

22 February 2011 (No. of pages: 19)

Korea Kumho Petrochemical (011780 KS)

6-mth rating: **1**Target price: **W190,000**Share price: **W143,500** (21 Feb)**Daniel Lee**

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Materials: Korea

Initiation of coverage: we expect an upturn in the synthetic-rubber cycle

Upside potential of more than 30%

■ We initiate coverage of Korea Kumho Petrochemical (KKP) with a **1** (*Buy*) rating and six-month SOTP-based target price of W190,000. Despite significant outperformance over the past year, we expect the stock to continue to outperform materially over the next couple of quarters on: 1) the attractive valuation vis-à-vis its domestic peers, 2) potentially strong earnings momentum in 2011, and 3) an upturn in the synthetic-rubber cycle in the next three years. Our reasons for this are as follows:

1) Tyre demand likely to fuel rubber industry growth

■ We forecast global tyre sales to rise by 8% YoY for 2011, falling to 5.6% YoY by 2013, due to strong replacement demand in China and the US, given the general tyre-replacement cycle.

2) Strong natural-rubber prices another positive

■ Natural-rubber prices are currently US\$2,000/tonne higher than butadiene-rubber prices. We expect natural-rubber demand growth in 2011 to outpace production growth, and therefore expect strong natural-rubber prices to support synthetic-rubber prices further in 2011.

3) Limited synthetic-rubber capacity additions

■ We expect butadiene-rubber and styrene-butadiene-rubber demand growth to consistently beat the capacity growth for both until 2013, except for butadiene rubber in 2011. That said, we estimate the global butadiene-rubber capacity utilisation rate will remain close to 90% in 2011, which we consider tight.

Reuters code 011780.KS

Market data	
KOSPI	2,005.30
Market cap	(US\$bn) 3.91
EV	(US\$bn; 11E) 4.70
3-mth avg daily T/O	(US\$m) 23.46
Shares outstanding	(m) 30
Free float	(%) 37.9
Major shareholder	C.G. Park and related parties (37.59%)
Exchange rate	W/US\$ 1,118

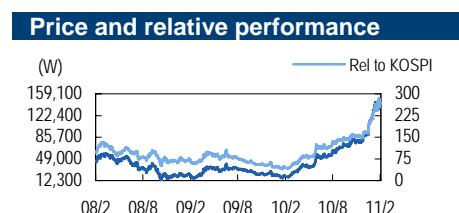
Performance (%)*	1M	3M	6M
Absolute	15.3	80.1	124.6
Relative	18.4	76.7	111.6

Source: Daiwa

Note: *Relative to KOSPI

Investment indicators		2011E	2012E	2013E
PER	(x)	8.5	7.8	7.1
PCFR	(x)	8.3	7.3	7.2
EV/EBITDA	(x)	7.1	6.2	5.4
PBR	(x)	2.7	2.0	1.6
Dividend yield	(%)	0.0	0.0	0.0
ROE	(%)	41.0	29.5	24.7
ROA	(%)	14.3	14.3	14.2
Net debt equity	(%)	79.4	41.2	16.7

Source: Daiwa forecasts



Source: Bloomberg, Daiwa

Income summary

Year to 31 Dec	Revenue		EBITDA		Net profit		EPS		CFPS	DPS
	(Wbn)	(%)	(Wbn)	(%)	(Wbn)	(%)	(W)	(%)	(W)	(W)
2009	2,802	(12.0)	215	(38.3)	(615)	n.a.	n.a.	n.a.	17,618	0.000
2010	3,886	38.7	477	121.3	331	n.a.	10,849	n.a.	7,726	0.000
2011E	4,940	27.1	738	54.7	517	56.3	16,960	56.3	17,379	0.000
2012E	4,924	(0.3)	781	5.9	560	8.3	18,369	8.3	19,691	0.000
2013E	4,982	1.2	816	4.5	614	9.6	20,140	9.6	19,943	0.000

Source: Company, Daiwa forecasts

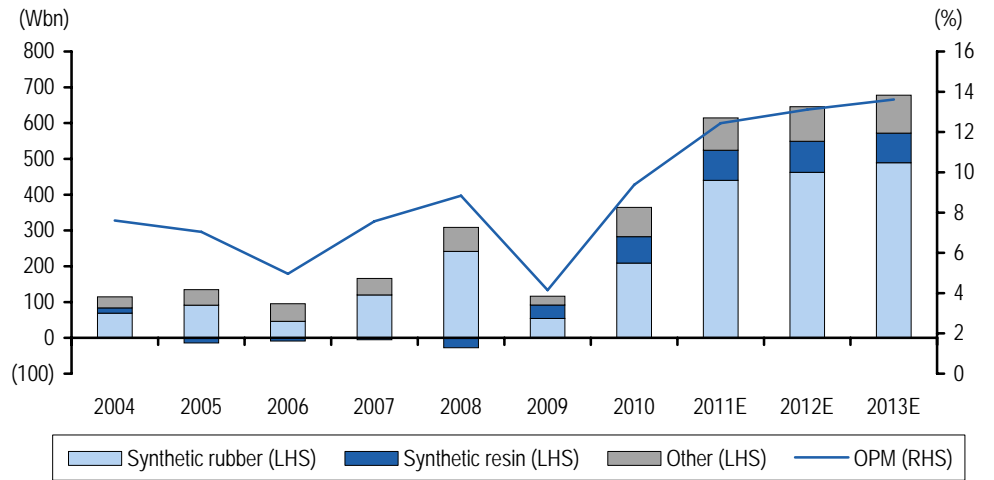
IMPORTANT DISCLOSURES, INCLUDING ANY REQUIRED RESEARCH CERTIFICATIONS, ARE PROVIDED ON THE LAST TWO PAGES OF THIS REPORT.

Global Equity Research

The three most important charts in this report ...

We forecast the operating profit to jump by 70% YoY for 2011

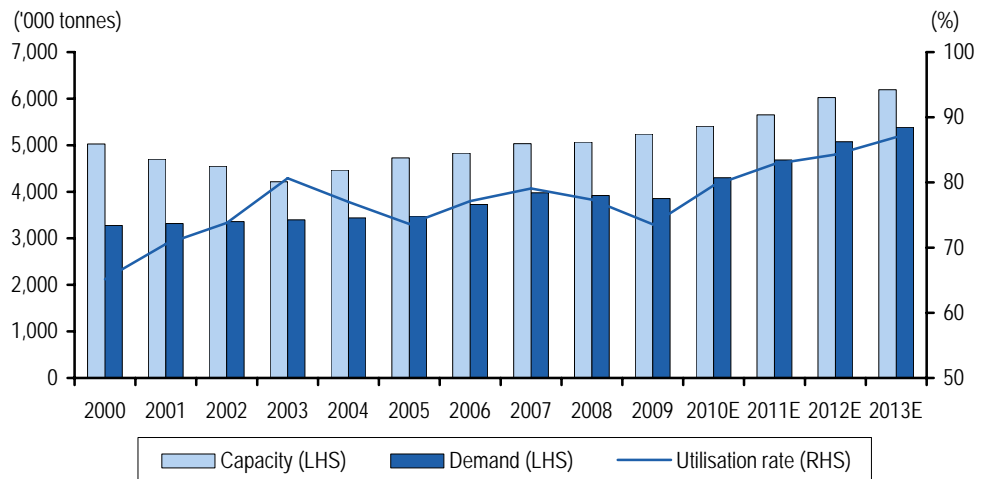
KKP: operating profit by division and overall operating-profit margin



Source: Company, Daiwa forecasts

We forecast the global utilisation rate for styrene butadiene rubber to increase to 87% by 2013 from 80% in 2010

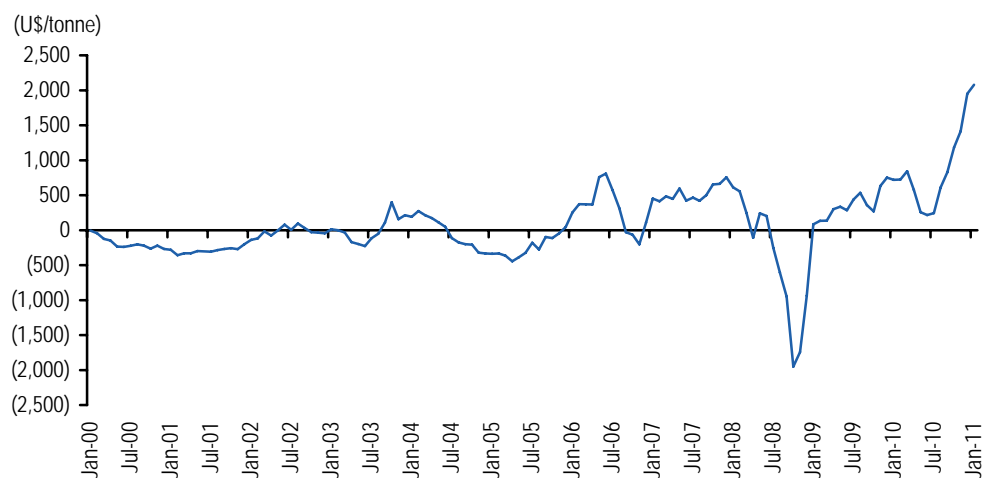
Global styrene-butadiene-rubber supply-demand estimates



Source: Company, ICIS News, CIS Chem, Daiwa forecasts

Soaring prices of natural rubber are supporting demand for and prices of styrene butadiene rubber

Natural-rubber/butadiene-rubber trend



Source: Company, Bloomberg
Note: BR price is based on KKP contract price

Executive summary

Initiate with a *Buy* on strong earnings momentum and still cheap valuation

Our six-month target price offers more than 30% upside potential

We initiate coverage of KKP with a **1 (*Buy*)** rating and six-month target price of W190,000, based on our SOTP valuation. KKP's share price increased by 338% in 2010 and has risen by a further 59% YTD due, we believe, to: 1) strong synthetic-rubber prices, and 2) the resolution of Kumho Group's liquidity crisis in 2010. That said, we still see significant upside potential for the share price given: 1) strong earnings momentum backed by a likely upturn in the synthetic-rubber cycle over the next three years, and 2) that KKP's shares look relatively undervalued to us vis-à-vis other Korean petrochemical stocks.

Synthetic-rubber cycle expected to heat up

Tyre replacement demand together with strong natural-rubber prices are likely to boost the synthetic-rubber cycle

We believe the supply-demand dynamics for synthetic rubber, the main earnings determinant for KKP, should improve markedly over the next three years, thereby boosting KKP's 2011 operating profit by 69% YoY to W614bn on our forecasts. We forecast the global utilisation rate for butadiene rubber to improve from 92% in 2010 to 94% in 2013. Although the global utilisation rate in 2011 may decline year-on-year to 89% on new capacity additions, we still believe the global supply of butadiene rubber will remain tight this year. We also expect the global utilisation rate for styrene-butadiene rubber to gradually improve from 80% in 2010 to 87% in 2013. The bright outlook we see for butadiene-rubber and styrene-butadiene-rubber supply-demand is based on three positive drivers given below:

- **Strong tyre demand.** We expect strong tyre-replacement demand to kick in during 2011 and 2012 given the general tyre-replacement cycle of 2-3 years, bolstering demand for both synthetic and natural rubber. We forecast global tyre sales to rise by 8% YoY for 2011, falling gradually to 5.6% YoY for 2013 due to strong replacement-demand growth in China (13% YoY for 2010 and 15% YoY for 2011, on our forecasts) and the US (3% YoY for 2010, increasing to 5.6% YoY for 2011, on our forecasts).
- **Strong natural-rubber prices.** We also believe substitution demand from natural rubber to synthetic rubber (ie, natural rubber being replaced by synthetic rubber) is another big positive for butadiene rubber and styrene butadiene rubber, given their price differentials with natural rubber of US\$2,000/tonne and US\$2,600/tonne, respectively, for the week ended 1 January 2011. We expect strong natural-rubber prices to continue to support synthetic-rubber price levels, as we expect the demand growth for natural rubber to outpace the increase in the supply of natural rubber in 2011. Hence, we do not expect a significant correction in natural-rubber prices which would cause them to fall below prices of butadiene rubber and styrene-butadiene rubber.
- **Limited synthetic-rubber capacity additions.** Given the new capacity addition schedules for butadiene rubber and styrene-butadiene rubber, we expect demand growth to consistently outpace capacity growth over the next three years, except for butadiene rubber in 2011. It is important to note that there is a lead-time of 6-12 months to market synthetic rubber from a new plant, as tyre makers generally conduct quality tests on products from new plants.

Valuation

KKP's shares are trading currently at a PER of 8.5x on our 2011 EPS forecast

We value KKP's business using an adjusted EV/EBITDA multiple and its investment securities at a 20% discount to book or market values. Our target price is equivalent to 2011 and 2012 PERs of 11.2x and 10.3x, respectively. We believe KKP's share price has not fully reflected its earnings growth potential, backed by the promising supply-demand outlook for synthetic rubber, despite the company's outstanding share-price performances in 2010 and in the year-to-date. Our target price and EPS forecasts are based on full dilution, assuming an additional 5,043,246 shares from the exchangeable bond of W200bn issued in May 2010 (the lock-up period for the shares expires in May 2013 with an exercise price of W39,657).

Company background

Korea Kumho Petrochemical (KKP) focuses on core businesses, namely synthetic rubber and resin production. Over the past 39 years, the company has developed into the leading producer of synthetic rubber globally and is actively expanding its business areas to synthetic resins and the fine chemical industry, construction material manufacturing, etc. Synthetic rubber accounted for 52.8% of sales for 2009, while resin accounted for 36%.

Korea Kumho Petrochemical – financial summary

Profit and loss (Wbn)						Balance sheet (Wbn)					
Year to 31 Dec	2009	2010	2011E	2012E	2013E	As at 31 Dec	2009	2010	2011E	2012E	2013E
Synthetic rubber	1,479	2,234	3,094	3,035	3,012	Cash & short-term investment	106	85	189	274	587
Synthetic resin	1,010	1,220	1,420	1,405	1,425	Inventory	321	368	394	395	402
Others	313	432	426	483	545	Accounts receivable	299	395	429	433	445
Total revenue	2,802	3,886	4,940	4,924	4,982	Other current assets	50	55	58	58	60
Other income	0	0	0	0	0	Total current assets	776	902	1,070	1,160	1,494
COGS	(2,488)	(3,307)	(4,065)	(4,012)	(4,032)	Fixed assets	1,357	1,456	1,644	1,818	1,998
SG&A	(198)	(215)	(261)	(266)	(272)	Goodwill & intangibles	36	28	23	20	18
Other op. expenses	0	0	0	0	0	Other non-current assets	1,032	1,056	1,056	1,056	1,056
EBIT	116	364	614	646	678	Total assets	3,200	3,443	3,793	4,055	4,566
Net-interest inc./(exp.)	(106)	(115)	(92)	(66)	(39)	Short-term debt	1,507	1,086	597	330	399
Assoc./forex/extraord./others	(852)	178	152	150	162	Accounts payable	263	231	248	249	253
Pre-tax profit	(842)	427	674	730	800	Other current liabilities	290	400	428	432	444
Tax	227	(97)	(157)	(170)	(187)	Total current liabilities	2,059	1,717	1,273	1,011	1,096
Min. int./pref. div./others	0	0	0	0	0	Long-term debt	585	801	878	843	655
Net profit (reported)	(615)	331	517	560	614	Other non-current liabilities	21	22	22	22	22
Net profit (adj.)	(615)	331	517	560	614	Total liabilities	2,665	2,540	2,174	1,876	1,773
EPS (reported) (W)	n.a.	10,849	16,960	18,369	20,140	Share capital	142	127	152	152	152
EPS (adj.) (W)	n.a.	10,849	16,960	18,369	20,140	Reserves/R.E./others	393	775	1,467	2,027	2,640
DPS (W)	0.000	0.000	0.000	0.000	0.000	Shareholders' equity	535	902	1,619	2,179	2,793
EBIT (adj.)	116	364	614	646	678	Minority interests	0	0	0	0	0
EBITDA (adj.)	215	477	738	781	816	Total equity & liabilities	3,200	3,443	3,793	4,055	4,566
						Net debt/(cash)	1,986	1,802	1,286	898	466

Cash flow (Wbn)						Key ratios					
Year to 31 Dec	2009	2010	2011E	2012E	2013E	Year to 31 Dec	2009	2010	2011E	2012E	2013E
Profit before tax	(842)	427	674	730	800	Sales – YoY %	(12.0)	38.7	27.1	(0.3)	1.2
Depreciation and amortisation	99	112	123	135	138	EBITDA (adj.) – YoY %	(38.3)	121.3	54.7	5.9	4.5
Tax paid	227	(97)	(157)	(170)	(187)	Net profit (adj.) – YoY %	n.a.	n.a.	56.3	8.3	9.6
Change in working capital	135	(173)	(44)	(4)	(15)	EPS (adj.) – YoY %	n.a.	n.a.	56.3	8.3	9.6
Other operational CF items	828	(34)	(67)	(91)	(130)	EBITDA margin % (adj.)	7.7	12.3	14.9	15.9	16.4
Cash flow from operations	448	235	530	600	608	EBIT margin % (adj.)	4.1	9.4	12.4	13.1	13.6
Capex	(287)	(200)	(300)	(300)	(300)	Net-profit margin % (adj.)	n.a.	8.5	10.5	11.4	12.3
Net (acquisitions)/disposal	(74)	37	0	0	0	ROAE (%)	n.a.	46.0	41.0	29.5	24.7
Other investing CF items	361	(566)	(307)	(173)	104	ROAA (%)	n.a.	10.0	14.3	14.3	14.2
Cash flow from investing	0	(728)	(607)	(473)	(196)	ROCE (%)	4.0	13.5	20.9	20.0	18.8
Change in debt	(261)	600	274	24	(59)	ROIC (%)	4.1	10.8	16.8	16.6	16.4
Net share issues/(repurchases)	0	0	0	0	0	Net debt to equity (%)	371.1	199.7	79.4	41.2	16.7
Dividends paid	(17)	0	0	0	0	Effective tax rate (%)	n.a.	22.6	23.3	23.3	23.3
Other financing CF items	0	0	0	0	0	Accounts receivable (days)	38.9	37.1	31.7	32.1	32.6
Cash flow from financing	(278)	600	274	24	(59)	Payables (days)	34.2	21.7	18.3	18.4	18.5
Forex effect/others	0	0	0	0	0	Net interest cover (x)	1.1	3.2	6.7	9.8	17.2
Change in cash	170	107	197	151	352	Net dividend payout (%)	n.a.	0.0	0.0	0.0	0.0

Key assumptions						PER bands					
Year to 31 Dec	2009	2010	2011E	2012E	2013E	(W)					
SBR spread (US\$/tonne)	486	538	1,005	1,161	1,268						
BR spread (US\$/tonne)	519	769	1,063	1,204	1,439						
SBR spread (US\$/tonne)	486	538	1,005	1,161	1,268						
SBR price (US\$/tonne)	1,441	2,198	2,950	2,920	2,888						
BR price (US\$/tonne)	1,520	2,659	3,288	3,163	3,200						
S. Rubber div. OP (Wbn)	54	209	440	462	489						
Resin div. OP (Wbn)	37	74	84	87	82						

Source: Company, Daiwa forecasts

Valuation

Six-month target price of W190,000

Our six-month target is equivalent to a PER of 11.2x on our 2011 EPS forecast

Our six-month target price of W190,000 is based on a SOTP valuation. We value KKP's business using an adjusted EV/EBITDA multiple (our adjusted EV is the EV minus the value of investment securities) and its investment securities at a 20% discount to book or market values. Our target price is equivalent to PERs of 11.2x and 10.3x on our 2011 and 2012 EPS forecasts, respectively. Our EPS forecasts and target price are based on full dilution, assuming an additional 5,043,246 shares from the exchangeable bond of W200bn issued in May 2010 (the lock-up period for the shares expires in May 2013 with an exercise price of W39,657).

KKP: target-price calculation

SOTP valuation	Assumption	(Wbn)
Operating business value	7.4x 2011E adjusted EV/EBITDA	5,458
Investment securities		725
- Listed	20% discount to market value	403
Asiana Airline (020560 KS)		294
Daewoo E&C (047040 KS)		177
Kumho Tire (073240 KS)		22
Kumho Industrial (002990 KS)		11
- Unlisted	20% discount to book value	322
Other - treasury stock		786
Total asset value		6,969
Net debt		1,286
Net asset value		5,683
Number of outstanding shares ('000 shares)		30,468
Net asset value per share (W)		186,515
Target price (W)		190,000

Source: Daiwa forecasts

Note: Number of outstanding shares is based on full exercise of its W200bn exchangeable bond

KKP's stock looks undervalued to us

We derive our 2011 adjusted EV/EBITDA multiple of 7.4x by assigning a 10% premium to the average adjusted EV/EBITDA multiple of the three other major Korean petrochemical companies we cover (LG Chemical [051910 KS, W380,000, 3] Honam Petrochemical [011170 KS, W337,000, 5], and Hanwha Chemical [009630 KS, W34,900, 4]) based on the Bloomberg-consensus forecasts. In other words, if the market actually sees KKP's EBITDA growth rate as 55% YoY (our forecast) for 2010-11 versus 12% YoY, the average of the three major Korean petrochemical companies, then KKP's fair multiple should exceed the average given the higher growth rate.

Moreover, given the simple comparison of PER valuations among major Korean chemical companies based on the Bloomberg consensus below, KKP is trading at the lowest level (KKP's PER valuation is based on our EPS forecasts). All in, we believe KKP's share price is still undervalued given our earnings-growth forecasts for the company, despite its outstanding share-price performance in 2010 and in the year-to-date.

EBITDA growth vs. adjusted EV/EBITDA

Company	Adj. EV/EBITDA (x)			EBITDA growth (%)	
	2010	2011E	2012E	2010-11	2011-12
LG Chemical	7.5	6.5	5.7	11.9	10.0
Honam Petrochemical	8.6	7.3	6.1	15.0	12.9
Hanwha Chemical	7.2	6.5	5.9	10.2	7.2
Average	7.7	6.8	5.9	12.4	10.0
Kumho Petrochemical*	9.5	5.4	4.6	54.7	5.9

Source: Bloomberg, *Daiwa forecasts

Korea chemical companies' EPS comparison

Company	PER (x)			EPS growth (%)	
	2010	2011E	2012E	2010-11	2011-12
LG Chemical	12.4	11.2	9.9	11.0	12.8
Honam Petrochemical	13.4	10.8	9.3	23.6	15.9
Hanwha Chemical	11.1	9.5	8.6	16.5	11.1
Average	12.3	10.5	9.3	17.0	13.3
Kumho Petrochemical*	13.0	8.3	7.6	56.3	8.3

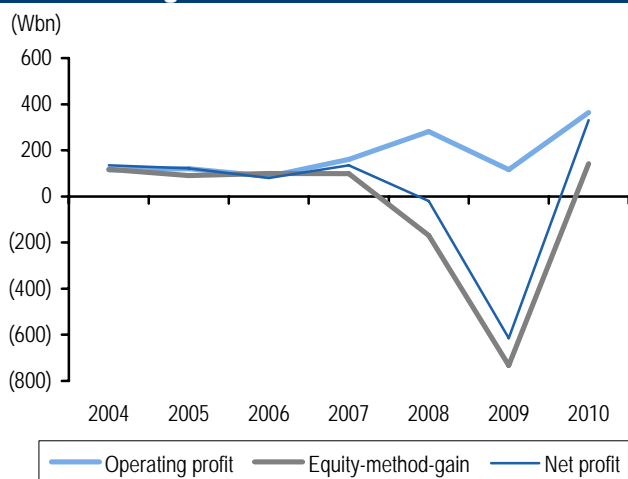
Source: Bloomberg, *Daiwa forecasts

Main earnings driver facing a better cycle

Since the start of 2010 KKP had no exposure to Kumho Group risk

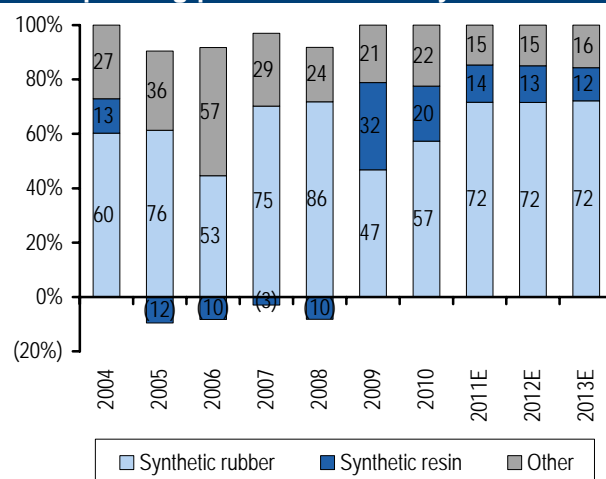
Since the beginning of 2010, the market seems to have returned its focus to KKP's main earnings driver, the synthetic-rubber business, as the Kumho Group risk has been removed by KKP being separated from the group and Kumho Group-related subsidiaries being reinstated as investment securities available for sales (being part of the Kumho Group until 2009, KKP's net profit was hit badly by the equity-method losses recorded by Kumho Industrial-related subsidiaries during 2008 and 2009, with KKP recording net losses of W20bn and W615bn, respectively. Please see page 14 for more details).

KKP: earnings trend



Source: Company

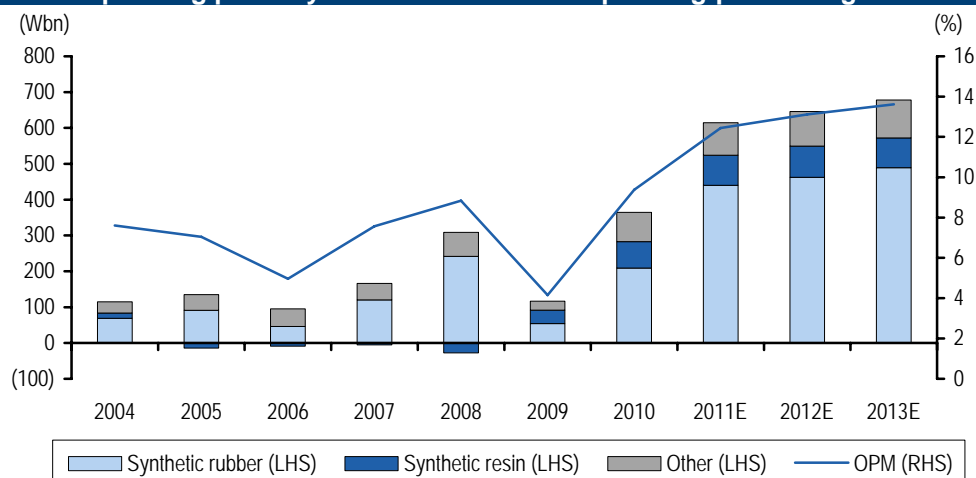
KKP: operating-profit breakdown by division



Source: Company, Daiwa forecasts

That said, KKP's operating profit rose by a strong 214% YoY to W364bn for 2010, due mainly to a low base effect (2009 operating profit dipped due to high raw-material costs carried forward from 2008), and we expect even better earnings for the next three years backed by the promising outlook for synthetic rubber supply-demand. We forecast the following factors: 1) strong tyre demand, 2) strong natural rubber prices, and 3) limited synthetic rubber capacity additions, to lead to better synthetic rubber supply-demand dynamics in the next few years, boosting KKP's synthetic rubber operating-profit contribution from 57% in 2010 to 75% in 2011.

KKP: operating profit by division and overall operating-profit margin



Source: Company, Daiwa forecasts

In addition, among KKP's three divisions – synthetic rubber (butadiene rubber and styrene butadiene rubber), synthetic resin (ABS and polystyrene) and other (cogeneration and rubber anti-aging agents) – synthetic rubber has been the key earnings driver for the company.

Earnings forecasts

We forecast the company's operating profit to surge by 56% YoY for 2011

We forecast KKP's 2011 and 2012 operating profit to increase by 56% YoY and 8% YoY to W614bn and W646bn, respectively, due mainly to the substantial increase in synthetic-rubber contract prices toward the end of 2010, and the company expects a 54% increase in its butadiene-rubber production capacity (a new 120,000-tpa butadiene-rubber plant is due to start commercial production from February 2011) on top of the promising outlook for synthetic-rubber supply-demand.

- **Synthetic-rubber division.** We forecast the operating profit for this division to rise by 111% YoY to W440bn for 2011, as January contract prices for butadiene rubber and styrene butadiene rubber were respectively US\$1,019/tonne and US\$646/tonne higher than their 2010 averages (January 2011 butadiene-rubber and styrene-butadiene-rubber spreads were respectively US\$710/tonne and US\$401/tonne higher than their 2010 averages). Given: 1) the current strong natural-rubber price rally, and 2) expected tight synthetic and natural-rubber supplies in 2011, we believe KKP should benefit from significantly wider synthetic-rubber spreads throughout 2011.
- **Synthetic-resin division.** We forecast the operating profit for this division to increase by 14% YoY to W84bn for 2011, on the back of strong ABS and polystyrene prices. That said, we expect the operating-profit margin for the synthetic-resin business to decline slightly due to the time-lag between product-price hikes and raw-material price increases.
- **Other.** We expect the operating profit for the cogeneration (steam and electricity sales) and rubber anti-aging agent (6PPD) segments to increase gradually over the next three years together with rises in oil prices (for the cogeneration business) and increases in the capacity utilisation rate of KKP's 6PPD. The company's 6PPD capacity utilisation rate was 50% for 4Q10, but should gradually increase with synthetic-rubber demand growth (6PPD is an additive for synthetic rubber).

KKP: sales and operating profit breakdown by division (Wbn)

	2004	2005	2006	2007	2008	2009	2010	2011E	2012E	2013E
Sales	1,508	1,709	1,753	2,125	3,182	2,802	3,886	4,940	4,924	4,982
Synthetic rubber	703	897	892	1,096	1,886	1,479	2,234	3,094	3,035	3,012
Synthetic resin	699	670	721	878	1,028	1,010	1,220	1,420	1,405	1,425
Other	106	143	140	151	269	313	432	426	483	545
Operating profit	115	120	87	161	281	116	364	614	646	678
Operating profit margin (%)	8	7	5	8	9	4	9	12	13	14
Sales breakdown (%)										
Synthetic rubber	47	52	51	52	59	53	57	63	62	60
Synthetic resin	46	39	41	41	32	36	31	29	29	29
Other	7	8	8	7	8	11	11	9	10	11
Operating profit breakdown (%)										
Synthetic rubber	60	76	53	75	86	47	57	72	72	72
Synthetic resin	13	(12)	(10)	(3)	(10)	32	20	14	13	12
Quarterly breakdown	3Q10	4Q10	1Q11E	2Q11E	3Q11E	4Q11E	1Q12E	2Q12E	3Q12E	4Q12E
Sales	1,007	1,022	1,261	1,299	1,270	1,110	1,261	1,274	1,270	1,120
Synthetic rubber	584	591	785	817	795	697	789	792	772	683
Synthetic resin	311	316	376	379	368	298	354	363	379	309
Other	112	115	100	103	108	115	117	119	119	128
Operating profit	91	110	167	154	161	132	158	184	168	136

Source: Company, Daiwa forecasts

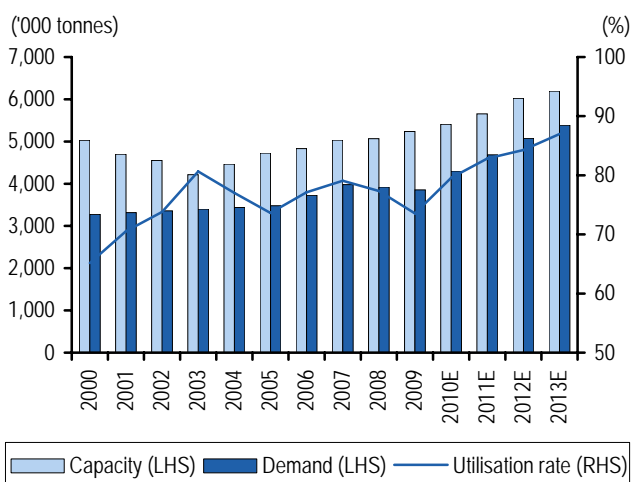
Note: We assume a 90% production utilisation rate for every fourth quarter due to regular maintenance shutdowns

We expect an upturn in the synthetic-rubber cycle

We expect the supply of butadiene rubber and styrene butadiene rubber to become tighter in the next three years

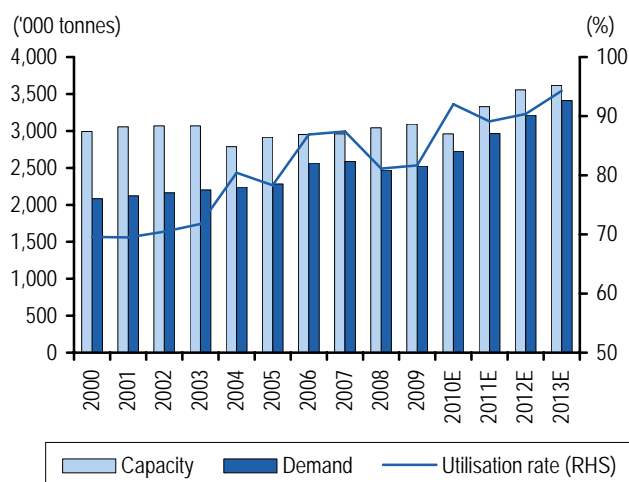
We believe the three key determinants for the synthetic-rubber cycle are: 1) tyre demand, 2) the price differential between natural rubber and synthetic rubber, and 3) new synthetic rubber capacity additions. We expect all three factors to support the synthetic-rubber cycle over the next three years. We forecast the global styrene butadiene rubber capacity utilisation rate to gradually improve from 80% in 2010 to 87% in 2013, resulting in tighter supply going forward. We also forecast the global butadiene-rubber-capacity utilisation rate to increase from 92% in 2010 to 94% in 2013. Although we forecast the utilisation rate for 2011 to decrease year-on-year to 89% on the back of new capacity additions, we still think global supplies of butadiene rubber will remain tight this year.

Global styrene-butadiene rubber supply-demand estimates



Source: Company, ICIS News, CIS Chem, Daiwa forecasts

Global butadiene rubber supply-demand estimates



Source: Company, ICIS News, CIS Chem Daiwa forecasts

Therefore, we forecast the average spreads for styrene butadiene rubber and butadiene rubber in 2011 to expand by US\$467/tonne and US\$294/tonne YoY, respectively, increasing the 2011 operating-profit margin for KKP's synthetic-rubber business substantially.

Major product and raw-material price assumptions

	Price			Spread		
	BR*	SBR**	NBR***	BR	SBR	NBR
1Q10	2,311	1,966	3,985	458	316	2,043
2Q10	2,624	2,257	2,808	562	476	624
3Q10	2,617	2,122	4,368	910	625	2,535
4Q10E	3,085	2,447	5,154	1,144	734	3,137
1Q11E	3,600	2,850	4,625	1,410	923	2,344
2Q11E	3,400	3,000	4,533	1,007	929	2,148
3Q11E	3,150	3,000	4,533	946	1,072	2,318
4Q11E	3,000	2,950	4,533	887	1,097	2,454
1Q12E	3,150	2,980	4,533	1,019	1,107	2,428
2Q12E	3,250	2,950	4,533	1,276	1,183	2,545
3Q12E	3,150	2,900	4,442	1,228	1,158	2,466
4Q12E	3,100	2,850	4,531	1,294	1,195	2,613
1Q13E	3,100	2,700	4,440	1,357	1,100	2,526
2Q13E	3,250	2,950	4,529	1,450	1,302	2,539
3Q13E	3,300	3,000	4,529	1,485	1,335	2,488
4Q13E	3,150	2,900	4,665	1,466	1,335	2,666

Source: Company, KITA, CIS Chem, Daiwa forecasts

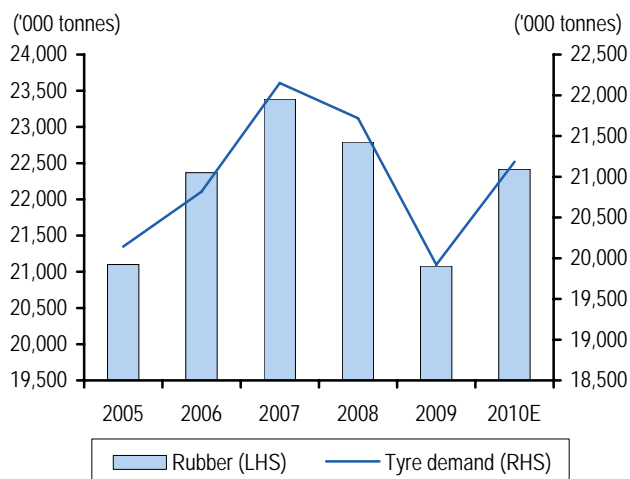
Note: Prices for *butadiene rubber, **styrene butadiene rubber, ***acrylonitrile butadiene rubber are based on our estimates of KKP's contract prices

1) Tyre demand growth likely to fuel synthetic-rubber demand

We expect replacement tyre demand to kick in over the next couple of years

Global rubber demand (the sum of synthetic-rubber and natural-rubber demand) is largely determined by the demand for tyres, and tyres account for 70% of KKP's synthetic-rubber demand. Needless to say, global tyre demand is the key, and we expect strong replacement as well as original-equipment demand to fuel global rubber demand over the next three years.

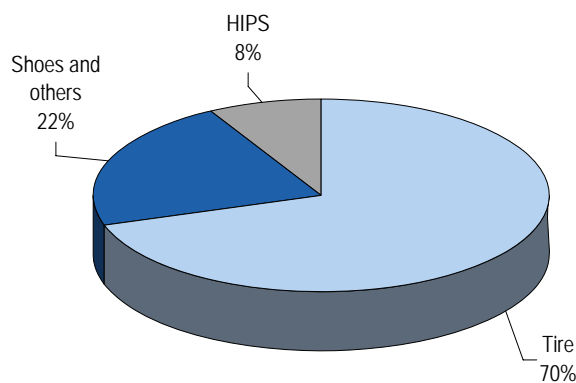
Global rubber demand vs. tyre demand



Source: IRSG, Daiwa forecasts

Note: We assume HCV, LCV and PC tyre weight as 57kg, 14kg and 9kg, respectively

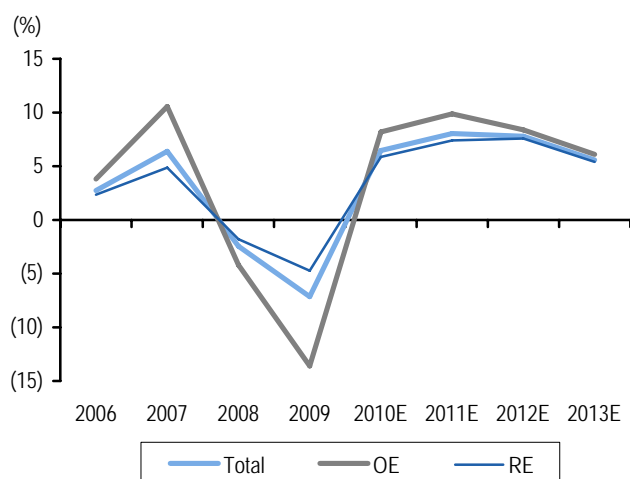
KKP: synthetic rubber demand breakdown (2009)



Source: Company

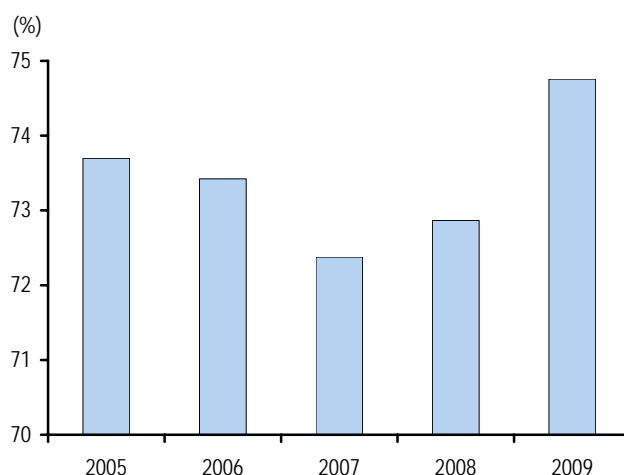
We forecast global rubber demand to rise by 8.9% YoY for 2011, 8.4% YoY for 2012 and 6.1% YoY for 2013, as strong tyre replacement demand kicks in over the next couple of years. We forecast global tyre sales to rise by 8% YoY for 2011, falling gradually to 5.6% YoY for 2013 due to strong replacement-demand growth in China (13% YoY for 2010, rising to 15% YoY for 2011, based on our forecasts) and the US (3% YoY for 2010, increasing to 5.6% YoY for 2011, based on our forecasts), given the general tyre-replacement cycle of 2-3 years.

Global tyre demand growth estimates



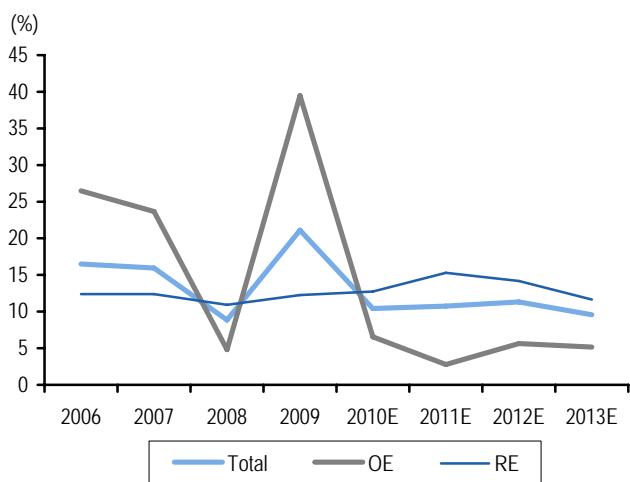
Source: Company, Michelin, ChemLocus, CIS Chem, Daiwa forecasts

Replacement portion of global tyre demand



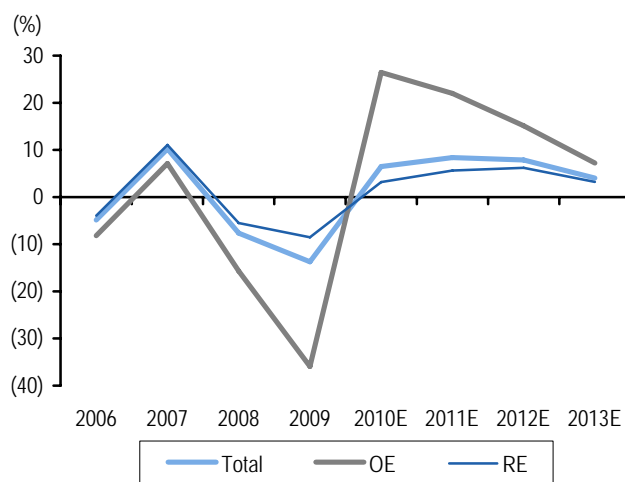
Source: Company, CIS Chem, ChemLocus

China tyre demand growth estimates



Source: Company, Michelin, ChemLocus, CIS Chem, Daiwa forecasts

US tyre demand growth estimates



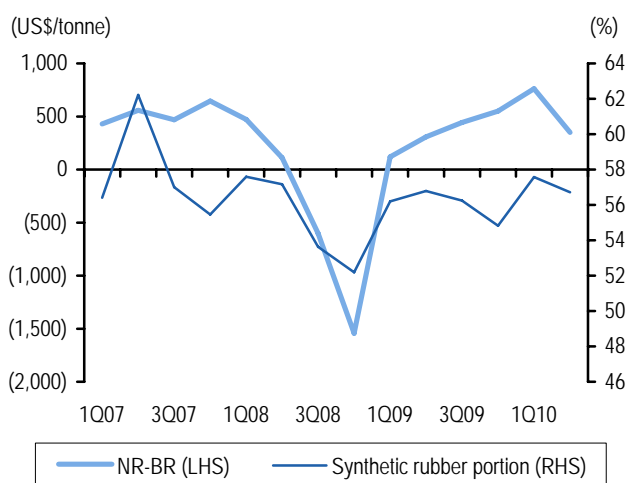
Source: Company, Michelin, ChemLocus, CIS Chem, Daiwa forecasts

2) Strong natural-rubber price, another positive

Strong natural-rubber prices should support synthetic rubber prices

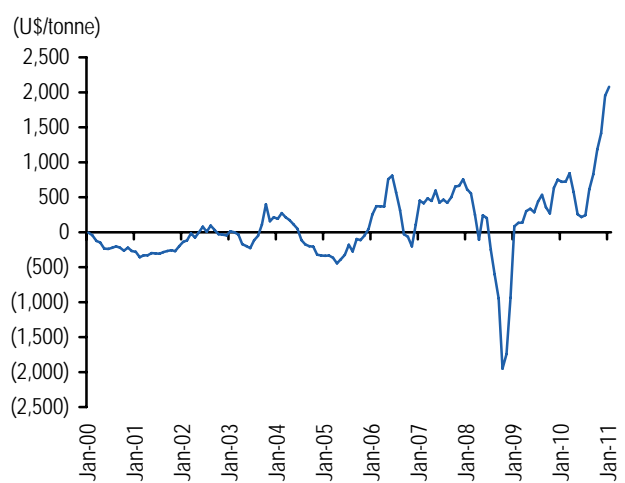
We believe synthetic rubber is a substitute product for natural rubber to some extent, as we note that the synthetic rubber portion of total rubber demand moves in tandem with the price differential between natural rubber and butadiene rubber. That said, natural-rubber prices increased sharply, by 72% YoY, in 2010, ending the year at US\$4,805/tonne, and recently reached close to the US\$6,000/tonne level due to tight supply among the major rubber-producing countries, such as Thailand, Malaysia, Vietnam, India and China. As the gap between KKP's butadiene-rubber contract price and natural-rubber contract price has widened to an all-time high of more than US\$2,000/tonne, currently, we expect more substitution demand to shift from natural rubber to synthetic rubber, thereby narrowing the gap in prices, or at least supporting the current BR price.

Synthetic rubber portion and natural rubber/butadiene rubber



Source: Company, Bloomberg, URSG, ANRPC
Note: BR price is based on KKP contract price

Natural rubber/butadiene rubber



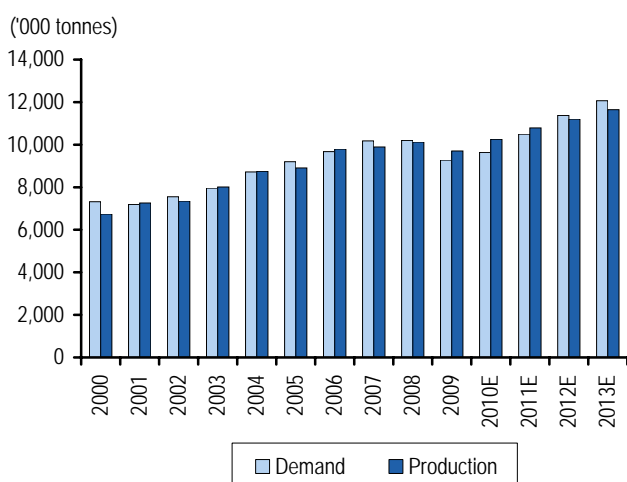
Source: Company, Bloomberg
Note: BR price is based on KKP contract price

Natural-rubber supply likely to remain tight throughout 2011

Then we believe the next question would be whether the current level of natural-rubber prices can be maintained. Although it is difficult to estimate how much natural-rubber prices could rise, we would not expect prices to go through a major correction, ie, falling below synthetic-rubber price levels, as we believe natural-rubber demand growth will outpace natural-rubber production growth in 2011. For the nine major rubber-producing countries (Thailand, Indonesia, Malaysia, India, Vietnam, China, Sri Lanka, The Philippines, and Cambodia, which accounted for

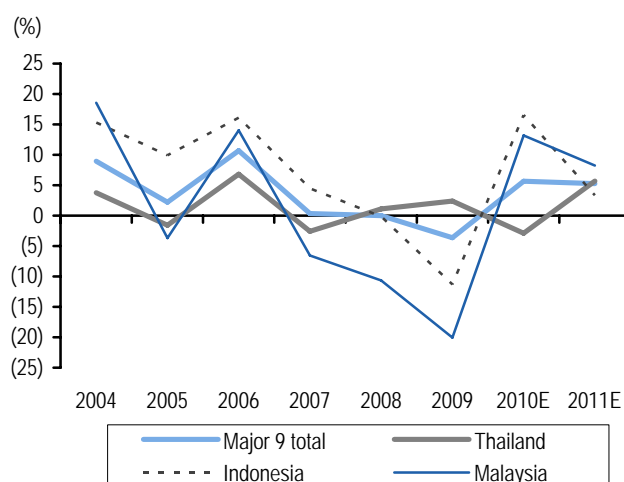
92% of total natural-rubber production globally for 2009), we forecast natural-rubber production to increase by 5.3% YoY, and natural-rubber demand to rise by 8.9% YoY for 2011.

Natural rubber supply-demand outlook



Source: IRSG, ANRPC, Daiwa forecasts

Natural rubber production growth rate



Source: IRSG, ANRPC

Note: Major 9 total includes Thailand, Indonesia, Malaysia, India, Vietnam, China, Sri Lanka, Philippines, Cambodia

If we assume the level of natural-rubber production growth in 2011 continues until 2013, the demand growth rate for natural rubber would outpace its production growth rate for the next three years, resulting in considerably tight natural-rubber supply.

3) Limited synthetic rubber supply additions

BR capacity addition may outpace demand growth in 2011, but the supply should remain tight, in our view

Given the new capacity addition schedule for butadiene rubber and styrene butadiene rubber, we expect demand growth to consistently outpace capacity growth for the next three years, except for butadiene rubber in 2011. We forecast capacity growth for butadiene rubber of 12% YoY for 2011 versus demand growth of 9% due to new capacity additions in China, South Korea and Japan. That said, we estimate global butadiene rubber capacity-utilisation rates to remain close to 90%, which we still consider tight. Although we expect the butadiene rubber spread to narrow after or toward the end of 1Q11 due to the capacity additions, we expect the butadiene rubber spread in 2011 to remain above the 2010 average given the tight supply and the significant price differential with natural rubber. It is also important to note that there is a lead-time of 6-12 months to market synthetic rubber from new plants, as tyre makers generally carry out quality tests of the products.

Butadiene rubber new capacity additions

Quarter	Country	Company	Capacity (tpa)	Start-up
1Q11	China	Meizhouwan Chloro-Alkali Industries	50	
	South Korea	Korea Kumho Petrochemical	120	Feb
	Brazil	Lanxess - Petroflex Industria e Comercio	17	
	Germany	Lanxess	17	
	Poland	Synthos (Dwory)	80	
	US	Lanxess	17	
		Total	301	
2Q11	China	Petrochina Sichuan Petrochemical - (PSP)	150	
	South Korea	LG Chem	80	May
		Total	230	
2011		Total	531	
1Q12	China	Shangdong Yuhuang Chemical	50	
	Japan	Ube Industries	15	
2012		Total	65	
1Q13	China	Daqing Petrochemical	50	
3Q13	China	TSRC Ube (Nantong) Chemical Industry	15	Aug
2013		Total	65	

Source: Company, ICIS News, CIS Chem, ChemLocus

Styrene butadiene rubber new capacity additions

Quarter	Country	Company	Capacity (tpa)	Start-up
4Q10	China	Hangzhou Zhechen Rubber	50	Oct
2Q11	China	Tianjin Lugang Petroleum and Rubber	100	
	China	Meizhouwan Chloro-Alkali Industries	100	
		Total	250	
4Q11	China	Fushun Petrochemical	200	
	Japan	JSR	35	Nov
		Total	235	
2011		Total	485	
1Q12	China	North Xingan Dinasol Synthetic Rubber	100	
2012		Total	100	
1Q13	China	Sinopec - YPC GPRO Rubber	50	
2Q13	Singapore	Asahi Kasei Chemicals	50	Jun
3Q13	Singapore	Sumitomo Chemical Asia	30	
	India	Indian Synthetic Rubber	120	Sept
2013		Total	250	

Source: Company, ICIS News, CIS Chem, ChemLocus

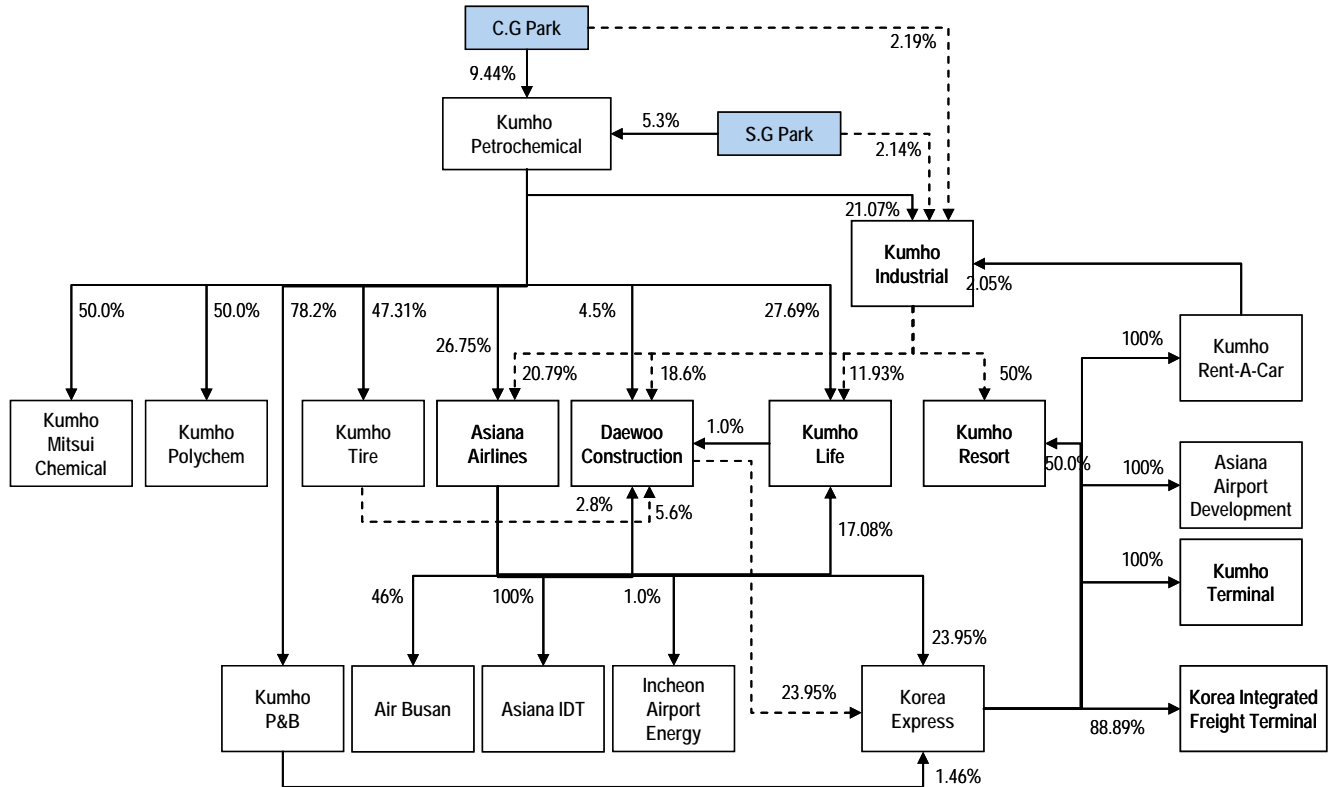
In addition, we expect KKP's synthetic rubber production costs to increase, as C4 purchases from Honam Petrochemical were reduced from November 2010. That said, we expect KKP's total butadiene-rubber capacity utilisation rate to remain above 80% in 2011, and the incremental cost as a result of the C4 reduction to be about W300bn a year. In any case, we believe the increase in production costs will not be significant, given the butadiene-rubber capacity expansion effect and the expanded synthetic-rubber spread we expect in 1Q11.

Ownership structure

KKP became a stand-alone company after separating itself from the Kumho Group

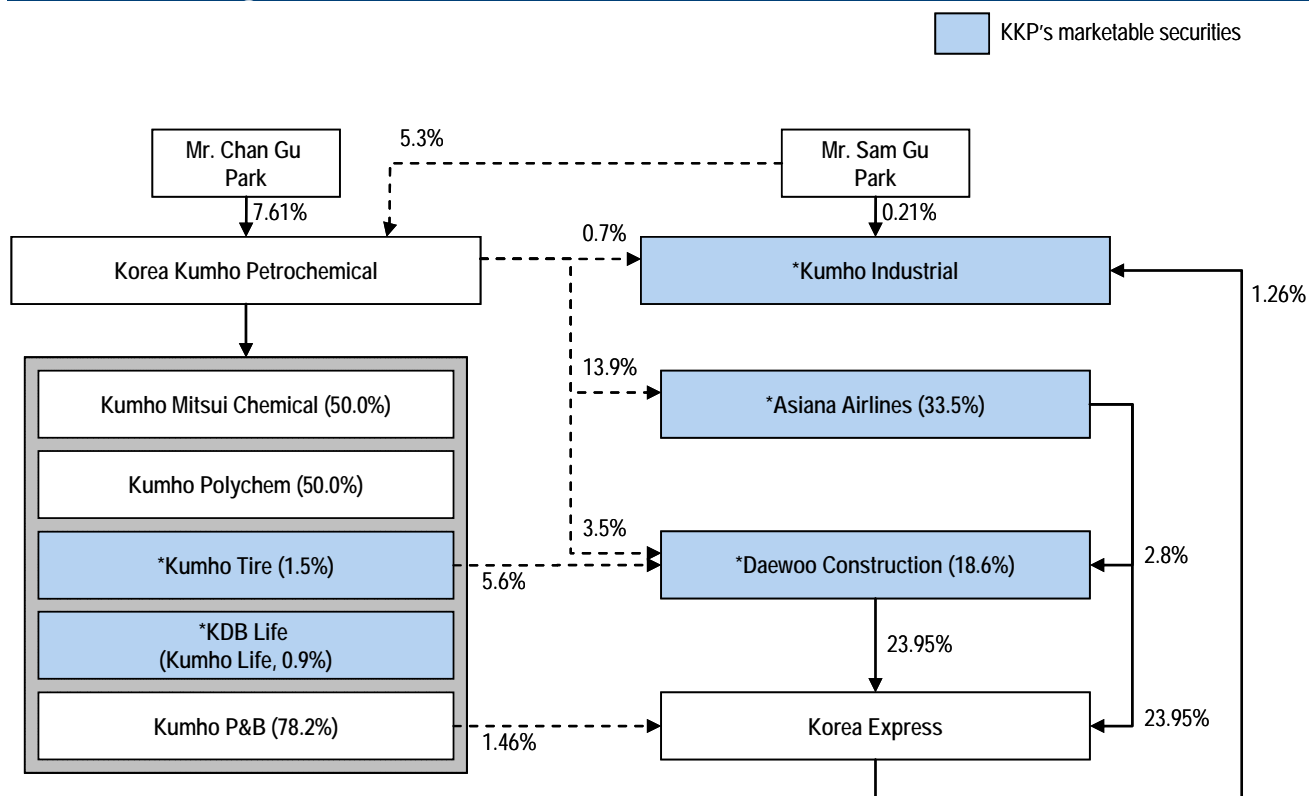
KKP became a standalone company from the beginning 2010, separated from the Kumho Group. Although the timing has not yet been determined, KKP plans to sell all of its major marketable securities related to the Kumho Group to pay down its debt in the future. These are Asiana Airlines (Not rated), Kumho Industrial (Not rated), and Kumho Tire (Not rated) and Daewoo E&C (047040 KS, W11,000, 1), KKP's stakes in which are equivalent to a total of W600bn.

The Kumho Group shareholding structure in 4Q09



Source: Company

KKP shareholding structure in December 2010



Source: Company

Note: KKP plans to sell *marketable securities

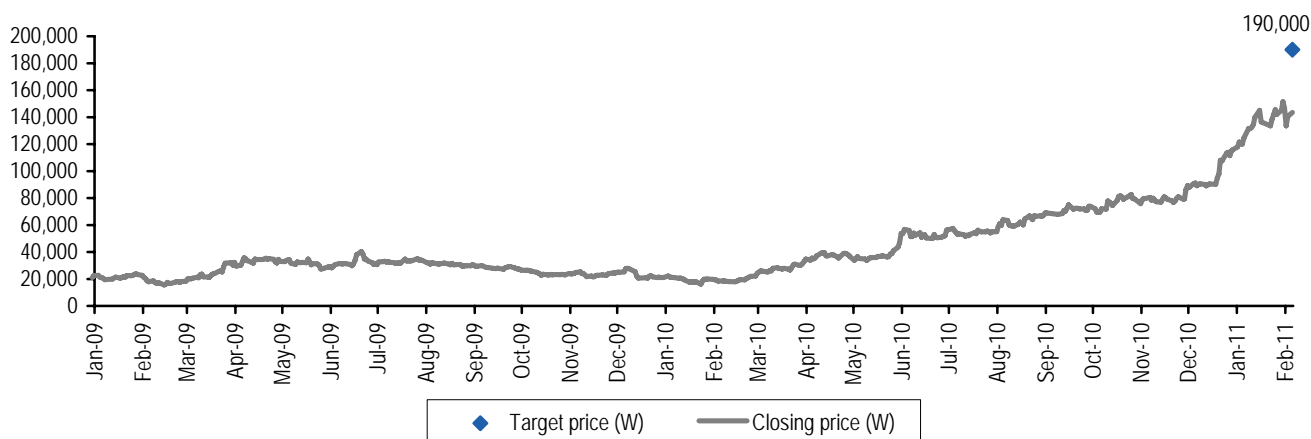
In addition, KKP's net debt level increased rapidly to W2tn in 2009 from W577bn in 2005, as the company supported the inorganic growth of the Kumho Group led by Chairman S.G. Park. That said, the Kumho Group was broken up in 2009, leaving only six subsidiaries run solely by Mr. C.G. Park. Among the six subsidiaries, the three chemical companies are the most important in terms of their earnings contribution: Kumho Polychem (Not listed) (major product: EPDM), Kumho Mitsui Chemical (Not listed) (major product: MDI), and Kumho P&B (Not listed) (major product: BPA, epoxy resin).

Downside risk

We believe the major downside risks to our target price and earnings forecasts are weak tyre sales, better-than-expected natural-rubber production growth and a sharp rise in butadiene prices. Furthermore, the primary reason behind the sluggish share-price performance and earnings deterioration during 2008 and 2009 was the Kumho Group-related risk. Although we firmly believe the group-related risk has been finally removed, any regrouping movement back to Kumho Group would impact the share-price adversely, in our view.

Korea Kumho Petrochemical: share price and Daiwa recommendation trend

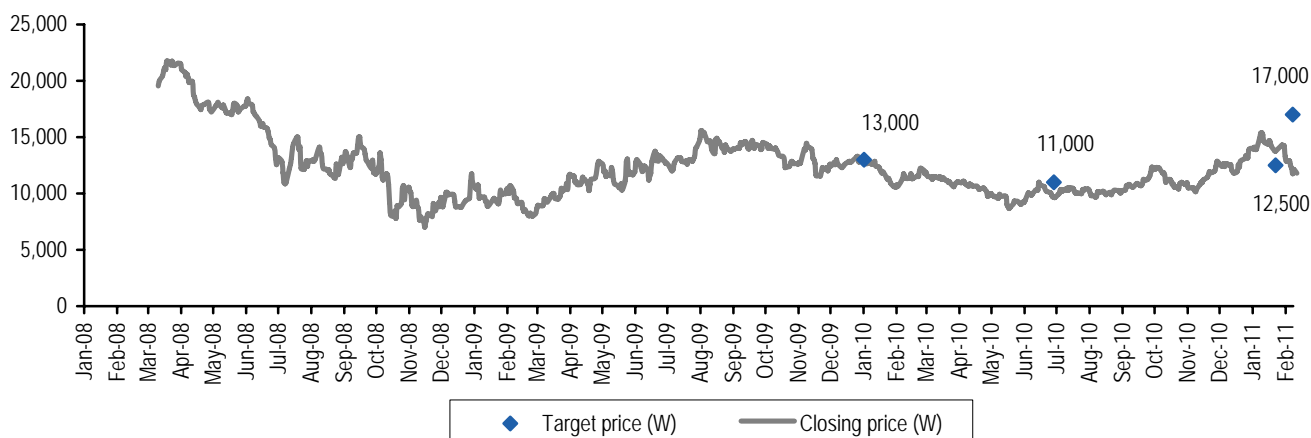
Date	2/22/2011
Target price	190,000
Rating	1



Source: Daiwa

Daewoo E&C: share price and Daiwa recommendation trend

Date	2/17/2011	2/1/2011	7/8/2010	1/11/2010
Target price	17,000	12,500	11,000	13,000
Rating	1	3	3	3



Source: Daiwa

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