

## Petrochemical price monitor

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- **High ethylene price continued to hurt downstream margin.** Ethylene price paused in its rise last week, with the price unchanged WoW at US\$1,455/t, the second highest price YTD. The high ethylene price reflected growing concerns about tight spot availability due to the turnaround season in Asia. PE prices were mixed, changing -0.6% to +1.6% WoW. The recent high ethylene price has caused PE producers to reduce utilization as they were unable to pass on higher feedstock cost to customers given high inventory and continued quiet demand for downstream PE. Margin for non-integrated producers like TPIPL continued to narrow, as LDPE-ethylene spread shrank 6.5% WoW and 43% YTD to US\$145/t.
- **First increase in PX price in 12 weeks.** PX price edged up 1.5% WoW to US\$1,246/t, the first WoW increase in 12 weeks. We believe this reflected a short-term stock buildup before maintenance shutdowns by regional refineries, which will reduce feedstock of PX. BZ price has been trending down since late Jan 2014 on lower downstream price, styrene monomer.
- **Feedstock costs for PET/PTA is picking up.** Higher feedstock cost (PX and MEG) reduced integrated PET/PTA spread by 8.1% WoW to US\$311/t. Spread was given some support by higher PTA price (+1.1% WoW) but lower PET price suggests demand remains sluggish, especially for polyester.

**Investment view:** The petrochemical sector index (-1.1% WoW) underperformed the overall market (+0.7% WoW) on bearish sentiment towards the sector due to weaker product spread across the board. We expect to see a short-term share price weakness for IVL (Neutral, TP: Bt24) and TPIPL (Buy, TP: Bt13.50) on their narrower spreads. We still prefer the olefins chain to others in 2014F with PTTGC as a top pick given its better earnings outlook due to a firmer product spread.

Figure 1: Petrochemical price update

	Current 7-Mar-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	830	897/744	-1.6%	-0.7%	-5.7%	-4.6%	-3.7%	846	855	-1.0%	846	-43	-4.8%	822
Ethylene, Far East CFR SE Asia \$/MT	1,455	1,465/1,215	0.0%	3.2%	2.8%	6.2%	1.0%	1,438	1,427	0.7%	1,438	35	2.5%	1,320
Propylene (C), Spot CFR F/E US/MT	1,445	1,503/1,280	0.0%	-1.9%	-2.4%	-1.5%	8.2%	1,476	1,472	0.3%	1,476	121	8.9%	1,370
Polye HDPE Inj, South East Asia US/MT	1,540	1,570/1,425	0.0%	-1.9%	0.7%	2.0%	2.0%	1,550	1,530	1.3%	1,550	73	4.9%	1,440
Polye LDPE-Film, Spot S.E Asia US/MT	1,600	1,680/1,420	-0.6%	-4.2%	-4.2%	-1.8%	6.3%	1,652	1,664	-0.7%	1,652	196	13.5%	1,490
Polye LLDPE Film, F/E Spot SE Asia \$/MT	1,555	1,585/1,410	1.6%	-1.9%	0.3%	2.3%	2.0%	1,565	1,546	1.2%	1,565	85	5.7%	1,480
PP Film, Spot South East Asia US/MT	1,560	1,570/1,440	0.0%	-0.6%	1.3%	1.3%	-1.3%	1,565	1,539	1.6%	1,565	21	1.4%	1,490
<b>Related stocks</b>														
PTTGC (Neutral)   IRPC (+)   SCC (+)   TPIPL (-)														
Para-Xylene CFR Chin M. Por Spot \$/MT	1,246	1,541/1,228	1.5%	-5.1%	-13.0%	-17.1%	-19.7%	1,316	1,432	-8.1%	1,316	-355	-21.3%	1,390
Benzene, Far East CFR Spot F/E US/MT	1,263	1,368/1,218	-1.0%	-5.8%	-5.4%	-3.8%	-7.5%	1,327	1,298	2.2%	1,327	-99	-6.9%	1,220
<b>Related stocks</b>														
PTTGC (+)   TOP (+)   ESSO (+)														
MEG, Far East Spot CFR F/E US/MT	927	1,124/905	2.4%	-6.4%	-11.8%	-14.8%	-11.4%	979	1,043	-6.1%	979	-180	-15.5%	1,040
PTA CFR South East Asia	895	1,125/885	1.1%	-6.8%	-10.5%	-17.1%	-20.1%	949	1,009	-6.0%	949	-228	-19.3%	1,050
PET(Fibre Grade)/P Spot CFR NEA \$/MT	1,250	1,510/1,250	-0.8%	-2.3%	-3.1%	-10.7%	-17.2%	1,280	1,330	-3.8%	1,280	-250	-16.3%	n.a.
<b>Related stocks</b>														
PTTGC (+)   IVL (-)														
ABS Asia Pac. India Spot CFR US/MT	1,875	1,990/1,870	-0.8%	-0.5%	-0.3%	-3.6%	-6.9%	1,889	1,904	-0.8%	1,889	-150	-7.3%	n.a.
Polystyrene-GP, Spot Hong Kong US/MT	1,740	1,915/1,740	-0.9%	-3.6%	-1.7%	-8.4%	-5.7%	1,788	1,817	-1.6%	1,788	-92	-4.9%	n.a.
<b>Related stocks</b>														
IRPC (-)														
PVC, Spot South East Asia US/MT	1,050	1,070/950	-0.5%	1.4%	5.0%	2.9%	-1.4%	1,039	1,003	3.6%	1,039	-11	-1.0%	1,030
<b>Related stocks</b>														
VNT (-)   TPC (-)														
<b>Product spread</b>														
Ethylene - naphtha	625	626/424	2.2%	8.8%	16.8%	24.9%	8.0%	592	572	3.4%	592	78	15.2%	498
Propylene - naphtha	615	665/444	2.2%	-3.4%	2.5%	2.9%	29.9%	630	617	2.1%	630	163	35.0%	548
HDPE - naphtha	710	735/615	1.9%	-3.3%	9.2%	10.9%	9.5%	704	675	4.3%	704	116	19.7%	618
LDPE - naphtha	770	851/637	0.4%	-7.7%	-2.6%	1.3%	19.7%	806	809	-0.4%	806	239	42.1%	668
LDPE - Ethylene	145	323/95	-6.5%	-44.2%	-43.1%	-44.2%	123.1%	214	237	-9.6%	214	161	300.5%	170
LLDPE - naphtha	725	750/624	5.6%	-3.2%	8.2%	11.5%	9.3%	719	691	4.1%	719	128	21.6%	658
PP - naphtha	730	740/657	1.9%	-0.6%	10.6%	8.9%	1.6%	719	684	5.0%	719	64	9.7%	668
PX - naphtha	416	739/384	8.3%	-12.7%	-24.7%	-34.3%	-39.8%	470	577	-18.5%	470	-313	-39.9%	568
BZ - naphtha	433	594/396	0.2%	-14.2%	-5.0%	-2.3%	-14.1%	481	443	8.5%	481	-56	-10.4%	398
MEG - Ethylene	24	324/2	916.7%	-78.9%	-86.0%	-89.8%	-84.0%	87	158	-44.5%	87	-202	-69.7%	222
PTA - PX	85	155/65	-2.3%	-20.4%	23.6%	-17.2%	-23.2%	93	78	19.2%	93	3	3.9%	119
PET spread	228	273/128	-10.1%	23.2%	60.1%	28.6%	-15.8%	198	179	10.8%	198	-9	-4.5%	n.a.
Integrated PET/PTA spread	313	391/211	-8.1%	7.3%	48.2%	11.8%	-18.0%	291	256	13.3%	291	-6	-2.0%	n.a.
ABS spread	1,076	1,272/1,040	-0.9%	0.6%	-5.0%	-12.1%	-5.5%	1,083	1,169	-7.4%	1,083	-79	-6.8%	n.a.
PS spread	321	565/303	-1.6%	-5.0%	5.1%	-31.2%	-8.1%	323	378	-14.5%	323	-24	-6.8%	n.a.
PVC - ethylene	323	398/258	-1.5%	-2.3%	10.3%	-3.7%	-6.5%	320	289	10.8%	320	-28	-8.1%	370

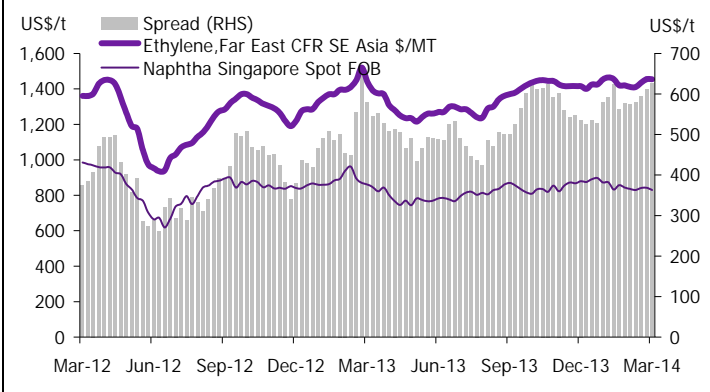
Source: Datastream, SCBS Investment Research

Note: Impact to related stocks is based on WoW performance

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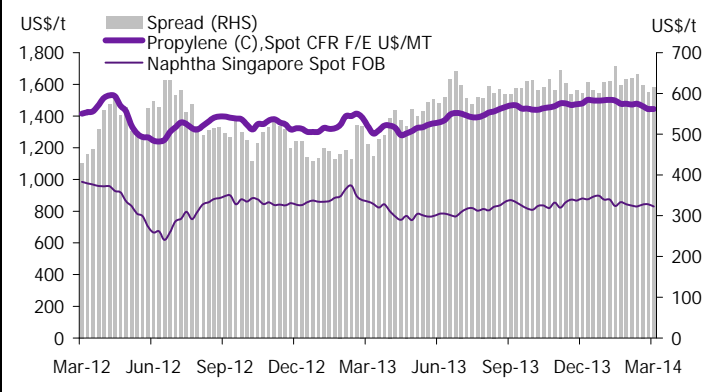
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Figure 2: Ethylene vs. Naphtha



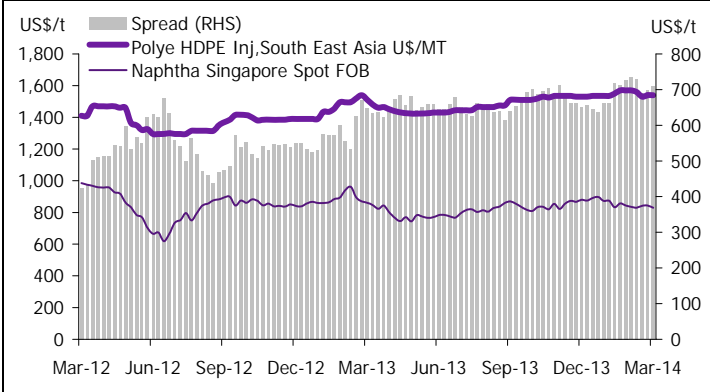
Source: Datastream, SCBS Investment Research

Figure 3: Propylene vs. Naphtha



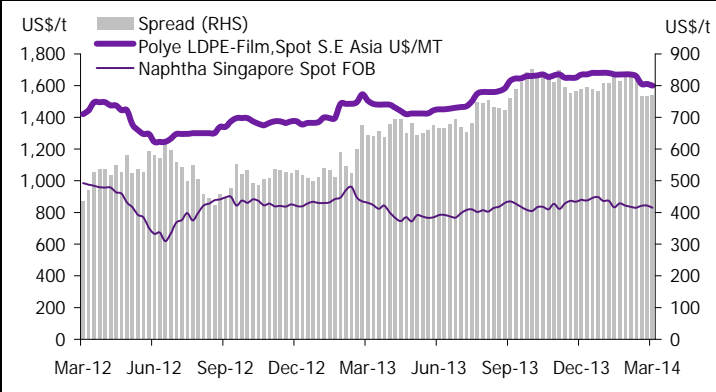
Source: Datastream, SCBS Investment Research

Figure 4: HDPE vs. Naphtha



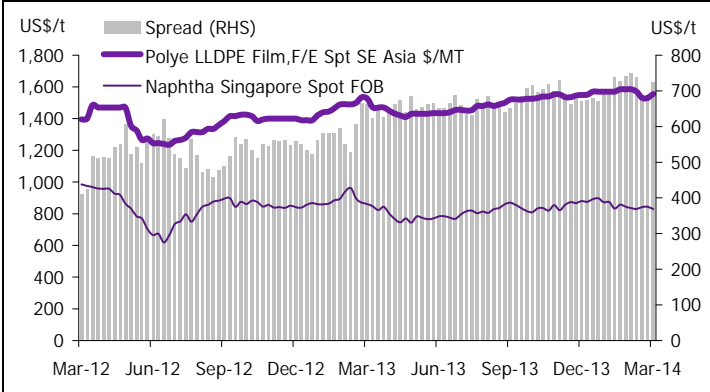
Source: Datastream, SCBS Investment Research

Figure 5: LDPE vs. Naphtha



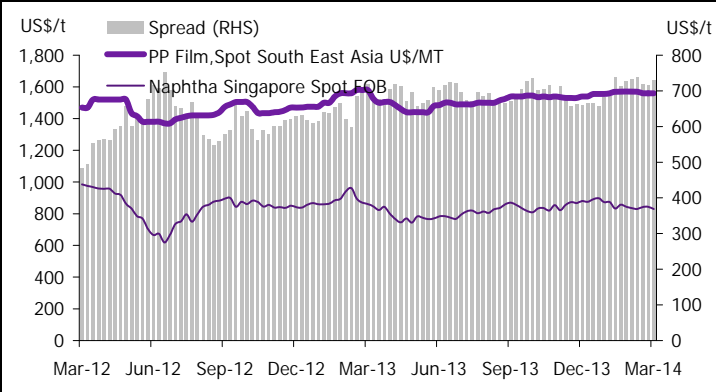
Source: Datastream, SCBS Investment Research

Figure 6: LLDPE vs. Naphtha



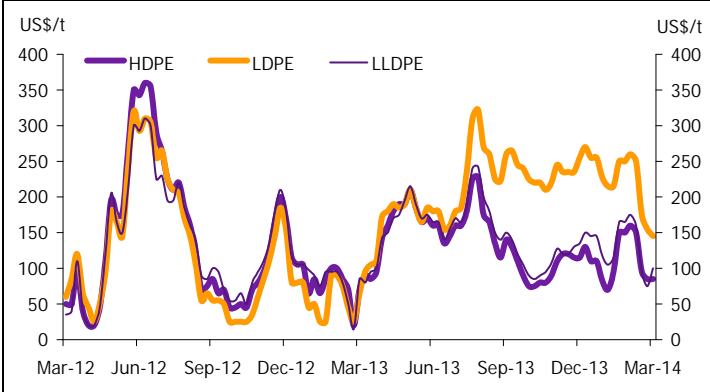
Source: Datastream, SCBS Investment Research

Figure 7: PP vs. Naphtha



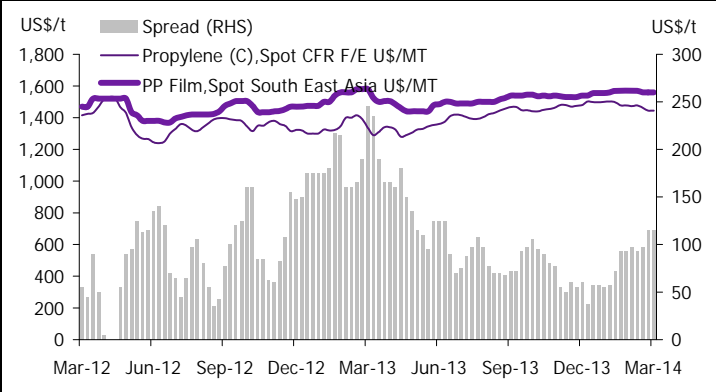
Source: Datastream, SCBS Investment Research

Figure 8: Polyethylene spread over ethylene

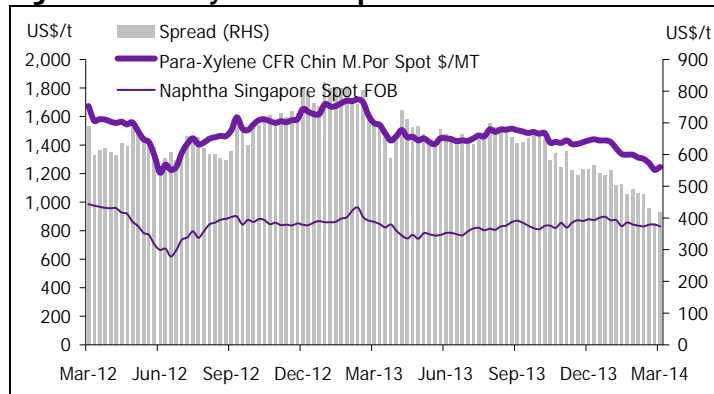


Source: Datastream, SCBS Investment Research

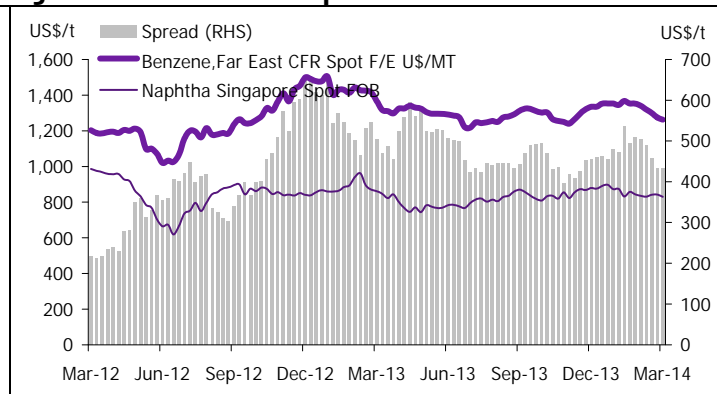
Figure 9: Polypropylene vs. propylene



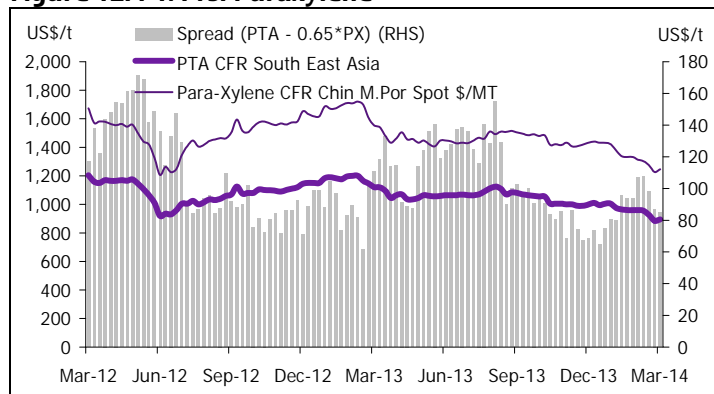
Source: Datastream, SCBS Investment Research

**Figure 10: Paraxylene vs. Naphtha**

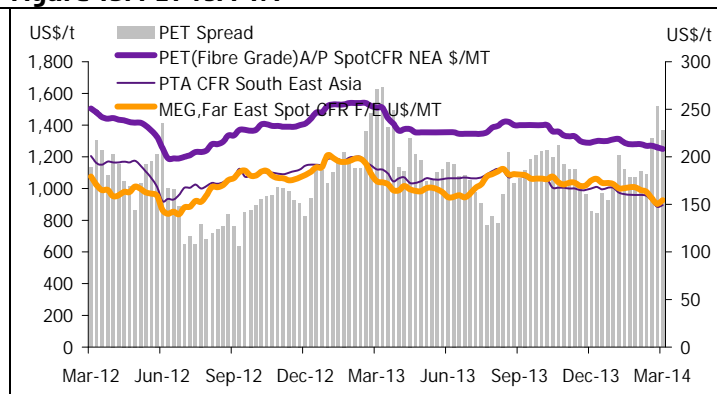
Source: Datastream, SCBS Investment Research

**Figure 11: Benzene vs. Naphtha**

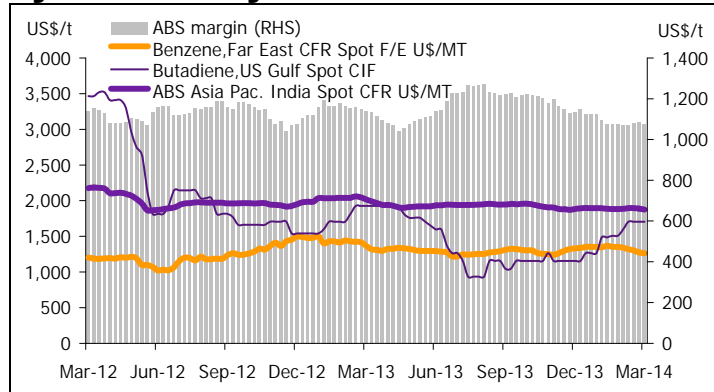
Source: Datastream, SCBS Investment Research

**Figure 12: PTA vs. Paraxylene**

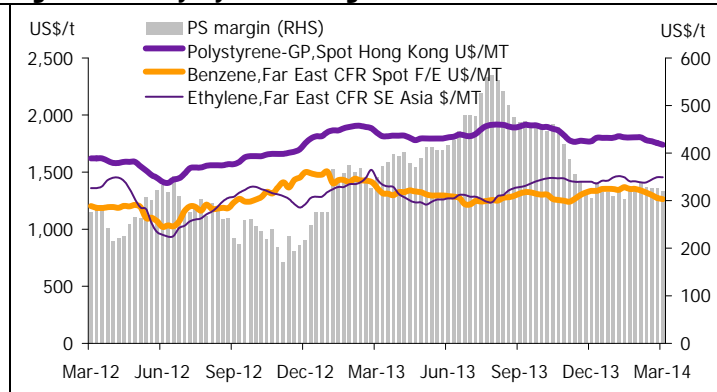
Source: Datastream, SCBS Investment Research

**Figure 13: PET vs. PTA**

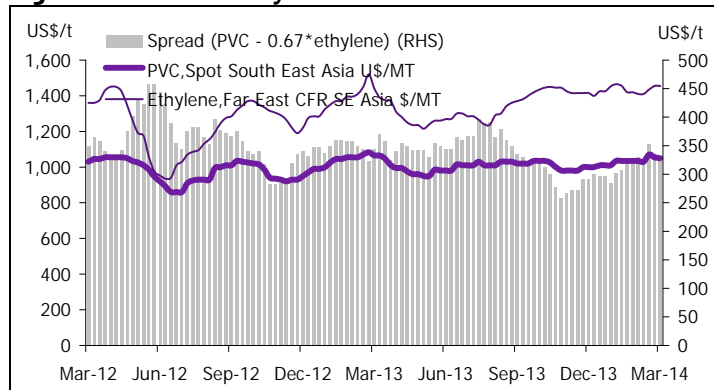
Source: Datastream, SCBS Investment Research

**Figure 14: ABS margin**

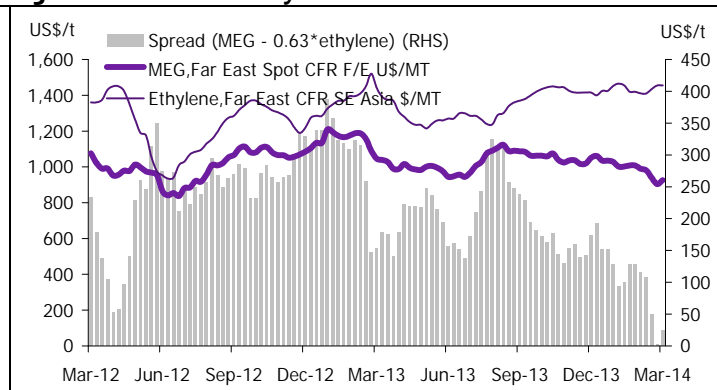
Source: Datastream, SCBS Investment Research

**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	1,438	1,427	1%	1,438	1,359	1,320	↗
			Propylene (C), Spot CFR F/E US/MT	1,476	1,472	0%	1,476	1,421	1,370	↘
	HDPE	19%	Polye HDPE Inj, South East Asia US/MT	1,550	1,530	1%	1,550	1,492	1,440	→
	LLDPE	7%	Polye LLDPE Film, F/E Spt SE Asia \$/MT	1,565	1,546	1%	1,565	1,503	1,480	→
	LDPE	4%	Polye LDPE-Film, Spot S.E Asia US/MT	1,652	1,664	-1%	1,652	1,572	1,490	↘
	MEG	6%	MEG, Far East Spot CFR F/E US/MT	979	1,043	-6%	979	1,019	1,040	↘
	PX	28%	PX - naphtha	470	577	-19%	470	605	568	↘
IRPC	BZ	15%	BZ - naphtha	481	443	9%	481	475	398	↘
	Ethylene/Propylene	15%	Ethylene - naphtha	592	572	3%	592	535	498	↗
			Propylene - naphtha	630	617	2%	630	596	548	↗
	HDPE	12%	HDPE - naphtha	704	675	4%	704	668	618	→
	PP	28%	PP - naphtha	719	684	5%	719	694	668	→
	ABS	7%	ABS spread	1,083	1,169	-7%	1,083	1,152	n.a.	→
	BTX	23%	BZ - naphtha	481	443	9%	481	475	398	↘
SCC	PS	12%	PS spread	323	378	-14%	323	407	n.a.	→
	HDPE	40%	HDPE - naphtha	704	675	4%	704	668	618	→
	LDPE	3%	LDPE - naphtha	806	809	0%	806	748	668	↘
	LLDPE	3%	LLDPE - naphtha	719	691	4%	719	678	658	→
	PP	25%	PP - naphtha	719	684	5%	719	694	668	→
	PVC	28%	PVC - Ethylene/EDC	435	521	-17%	435	463	n.a.	↘
TPIPL	LDPE	60%	LDPE - Ethylene	214	237	-10%	214	213	170	↘
TOP	PX	60%	PX - naphtha	470	577	-19%	470	605	568	↘
	BZ	21%	BZ - naphtha	481	443	9%	481	475	398	↘
IVL	PTA	25%	PTA - PX	93	78	19%	93	103	119	→
	PET/Polyester	67%	PET spread	198	179	11%	198	186	n.a.	↗
	MEG	8%								
VNT	PVC	63%	PVC - ethylene	320	289	11%	320	331	370	↘
TPC	PVC	100%	PVC - Ethylene/EDC	435	521	-17%	435	463	n.a.	↘

Source: Datastream, SCBS Investment Research

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