

Petrochemical price monitor

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- **Lower oil price slows stock buildup.** Despite a slight increase in naphtha price, low demand caused prices of ethylene and its derivative products to again soften 0.3-1.9% WoW. Product spread over naphtha also weakened 1.5-4.8% WoW. The adverse impact of lower oil price continued to take the lead role in pushing down olefins price, as buyers were reluctant to build inventory on hopes of further declines in coming weeks. This pushed ethylene price to a 15-month low and prices of polyethylene will follow suit soon. This will be a boon for non-integrated producers, especially of HDPE and LDPE, for which margin widened 62-118% WoW.
- **Aromatics price back to reality.** After a brief recovery last week, both PX and BZ prices returned to their downward trend with a decline of 2.6-2.7% WoW to a 52-week low. Demand for PX and BZ weakened as the low season for production of downstream products begins. Lower feedstock cost (naphtha), weak demand and ample supply will continue to be at play in the near term before stock building begins early next year.
- **PET/PTA continued to slide on lower PET/PTA prices.** Integrated PET/PTA prices in Asia continued to weaken to US\$287/t (-3.3% WoW) as seasonally slow demand in the market and lower feedstock cost continued to depress PET and PTA prices. Further, the market still expects to see more PTA supply in the market since several plants in China will resume normal operations in Nov 2014 after months of maintenance shutdown and reduction in operating rates.

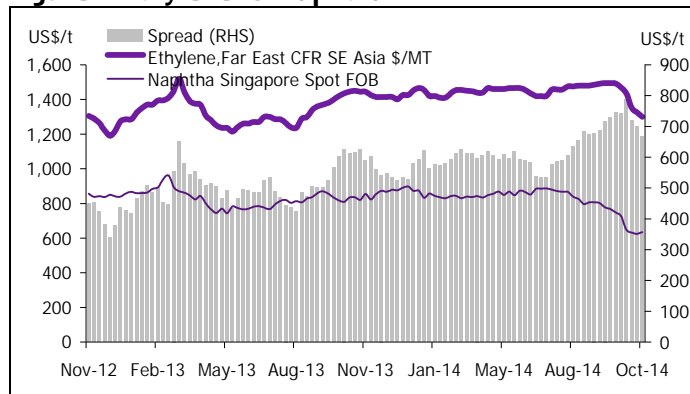
Investment view: The petrochemical sector index rose 3.7% WoW, driven by optimism that PTTGC (+5.1% WoW) will surprise on the upside with its 3Q14. IVL's share price also improved 2.1% WoW. The sector continued to outperform the market. We believe the rebound in share price will be short-lived since oil prices continue weak, exerting greater pressure on petrochemical prices in the near term.

Figure 1: Petrochemical price update

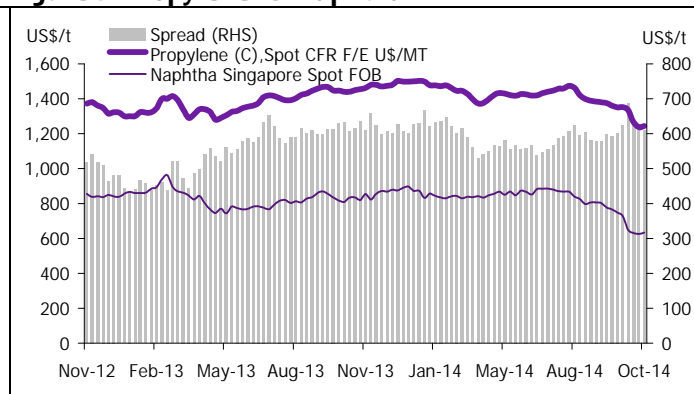
	Current 31-Oct-14	52-week High/Low	-1W	-1M	-3M	-6M	-12M	4Q14 QTD	3Q14	QoQ%	YTD	Chg.	%YoY	2014F projection
Price														
Naphtha Singapore Spot FOB	634	897/625	1.4%	-12.9%	-24.5%	-25.4%	-25.8%	653	820	-20.3%	821	-5	-0.6%	842
Ethylene, Far East CFR SE Asia \$/MT	1,300	1,495/1,300	-1.9%	-11.6%	-11.9%	-11.0%	-10.0%	1,376	1,478	-6.9%	1,446	106	7.9%	1,440
Propylene (C), Spot CFR F/E US\$/MT	1,245	1,503/1,238	0.6%	-7.9%	-14.9%	-12.9%	-14.9%	1,288	1,412	-8.8%	1,414	32	2.3%	1,430
Polye HDPE Inj, South East Asia US\$/MT	1,540	1,620/1,530	-1.3%	-2.5%	-4.6%	-0.6%	0.3%	1,564	1,605	-2.5%	1,573	105	7.1%	1,570
Polye LDPE-Film, Spot S.E Asia US\$/MT	1,550	1,680/1,550	-0.3%	-1.6%	-3.7%	-4.3%	-6.9%	1,566	1,602	-2.2%	1,610	100	6.6%	1,640
Polye LLDPE Film, F/E Spot SE Asia \$/MT	1,535	1,615/1,530	-1.6%	-2.5%	-5.0%	-1.9%	-1.1%	1,562	1,602	-2.5%	1,578	103	7.0%	1,580
PP Film, Spot South East Asia US\$/MT	1,545	1,625/1,530	-2.2%	-2.5%	-4.3%	-2.2%	0.3%	1,576	1,613	-2.3%	1,584	74	4.9%	1,570
Related stocks														
			PTTGC (-) IRPC (-) SCC (-) TPIPL (+)											
Para-Xylene CFR Chin M. Por Spot \$/MT	1,043	1,488/1,043	-2.6%	-13.3%	-25.7%	-11.7%	-26.3%	1,097	1,353	-18.9%	1,278	-234	-15.5%	1,190
Benzene, Far East CFR Spot F/E US\$/MT	1,088	1,385/1,088	-2.7%	-8.8%	-18.2%	-14.0%	-13.0%	1,134	1,296	-12.6%	1,279	-40	-3.0%	1,240
Related stocks														
			PTTGC (-) TOP (-) ESSO (-)											
MEG, Far East Spot CFR F/E US\$/MT	833	1,061/794	-0.6%	-7.0%	-15.6%	-9.0%	-18.7%	839	973	-13.9%	946	-111	-10.5%	1,110
PTA CFR South East Asia	800	1,040/780	-2.4%	-12.6%	-22.3%	-9.1%	-20.4%	832	999	-16.7%	938	-152	-13.9%	900
PET (Fibre Grade) A/P Spot CFR NEA \$/MT	1,080	1,330/1,080	-2.3%	-11.1%	-15.6%	-9.6%	-19.1%	1,143	1,268	-9.8%	1,238	-175	-12.4%	n.a.
Related stocks														
			PTTGC (-) IVL (+)											
ABS Asia Pac. India Spot CFR US\$/MT	1,855	1,950/1,855	-0.8%	-3.1%	-3.4%	-2.1%	-2.6%	1,883	1,925	-2.2%	1,902	-59	-3.0%	n.a.
Polystyrene-GP, Spot Hong Kong US\$/MT	1,575	1,815/1,575	-0.6%	-4.5%	-10.3%	-10.0%	-13.7%	1,608	1,713	-6.1%	1,726	-130	-7.0%	n.a.
Related stocks														
			IRPC (-)											
PVC, Spot South East Asia US\$/MT	975	1,070/975	-1.0%	-2.0%	-8.5%	-3.9%	-0.5%	989	1,047	-5.6%	1,035	19	1.9%	1,070
Related stocks														
			VNT (+) TPC (-)											
Product spread														
Ethylene - naphtha	666	786/525	-4.8%	-10.2%	4.9%	9.2%	12.8%	723	659	9.7%	626	111	21.6%	598
Propylene - naphtha	611	686/530	-0.2%	-2.1%	-1.8%	5.3%	0.5%	634	593	7.0%	593	37	6.7%	588
HDPE - naphtha	906	935/638	-3.1%	6.4%	16.9%	29.4%	33.1%	911	785	16.0%	752	109	17.0%	728
LDPE - naphtha	916	943/709	-1.5%	8.2%	19.0%	19.0%	13.0%	913	782	16.7%	789	105	15.3%	798
LDPE - Ethylene	250	270/93	8.7%	138.1%	85.2%	56.3%	13.6%	190	123	53.9%	164	-7	-3.8%	200
LLDPE - naphtha	901	935/662	-3.6%	6.4%	16.3%	26.0%	29.1%	909	782	16.1%	757	108	16.7%	738
PP - naphtha	911	955/657	-4.6%	6.3%	17.5%	24.8%	32.9%	923	793	16.3%	763	79	11.6%	728
PX - naphtha	409	612/304	-8.1%	-14.0%	-27.4%	23.6%	-27.1%	444	533	-16.8%	457	-229	-33.4%	348
BZ - naphtha	454	535/381	-7.8%	-2.3%	-7.4%	9.3%	14.7%	480	477	0.7%	458	-35	-7.1%	398
MEG - Ethylene	27	193/-58	63.6%	-275.3%	-62.8%	175.5%	-79.1%	-15	57	-125.8%	49	-177	-78.3%	217
PTA - PX	122	184/53	-1.7%	-8.0%	3.4%	8.6%	43.5%	119	120	-0.7%	108	0	-0.1%	103
PET spread	164	253/121	-4.4%	-12.4%	25.4%	-12.7%	-14.5%	201	148	35.7%	175	-17	-9.0%	n.a.
Integrated PET/PTA spread	287	359/190	-3.3%	-10.6%	14.9%	-4.7%	3.3%	319	268	19.4%	283	-17	-5.8%	n.a.
ABS spread	1,245	1,251/1,070	-0.3%	1.2%	9.2%	12.5%	5.8%	1,242	1,165	6.6%	1,132	-38	-3.3%	n.a.
PS spread	339	387/214	6.6%	20.3%	22.5%	3.6%	-19.0%	313	260	20.7%	296	-129	-30.4%	n.a.
PVC - ethylene	325	353/249	0.8%	25.0%	-0.8%	14.0%	26.2%	301	308	-2.3%	312	-34	-9.8%	350

Source: Datastream, SCBS Investment Research

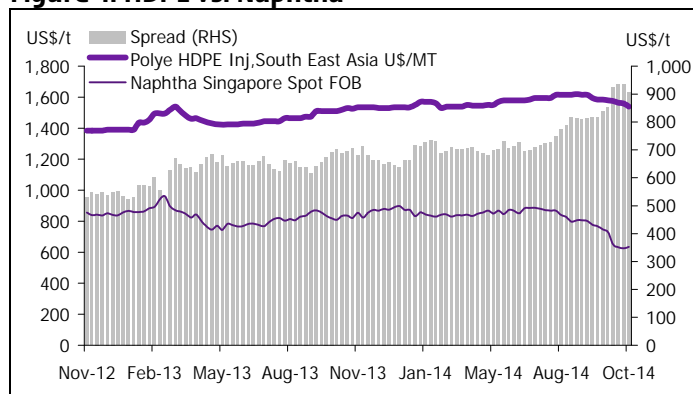
Note: Impact to related stocks is based on WoW performance

Figure 2: Ethylene vs. Naphtha

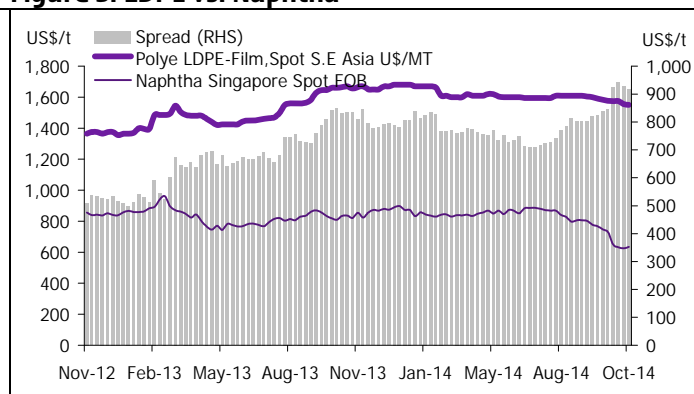
Source: Datastream, SCBS Investment Research

Figure 3: Propylene vs. Naphtha

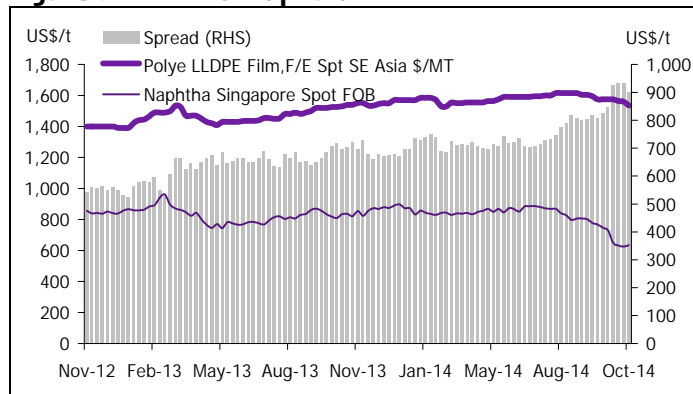
Source: Datastream, SCBS Investment Research

Figure 4: HDPE vs. Naphtha

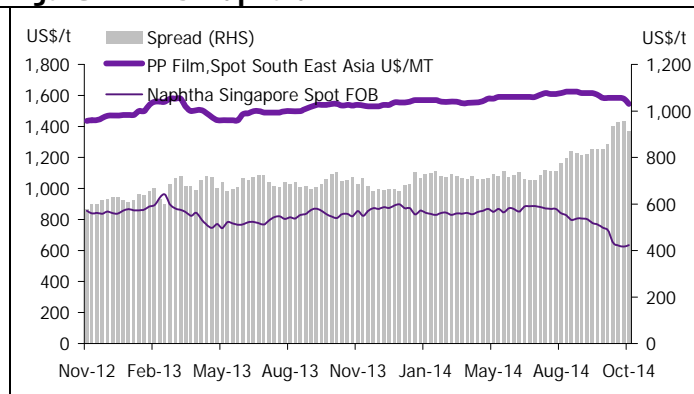
Source: Datastream, SCBS Investment Research

Figure 5: LDPE vs. Naphtha

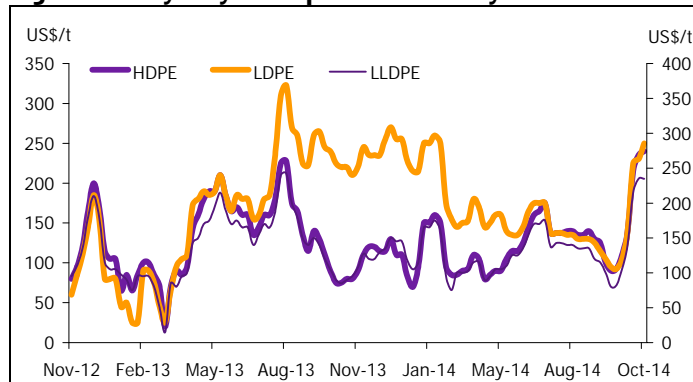
Source: Datastream, SCBS Investment Research

Figure 6: LLDPE vs. Naphtha

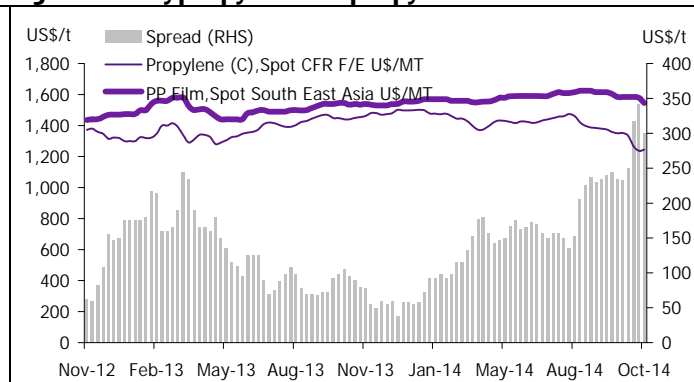
Source: Datastream, SCBS Investment Research

Figure 7: PP vs. Naphtha

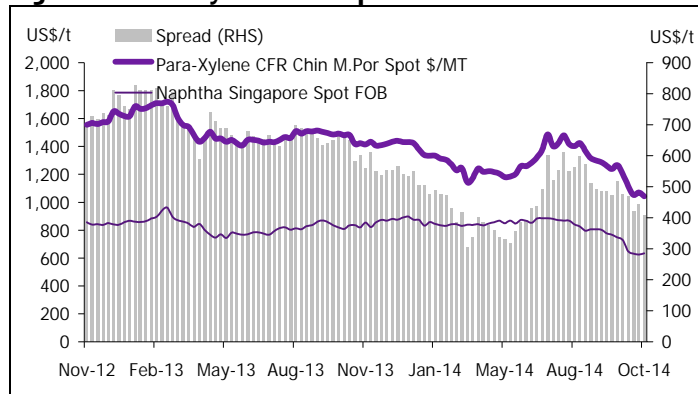
Source: Datastream, SCBS Investment Research

Figure 8: Polyethylene spread over ethylene

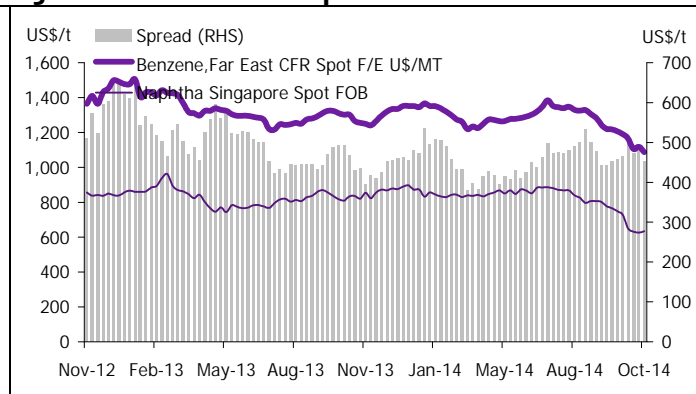
Source: Datastream, SCBS Investment Research

Figure 9: Polypropylene vs. propylene

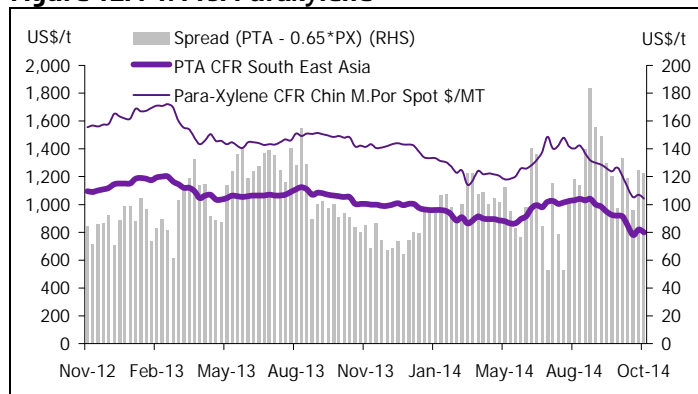
Source: Datastream, SCBS Investment Research

Figure 10: Paraxylene vs. Naphtha

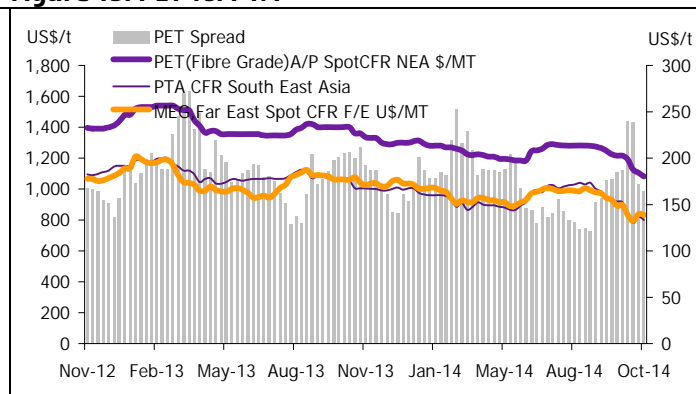
Source: Datastream, SCBS Investment Research

Figure 11: Benzene vs. Naphtha

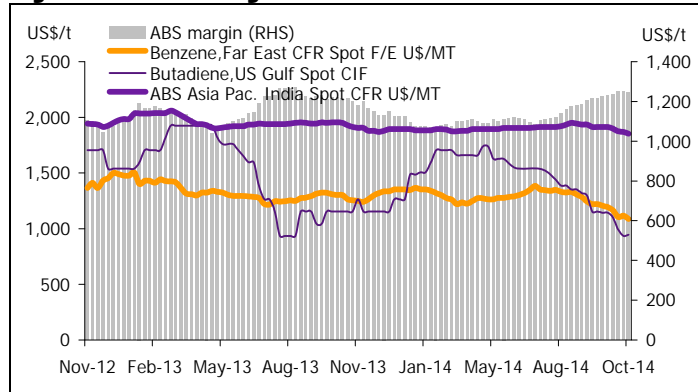
Source: Datastream, SCBS Investment Research

Figure 12: PTA vs. Paraxylene

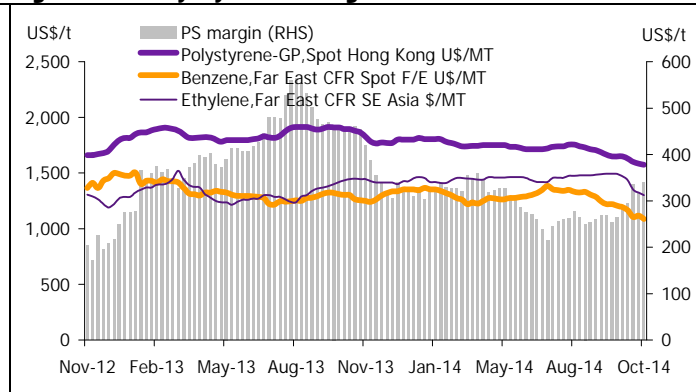
Source: Datastream, SCBS Investment Research

Figure 13: PET vs. PTA

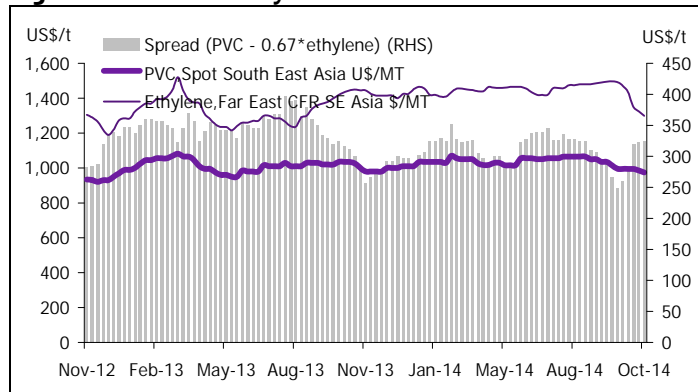
Source: Datastream, SCBS Investment Research

Figure 14: ABS margin

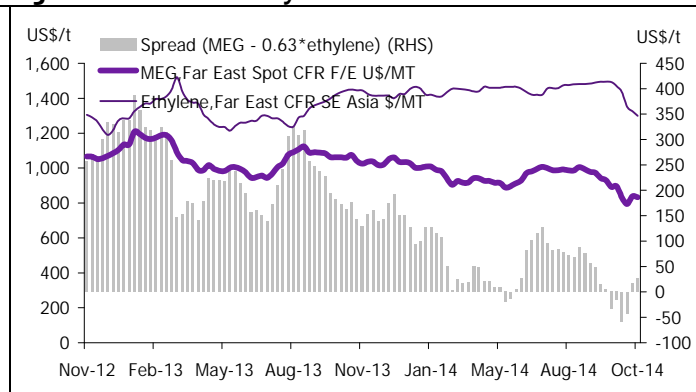
Source: Datastream, SCBS Investment Research

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	1,376	1,478	-7%	1,446	1,442	1,440	↘
			Propylene (C), Spot CFR F/E US/MT	1,288	1,412	-9%	1,414	1,425	1,430	↘
	HDPE	19%	Polye HDPE Inj, South East Asia US/MT	1,564	1,605	-3%	1,573	1,567	1,570	↘
	LLDPE	7%	Polye LLDPE Film, F/E Spt SE Asia \$/MT	1,562	1,602	-2%	1,578	1,574	1,580	↘
	LDPE	4%	Polye LDPE-Film, Spot S.E Asia US/MT	1,566	1,602	-2%	1,610	1,619	1,640	↘
	MEG	6%	MEG, Far East Spot CFR F/E US/MT	839	973	-14%	946	960	1,110	↘
	PX	28%	PX - naphtha	444	533	-17%	457	472	348	↘
IRPC	BZ	15%	BZ - naphtha	480	477	1%	458	456	398	↘
	Ethylene/Propylene	15%	Ethylene - naphtha	723	659	10%	626	613	598	→
			Propylene - naphtha	634	593	7%	593	596	588	↘
	HDPE	12%	HDPE - naphtha	911	785	16%	752	738	728	↗
	PP	28%	PP - naphtha	923	793	16%	763	749	728	↗
	ABS	7%	ABS spread	1,242	1,165	7%	1,132	1,135	n.a.	↗
	BTX	23%	BZ - naphtha	480	477	1%	458	456	398	↘
SCC	PS	12%	PS spread	313	260	21%	296	302	n.a.	↗
	HDPE	40%	HDPE - naphtha	911	785	16%	752	738	728	↗
	LDPE	3%	LDPE - naphtha	913	782	17%	789	790	798	↗
	LLDPE	3%	LLDPE - naphtha	909	782	16%	757	746	738	↗
	PP	25%	PP - naphtha	923	793	16%	763	749	728	↗
	PVC	28%	PVC - Ethylene/EDC	407	428	-5%	416	393	n.a.	→
	TPIPL	60%	LDPE - Ethylene	190	123	54%	164	177	200	↗
TOP	PX	60%	PX - naphtha	444	533	-17%	457	472	348	↘
	BZ	21%	BZ - naphtha	480	477	1%	458	456	398	↘
IVL	PTA	25%	PTA - PX	119	120	-1%	108	102	103	→
	PET/Polyester	67%	PET spread	201	148	36%	175	174	n.a.	→
	MEG	8%								
VNT	PVC	63%	PVC - ethylene	301	308	-2%	312	308	350	→
TPC	PVC	100%	PVC - Ethylene/EDC	407	428	-5%	416	393	n.a.	→

Source: Datastream, SCBS Investment Research

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