

## Petrochemical price monitor

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- **Higher feedstock cost pushed up ethylene price WoW.** Ethylene price rose 1.8% WoW on the back of higher oil and naphtha prices. PE prices, on the other hand, continued to soften 1.9-3% WoW, though remain strong. Product spread slid by 5.7-7% WoW. We believe this reflects the lag for lower ethylene cost over the past weeks. Hence, non-integrated PE producers were the worst performers with product spread over ethylene plunging 30-41% WoW. LDPE-ethylene spread fell 30% WoW to an 8-month low of US\$175/t.
- **PX the worst performer YTD.** PX price fell 2.4% WoW and 11.1% YTD to a 21-month low of US\$1,273/t, primarily because of slower demand from PTA producers, with PTA-PX spread too thin for high-cost PTA producers to stay afloat on cash cost of US\$150/t. Although threat from new supply is deferred to 2H14, we believe PX price will head down throughout this year.
- **Sharp increase of PET/PTA margin reflects lower feedstock cost.** Integrated PET/PTA spread surged 12% WoW to US\$324/t, the second highest rise in the last 52 weeks. Behind this was lower feedstock cost for both PX and MEG; PET and PTA prices were stable WoW. We expect this to spur PTA producers to boost operating rates in the near term as PTA-PX spread continues to widen to cover cash cost.

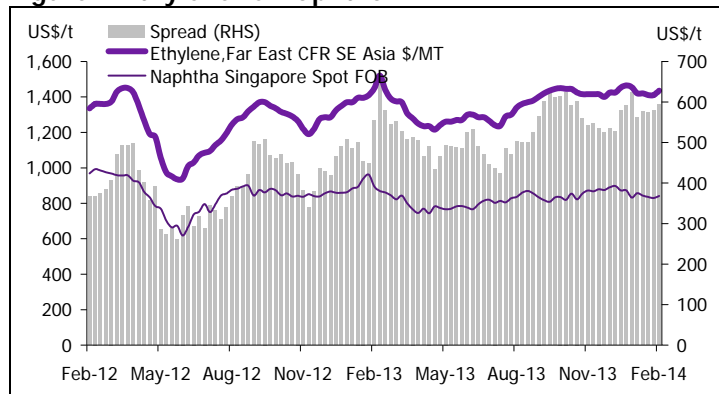
**Investment view:** The petrochemical sector index has fallen 5.4% YTD on concerns of a weak 4Q13. We expect investor interest in the sector to revive after results season, especially for PTTGC (-8.5% YTD) after it beat forecasts in 4Q13 and 2013. More importantly, its earnings outlook for 2014F is strong and valuation is undemanding at 2014 PE of only 8x, vs. 16x for its regional peers, plus dividend yield of >5%.

Figure 1: Petrochemical price update

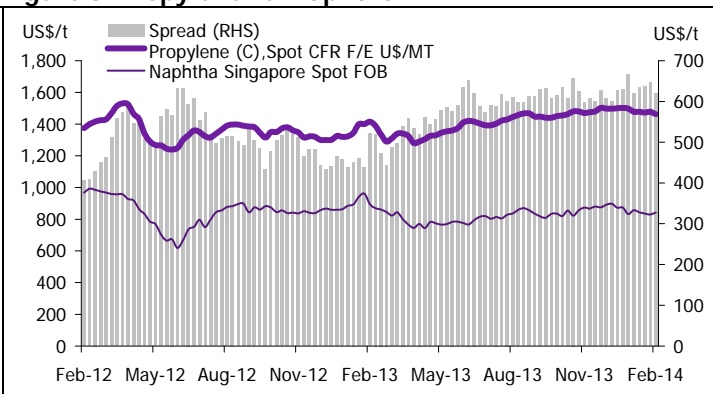
	Current 21-Feb-14	52-week High/Low	-1W	-1M	-3M	-6M	-12M	1Q14 QTD	4Q13	QoQ%	YTD	Chg.	%YoY	2014F projection
<b>Price</b>														
Naphtha Singapore Spot FOB	842	897/744	1.4%	-1.9%	-3.6%	0.7%	-5.9%	848	855	-0.8%	848	-46	-5.2%	822
Ethylene, Far East CFR SE Asia \$/MT	1,435	1,520/1,215	1.8%	1.1%	1.4%	7.1%	-1.0%	1,433	1,427	0.4%	1,433	50	3.6%	1,320
Propylene (C), Spot CFR F/E US/MT	1,463	1,503/1,280	-1.0%	-1.0%	-0.5%	1.2%	3.4%	1,483	1,472	0.8%	1,483	130	9.6%	1,370
Polye HDPE Inj, South East Asia US/MT	1,530	1,570/1,425	-1.9%	-2.5%	-0.3%	3.7%	0.7%	1,553	1,530	1.5%	1,553	88	6.0%	1,440
Polye LDPE-Film, Spot S.E Asia US/MT	1,610	1,680/1,420	-3.0%	-3.6%	-2.4%	2.9%	7.7%	1,664	1,664	0.0%	1,664	225	15.6%	1,490
Polye LLDPE Film, F/E Spot SE Asia \$/MT	1,530	1,585/1,410	-2.5%	-3.5%	-0.3%	2.7%	2.0%	1,571	1,546	1.6%	1,571	103	7.0%	1,480
PP Film, Spot South East Asia US/MT	1,560	1,580/1,440	-0.6%	-0.6%	2.0%	3.0%	-1.3%	1,566	1,539	1.7%	1,566	31	2.0%	1,490
<b>Related stocks</b>														
PTTGC (-)   IRPC (-)   SCC (-)   TPIPL (-)														
Para-Xylene CFR Chin M. Por Spot \$/MT	1,273	1,603/1,273	-2.4%	-4.5%	-9.7%	-15.6%	-25.0%	1,336	1,432	-6.7%	1,336	-359	-21.2%	1,390
Benzene, Far East CFR Spot F/E US/MT	1,300	1,415/1,218	-1.5%	-3.9%	0.2%	1.6%	-8.8%	1,341	1,298	3.3%	1,341	-93	-6.5%	1,220
<b>Related stocks</b>														
PTTGC (-)   TOP (-)   ESSO (-)														
MEG, Far East Spot CFR F/E US/MT	940	1,124/940	-4.2%	-6.8%	-7.6%	-13.6%	-18.8%	995	1,043	-4.6%	995	-187	-15.8%	1,040
PTA CFR South East Asia	955	1,145/955	0.0%	-0.5%	-3.5%	-10.7%	-18.0%	967	1,009	-4.2%	967	-220	-18.5%	1,050
PET(Fibre Grade)A/P Spot CFR NEA \$/MT	1,270	1,520/1,270	0.0%	-0.8%	-2.3%	-10.6%	-17.5%	1,287	1,330	-3.3%	1,287	-247	-16.1%	n.a.
<b>Related stocks</b>														
PTTGC (-)   IVL (+)														
ABS Asia Pac. India Spot CFR US/MT	1,895	2,045/1,870	0.0%	0.5%	0.8%	-2.8%	-8.0%	1,890	1,904	-0.7%	1,890	-150	-7.4%	n.a.
Polystyrene-GP, Spot Hong Kong US/MT	1,770	1,915/1,765	-0.6%	-1.9%	-0.3%	6.8%	-6.6%	1,798	1,817	-1.0%	1,798	-85	-4.5%	n.a.
<b>Related stocks</b>														
IRPC (-)														
PVC, Spot South East Asia US/MT	1,070	1,083/950	3.9%	3.4%	9.2%	3.9%	0.0%	1,036	1,003	3.3%	1,036	-8	-0.8%	1,030
<b>Related stocks</b>														
VNT (+)   TPC (+)														
<b>Product spread</b>														
Ethylene - naphtha	593	650/424	2.3%	5.5%	9.4%	17.8%	6.8%	585	572	2.2%	585	96	19.8%	498
Propylene - naphtha	621	665/444	-4.1%	0.2%	3.9%	2.0%	19.2%	635	617	3.0%	635	176	38.4%	548
HDPE - naphtha	688	735/615	-5.7%	-3.4%	3.9%	7.7%	10.0%	704	675	4.4%	704	134	23.4%	618
LDPE - naphtha	768	851/637	-7.4%	-5.4%	-1.1%	5.4%	27.9%	815	809	0.7%	815	271	49.8%	668
LDPE - Ethylene	175	323/25	-30.0%	-30.0%	-25.5%	-22.2%	288.9%	230	237	-2.8%	230	175	314.0%	170
LLDPE - naphtha	688	750/624	-7.0%	-5.4%	3.9%	5.3%	13.6%	722	691	4.5%	722	149	26.0%	658
PP - naphtha	718	740/657	-2.9%	0.8%	9.3%	5.8%	4.7%	717	684	4.8%	717	77	12.1%	668
PX - naphtha	431	739/431	-9.0%	-9.3%	-19.6%	-35.9%	-46.4%	488	577	-15.5%	488	-313	-39.1%	568
BZ - naphtha	458	594/396	-6.4%	-7.4%	7.9%	3.3%	-13.7%	493	443	11.2%	493	-47	-8.7%	398
MEG - Ethylene	50	324/50	-53.4%	-61.0%	-64.2%	-80.6%	-80.7%	106	158	-32.8%	106	-218	-67.3%	222
PTA - PX	128	155/65	18.7%	36.2%	71.7%	42.4%	107.5%	98	78	26.2%	98	13	15.7%	119
PET spread	196	273/128	8.0%	10.0%	14.1%	-4.1%	-13.3%	184	179	3.2%	184	-10	-5.3%	n.a.
Integrated PET/PTA spread	324	391/211	12.0%	19.1%	31.5%	10.1%	12.6%	282	256	10.2%	282	3	1.1%	n.a.
ABS spread	1,080	1,272/1,040	0.8%	0.3%	-6.0%	-11.9%	-6.8%	1,084	1,169	-7.3%	1,084	-83	-7.1%	n.a.
PS spread	327	565/303	-0.4%	0.7%	-3.8%	-34.7%	-6.3%	323	378	-14.5%	323	-26	-7.5%	n.a.
PVC - ethylene	353	398/258	8.5%	8.5%	29.4%	-2.1%	2.2%	319	289	10.3%	319	-33	-9.4%	370

Source: Datastream, SCBS Investment Research

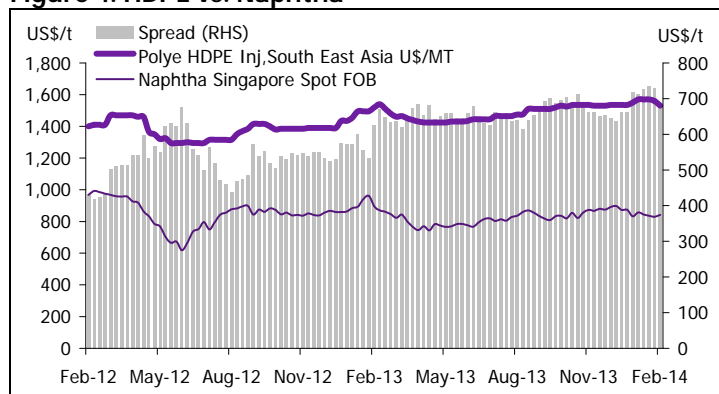
Note: Impact to related stocks is based on WoW performance

**Figure 2: Ethylene vs. Naphtha**

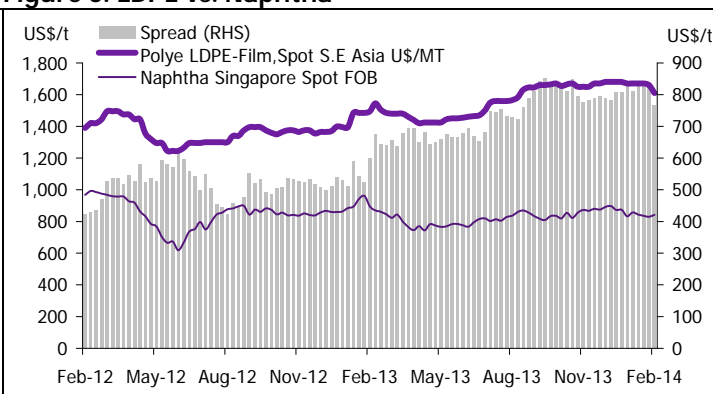
Source: Datastream, SCBS Investment Research

**Figure 3: Propylene vs. Naphtha**

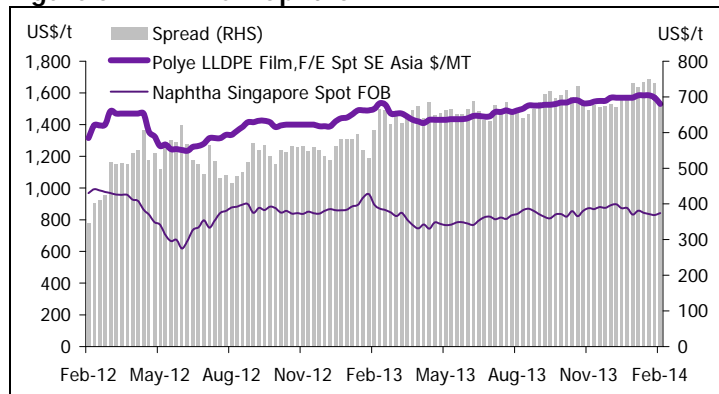
Source: Datastream, SCBS Investment Research

**Figure 4: HDPE vs. Naphtha**

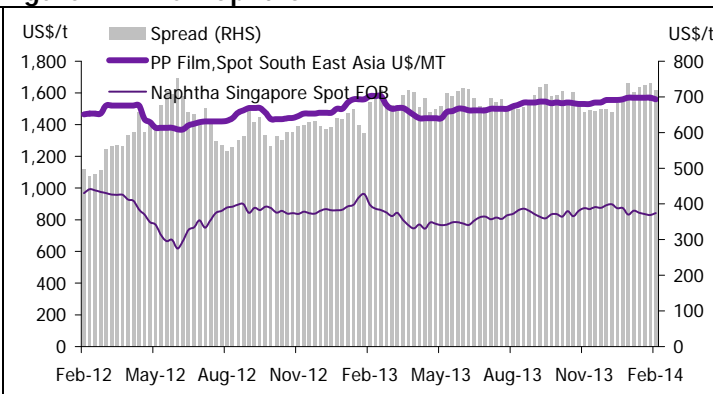
Source: Datastream, SCBS Investment Research

**Figure 5: LDPE vs. Naphtha**

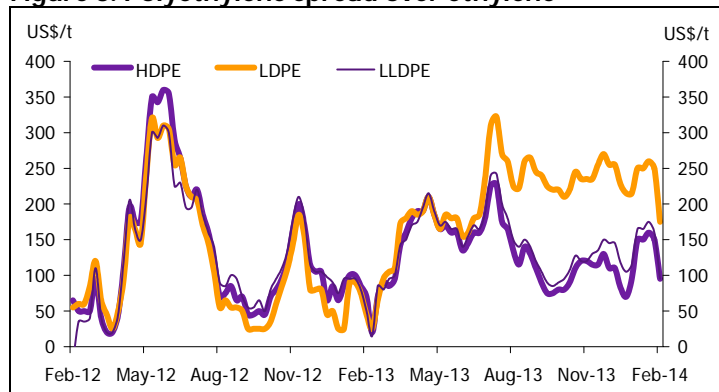
Source: Datastream, SCBS Investment Research

**Figure 6: LLDPE vs. Naphtha**

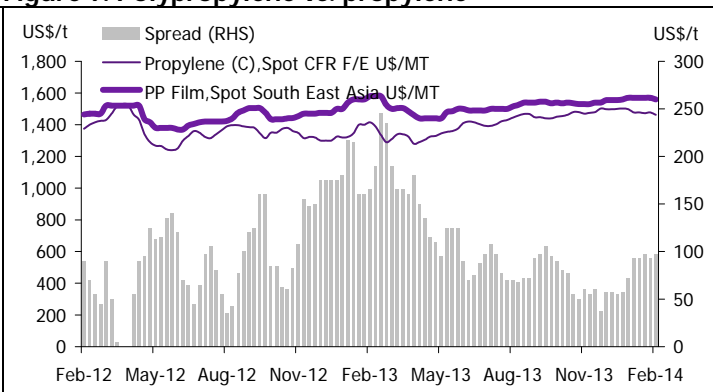
Source: Datastream, SCBS Investment Research

**Figure 7: PP vs. Naphtha**

Source: Datastream, SCBS Investment Research

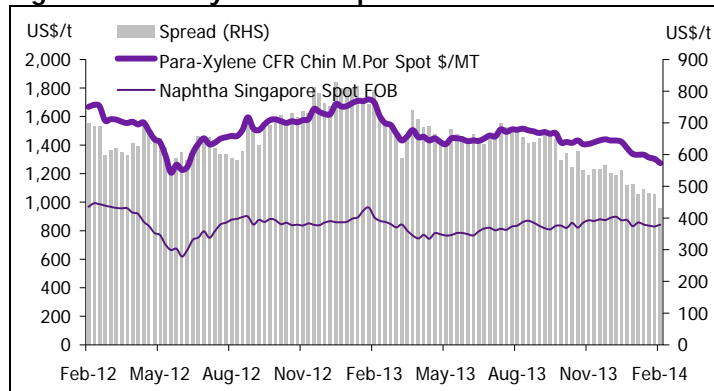
**Figure 8: Polyethylene spread over ethylene**

Source: Datastream, SCBS Investment Research

**Figure 9: Polypropylene vs. propylene**

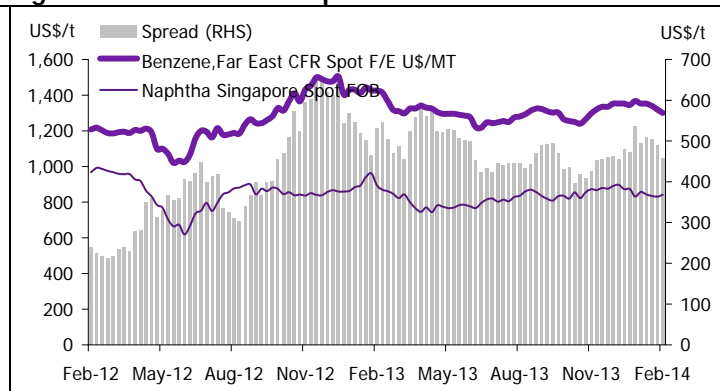
Source: Datastream, SCBS Investment Research

Figure 10: Paraxylene vs. Naphtha



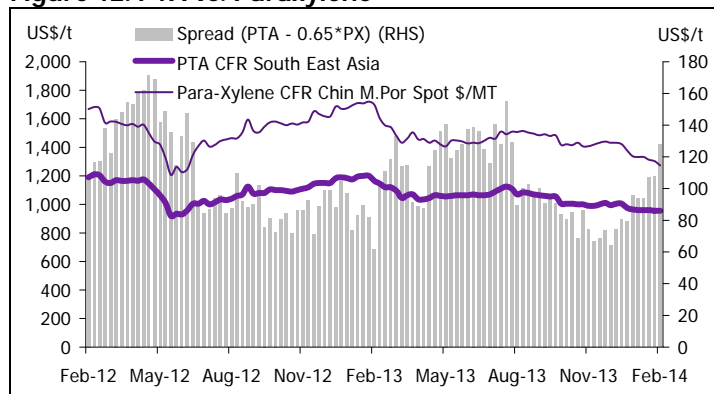
Source: Datastream, SCBS Investment Research

Figure 11: Benzene vs. Naphtha



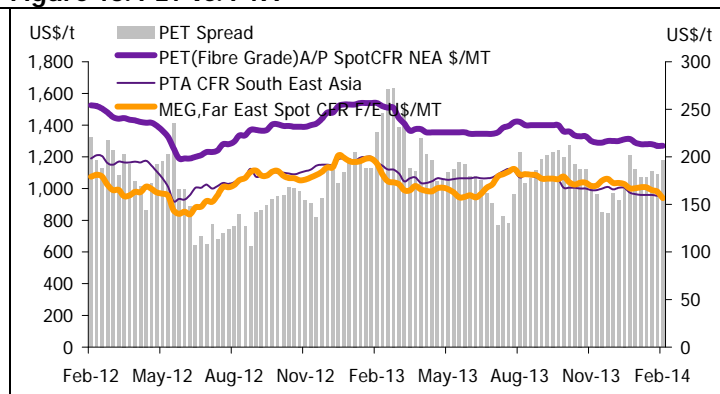
Source: Datastream, SCBS Investment Research

Figure 12: PTA vs. Paraxylene



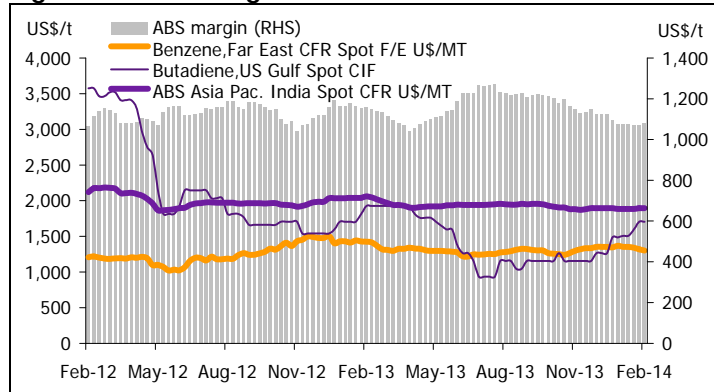
Source: Datastream, SCBS Investment Research

Figure 13: PET vs. PTA



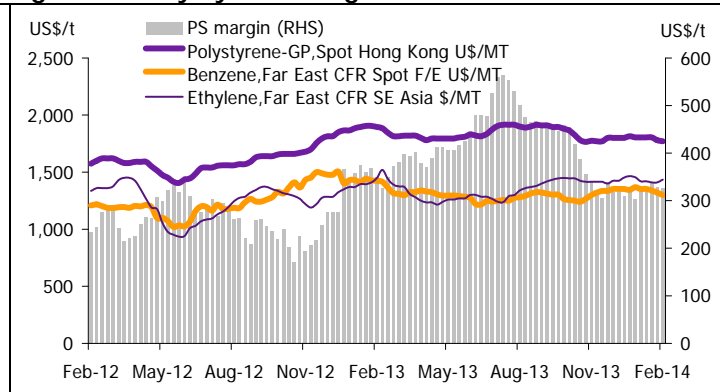
Source: Datastream, SCBS Investment Research

Figure 14: ABS margin



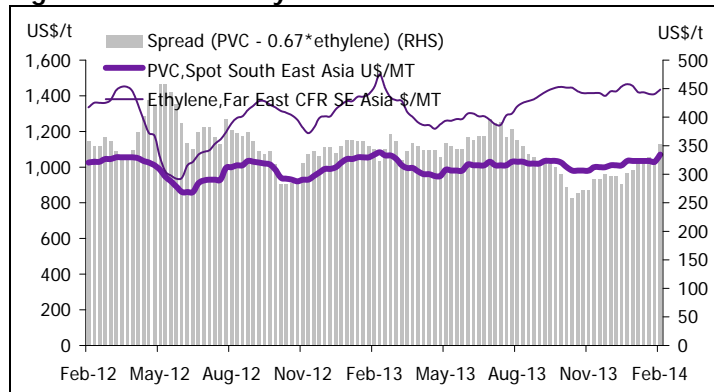
Source: Datastream, SCBS Investment Research

Figure 15: Polystyrene margin



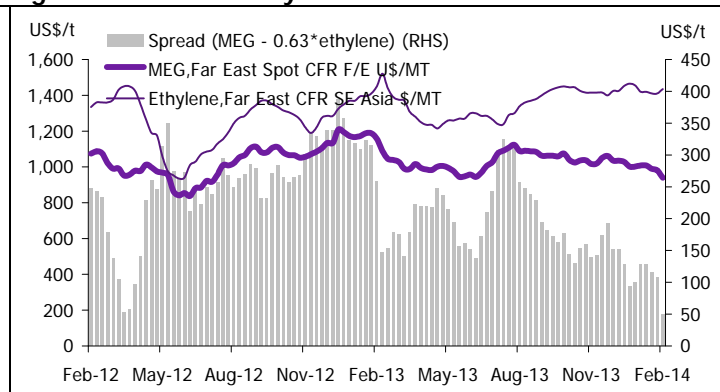
Source: Datastream, SCBS Investment Research

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	1Q14 QTD	4Q13	QoQ%	YTD	12MMA	2014F projection	Momentum
PTTGC	Ethylene/Propylene	21%	Ethylene, Far East CFR SE Asia \$/MT	1,433	1,427	0%	1,433	1,360	1,320	↗
			Propylene (C), Spot CFR F/E US/MT	1,483	1,472	1%	1,483	1,418	1,370	↘
	HDPE	19%	Polye HDPE Inj, South East Asia US/MT	1,553	1,530	1%	1,553	1,492	1,440	↘
	LLDPE	7%	Polye LLDPE Film, F/E Spt SE Asia \$/MT	1,571	1,546	2%	1,571	1,502	1,480	↘
	LDPE	4%	Polye LDPE-Film, Spot S.E Asia US/MT	1,664	1,664	0%	1,664	1,569	1,490	↘
	MEG	6%	MEG, Far East Spot CFR F/E US/MT	995	1,043	-5%	995	1,025	1,040	↘
	PX	28%	PX - naphtha	488	577	-15%	488	617	568	↘
IRPC	BZ	15%	BZ - naphtha	493	443	11%	493	478	398	→
	Ethylene/Propylene	15%	Ethylene - naphtha	585	572	2%	585	534	498	↗
			Propylene - naphtha	635	617	3%	635	592	548	↗
	HDPE	12%	HDPE - naphtha	704	675	4%	704	666	618	→
	PP	28%	PP - naphtha	717	684	5%	717	694	668	↗
	ABS	7%	ABS spread	1,084	1,169	-7%	1,084	1,154	n.a.	→
	BTX	23%	BZ - naphtha	493	443	11%	493	478	398	→
SCC	PS	12%	PS spread	323	378	-15%	323	407	n.a.	→
	HDPE	40%	HDPE - naphtha	704	675	4%	704	666	618	→
	LDPE	3%	LDPE - naphtha	815	809	1%	815	744	668	↘
	LLDPE	3%	LLDPE - naphtha	722	691	5%	722	677	658	→
	PP	25%	PP - naphtha	717	684	5%	717	694	668	↗
	PVC	28%	PVC - Ethylene/EDC	445	521	-15%	445	468	n.a.	→
TPIPL	LDPE	60%	LDPE - Ethylene	230	237	-3%	230	209	170	↘
TOP	PX	60%	PX - naphtha	488	577	-15%	488	617	568	↘
	BZ	21%	BZ - naphtha	493	443	11%	493	478	398	→
IVL	PTA	25%	PTA - PX	98	78	26%	98	104	119	↗
	PET/Polyester	67%	PET spread	184	179	3%	184	187	n.a.	↗
	MEG	8%								
VNT	PVC	63%	PVC - ethylene	319	289	10%	319	331	370	→
TPC	PVC	100%	PVC - Ethylene/EDC	445	521	-15%	445	468	n.a.	→

Source: Datastream, SCBS Investment Research

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