rubber | 775 | 749 | -3.4 |
| India | | | |
| Consumption of NR | 666 | 701 | 5.3 |
| Import of NR | 137 | 146 | 6.6 |
| Malaysia | | | |
| Consumption of NR | 346 | 354 | 2.4 |
| Import of NR | 518 | 511 | -1.5 |

Looking into next year, projected demand of 11.26 million metric tons will outpace anticipated production of 11.00 million metric tons. 2009 saw natural rubber consumption of 9.39 million metric tons and production of 9.62 million metric tons. These production numbers are expected to see downward revisions according to the ANRPC because Thailand and Indonesia alone are likely to produce 9.0 percent and 7.7 percent lower harvests respectively than previous estimates due to heavy rains. Malaysia has yet to revise down their 16.7% output growth targeted for 2010, despite their zero percent growth rate in Q2 and 4.7% growth rate in Q3. The net stock position for rubber is an unknown. The best proxies we can use are the stock held on the Shanghai exchange (orange line) and the price (green line). Falling exchange inventory stocks tend to indicate that demand exceeds supply as does a rising price.



Looking further out, the International Rubber Study Group projects that consumption will increase at a rate of 19 percent from 2010 to 2015 whilst production will rise 18 percent. However, the output numbers may prove to be optimistic. Rubber trees compete for planting acres with other tropical crops such as cocoa and palm oil. It takes around 7 years for rubber trees to produce their first latex. There is then a productive phase that lasts for 25 years. Cocoa develops more

rapidly and has a longer working life span, but is unsuitable for large scale plantation farming. The palm fruit tree takes 5-6 months to mature and has economically viable life span of an oil palm is typically 22 to 25 years, depending upon the oil price, economically harvestable height, and yield. According an example posted in the JakartaGlobe, a rubber farmer in Malaysia will generate between 6,000 and 8,000 ringgit (\$1,734 to \$2,312) from harvesting rubber on a two hectare plot, whilst, replanting his rubber plantation with palm oil would bring in as much as 40,000 ringgit (\$11,560). The lack of incentive to replant rubber has meant that many plantations are harvesting trees well beyond their optimal life span.

Table 12: Consumption of natural rubber ('000 tonnes)

| | 2008 | 2009 | 2010 | 2015 | 2019 |
|----------------------|--------------|-------------|--------------|--------------|--------------|
| North America | 1179 | 876 | 985 | 928 | 929 |
| Europe | 1443 | 1034 | 1162 | 1344 | 1394 |
| Asia | 6707 | 7140 | 7614 | 9348 | 10765 |
| Middle East | 80 | 71 | 71 | 76 | 85 |
| Africa | 119 | 104 | 114 | 106 | 107 |
| Latin America | 562 | 435 | 515 | 631 | 723 |
| Oceania | 28 | 23 | 11 | 14 | 15 |
| World | 10088 | 9647 | 10436 | 12412 | 13982 |

Table 14: Production of natural rubber ('000 tonnes)

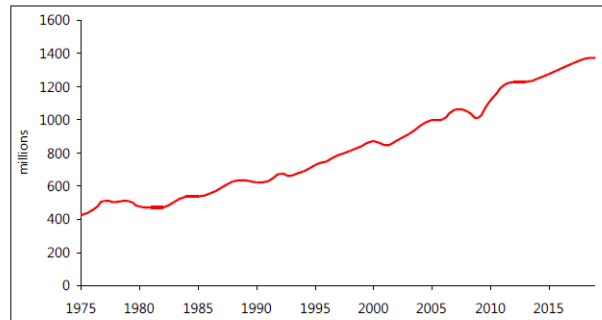
| | 2008 | 2009 | 2010 | 2015 | 2019 |
|----------------------|--------------|-------------|--------------|--------------|--------------|
| Asia | 9377 | 8822 | 9918 | 11711 | 13086 |
| Africa | 438 | 456 | 472 | 572 | 685 |
| Latin America | 241 | 237 | 248 | 304 | 349 |
| World | 10026 | 9436 | 10559 | 12508 | 14040 |

The worsening age-structure will exert downward pressure on rubber yields for the rest of this year and into 2011. Perversely high rubber prices discourage farmers from replanting aged trees as they continue to harvest the low yielding aged trees because the high prices offset the yield loss. Region-wide large scale replanting is scheduled to start at the beginning of 2011-2020 to replace trees that were planted in the 1980s but this may well not occur given farmer desire to maximise short-term revenue. The result will be a short-term support to supply as fewer and fewer acres are devoted to growing fresh trees but at the expense of long-term yields. The decision, as to whether and when farmers will replant is crucial in determining supply beyond 2011. Labour costs also affect rubber production. As the Asian economy picks up momentum, there are more employment opportunities in the industrial and tertiary sectors in turn driving up agricultural wages as farmers need to bid for increasingly scarce labour. This has led to a shift towards palm cultivation which is much less labour intensive.

Whilst there are doubts about supply, the prospects for demand remain favourable. The key factor is new vehicle sales in Asia - specifically Chinese demand for tyres. This year Chinese consumption of rubber is forecasted at 3.3 million tonnes for 2010. This represents an 8.5 percent

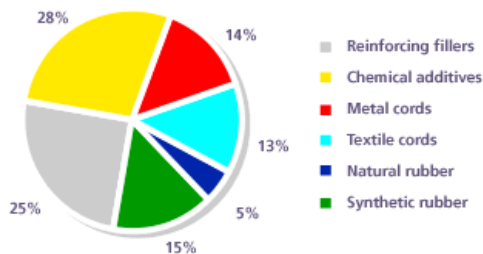
increase from 2009 and 20 percent increase from 2008 levels. According to the China Association of Automobile Manufacturers, automobile sales in China may rise to 16 million this year - a growth rate of 20-25 percent. Pirelli forecasts that Chinese demand for truck tyres will have risen by more than half this year. Passenger car tyre production is expected to increase 21.6% over the period 2010 to 2015

Figure 3.3: World passenger car tyre production, 1975-2019



The chart below outlines the weighted distribution of the components of a passenger car tyre. By mass tyres are 40% rubber, of which, 55% is synthetic and 45% is natural rubber. The simple substitution of synthetic rubber for natural is difficult as there is a trade off between the two. Natural rubber provides grip but wears faster, whereas synthetic rubber gives you longevity but less rolling resistance. Tyre design is essentially a compromise between the life of the tyre and the life of the driver. Nonetheless, on margin, the proportion of natural and synthetic material in a tyre can be adjusted to take into account relative pricing.

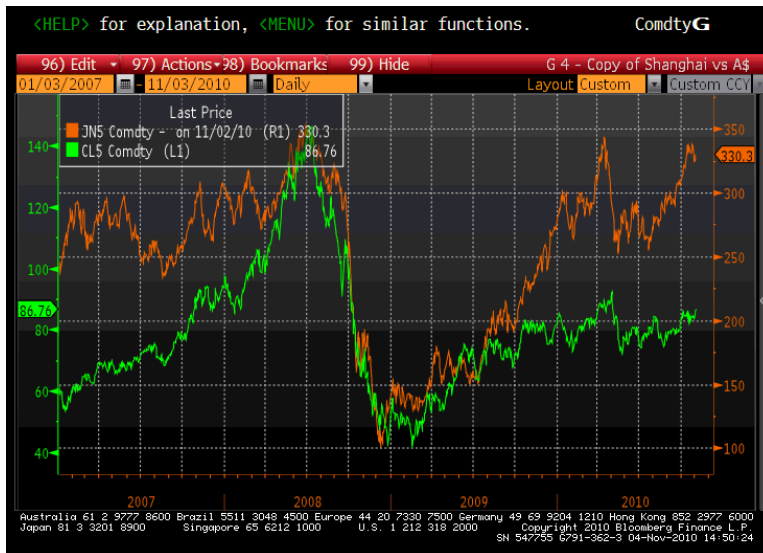
Weighted distribution of the various components of a passenger car tyre.



| | Synthetic Rubber | Natural Rubber |
|-------------------------------------|------------------|----------------|
| Passenger Tire | 55% | 45% |
| Light Truck Tire | 50% | 40% |
| Race Tire | 65% | 35% |
| Off-highway Tire (giant/earthmover) | 20% | 80% |

Oil and oil derivatives (i.e. Butadiene, Styrene) account for 80-90% of synthetic rubber cost. This meant that in the past, natural rubber tended to trade in parallel with the oil market. As the chart below shows, this relationship appears to have broken down over the past year. (Please note that the divergence is even more marked than it at first appears as the rubber price is in Yen and

crude is in USD). There are two reasons for this behaviour. Firstly the net increase in demand for tyres out of Asia has been so enormous that it has depleted natural rubber stocks and secondly the shale gas revolution in the US means that more of the global petrochemical industry is using gas rather than oil derived naphtha as a base feedstock. Gas based synthesis produces the same products as those using naphtha but in different proportions. Specifically gas plants produce a lot less butadiene. Low global gas prices have meant less of the feedstock for synthetic rubber at exactly the same time that tyre demand has accelerated.



The combination of strong demand, faltering supply and a lack of alternative products mean that we are probably looking at a fundamental shift in the price of rubber. Direct investment in rubber futures is possible but difficult with the most liquid contract trading in Tokyo and priced in Yen. An alternative is to look at those companies that are heavily exposed to rubber. The list includes tyre manufacturers, latex glove companies and condom producers. Across the space there is increased news flow about the price increases these companies have forced on consumers to deal with the higher cost of their key raw material. As of September, 2010, prices charged by US car-tire manufacturers to retailers and other distributors were 18% higher than 3 years ago according to the US Producer Price Index. With rubber prices still climbing and the Western economies still facing huge difficulties, the ability to push through margin maintaining increases must be difficult. In Asia, the key source of demand, consumers will prove reluctant to pay high sticker prices for premium products. Trading down will be a continuing phenomenon. The most recent examples of the corporate response to higher input prices are shown below.

- **Goodyear Tire & Rubber:** raised consumer prices 6% on October 1. Reported a loss last week for the 3Q, in spite of their highest sales in 2 years, sending shares down 12% due to higher raw material costs
- **Hankook Tire America:** raising U.S. prices by 6.5% on its full line of passenger, light truck, and medium-duty truck tires on November 1
- **Cooper Tire & Rubber:** raising U.S. consumer tire prices in North America by 6.5% on November 1. Expects underlying raw material costs to rise 2-4 percent sequentially in 4Q

- **Pirelli Tire North America**: raising U.S. consumer prices by 7% on December 1
- In June, **Toyo Tire U.S.A., Goodyear Tire & Rubber, Nexen Tire America, Kumho Tire U.S.A., Yokohama Tire, Hankook Tire America, Michelin North America, Cooper Tire & Rubber, Falken Tire, Bridgestone Americas Tire, and Continental Tire** all raised regional consumer and commercial tire prices by an average 7%.
- Malaysia's **Top Glove (TPGC.KL)** was forced to raise prices 5 percent the beginning of October. Latex accounts for 59 percent of the company's overall expenses.
- Condom retailers have reported an increase in prices up to 20 percent and have warned of their margins being squeezed. This affects the likes of **SSL International**, owner of Durex brands and currently being acquired by Reckitt Benckiser, as well as **Church & Dwight** of the US and Australian listed **Ansell**.

Conclusion

The market reaction to the Goodyear miss shows that the opportunity in rubber is to short the consumers, either specific names or a basket. UBS covers the following stocks. Goodyear is not covered at present but should form a part of any short basket. Price targets and ratings are included.

Hankook Tire (Won 30,550.00PT, NEUTRAL)

- Input costs will substantially rise in 1Q11, given a sharp rise in the natural rubber price (currently near an all-time high at US\$4,975/t, 61% higher than Hankook's Q3 input cost of US\$3,096)
- Does not hedge rubber position.
- Natural rubber is approximately 21% of total operating expense
- Raised tyre prices by 10% through 9M10 and plans to raise tyre prices by another 6% during Q410
- Natural rubber input costs increased 111% YoY for 3Q10 / Synthetic rubber input costs increased 52% YoY for 3Q10
- Cannot change the mix between natural and synthetic rubber easily
- It has historically raised prices by 4-5% per annum which was sustainable but given rubber prices are up 20% this year, this would pressure earnings / margins for Hankook
- Trading at 11x P/E, highest among Korean autos – sets up for a good short

Cheng Shin Rubber Ind (NT\$72.00PT, NEUTRAL)

- Cheng Shin's synthetic rubber supplier Taiwan Synthetic Rubber has indicated a price hike for Q4
- Despite price hikes on selected models that will partially mitigate cost pressures, we believe there will still be a negative impact on Cheng Shin's gross margins.
- Sensitivity analysis below by our analyst – for every 5% increase in natural or synthetic rubber price, 2010E EPS will be lowered by 7-9%, with all else being equal

Table 3: Sensitivity analysis: every 5% increase in natural or synthetic rubber price will lower 2010E EPS by 7-9%, with all else being equal

| | | Natural rubber cost | | | | |
|-----------------------|------|---------------------|-----|-----|-----|-----|
| | | -10% | -5% | 0% | 5% | 10% |
| Synthetic rubber cost | -10% | 6.2 | 5.8 | 5.4 | 5.0 | 4.6 |
| | -5% | 5.9 | 5.5 | 5.1 | 4.7 | 4.3 |
| | 0% | 5.6 | 5.1 | 4.7 | 4.3 | 3.9 |
| | 5% | 5.2 | 4.8 | 4.4 | 4.0 | 3.6 |
| | 10% | 4.9 | 4.5 | 4.1 | 3.7 | 3.3 |

Source: UBS estimates

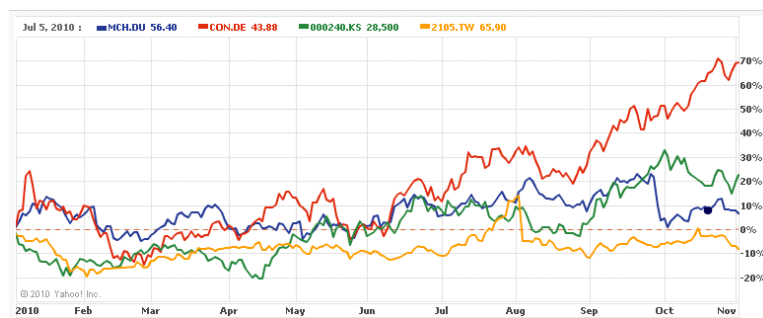
Michelin (€55.00PT, NEUTRAL)

- Our analysts initiated on the name in September with caution
- Review of the industry points to an outlook of weaker mix, reduced industry concentration, moderate replacement growth, and severe low-cost competition in emerging and mature markets.
- Full year expenses will increase by as much as €650 million because of higher raw-material costs
- It is estimated that a 5% move in rubber can cause a 20 swing in margins

Continental AG (€65.00PT, BUY)

- Raw materials are bought 6 months in advance so no additional headwinds expected for the rest of 2010
- On 11/3 earnings conference call, management said that the only way to have a neutral net impact in 2011 would be if raw materials were to stay at the average of H1 2010 – natural rubber prices have increased approximately 33% from those levels
- Conti now expects a >€450m headwind from higher raw material prices in 2010 vs approximately €320m previously – these numbers will likely increase in 2011 as they are not able to hedge the commodity cost in 2011
- Management estimates that about 2/3 of the raw material increases can be offset by price hikes.
- Volumes may increase but we do not think this will be enough to offset the higher material costs

Share performance of Hankook, Cheng Shin, Michelin, and Continental



Rubber accounts for 18.4% of Japanese tyre companies cost of goods sold.

For every 1 US cent increase in natural rubber prices, EPS will fall by

Yokohama Rubber (¥500.00PT, BUY)

0.22yen (0.7%)

Bridgestone (¥1,900.00PT, BUY)

0.55yen (0.4%)

Sumitomo Rubber (¥980.00PT, BUY)

0.44yen

Lauren

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