

Nov 8<sup>th</sup>, 2005

**Rp375**

Indonesia Plantation

# Bakrie Sumatra Plantations (UNSP IJ)

Heading to Prime Growth

**BUY**

## Stock Information\*

Sector	Plantation
Jakarta Composite Index (JCI)	1,058
Bloomberg Code	UNSP IJ
Shares issued @ Rp100 par	2,331m
Market Capitalisation	Rp874bn / US\$85.7m
Estimated free Float	Rp376bn / 43.0%
Book NAV/Share	Rp213

**Expect rising CPO prices.** We expect BSP's CPO price to surge by US\$31/ton (+9%) in FY06F and US\$19/ton (+5%) FY07F after falling US\$51/ton (-13%) this year to US\$341/ton. The expected rise is due to (i) slowing down growth of CPO supply, (ii) rising demand for bio diesel, (iii) concerns over the harmful TFA content in soybean oil, (iv) the lifting of China's palm oil import quota in 2006, and (v) rising global consumption of vegetable oil.

**Further upside on rubber price.** We forecast BSP's rubber price to increase by US\$81/ton (+6.4%) in FY05F to US\$1,351/ton, US\$42/ton (+3.1%) in FY06F and US\$35/ton (+2.5%) in FY07F due to (i) the persistently high petroleum price, (ii) high growths of vehicle sales in Asia, (iii) a low growth in rubber inventory, and (iv) a lagged increase in rubber price compared to petroleum price in 2005.

**31% CAGR of earnings in 3 years.** We project a 30.7% CAGR in net profit in FY04 - FY07F driven by divestment of loss-making Vecolina, lower FX losses and increases in: (i) yields of oil palm and rubber estates, (ii) CPO mill capacity, and (iii) valued added revenues. The projection excludes a potential upside surprise from acquisitions as early as 4Q:05.

**Sustainable long-term earnings growth.** We expect a sustainable high earnings growth over a long period powered by BSP's two-pronged strategies to grow through: (i) organic growths, strategic partnerships, and acquisitions in the *near* term coupled with (ii) new planting and a development of seed garden in the *long* term.

**Attractive valuation.** We value BSP at Rp492/share, implying a 31% upside potential. Given its falling gearing and high earnings growth, BSP is undervalued against its average Indonesian peers at (i) 5.7x vs. 8.1x on FY06F P/E, (ii) 3.8x vs. 5.0x on FY06F EV/EBITDA, and (iii) US\$2,678/ha vs. US\$5,176/ha on FY06F EV/plantation.

FY end Dec 31	2003	2004	2005F	2006F	2007F
Turnover (Rp bn)	457	696	827	999	1,213
EBITDA (Rp bn)	142	258	275	350	441
Operating Profit (Rp bn)	96	201	226	299	385
Net Profit (Rp bn)	78	95	103	153	213
F. dil EPS (Rp)	48.0	71.3	44.1	65.7	91.4
Change (%)	2.2	48.3	(38.1)	48.8	39.3
Book Value / Share (Rp)	82	175	213	270	349
Dividend / Share (Rp)	-	-	6.0	8.8	13.1
Enterprise Value (Rp bn)	1,041	1,459	1,371	1,343	1,300
F. dil P/E (x)	7.8	5.3	8.5	5.7	4.1
Price / Book Value (x)	5.97	2.14	1.76	1.39	1.08
EV / EBITDA	7.3	5.6	5.0	3.8	2.9
Adj. Yield (%)	-	-	1.6	2.4	3.5
ROE (%)	128.8	37.3	22.7	27.2	29.6
Net Gearing (x)	5.27	1.31	0.89	0.65	0.45

\*Based on closing price as of 28 Oct, 2005

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## INVESTMENT SUMMARY

*Bakrie Sumatera Plantations (BSP) is probably the least known plantation stock in the JSX. Investors seem to neglect the fact that it is the one in the JSX that has the biggest portion of its revenues coming from rubber, whose price has been surging significantly. We believe it is due for a re-rating primarily for its attractive valuation, high-growth potential and insulations against risks of IDR depreciation and rising petroleum price.*

**Insulated against major country and global risks.** BSP is one of a few Indonesian companies that are insulated against a country risk of IDR depreciation and a global risk of rising petroleum price. Indeed BSP benefits from (i) IDR depreciations given its US\$-based revenues and IDR-based COGS and (ii) high petroleum price as it increases the price of its natural rubber, which accounted for nearly a half of its FY05F revenues.

**31% CAGR of earnings in 3 years.** We expect BSP to post a 31% CAGR in net profit in FY04 - FY07F powered by its organic growth and divestment of loss making Kilang Vecolina. At the operating level, the organic growth will come from (i) bolstering valued added revenues, (ii) improving yields of oil palm and rubber plantations, (iii) expanding CPO mill capacity, and (iv) rising CPO and rubber prices. Below the operating level, the growth will come from (v) lower FX losses, and (vi) cheaper funding cost. The projection excludes potential upside surprises from acquisitions and / or strategic partnerships, one of which is a potential acquisition of 2,300 ha of rubber plantation at S. Sumatra in 4Q:05. Cash flow to remain strong as net working capital requirement is low (less than 4 weeks).

**Sustainable long-term earnings growth.** We also expect a sustainable, high earnings growth beyond the next 3 years driven by BSP's two-pronged strategies to invest in (i) estimated 53,200 ha of new planting over the next 5 years that will more than double its plantation acreage and (ii) a development of a seed garden to support the new planting. The timing to raise funds to finance the growth seems right as its net gearing is expected to fall to 0.65x in FY06F and its US\$60m - US\$70m fund raising that should be completed in 4Q:05 shows a vote of confidence from creditors and provides a stepping stone for raising longer-maturity debts from bond issuance.

**Potentially huge growth from strategic partnerships.** BSP may post a huge growth through strategic partnerships, most likely with foreign partners, to build and / or acquire large plantations and, potentially, develop a bio-diesel plant. Strategic investors are attracted to BSP's strong balance sheet, long track record in plantation, vast land bank, and pure plantation play with no downstream product.

**Expect rising CPO prices.** We expect BSP's CPO price to surge by US\$31/ton (+9%) in FY06F and US\$19/ton (+5%) FY07F after falling US\$51/ton (-13%) this year to US\$341/ton. The rise is due to (i) slowing down annual growth of CPO production in 2006 - 2007 to 4.4% - 5.6% from double-digit (9.8% - 10.7%) growths in 2003 - 2004 and a high single-digit growth (8.4%) in 2005, (ii) rising demand for bio diesel, (iii) rising concerns over the harmful effect of TFA in other vegetable oils, primarily, soybean oil, (iv) the lifting of China's import quota for palm oil in 2006, and (v) rising vegetable oil consumption globally in line with population and economic growths.

**Further upside on rubber price.** We forecast BSP's rubber price to increase by US\$81/ton (+6.4%) in FY05F to US\$1,351/ton, US\$42/ton (+3.1%) in FY06F and US\$35/ton (+2.5%) in FY07F. The growth will be driven by (i) an expectation of persistently high petroleum price in the foreseeable future, (ii) strong demand for tyres given high growths of automobile and motorcycle industries in Asia's most populous countries China, India and Indonesia, (iii) a collaboration among the world three largest natural rubber producers in controlling natural rubber price, and (iv) a trend of rising consumption of natural rubber vs. synthetic rubber.

**Attractive valuation.** We value BSP at Rp492/share, implying a 31% upside potential. The valuation is based on a DCF valuation translating into undemanding 7.5x FY06 P/E, 4.6x FY06F EV/EBITDA and US\$3,222 FY06F EV/total plantation, which are still below the *current* average valuations of its Indonesian peers. Currently, BSP is attractively valued against its average Indonesian peers at (i) 5.7x vs. 8.1x on FY06F P/E, (ii) 3.8x vs. 5.0x on FY06F EV/EBITDA and (iii) US\$2,678/ha vs. US\$5,176/ha on FY06F EV/plantation. In fact, BSP is trading at a deep (23% - 72%) discount to the average Malaysian and Indonesia peers on most FY06F valuation multiples including EV/mature plantation and P/CF. FY06F dividend yield at 2.4% provides a downside cushion.

## **RISKS**

- 1. Risk of overpaying in acquisition.** BSP's growth strategy through acquisitions has an inherent risk of overpaying the target companies. However, the risk is mitigated by (i) BSP's long (nearly one century) experience in a plantation business, (ii) a decent track record in acquisitions as evident by its acquisition of rubber plantation HIM in 2004 at an estimated average price of US\$2,648/mature ha, well below BSP's current valuation at US\$4,095/ha and that of two other listed plantations at an average of US\$5,635/ha, (iii) benefits of economies of scale from having larger plantation acreage, and (iv) immediate cash flow from the newly acquired plantations.
- 2. Cash call risk.** BSP's high-growth strategies are expected to require a second cash call in 2006. While the cash call will cause an EPS dilution, we believe it is a sensible move to (i) build sufficient funds to ink potentially large strategic partnerships and (ii) strengthen balance sheet to raise debts to fund new planting and acquisitions. The timing to make a cash call seems right as (a) investors have seen the sensible use of 2004 rights issue in bolstering BSP's FY05F growth, (b) the cash call will likely be preceded by a vote of confidence from creditors, who is expected to provide US\$60m - US\$70m debts in 4Q:05, and (iii) projected hikes in CPO and rubber prices in FY06F - FY07F, which will minimise the impact of EPS dilution.
- 3. Lagging effect of new planting and seed garden investments.** BSP's around US\$100m investments in 53,200 ha of new planting from FY05F - FY10F and a seed garden development are not expected to yield fruits until 2009 and 2010 respectively. Nevertheless, they are in line with BSP's core business and necessary to create a sustainable, long-term growth and produce top-quality plantations. In the meantime, we expect BSP to post a high 31% CAGR in short-term (FY04 - FY07F) growth through valued added services and yield improvements as well as acquisitions and strategic partnerships.
- 4. Labour, theft, and land ownership issues.** The mandated annual rise of minimum labour wage affects the labour-intensive plantation sector especially the rubber plantation. Potential tensions with labours and local peoples along with theft and land ownership problems are issues for the plantation industry in Indonesia. To control rising cost due to increasing wages, BSP is (i) centralising fertiliser purchases, which cost a few million dollar each year, to get a volume discount and (ii) improving its rubber tapping system to obtain the optimum yield.

To minimise disputes with labour and local peoples, BSP has built social facilities including a hospital and schools and made a good progress in establishing relationships with local people, especially, in Bakrie Pasaman this year. Theft, which is estimated to account for about 3% - 5% loss in yield, has been dealt with by making ditches around plantations and involving military personnel. The government's decree to close down CPO mills that do not have their own plantations (and hence often buy illegal FFB from other plantations) by 2007 should reduce theft in oil palm plantations.

## VALUATION

### BSP at a Deep Discount to Average Malaysian & Indonesian Peers on EV/EBITDA, EV/Mature Plantation, & EV/Plantation

No	Company	Price*	FX**	Market Cap (US\$ m)	EV / EBITDA			EV / Mature Plantation^^			EV / Total Plantation***		
					2004 (x)	2005F (x)	2006F (x)	2004 (All in USD / Ha)	2005F (All in USD / Ha)	2006F (All in USD / Ha)	2004 (All in USD / Ha)	2005F (All in USD / Ha)	2006F (All in USD / Ha)
1	Golden Hope^	4.140	3.7748	1,561	8.6	10.2	8.9	9,712	11,196	11,093	8,254	9,515	9,428
2	KL Kepong^	7.85	3.7748	1,482	7.5	7.5	6.2	12,354	12,128	11,810	9,676	9,499	9,250
3	Kumpulan Guthrie	2.45	3.7748	651	5.3	5.5	5.3	5,373	4,803	4,700	4,930	4,406	4,312
4	Highland & Low land	4.14	3.7748	663	14.5	9.4	10.2	13,689	9,547	10,871	11,344	7,912	9,008
5	PPB Oil Palm	4.92	3.7748	581	8.2	7.5	6.8	9,690	9,388	9,064	7,567	7,331	7,078
6	Kulim	2.65	3.7748	184	3.6	4.0	4.1	4,535	4,741	5,096	3,496	3,655	3,929
<b>Average Malaysian Plantations</b>				<b>853</b>	<b>7.9</b>	<b>7.3</b>	<b>6.9</b>	<b>9,226</b>	<b>8,634</b>	<b>8,773</b>	<b>7,544</b>	<b>7,053</b>	<b>7,168</b>
1	Astra Agro	5,250	10,120	817	5.5	5.4	4.2	5,442	5,234	4,859	5,359	5,153	4,785
2	London Sumatra	2,875	10,120	311	7.8	7.3	5.8	6,943	6,799	6,411	6,028	5,903	5,566
<b>Average Indonesian Plantation</b>				<b>564</b>	<b>6.7</b>	<b>6.4</b>	<b>5.0</b>	<b>6,193</b>	<b>6,016</b>	<b>5,635</b>	<b>5,693</b>	<b>5,528</b>	<b>5,176</b>
3	Bakrie Sumatera	375	10,120	86	5.6	5.0	3.8	4,426	4,253	4,095	3,913	3,444	2,678
<b>BSP's Disc.(Premium) to Avg. Malaysian Play</b>					29%	32%	44%	52%	51%	53%	48%	51%	63%
<b>BSP's Disc. (Premium) to Avg. Indonesian Play</b>					15%	22%	23%	29%	29%	27%	31%	38%	48%
*In local currency as of 28 October, 2005					^Financial year ends are not Dec. Golden Hope is in June and KL Kepong in Sept								
** Local Currency to USD					^^ Exclude plasma plantations								
*** Include mature and immature plantation owned by the company					Source: PCR Estimates								

#### Exhibit 1

#### At a deep discount to the average Malaysian and Indonesian peers

Compared to the average Malaysian and Indonesian plantations, BSP is trading at a deep discount on most valuation standards including EV/EBITDA, EV/ mature plantation, EV/ total plantation, P/E, and P/CF (see Exhibit 1 and 2) as explained below:

- (i) *EV/ EBITDA.* BSP is currently valued at mere 3.8x FY06F EV/EBITDA, a deep discount to that of the average Malaysian peers at 6.9x and that of the average Indonesia peers at 5.0x (see Exhibit 1).
- (ii) *EV/ mature plantation.* BSP's FY06F EV/mature plantation (excluding plasma plantation) at US\$5,095/ha is at less than a half of the average Malaysian peers' at Rp8,773/ha and at 27% of the average Indonesian peers' at US\$5,635/ha (see Exhibit 1). The magnitude of the discounts is about the same if FY05F multiple is used.
- (iii) *EV/ total plantation.* In term of FY06F EV/total plantation, which includes both mature and immature plantations (excluding plasma plantations), BSP is trading at US\$2,678/ha, just about one third of the average Malaysian peers' at US\$7,168/ha and a half of the average Indonesian peers' at US\$5,176/ha (see Exhibit 1).
- (iv) *P/E.* BSP's FY06F P/E at 5.7x is about a half of its Malaysian peers at 11.9x and at a 29% discount to its Indonesian peers at 8.1x (see Exhibit 2). The discount for FY06F P/E is large as the impact of EPS dilution from the rights issue in 2004 will diminish in FY06F.
- (v) *P/CF.* BSP's FY06F P/CF at mere 3.0x is low by most standards, only around a quarter of its Malaysian peers' at 10.6x and around a half of its Indonesian peers' at 5.8x (see Exhibit 2).

**BSP at a Deep Discount to Average Malaysian & Indonesian Peers on P/E and P/CF**

No Company	Price*	FX**	Market Cap (US\$ m)	P/E			P/BV			P/CF		
				2004 (x)	2005F (x)	2006F (x)	2004 (x)	2005F (x)	2006F (x)	2004 (x)	2005F (x)	2006F (x)
1 Golden Hope <sup>^</sup>	4.140	3.7748	1,561	12.6	9.3	12.9	0.9	1.2	1.1	11.1	17.8	15.4
2 KL Kepong <sup>^</sup>	7.85	3.7748	1,482	13.0	13.7	11.8	1.4	1.3	1.2	10.2	10.6	9.3
3 Kumpulan Guthrie	2.45	3.7748	651	15.3	15.5	16.1	0.9	0.9	0.9	2.8	3.2	3.3
4 Highland & Low land	4.14	3.7748	663	7.2	15.5	14.9	1.0	1.0	1.0	25.9	23.3	22.5
5 PPB Oil Palm	4.92	3.7748	581	11.7	10.9	10.2	1.8	1.6	1.5	10.0	9.6	9.6
6 Kulim	2.65	3.7748	184	3.5	6.3	5.4	0.3	0.3	0.3	2.3	3.3	3.2
<b>Average Malaysian Plantations</b>			<b>853</b>	<b>10.6</b>	<b>11.9</b>	<b>11.9</b>	<b>1.1</b>	<b>1.0</b>	<b>1.0</b>	<b>10.4</b>	<b>11.3</b>	<b>10.6</b>
1 Astra Agro	5,250	10,120	817	10.2	10.9	8.7	4.1	3.3	2.7	7.7	7.8	6.6
2 London Sumatra	2,875	10,120	311	6.1	8.7	7.4	4.1	2.8	2.0	4.4	5.8	5.0
<b>Average Indonesian Plantation</b>			<b>564</b>	<b>8.2</b>	<b>9.8</b>	<b>8.1</b>	<b>4.1</b>	<b>3.1</b>	<b>2.3</b>	<b>6.1</b>	<b>6.8</b>	<b>5.8</b>
<b>3 Bakrie Sumatera</b>	<b>375</b>	<b>10,120</b>	<b>86</b>	<b>5.3</b>	<b>8.5</b>	<b>5.7</b>	<b>2.1</b>	<b>1.8</b>	<b>1.4</b>	<b>2.0</b>	<b>3.1</b>	<b>3.0</b>
<b>BSP's Disc.(Premium) to Avg. Malaysian Play</b>				50%	28%	52%	-103%	-68%	-41%	80%	72%	72%
<b>BSP's Disc. (Premium) to Avg. Indonesian Play</b>				36%	14%	29%	48%	42%	41%	66%	54%	49%
*In local currency as of 28 October, 2005				<sup>^</sup> Financial year ends are not Dec. Golden Hope is in June and KL Kepong in Sept								
** Local Currency to USD												
Source: PCR Estimates												

**Exhibit 2**

*Rp492/share fair value based on the DCF valuation*

We value BSP at Rp492/share, offering a 31% upside potential (see Exhibit 3). We believe the valuation is sensible because:

- (i) *It translates into undemanding 7.5x FY06 P/E, 4.6x FY06F EV/EBITDA and US\$3,222 FY06F EV/total plantation, which are still below the current average valuations of its Indonesian peers at 8.1x , 5.0x and US\$5,176/ha respectively.*
- (ii) *It is based on a conservative DCF method on the existing operation with assumptions of (i) no new planting, (ii) only 2.0% terminal growth after 2009, and (iii) a discount rate (after tax WACC) of 15.8% (see Exhibit 3). If the discount rate were reduced by 50 bp to 15.3%, the fair value would increase to Rp522/share whereas if the terminal growth were increased by 50bps to 2.5%, the valuation would rise to Rp511/share (see Exhibit 4)*

*Attractive valuation supported by a high earning growth and low financial risks*

BSP's attractive valuation is supported by its projected 31% CAGR in net profit from FY04 - FY07F, strengthening balance sheet with net gearing falling to 0.65x in FY06, little (less than 4 week) net working capital requirement, and US\$ based earnings from diversified products of rubber and oil palm.

**DCF Valuation Yields Rp492/Share Fair Value**

Period	1	2	3	4	5
Year	2005	2006	2007	2008	2009
Operating Profit	226	299	385	381	436
+ Tax on Operating Income	(67)	(88)	(113)	(112)	(129)
+ Depreciation & Amortisation	49	51	56	60	69
+ Others	-	-	-	-	-
+ Working Capital & Others	24	(15)	(15)	(4)	(13)
Operating Cash Flow	233	246	313	325	364
Capex	(108)	(86)	(74)	(75)	(83)
<b>Free Cash Flow</b>	129	165	243	253	285
Terminal Growth Assumption	2.0%				
Year of Terminal Growth	5				
CF @ end of forecast period	285				
WACC	15.8%				
	<b>(Rp bn)</b>				
PV at WACC	669				
PV of Terminal Value	1,014				
Total PV	1,683				
- Net Debt	(536)				
<b>NAV</b>	<b>1,147</b>				
# of share (Mn)	2,331				
<b>NAV / Share (Rp)</b>	<b>492</b>				
Current Price (Rp)	375				
<b>Upside Potential</b>	<b>31%</b>				
Source: PCR Estimates					

**Exhibit 3**

**Sensitivity Analysis of BSP's DCF Valuation**

Terminal Growth	Weighted Average Cost of Capital										
	13.3%	13.8%	14.3%	14.8%	15.3%	15.8%	16.3%	16.8%	17.3%	17.8%	18.3%
1.50%	642	603	567	534	503	475	448	423	400	378	358
1.75%	656	615	578	544	513	483	456	431	407	385	364
2.00%	670	628	590	555	522	492	464	438	414	391	370
2.25%	685	642	602	566	532	501	472	446	421	397	376
2.50%	701	656	615	577	543	511	481	454	428	404	382
2.75%	717	670	628	589	553	520	490	462	435	411	388
3.00%	734	686	642	602	565	531	499	470	443	418	395
3.25%	752	702	656	615	576	541	509	479	451	426	401
3.50%	771	719	671	628	589	552	519	488	460	433	409
3.75%	791	737	687	642	601	564	529	498	468	441	416
Source: PCR Estimates											

**Exhibit 4**

## OPERATION ANALYSIS

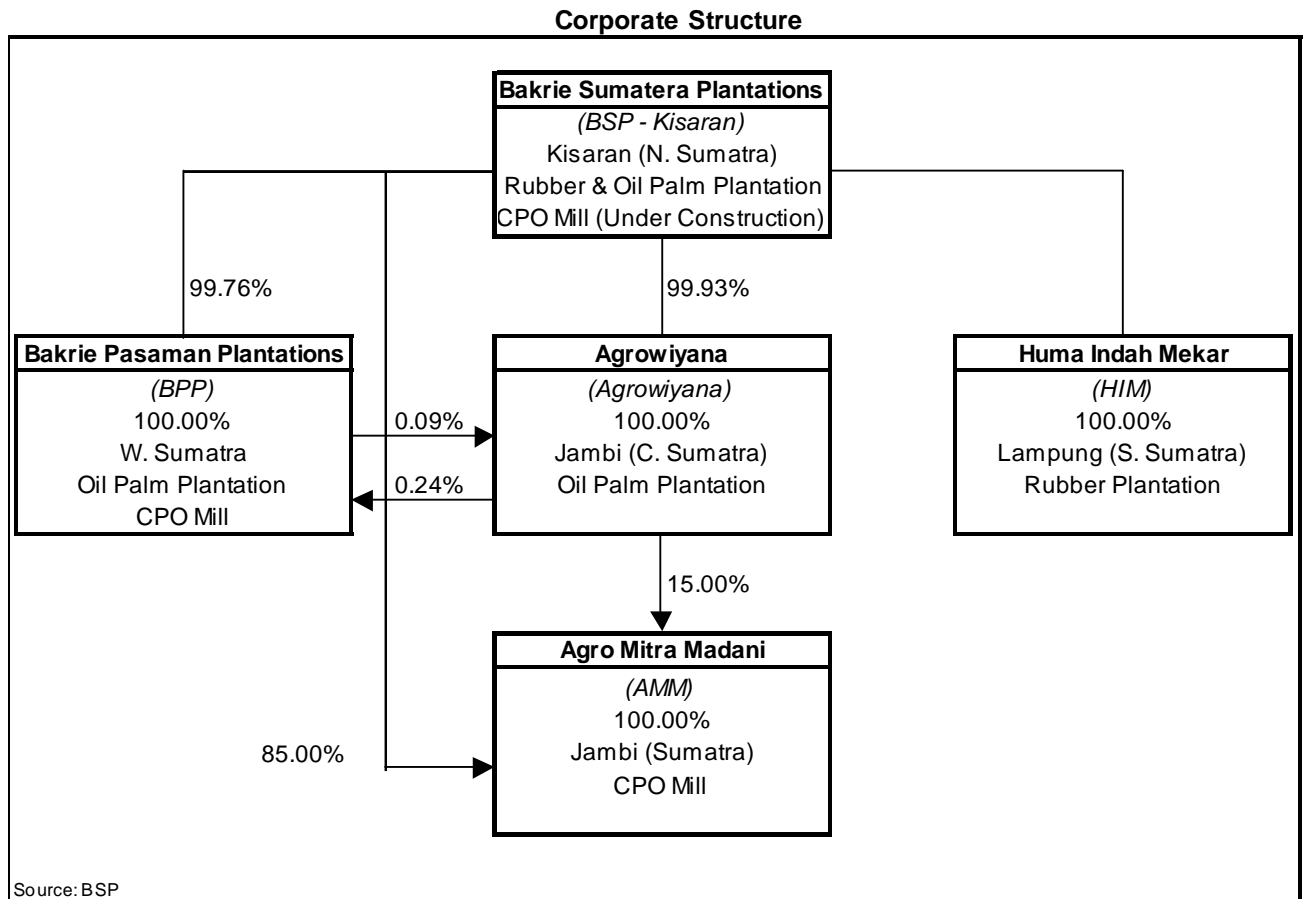
### Background

#### *Largest latex producer with an established brand and comprehensive product range*

Set up in 1911 by a Dutch / American company as a rubber plantation company, BSP is currently managing 48,522 ha of rubber and oil palm plantations. It is the largest latex maker in Indonesia and its around 14,000 ha rubber plantation in Kisaran remains one of the oldest and largest in Indonesia. Its latex brand commands a price premium and is known for meeting the stringent specifications for making surgical gloves. Its acquisition of a rubber plantation HIM (see Exhibit 5), which is its second rubber plantation and the one that produces ribbed smoked sheets (RSS) in BSP group, in 2004 has expanded its product range to nearly all major rubber products: cream latex, centrifuged latex, crumb rubber (SIR), RSS, and block skim rubber.

#### *Ventured into lucrative oil palm plantation*

BSP ventured into lucrative oil palm plantation in 1990 by establishing Bakrie Pasaman Plantations (BPP) in West Sumatra. This was followed by an acquisition of Agrowiyana in Jambi (C. Sumatra) in 1991 and a conversion of 6,000 ha of its rubber plantations in Kisaran (N. Sumatra) into palm oil plantations starting in 1992. As a result, BSP now has 3 wholly owned oil palm plantations (BSP Kisaran, BPP, and Agrowiyana) and 2 wholly owned rubber plantations (BSP Kisaran and HIM) (see Exhibit 5).



**Exhibit 5**

#### *Turning into an integrated rubber and CPO play*

Subsequent to its venture into oil palm plantations, BSP has been moving to become an integrated CPO player by setting up a CPO mill in Bakrie Pasaman (BPP), acquiring a CPO mill AMM, which processes FFB from Agrowiyana, in 2004, and constructing a new CPO mill at Kisaran currently. The strategy complements its integrated rubber plantations, all of which have their own rubber factories. By having its own mills and factories, BSP (i) ensures timely processing of FFB and latex to produce high quality products and (ii) reduces transportation cost to far away mills / factories while (iii) minimising thefts on the way to mills /



factories outside plantation areas and (iv) eliminating discounts demanded by millers for smaller FFB. The details of the processing facilities are as follow (see Exhibit 6):

1. *Bakrie Pasaman (BPP)*. BPP has just increased its CPO mill capacity by 50% from 40 tons of FFB / hour to 60 tons of FFB / hour in 2H:05 (see Exhibit 6).
2. *Agrowiyana*. Agrowiyana acquired the remaining 85% share of CPO mill AMM, which has a capacity of 60 tons of FFB / hour, in Dec 04 (see Exhibit 6).
3. *BSP Kisaran - CPO mill*. A CPO mill with a capacity of 45 tons of FFB / hour is under construction in BSP Kisaran and it will be completed in 2006.
4. *BSP Kisaran - rubber factory*. BSP Kisaran has one of the largest and most efficient rubber processing factories in Indonesia with a capacity of more than 58,000 tons pa (see Exhibit 6). It is capable to produce various types of rubbers from centrifuged latex, cream latex, crumb rubber (SIR 3CV, 10, and 20), and block skim rubber (see *Rubber Industry Analysis* for descriptions of various rubber products). The flexibility to produce various types of rubber has been one of BSP's competitive advantages.
5. *Huma Indah Mekar (HIM)*. HIM has a capacity to produce 8,378 tons of centrifuged latex and ribbed smoked sheet (RSS) (see Exhibit 6). RSS from HIM is a good complement to BSP's product range, as BSP Kisaran does not produce RSS.

**All Plantations Have CPO / Rubber Processing Mills or One under Construction**

	N. Sumatra (Bakrie Sumatera Plantations)	Jambi (Agrowiyana)	W. Sumatra (Bakrie Pasaman Plantations)	Lampung (Huma Indah Mekar)	Total
<b>CPO Mill Capacity (Tons FFB/ hr)*</b>	*	60	60	-	<b>120</b>
<b>Rubber Processing Capacity (tons pa)</b>					
Centrifuge Latex	19,000			7,128	
Cream Latex	19,000				
RSS	-			1,250	
SIR 3CV	4,275				
SIR 10/20	12,600				
Block Skim Rubber	3,078			-	
<b>Total</b>	<b>58,036</b>			<b>8,378</b>	<b>66,414</b>
* CPO mill with a capacity of 45 FFB/hr is under construction in BSP Kisaran (N. Sumatra) and will be completed in 2006. Bakrie Pasaman just completed a capacity upgrade from 40 FFB/hr to 60FFB/hour in 2H:05					
Source: BSP, PCR Estimates					

**Exhibit 6**

**Product Analysis**

*A balanced rubber and oil palm play*

Unlike most of Indonesian and Malaysian plantations, which largely focus on oil palm, BSP is a balanced oil palm and rubber play. This is evident in:

- (i) *Revenue breakdown*. Oil palm and rubber accounted for 54% and 46% respectively of total revenues in Jan - Aug 2005 (see Exhibit 7).
- (ii) *Plantation breakdown*. Of the total 36,545 ha of plantation that BSP owns (excluding plasma plantations owned by surrounding small farmers, who have agreements to sell their FFB to BSP), nearly a half is rubber plantation and the other half oil palm plantation (see Exhibit 7). Including plasma plantations, oil palm plantation accounted for nearly two thirds (64%) of the total plantation and rubber plantation the remaining 36%.

**Balanced Oil Palm and Rubber Operation**

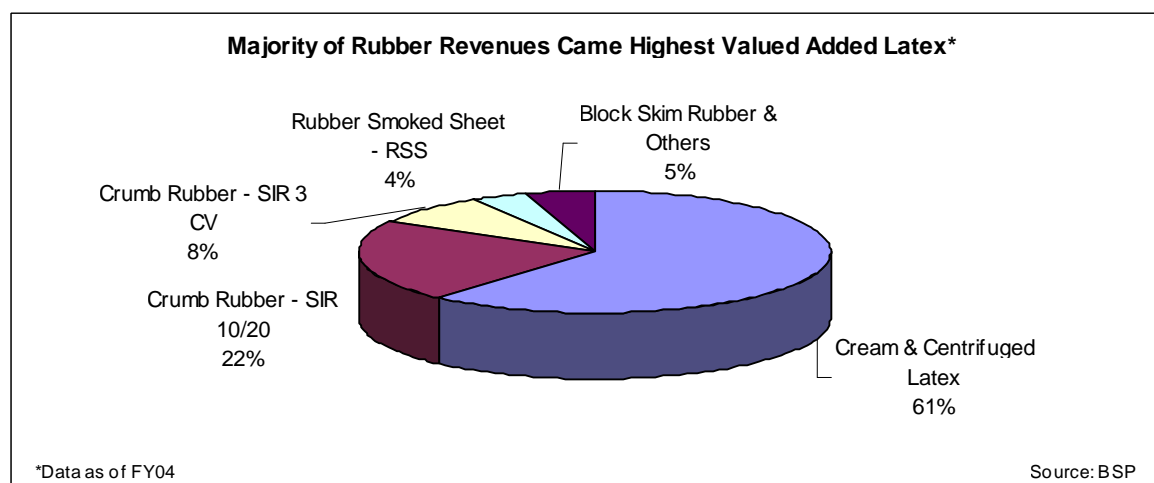
	Revenues in Jan - Aug 2005	Plantation Size Excl. Plasma**	Plantation Size Incl. Plasma**
	(Rp Bn)	(Ha)	(Ha)
<b>Absolute</b>			
Oil Palm	269	18,958	30,935
Rubber	229	17,588	17,588
Total	498	36,545	48,522
<b>Percentage</b>			
Oil Palm	54%	52%	64%
Rubber	46%	48%	36%
Total	100%	100%	100%

\*\* Plasma refers to the plantations run by small farmers, who typically have agreements to sell their FFB to BSP  
Source: BSP, PCR Estimates

**Exhibit 7**

*Majority of the rubber revenues came from highest value products*

Majority (61%) of BSP's rubber revenues in 2004 came from the highest value of rubber products, i.e. cream and centrifuged latex (see Exhibit 8). Cream and centrifuged latex fetched an estimated price premium of 25% - 30% compared to premium crumb rubber SIR 3CV in FY04. The rest of rubber sales came from lower quality crumb rubber SIR 10/20 (22%), higher quality crumb rubber SIR 3CV (8%), ribbed smoked sheet (4%) and block skim rubber / others (5%).



**Exhibit 8**

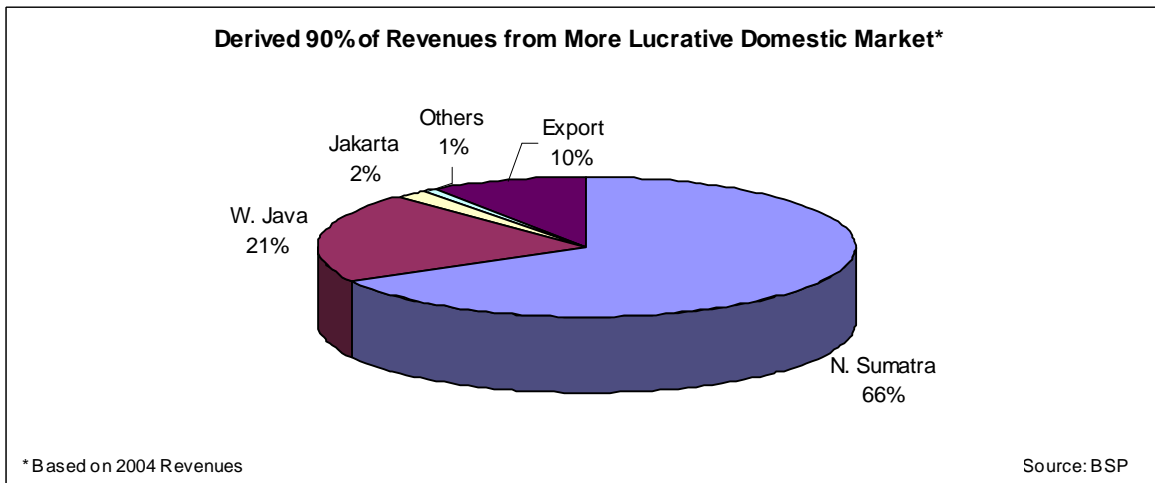
*Derived 90% of revenues from lucrative domestic market*

BSP derived 90% of its sales from more domestic sales, which are considered to be more lucrative than export sales, and the remaining 10% from exports (see Exhibit 9). Domestic sales are more profitable as (i) there is no special sales tax (except normal VAT that can be offset by certain COGS) like the 3% tax on CPO exports, (ii) their port handling and transportation costs are lower given that many customers actually "fetch" CPO and rubber directly from BSP's CPO mills and rubber factories. Going forward, however, the export portion is likely to increase as BSP's rising revenues from value added services need to be marketed to larger markets, i.e. export markets. Value added products come from processing raw materials purchased from outside or selling finished goods from 3<sup>rd</sup> parties after re-branding them into BSP brands.

*Two thirds of revenues came from N. Sumatra, the headquarter of BSP*

Two thirds of total FY04 sales were generated from North Sumatra with the remaining domestic sales coming from West Java (21%), Jakarta (2%) and others (1%) (see Exhibit 9). This explains why BSP's headquarter is in Medan, the capital of N. Sumatra. Medan is the centre for glove factory, rubber and CPO

trading activities and it is supported by one of the nation's biggest seaports Belawan. Indeed 60% of CPO exports from Indonesia in 2002 came from Belawan.

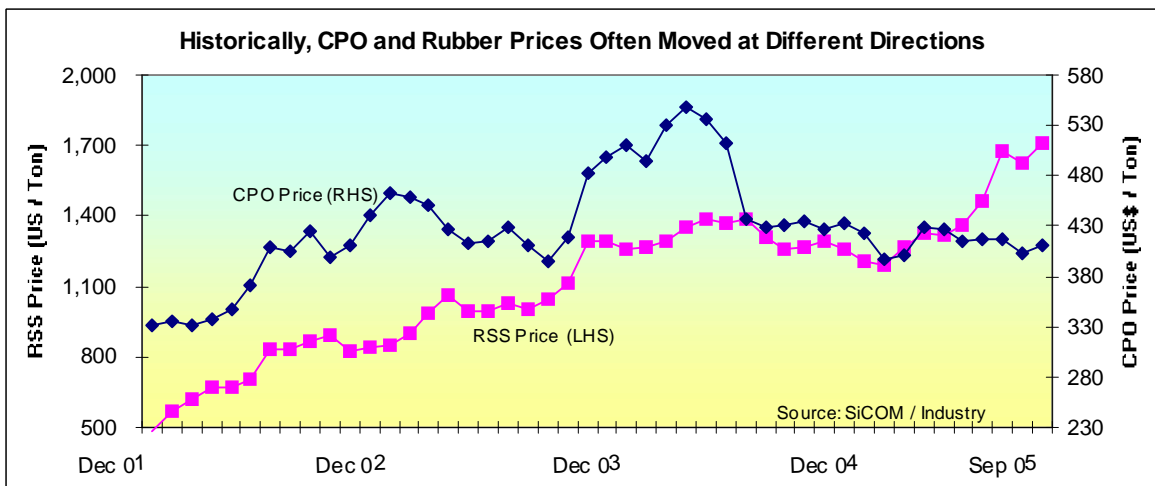


**Exhibit 9**

**Price Analysis**

*Benefit from different price movements of two products*

Historically, prices of CPO and rubber often moved to different directions to the benefit of BSP, which can reduce dependency on one product. For example, in 2005 rubber price is rising whereas CPO price decreasing (see Exhibit 10). The price movements affect the profitability of products. For example, in 2003, gross margins on rubber and oil palms were nearly the same at 35% and 34% respectively while in 2004 the margins were significantly different at 41% and 35% respectively (see Exhibit 11). In fact in 1H:05, the gross margin of oil palm at 34% was higher than that of rubber at 33% although this was largely due to an increased portion of rubber valued added revenues, which earned lower margin.



**Exhibit 10**

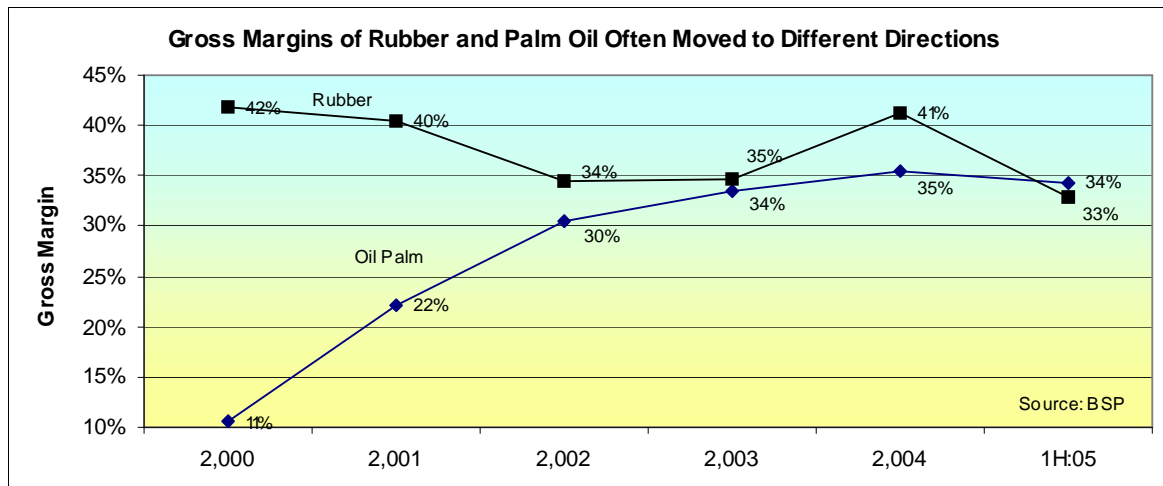


Exhibit 11

### Cost Structure Analysis

Cost structure are diversified by two types of plantation

BSP arguably diversifies its cost structure by having two types (rubber and oil palm) of plantations because the two have different cost structures as follows:

- (i) *Rubber plantation is labour intensive.* Rubber plantation is labour intensive because of the high frequency of harvesting / tapping, i.e. every 3 days (twice a day - morning for tapping and afternoon for collecting) compared to once every 7 - 10 days in oil palm plantation. This is evident in that harvesting cost making up 48% of total COGS as opposed to only 12% in oil palm plantation (see Exhibit 12 & 13).
- (ii) *Oil palm plantation is more capital intensive.* Oil palm plantation is arguably more capital intensive as it requires more investments in fertiliser and processing factory than rubber plantation does as evident in that:
  - (a) *Fertiliser accounted for 25% of COGS in oil plantation but only 1% in rubber plantations* as oil palm tree needs a lot of nutrition to bear fruits whereas there is no fruit in rubber tree (see Exhibit 12 & 13).

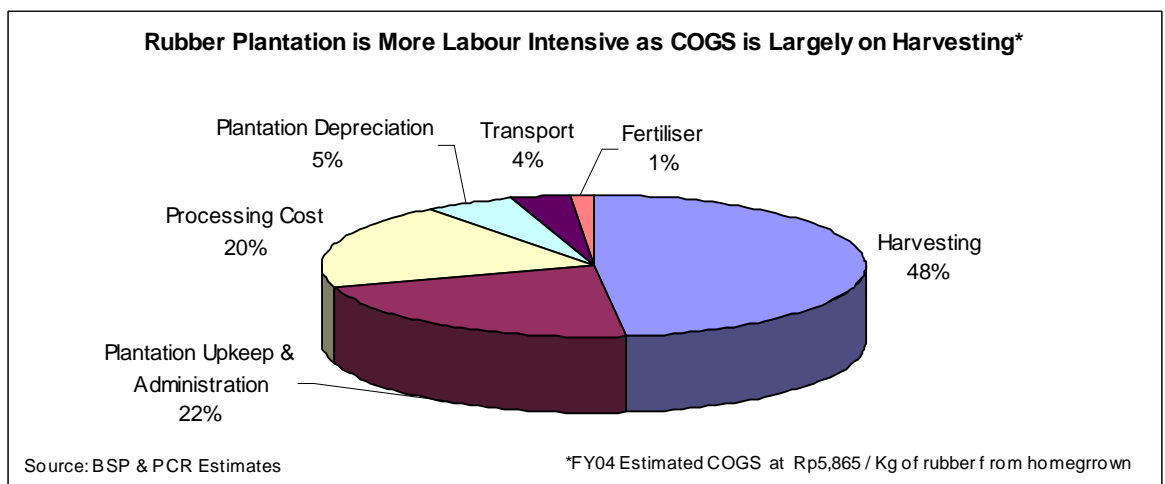
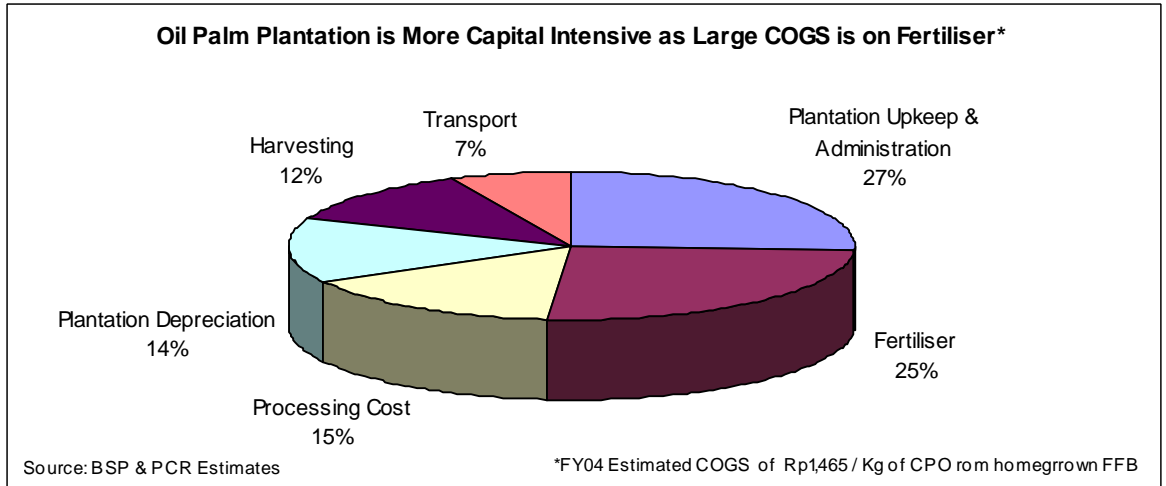


Exhibit 12

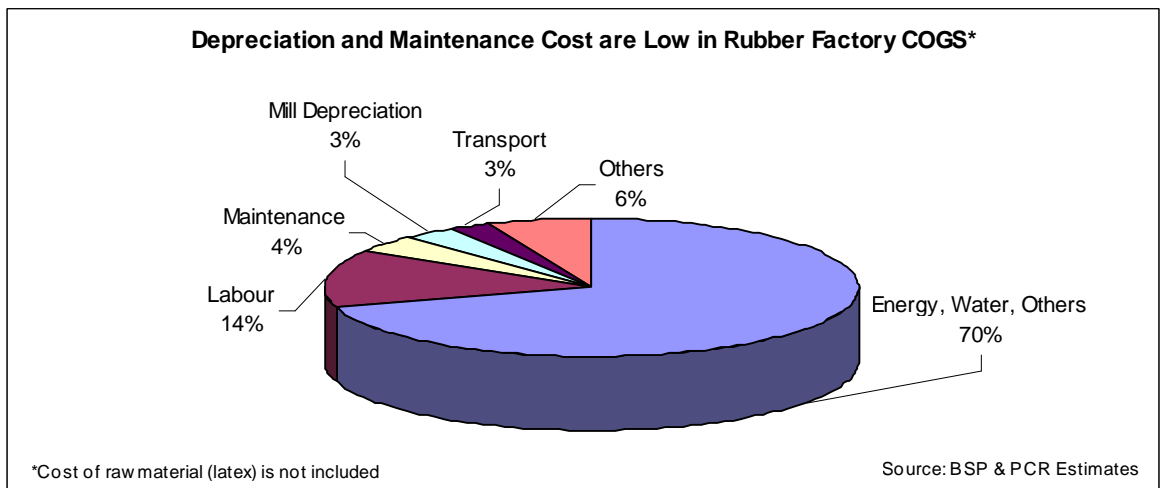


**Exhibit 13**

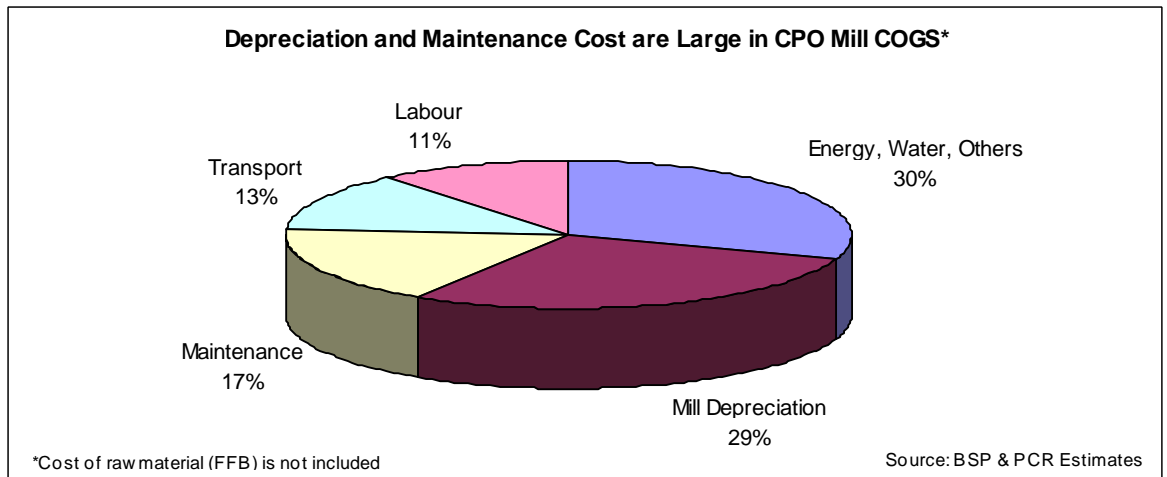
(b) A CPO mill costs around US\$6m - US\$8m to build compared to US\$1m - US\$3m in rubber processing factory. The least costly rubber factory is a ribbed smoked sheet (RSS) factory like the one in HIM while the most expensive one is a centrifuged / cream latex factory like the one in Kisaran. The difference can be seen in the breakdown of processing cost. Depreciation and maintenance accounted for nearly a half of processing cost in CPO mill but only 7% in rubber factory (see Exhibit 14 & 15). Admittedly, the difference is partly due to the fact that Kisaran rubber factory is much older than all of BSP's CPO mills. The largest component in rubber mill is by far energy and water, which accounted for 70% of total COGS.

*Lower depreciation in rubber plantation due to older plantation*

Note that plantation depreciation accounted for 14% of COGS in oil palm plantation, much higher than only 5% in rubber plantation (see Exhibit 12 & 13) because BSP's nearly one-century rubber plantation at Kisaran has been largely depreciated.



**Exhibit 14**

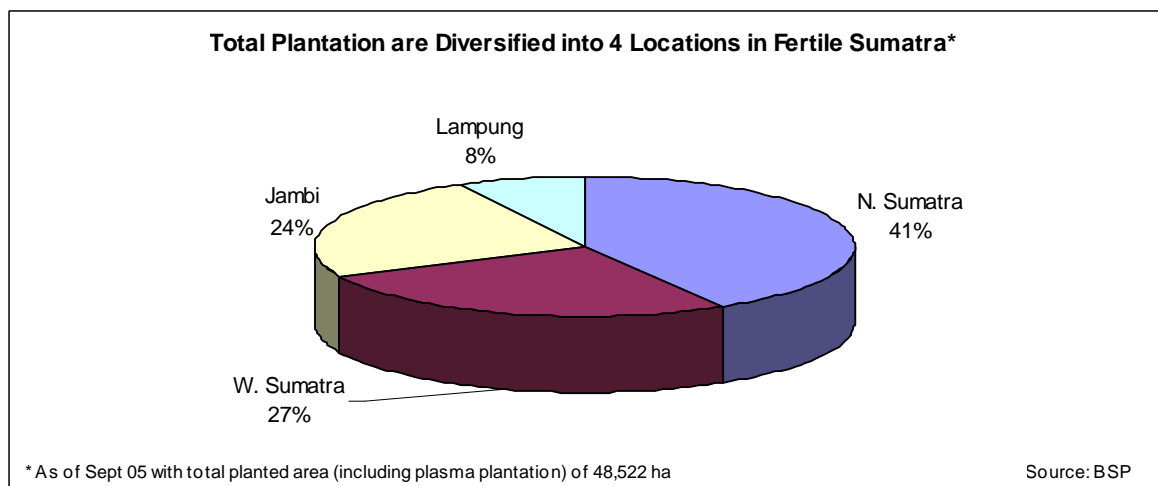


**Exhibit 15**

### Plantation Analysis

*All current plantations are located at fertile and well developed Sumatra*

All of BSP's 48,500 ha of plantations under management are located in Sumatra island, which is the best island for plantation given its superior soil fertility and climate and well developed infrastructure. All of BSP's plantations are supported by provincial seaports and they are accessible by land transports. The Company's headquarter in Medan, the capital of North Sumatra, is only a few-hour drive from the main plantation Kisaran.



**Exhibit 16**

*Plantations are diversified into 4 locations*

Within Sumatra, the plantations under BSP's management (including plasma plantations) are diversified into 4 locations: North Sumatra - Kisaran (41% of total planted area), West Sumatra (27%), Jambi (Central Sumatra - 24%), and Lampung (South Sumatra - 8%) (see Exhibit 16 & 17). Only Kisaran has both oil palm and rubber plantations while rest are either oil palm or rubber plantation.

Plantation Profile as of Dec 2004 (in Hectare)

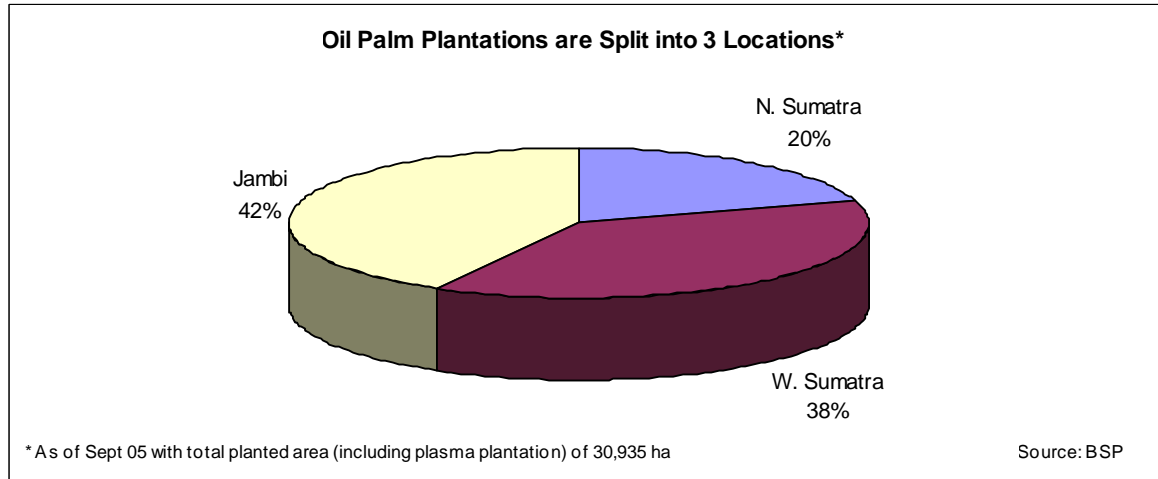
	N. Sumatra	Jambi	W. Sumatra	Lampung	Total	% of Sub-Total	% of Total
	(Bakrie Sumatera Plantations)	(Agrowiyana)	(Bakrie Pasaman Plantations)	(Huma Indah Mekar)			
<b>Oil Palm</b>							
<b>Nucleus*</b>							
<5 yr	249	119	373	-	741	4%	2%
6-10	3,273	1,615	4,086	-	8,974	47%	29%
11-15	1,642	2,122	4,204	-	7,968	42%	26%
16-20	-	-	-	-	-	-	-
>20 yr	-	-	-	-	-	-	-
Mature	5,164	3,856	8,663	-	17,683	93%	57%
Immature	989	286	-	-	1,275	7%	4%
Total Area	6,153	4,142	8,663	-	18,958	100%	61%
<b>Plasma**</b>							
<5 yr	-	490	222	-	712	6%	2%
6-10	-	7,180	3,871	-	11,051	92%	36%
11-15	-	-	-	-	-	-	-
16-20	-	-	-	-	-	-	-
>20 yr	-	-	-	-	-	-	-
Mature	-	7,670	4,093	-	11,763	98%	38%
Immature	-	31	183	-	214	2%	1%
Total Area	-	7,701	4,276	-	11,977	100%	39%
Total Mature	5,164	11,526	12,756	-	29,446	95%	95%
Total Immature	989	317	183	-	1,489	5%	5%
<b>Oil Palm Plantation</b>	<b>6,153</b>	<b>11,843</b>	<b>12,939</b>	<b>-</b>	<b>30,935</b>	<b>100%</b>	<b>100%</b>
Oil Palm Plantation (%)	20%	38%	42%	-	100%		
<b>Rubber (All Nucleus*)</b>							
<5 yr	152	-	-	-	152	1%	1%
6-10	1,783	-	-	-	1,783	10%	10%
11-15	1,576	-	-	1,191	2,767	16%	16%
16-20	4,676	-	-	2,503	7,179	41%	41%
>20 yr	2,750	-	-	-	2,750	16%	16%
Mature	10,937	-	-	3,695	14,632	83%	83%
Immature	2,956	-	-	-	2,956	17%	17%
<b>Rubber Plantation</b>	<b>13,893</b>	<b>-</b>	<b>-</b>	<b>3,695</b>	<b>17,588</b>	<b>100%</b>	<b>100%</b>
Rubber Plantation (%)	79%	-	-	21%	100%		
<b>Total Plantations</b>	<b>20,046</b>	<b>11,843</b>	<b>12,939</b>	<b>3,695</b>	<b>48,522</b>		
Total Plantations (%)	41%	24%	27%	8%	100%		
* Nucleus refers to the plantation owned by the Company (BSP)							
** Plasma refers to the plantations run by small farmers, who typically have agreements to sell their FFB to BSP							
Source: BSP, PCR Estimates							

Exhibit 17

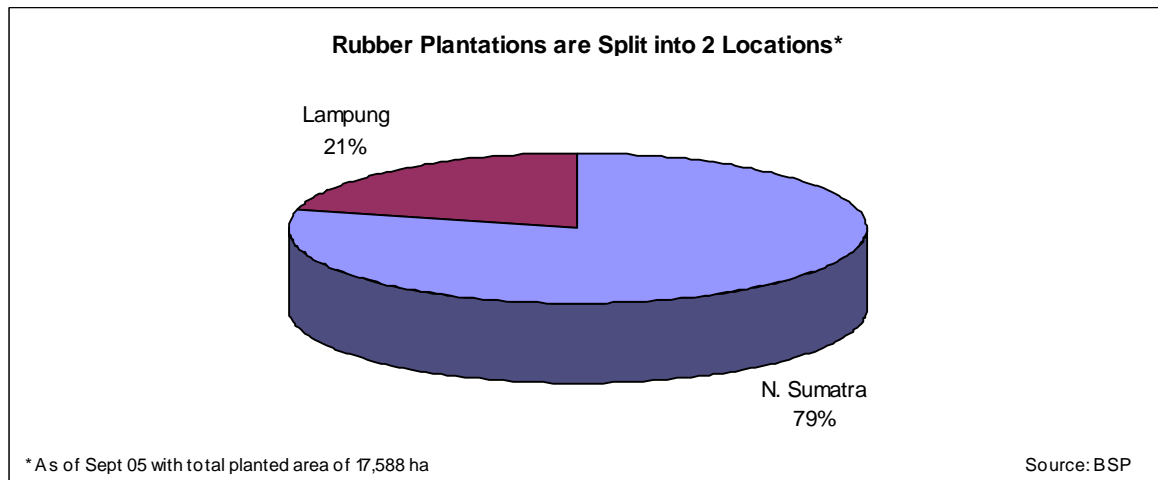
*Diversified locations of oil palm and rubber estates*

The split of the oil palm and rubber plantations are as follows:

- (i) *Oil palm plantations.* Of nearly 31,000 ha of oil palm plantations under management (including plasma plantations), 42% is in West Sumatra (BPP), 38% in Jambi (Agrowiyana) and 20% in North Sumatra (BSP Kisaran) (see Exhibit 17 & 18).
- (ii) *Rubber plantation.* Of around 17,600 ha of rubber plantations, 79% is in North Sumatra under BSP Kisaran and the remaining 21% in Lampung, South Sumatra under HIM (see Exhibit 18 & 19).



**Exhibit 18**

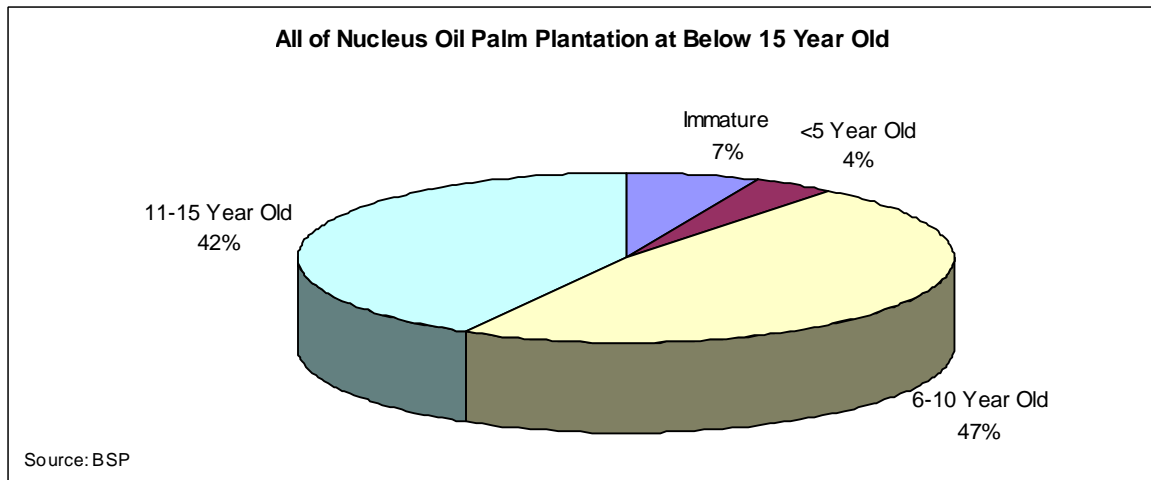


**Exhibit 19**

*All of the nucleus oil palm plantations at their prime ages*

BSP's oil palm plantations are in their prime age as none of the 19,000 ha of its *nucleus* oil palm plantations is more than 15 year old (see Exhibit 17 & 20). Eighty nine percent of the trees are 6 - 15 year old. The remaining 11% is either below 5 year old (4%) or immature, i.e. below 3 years (7%).

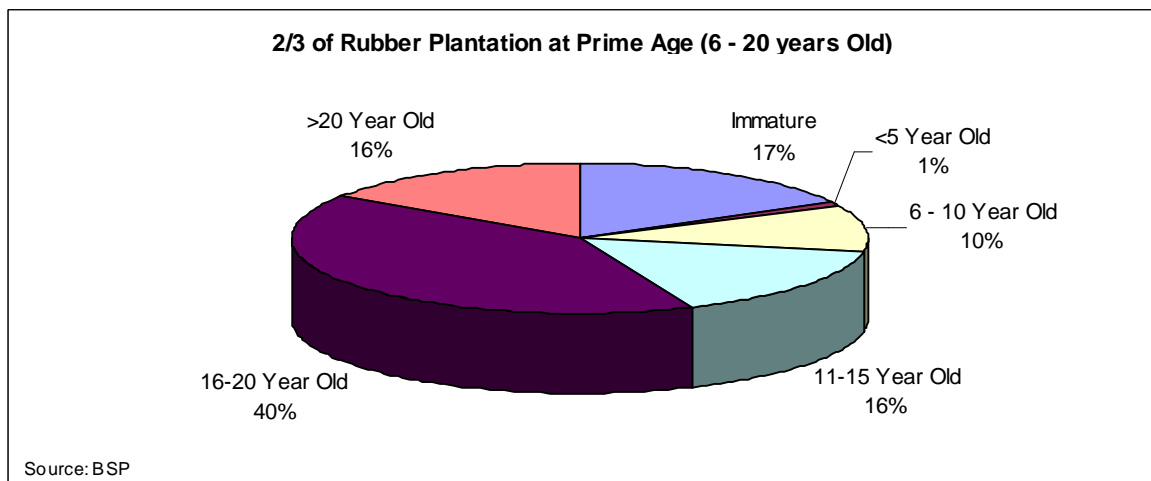




**Exhibit 20**

*Two thirds of rubber plantation is at prime age*

Two thirds of BSP's rubber plantation is between 6 - 20 year old (see Exhibit 21), which is considered as prime age given that the highest yield for rubber trees is generally between 8 - 23 year old (see *Analysis of Rubber Industry* section). Of the remaining one third, 16% is above 20 year old and 17% immature.



**Exhibit 21**

*Expect total plantation acreage to more than double by 2010*

We expect BSP's plantation acreage (including plasma plantation) to more than double in 5 years from 48,500 ha in 2004 to 101,100 ha in 2010 (see Exhibit 22) as BPS is investing in 53,200 ha of oil palm new planting from 2005 - 2010. The first new planting of 3,200 ha, which began in late 2H:05, should mature by late 2008 / early 2009 while the subsequent 10,000 ha pa of new planting in 2006 - 2010 will mature in the 2009 - 2014.

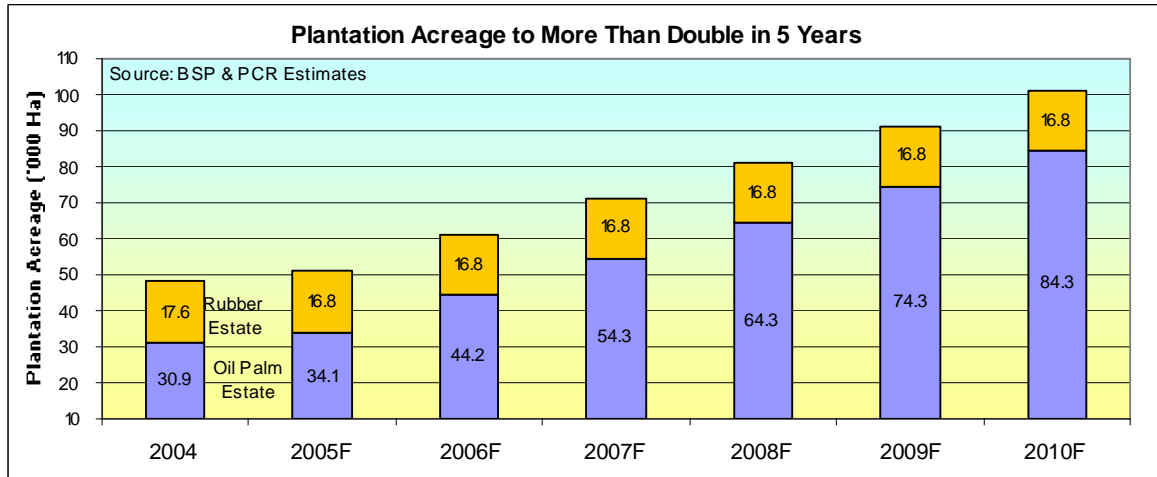


Exhibit 22

*Expect rising yield on oil palm estates*

In the mean time, we expect the yield on existing plantations to rise. The yield on plasma oil palm plantations is projected to increase steadily from 10.2 tons/ha in FY04 to 14.4 tons / ha in FY08F (see Exhibit 23) as the estate is heading toward the prime age and BSP is assisting plasma farmers to invest in a more intensive fertiliser program and to build better accesses to plantations. Yield on the nucleus estate is expected to rise from 21.7 tons / ha in FY04 to 22.6 tons/ha in FY08F (see Exhibit 23) given a low base in FY04 and a more intensive fertiliser program.

*Expect rising yield amidst a decline in rubber estate acreage*

While we expect BSP's rubber plantation to decline from 17,600 ha in FY04 to 16,800 ha in FY08F (see Exhibit 22) due to a major replanting program in Kisaran, we project its yield to rise from 1.35 tons/ha in FY04 to 1.38 tons/ha in FY08 (see Exhibit 23).

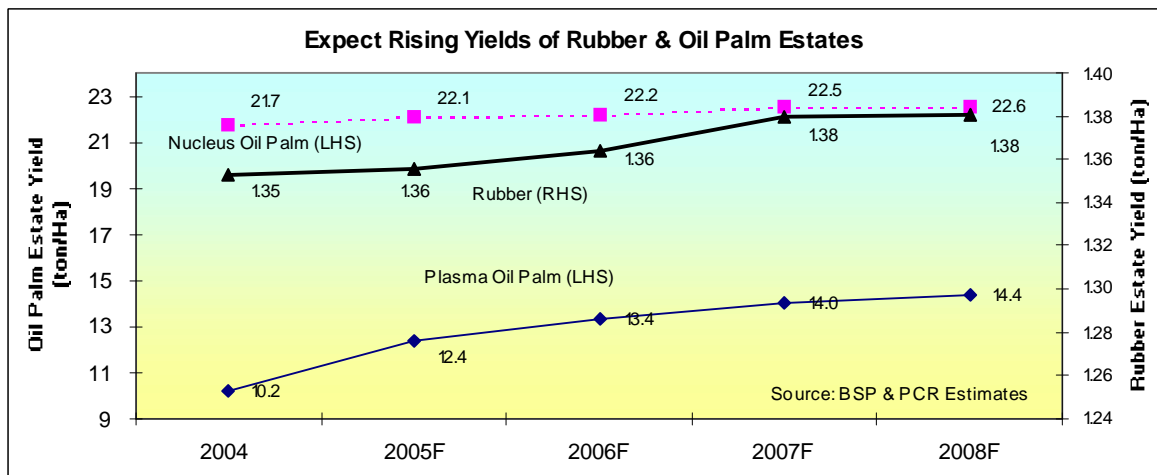


Exhibit 23

## FINANCIAL ANALYSIS

### Background

#### *Sensible use of funds from the first rights issue*

Having been listed for 15 years since 1990, BSP has done stock split, paid bonus shares and share dividends but made a cash call only once in 2004 to raise Rp267bn (see Exhibit 24). The proceeds from the rights issue were sensibly used for expanding its business mainly for (i) acquiring rubber plantation HIM at an attractive price (41% of total proceeds), (ii) acquiring CPO mill AMM, which processes Agrowiyana's FFB (23%), and (iii) constructing a CPO mill in Kisaran to save cost from third-party processing (21%) (see Exhibit 25).

#### First Time Rights Issue in 2004 after 14 years of Listing

Date	Event	Total Share Listed (m)	New Share Listed (m)	Funds Raised (Rp Bn)
Mar-90	IPO	11	11	na
Feb-96	Company Listing	37	26	na
Aug-96	2-for-1 Stock split*	74	37	na
Sep-96	9-for-5 Bonus Share*	207	133	na
Aug-99	1-for-5 Share Dividend*	249	41	na
Oct-04	1-for-5 Share Dividend*	995	746	na
Nov-04	7-for-8 Rights Issue at Rp200*	2,331	1,336	267

\*Ratio of new share to old share

#### Exhibit 24

#### Rights Issue Proceeds Used Mainly for Expanding Business

	Name of Target Company	Share Acquired	Location	Amount*	
				(Rp bn)	%
Acquisition of new rubber plantation	Huma Indah Mekar (HIM)	100%	Lampung, S. Sumatra	90	41%
Acquisition of CPO Mill	Asia Makmur Lestari (AMM)	85%	Jambi, C. Sumatra	50	23%
Development of CPO Mill	na	100%	Kisaran, N. Sumatra	45	21%
Payment loan				27	12%
Rights issue cost				6	3%
Total				218	100%

Source: Company

#### Exhibit 25

#### *Controlled by a large listed conglomerate Bakrie & Brothers*

BSP is majority (57%) owned by listed Bakrie & Brothers, one of the largest conglomerates in Indonesia that boasts an equity base of nearly Rp4 trillion (US\$400m), or about 6 times as big as BSP's. Of the remaining 43% share, which is considered as free float, estimated more than a half (57%) is owned by foreign investors.

#### *Survived 1997 crisis with a minor little scratch*

Unlike many Indonesian corporate, BSP managed to pass through the 1997 financial crisis with only a minor scratch. The restructuring of its syndicated US\$72.6m loan involved only lengthening a tenor for a few years to 2006 with a bullet payment of US\$51.7m due in 2006. The debts have been fully serviced since then and will be repaid in 4Q:05 through debt re-financing. Another US\$5m convertible loan issued by subsidiary Kilang Vecolina was restructured to result around US\$1.5m waiver of interest and principal after the loans were sold to a third party.

### Near-Term Growth Strategy

BSP's short to medium term growth strategy is to create growth from 5 sources: (i) acquisition, (ii) strategic partnership, (iii) value added revenues, (iv) improvements of existing plantations, and (v) divestment of non-core business. The analysis of the strategy is as follows:

- (i) *Acquisition.* BSP is expected to continue acquiring new plantations in the next 1 - 2 years after investing Rp140bn in 2004 to buy AMM (Rp50bn) and HIM (Rp90bn) (see exhibit 25). However, we have not factored this into our forecast.

*Past plantation acquisition was value enhancing*

BSP's acquisition of rubber plantation HIM in 2004 was value enhancing as it was bought at below market value. The price BSP paid for HIM was estimated at US\$2,648/ha in term of EV/mature plantation (see Exhibit 25). This is well below BSP's current valuation at US\$4,095/ha and at a deep discount to the average valuation of two other listed plantations (Astra Agro and London Sumatra) at US\$5,635/ha.

**Investing Nearly Rp200bn in Acquisition to Bolster Short-Term Growth**

Target Company	Date	Business	Location	Mature Plantation (ha)	Share Bought	Acquisition Cost <sup>^^</sup>		
						Rp bn	US\$	US\$/Ha
AMM*	Dec 04	CPO mill	Jambi, C. Sumatra <sup>^</sup>	na	85%	50	5.4	na
HIM**	Dec 04	Rubber Plantation	Lampung, S. Sumatra <sup>^</sup>	3,694	100%	90	9.8	2,648
<b>Total</b>						<b>140</b>	<b>15.2</b>	

\*Agro Mitra Madani      ^All are in Sumatra island  
\*\*Huma Indah Mekar      ^^Based on exchange rate at Rp9,200 / US\$ in 2004  
Source: BSP, PCR Estimates

**Exhibit 26**

- (ii) *Strategic partnership.* BSP is considering setting up strategic partnerships with foreign partners, many of whom are attracted by Indonesia's lucrative potential in oil palm plantation. While nothing has been confirmed, we believe the partnership is likely and when that happens there will be a huge impact to BSP's growth.
- (iii) *Growth in value added revenues.* BSP is leveraging on its strong brand name, rubber processing expertise, and excess factory and mill capacity, especially during low seasons, to bolster its valued added revenues. The revenues come from (i) buying raw materials like cup lump and FFB and process them in the existing factories or mills and (ii) buying finished goods like centrifuged latex or CPO from third parties, simply re-brand it as BSP product, and sell them at higher prices. The first type of valued added revenues is by far the larger sources of revenues than the second one currently, accounting for estimated 85% - 90% of total valued added revenues presently.

*Value added revenues are similar to fee-base income,*

Although P&L analysis indicates that gross margins for rubber and oil palm value added revenues in FY04 were only 8% and 15% respectively, much lower than those from own plantations at 49% and 59% respectively (see Exhibit 27), their economic margins are arguably very high as there is little incremental cost on it. These valued added revenues are almost like fee-based income as it costs little to re-brand rubber products from third parties and there is no additional fixed cost to process raw materials from third parties on BSP's own factories.

*BSP have key success factors to bolster value added revenues*

The key success factors of BSP's strategy in bolstering valued added revenues are (i) availability of working capital to purchase raw materials or finished goods and (ii) the ability to identify suppliers who are in need of cash or are willing to sell at discount. Given BSP's strengthening balance sheet and long track record in rubber industry, it has these two key success factors.

- (iv) *Growth of existing plantations.* The growth will come from increases in yields and mature plantations.

- (v) *Divestment of non-core business.* BSP has divested its non-core business, loss-making refinery Kilang Vecolina in 3Q:05 to focus on its core strength in plantation. Vecolina was established prior to the 1997 financial crisis and arguably does not fit into BSP's core strength in plantation as its downstream palm oil products serve different market niches.

**Gross Margins from Own Plantation are Much Higher than from Third Parties' Purchases**

Description	Unit	CPO*			Rubber*		
		Plasma	Own Plantation***	Differ	Purchase*	Own Plantation***	Differ
<b>Gross Profit Analysis (Rp/Ton)</b>							
Average Realised Price	Rp/kg	3,497	3,497	0%	12,608	11,330	-10%
Average COGS*	Rp/kg	2,974	1,449	-51%	11,617	5,804	-50%
<i>Average Gross Profit</i>	Rp/kg	523	2,049	292%	991	5,526	457%
<b>Average Gross Margin</b>		<b>15%</b>	<b>59%</b>		<b>8%</b>	<b>49%</b>	
<b>*COGS Analysis (in Rp)</b>							
Field Cost	Rp/kg	2,752	1,226	-55%	10,472	4,659	-56%
Processing Cost	Rp/kg	223	223	0%	1,145	1,145	0%
<i>Total COGS / Kg</i>	Rp/kg	2,974	1,449	-51%	11,617	5,804	-50%
<b>Gross Profit Analysis (in US\$/ton)^</b>							
Average Realised Price	US\$/Ton	392	392	0%	1,413	1,270	-10%
Average COGS*	US\$/Ton	333	162	-51%	1,302	650	-50%
<i>Average Gross Profit</i>	US\$/Ton	59	230	292%	111	619	457%
<b>Average Gross Margin</b>		<b>15%</b>	<b>59%</b>		<b>8%</b>	<b>49%</b>	
<b>*COGS Analysis (in US\$)^</b>							
Field Cost	US\$/Ton	308	137	-55%	1,174	522	-56%
Processing Cost	US\$/Ton	25	25	0%	128	128	0%
<i>Total COGS / Kg</i>	US\$/Ton	333	162	-51%	1,302	650	-50%
*Estimated data for FY04				**Raw materials are purchased from third parties			
*Raw materials are from own (nucleus) plantation				^Based on exchange rate of Rp8,924/US\$ in 2004			
Source: PCR Estimate							

**Exhibit 27**

*31% CAGR of net profit in FY04 - FY07F*

We expect BSP to post a 30.7% CAGR in net profit in FY04 - FY07F driven by a high growth in operating income and lower non-operating expenses. Lower non-operating expenses are expected to be driven by:

- (i) *Lower forex losses.* The forex loss is based on an assumption that foreign exchange rate will depreciate 8% this year to Rp10,000/US\$ in Dec 05 and only 4% p.a. thereafter.
- (ii) *Lower interest expense.* This will come about as BSP is expected to (a) successfully refinance its US\$50m debt at a lower rate in 4Q:05 and (b) start repaying its loans in 2006.
- (iii) *Gain from divestment of Kilang Vecolina (Vecolina).* BSP has divested its 96% owned subsidiary Vecolina in 3Q:05 at Rp20bn gains.

However, potential write-off of the remaining, long-overdue Rp24bn receivables from Bakrie Rubber within the next 2 years will result in non-cash charges. BSP had written off the first Rp22bn of the receivables back in 2003.

*Double-digit CAGR in operating income*

BSP's operating income is projected to grow by a CAGR of 31% in FY04 - FY07F on the back of Vecolina divestment, increased CPO mill capacity, rising sales volume and price, and depreciation of IDR, as explained below:

- (i) *Divestment of Kilang Vecolina.* Sale of Vecolina eliminated around Rp12bn potential pretax loss from annual depreciation of its assets.
- (ii) *Increased CPO mill capacity.* The new capacity will come from (i) doubling capacity in Bakrie Pasaman's CPO mill from 30 tons of FFB / hour to 60 tons of FFB / hour in 2H:05 and (ii) commencement of new CPO mill in Kisaran with a capacity of 45 tons of FFB / hour in 2H:06.
- (iii) *Rising CPO and PK sales volume.* We expect sales volume of CPO and palm kernel (PK) to surge by a CAGR of 13% and 5% respectively during FY04 - FY07F to 152 tons of CPO and 25 tons of PK in FY07F (see Exhibit 28). The surge is on the back of (i) rising yield on both plasma and nucleus plantations (see *Operation Analysis* section), (ii) the acquisition of CPO mill AMM in 2004 that has eliminated sales of FFB and replaced it with sales of CPO, and (iii) a 4% (1,200 ha) increase in the size of mature estate of both nucleus and plasma oil palm plantations during the period to 30,600 ha, mainly from nucleus plantation in Kisaran (see Exhibit 29).

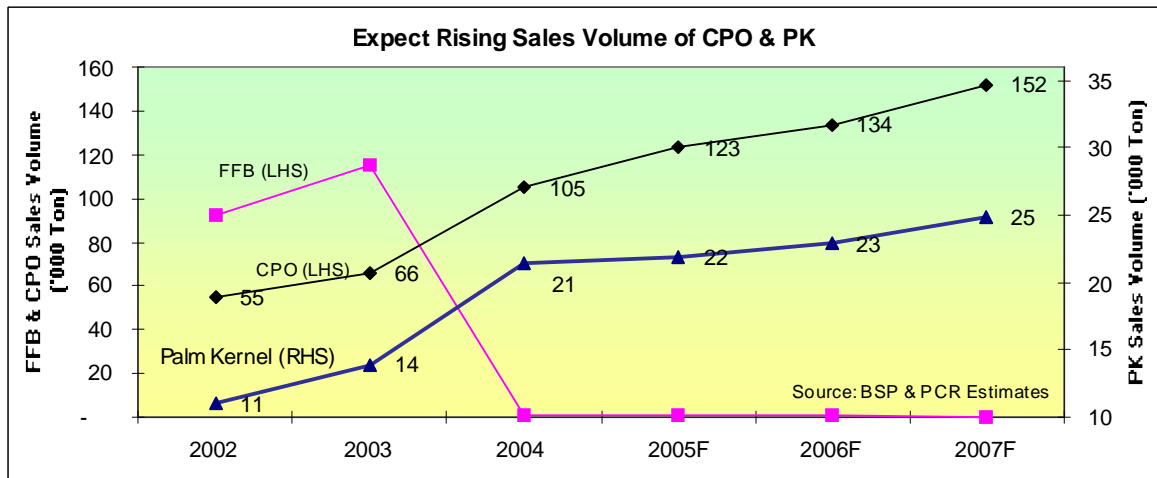


Exhibit 28

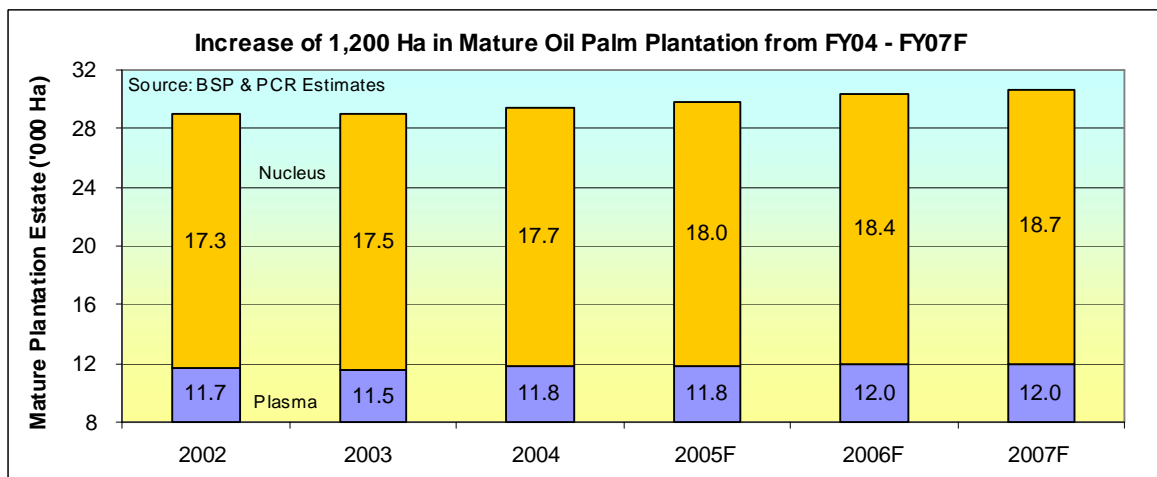


Exhibit 29

- (iv) *Rising rubber sales volume.* We expect BSP to post a 11% CAGR in rubber sales volume from FY04 - FY07F due to a 41% CAGR in third parties value added revenues (see Exhibit 30). Majority of the revenues will come from purchasing rubber raw materials (latex and cup lump) and processing them in-house although BSP has started to sell re-branded finished goods (centrifuged latex and SIR).

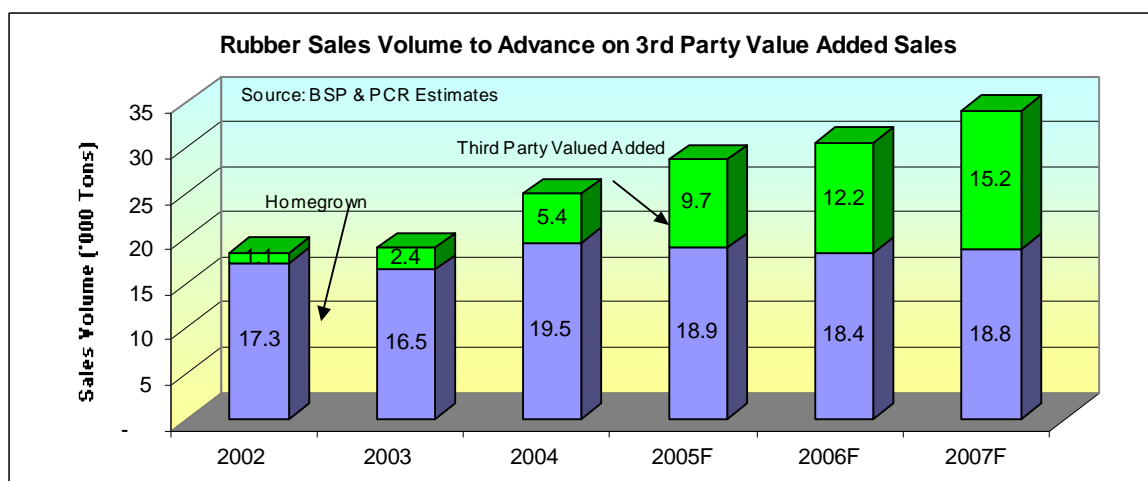


Exhibit 30

- (v) *Higher rubber price.* We forecast BSP's rubber price to increase by US\$81/ton (+6.4%) in FY05F to US\$1,351/ton, US\$42/ton (+3.1% to US\$1,393/ton) in FY06F and US\$35/ton (+2.5% to US\$1,428/ton) in FY07F due to (i) the persistently high petroleum price, (ii) high growths of vehicle sales in Asia, (iii) a low growth in rubber inventory, (iv) a lagging increase in rubber price compared to petroleum price in 2005, and (v) a trend of rising consumption of natural rubber vs. synthetic rubber (see *Rubber Industry Analysis - Price Outlook* section). In term of IDR, the rise in FY05F - FY07F price will be higher at 14.5%, 7.2% and 6.6% respectively given the expected average depreciations of rupiah at 8.1%, 5.8% and 4% respectively.

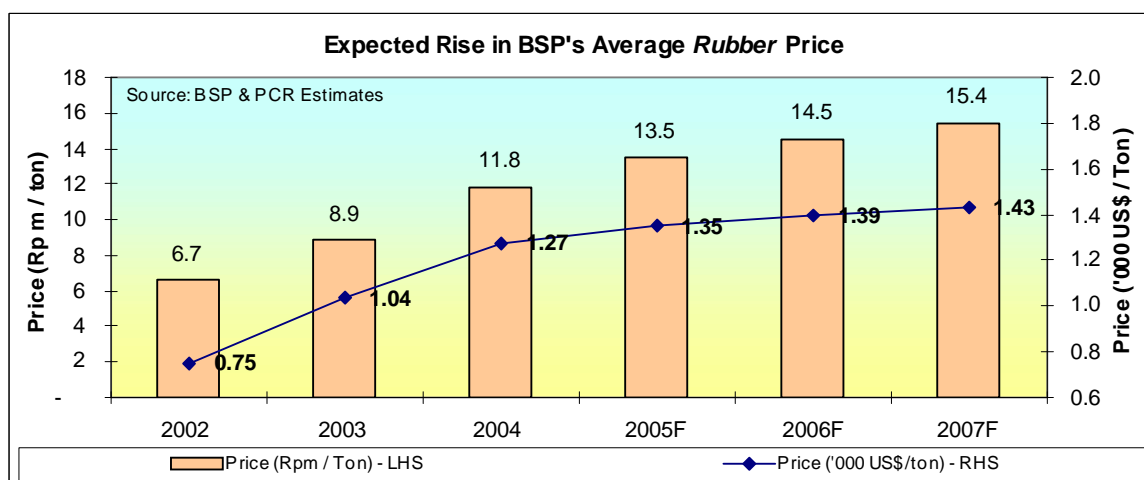


Exhibit 31

- (vi) *Higher CPO price.* We expect BSP's CPO price to surge by US\$31/ton (+9%) in FY06F and US\$19/ton (+5%) FY07F after falling US\$51/ton (-13%) this year to US\$341/ton. The expected price increase is on the back of (i) slowing down growth of CPO supply, (ii) rising demand for bio diesel, (iii) concerns over the harmful effect of TFA in soybean oil, (iv) the lifting of China's palm oil import quota in 2006, and (v) rising global consumption (see *Analysis of Oil Palm Industry - Price Outlook* section). In term of IDR, the rise in FY06F - FY07F will be higher at 15.0% and 9.0% respectively and the decline in FY05 less at 6% given expected depreciations of rupiah.

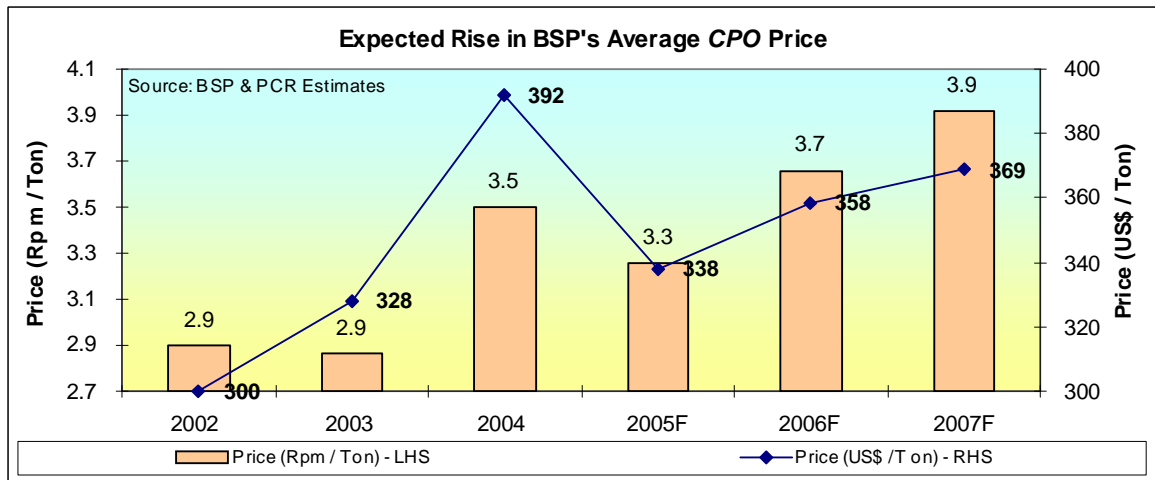


Exhibit 32

(vii) *Depreciation of IDR.* As 100% of BSP sales are in US\$ while 85% of its COGS (from nucleus / home-grown plantations) is in IDR, every 10% depreciation of IDR is estimated to raise gross profit (of home-grown plantation) by around 8.5% (10% x 0.85) *ceteris paribus*. Home grown accounted for 79% of FY04 revenues (see Exhibit 33). The only US\$-based component of home-grown COGS is fertiliser, which constituted 15% of total COGS in FY04 (see Exhibit 34).

*Little impact of IDR depreciation to value added revenues*

Other US\$ based COGS come from purchases of raw materials (mainly latex and FFB) from third parties. Revenues from third party valued added, however, constituted only 21% of total FY04 revenues (see Exhibit 33). The impact of IDR depreciation to the revenues is insulated because the purchase price and selling price are both denominated in US\$.

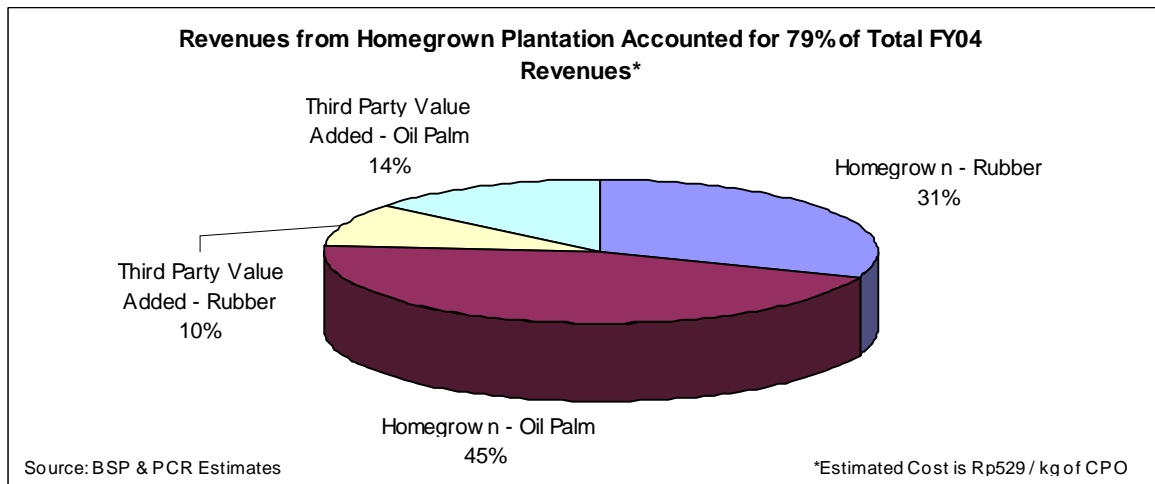
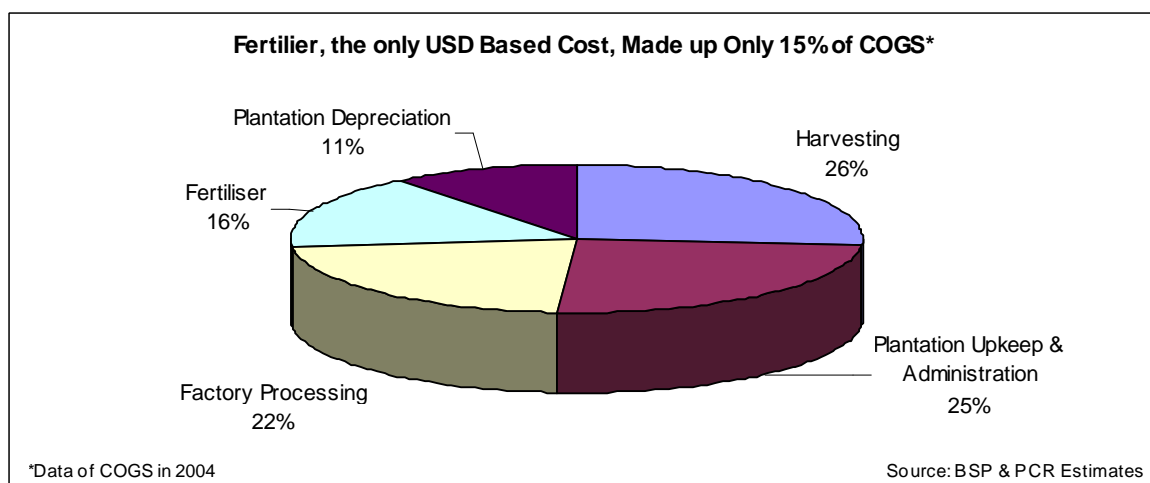


Exhibit 33





**Exhibit 34**

### Long-Term Growth Strategy

*Long-term growth strategy from new planting and a development of seed garden*

BSP's long-term growth strategy will come from two sources: (i) new planting and (ii) a seed garden development. The two sources of growth are inter-linked as new planting requires assurance of seed supply. While the strategy will yield harvest only in the next 4 - 5 years, it is important to implement it now to sustain a high growth in the long term. The strategies are explained as follows:

#### 1. New Planting

*Long overdue new planting.*

BSP has not made any major new planting since the onset of the Asian financial crisis in 1997. The lack of new planting has affected its current growth. BSP has recognised the problem and begun to tackle it with an acquisition of rubber plantations HIM in 2004. However, this is a short-term growth strategy that needs to be supplemented with a cheaper long-term growth strategy through new planting.

*Has capacity to more than triple the plantation size*

BSP has 129,000 ha of land bank and, based on an 80% developable area, can be translated into 103,200 ha planted area, or more than twice the existing 48,500-ha plantation estate (see Exhibit 35). The land bank is located in Central Borneo (39%), East Borneo (35%), and Jambi, Sumatra (26%). Of the total 103,200 ha of net plantable area, around 59.2% (61,100 ha) is estimated to belong to BSP with the remaining to be owned by local plasma farmers or partners.

#### **Land Bank Can be Developed into 103,200 ha Planted Area, more than 2x the Existing Plantation Size**

	Jambi	E Borneo	C. Borneo	Total
	(Agrowiyana)			
	(Ha)	(Ha)	(Ha)	(Ha)
Breakdown of Land Bank by Location	26%	35%	39%	100%
Land Bank	34,000	45,000	50,000	129,000
Estimated Portion of Planted Area	80%	80%	80%	80%
Net Plantable Area	27,200	36,000	40,000	103,200
Estimated Portion to be Owned by BSP*	50.0%	62.5%	62.5%	59.2%
Estimated Planted Area Belonging to BSP	13,600	22,500	25,000	61,100

\*The remaining is assumed to be owned by local plasma farmers or partners

Source: BSP, PCR Estimates

**Exhibit 35**

*Sustainable long term growth from 53,200 ha of new planting*

BSP is expected to plant 3,200 ha in 2005, and 10,000 ha pa in the following 5 years (see Exhibit 36). Hence by 2010, BSP planted area (including immature and plasma plantations) will more than double from around 49,000 ha currently to 103,000 ha in 2010 (see Exhibit 37). The planting will primarily be in oil palm plantation, which takes about 30 months to mature after the initial preparation, including germination, of around 9 - 12 months. The new planting will partially self fund as the harvest from the first batch of planting in 2009 will finance the planting of the next batch and hence create a sustainable growth.

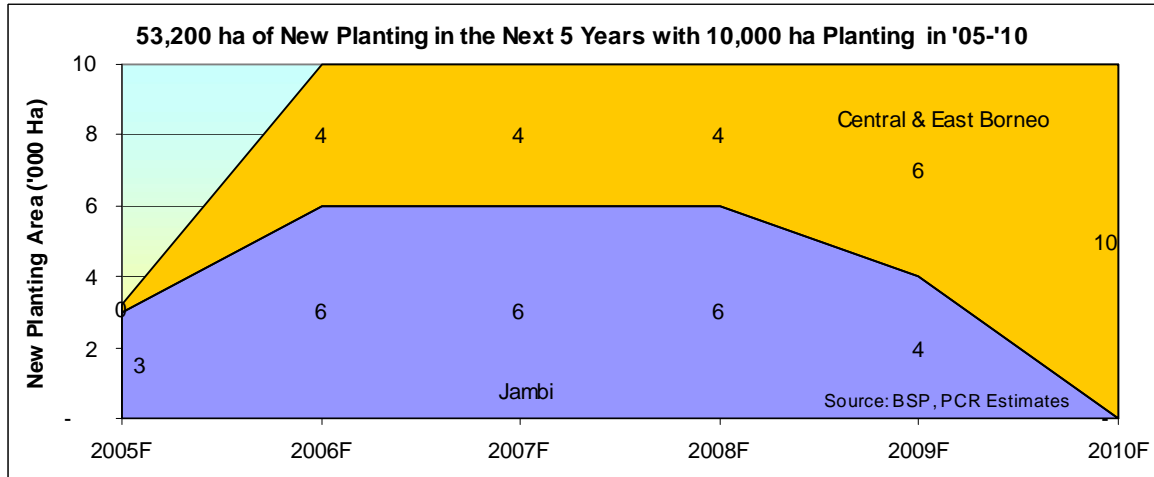


Exhibit 36

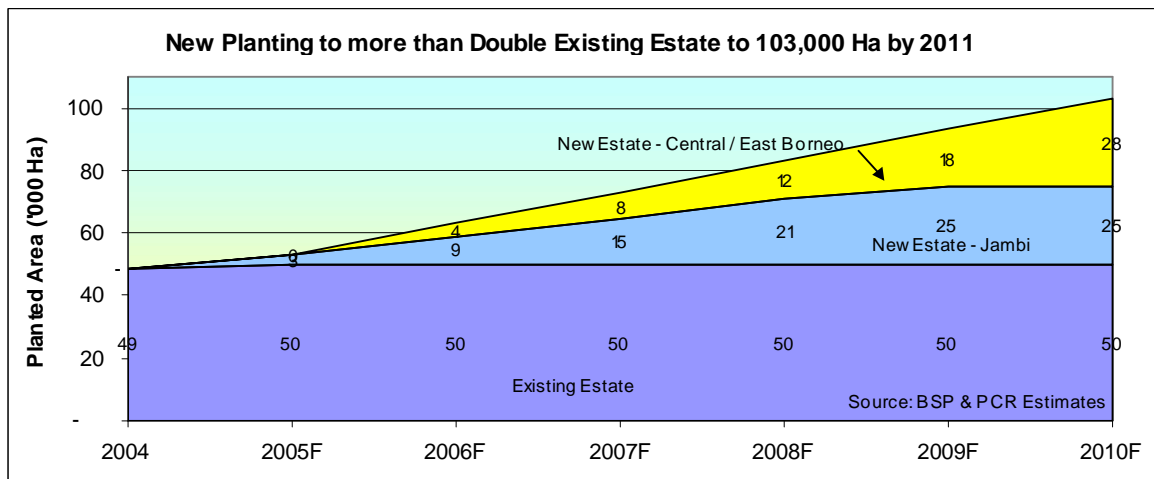


Exhibit 37

*US\$200m capex in over the next 8 years*

We expect BSP to invest Rp950bn (US\$95m) capex in the next 8 years (FY05 - FY13) in new planting (see Exhibit 38). Including cost of construction of new CPO mills to process FFB from new plantations, replanting of existing estates, and maintenance expenditure, total capex is estimated at Rp2.0 trillion (US\$200m). Annual capex is projected to increase from Rp100bn in FY05F to Rp346bn in FY10F due to start-up cost in new planting before coming down when a sizeable portion of the new planting will have matured. The projected capex assumes no further new planting in FY10F onward.

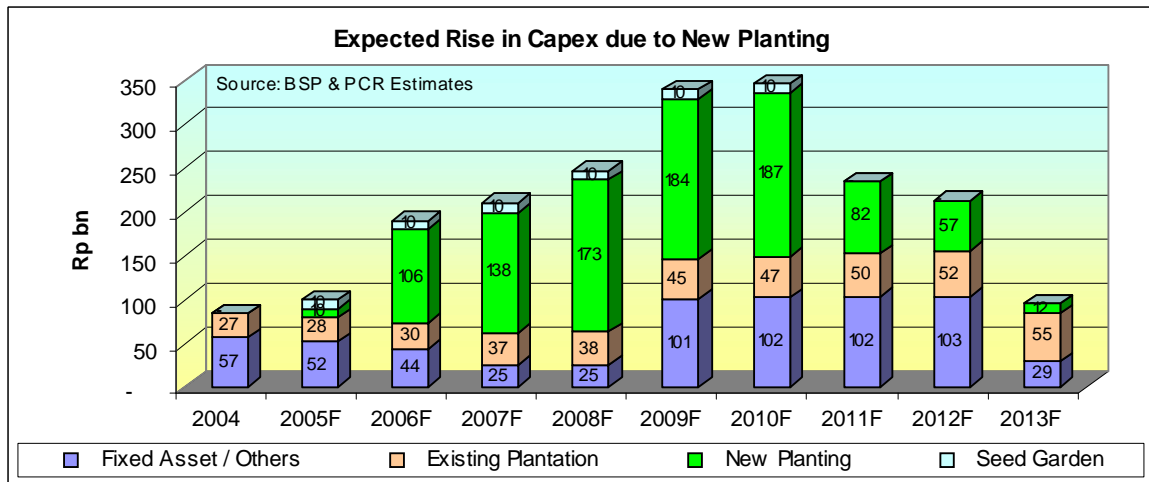


Exhibit 38

*New planting to bolster growth in 2009 onward*

We take BSP's new planting strategy as a sign of its commitment to build a long-term growth. Assuming the first fruit of the new planting will be seen in 2009, FFB production are expected to accelerate to 9%, 18%, and 26% in FY10F, FY11F, and FY12F respectively as the trees mature and enter into their prime age (see Exhibit 39).

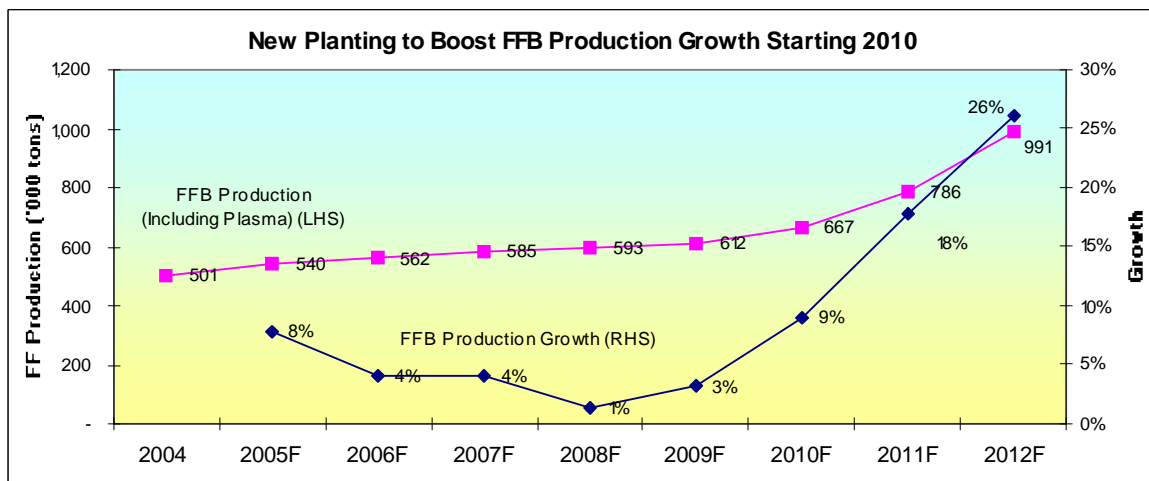


Exhibit 39

2. Seed Garden Development

*Upward integration to build a seed garden*

BSP is making an upward integration to invest US\$6m in the next 6 years to develop a palm oil seed garden. This is a long-term investment as the "harvest" can only be reaped in the next 5 - 8 years. A long period of breeding is required because the existing species need to be crossed to create a superior seed and the superior seeds need to be planted until a few years until they reach a certain age before they can be used as parent stocks. The investment will generate significant benefits in:

- (i) *Ensuring sufficient seed supply for internal demand.* Internal demand for seeds is expected to grow due to (i) 53,200 ha of new planting in the next 5 years and (ii) replanting of existing plantations as some begin to reach the end of life cycle in the next 7 - 10 years. Note that seed shortage has been cited as one of the main reasons for the lack of new planting in large plantations like Astra Agro.
- (ii) *Revenues from sales of seeds.* There is good demand for oil palm seeds in Indonesia due to

- (a) *Large new planting and replanting.* The government estimated that domestic demand for oil palm seeds to increase by a CAGR of 6.2% from 13.2m in 2005 given developments of new plantations and replanting of existing ones.
- (b) *Chronic fake seed problem.* There has been a chronic problem of fake (low quality) seeds in the country and this has negatively affected the yield of many small-medium size plantations in the nation. Worse, the problem often cannot be detected until the harvest time in 3 - 4 year time.
- (c) *Limited domestic suppliers and existence of government's protection.* Currently there are only 6 reputed suppliers of oil palm seed in Indonesia and they enjoy a government's protection. Imports of seeds require permits from these domestic seed suppliers and they will grant it only if they cannot supply the seeds themselves.
- (d) *Limited overseas suppliers.* As Indonesia and Malaysia account for 85% of oil palm production in the world, not many other countries have a capacity to invest in R&D facilities to produce superior oil palm seeds. Malaysian seed producers, which have big resources to undertake the R&D, are prohibited by Kuala Lumpur to export seeds.

*Has secured a strategic partner to develop a seed garden*

To ensure the success of its seed garden development, BSP has secured an agreement with (i) a leading Costa Rican R&D company for supply the initial 10m hybrid seeds or ramets over a few years and (ii) an expert in oil palm breeding to conduct research to develop superior seeds. The seed garden development project is led Messr. Sergeant, BSP's current operation and estate director, who has 40 years of experience in plantation throughout Asia and Africa.

**Funding Strategy**

*High growth strategy is supported by rising funding capacity*

We believe BSP's high growth strategy that involves acquisitions and new planting are well timed and supported by its ability to raise funds from the capital market, banks, strategic partners, and internal cash flow. The timing to raise funds is right because of:

- (i) *Rising creditors' confidence.* This will be evident in its ability to be one of a few Indonesian corporate that is expected to be able to raise US\$60m – US\$70m debts in 4Q:05 when the country is plagued with concerns over depreciating IDR and rising fuel price. Further, BSP is able to raise the new debts at a lower interest rate and much fewer restrictive debt covenants than the existing one. The new debts will refinance the existing US\$50m loan, which cost SIBOR + 3.5%, at a lower cost of SIBOR + 2.25%.
- (ii) *Significant equity investors' interest.* This is as evident by its ability to successfully make a Rp267bn cash call, the first cash call since its listing, last year. We expect BSP to make another successful cash call in 2006.
- (iii) *Great interests from foreign strategic partners.* There is evidence of great interests from foreign investors, primarily from Malaysia, China, and Middle East, in capitalising Indonesia's vast potentials in oil palm plantation. We understand that BSP has been approached by foreign strategic investors and believe that any venture with them will give a significant boost to BSP's growth.
- (iv) *Strengthening balance sheet.* Despite projected US\$200m capex in the next 7 years (FY05F - FY12F) and a steady 20% dividend payout assumption, we expect BSP to be able to chop its net gearing by a half from 1.31x in FY04 to 0.65x in FY06F and be in net cash position by FY11F (see Exhibit 40). The fall in gearing is due to:

- (a) *Low working capital requirement.* BSP has low account receivable and inventory turnovers of around 3 weeks each. A significant portion of BSP's sales is cash on delivery with some advanced payments. The working capital funding is reduced by its typical payable turnover of around 2.5 - 3.0 weeks, resulting in net working capital funding of only 25 days. Given the low working capital requirement, a significant increase in projected revenues will require little financing.
- (b) *Beneficiary of weakening rupiah.* Given its US\$-based revenues, BSP is the net beneficiary of weakening rupiah and hence its balance sheet is not significantly affected by expected IDR depreciations over time. Our sensitivity analysis suggests that, based on US\$53m loan (before refinancing) and FY05F pretax profit projection, a 10% decline in the rupiah exchange rate will increase pretax profit by Rp18bn in 2005. Based on new debts of US\$73m and FY06F projected pretax profit, a 10% decline in the value of rupiah will increase pretax profit by Rp8bn.
- (c) *Divestment of Kilang Vecolina (Vecolina),* which eliminated Vecolina's Rp33bn debts from BSP's book in Sept 05.
- (d) *Strong growth of net profit with a 31% CAGR in FY04 - FY07F*

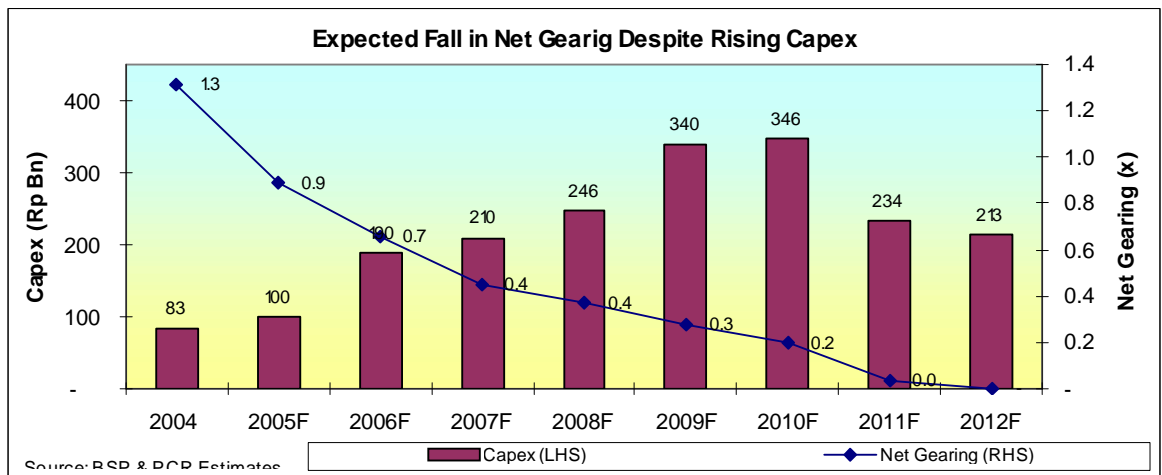


Exhibit 40

## RUBBER INDUSTRY ANALYSIS

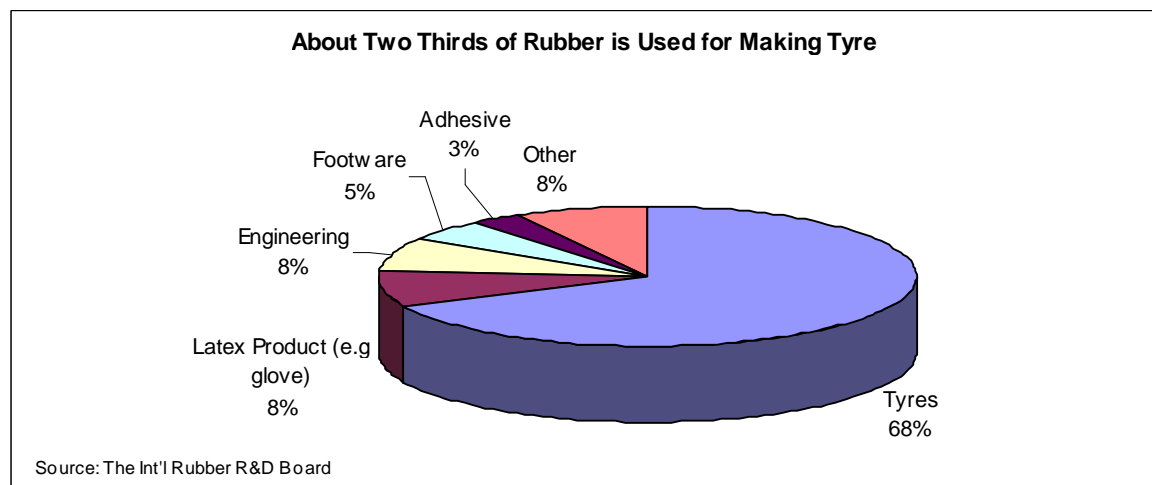
### Product Description

*Two types of rubber: natural and synthetic*

Rubber is an elastic hydrocarbon polymer that occurs as a milky emulsion (known as *latex*) in the sap of plants primarily *Hevea brasiliensis*. However, rubber can also be produced synthetically from petroleum and other minerals. While natural rubber has been available for centuries, synthetic rubber was not developed to the level where it could rival natural rubber until after World War II.

*Rubber is used mainly for making tyre...*

About two thirds of natural rubber production in the world is used for making tyre (see Exhibit 41). The remaining is for latex products like glove and condom (8%), engineering products like hose and engine mounting (8%), footwear like shoe soles and slippers (5%), adhesive (3%), and others such as upholstery, mattresses, carpet, rubber band, pencil eraser, medical catheters, and electrical insulation (cables).



**Exhibit 41**

*...Mainly heavy-duty tyre*

As most of the time the price of natural rubber is higher than that of synthetic rubber, the biggest usage of natural rubber is in the important, heavy-duty purposes that cannot risk using synthetic rubber. The largest usage is in truck tyres, which account for an estimated one third of total natural rubber consumption, as they contain up to 80% of natural rubber. Other important usages are aircraft tyres and earthmover tyres. Passenger car tyres typically contain a relatively small amount of natural rubber although they remain significant given their large quantity. In general radial-ply tyres tend to contain a higher proportion of natural rubber than normal tyres. Rethreading of tyres also requires large amount of natural rubber and most heavy-duty tyres are rethreaded several times. Tyres production in the world are dominated by the three largest producers: Goodyear (based in the USA), Michelin (France) and Bridgestone / Firestone (Japan).

*Natural rubber has unique, non-substitutable properties*

Natural rubber has properties that cannot be substituted by synthetic rubber. Only natural rubber has the capacity to dissipate the heat generated by tyre during operation. Natural rubber is also able to dissipate the heat generated in landing and take-off of aircraft. It is also capable of withstanding the low temperatures encountered at high altitude and rapid transitions in temperature and, hence, it is used in space shuttle. Natural rubber is important in increasing grip on snow and ice. Even synthetic rubber needs to have some content of natural rubber to increase strength.

## **Cultivation and Harvesting**

*Rubber tree is a tropical tree*

Rubber tree grows best at temperatures of 21-28°C (Celsius degrees), in areas with an annual rainfall of just under 2,000mm, which is close to that of oil palm tree at 1,829mm. These features, and its preferred altitude of around 600 metres from sea surface, mean that its best growing area is in tropical areas, around 10 degrees on either side of the equator, like Indonesia, Malaysia, and Thailand. Rubber is also cultivated further north in China, Mexico, and Guatemala.

*It does not costs more to plant rubber tree than oil palm tree*

Replanting of rubber tree costs around Rp20m per ha, which seems more expensive than that of oil palm at Rp15m - 18m / ha (see Exhibit 42). This is partly because soils have to be ploughed 4x for planting rubber tree compared to 2x in oil palm tree to ensure no disease on the root of rubber tree. However, after taking into Rp4m/ha value of rubber wood that can be sold in mature rubber plantations, the effective cost for replanting rubber trees at around Rp16m/ha is about the same as that of oil palm.

*Rubber plantation requires less fertiliser and has a higher density rate*

Rubber plantation advantages are that it requires less fertiliser (2.0 - 3.5 kg p.a.) compared to oil palm (7.5 kg p.a.) as the former does not yield fruit (see Exhibit 42). Further, rubber plantation can have a higher density rate (400 - 500 trees per ha) compared to oil palm plantation (130 - 144 trees / ha) as oil palm tree has wide long leaves (the crown) that take spaces whereas rubber tree is slim. The few disadvantages of rubber plantation are that it takes longer time (6 years) to harvest compared to 3.5 years in oil palm plantation and its harvesting is more labour intensive at every 3 days compared to every 7 - 10 days for oil palm plantation.

### **Comparison of Oil Palm and Rubber Tree**

	<b>Oil Palm Tree</b>	<b>Rubber Tree</b>
<b>Planting</b>		
Cost of Planting	Rp15-18m / ha	Rp20m / ha
Number of Trees Per Ha	130 -144	400 - 500
Fertiliser required	7.5 Kg p.a.	2.0 - 3.5 Kg p.a.
<b>Harvesting</b>		
Time to Harvest (Including Nursery Period)	3.5 years (39 - 42 months - but new superior seeds can yield fruit in 3 years or 33 - 36 months )	6 years (72 months but new superior tree can be harvested in 5 years or 60 months)
Yield	Up to 27 tons of FFB / Ha	1.30 - 1.45 tons of latex / Ha
Harvesting Cycle	Every 7 - 10 days	Every 3 days
Life Span of in Plantation	25 years	25 years
Use of the Wood	Currently researched for turning palm wood into MDF (Medium Density Board), plywood and human food	For timber, plywood, MDF. Matured rubber wood is worth around Rp3-4m / ha
Source: BSP, Industries		

### **Exhibit 42**

*Revenues/ha of rubber tree is similar to that of oil palm*

Based on BSP's FY05F average rubber plantation yields at 1.36 tons/ha and FY05F average rubber price at US\$1,351/ton, BSP's rubber plantations generates around US\$1.83m/ha. This is similar to US\$1.80m/ha generated from its palm oil plantations, which yield 4.7 tons of CPO and 0.86 ton of PK / ha at FY05F average price of US\$341 /ton for CPO and US\$223 / ton for PK.

*Yield on rubber tree depends on the tapping system used*

Yield on rubber tree depends on the tapping system used (see Exhibit 43). Tapping involves periodically cutting the bark of tree trunk, and hence severing latex vessels of rubber tree. Tapping productivity is a critical issue in maintaining a sustainable supply of natural rubber over its 25-year life span. Rubber tree can yield very high latex if tapped extensively in a given period but it will shorten the life of the tree and reduce the yield in the subsequent periods. Typically, tapping system is designed to maximise yield for the 25-year life span of rubber

tree. The highest yield is usually on the 7<sup>th</sup> or 8<sup>th</sup> years, then it declines before rising again to the peak in the 20<sup>th</sup> and 21<sup>st</sup> years when the tree is fully tapped ahead of its replanting in the 25<sup>th</sup> year (see Exhibit 43).

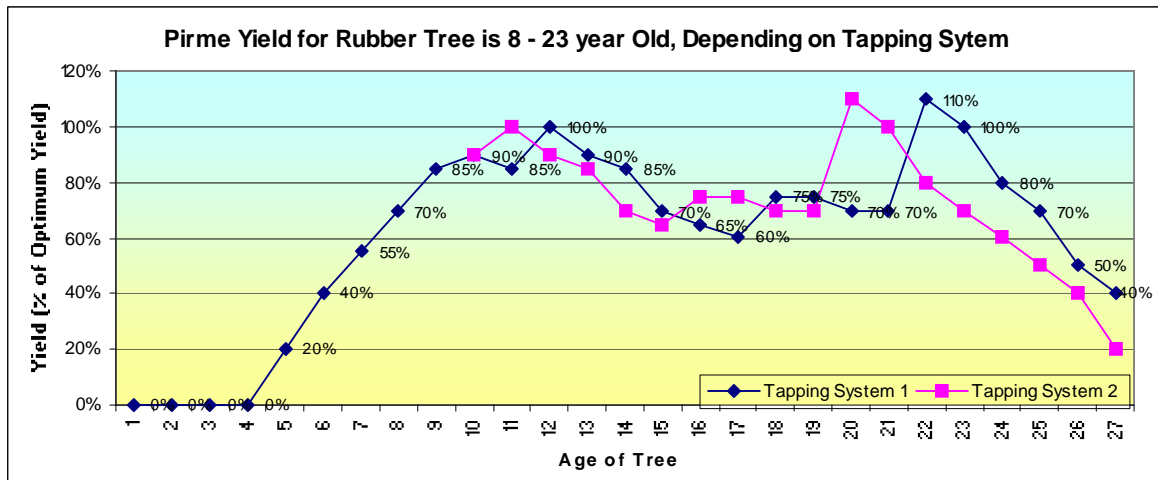


Exhibit 43

### Processing

Unlike oil palm processing which extracts only around 20% CPO from fresh fruit bunch, rubber processing allows 100% of raw latex to be made into finished products. Latex is processed in a rubber factory to become several types of rubbers (see Exhibit 44) primarily:

1. *Cream / centrifuged latex.* Cream latex and centrifuged latex maintain latex in its liquid form and they are the highest grade of finished goods as they have the highest rubber content. To produce them, raw latex must be processed to remove some water, dirt, and undesired materials before it is preserved with ammonia. The process is either through a chemical-oriented (creaming) process to produce *cream* latex, which is a more expensive product, or through a mechanical-oriented (centrifugal) process to produce *centrifuged* latex. Cream latex and centrifuged latex are primarily used to produce gloves, condom, balloon, etc. For medical purposes, only high quality latex is used to produce surgical gloves whereas lower quality one is for examination glove.
2. *Ribbed smoked sheet (RSS).* Latex can also be processed through "smoking" process to turn it into sheets called ribbed smoked sheets (RSS). RSS is generally priced below centrifuged latex and is used for heavy-duty applications like truck tyres. RSS are graded based on an international standard into 6 grades: RSS IX, RSS 1, RSS 2, RSS 3, RSS 4, and RSS 5.
3. *Crumb rubber.* Excess from cream and centrifuged latex processing, cup lump (latex that has coagulated because it is left too long on the cup during tapping or it is purposely coagulated to preserve latex during long transports) are usually processed to produce crumb rubber. Crumb rubber is often called TSR (Technically Specified Rubber) in the international market. Crumb rubber made in Indonesia is called SIR (Standard Indonesian Rubber), made in Thailand STR (Standard Thai Rubber), and made in Malaysia SMR (Standard Malaysian Rubber). BSP produces premium grade SIR called SIR 3CV and lower grade SIR 10 and SIR 20. Crumb rubber is generally priced lower than smoked sheets (RSS) and is used primarily for tyre. Most of exports from Indonesia are in the form of crumb rubber (SIR).
4. *Block Skim Rubber.* By products of crumb rubber, RSS, cream / centrifuged latex can be further processed to make block skim rubber, which has a low rubber content. It is the cheapest (lowest grade) of all rubber types mentioned here and is usually used for making slippers and shoe sole.



### Types of Rubber and Their Usage

Value	Form	Raw Material	Name	Usage
Highest	Liquid	Raw latex	Cream latex	Glove, condom, balloon
2nd	Liquid	Raw latex	Centrifuged Latex	Glove, condom, balloon
3rd	Solid	Raw latex	Ribbed Smoked Sheet (RSS)	Tyre, engine part
4th	Solid	Excess Latex	Crumb Rubber like Standard Indonesian Latex (SIR) 3L, 3CV,	Heavy duty tyre, engine part
5th	Solid	Cup Lump*	Crumb Rubber like Standard Indonesian Latex (SIR) 10 & 20	Tyre, engine part
Low est	Solid	Byproduct of SIR, RSS, cup lump*	Block Skim Rubber	Shoe sole, slipper

\* Cup Lump is latex that has hardened to become solid substance. It is usually found on tapping cups  
Source: BSP, Industries

### Exhibit 44

### Supply and Demand

#### Increasing share of natural rubber production

Since 1960 synthetic rubber production has surpassed that of natural rubber. However, production of natural rubber as a percentage of total rubber production had increased by 2.8 percentage points from 39.1% in 1997 to 41.9% in 2004 (see Exhibit 45). This was in line with a higher growth of natural rubber production at a CAGR of 4.2% in the period reaching 8.8m tons in 2004 compared to a 2.5% CAGR of synthetic rubber production to 12.2m tons.

### Declining Trend of Synthetic Rubber Production Compared to Natural Rubber Production

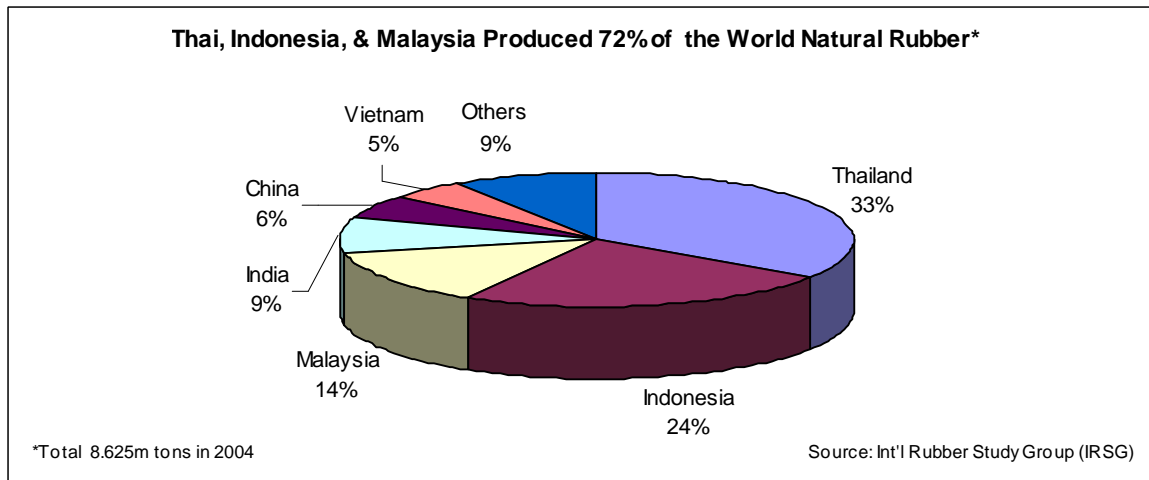
	1997	1998	1999	2000	2001	2002	2003	2004	2005F	CAGR 97-04	CAGR '97-'05F
<b>Production</b>											
Natural Rubber	6.47	6.82	6.87	6.73	7.25	7.34	7.99	8.62	8.78	4.2%	4.2%
Synthetic Rubber	10.08	9.88	10.34	10.83	10.49	10.90	11.45	11.95	12.19	2.5%	2.5%
<b>Total</b>	<b>16.55</b>	<b>16.70</b>	<b>17.21</b>	<b>17.56</b>	<b>17.74</b>	<b>18.24</b>	<b>19.44</b>	<b>20.57</b>	<b>20.97</b>	<b>3.2%</b>	<b>3.2%</b>
<b>Production Growth</b>											
Natural Rubber		5.4%	0.7%	-2.0%	7.7%	1.2%	8.9%	7.9%	1.9%		
Synthetic Rubber		-2.0%	4.7%	4.7%	-3.1%	3.9%	5.0%	4.4%	2.0%		
<b>Total</b>		0.9%	3.1%	2.0%	1.0%	2.8%	6.6%	5.8%	1.9%		
<b>Production Composition</b>											
Natural Rubber	39.1%	40.8%	39.9%	38.3%	40.9%	40.2%	41.1%	41.9%	41.9%		
Synthetic Rubber	60.9%	59.2%	60.1%	61.7%	59.1%	59.8%	58.9%	58.1%	58.1%		
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>		

Source: IRSG

### Exhibit 45

#### S.E. Asia is the world largest producer of natural rubber

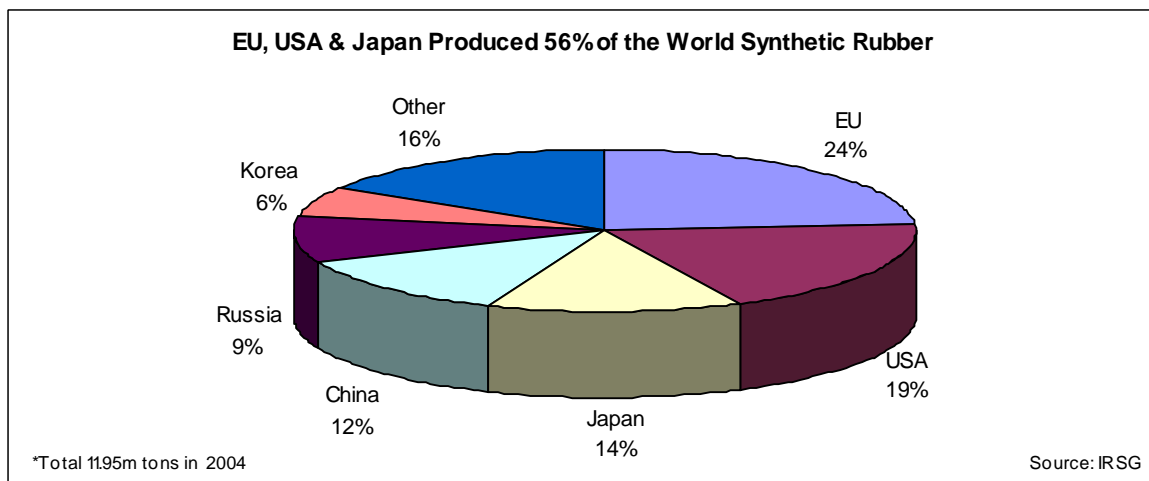
Given natural rubber preferred habitat in tropical areas, it is no wonder that S.E. Asia is the world largest producer of natural rubber (see Exhibit 46). The biggest producer is Thailand, which accounted for 33% of total world production at 8.6m tons in 2004. This was followed by Indonesia (24%), Malaysia (14%), India (9%), China (6%), Vietnam (5%) and others (9%). The main reason why there has been little supply of natural rubber from South America, where rubber tree originates, is that a fungal disease (leaf blight) wiped out a lot S. American trees in the past and it is still present today. On the other hand, South East Asia has only encountered a few cases, all from different, less damaging, varieties of leaf blight.



**Exhibit 46**

*Developed countries are the main producers of synthetic rubber*

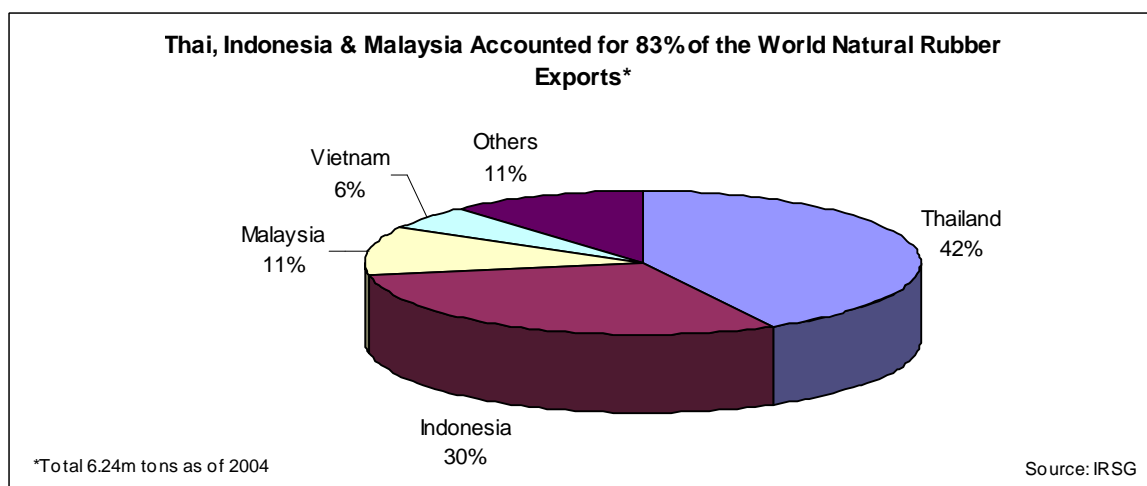
Contrary to natural rubber, whose main producers are developing countries, synthetic rubber is mainly produced by developed countries as they have the most advanced processing technology. Fifty six percent of synthetic rubber in the world is produced in 3 developed countries / region: European Union (24%), the USA (19%), and Japan (14%) (see Exhibit 47). The remaining came from China (12%), Russia (9%), S. Korea (6%) and other countries (16%).



**Exhibit 47**

*Thailand, Indonesia, and Malaysia accounted for 83% of the world natural rubber exports*

Eighty three percent of world exports of natural rubber came from three S.E. Asian countries: Thailand (42%), Indonesia (30%), and Malaysia (11%) (see Exhibit 48). Vietnam ranked 4<sup>th</sup> with a 6% share while the rest of the world had just 11%. Note that although India and China are large producers, they consume natural rubber internally and, in fact, are net importers.



**Exhibit 48**

*China, USA, and Japan are the largest consumer and importer of natural rubber*

Forty five percent of natural and synthetic rubber is consumed by 3 countries: China (20%), the USA (15%) and Japan (10%) (see Exhibit 49). The three countries are also the largest importers of natural rubber (NR) accounting for more than a half (53%) of total imports in 2004 (see Exhibit 50). Next biggest importers were S. Korea (6%), France (5%) and Germany (5%) while the rest of the world made up the remaining 31%.

**China, USA, and Japan Constituted 45% of Natural Rubber Consumption**

In 2004	China	USA	Japan	Germany	France	S. Korea	Others	Total
<b>Natural Rubber Consumption (m n Tons)</b>								
Natural Rubber	1,630	1,144	815	220	230	352	3,890	8,280
Synthehtic Rubber	2,438	1,904	1,146	625	420	339	4,879	11,750
<b>Total</b>	<b>4,068</b>	<b>3,048</b>	<b>1,961</b>	<b>844</b>	<b>650</b>	<b>691</b>	<b>8,769</b>	<b>20,030</b>
<b>Share of World Consumption</b>								
Natural Rubber	20%	14%	10%	3%	3%	4%	47%	100%
Synthehtic Rubber	21%	16%	10%	5%	4%	3%	42%	100%
<b>Total</b>	<b>20%</b>	<b>15%</b>	<b>10%</b>	<b>4%</b>	<b>3%</b>	<b>3%</b>	<b>44%</b>	<b>100%</b>
<b>Percentage</b>								
Natural Rubber	40%	38%	42%	26%	35%	51%	44%	41%
Synthehtic Rubber	60%	62%	58%	74%	65%	49%	56%	59%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: Int'l Rubber Study Group

**Exhibit 49**

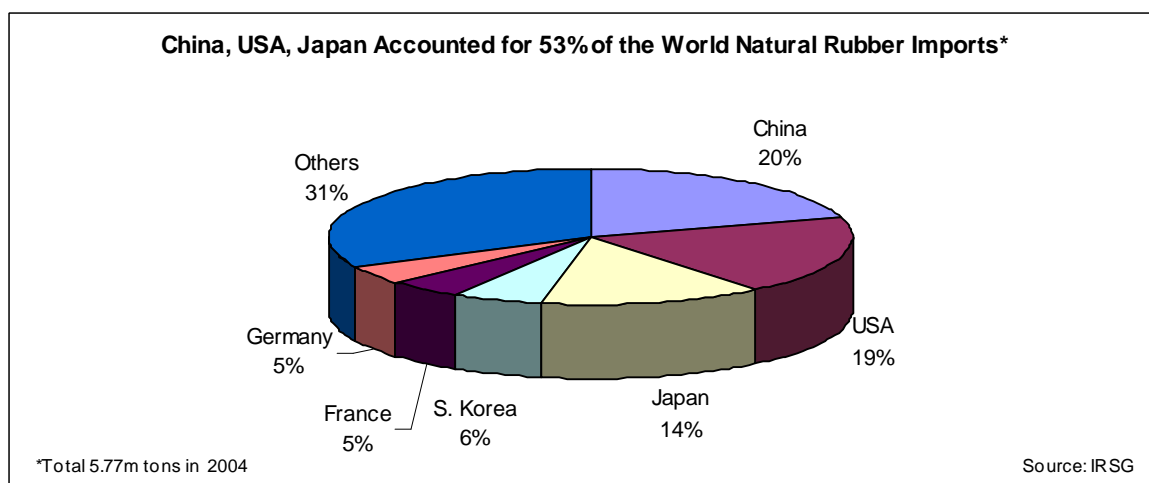


Exhibit 50

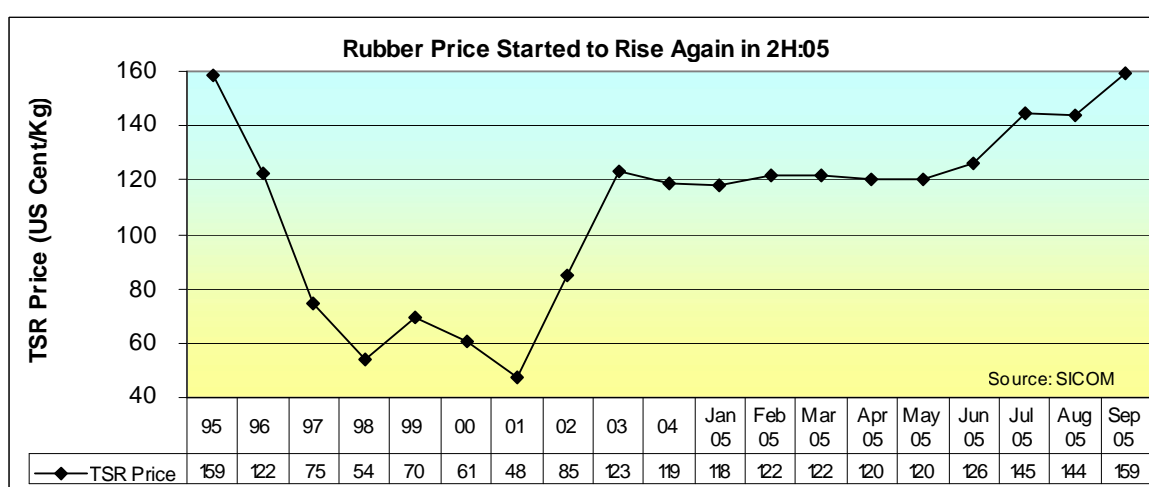


Exhibit 51

### Price Outlook

*Price has recovered to near 1995 level*

Rubber price plummeted 70% from US\$1.59/Kg in 1995 to US\$0.48/Kg in 2001 partly due to the global economic slowdown, Asian financial crisis and the collapse of INRO (International Natural Rubber Organisation) (see Exhibit 51). The price has since recovered to near 1995 level, reaching US\$1.44/kg in Aug 05 driven by high petroleum price and the global economic growth especially in China. In particular, the pick up started again in 2H:05.

*Expect rubber price to continue rising in the medium term*

We forecast BSP's average rubber price to increase by US\$81/ton (+6.4%) in FY05F to US\$1,351/ton, US\$42/ton (+3.1%) to US\$1,393/ton in FY06F and US\$35/ton (+2.5%) to US\$1,428/ton in FY07F due to (i) the persistently high petroleum price, (ii) a trend of rising consumption of natural rubber, (iii) high growths of vehicle sales in Asia, (iv) a low growth in rubber inventory, and (v) a lagging increase in rubber price compared to petroleum price in 2005 as explained below:

1. *Persistently high petroleum price.* The persistently high price of petroleum, the raw material for synthetic rubber, since early 2004 and an expectation that it will remain high for a considerable period of time have given many consumers reasons to seriously switch from synthetic rubber to natural rubber for a long term strategy while building up their natural rubber inventories. This is a lagging affects as more companies are increasingly convinced of the outlook of high petroleum price in long term and this will continue pushing up rubber price in the near term. IRSG forecast that natural rubber consumption will increase by 5.3% in 2005 whereas that of synthetic rubber to grow only by 2%, the lowest in the past 4

years (see Exhibit 52a). Strong economic growths in China and the US, hurricane impacts to the US's major oil production centres along with the fact that the current petroleum price is not as high as its peak in the past in term real (inflation adjusted) price mean that there is a room for a further rise in oil price, or at least to keep it at a high level in the near future.

**Consumption Growths of Natural Rubber Exceeded those of Synthetic Rubber during 1997 -2005F**

	1997	1998	1999	2000	2001	2002	2003	2004	2005F	CAGR 97-04	CAGR '97-'05F
<b>Consumption</b>											
Natural Rubber	6.47	6.57	6.64	7.32	7.19	7.54	7.95	8.28	8.72	3.6%	3.8%
Synthetic Rubber	<u>10.00</u>	<u>9.87</u>	<u>10.20</u>	<u>10.72</u>	<u>10.25</u>	<u>10.74</u>	<u>11.38</u>	<u>11.75</u>	<u>11.98</u>	<u>2.3%</u>	<u>2.3%</u>
<b>Total</b>	<b>16.47</b>	<b>16.44</b>	<b>16.84</b>	<b>18.04</b>	<b>17.44</b>	<b>18.28</b>	<b>19.33</b>	<b>20.03</b>	<b>20.70</b>	<b>2.8%</b>	<b>2.9%</b>
<b>Consumption Growth</b>											
Natural Rubber		1.5%	1.1%	10.2%	-1.8%	4.9%	5.4%	4.2%	5.3%		
Synthetic Rubber		<u>-1.3%</u>	<u>3.3%</u>	<u>5.1%</u>	<u>-4.4%</u>	<u>4.8%</u>	<u>6.0%</u>	<u>3.3%</u>	<u>2.0%</u>		
Total		-0.2%	2.4%	7.1%	-3.3%	4.8%	5.7%	3.6%	3.3%		
<b>Consumption Composition</b>											
Natural Rubber	39.3%	40.0%	39.4%	40.6%	41.2%	41.2%	41.1%	41.3%	42.1%		
Synthetic Rubber	<u>60.7%</u>	<u>60.0%</u>	<u>60.6%</u>	<u>59.4%</u>	<u>58.8%</u>	<u>58.8%</u>	<u>58.9%</u>	<u>58.7%</u>	<u>57.9%</u>		
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		

Source: IRSG

**Exhibit 52a**

2. *Trend of rising consumption of natural rubber vs. synthetic rubber.* According to IRSG, the share of natural rubber (NR) consumption to total rubber consumption had increased by 2 percentage points over the past 7 years from 39.3% in 1997 to 41.3% in 2004 and is expected to increase further to 42.1% in 2005 (see Exhibit 52a). The forecast consumption growth of NR in 2005 at 5.3% is more than twice as high as that of synthetic rubber at 2.0%, a huge gap that has not been seen in the past 6 years. The increasing demand for NR reflects consumers' confidence in the sustainability of NR supply, liking of its non-substitutable properties, and competitiveness of its price, which will remain given the high petroleum price.
3. *Strong growth of automobile and motorcycle sales in Asia.* The three most populated countries in Asia - China, India and Indonesia - are seeing strong growths in the demand for automobile and motorcycles. In 2005, Indonesia is expected to post an 18% growth in car sales to 0.5m and a 20% surge in motorcycles to 4.7m while India is looking at a 14% growth in auto sales. China, whose local car and motorcycle industries have begun to export their products, is the chief driver. It is looking to increase tyre production by 28% to 92.1m units this year while bolstering industrial products made of rubber such as hoses, belts and gaskets to support the surging auto industry and export demand.
4. *Low inventory growth in 2005.* In 2005, IRSG forecast ending inventory of natural rubber to increase by only 2.6%, much lower than the 16.4% growth seen in 2004 (see Exhibit 52b). Dry weather in the first half of 2005 and heavy raining in 4Q:05 in Thailand are expected to cut Thailand's production by 10% to 2.66m tons in 2005. Malaysia's rubber output is expected to fall 2% to 1.14 m tons in 2005 due to dry weather and falling rubber plantation acreage. Typhoon in China - especially in Hainan, which produces 60% of China rubber - is expected to chop China's rubber supply by 13% (0.5m tons) in 2005 and this will not recover soon as it takes 6 years to grow new rubber trees. Despite a 9% increase in Indonesia's output this year to 2.25m tons, the supply of rubber will remain tight.

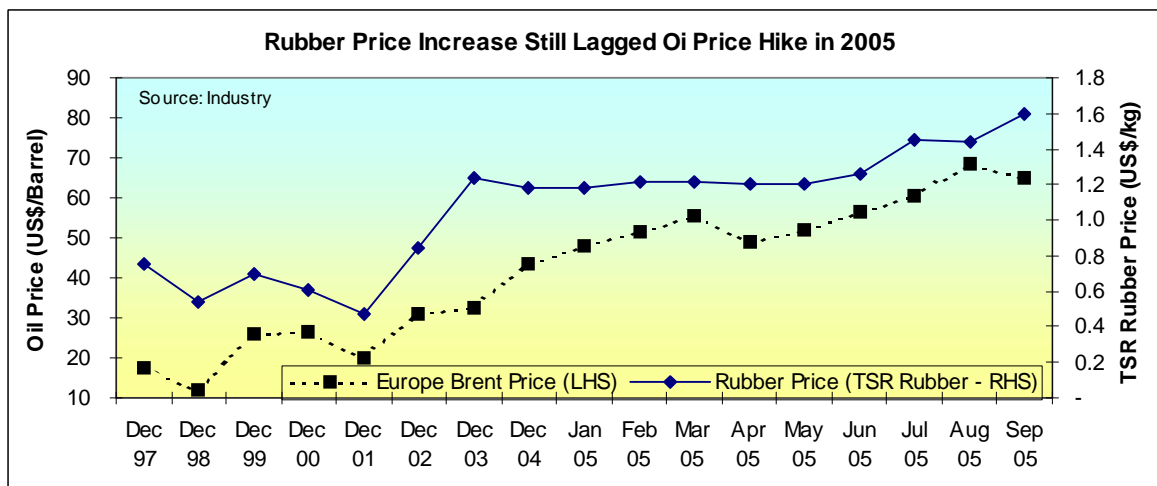
**Ending Inventory of Natural Rubber Grew at much Lower Rate than Synthetic Rubber in 1997 -2005F Despite Its Higher Production Growth**

	1997	1998	1999	2000	2001	2002	2003	2004	2005F	CAGR 97-04	CAGR '97-'05F
<b>Ending Inventory</b>											
Natural Rubber	2.15	2.40	2.76	2.17	2.23	2.03	2.07	2.41	2.47	1.6%	1.6%
Synthetic Rubber	2.40	2.41	2.70	2.81	3.05	3.21	3.30	3.50	3.71	5.5%	5.5%
<b>Total</b>	<b>4.55</b>	<b>4.81</b>	<b>5.46</b>	<b>4.98</b>	<b>5.28</b>	<b>5.24</b>	<b>5.37</b>	<b>5.91</b>	<b>6.18</b>	<b>3.8%</b>	<b>3.8%</b>
<b>Ending Inventory Growth</b>											
Natural Rubber		11.6%	15.0%	-21.4%	2.8%	-9.0%	2.0%	16.4%	2.5%		
Synthetic Rubber		0.4%	12.0%	4.1%	8.5%	5.2%	2.8%	6.1%	6.0%		
<b>Total</b>		<b>5.7%</b>	<b>13.5%</b>	<b>-8.8%</b>	<b>6.0%</b>	<b>-0.8%</b>	<b>2.5%</b>	<b>10.1%</b>	<b>4.6%</b>		

Source: IRSG

**Exhibit 52b**

5. *Lagging increase of rubber price compared to petroleum price in 2005.* While the price of crude oil (petroleum) has increased by 50% since Dec 04 to Sep 05, the price of natural rubber has increased only 34% (see Exhibit 53). This leaves a room for a further increase in natural rubber price, as, historically, there was a strong correlation between crude oil price and natural rubber price. Further, many buyers of natural rubber had purchased 6-month forward contracts and hence the impact of the recent rise in oil price has not been reflected.



**Exhibit 53**

6. *Intervention of IRCo.* International Rubber Corporation (IRCo) is looking to further increase natural rubber (NR) price. IRCo, which consists of the 3 largest NR exporters Thailand, Indonesia and Malaysia, controls around 83% of natural rubber exports.

## OIL PALM INDUSTRY ANALYSIS

### Product Description

Palm oil is a form of edible vegetable oil obtained from the fruit of oil palm tree (*Elaeis guineensis* Jacq - for more information refer to [www.uga.edu/fruit/oilpalm.htm](http://www.uga.edu/fruit/oilpalm.htm), [http://en.wikipedia.org/wiki/Palm\\_oil](http://en.wikipedia.org/wiki/Palm_oil)). Although oil palm can reach 60-80 ft in height in nature, it is rarely more than 20 - 30 ft in cultivation. Old or dead leaves are often pruned off to facilitate harvest in plantations. Wild palms are said to reach 200 years of age. However, cultivated palms are removed after about 25 years, when they reach about 30 ft in height, since this presents difficulty in harvesting and has low yield. Oil palms are insect pollinated in nature.

### Cultivation

Oil palm thrives in hot, wet tropical lowlands. The major production regions receive at least 6 ft (1,829mm) of rain per year, evenly distributed, with at least 4 inches (102mm) per month if a short dry season exists. Areas with a strong dry season and less than 6 ft (1,829mm) of annual rainfall have yields of 25-75% of their potential. Optimal temperatures are in the 80s - 90s °F (26.7 – 32.2 °C), with temperatures below 75°F (23.9°C) slowing down growth.

#### *Three types of oil palm species*

There are three naturally occurring forms of the oil palm fruit:

- (i) *Dura*. The *dura* form has a thick endocarp / shell (up to 1/4") such that the mesocarp (the "meat") occupies only 35-65% of the fruit. However, yield and fruit weight are highest in *dura*
- (ii) *Tenera*. The *tenera* form has a thin endocarp (<1/8") and thick (55-96%) mesocarp. Yield and fruit weight are lower in *tenera*, although *tenera* produces fruit with higher oil content.
- (iii) *Pisifera*. The endocarp is absent in the *pisifera* form, and it may be female sterile, lacking seed entirely. Pure *pisifera* are undesirable from a commercial standpoint since they have low yield and are too vigorous. However, they have been extremely important in breeding.

#### *Newly breed oil palm to have a greater oil yield and lower height and smaller leaf size*

Since palm oil comes from the mesocarp of the fruit, early breeding work focused on *tenera* types or on *dura* types with high mesocarp such as 'Deli'. It was revealed that *tenera* types were, in fact, the first generation of well known hybrids of *dura* x *pisifera* crosses. Today, oil palm culture is based mostly on *tenera*, and breeding focuses on maximizing oil yield and reducing height and leaf size.

#### *Advanced tissue culture (cloning) technology produces superior seeds*

Oil palm is naturally propagated by seed. However, tissue culture (cloning) of oil palm is carried out on a commercial scale, producing clones of superior types. This is done by many large plantation companies that have their own oil palm breeding or research centres like the one in Costa Rica with whom BSP has a partnership to build an oil palm breeding / seed garden. Good, pre-germinated seed, which are sold at as much as US 50 cents/each, are sown in black plastic bags and grown in a nursery for 9-16 months before transplantation to the field.

### Harvesting

#### *The three layers of oil palm fruit*

Oil palm fruit is reddish, about the size of a large plum and grows in large bunches (see Exhibit 54). Each fruit consists of 3 layers: a seed (the palm kernel) inside a shell (endocarp), which is surrounded by a soft oily fibrous "meat"(mesocarp). Oil extracted from the "meat " is called Crude Palm Oil (CPO) and from the seed (kernel) Palm Kernel Oil (PKO).



Exhibit 54

*Oil palm has a long (17) year period of high yield*

A bunch of fruits, which is called fresh fruit bunch or FFB, can weigh between 10 to 40 kg each and has up to 2,000 individual fruits. For every FFB, one typically extracts (i) 20% - 22% of CPO and (ii) 4% of Palm Kernel (PK) translating into 1.6% of Palm Kernel Oil (PKO). One hectare of plantation typically yields 25 - 28 tons of FFB per annum during the long (17 years) period of prime age, i.e. from 7 - 24 years old (see Exhibit 55). Oil palm can usually be harvested within a short period of 3.5 years and is usually re-planted after 25 years. The optimal density rate is about 130 - 144 trees / ha.

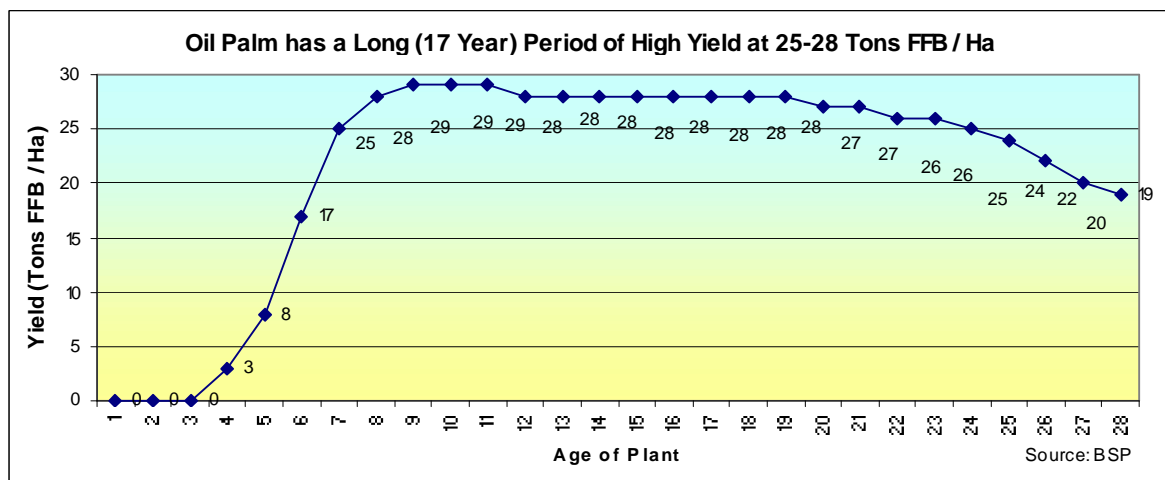


Exhibit 55

*Yield of oil palm is the highest among major vegetable oil trees*

FAO data in 2003 showed that oil palm plantation by far had the highest yield among the world's top 6 vegetable oil plantations, which include soybean, rapeseed, sunflower, coconut and peanut (see Exhibit 56). The average yield of oil palm plantation in the world was 2,466 kg of oils /ha, nearly 5 times as much as that of its nearest competitor rapeseed plantation at 504 kg/ha and nearly 9 times as high as that of soybean at 336 kg/ha. Oil palm plantation's high yield and few diseases / pestilences have made palm oil a great choice to replace rapeseed oil as the biggest source of bio diesel in the future.

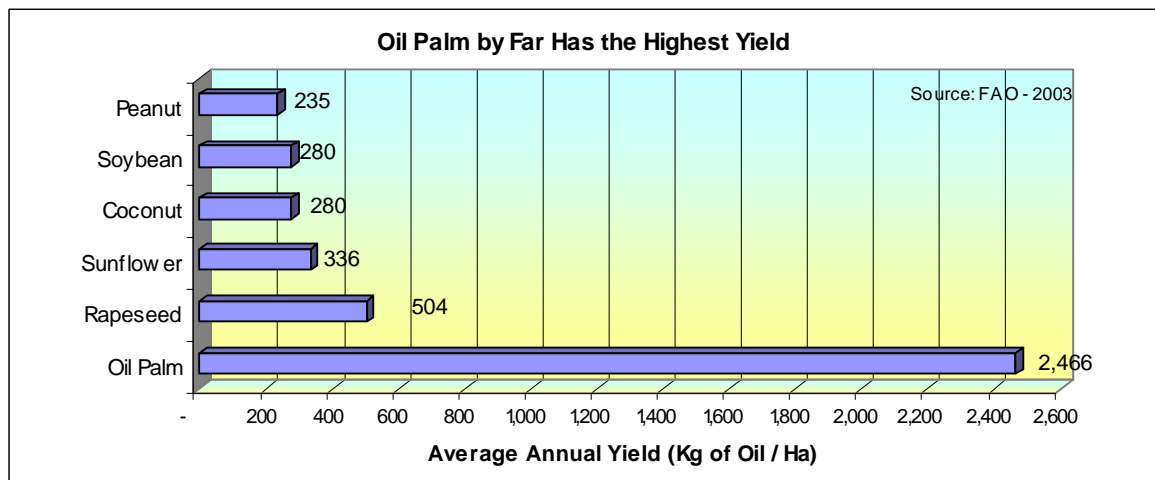


Exhibit 56



## **Processing**

*Processing mainly involves heating and mechanical processing*

Oil palm extraction from FFB follows the same basic steps of: (i) steam sterilization of bunches to inactivate lipase enzymes and kill micro organisms that produce free fatty acids (FFA), which reduce CPO quality. (ii) Stripping fruit from bunches. (iii) Crushing, digestion, and heating of the fruit. (iv) Oil extraction from macerated fruit (hydraulic pressing). (v) Palm oil clarification. (vi) Separating fibre from the endocarp. (vii) Drying, grading, and cracking of the endocarp. (viii) Separating the endocarp from the kernel (cake). (ix) Kernel drying and packing

*CPO quality depends mainly on the FFA content*

The product of step (v) produces CPO, whose grade depends on many of its chemical contents, mainly the FFA (Free Fatty Acid) content. A maximum acceptable FFA content for the international trade is usually 5% while the range between 2% - 5% is considered as premium and below 2% superior. The FFA content will rise if FFB processing is delayed usually due to transportation or weather problems.

*CPO is refined to become RBD palm oil*

CPO must be refined to remove pigments, free fatty acids, and phospholipids, and then deodorized. Through a combination of chemical treatments, bleaching, and steam stripping, the final product, termed "RBD" (Refined, Bleached, Deodorized) palm oil is produced. Palm oil is stored in large steel tanks at maximum storage time of about 6 months at 88°F (31.1°C). The spent fibre and shells (endocarps) of oil palm are generally used as fuel to generate electricity for CPO mills.

*PKO is usually produced outside CPO mill*

Palm kernel may be pressed hydraulically to produce PKO in the same mill that produces CPO, but more often it is done elsewhere in facilities designed for this process. This is to benefit from economies of scale as palm kernels produced from a single CPO mill are usually not many enough to justify building a PKO mill. Palm kernel oil extraction is generally done by solvents (hexane), which extract all but 1.6% of the oil from kernel.

## **Applications & Health Issues**

*Palm oil is mostly use for producing food products*

About 90% of the palm oil products finds its way into food products, with industrial uses accounting for the remaining 10%. Palm oil is used in a wide variety of foods, primarily margarine, shortening, and vegetable cooking oil. Crude palm oil can be processed into:

- (i) *Palm Stearin.* Palm stearin (solid at room temperature) is used almost exclusively - with the exception of some third world countries - for industrial uses such as in cosmetics, soaps, detergents etc. Palm stearin is relatively price elastic, i.e. small changes in price can result in substantial changes in the quantity demanded.
- (ii) *Palm Olein.* Palm Olein (liquid at room temperature) is used exclusively for food use such as instant noodles, biscuits and snacks. In contrast to palm stearin, palm olein is more price *inelastic*, i.e. its responsiveness to price movements is not as dramatic as that in palm stearin.

*Oil palm is rich of vitamin A & E and does not contain cholesterol*

Contrary to the common perception that palm oil is like its "sister" coconut oil, which is unhealthy, research has suggested that it is a rich source of pro-vitamin A in the form of carotenoids, which have cancer-fighting properties. The carotenoids content of oil palm is about 15 times and 300 times more than those of carrots and tomato respectively. Palm oil is also rich in vitamin E and contains no cholesterol. Palm oil contains more tocopherols and tocotrienols than any other vegetable oil. These compounds are related to vitamin E, and have antioxidant and anti-cancer effects. The saturated fatty acids in palm oil are different from those in coconut oil, palm kernel oil and dairy products as the former do not generally adversely affect blood cholesterol (if taken within limit).

*Unlike other vegetable oils, oil palm contains no harmful FFA*

Unlike many other types of vegetable oil like soybean, cottonseed, and rapeseed oils, palm oil does not require hydrogenation to "stabilises (preserve)" the oil. Hence, palm oil does not contain *trans* fatty acids (TFA), which are associated with elevated cholesterol and heart disease. TFA are found in foods such as cookies and crackers, French fries, potato chips, microwaved popcorn as well as in vegetable shortening and some margarine. Indeed, any packaged food that contains "partially-hydrogenated vegetable oils" or "shortening" most likely contains TFA.

*Rising concerns over the harmful TFA effect to bolster CPO demand*

Legislations by various European agencies have advocated elimination of trans fatty acids (TFA) from the market place and some impose maximum thresholds. In the USA, the government has called for mandatory labelling of TFA starting 2006. Thus, the food industry has been forced to find alternatives to avoid TFA, prompting the use of palm oil in numerous food formulations as palm oil, with its naturally balanced mixture of saturated and unsaturated fatty acids, requires no hydrogenation. This is one of the main driving forces for the expected increase in the global consumption of palm oil in the future.

**Supply and Demand**

*Two thirds of the world edible oils came from 4 major vegetable oils*

Four vegetable oils - soybean oil, palm oil, and rapeseed oil and sunflower oil – are the largest sources of edible oils. They constituted more than 3 quarters (79%) of total vegetable oil production and about two thirds (65%) of edible oil production in 2004 (see Exhibit 57). Vegetable oil accounted for 82% of total edible oil with the remaining 18% coming from animal oil. Within vegetable oils, the largest source came from soybean oil (30% share) followed by palm oil (27%), rapeseed oil (13%), sunflower oil (9%), groundnut oil (5%), cotton oil (4%), and palm kernel oil (3%) while other vegetable oils accounted for the remaining 9%.

**Palm Oil is the World 2nd Largest Edible Oil in 2004**

No	Type of Edible Oil	Production ('000 tons)	% of Vegetable Oil	% of Animal Oil	% of Total Vegetable + Animal Oil
1	Soybean oil	31,279	30%		24%
2	<b>Palm Oil</b>	<b>28,425</b>	<b>27%</b>		<b>22%</b>
3	Rapeseed oil	13,959	13%		11%
4	Sunflower oil	9,477	9%		7%
5	Groundnut oil	4,900	5%		4%
6	Cotton Oil	4,127	4%		3%
7	Palm Kernel oil	3,380	3%		3%
8	Coconut Oil	3,204	3%		2%
9	Olive Oil	2,915	3%		2%
10	Corn Oil	2,049	2%		2%
11	Sesame Oil	775	1%		1%
12	Linseed Oil	614	1%		0%
13	Castor Oil	445	0%		0%
	<b>Total Vegetable Oil</b>	<b>105,549</b>	<b>100%</b>		<b>82%</b>
14	Tallow & Grease	8,032		35%	6%
15	Butter	6,440		28%	5%
16	Lard	7,276		32%	6%
17	Fish Oil	985		4%	1%
	<b>Total Animal Oil</b>	<b>22,733</b>		<b>100%</b>	<b>18%</b>
	<b>Total Vegetable &amp; Animal Oil</b>	<b>128,282</b>			<b>100%</b>

\*From Oct 03 - Sept 04  
Source: Oil World

**Exhibit 57**

*CPO is the fastest growing and has overtaken soybean oil as the largest edible oil*

Palm oil is the fastest growing vegetable oil among the four most important vegetable oils. From Oct 1999 - Sept 2004, palm oil production increased by a CAGR of 7.9% compared to that of soybean at 4.9%, rapeseed oil at 1.9% and sunflower oil 0.4% (see Exhibit 58). The share of palm oil among the four vegetable oils had increased from 30% in 1999 to 34% in 2004 whereas that of soybean oil remained at 37% - 38%. In fact, in the period of Oct 2004 - Sept 2005, palm oil production at 33.2m tons had overtaken soybean oil as the largest source of edible oil in the world

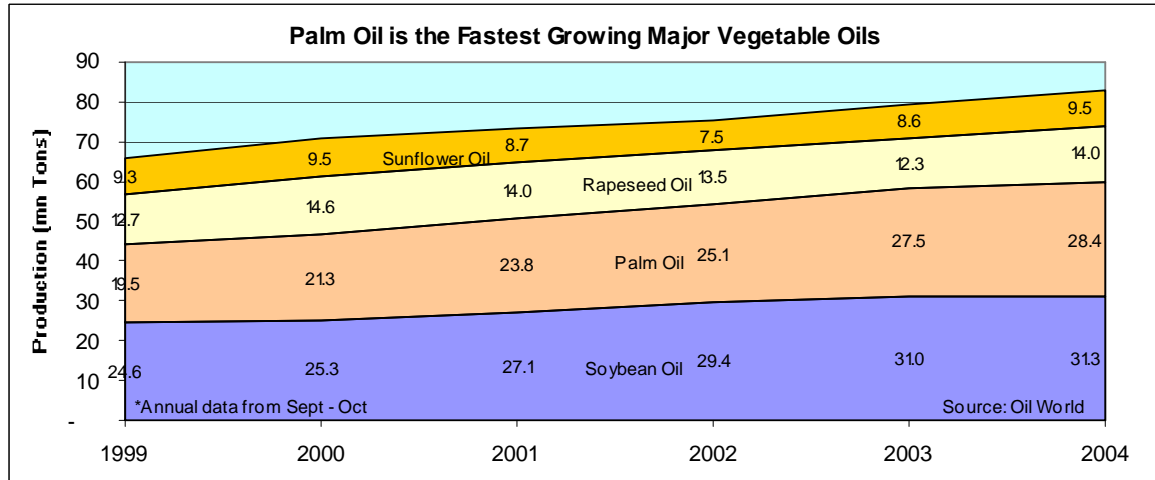


Exhibit 58

*Palm oil is the most internationally traded edible oil*

Among the four major vegetable oils, palm oil is by far the largest internationally traded oil accounted for nearly two third (62%) of total exports in 2004 (see Exhibit 59). Soybean oil ranked second with a 27% market share, followed by sunflower oil (8%), and rapeseed oil (4%). Most (71%) of palm oil production was exported whereas in the case of soybean, rapeseed, and sunflower oils only 34%, 20% and 14% of their respective productions were exported.

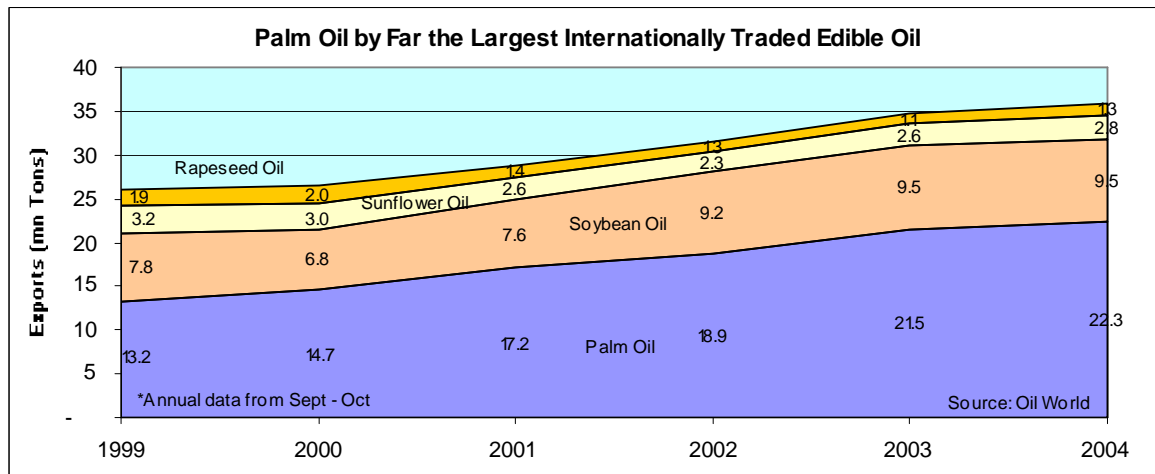
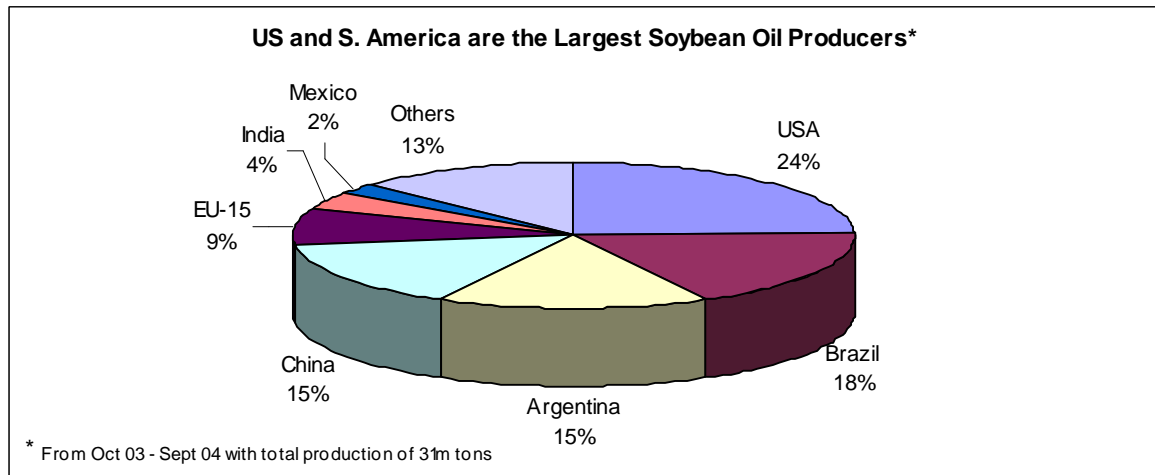


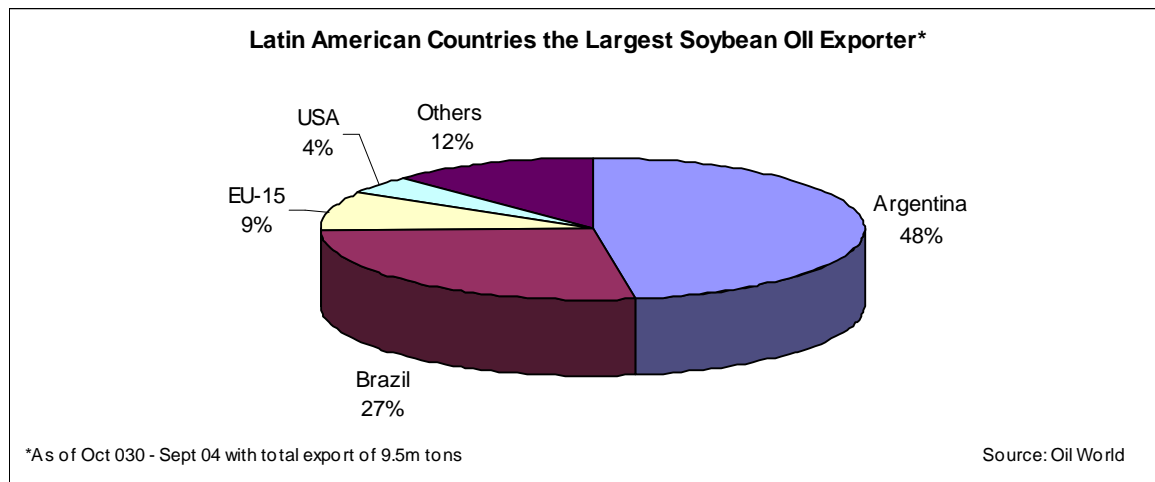
Exhibit 59

*USA and S. America were the largest soybean oil producers while China the largest importer*

The world largest producer of soybean oil in 2004 was the US with a 24% grip of the market followed by Latin American countries Brazil (18%) and Argentina (15%) and then China (15%), EU-15 (9%), India (4%), Mexico (2%) and others (13%) (see Exhibit 60). However, the US was not a large exporter of soybean oil. The largest exporters were Argentina (48%), followed by Brazil (27%), EU-15 (9%), with US accounting only for a 4% share and the rest 12% (see Exhibit 61). Although China and India were large producers, they were net importers. In fact the largest soybean oil importers in 2004 were China (25%), followed by Iran (10%), India (8%), Bangladesh (4%), and others (53%).



**Exhibit 60**



**Exhibit 61**

*Malaysia and Indonesia produced 85% of the world CPO*

The largest producers of palm oil in the world are Malaysia and Indonesia, which together accounted for 85% of total CPO production at 28.4m tons in 2004 (see exhibit 62). Malaysia was a bigger player with a 46% grip of the market while Indonesia had a 39% share. The next biggest players Nigeria and Thailand were far behind with only 3% and 2% shares respectively. The rest of the nearly 40 countries that produced palm oils accounted for only 10% of the world production.

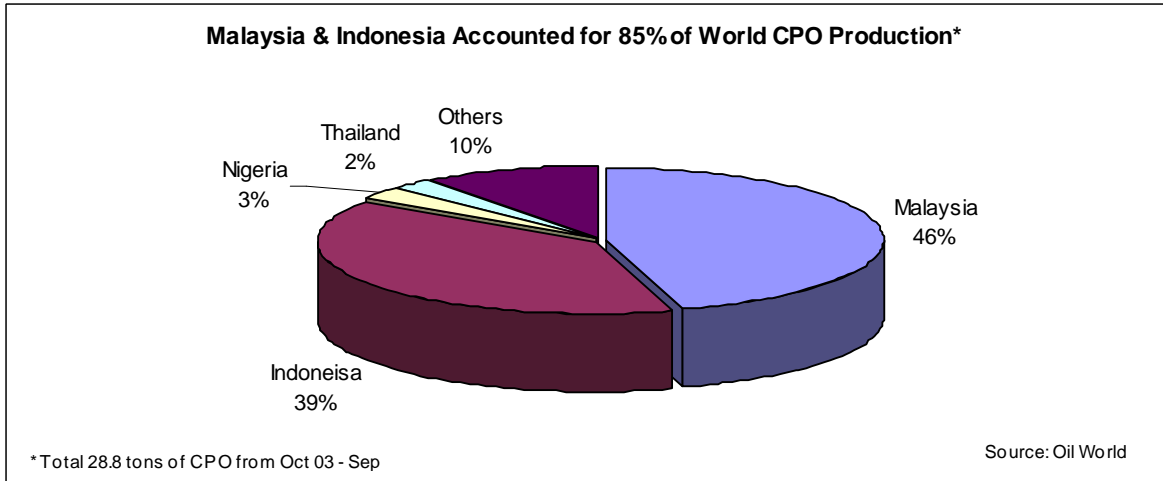


Exhibit 62

*Indonesia is catching up with Malaysia...*

From 1999 to 2004, Indonesia's palm oil production rose by a CAGR of 14.6%, more than twice as fast as Malaysia's at 5.8% (see Exhibit 64). As a result, Indonesia's share of total world palm oil production had increased from 30% in 1999 to 40% (12.4m tons) in 2004 whereas Malaysia's declined from 51% to 45% (14.0m tons) over the same period. The fast production growth allowed Indonesia to boost its exports, which grew by a CAGR of 19.6% in the period, nearly three times as fast as Malaysia's at 7.3% (see Exhibit 63). Indonesia exported 71% of its palm oil production in 2004 (Oct 03 - Sep 04), a big jump from 54% in 1999 (Oct 98 - Sep 99)

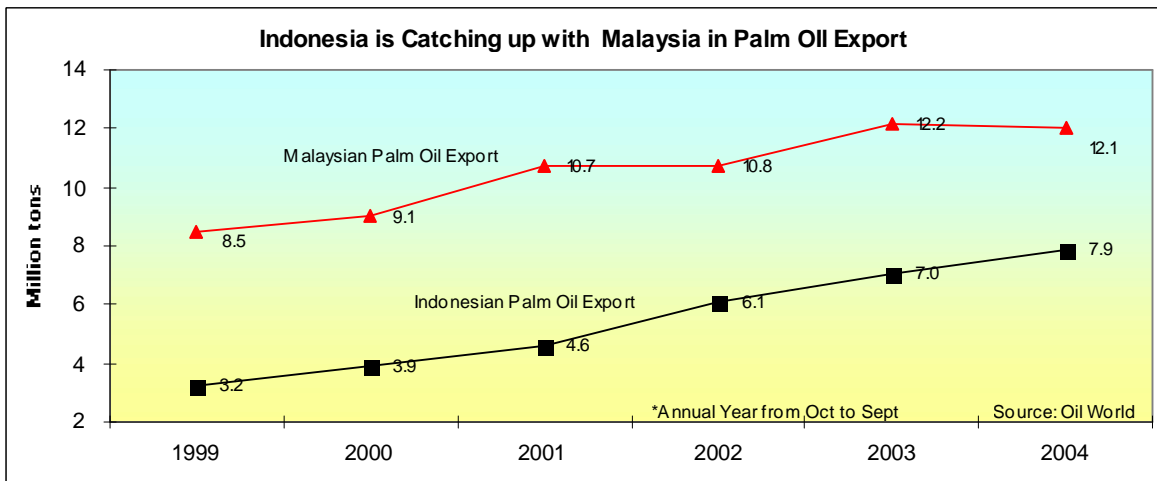


Exhibit 63

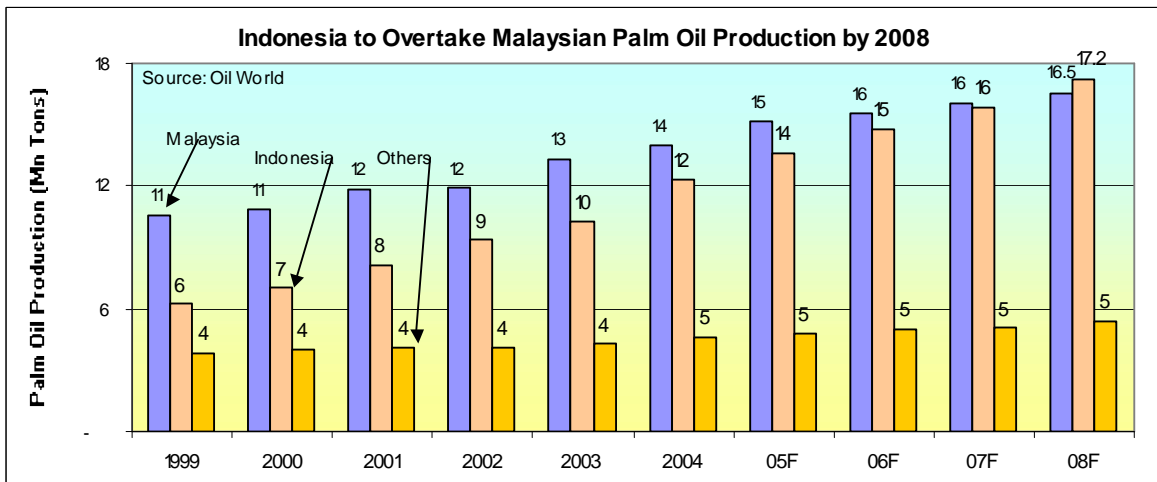


Exhibit 64

.. And will overtake Malaysia in 2008

Oil World forecast that Indonesia to overtake Malaysia as the largest CPO producer by 2008 as Indonesia's output is expected to grow by a CAGR of 8.6% in 2004 - 2009 to 17.2m tons (see Exhibit 64). On the other hand, Malaysia's output is expected to grow by a CAGR of 4.2%, less than a half of Indonesia's, to 16.5m tons. The higher growth of Indonesia is because:

- (i) *Indonesia has more land bank.* Most of Indonesian palm oil plantations are still concentrated in the relatively smaller island of Sumatra and there is still plenty of land in bigger islands like Borneo and Papua. In 2002, out of total 4.1m ha of palm oil plantation, 70% was in Sumatra while Borneo, Celebes, and Maluku / Papua accounted for only 30% (see Exhibit 65). On the other hand, 60% of palm oil plantations in Malaysia already occupied the main Peninsula with E. Malaysia (Sarawak and Sabah) accounted for the remaining 40% (see Exhibit 66).
- (ii) *Indonesia has lower labour cost.* Labour cost in Indonesia is much cheaper than in Malaysia, especially lately after the Malaysian government took a tough stand to repatriate illegal (cheaper) workers from Indonesia.

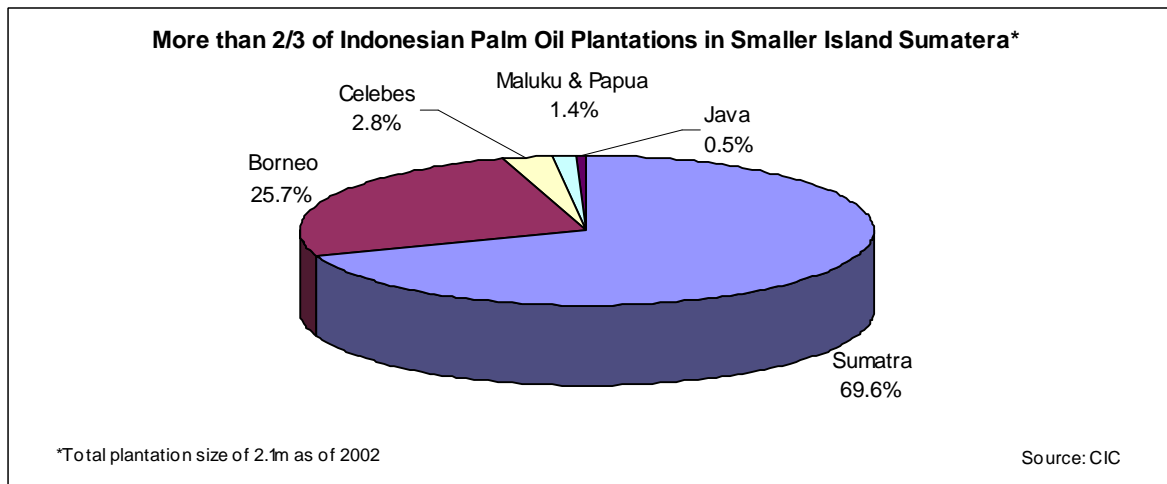


Exhibit 65

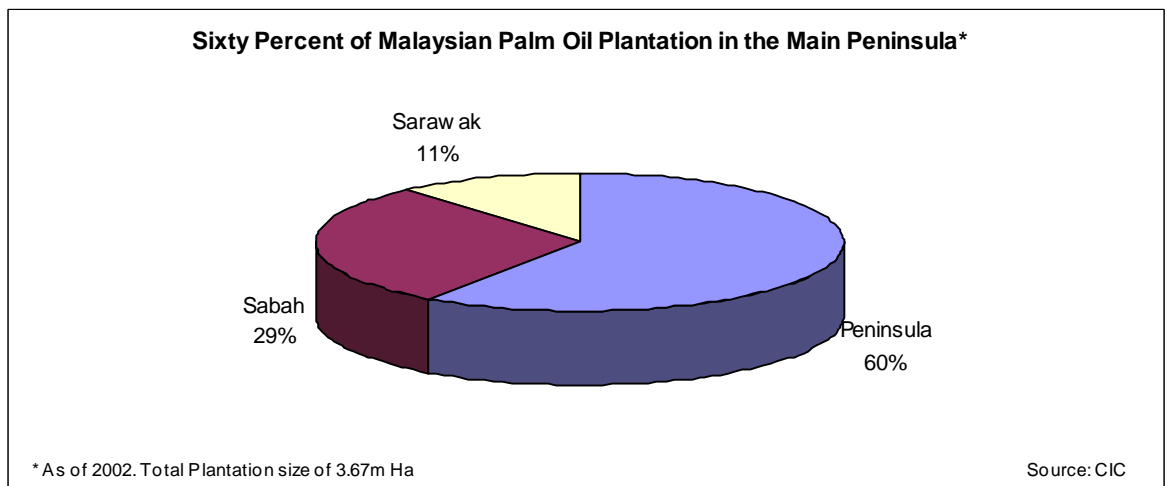


Exhibit 66

(iii) There is more room to increase yield in Indonesia. There is a more room for Indonesia to increase its yield because of:

- (a) *Lower base.* The average yield of Indonesian plantations is lower than that of Malaysian plantations partly due to a significant amount of small-medium size plantations in Indonesia.
- (b) *Increasing role of large private plantations in Indonesia.* Large private plantations, which generally are more efficient than small scale or state-owned plantations, are making up a greater portion of Indonesia's plantations. As of 2002, large private plantations constituted 57% of total plantations, up significantly from 45% in 1993 (see Exhibit 67). On the other hand, state-owned plantations accounted for only 13% of total plantations in 2002, down nearly a half from 24% in 1993. Small plantations maintained its share of 30% - 31% in the same period. Large private plantation drove the nearly double digit (9.8%) CAGR of total oil palm plantation acreage in Indonesia from 1993 - 2002 to 4.1m ha in 2002.

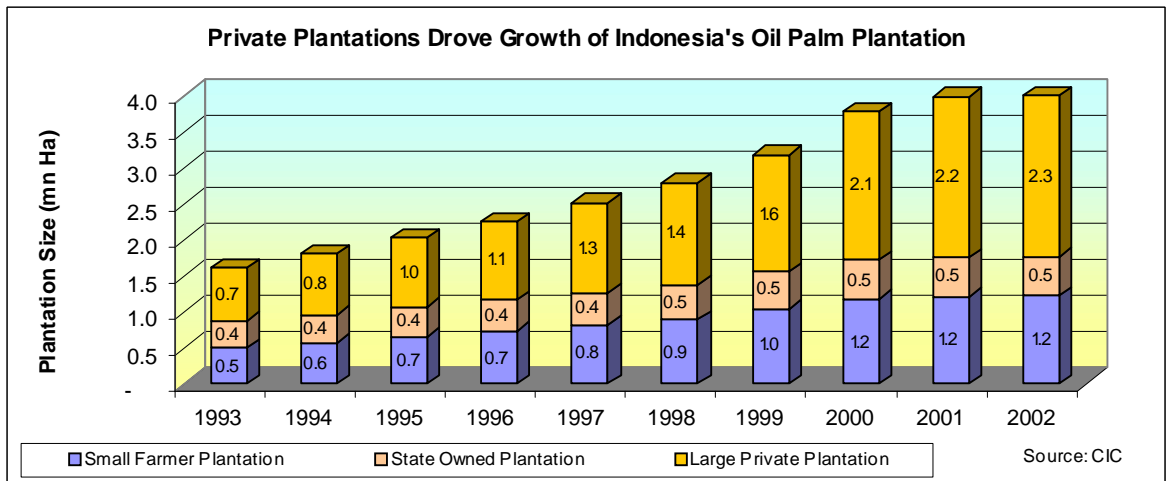


Exhibit 67

**Price Outlook**

*Expect surges of CPO price in the next 2 years after bottoming out in 2005*

We expect BSP's average CPO price to surge US\$31/ton (+9%) to US\$371/ton in FY06F and US\$19/ton (+5%) to US\$390/ton FY07F after falling US\$51/ton (-13%) this year to US\$341/ton (see Exhibit 68). Similarly, the average international prices (CIF-Rotterdam) are expected to move by the same absolute amount (in US\$/ton) to US\$420/ton, US\$450 /ton, and US\$469 /ton in 2005 - 2007 respectively.

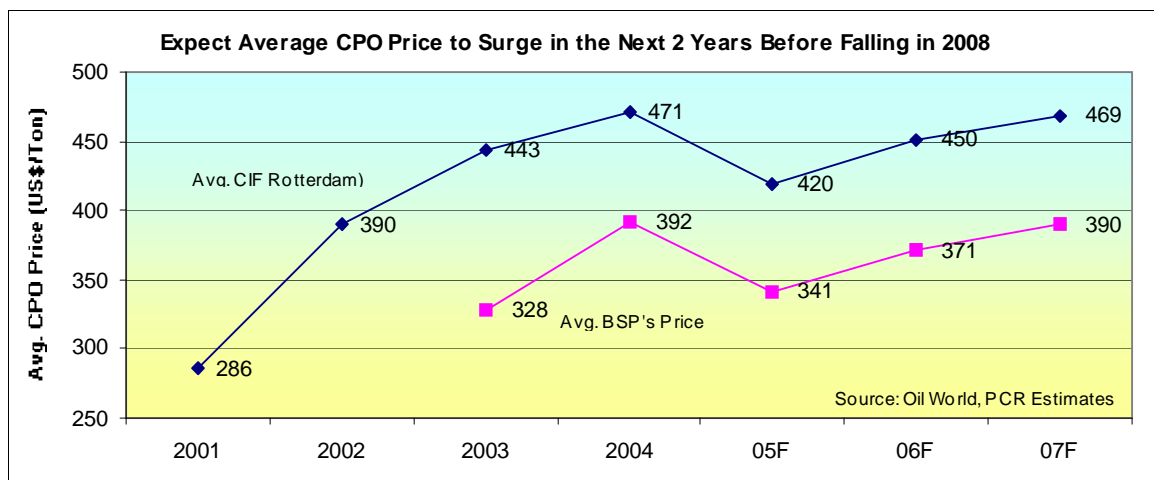


Exhibit 68

*Declining CPO price in 2005 was due to jumps in soybean oil and CPO productions...*

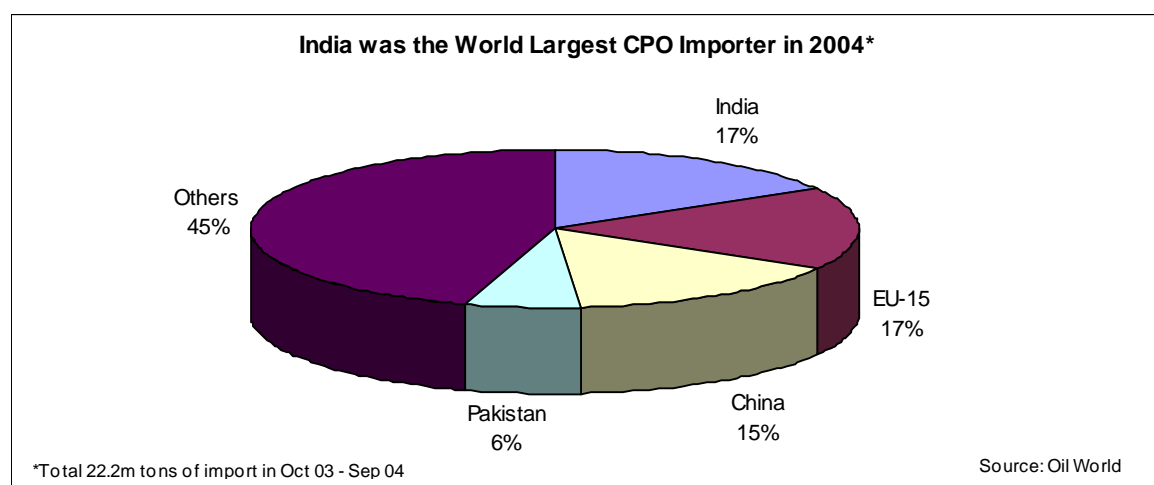
The expected US\$51/ton (-13%) decline in average CPO price in FY05 is largely due to (i) a huge 16.8% jump in CPO production from Oct 04 - Sep 05 to 33.2m tons (*Oil World's* estimate), much higher than the 3.3% - 11.9% growths seen in the previous 5 years (2000 - 2004), (ii) an expected double-digit 10% rise in the inventory of soybean in 2005 to 52m tons given good harvests in S. America and the US and the controllable impact of Asian soy rust in the US, and (iii) a high base of average palm oil price in 2004.

*... Aggravated by a hike in India's palm oil import duty*

The decline in CPO price in 2005 was further aggravated by a steep hike of India's CPO import duty from 65% to 80% early this year. The hike had a significant impact in pulling down price as India is Indonesia's largest CPO market, accounting for more than a third (36%) of total exports in 2004, compared to EU-15 (19%) and China (15%) (see Exhibit 69a). In fact, India was also the world biggest CPO importer in 2004, constituting 17% of total CPO imports, and was rivalled only by a group of EU countries (17%) but still bigger than China (15%) (see Exhibit 69b). Although as per the WTO agreement India can set its CPO import duty to as high as 300%, we believe a near-term increase is unlikely because (i) the current CPO import duty at 80% is already at a significant premium to that of soybean at 45%. (ii) CPO annual production growths are expected to slow down to mid single-digit (4.4% - 5.6%) in 2006 - 2007 from around double digits in 2003 - 2004 (see Exhibit 70). (iii) Indonesia is lobbying hard to reduce the import duty.



**Exhibit 69a**



**Exhibit 69b**

*Rising CPO price to be driven mainly by a lower output growth and greater consumption*

The expected increases in BSP's average CPO price in the next two years by US\$31/ton (+9%) to US\$371/ton in FY06F and by US\$19/ton (+5%) to US\$390/ton FY07F are due to (i) slowing down growth of CPO supply, (ii)



rising demand for bio diesel, (iii) concerns over the harmful effect of TFA in soybean oil, (iv) the lifting of China's palm oil import quota in 2006, and (v) rising consumption of vegetable oil globally as explained below:

1. *Slowing down growth of CPO production in 2006 - 2007.* Oil World projected that the annual growth of CPO production to slow down to mid single-digit 5.6% in 2006 before declining further by 4.4% in 2007 (see Exhibit 70). The slowdown is significant when it is compared to double-digit (9.8% - 10.7%) growths in 2003 - 2004 and a high single-digit growth (8.4%) in 2005. The declining growth is driven primarily by lower output from Indonesia and Malaysia given (i) a natural tree cycle and stress after producing high growths in the previous years and (ii) the impact of lower rainfall in Malaysia and Indonesia in 2005. For example, rainfall in 2 out of 3 BSP's plantations in Sumatra had been reduced by around 10% - 15% in the first 8 months of 2005 (see Exhibit 71)

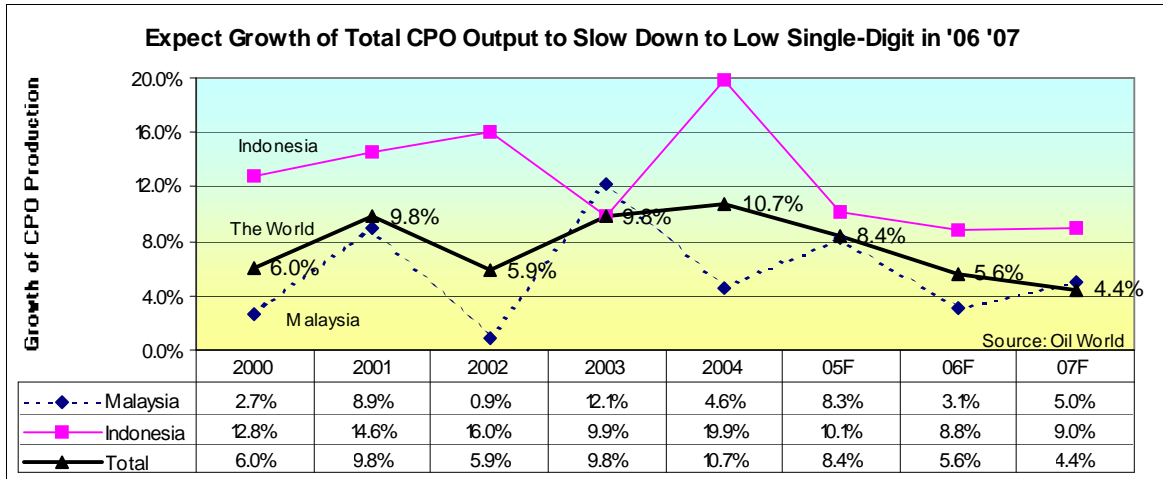


Exhibit 70

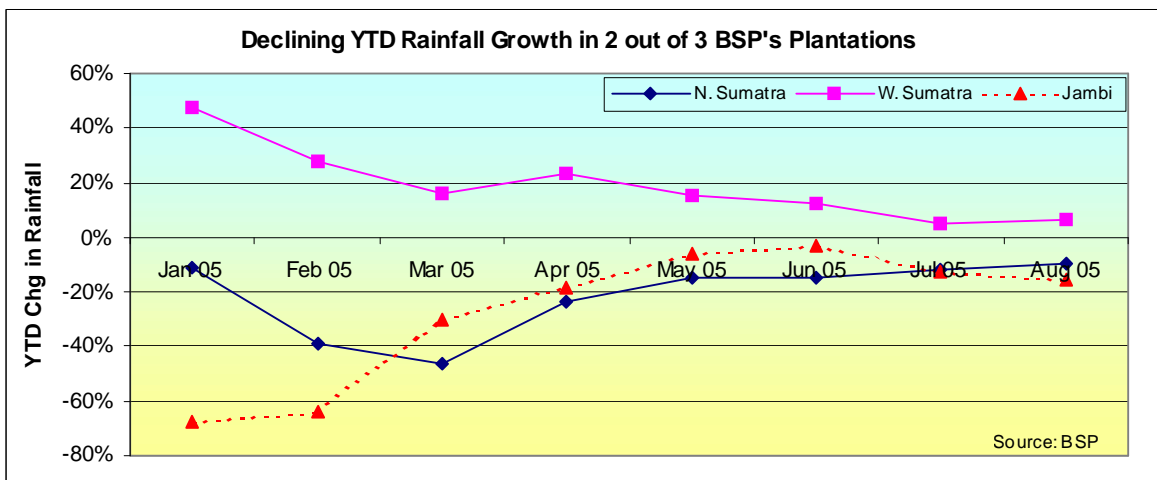


Exhibit 71

2. *Surging demand for bio diesel.* Bio diesel is a renewable fuel for diesel engines derived from vegetable oils. Bio diesel can be mixed with petroleum-based diesel fuel with little or no modification of diesel engines. It is commonly used in a blend with diesel fuel at 20% bio diesel and 80% petroleum diesel and has a "greener" environment result. Demand for bio diesel is expected to increase significantly given an expectation of long period of high petroleum price in the foreseeable future. Its usage will be powered by:

- (i) *Governments' initiatives.* The US in March 2005 introduced a legislation that establishes a Renewable Fuels Standard (RFS) requiring 6 billion gallons (22.7 billion litres) of renewable fuels be blended into the nation's fuel supply annually by 2012. The EU already passed a

regulation to use 2% of bio-diesel to replace petroleum and the percentage is likely to go up. Malaysia is looking to follow the EU in introducing a similar measure in the next few years.

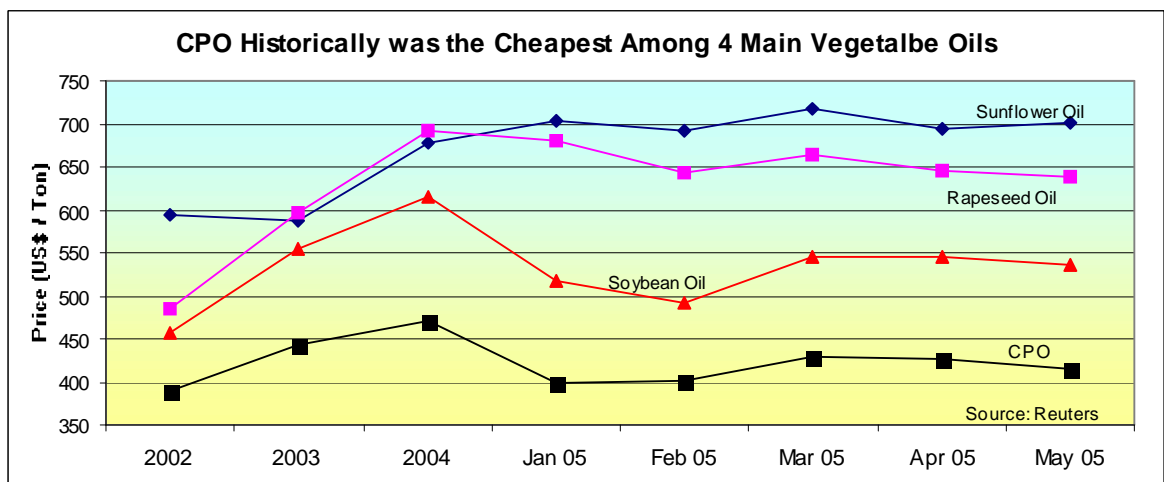
- (ii) *Private sector's responses.* Recently giant chemical company Dow Chemical has started to produce bio diesel. Meanwhile, world-class consumer company Procter & Gamble of the US has announced its pledge to replace its raw materials ("surfactants") for detergents and shampoo, which currently is made from petroleum-based products, with raw materials made from palm and coconut oils in the next 3 - 5 years.

*Palm oil has competitive advantages against other vegetable oils for bio-diesel*

Palm oil has competitive advantages against other vegetable oils to become the main source of bio-diesel because (i) It is the world's largest source of vegetable oil currently, (ii) its production growth to remain the highest among the 4 major vegetable oils in many years to come given plenty of land bank in Indonesia, rising yield, low production cost, and its good resistance against diseases. (iii) Historically, its price was the lowest among the four major vegetable oils (see Exhibit 72).

*It takes only a little switch from petroleum consumption to spark bio diesel demand*

A shift of just 2.5% in the consumption of petroleum to vegetable oils will exhaust the whole supply of vegetable oil. The world produces only 106m tons vegetable oils in 2004 and this was equal to less than 10 days of world annual production of crude oil for petroleum at 11.5m tons / day. Rising bio diesel demand largely explained the strong growth of palm oil exports to EU and US this year.



**Exhibit 72**

- Concern over Trans Fatty Acids (TFA).* There has been a rising concern over harmful effect of TFA, which is linked to heart disease, in other vegetable oils like soybean, cottonseed, and rapeseed (canola) oils. The US government has required that all manufacturers put the TFA content in every food label starting Jan 2006 and many have started doing it before that. Hence, many US food manufacturers are likely to switch, or in the process of switching, to other oils, primarily palm oil. It is estimated that the labelling alone is likely to increase import of palm oil to the US by 30%.
- The abolishment of edible oil import quota in China by 2006.* As per the WTO agreement, China will have to abolish the import quota on edible oil including oil palm and soybean oils by 2006. Palm oil will be the major beneficiary as its imports had exceeded the import quota. In 2005, the quota is only 3.2m tons for CPO import but imports in the previous year (2004) had exceeded that threshold by 5% to 3.36m, excluding 0.17 tons of imports from Hong Kong, which actually were indirect imports. Historically, growth of China's palm oil imports was high at a CAGR of 26% from 1999 - 2004. On the other hand, the import quota from soybean oil is 3.3m tons in 2005 but in 2004 there were only 2.37m tons of soybean oil imports. Hence, soybean oil is unlikely to benefit much from the elimination of the quota system. Note that the import tariffs for importing in excess of the import quota are much higher than the normal tariffs at 9% for palm oil and 20% for soybean oil.

5. *Rising global consumption of vegetable oils.* The world's per capita consumption of vegetable oil, primarily for confectionary products (bakery), soaps and cooking oils, are expected to increase due to (i) rising population, (ii) increased GDP / capita, and (iii) low per capita consumption in countries outside the US and EU. For example per capita consumption in the most populous countries in Asia like India, Indonesia and China in 2004/5 are estimated only at 11.7 kg, 15.1 kg and 19.5 kg per year respectively.

*Improving living standard to bolster CPO demand in China*

China is expected to drive growth for CPO demand in Asia given its improving standard of living and huge population base. Unlike in India, in China palm oil is not commonly used for cooking oil due to cold weather. Palm oil solidifies when temperature drops during winter so Chinese households prefer other edible oil such as soybean or rapeseed oil. However, palm oil, with its form of semi-solid fat, are difficult to be substituted by other vegetable oils in uses such as for making instant noodles, biscuits and snacks, whose consumption increases in tandem with rising living standard. It should be noted that China is the world's biggest consumer of instant noodles, followed by Indonesia and Japan.

*Expect a higher growth in Indonesia's palm oil consumption*

We expect the domestic consumption of CPO and PKO to grow by a CAGR of 4.5% in 2005 - 2007, higher than the 3.1% growth seen in the 5 years earlier (1999- 2004), to 4m tons in 2007 (see Exhibit 73). About 85% of the domestic consumption of palm oil is used for cooking oil, whose consumption had grown by a CAGR of 6.8% in 1996 - 2002.

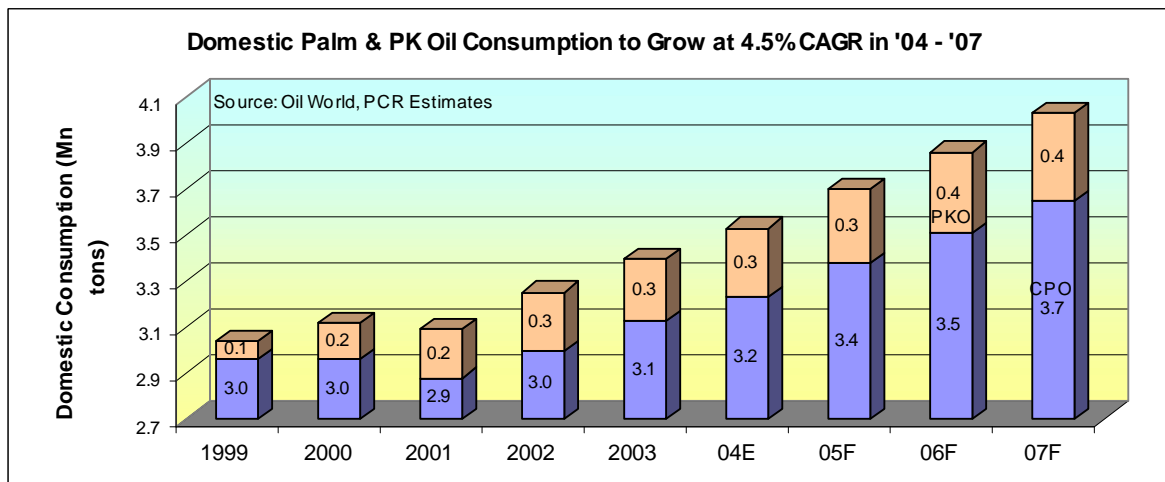


Exhibit 73

*Potential rise in Indonesia's CPO export tax may dampen demand*

One factor that may slightly reduce the demand and hence price of CPO is the potential increase in Indonesia's CPO export tax. Jakarta is considering to raise the based price for calculating the CPO export tax from US\$160/ton to CIF Rotterdam price while reducing the export tax rate from 3% to 1.5%. Assuming the CIF Rotterdam price at US\$402/ton and the export tax rate is reduced to 1.5%, the change will result in US\$1.23/ton (26%) jump in CPO export tax to US\$6.03/ton (see Exhibit 74). Export tax rates for other oil palm products are currently being reviewed. This is the first time the government is looking to change the export tax since 2003 when the tax rates on CPO and palm kernel were reduced from 5% to 3% while those of RBD palm oil and RBD palm olein cut from 3% to 1%. The reductions then were made in view of easing concern over possible shortage in the domestic supply. On the other hand, the rise in export tax this year is probably driven by the need to reduce the government's budget deficit.

Potential Rise in Export Tax for CPO

Product	Export Tax Rate	Base Price for Export Tax (US\$/Ton)		Export Tax Amount (US\$/ton)		Change	
		Before Oct 05	After Oct '05	Before Oct 05	After Oct '05	(US\$/Ton)	(%)
Oil Palm & Palm Kernel	3.0%	35	35	1.05	1.05	0.00	0%
<b>CPO</b>	<b>1.5%</b>	<b>160</b>	<b>CIF Rotterdam</b>	<b>4.80</b>	<b>*6.03</b>	<b>1.23</b>	<b>26%</b>
Crude Olean	1.0%	165	165	1.65	1.65	0.00	0%
Refined Bleached Deodorized (RBD) Palm Oil	1.0%	175	175	1.75	1.75	0.00	0%
Refined Bleached Deodorized (RBD) Palm Oil	1.0%	190	190	1.90	1.90	0.00	0%

Source: Ministry of Industry & Trade

\*Based on CIF Rotterdam price at US\$402/ton

Exhibit 74

## APPENDIX 1. RUBBER EARNINGS MODEL

	2003	2004	2005F	2006F	2007F
<b>FX rate (Rp / US\$)</b>	<b>8,749</b>	<b>8,924</b>	<b>9,645</b>	<b>10,200</b>	<b>10,608</b>
Mature hectare	11,569	14,631	13,595	13,745	13,895
Immature hectare	<u>2,555</u>	<u>2,956</u>	<u>3,254</u>	<u>3,104</u>	<u>2,954</u>
<b>Total Plantation (Ha)</b>	<b>14,124</b>	<b>17,587</b>	<b>16,849</b>	<b>16,849</b>	<b>16,849</b>
Yield per Hectare (Ton)	1.43	1.35	1.36	1.36	1.38
<b><u>Field Production (Ton)</u></b>					
Home grow n	16,657	20,218	19,134	18,640	19,064
Purchase	<u>1,978</u>	<u>3,397</u>	<u>9,135</u>	<u>11,418</u>	<u>14,273</u>
<b>Total Field Production</b>	<b>18,635</b>	<b>23,615</b>	<b>28,269</b>	<b>30,058</b>	<b>33,337</b>
<b><u>Sales Volume ('000 tons)</u></b>					
Homegrow n	16.54	19.53	18.92	18.43	18.85
Third Party Value Added	<u>2.39</u>	<u>5.39</u>	<u>9.74</u>	<u>12.18</u>	<u>15.23</u>
<b>Total Sales Volume</b>	<b>18.93</b>	<b>24.92</b>	<b>28.66</b>	<b>30.61</b>	<b>34.07</b>
<b><u>Price (Rp m /Ton)</u></b>					
Homegrow n	8.99	10.99	12.58	13.64	14.47
Third Party Value Added	<u>9.64</u>	<u>12.61</u>	<u>13.91</u>	<u>15.08</u>	<u>15.99</u>
<b>Total Price</b>	<b>9.07</b>	<b>11.34</b>	<b>13.03</b>	<b>14.21</b>	<b>15.15</b>
<b><u>Price (US\$ / Ton)</u></b>					
Homegrow n	1,028	1,231	1,305	1,337	1,364
Third Party Value Added	<u>1,102</u>	<u>1,413</u>	<u>1,442</u>	<u>1,478</u>	<u>1,508</u>
<b>Total Price</b>	<b>1,037</b>	<b>1,271</b>	<b>1,351</b>	<b>1,393</b>	<b>1,428</b>
<b><u>Revenues</u></b>					
Home grow n	149	215	238	251	273
Third Party Value Added	<u>23</u>	<u>68</u>	<u>136</u>	<u>184</u>	<u>244</u>
<b>Rubber Revenues (Rp bn)</b>	<b>172</b>	<b>283</b>	<b>374</b>	<b>435</b>	<b>516</b>
<b><u>COGS (Rp bn)</u></b>					
Harvesting		63	77	83	91
General		29	27	28	29
Upkeep		6	7	7	8
Transport		<u>4</u>	<u>6</u>	<u>7</u>	<u>7</u>
<i>Cost From Nucleus Field</i>		101	117	125	135
<i>Purchase from Third Parties</i>		<u>38</u>	<u>86</u>	<u>117</u>	<u>155</u>
<b>Raw Material Cost</b>		<b>139</b>	<b>203</b>	<b>242</b>	<b>290</b>
Processing cost		<u>27</u>	<u>31</u>	<u>33</u>	<u>36</u>
<b>Total Rubber COGS</b>	<b>112</b>	<b>166</b>	<b>233</b>	<b>274</b>	<b>327</b>
<b>Rubber Gross Profit (Rp bn)</b>	<b>59</b>	<b>116</b>	<b>140</b>	<b>161</b>	<b>190</b>
<i>Gross Margin</i>	34.6%	41.2%	37.5%	36.9%	36.7%

Source: BSP & PCR Estimates

Exhibit 75

## APPENDIX 2. OIL PALM EARNINGS MODEL

### Oil Palm Earnings Model - Part 1

	2003	2004	2005F	2006F	2007F
<b><u>Nucleus Plantation (Ha)</u></b>					
Mature hectare	17,507	17,683	17,996	18,403	18,668
Immature hectare	984	1,275	4,167	13,908	23,643
<b>Total Nucleus Plantation</b>	<b>18,433</b>	<b>18,958</b>	<b>22,095</b>	<b>32,237</b>	<b>42,311</b>
<b><u>Plasma Plantation (Ha)</u></b>					
Mature hectare	11,528	11,763	11,763	11,977	11,977
Immature hectare	449	214	214	0	0
<b>Total Plasma Plantation</b>	<b>11,977</b>	<b>11,977</b>	<b>11,977</b>	<b>11,977</b>	<b>11,977</b>
<b><u>Total Plantation (Ha)</u></b>					
Mature hectare	29,035	29,446	29,759	30,380	30,645
Immature hectare	1,433	1,489	4,381	13,908	23,643
<b>Total Plantation</b>	<b>30,410</b>	<b>30,935</b>	<b>34,072</b>	<b>44,214</b>	<b>54,288</b>
<b><u>FFB Processed ('000 Ton)</u></b>					
Nucleus	352	382	394	404	418
Plasma	86	119	146	159	168
Total Field Production	438	501	540	562	585
Purchase from 3rd Parties	0	0	5	6	22
<b>Total FFB Processed</b>	<b>438</b>	<b>501</b>	<b>545</b>	<b>568</b>	<b>607</b>
<b><u>Plantation Yield (Tons FFB / ha)</u></b>					
Nucleus Yield	20.2	21.7	22.1	22.2	22.5
Plasma Yield	7.4	10.2	12.4	13.4	14.0
<b>Total Yield</b>	<b>15.1</b>	<b>17.1</b>	<b>18.2</b>	<b>18.7</b>	<b>19.2</b>
<b><u>Extraction Rate</u></b>					
CPO	20.4%	21.0%	21.3%	21.6%	22.3%
PK	3.7%	4.1%	3.9%	3.9%	3.9%
Source: BSP & PCR Estimates					

### Exhibit 76

Oil Palm Earnings Model - Part 2

	2003	2004	2005F	2006F	2007F
<b>FX rate</b>	8,749	8,924	9,645	10,200	10,608
<b><u>Sales Volume ('000 Tons)</u></b>					
FFB	116	0	0	0	0
CPO	66	105	123	134	152
PK	14	21	22	23	25
<b><u>Price (US\$/ton)</u></b>					
FFB	76	0	0	0	0
CPO	328	392	341	371	390
PK	157	234	223	243	255
<b><u>Price (Rp m/ton)</u></b>					
FFB	661	0	0	0	0
CPO	2,868	3,497	3,284	3,786	4,134
PK	1,376	2,085	2,147	2,475	2,702
<b><u>Revenues</u></b>					
FFB	76	0	0	0	0
CPO	190	367	406	506	628
PK	19	45	47	57	67
Others (Toll Fee / Rejected FFB)	<u>0</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>
<b>Total Oil Palm Revenues</b>	<b>285</b>	<b>414</b>	<b>454</b>	<b>564</b>	<b>697</b>
<b><u>COGS</u></b>					
Upkeep		11	12	14	15
Fertiliser		34	36	40	44
General estate		26	27	28	29
Depreciation		21	21	22	22
Harvesting		19	20	22	24
Transport to Factory		<u>13</u>	<u>14</u>	<u>16</u>	<u>18</u>
<i>Cost From Nucleus Field</i>		123	130	142	152
<i>Purchase from Third Parties</i>		<u>82</u>	<u>116</u>	<u>156</u>	<u>212</u>
<b>Raw Material Cost</b>		<b>205</b>	<b>246</b>	<b>298</b>	<b>364</b>
Processing cost		<u>49</u>	<u>53</u>	<u>56</u>	<u>61</u>
<b>Total Oil Palm COGS</b>		<b>255</b>	<b>299</b>	<b>354</b>	<b>425</b>
Kilang Vecolina COGS		<u>12</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>Total Oil Palm Related COGS</b>	<b>189</b>	<b>267</b>	<b>299</b>	<b>354</b>	<b>425</b>
<b>Gross Profit</b>	<b>96</b>	<b>147</b>	<b>154</b>	<b>210</b>	<b>272</b>
<i>Gross Margin</i>	33.7%	35.5%	34.0%	37.3%	39.0%

Source: BSP & PCR Estimates

Exhibit 77

## APPENDIX 3. FINANCIAL STATEMENTS & RATIOS

### Profit & Loss Statement

(Rp bn)	2003	2004	2005F	2006F	2007F	CAGR '04-'07	CAGR 05-'07
Oil Palm	285.5	413.9	453.7	564.4	696.9	13.9%	23.9%
Rubber	171.7	282.6	373.6	435.0	516.2	16.3%	17.6%
<b>Total Revenues</b>	<b>457.2</b>	<b>696.4</b>	<b>827.2</b>	<b>999.5</b>	<b>1213.1</b>	<b>14.9%</b>	<b>21.1%</b>
Total COGS	301.5	433.1	532.8	628.6	751.9	14.8%	18.8%
<b>Gross Profit</b>	<b>155.7</b>	<b>263.3</b>	<b>294.5</b>	<b>370.9</b>	<b>461.2</b>	<b>15.0%</b>	<b>25.2%</b>
Operating Expense	60.2	62.5	68.0	72.1	76.7	5.3%	6.3%
<b>Operating Income</b>	<b>95.5</b>	<b>200.8</b>	<b>226.5</b>	<b>298.7</b>	<b>384.5</b>	<b>17.6%</b>	<b>30.3%</b>
Depreciation	46.4	57.6	48.6	51.0	56.5	-0.5%	7.8%
EBITDA	141.9	258.4	275.1	349.8	441.0	14.3%	26.6%
Net Interest	-31.2	-40.5	-43.9	-43.2	-40.8	na	na
FX loss	34.1	-48.9	-47.5	-26.7	-27.8	-13.2%	na
Others	17.9	29.0	16.1	-4.8	-4.8	na	na
<b>Total Other Expense</b>	<b>20.8</b>	<b>-60.4</b>	<b>-75.3</b>	<b>-74.8</b>	<b>-73.4</b>	<b>na</b>	<b>-1.2%</b>
<b>Pretax Profits</b>	<b>116.3</b>	<b>140.4</b>	<b>151.2</b>	<b>224.0</b>	<b>311.1</b>	<b>22.0%</b>	<b>43.4%</b>
Tax	-38.7	-45.3	-48.4	-70.9	-97.9	21.2%	42.3%
Minority Interest	0.0	0.0	0.0	0.0	0.0	na	na
<b>Net Profit Before Extraordinary</b>	<b>77.6</b>	<b>95.0</b>	<b>102.8</b>	<b>153.0</b>	<b>213.2</b>	<b>22.4%</b>	<b>44.0%</b>
Extraordinary Item	2.8	10.0	0.0	0.0	0.0	na	na
<b>Net Profit Before Net Income of Consolidated Subsidiaries</b>	<b>80.4</b>	<b>105.1</b>	<b>102.8</b>	<b>153.0</b>	<b>213.2</b>	<b>19.3%</b>	<b>44.0%</b>
Consolidated Subsidiaries' Net Income Before Acquisition	0.0	-9.5	0.0	0.0	0.0	na	na
<b>Net Profit</b>	<b>80.4</b>	<b>95.6</b>	<b>102.8</b>	<b>153.0</b>	<b>213.2</b>	<b>22.2%</b>	<b>44.0%</b>
<b>Ratio</b>							
Gross margin	34.1%	37.8%	35.6%	37.1%	38.0%		
EBITDA margin	31.0%	37.1%	33.3%	35.0%	36.4%		
Operating margin	20.9%	28.8%	27.4%	29.9%	31.7%		

Source: Company & PCR Estimates

### Exhibit 78



**Balance Sheet**

<b>Dec 31 (Rp bn)</b>	<b>2003</b>	<b>2,004</b>	<b>2005F</b>	<b>2006F</b>	<b>2007F</b>
Cash & Equivalence	23	32	33	33	34
Receivables	38	104	163	145	151
Inventories	31	28	35	41	49
Other Current Assets	11	18	23	27	32
<i>Total Current Assets</i>	<u>102</u>	<u>183</u>	<u>254</u>	<u>246</u>	<u>267</u>
Fixed Asset	582	667	609	635	636
Goodwill	3	93	88	83	78
Other	160	182	187	304	458
<b>Total Assets</b>	<u>847</u>	<u>1,125</u>	<u>1,138</u>	<u>1,269</u>	<u>1,439</u>
Short Term Loans	42	33	-	-	-
Payables	55	38	51	58	67
Other Current Liabilities	56	29	36	42	51
Current Maturity - Long Term Debt	47	75	-	-	-
<i>Total Current Liabilities</i>	<u>200</u>	<u>175</u>	<u>86</u>	<u>100</u>	<u>117</u>
Long Term Payables	53	37	21	21	21
Deferred Tax	6	28	37	49	63
Debts	486	476	496	469	426
<i>Total Liabilities</i>	<u>746</u>	<u>716</u>	<u>641</u>	<u>639</u>	<u>627</u>
<i>Total Equity</i>	<u>102</u>	<u>409</u>	<u>497</u>	<u>630</u>	<u>812</u>
<b>Liabilities &amp; Equity</b>	<u>847</u>	<u>1,125</u>	<u>1,138</u>	<u>1,269</u>	<u>1,439</u>

Source: Company & PCR Estimates

**Exhibit 79**

**Cash Flow Statement**

<b>Dec 31 (Rp bn)</b>	<b>2003</b>	<b>2004</b>	<b>2005F</b>	<b>2006F</b>	<b>2007F</b>
Operating Profits	95.5	200.8	226.5	298.7	384.5
Tax	(23.5)	(12.2)	6.0	(53.6)	(78.9)
Depreciation	46.4	57.6	48.6	51.0	56.5
CF before Working Capital	118.4	246.2	281.1	296.0	362.0
CF from Working Capital	3.3	(115.2)	(55.5)	17.3	(8.4)
Others - Operation	6.5	(23.2)	(21.0)	(6.5)	(3.6)
<b>Cash Flow from Operation</b>	<b>128.2</b>	<b>107.8</b>	<b>204.6</b>	<b>306.8</b>	<b>350.0</b>
Fixed Asset	(44.8)	(142.9)	9.4	(76.7)	(57.7)
Construction in Progress	(0.5)	(16.7)	(12.3)	(110.4)	(149.1)
Other-Capex	(0.3)	(99.8)	(23.6)	3.6	3.5
Others	1.1	(2.2)	(3.1)	(3.1)	(3.1)
<b>Cash Flow from Investment</b>	<b>(44.5)</b>	<b>(261.7)</b>	<b>(29.6)</b>	<b>(186.6)</b>	<b>(206.3)</b>
Short Term Debt	42.3	(9.3)	(33.0)	-	-
Long Term Debt	(142.6)	19.1	(55.2)	(27.8)	(42.4)
Long Term Loans	(91.1)	(9.6)	-	-	-
Equity	-	211.5	-	-	-
Dividend	-	-	(14.0)	(20.6)	(30.6)
Interest Expenses	(31.2)	(40.5)	(43.9)	(43.2)	(40.8)
Others	147.9	(6.6)	(26.6)	(26.7)	(27.8)
<b>Cash flow from Financing</b>	<b>(74.7)</b>	<b>164.5</b>	<b>(172.7)</b>	<b>(118.4)</b>	<b>(141.7)</b>
Incr. (Decr.) in Cash	8.9	10.7	2.4	1.9	2.1
Beginning Cash	17.4	26.3	36.9	39.3	41.2
Ending Cash	26.3	36.9	39.3	41.2	43.2

Source: Company & PCR Estimates

**Exhibit 80**

**Financial Ratio**

<b>Dec 31</b>	<b>2003</b>	<b>2004</b>	<b>2005F</b>	<b>2006F</b>	<b>2007F</b>
<b><u>Growth Ratio</u></b>					
Sales Growth (%)	27.8	52.3	18.8	20.8	21.4
EBITDA Growth (%)	22.8	82.1	6.4	27.2	26.1
Operating Profit Growth (%)	36.8	110.2	12.8	31.9	28.7
Net Profit Growth (%)	2.2	22.5	8.2	48.8	39.3
<b><u>Profitability Ratio</u></b>					
Gross Margin (%)	34.1	37.8	35.6	37.1	38.0
Operating Margin (%)	20.9	28.8	27.4	29.9	31.7
Net Margin (%)	17.0	13.6	12.4	15.3	17.6
Effective Tax (%)	33.3	32.3	32.0	31.7	31.5
<b><u>Return Ratio</u></b>					
ROE (%)	128.8	37.3	22.7	27.2	29.6
ROA (%)	9.1	9.6	9.1	12.7	15.7
ROACE (%)	14.8	15.4	13.6	17.5	20.6
Earnings Yield (%)	16.6	10.9	11.8	17.5	24.4
<b><u>Solvency Ratio</u></b>					
Net Debt to Equity	5.27	1.31	0.89	0.65	0.45
Total Debt / Equity (x)	7.34	1.75	1.29	1.01	0.77
Total Debt/Asset (x)	0.88	0.64	0.56	0.50	0.44
Interest Coverage (x)	4.73	4.46	4.44	6.18	8.62
Cash Flow Cover (x)	4.79	7.07	7.40	7.85	9.87
<b><u>Liquidity Ratio</u></b>					
Current Ratio (x)	0.5	1.0	2.9	2.5	2.3
Quick Ratio (x)	0.3	0.8	2.3	1.8	1.6
Net Working Capital (Rp bn)	(98)	7	168	146	150
<b><u>Activity Ratio</u></b>					
Inventory Turnover (Day)	33	25	21	21	21
Receivable Turnover (Day)	45	65	95	83	67
Payable Turnover (Day)	37	24	20	20	19
Cash-to-Cash cycle (Day)	42	65	96	84	70

Source: Company & PCR Estimates

**Exhibit 81**

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