

Petrochemical price monitor

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- **Non-integrated players outperformed in 4Q14.** The sharp fall in naphtha price in 4Q14 sank prices of upstream olefins products. For PE products, however, tight supply kept their price declines at a much slower pace. This was a boon for non-integrated PE producers as PE-ethylene spread widened 80% QoQ on average while that for integrated producers rose only 12% QoQ. We view that product spread for PE/PP will remain strong in 2015, though down slightly from the historical high in 2014. At this level we prefer integrated producers to non-integrated as prices of downstream products will adjust more readily in early 2015.
- **Aromatics spread pulled back QoQ, especially BZ.** Subdued demand for aromatics products sliced product prices by 26% QoQ and spread by 20% QoQ. BZ price has fallen more sharply lately on weaker demand for downstream SM and PS to 5-year lows, making 4Q14 the worst quarter of the year. Product spread for both PX and BZ is expected to continue to weaken in early 2015 on near-term oversupply. The chance of a turnaround in price and spread is miniscule unless additional supply is delayed in response to shaky demand, mainly from China.
- **Best quarter for integrated PET/PTA producers in 4Q14.** Integrated PET/PTA spread rose 16% QoQ to US\$310/t, the best quarter since 2Q13, as PET-PTA spread improved 28% QoQ while PTA-PX spread was sustained at US\$120/t, flat QoQ. This reflects the success of PTA production cuts during the quarter. Entering 2015, we expect demand for downstream products PET and polyester to improve from a sluggish 4Q14 and buyers should be more willing to rebuild inventory before Chinese New Year in mid-Feb.

Investment view: The petrochemical sector index fell 16% in 4Q14, underperforming the market by 10%. Although we view this as an opportunity to build position in the sector, we prefer to stay on the sidelines until there is more correction in the market in early 2015. The key catalyst for the sector is improving demand as energy prices decline. Demand from China should remain the focal point early next year.

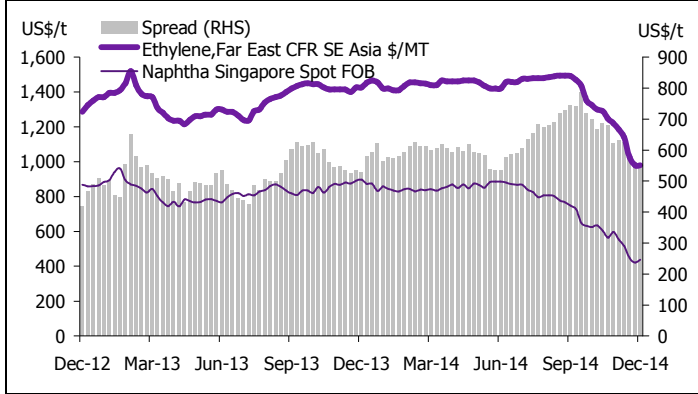
Figure 1: Petrochemical price update

	Current 26-Dec-14	52-week High/Low	-1W	-1M	-3M	-6M	-12M	4Q14 QTD	3Q14	QoQ%	YTD	Chg.	%YoY	2014F projection
Price														
Naphtha Singapore Spot FOB	437	886/421	3.9%	-20.9%	-41.6%	-50.7%	-51.3%	570	820	-30.5%	774	-57	-6.9%	842
Ethylene, Far East CFR SE Asia \$/MT	980	1,495/980	0.0%	-17.3%	-34.3%	-31.0%	-31.2%	1,227	1,478	-17.0%	1,398	48	3.5%	1,440
Propylene (C), Spot CFR F/E U\$/MT	660	1,503/615	7.3%	-36.5%	-51.1%	-54.2%	-55.9%	1,076	1,412	-23.8%	1,341	-54	-3.9%	1,430
Polye HDPE Inj, South East Asia U\$/MT	1,200	1,620/1,185	1.3%	-17.2%	-24.3%	-24.8%	-21.8%	1,457	1,605	-9.2%	1,545	68	4.6%	1,570
Polye LDPE-Film, Spot S.E Asia U\$/MT	1,210	1,680/1,210	-0.4%	-16.6%	-23.7%	-24.1%	-28.0%	1,450	1,602	-9.5%	1,574	43	2.8%	1,640
Polye LLDPE Film, F/E Spot SE Asia \$/MT	1,160	1,615/1,160	0.0%	-19.4%	-26.3%	-27.3%	-26.1%	1,441	1,602	-10.0%	1,546	61	4.1%	1,580
PP Film, Spot South East Asia U\$/MT	1,165	1,625/1,165	-6.0%	-19.4%	-26.5%	-26.7%	-25.1%	1,463	1,613	-9.3%	1,555	41	2.7%	1,570
Related stocks														
			PTTGC (+) IRPC (-) SCC (+) TPIPL (-)											
Para-Xylene CFR Chin M. Por Spot \$/MT	839	1,488/833	0.7%	-12.7%	-33.8%	-43.6%	-41.4%	998	1,353	-26.2%	1,225	-274	-18.3%	1,190
Benzene, Far East CFR Spot F/E U\$/MT	670	1,385/640	4.7%	-27.8%	-44.4%	-51.6%	-50.5%	961	1,296	-25.9%	1,214	-104	-7.9%	1,240
Related stocks														
			PTTGC (-) TOP (+) ESSO (+)											
MEG, Far East Spot CFR F/E U\$/MT	778	1,028/758	2.7%	-11.0%	-12.8%	-22.7%	-24.8%	828	973	-14.9%	927	-128	-12.1%	1,110
PTA CFR South East Asia	625	1,040/625	-3.1%	-17.8%	-32.1%	-38.7%	-37.8%	769	999	-23.0%	906	-171	-15.9%	900
PET(Fibre Grade)A/P Spot CFR NEA \$/MT	960	1,313/960	-1.0%	-11.1%	-21.0%	-25.3%	-26.2%	1,080	1,268	-14.8%	1,208	-191	-13.6%	n.a.
Related stocks														
			PTTGC (+) IVL (+)											
ABS Asia Pac. India Spot CFR U\$/MT	1,575	1,950/1,575	-0.9%	-8.7%	-17.8%	-17.5%	-16.9%	1,766	1,925	-8.3%	1,870	-81	-4.1%	n.a.
Polystyrene-GP, Spot Hong Kong U\$/MT	1,200	1,815/1,200	-1.6%	-14.6%	-27.3%	-30.2%	-33.3%	1,455	1,713	-15.0%	1,670	-176	-9.5%	n.a.
Related stocks														
			IRPC (-)											
PVC, Spot South East Asia U\$/MT	780	1,070/780	-1.3%	-13.3%	-21.6%	-26.1%	-22.8%	928	1,047	-11.4%	1,013	0	0.0%	1,070
Related stocks														
			VNT (-) TPC (+)											
Product spread														
Ethylene - naphtha	543	786/534	-2.9%	-14.2%	-27.1%	1.7%	2.9%	657	659	-0.3%	624	105	20.2%	598
Propylene - naphtha	223	686/194	14.7%	-54.3%	-63.0%	-59.7%	-62.9%	506	593	-14.6%	567	3	0.5%	588
HDPE - naphtha	763	956/661	-0.2%	-15.0%	-8.8%	7.6%	19.7%	888	785	13.1%	770	125	19.3%	728
LDPE - naphtha	773	956/709	-2.7%	-13.9%	-7.7%	9.0%	-1.2%	880	782	12.5%	800	100	14.3%	798
LDPE - Ethylene	230	275/93	-2.1%	-13.2%	148.6%	31.4%	-9.8%	223	123	80.7%	176	-5	-2.6%	200
LLDPE - naphtha	723	946/687	-2.2%	-18.5%	-12.6%	2.0%	7.5%	871	782	11.4%	771	118	18.0%	738
PP - naphtha	728	956/682	-11.2%	-18.4%	-13.0%	3.4%	10.7%	893	793	12.6%	780	98	14.4%	728
PX - naphtha	401	612/304	-2.5%	-1.5%	-22.5%	-33.2%	-24.8%	428	533	-19.7%	451	-217	-32.5%	348
BZ - naphtha	233	535/219	6.2%	-37.9%	-49.0%	-53.3%	-48.8%	391	477	-18.0%	439	-47	-9.6%	398
MEG - Ethylene	170	170/-58	13.7%	21.9%	-610.9%	34.6%	12.5%	68	57	19.1%	60	-157	-72.4%	217
PTA - PX	80	184/53	-23.0%	-41.2%	-17.6%	50.5%	7.3%	120	120	0.5%	110	7	6.7%	103
PET spread	200	253/121	-0.8%	10.5%	8.1%	46.2%	30.1%	190	148	28.4%	177	-12	-6.5%	n.a.
Integrated PET/PTA spread	280	359/190	-8.3%	-11.7%	-0.8%	47.4%	22.7%	310	268	15.9%	286	-5	-1.8%	n.a.
ABS spread	1,153	1,251/1,070	-2.4%	-2.2%	-5.9%	6.4%	2.6%	1,208	1,165	3.7%	1,141	-27	-2.3%	n.a.
PS spread	387	430/214	-10.2%	17.6%	45.7%	80.6%	21.4%	340	260	31.0%	305	-108	-26.1%	n.a.
PVC - ethylene	290	388/249	-3.3%	-5.7%	16.6%	-15.9%	-2.5%	314	308	2.1%	313	-24	-7.1%	350

Source: Datastream, SCBS Investment Research

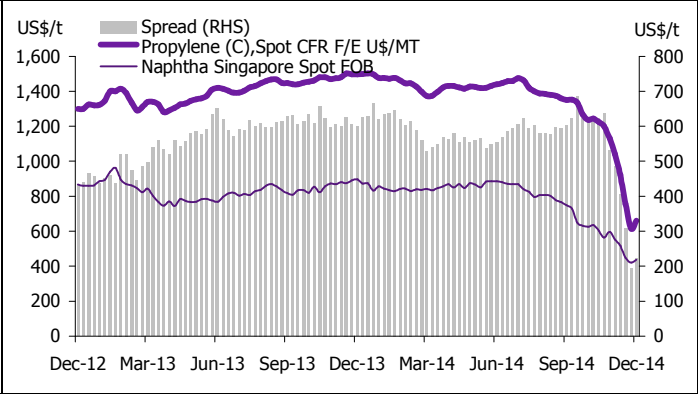
Note: Impact to related stocks is based on WoW performance

Figure 2: Ethylene vs. Naphtha



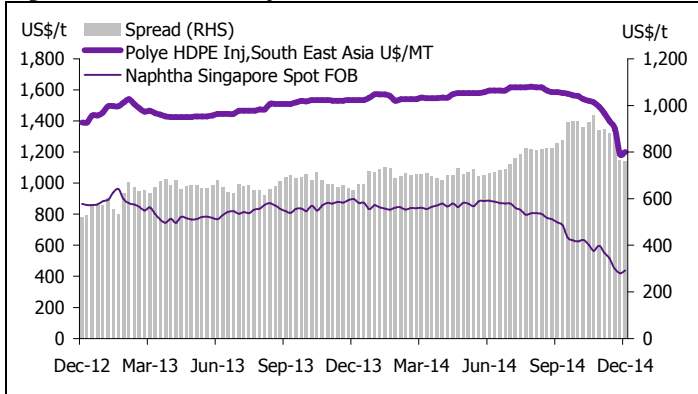
Source: Datastream, SCBS Investment Research

Figure 3: Propylene vs. Naphtha



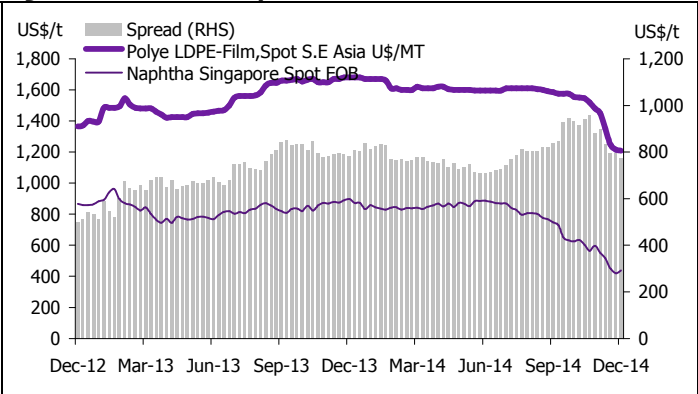
Source: Datastream, SCBS Investment Research

Figure 4: HDPE vs. Naphtha



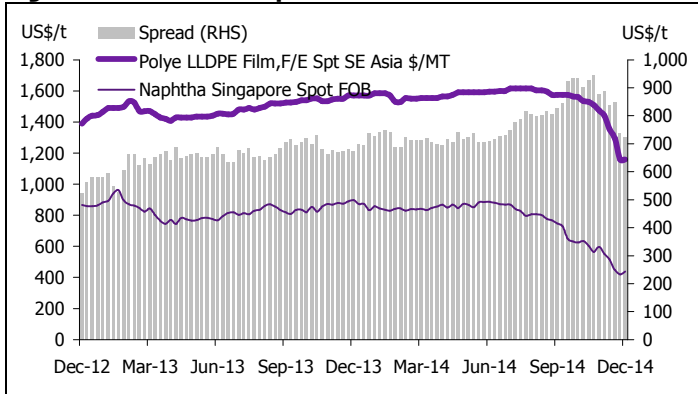
Source: Datastream, SCBS Investment Research

Figure 5: LDPE vs. Naphtha



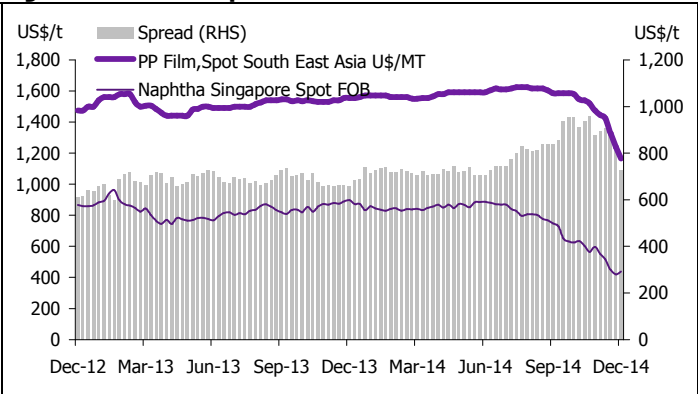
Source: Datastream, SCBS Investment Research

Figure 6: LLDPE vs. Naphtha



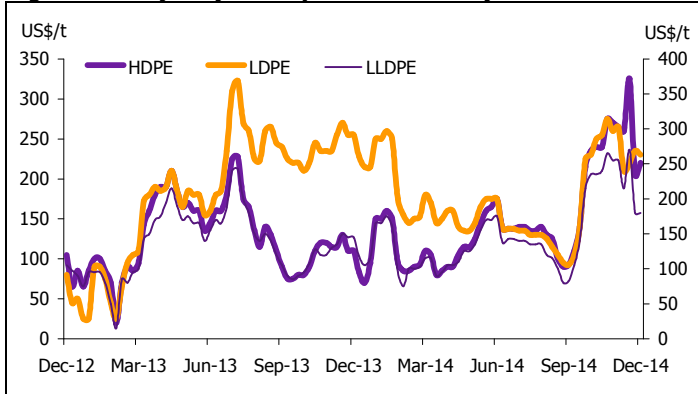
Source: Datastream, SCBS Investment Research

Figure 7: PP vs. Naphtha



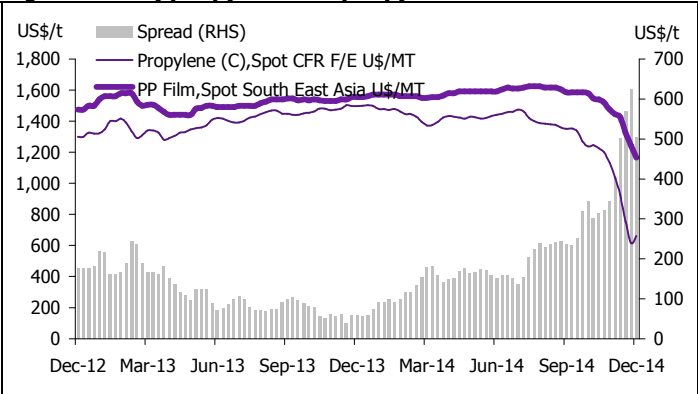
Source: Datastream, SCBS Investment Research

Figure 8: Polyethylene spread over ethylene

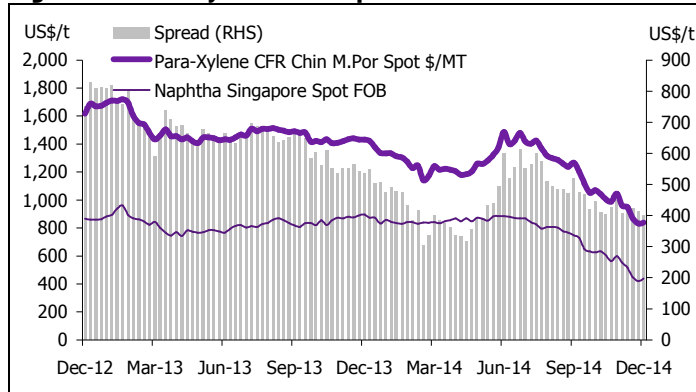


Source: Datastream, SCBS Investment Research

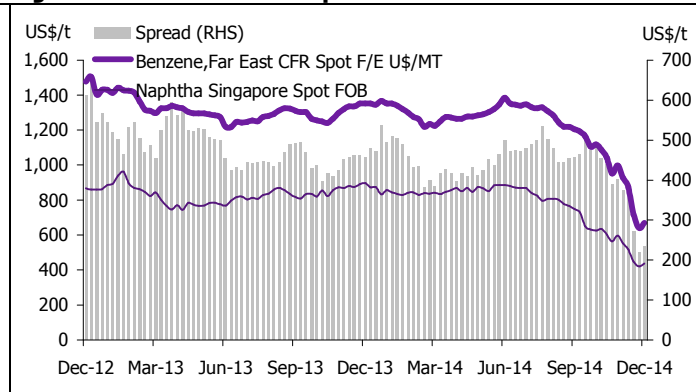
Figure 9: Polypropylene vs. propylene



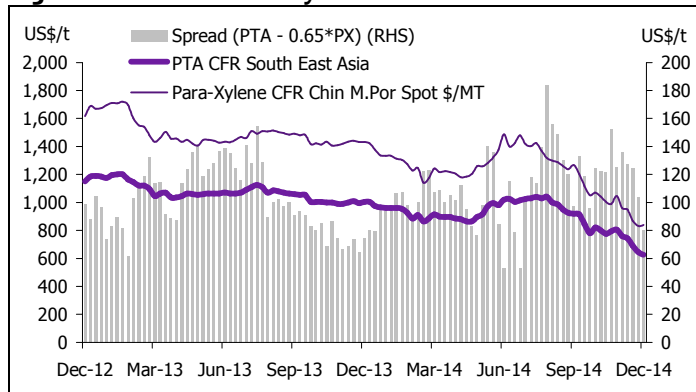
Source: Datastream, SCBS Investment Research

Figure 10: Paraxylene vs. Naphtha

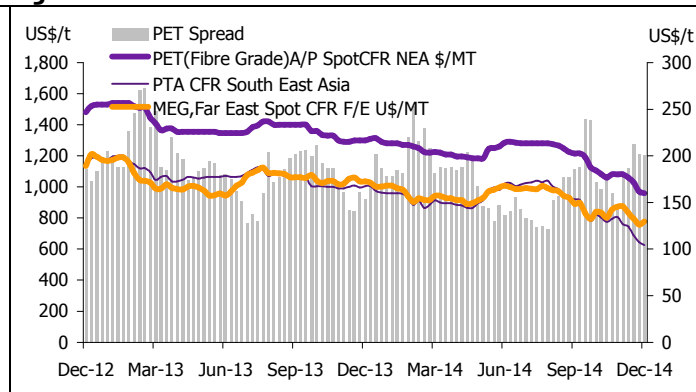
Source: Datastream, SCBS Investment Research

Figure 11: Benzene vs. Naphtha

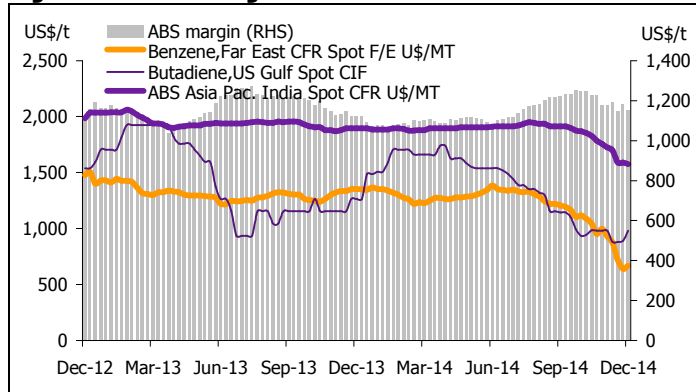
Source: Datastream, SCBS Investment Research

Figure 12: PTA vs. Paraxylene

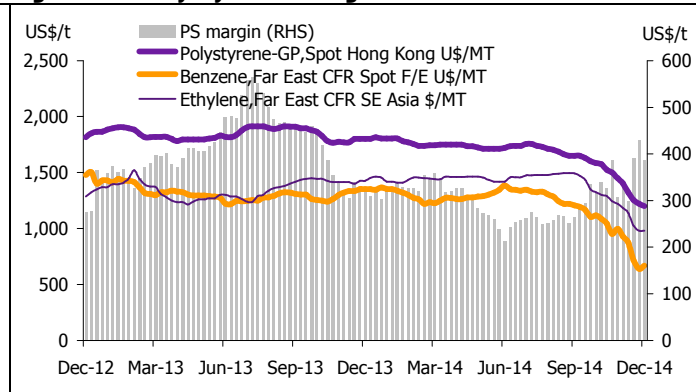
Source: Datastream, SCBS Investment Research

Figure 13: PET vs. PTA

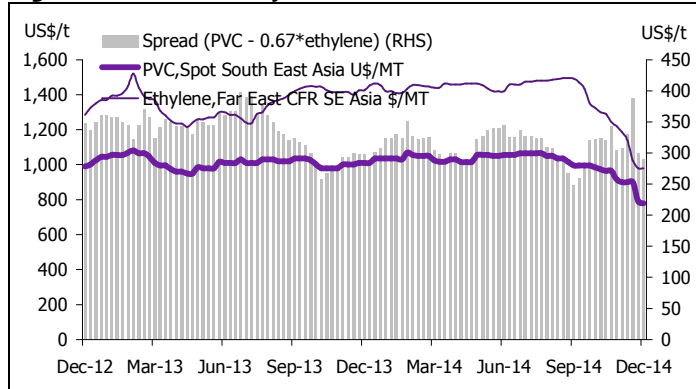
Source: Datastream, SCBS Investment Research

Figure 14: ABS margin

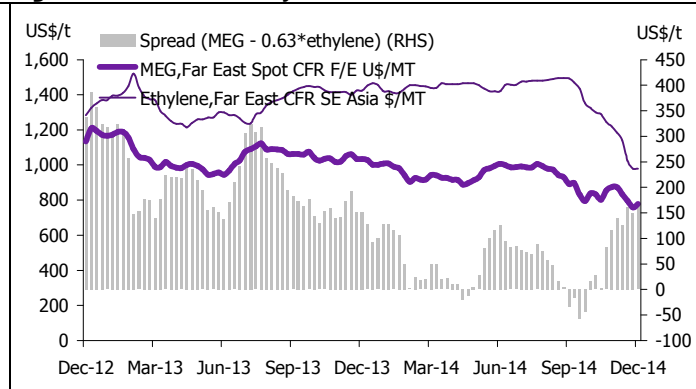
Source: Datastream, SCBS Investment Research

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	1,227	1,478	-17%	1,398	1,398	1,440	↘
			Propylene (C), Spot CFR F/E U\$/MT	1,076	1,412	-24%	1,341	1,341	1,430	↘
	HDPE	19%	Polye HDPE Inj, South East Asia U\$/MT	1,457	1,605	-9%	1,545	1,545	1,570	↘
	LLDPE	7%	Polye LLDPE Film, F/E Spt SE Asia \$/MT	1,441	1,602	-10%	1,546	1,546	1,580	↘
	LDPE	4%	Polye LDPE-Film, Spot S.E Asia U\$/MT	1,450	1,602	-10%	1,574	1,574	1,640	↘
	MEG	6%	MEG, Far East Spot CFR F/E U\$/MT	828	973	-15%	927	927	1,110	↘
	PX	28%	PX - naphtha	428	533	-20%	451	451	348	↘
IRPC	BZ	15%	BZ - naphtha	391	477	-18%	439	439	398	↘
	Ethylene/Propylene	15%	Ethylene - naphtha	657	659	0%	624	624	598	↘
			Propylene - naphtha	506	593	-15%	567	567	588	↘
	HDPE	12%	HDPE - naphtha	888	785	13%	770	770	728	↘
	PP	28%	PP - naphtha	893	793	13%	780	780	728	↘
	ABS	7%	ABS spread	1,208	1,165	4%	1,141	1,141	n.a.	↘
	BTX	23%	BZ - naphtha	391	477	-18%	439	439	398	↘
SCC	PS	12%	PS spread	340	260	31%	305	305	n.a.	↗
	HDPE	40%	HDPE - naphtha	888	785	13%	770	770	728	↘
	LDPE	3%	LDPE - naphtha	880	782	12%	800	800	798	↘
	LLDPE	3%	LLDPE - naphtha	871	782	11%	771	771	738	↘
	PP	25%	PP - naphtha	893	793	13%	780	780	728	↘
	PVC	28%	PVC - Ethylene/EDC	399	428	-7%	413	387	n.a.	→
	LDPE	60%	LDPE - Ethylene	223	123	81%	176	176	200	→
TPIPL	PX	60%	PX - naphtha	428	533	-20%	451	451	348	↘
	BZ	21%	BZ - naphtha	391	477	-18%	439	439	398	↘
IVL	PTA	25%	PTA - PX	120	120	1%	110	110	103	↘
	PET/Polyester	67%	PET spread	190	148	28%	177	177	n.a.	↗
	MEG	8%								
VNT	PVC	63%	PVC - ethylene	314	308	2%	313	313	350	→
TPC	PVC	100%	PVC - Ethylene/EDC	399	428	-7%	413	387	n.a.	→

Source: Datastream, SCBS Investment Research

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