

Petrochemical price monitor

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- **Better spread for naphtha-based producers.** PE/PP product spread over naphtha widened another 2.3-2.9% WoW on weaker naphtha price (-4.9% WoW) brought by declining oil price. This also depressed petrochemical product prices but less so. Non-integrated producers enjoyed a wider product spread of ~2-5% WoW, especially for PP, since propylene price continued to fall to a 52-week low. Demand for PE resin remained sluggish due to both low season and buyer expectations of lower prices and thus reluctance to build inventory.
- **Aromatics prices continued to head south.** Prices of PX and BZ slid to a 52-week low of US\$1,005/t (-3.6% WoW) and US\$1,043/t (-4.1% WoW). Sluggish demand for PX and BZ during the low season for production of downstream products continued to depress prices before stock building begins early next year.
- **Lower feedstock sent PET/PTA spread up.** All PET/polyester chain product prices - from upstream to downstream - continued to decline on seasonal impact. At the same time, integrated PET/PTA spread edged up 1.8% WoW to US\$292/t, owing to lower PX and MEG prices. PTA price fell the steepest, by 5.6% WoW, on ample supply but slow demand. This was the result of more PTA supply in the market since several plants in China resumed normal operations in Nov 2014 after months of maintenance shutdown and reduction in operating rates.

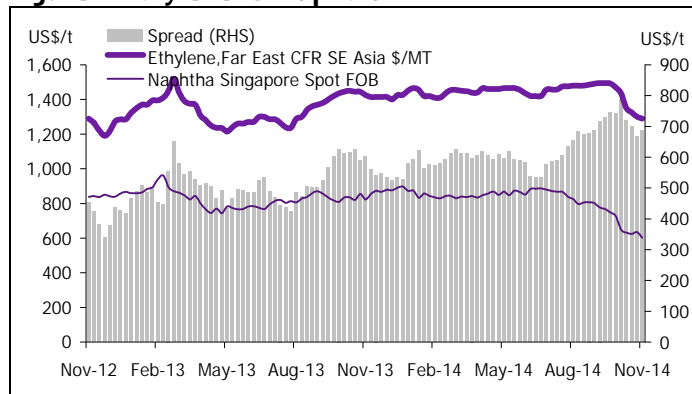
Investment view: The petrochemical sector index slid 0.5% WoW, slightly outperforming the market (-0.7% WoW). Key driver was PTTGC, whose share price rose 1.6% WoW on better than expected 3Q14 profit despite a huge inventory loss. This positive sentiment was overshadowed by IVL's disappointing results, which sent the share price down 5.5% WoW. We expect to see the index soften in the near term on lack of enthusiasm during the sector's low season.

Figure 1: Petrochemical price update

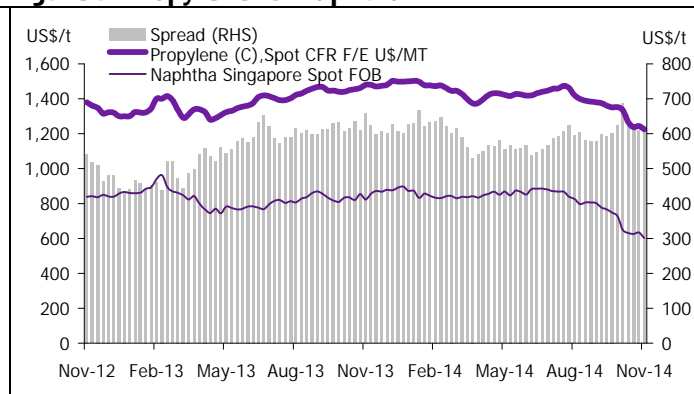
	Current 7-Nov-14	52-week High/Low	-1W	-1M	-3M	-6M	-12M	4Q14 QTD	3Q14	QoQ%	YTD	Chg.	%YoY	2014F projection
Price														
Naphtha Singapore Spot FOB	603	897/603	-4.9%	-7.1%	-27.0%	-30.6%	-26.7%	645	820	-21.3%	816	-10	-1.2%	842
Ethylene, Far East CFR SE Asia \$/MT	1,290	1,495/1,290	-0.8%	-10.1%	-12.8%	-11.9%	-9.5%	1,362	1,478	-7.9%	1,443	101	7.5%	1,440
Propylene (C), Spot CFR F/E US/MT	1,225	1,503/1,225	-1.6%	-8.2%	-13.7%	-13.9%	-17.2%	1,277	1,412	-9.6%	1,410	26	1.9%	1,430
Polye HDPE Inj, South East Asia US/MT	1,530	1,620/1,530	-0.6%	-2.9%	-5.3%	-2.5%	-0.3%	1,558	1,605	-2.9%	1,572	102	6.9%	1,570
Polye LDPE-Film, Spot S.E Asia US/MT	1,545	1,680/1,545	-0.3%	-1.9%	-4.0%	-3.7%	-7.5%	1,563	1,602	-2.5%	1,609	95	6.2%	1,640
Polye LLDPE Film, F/E Spot SE Asia \$/MT	1,530	1,615/1,530	-0.3%	-2.9%	-5.3%	-2.9%	-1.4%	1,557	1,602	-2.8%	1,577	101	6.8%	1,580
PP Film, Spot South East Asia US/MT	1,540	1,625/1,530	-0.3%	-2.8%	-5.2%	-3.1%	0.3%	1,570	1,613	-2.6%	1,583	73	4.8%	1,570
Related stocks														
			PTTGC (-) IRPC (+) SCC (+) TPIPL (+)											
Para-Xylene CFR Chin M. Por Spot \$/MT	1,005	1,488/1,005	-3.6%	-10.1%	-29.5%	-15.2%	-29.8%	1,082	1,353	-20.0%	1,272	-238	-15.8%	1,190
Benzene, Far East CFR Spot F/E US/MT	1,043	1,385/1,043	-4.1%	-10.5%	-21.3%	-18.4%	-15.9%	1,118	1,296	-13.7%	1,274	-43	-3.3%	1,240
Related stocks														
			PTTGC (-) TOP (-) ESSO (-)											
MEG, Far East Spot CFR F/E US/MT	803	1,061/794	-3.7%	-3.5%	-18.7%	-9.7%	-22.6%	833	973	-14.5%	943	-114	-10.8%	1,110
PTA CFR South East Asia	755	1,040/755	-5.6%	-10.7%	-27.4%	-12.7%	-24.5%	819	999	-18.0%	934	-154	-14.2%	900
PET (Fibre Grade) A/P Spot CFR NEA \$/MT	1,060	1,330/1,060	-1.9%	-10.9%	-17.2%	-10.9%	-20.3%	1,129	1,268	-10.9%	1,234	-177	-12.5%	n.a.
Related stocks														
			PTTGC (-) IVL (+)											
ABS Asia Pac. India Spot CFR US/MT	1,825	1,950/1,825	-1.6%	-3.9%	-5.7%	-3.7%	-4.2%	1,873	1,925	-2.7%	1,900	-59	-3.0%	n.a.
Polystyrene-GP, Spot Hong Kong US/MT	1,525	1,815/1,525	-3.2%	-6.4%	-12.4%	-12.1%	-14.3%	1,594	1,713	-6.9%	1,721	-133	-7.2%	n.a.
Related stocks														
			IRPC (-)											
PVC, Spot South East Asia US/MT	965	1,070/965	-1.0%	-3.0%	-9.4%	-4.9%	-1.5%	985	1,047	-5.9%	1,033	18	1.8%	1,070
Related stocks														
			VNT (-) TPC (+)											
Product spread														
Ethylene - naphtha	687	786/525	3.2%	-12.6%	5.0%	15.2%	14.1%	717	659	8.8%	627	110	21.4%	598
Propylene - naphtha	622	686/530	1.8%	-9.3%	4.7%	12.3%	-5.4%	632	593	6.6%	594	36	6.4%	588
HDPE - naphtha	927	935/638	2.3%	0.1%	17.5%	32.2%	30.1%	913	785	16.4%	756	112	17.4%	728
LDPE - naphtha	942	943/709	2.8%	1.7%	20.1%	28.0%	11.2%	917	782	17.3%	793	104	15.1%	798
LDPE - Ethylene	255	270/93	2.0%	82.1%	96.2%	82.1%	4.1%	201	123	62.7%	166	-6	-3.6%	200
LLDPE - naphtha	927	935/662	2.9%	0.1%	17.5%	31.3%	27.0%	912	782	16.5%	761	110	17.0%	738
PP - naphtha	937	955/657	2.9%	0.1%	17.2%	29.9%	31.5%	925	793	16.6%	767	82	12.0%	728
PX - naphtha	402	612/304	-1.6%	-14.2%	-32.9%	27.3%	-34.1%	437	533	-18.1%	455	-228	-33.4%	348
BZ - naphtha	440	535/381	-3.1%	-14.8%	-11.9%	7.5%	5.3%	473	477	-0.7%	458	-34	-6.9%	398
MEG - Ethylene	3	193/-58	-90.0%	-104.6%	-96.1%	-113.6%	-98.2%	-12	57	-120.7%	48	-176	-78.6%	217
PTA - PX	102	184/53	-16.9%	-14.2%	-10.5%	7.0%	47.7%	116	120	-3.1%	108	1	0.6%	103
PET spread	190	253/121	15.7%	-20.7%	54.0%	-6.9%	1.6%	199	148	34.5%	176	-17	-8.8%	n.a.
Integrated PET/PTA spread	292	359/190	1.8%	-18.6%	23.1%	-2.5%	14.0%	315	268	17.7%	283	-16	-5.4%	n.a.
ABS spread	1,229	1,251/1,070	-1.3%	-0.4%	6.2%	11.6%	2.5%	1,240	1,165	6.4%	1,135	-37	-3.1%	n.a.
PS spread	327	360/214	-3.4%	11.5%	24.0%	8.8%	-15.5%	316	260	21.5%	297	-128	-30.1%	n.a.
PVC - ethylene	320	353/249	-1.5%	15.3%	-1.5%	13.3%	19.6%	304	308	-1.3%	312	-32	-9.3%	350

Source: Datastream, SCBS Investment Research

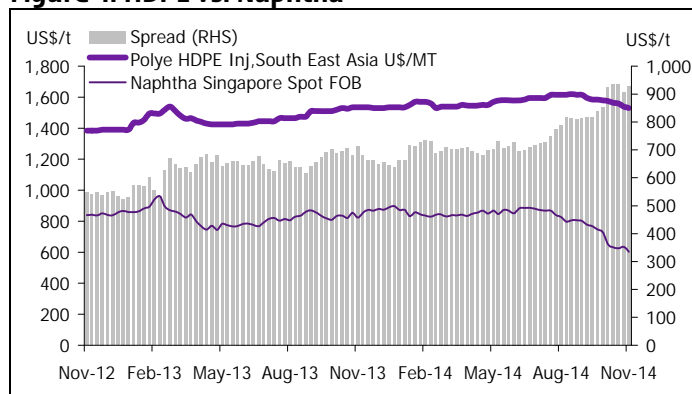
Note: Impact to related stocks is based on WoW performance

Figure 2: Ethylene vs. Naphtha

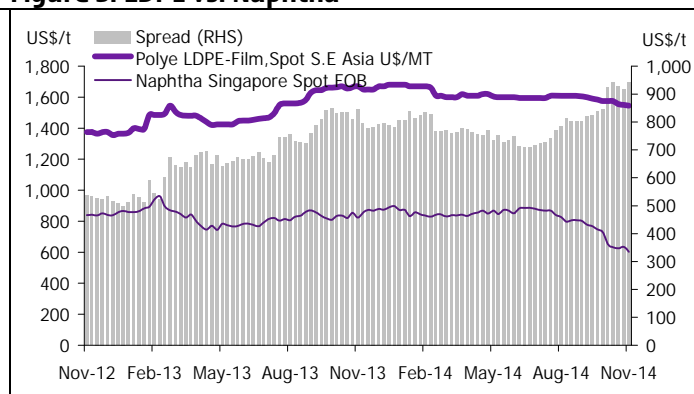
Source: Datastream, SCBS Investment Research

Figure 3: Propylene vs. Naphtha

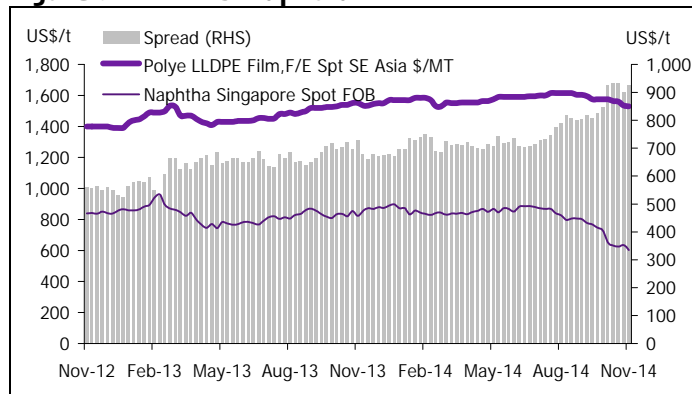
Source: Datastream, SCBS Investment Research

Figure 4: HDPE vs. Naphtha

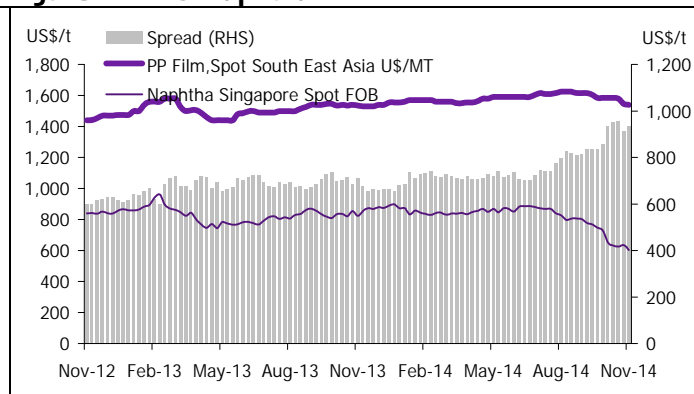
Source: Datastream, SCBS Investment Research

Figure 5: LDPE vs. Naphtha

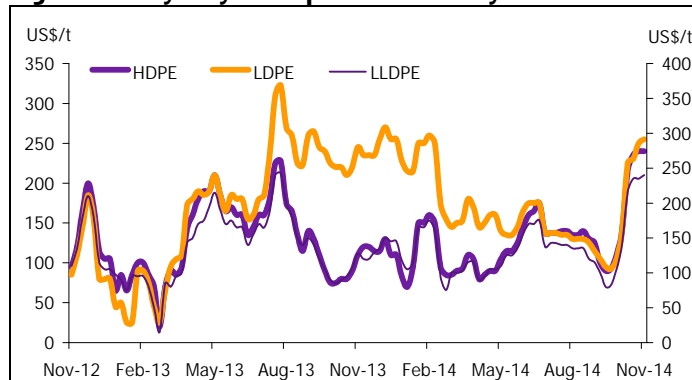
Source: Datastream, SCBS Investment Research

Figure 6: LLDPE vs. Naphtha

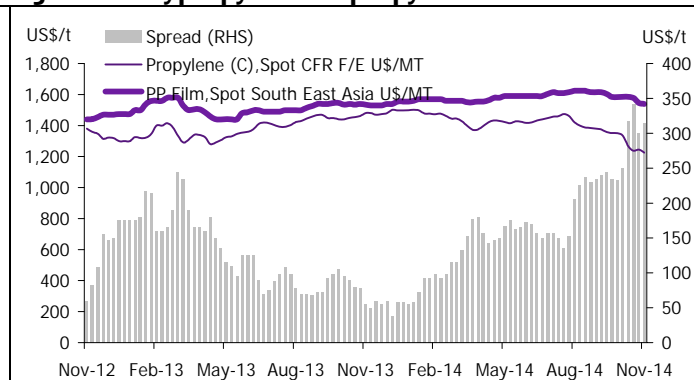
Source: Datastream, SCBS Investment Research

Figure 7: PP vs. Naphtha

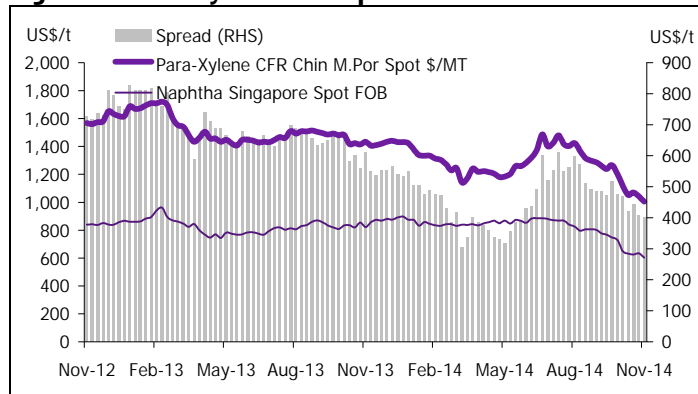
Source: Datastream, SCBS Investment Research

Figure 8: Polyethylene spread over ethylene

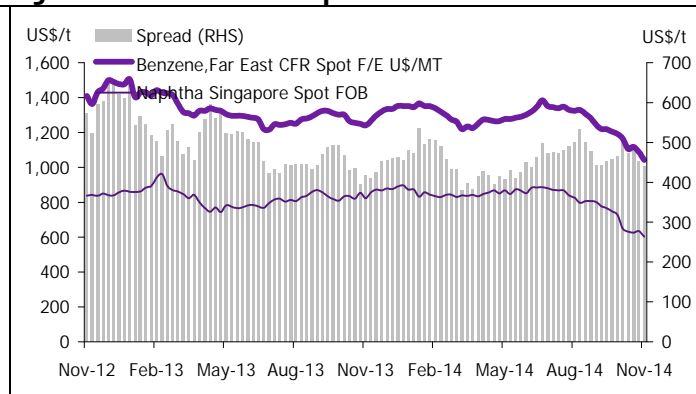
Source: Datastream, SCBS Investment Research

Figure 9: Polypropylene vs. propylene

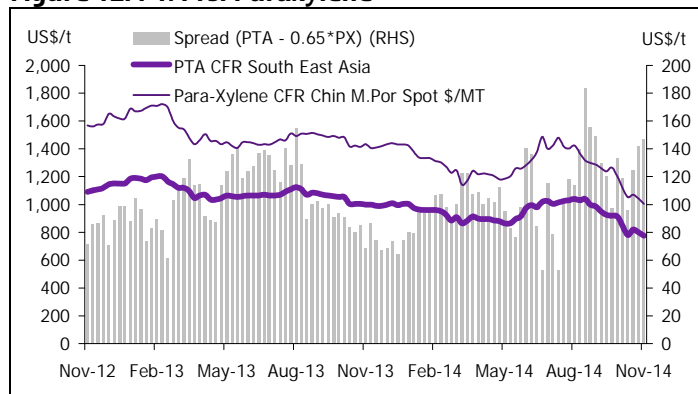
Source: Datastream, SCBS Investment Research

Figure 10: Paraxylene vs. Naphtha

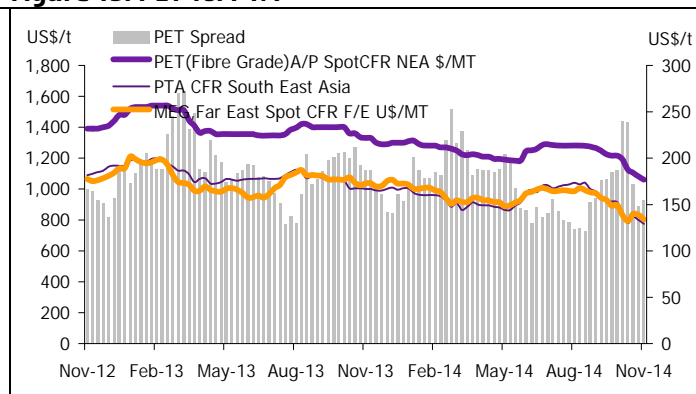
Source: Datastream, SCBS Investment Research

Figure 11: Benzene vs. Naphtha

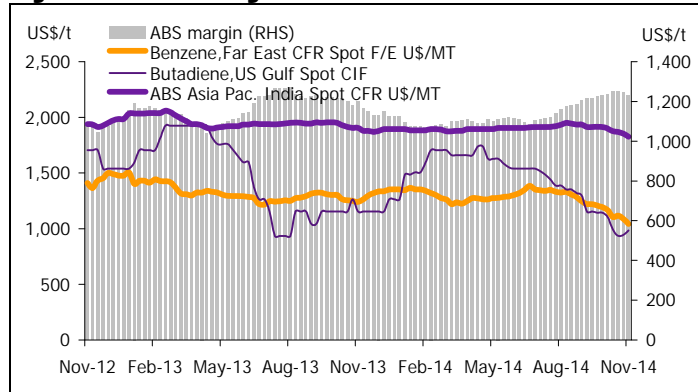
Source: Datastream, SCBS Investment Research

Figure 12: PTA vs. Paraxylene

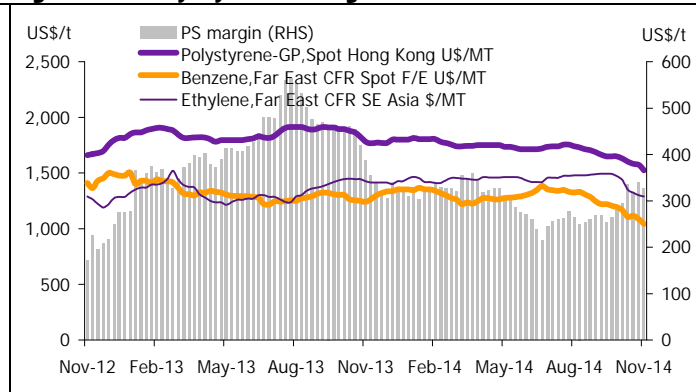
Source: Datastream, SCBS Investment Research

Figure 13: PET vs. PTA

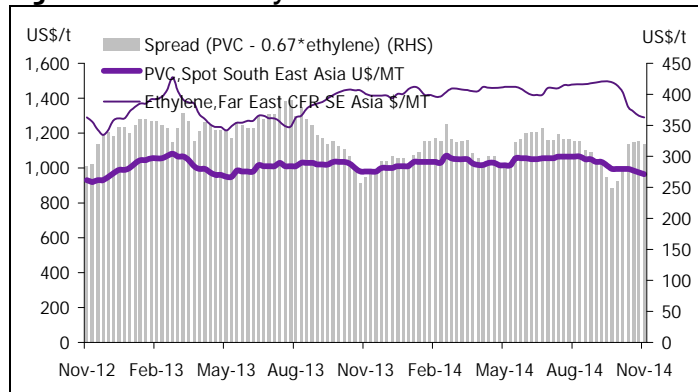
Source: Datastream, SCBS Investment Research

Figure 14: ABS margin

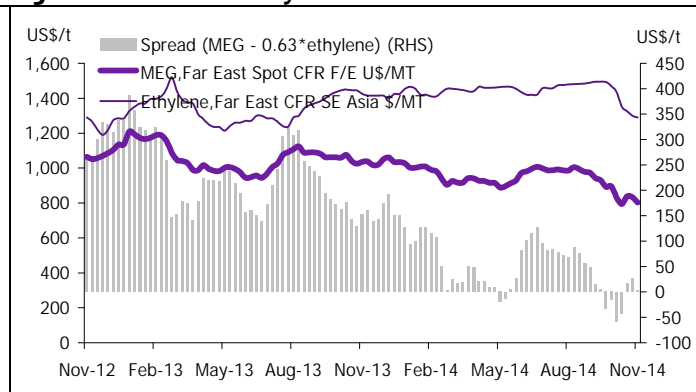
Source: Datastream, SCBS Investment Research

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	1,362	1,478	-8%	1,443	1,439	1,440	↘
			Propylene (C), Spot CFR F/E US/MT	1,277	1,412	-10%	1,410	1,420	1,430	↘
	HDPE	19%	Polye HDPE Inj, South East Asia US/MT	1,558	1,605	-3%	1,572	1,566	1,570	↘
	LLDPE	7%	Polye LLDPE Film, F/E Spt SE Asia \$/MT	1,557	1,602	-3%	1,577	1,574	1,580	↘
	LDPE	4%	Polye LDPE-Film, Spot S.E Asia US/MT	1,563	1,602	-2%	1,609	1,616	1,640	↘
	MEG	6%	MEG, Far East Spot CFR F/E US/MT	833	973	-14%	943	955	1,110	↘
	PX	28%	PX - naphtha	437	533	-18%	455	468	348	↘
IRPC	BZ	15%	BZ - naphtha	473	477	-1%	458	456	398	↘
	Ethylene/Propylene	15%	Ethylene - naphtha	717	659	9%	627	615	598	→
			Propylene - naphtha	632	593	7%	594	596	588	→
	HDPE	12%	HDPE - naphtha	913	785	16%	756	742	728	↗
	PP	28%	PP - naphtha	925	793	17%	767	753	728	↗
	ABS	7%	ABS spread	1,240	1,165	6%	1,135	1,135	n.a.	→
	BTX	23%	BZ - naphtha	473	477	-1%	458	456	398	↘
SCC	PS	12%	PS spread	316	260	22%	297	301	n.a.	↗
	HDPE	40%	HDPE - naphtha	913	785	16%	756	742	728	↗
	LDPE	3%	LDPE - naphtha	917	782	17%	793	792	798	↗
	LLDPE	3%	LLDPE - naphtha	912	782	17%	761	749	738	↗
	PP	25%	PP - naphtha	925	793	17%	767	753	728	↗
	PVC	28%	PVC - Ethylene/EDC	411	428	-4%	417	392	n.a.	→
	TPIPL	60%	LDPE - Ethylene	201	123	63%	166	177	200	↗
TOP	PX	60%	PX - naphtha	437	533	-18%	455	468	348	↘
	BZ	21%	BZ - naphtha	473	477	-1%	458	456	398	↘
IVL	PTA	25%	PTA - PX	116	120	-3%	108	103	103	↘
	PET/Polyester	67%	PET spread	199	148	35%	176	174	n.a.	→
	MEG	8%								
VNT	PVC	63%	PVC - ethylene	304	308	-1%	312	309	350	→
TPC	PVC	100%	PVC - Ethylene/EDC	411	428	-4%	417	392	n.a.	→

Source: Datastream, SCBS Investment Research

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