EL NINO AND PALM OIL PRODUCTION – supply shock in the making?

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TODAY’S TALK

1. Palm oil supply dynamics and future growth trend
2. Weather changes and palm oil production
3. Emerging El Nino and looming supply disruption?
4. Supply and Price Outlook for 2014/15
PALM OIL SUPPLY DYNAMICS AND FUTURE GROWTH TREND

GLOBAL PALM OIL PRODUCTION – DYNAMIC SUPPLY GROWTH

- FASTEST GROWING EDIBLE OIL IN THE WORLD – doubled in 10 years
- AVG GROWTH OF 7.3% PER ANN (SOYBEAN OIL: 3.3% PER ANN)
- DOMINANCE OF PALM OIL IN THE GLOBAL OILS AND FATS TRADE
- SUPPLY GAP BTW PALM AND SOY OIL TO WIDEN AS PALM SURGE AHEAD
GLOBAL PALM OIL PRODUCTION – KEY PRODUCING COUNTRIES

- Growth is concentrated mainly in South-East Asia (88%)
- Indonesia (51%) + Malaysia (34%) = 85% of world’s production
- Thailand is the 3rd largest producer (3%)
- Malaysia and Indonesia - still the key determinants of palm oil supply to the world

1. Rapid area expansion in the last decade boosts global palm oil supply

- Planted area growth:
  - Malaysia: 3.8 to 5.1 mn ha Avg: 3.1% or 130,000 ha pa
  - Indonesia: 5.3 to 9.3 mn ha Avg: 5.8% or 390,000 ha pa

- CPO production growth:
  - Malaysia: 13.4 to 19.2 mn T Avg: 4.6% or 0.7 mn T pa
  - Indonesia: 10.4 to 29.3 mn T Avg: 11.0% or 1.8 mn T pa

With very rapid area expansion, Indonesia production has surged ahead – almost triple in 10 years
MOVING FORWARD – slower area expansion to impact long-term global palm oil supply

MALAYSIA:
- NEW PLANTING TO BE LESS THAN 100,000 HA/ANN – total planted area estimated to reach a maximum of 5.6 million ha
- REPLANTING TO TEMPORARILY LIMIT PRODUCTION GROWTH
- LIMITED OR STAGNATING PRODUCTION GROWTH

INDONESIA:
- NEW PLANTINGS HAVE ALSO SLOWED DOWN SINCE 2011
- CUT BACK IN EXPANSION DUE TO: STRINGENT STATUTORY AND SUSTAINABILITY REQUIREMENTS, A TWO-YEARS GOVERNMENT MORATORIUM ON FOREST AND PEATLAND CONVERSION (from 2011), 100,000 HA LIMIT ON NEW PLANTATION COMPANY AND MORE DIFFICULT (LOGISTICIALLY) AND MARGINAL AREAS
- ESTIMATE NEW PLANTING OF 150,000 TO 250,000 HA/ANN – total planted area to reach 11.0 million ha by 2020

- SLOWER EXPANSION IN INDONESIA WILL STRUCTURALLY CAP SUPPLY GROWTH FROM 2020 ONWARDS

2. IMPROVING PALM AGE IN INDONESIA – key to future supply growth

<table>
<thead>
<tr>
<th>% TOTAL PLANTED</th>
<th>IMMATURE 0-3 YRS</th>
<th>YOUNG 4-8 YRS</th>
<th>PRIME 9-18 YRS</th>
<th>AGEING 19-23 YRS</th>
<th>OLD 24-28 YRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALAYSIA</td>
<td>14</td>
<td>21</td>
<td>36</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>18</td>
<td>33</td>
<td>34</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>
IMPROVING PALM AGE IN INDONESIA
- to drive global supply growth

- Very rapid planting from 2005-2010 resulted in relatively young age profile (51% immature and young mature palms)
- Indonesia will continue to enjoy very high production growth over the next 4-5 years
- 2013 to 2018 will be the golden era for growth
- Strong organic production growth in Indonesia to drive global supply growth in this decade
- Risk: the supply growth may be too fast in the short term

3. REPLANTING TO BOOST SUPPLY GROWTH IN MALAYSIA – replant or perish?

- High % of ageing and old palms (28%) with declining yield
- Replanting with high yielding materials and improved agro-management technologies to boost oil yield (from present 4.0 to 5.5 t/ha)
- Need to replant at least 200,000 ha annually to sustain a supply growth of 4-5%
- Malaysia needs to step up the pace of replanting to boost productivity
Palm Oil Production Forecasts by 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>2010 MN T</th>
<th>2015F MN T</th>
<th>2020F MN T</th>
<th>AVG GWTM MN T/YR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>17.0</td>
<td>19.8</td>
<td>21.2</td>
<td>0.42</td>
</tr>
<tr>
<td>Indonesia</td>
<td>21.9</td>
<td>32.4</td>
<td><strong>44.6</strong></td>
<td><strong>2.27</strong></td>
</tr>
<tr>
<td>Thailand</td>
<td>1.4</td>
<td>1.8</td>
<td>2.5</td>
<td>0.11</td>
</tr>
<tr>
<td>Others*</td>
<td>5.4</td>
<td>8.0</td>
<td>11.4</td>
<td>0.61</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45.6</strong></td>
<td><strong>61.9</strong></td>
<td><strong>79.7</strong></td>
<td><strong>3.41</strong></td>
</tr>
</tbody>
</table>

- Prospects for palm oil supply growth are expected to be good.
- Palm oil supply to grow at an average of 3.4 MN T (7.5% PA) to reach 80 MN tonnes by 2020.
- Strongest growth to come mainly from Indonesia.

Supply Shock in the Making – severe dryness in S.E. Asia to impact supply and prices?

Weather is one of the key factors in the supply equation of oilseeds and palm oil. We see below avg rainfall in Indonesia, Malaysia & Thailand in recent years.
**NON EL NINO RELATED DROUGHT IN THE LAST 3 YEARS – impact production in Indonesia**

- Two consecutive non-El Nino related droughts in mid-2011 and 2012 in key oil palm growing areas of Sumatra and Kalimantan checked production growth in **2013**.
- The prolonged low rainfall in mid-2012 and 2013 will again disrupt production in **2014** in Sumatra but to a lesser extent in Kalimantan.
- With 3 consecutive years of dry weather 2011-13 and an El Nino emerging in mid-2014, we would be heading for severe supply tightness in **2015**?

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**LESS WIDESPREAD DRY WEATHER IN MALAYSIA – mixed impacts on production**

- Prolonged dry weather in Pen. Malaysia from Perak to Johore in mid-2012 and 2013 and Q1 2014 to impact supply in 2014 and 2015.
- Sabah and Sarawak have no prolonged rainfall deficits in 2012 and 2013, should see a recovery in production in 2014. A short dry spell in 3Q 2013 in Sabah to have some impact.
- Malaysia to see a flat growth in 2014 and a negative growth in 2015 if El Nino is confirmed.
Still in neutral ENSO conditions but high probabilities of El Nino emerging by mid-2014.

Chances of an El Nino emerging by Q3 2014 have exceeded 70%.
EMERGING EL NIÑO IN 2014 – to reduce global palm oil supply in 2015?

Impact of El Niño on CPO Production in Malaysia

Impact of El Niño on Palm Oil Prices

EL NIÑO EVENT IS USUALLY FOLLOWED BY A SPIKE IN PALM OIL PRICES (UP 15%-125%) DUE TO DISRUPTION OF SUPPLY

PRICES INCREASE BY 70% TO PEAK AT RM 3962/T IN FEB 2011 AFTER THE LAST 2009/10 EL NIÑO

STRONG INDICATION OF AN EL NIÑO EMERGING IN MID-2014 TO PROVIDE A MAJOR CATALYST FOR SUPPLY DISRUPTION AND PRICE SPIKE IN 2014/15
Moderate El Nino will reduce global supply growth in 2015 to less than 0.5 mn T
(long term average of 3.4 mn T/ann)
Severe El Nino will result in a negative supply growth of - 0.6 mn T (1st in a
decade) and will result in severe supply tightness in the world
PROLONGED LOW PALM OIL STOCKS – to drive palm oil prices

Malaysian inventory levels have been low since mid-2013

Indonesian inventories were reported to be tight (less than 3.0 mn T) due to lower production in 2013 and increase usage for biodiesel

With consecutive bad weather in the last few years and an emerging El Nino, stock is likely to remain low and below the long-term trend-line in the coming years

SBO PRICE PREMIUM – low or negative premium during palm oil supply tightness

➢ SBO premium over CPO usually average US140/T

➢ SBO premium narrows and may sometimes drop below CPO prices during periods of tight palm oil supply

➢ Low or negative SBO premium in recent months - early signs of palm oil supply tightness

Price leader upward: Palm oil to lead during time of supply tightness
1. Brent Crude to trade between US 100-115 per barrel

Assumptions and Risks:
1. Brent Crude to trade between US 100-115 per barrel
2. El Nino to emerge in 2nd half 2014

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**PRICE OUTLOOK FOR 2014/15**

- We expect palm oil prices to trend higher in 2014 & 2015
- Avg. price 2014 to increase by about 14% to RM 2700/T (US 830) VS 2013: RM 2360/T (US 725)
- Steady demand from food and additional demand of 2.0 million tonnes from Indonesia domestic biodiesel usage
- Looming palm oil supply tightness due to past and emerging dry weather will be a key catalyst to upward price movement in 2015
- Plantation companies in Indonesia and Malaysia should generally fare better in 2014 (than 2013)

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**Thank you**

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