

Petrochemical price monitor

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- **Propylene still in bad shape.** Prices of olefins and derivative products remained under pressure, down 0.3-2.4% WoW due to lower feedstock price, as naphtha price fell 1% WoW, and softening regional demand. Propylene was among the worst performers, falling 2.4% WoW to a 3-year low of US\$1,238/t and spread over naphtha narrowed 3.7% WoW to US\$612/t. The supply glut in the region came from higher supply of propylene due to alternative production processes rather than naphtha crackers, such as Propylene Dehydrogenation (PDH) and coal-to-olefins and methanol-to-olefins. This could pose downside risk to naphtha-based producers given their higher propylene output than gas-based producers. Meanwhile, non-integrated PE/PP producers will continue to enjoy stronger product margin due to weakening ethylene/propylene prices.
- **Brief recovery of aromatics price.** PX and BZ prices rebounded slightly by 1.1-1.7% WoW after a continuous slide during the past four weeks. This is unlikely to be sustained in the near term given lower feedstock cost (naphtha), weak demand and ample supply. Operators will continue to be hit by narrower spread as more PTA production cuts come into play.
- **PET/PTA spread tumbled to four-week low.** As expected, integrated PET/PTA spread fell by 11.4% WoW to US\$297/t due to lower PET price and higher feedstock cost. We believe the higher feedstock cost cannot be sustained for long and PET/polyester prices will continue to weaken during low season in 4Q.

Investment view: IVL (+4.5% WoW) led the sector (+3% WoW) to outperform the market (+1.4% WoW). It appears the poor 3Q14 performance is largely priced in and valuation looks undemanding. Nonetheless, as oil price continues to weaken despite seasonal demand, we still see downside risk for the sector in the near term. Prefer PTTGC to others.

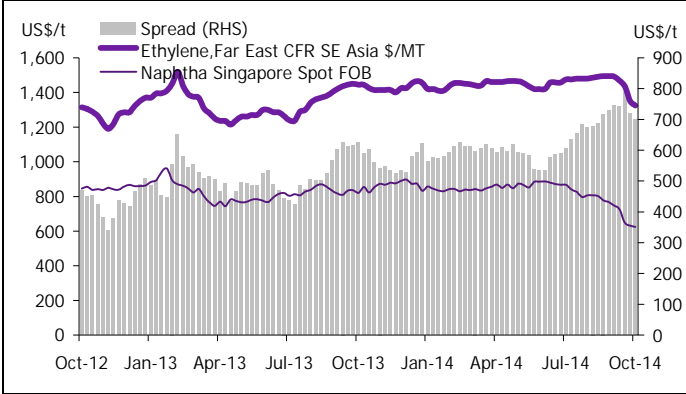
Figure 1: Petrochemical price update

	Current 24-Oct-14	52-week High/Low	-1W	-1M	-3M	-6M	-12M	4Q14 QTD	3Q14	QoQ%	YTD	Chg.	%YoY	2014F projection
Price														
Naphtha Singapore Spot FOB	625	897/625	-1.0%	-16.4%	-27.9%	-28.0%	-23.7%	658	820	-19.7%	825	0	0.0%	842
Ethylene, Far East CFR SE Asia \$/MT	1,325	1,495/1,325	-1.9%	-11.2%	-10.2%	-9.2%	-8.3%	1,395	1,478	-5.6%	1,450	112	8.4%	1,440
Propylene (C), Spot CFR F/E US/MT	1,238	1,503/1,238	-2.4%	-8.3%	-16.1%	-13.6%	-14.9%	1,298	1,412	-8.1%	1,418	38	2.8%	1,430
Polye HDPE Inj, South East Asia US/MT	1,560	1,620/1,530	-0.3%	-1.6%	-3.4%	0.6%	2.3%	1,570	1,605	-2.2%	1,573	107	7.3%	1,570
Polye LDPE-Film, Spot S.E Asia US/MT	1,555	1,680/1,555	-1.3%	-1.9%	-3.4%	-4.0%	-6.0%	1,570	1,602	-2.0%	1,612	105	6.9%	1,640
Polye LLDPE Film, F/E Spot SE Asia \$/MT	1,560	1,615/1,530	-0.3%	-1.0%	-3.4%	-0.3%	1.3%	1,569	1,602	-2.1%	1,579	106	7.2%	1,580
PP Film, Spot South East Asia US/MT	1,580	1,625/1,530	-0.3%	-0.3%	-1.9%	0.0%	2.9%	1,584	1,613	-1.8%	1,585	76	5.0%	1,570
Related stocks														
			PTTGC (-) IRPC (+) SCC (+) TPIPL (+)											
Para-Xylene CFR Chin M. Por Spot \$/MT	1,070	1,488/1,053	1.7%	-15.5%	-24.5%	-11.2%	-24.8%	1,111	1,353	-17.9%	1,283	-230	-15.2%	1,190
Benzene, Far East CFR Spot F/E US/MT	1,118	1,385/1,105	1.1%	-7.3%	-17.1%	-11.7%	-11.0%	1,145	1,296	-11.7%	1,284	-37	-2.8%	1,240
Related stocks														
			PTTGC (+) TOP (+) ESSO (+)											
MEG, Far East Spot CFR F/E US/MT	838	1,061/794	5.5%	-6.1%	-15.6%	-8.4%	-19.4%	840	973	-13.7%	949	-109	-10.3%	1,110
PTA CFR South East Asia	820	1,040/780	5.1%	-10.9%	-20.0%	-7.3%	-18.4%	840	999	-15.9%	941	-151	-13.8%	900
PET (Fibre Grade) A/P Spot CFR NEA \$/MT	1,105	1,335/1,105	-1.8%	-9.1%	-13.7%	-7.5%	-18.8%	1,159	1,268	-8.6%	1,242	-173	-12.2%	n.a.
Related stocks														
			PTTGC (+) IVL (-)											
ABS Asia Pac. India Spot CFR US/MT	1,870	1,950/1,870	-0.3%	-2.3%	-2.3%	-1.3%	-2.3%	1,890	1,925	-1.8%	1,903	-59	-3.0%	n.a.
Polystyrene-GP, Spot Hong Kong US/MT	1,585	1,825/1,585	-0.9%	-3.9%	-9.7%	-9.4%	-15.0%	1,616	1,713	-5.6%	1,729	-127	-6.9%	n.a.
Related stocks														
			IRPC (-)											
PVC, Spot South East Asia US/MT	985	1,070/980	-1.0%	-1.0%	-7.5%	-4.4%	-1.5%	993	1,047	-5.2%	1,036	20	1.9%	1,070
Related stocks														
			VNT (+) TPC (+)											
Product spread														
Ethylene - naphtha	700	786/525	-2.6%	-6.0%	15.2%	18.3%	12.0%	737	659	11.8%	625	112	21.8%	598
Propylene - naphtha	612	686/530	-3.7%	1.7%	0.8%	8.6%	-3.6%	640	593	7.9%	593	38	6.8%	588
HDPE - naphtha	935	935/638	0.1%	11.7%	25.1%	37.2%	32.6%	912	785	16.1%	748	107	16.6%	728
LDPE - naphtha	930	943/709	-1.4%	11.1%	25.3%	23.7%	11.3%	912	782	16.5%	787	104	15.3%	798
LDPE - Ethylene	230	270/93	2.2%	148.6%	70.4%	43.8%	9.5%	175	123	41.7%	162	-7	-4.4%	200
LLDPE - naphtha	935	935/662	0.1%	13.0%	25.1%	34.2%	29.8%	910	782	16.4%	754	106	16.4%	738
PP - naphtha	955	955/657	0.1%	14.1%	28.6%	34.2%	33.5%	925	793	16.7%	760	76	11.1%	728
PX - naphtha	445	612/304	5.7%	-14.1%	-19.2%	32.0%	-26.2%	452	533	-15.2%	458	-230	-33.5%	348
BZ - naphtha	492	535/381	4.0%	7.7%	2.6%	24.2%	13.2%	487	477	2.1%	458	-37	-7.5%	398
MEG - Ethylene	17	193/-58	-138.4%	-149.5%	-78.8%	68.4%	-88.5%	-25	57	-144.2%	50	-179	-78.3%	217
PTA - PX	125	184/53	29.9%	28.2%	20.5%	22.8%	54.9%	118	120	-1.5%	107	-1	-0.9%	103
PET spread	172	253/121	-27.9%	-7.1%	29.3%	-6.7%	-18.9%	210	148	41.8%	176	-17	-8.9%	n.a.
Integrated PET/PTA spread	297	359/190	-11.4%	5.1%	25.5%	3.8%	1.4%	328	268	22.4%	283	-18	-6.0%	n.a.
ABS spread	1,249	1,251/1,070	-0.2%	2.0%	11.6%	14.6%	3.9%	1,241	1,165	6.5%	1,130	-41	-3.5%	n.a.
PS spread	318	418/214	-5.3%	19.9%	21.0%	-2.8%	-30.0%	307	260	18.2%	295	-131	-30.7%	n.a.
PVC - ethylene	323	353/249	0.8%	29.6%	-1.5%	7.5%	16.2%	295	308	-4.2%	311	-36	-10.4%	350

Source: Datastream, SCBS Investment Research

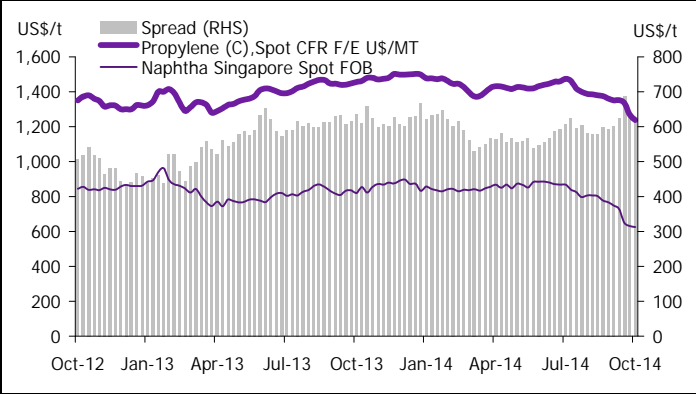
Note: Impact to related stocks is based on WoW performance

Figure 2: Ethylene vs. Naphtha



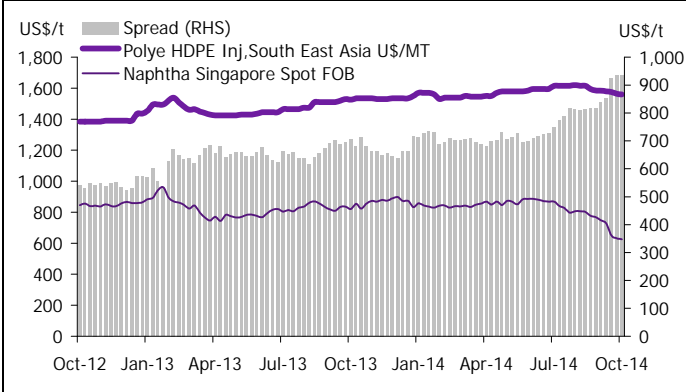
Source: Datastream, SCBS Investment Research

Figure 3: Propylene vs. Naphtha



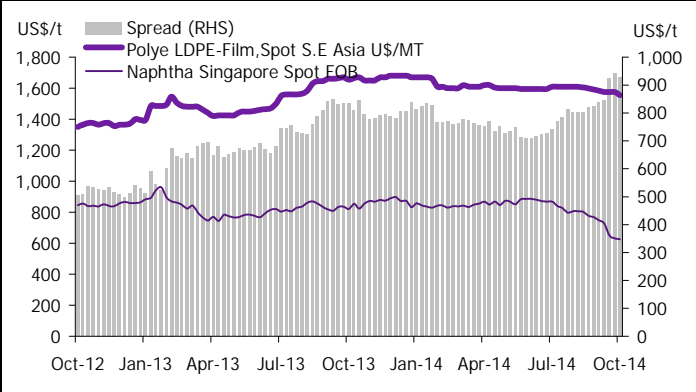
Source: Datastream, SCBS Investment Research

Figure 4: HDPE vs. Naphtha



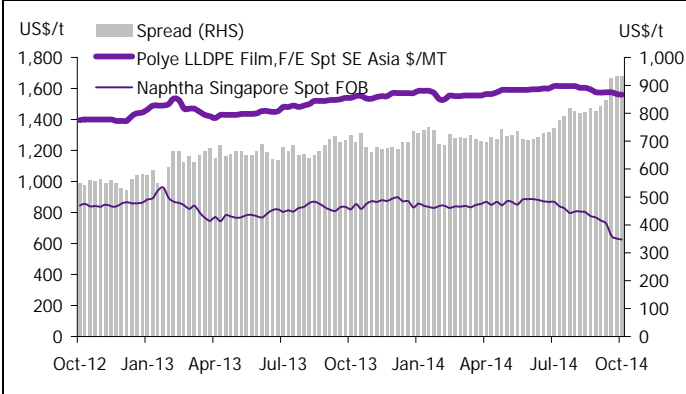
Source: Datastream, SCBS Investment Research

Figure 5: LDPE vs. Naphtha



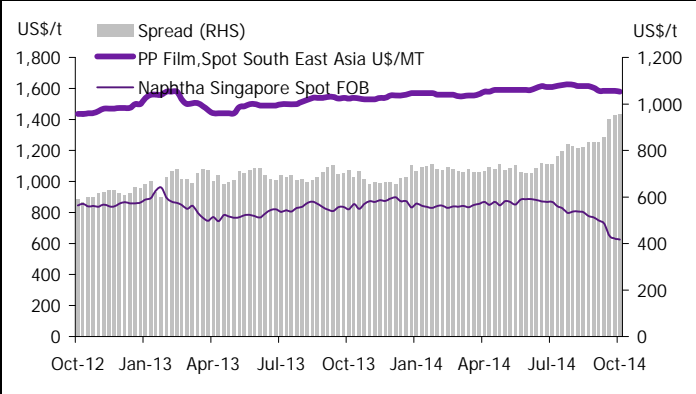
Source: Datastream, SCBS Investment Research

Figure 6: LLDPE vs. Naphtha



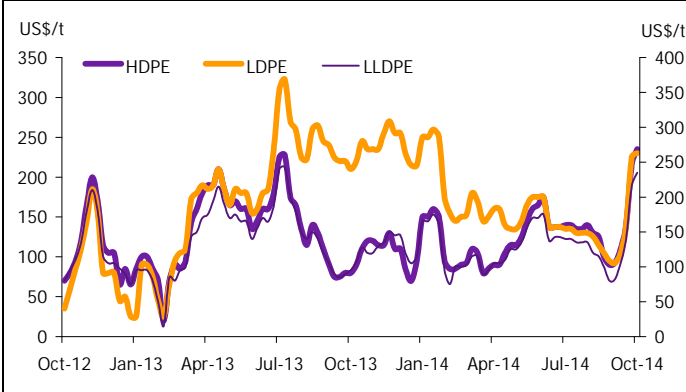
Source: Datastream, SCBS Investment Research

Figure 7: PP vs. Naphtha



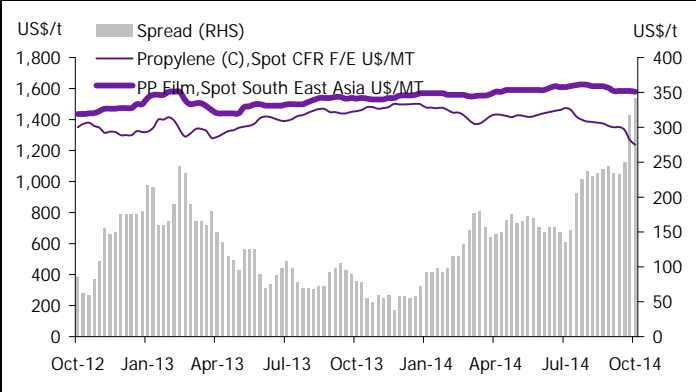
Source: Datastream, SCBS Investment Research

Figure 8: Polyethylene spread over ethylene

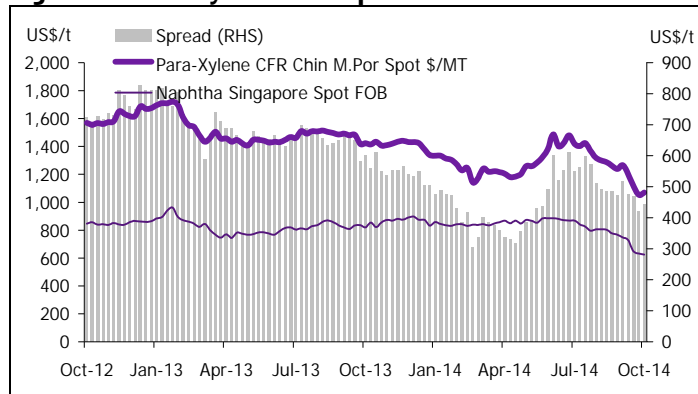


Source: Datastream, SCBS Investment Research

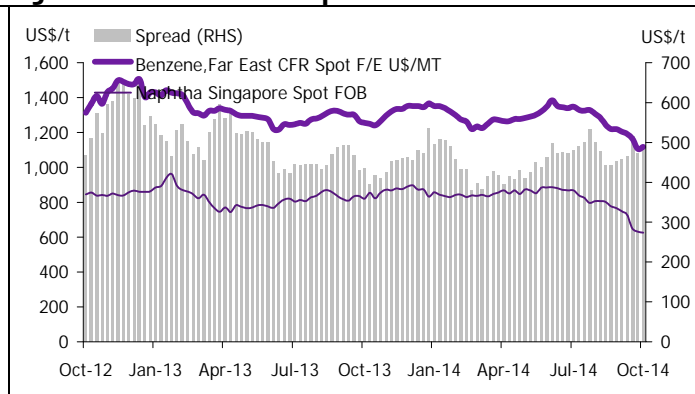
Figure 9: Polypropylene vs. propylene



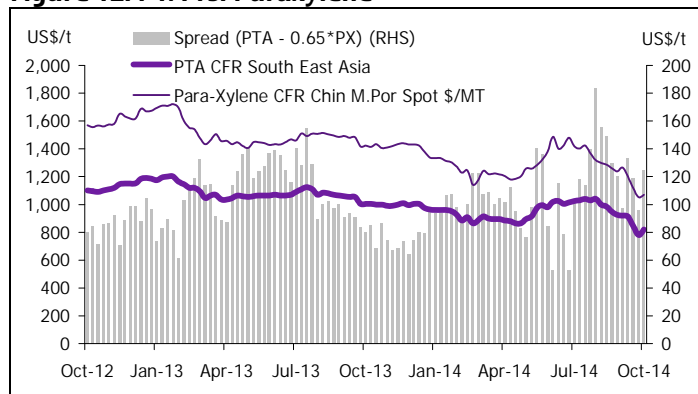
Source: Datastream, SCBS Investment Research

Figure 10: Paraxylene vs. Naphtha

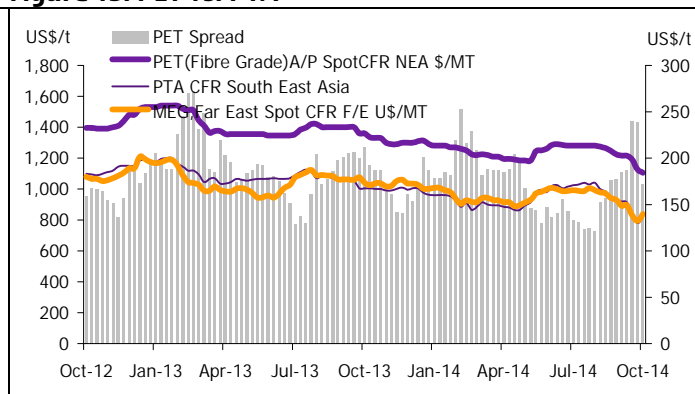
Source: Datastream, SCBS Investment Research

Figure 11: Benzene vs. Naphtha

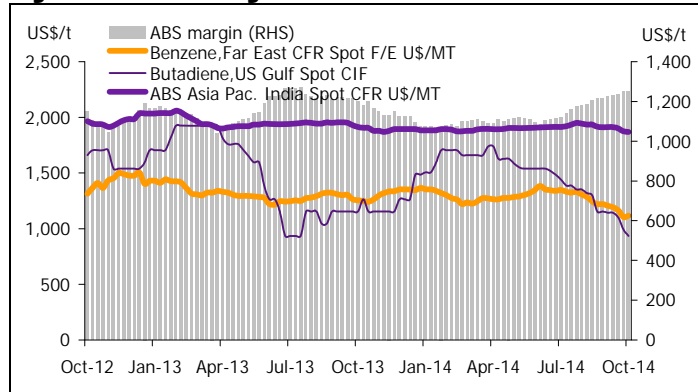
Source: Datastream, SCBS Investment Research

Figure 12: PTA vs. Paraxylene

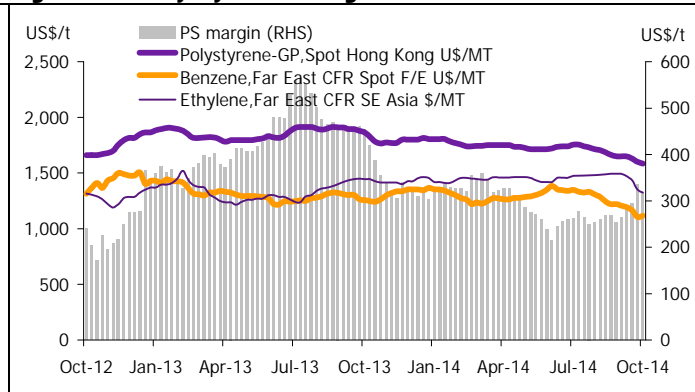
Source: Datastream, SCBS Investment Research

Figure 13: PET vs. PTA

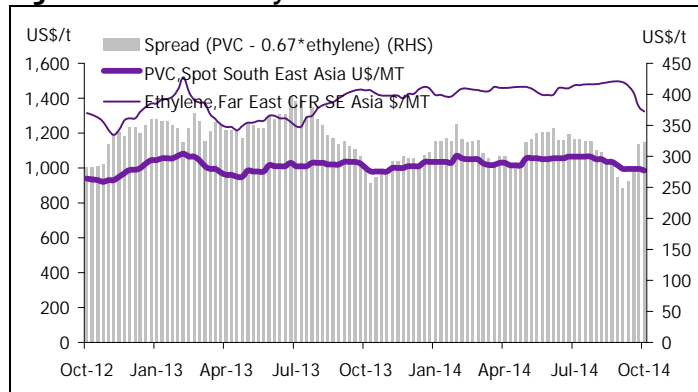
Source: Datastream, SCBS Investment Research

Figure 14: ABS margin

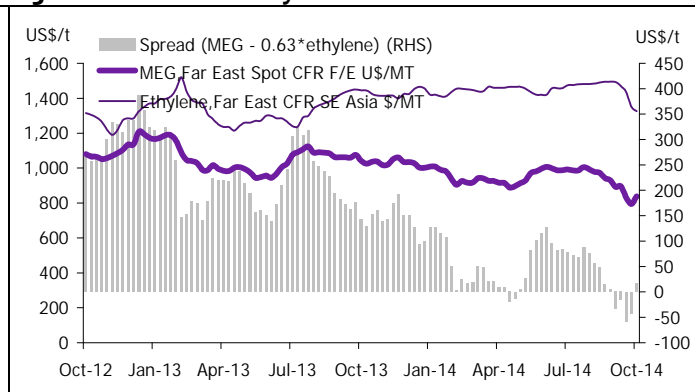
Source: Datastream, SCBS Investment Research

Figure 15: Polystyrene margin

Source: Datastream, SCBS Investment Research

Figure 16: PVC vs. ethylene

Source: Datastream, SCBS Investment Research

Figure 17: MEG vs. ethylene

Source: Datastream, SCBS Investment Research

Figure 18: Selected product price/spread of listed companies

Company	Key products	% of total	Product price/spread	4Q14 QTD	3Q14	QoQ%	YTD	12MMA	2014F projection	Momentum
PTTGC	Ethylene/Propylene	21%	Ethylene, Far East CFR SE Asia \$/MT	1,395	1,478	-6%	1,450	1,445	1,440	↘
			Propylene (C), Spot CFR F/E US/MT	1,298	1,412	-8%	1,418	1,429	1,430	↘
	HDPE	19%	Polye HDPE Inj, South East Asia US/MT	1,570	1,605	-2%	1,573	1,566	1,570	↘
	LLDPE	7%	Polye LLDPE Film, F/E Spt SE Asia \$/MT	1,569	1,602	-2%	1,579	1,574	1,580	↘
	LDPE	4%	Polye LDPE-Film, Spot S.E Asia US/MT	1,570	1,602	-2%	1,612	1,621	1,640	↘
	MEG	6%	MEG, Far East Spot CFR F/E US/MT	840	973	-14%	949	964	1,110	↘
	PX	28%	PX - naphtha	452	533	-15%	458	475	348	↘
IRPC	BZ	15%	BZ - naphtha	487	477	2%	458	455	398	↗
	Ethylene/Propylene	15%	Ethylene - naphtha	737	659	12%	625	612	598	↗
			Propylene - naphtha	640	593	8%	593	596	588	↗
	HDPE	12%	HDPE - naphtha	912	785	16%	748	734	728	↗
	PP	28%	PP - naphtha	925	793	17%	760	745	728	↗
	ABS	7%	ABS spread	1,241	1,165	7%	1,130	1,133	n.a.	↗
	BTX	23%	BZ - naphtha	487	477	2%	458	455	398	↗
SCC	PS	12%	PS spread	307	260	18%	295	303	n.a.	↗
	HDPE	40%	HDPE - naphtha	912	785	16%	748	734	728	↗
	LDPE	3%	LDPE - naphtha	912	782	17%	787	788	798	↗
	LLDPE	3%	LLDPE - naphtha	910	782	16%	754	742	738	↗
	PP	25%	PP - naphtha	925	793	17%	760	745	728	↗
	PVC	28%	PVC - Ethylene/EDC	403	428	-6%	416	393	n.a.	↗
	TPIPL	60%	LDPE - Ethylene	175	123	42%	162	176	200	↗
TOP	PX	60%	PX - naphtha	452	533	-15%	458	475	348	↘
	BZ	21%	BZ - naphtha	487	477	2%	458	455	398	↗
IVL	PTA	25%	PTA - PX	118	120	-1%	107	102	103	↗
	PET/Polyester	67%	PET spread	210	148	42%	176	174	n.a.	↗
	MEG	8%								
VNT	PVC	63%	PVC - ethylene	295	308	-4%	311	306	350	↗
TPC	PVC	100%	PVC - Ethylene/EDC	403	428	-6%	416	393	n.a.	↗

Source: Datastream, SCBS Investment Research

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