

Petrochemical price monitor

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- **Tight demand/supply continued to boost ethylene price.** Tight availability in the region continued to push ethylene price to an increase of 0.9% WoW to an 11-month high of US\$1,465/t. We believe another factor is the usual raise in demand ahead of Chinese New Year. Polyethylene prices remained stable WoW but expect a rise in weeks ahead due to several maintenance shutdowns, especially in China: Fushun Petrochemical shut an HDPE plant for maintenance turnaround on Jan 7 for around one month. Product spread inched down 0.1% WoW on higher naphtha cost. LDPE-ethylene spread plunged another 5.5% WoW on higher ethylene cost.
- **Demand for PX remained weak.** PX price declined 3.2% WoW to a 20-week low of US\$1,378/t on sluggish demand. PX-naphtha spread also weakened 8.3% WoW to a 3-year low of only US\$504/t. This was despite the delay in the startup of Saudi Aramco Total Refining and Petrochemical Co (Satorp)'s new PX plant (700kta) to Feb 2014. The plant was initially scheduled to start in Dec 2013.
- **Integrated PET/PTA spread up to 11-week high.** Integrated PET/PTA spread continued to increase by 14.8% WoW to an 11-week high of US\$283/t as PX and MEG costs declined 3.2% and 2.6% WoW. PET and PTA prices were stable WoW. Lower PX price will continue to benefit PET/PTA producers in 2014F but the magnitude of the benefit is uncertain.

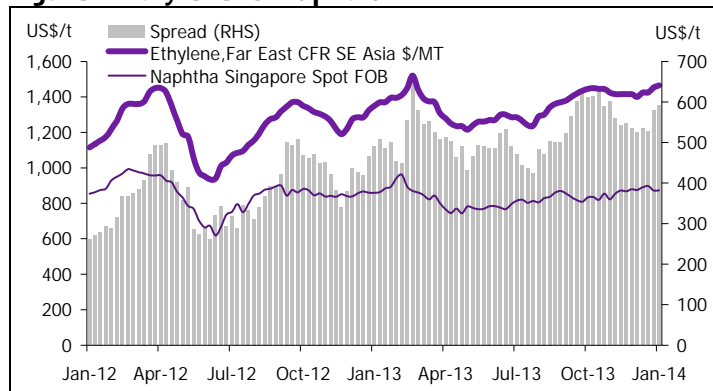
Investment view: IVL share price recovered 9.2% WoW, outperforming the sector (+3.1% WoW) but remained 3.5% below 52-week average. This reflected improving product spread, in our view. Nonetheless, we still prefer PTTGC after a sell-off and on its stronger operating performance QoQ in 4Q13F. The company should also be a net beneficiary of the weaker baht despite some US\$-denominated debts.

Figure 1: Petrochemical price update

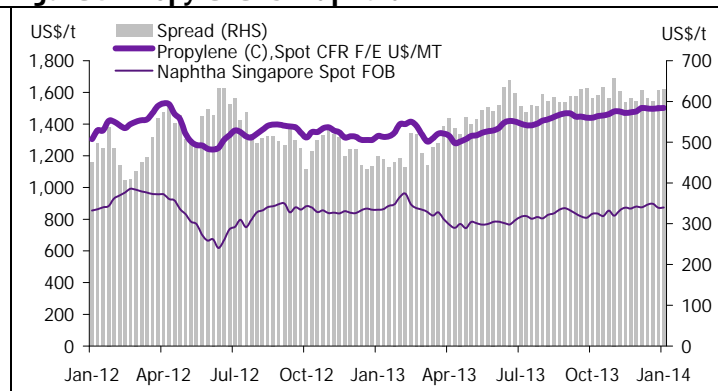
	Current 10-Jan-14	52-week High/Low	-1W	-1M	-3M	-6M	-12M	1Q14 QTD	4Q13	QoQ%	YTD	Chg.	%YoY	2014F projection
Price														
Naphtha Singapore Spot FOB	874	962/744	0.1%	-0.2%	4.8%	7.2%	1.6%	873	855	2.1%	873	14	1.6%	822
Ethylene, Far East CFR SE Asia \$/MT	1,465	1,520/1,215	0.9%	4.6%	1.4%	14.0%	8.5%	1,459	1,427	2.2%	1,459	121	9.1%	1,320
Propylene (C), Spot CFR F/E US/MT	1,503	1,503/1,280	0.2%	0.0%	4.3%	7.1%	13.4%	1,501	1,472	2.0%	1,501	189	14.4%	1,370
Polye HDPE Inj, South East Asia US/MT	1,535	1,540/1,425	0.0%	0.3%	1.0%	6.2%	7.0%	1,535	1,530	0.4%	1,535	123	8.7%	1,440
Polye LDPE-Film, Spot S.E Asia US/MT	1,680	1,680/1,395	0.0%	0.6%	0.9%	14.3%	20.0%	1,680	1,664	0.9%	1,680	295	21.3%	1,490
Polye LLDPE Film, F/E Spot SE Asia \$/MT	1,570	1,570/1,410	0.0%	1.3%	2.6%	8.3%	9.0%	1,570	1,546	1.6%	1,570	139	9.7%	1,480
PP Film, Spot South East Asia US/MT	1,560	1,580/1,440	0.3%	1.3%	1.6%	4.7%	4.0%	1,558	1,539	1.2%	1,558	70	4.7%	1,490
Related stocks														
PTTGC (Neutral) IRPC (-) SCC (-) TPIPL (-)														
Para-Xylene CFR Chin M. Por Spot \$/MT	1,378	1,721/1,378	-3.2%	-4.4%	-7.1%	-4.8%	-17.5%	1,400	1,432	-2.3%	1,400	-279	-16.6%	1,390
Benzene, Far East CFR Spot F/E US/MT	1,345	1,443/1,218	-0.6%	0.7%	3.3%	7.8%	-4.1%	1,349	1,298	3.9%	1,349	-105	-7.2%	1,220
Related stocks														
PTTGC (-) TOP (-) ESSO (-)														
MEG, Far East Spot CFR F/E US/MT	1,002	1,189/944	-2.6%	-5.6%	-5.4%	-0.4%	-16.2%	1,015	1,043	-2.7%	1,015	-187	-15.6%	1,040
PTA CFR South East Asia	985	1,200/985	-2.0%	-2.5%	-6.6%	-7.5%	-17.2%	995	1,009	-1.4%	995	-193	-16.2%	1,050
PET (Fibre Grade)A/P Spot CFR NEA \$/MT	1,313	1,540/1,290	0.2%	1.0%	-6.3%	-2.4%	-14.2%	1,311	1,330	-1.4%	1,311	-214	-14.0%	n.a.
Related stocks														
PTTGC (-) IVL (+)														
ABS Asia Pac. India Spot CFR US/MT	1,895	2,060/1,870	0.0%	0.0%	-2.8%	-2.3%	-6.9%	1,895	1,904	-0.5%	1,895	-140	-6.9%	n.a.
Polystyrene-GP, Spot Hong Kong US/MT	1,815	1,915/1,765	0.8%	0.8%	-4.2%	-1.1%	-2.7%	1,808	1,817	-0.5%	1,808	-50	-2.7%	n.a.
Related stocks														
IRPC (+)														
PVC, Spot South East Asia US/MT	1,035	1,083/950	2.5%	3.5%	0.0%	2.5%	1.0%	1,023	1,003	2.0%	1,023	10	1.0%	1,030
Related stocks														
VNT (+) TPC (+)														
Product spread														
Ethylene - naphtha	591	650/424	2.0%	12.7%	-3.2%	25.9%	20.6%	586	572	2.3%	586	108	22.5%	498
Propylene - naphtha	629	658/438	0.3%	0.2%	3.7%	7.1%	35.1%	628	617	1.8%	628	175	38.7%	548
HDPE - naphtha	661	713/533	-0.1%	1.0%	-3.6%	5.0%	15.0%	662	675	-1.9%	662	109	19.7%	618
LDPE - naphtha	806	851/511	-0.1%	1.5%	-3.0%	23.1%	49.2%	807	809	-0.3%	807	281	53.6%	668
LDPE - Ethylene	215	323/25	-5.5%	-20.4%	-2.3%	16.2%	330.0%	221	237	-6.6%	221	174	365.8%	170
LLDPE - naphtha	696	730/528	-0.1%	3.2%	0.0%	9.7%	20.0%	697	691	0.9%	697	125	21.9%	658
PP - naphtha	686	736/598	0.6%	3.2%	-2.1%	1.7%	7.2%	684	684	0.0%	684	56	9.0%	668
PX - naphtha	504	817/504	-8.3%	-10.9%	-22.4%	-20.2%	-37.8%	527	577	-8.8%	527	-292	-35.7%	568
BZ - naphtha	471	594/396	-1.8%	2.5%	0.6%	9.0%	-13.2%	476	443	7.3%	476	-119	-20.0%	398
MEG - Ethylene	93	324/93	-26.9%	-51.7%	-42.9%	-55.5%	-73.9%	110	158	-30.0%	110	-262	-70.4%	222
PTA - PX	90	155/62	11.5%	21.6%	-1.2%	-28.2%	-14.2%	85	78	9.2%	85	-11	-11.7%	119
PET spread	194	273/128	16.5%	37.5%	-6.2%	19.4%	5.4%	180	179	0.8%	180	2	1.0%	n.a.
Integrated PET/PTA spread	283	391/211	14.8%	32.1%	-4.7%	-1.3%	-1.7%	265	256	3.3%	265	-9	-3.4%	n.a.
ABS spread	1,094	1,272/1,040	-2.6%	-4.7%	-10.1%	-11.1%	-8.3%	1,109	1,169	-5.2%	1,109	-66	-5.6%	n.a.
PS spread	328	565/305	5.6%	-3.5%	-26.7%	-31.3%	-10.4%	319	378	-15.6%	319	-2	-0.7%	n.a.
PVC - ethylene	303	398/258	6.6%	0.8%	-3.2%	-17.7%	-13.6%	293	289	1.4%	293	-51	-14.7%	370

Source: Datastream, SCBS Investment Research

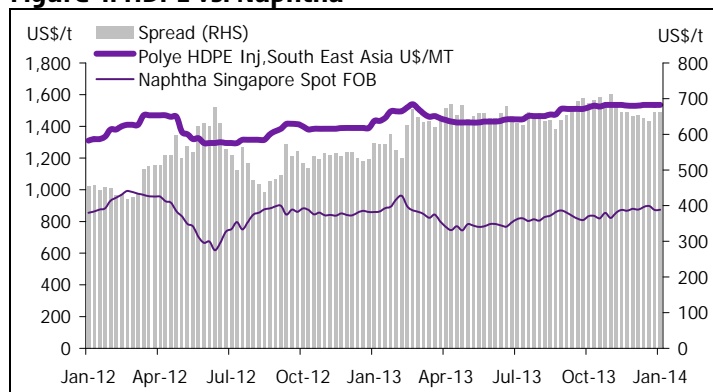
Note: Impact to related stocks is based on WoW performance

Figure 2: Ethylene vs. Naphtha

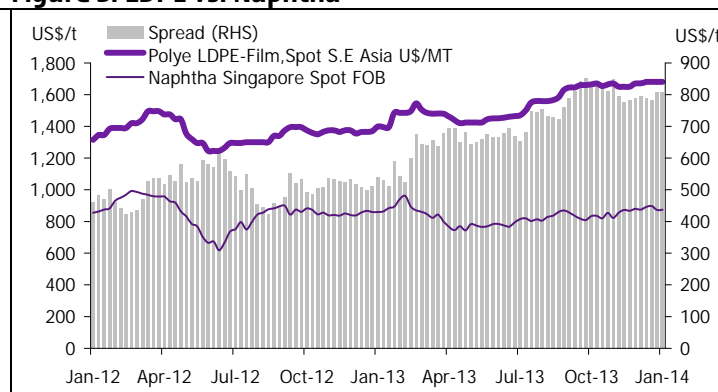
Source: Datastream, SCBS Investment Research

Figure 3: Propylene vs. Naphtha

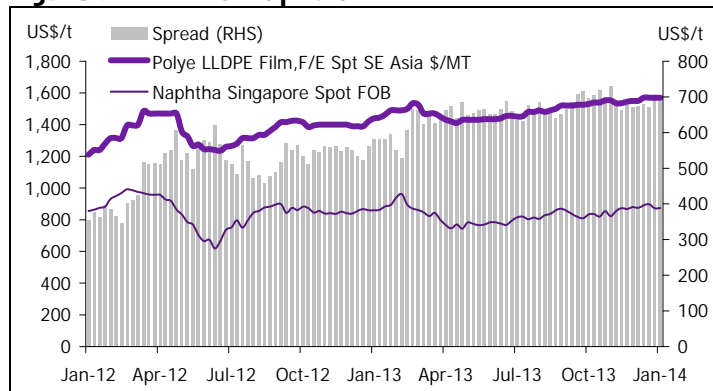
Source: Datastream, SCBS Investment Research

Figure 4: HDPE vs. Naphtha

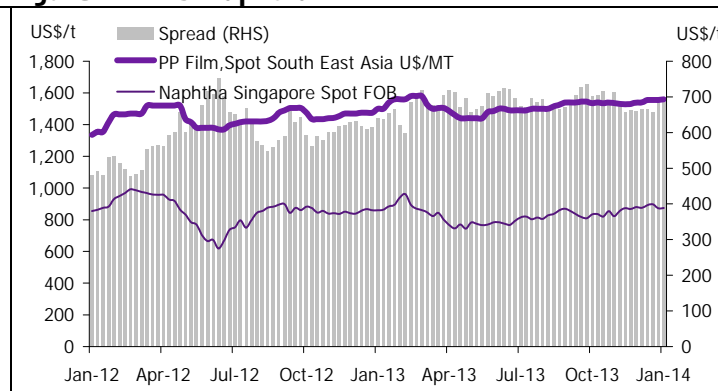
Source: Datastream, SCBS Investment Research

Figure 5: LDPE vs. Naphtha

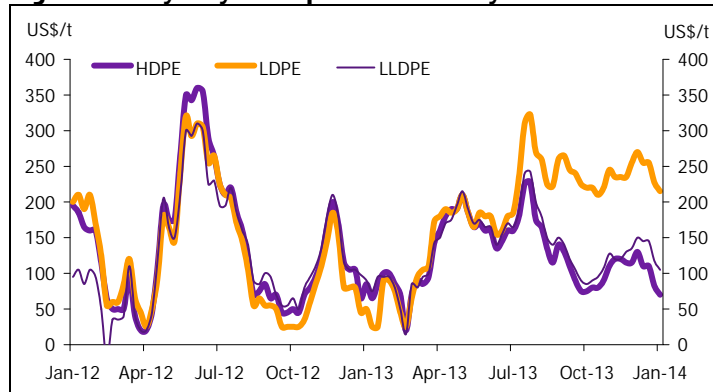
Source: Datastream, SCBS Investment Research

Figure 6: LLDPE vs. Naphtha

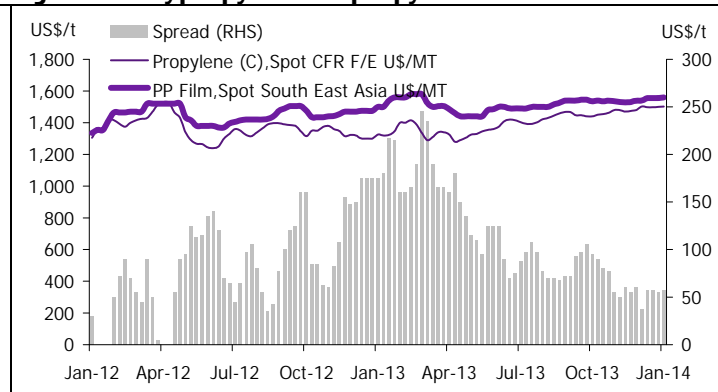
Source: Datastream, SCBS Investment Research

Figure 7: PP vs. Naphtha

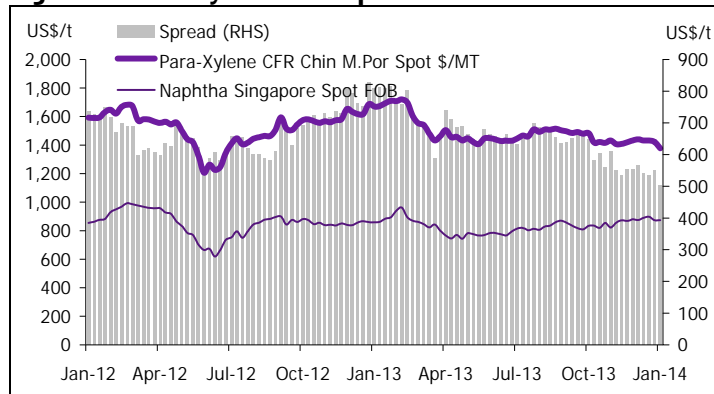
Source: Datastream, SCBS Investment Research

Figure 8: Polyethylene spread over ethylene

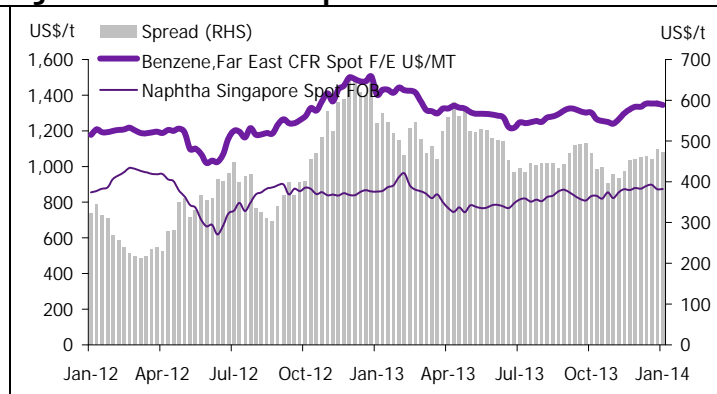
Source: Datastream, SCBS Investment Research

Figure 9: Polypropylene vs. propylene

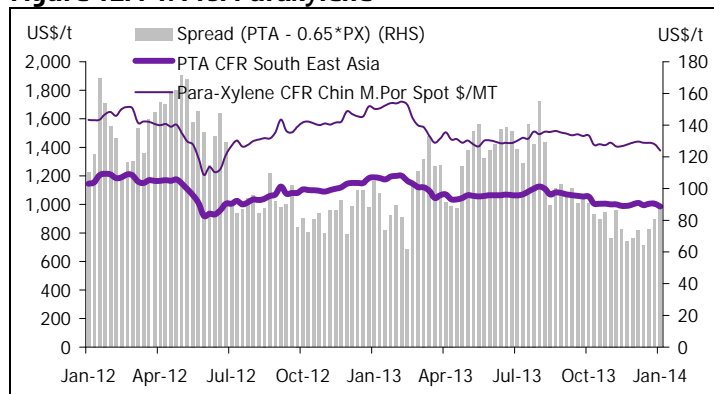
Source: Datastream, SCBS Investment Research

Figure 10: Paraxylene vs. Naphtha

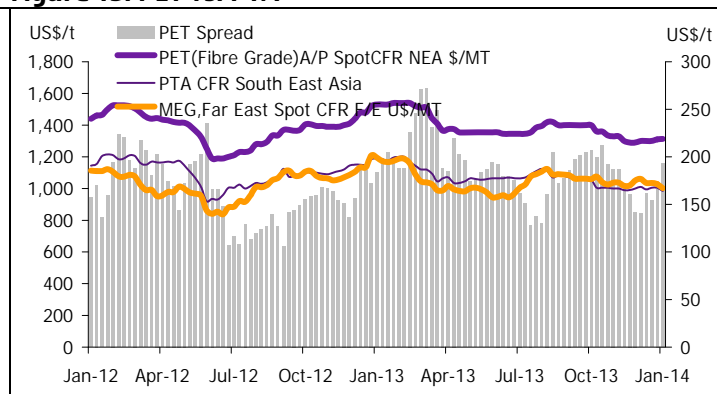
Source: Datastream, SCBS Investment Research

Figure 11: Benzene vs. Naphtha

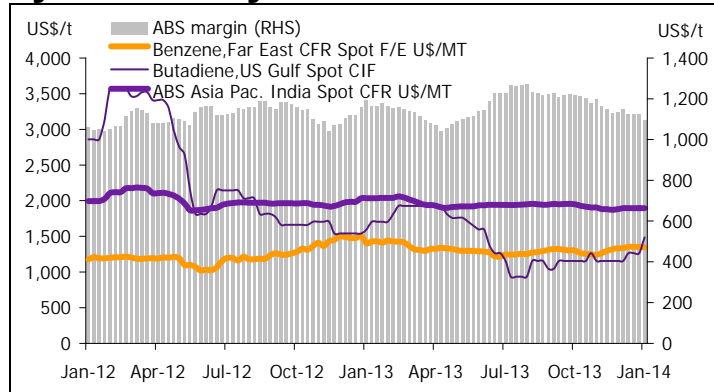
Source: Datastream, SCBS Investment Research

Figure 12: PTA vs. Paraxylene

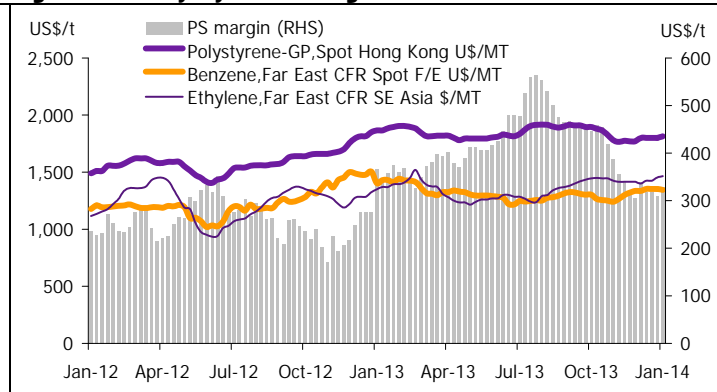
Source: Datastream, SCBS Investment Research

Figure 13: PET vs. PTA

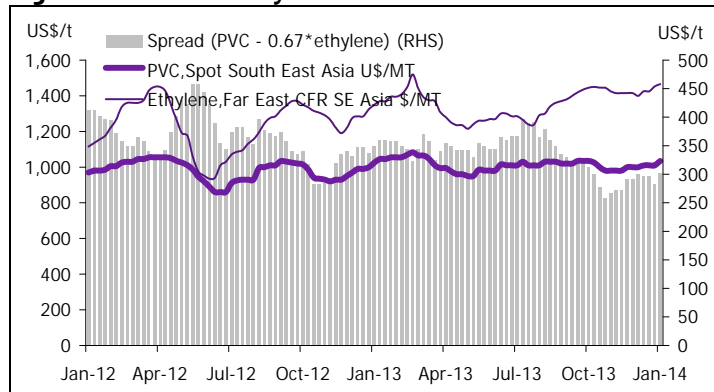
Source: Datastream, SCBS Investment Research

Figure 14: ABS margin

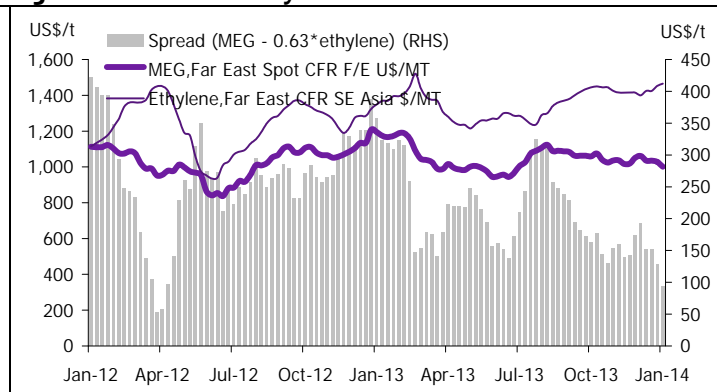
Source: Datastream, SCBS Investment Research

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	1,459	1,427	2%	1,459	1,357	1,320	↗
			Propylene (C), Spot CFR F/E US/MT	1,501	1,472	2%	1,501	1,405	1,370	↗
	HDPE	19%	Polye HDPE Inj, South East Asia US/MT	1,535	1,530	0%	1,535	1,483	1,440	↗
	LLDPE	7%	Polye LLDPE Film, F/E Spt SE Asia \$/MT	1,570	1,546	2%	1,570	1,492	1,480	↗
	LDPE	4%	Polye LDPE-Film, Spot S.E Asia US/MT	1,680	1,664	1%	1,680	1,546	1,490	↗
	MEG	6%	MEG, Far East Spot CFR F/E US/MT	1,015	1,043	-3%	1,015	1,047	1,040	↘
	PX	28%	PX - naphtha	527	577	-9%	527	654	568	↘
IRPC	BZ	15%	BZ - naphtha	476	443	7%	476	481	398	↗
	Ethylene/Propylene	15%	Ethylene - naphtha	586	572	2%	586	524	498	↗
			Propylene - naphtha	628	617	2%	628	572	548	↗
	HDPE	12%	HDPE - naphtha	662	675	-2%	662	650	618	↗
	PP	28%	PP - naphtha	684	684	0%	684	684	668	↗
	ABS	7%	ABS spread	1,109	1,169	-5%	1,109	1,164	n.a.	↘
	BTX	23%	BZ - naphtha	476	443	7%	476	481	398	↗
SCC	PS	12%	PS spread	319	378	-16%	319	411	n.a.	↘
	HDPE	40%	HDPE - naphtha	662	675	-2%	662	650	618	↗
	LDPE	3%	LDPE - naphtha	807	809	0%	807	713	668	↗
	LLDPE	3%	LLDPE - naphtha	697	691	1%	697	659	658	↗
	PP	25%	PP - naphtha	684	684	0%	684	684	668	↗
	PVC	28%	PVC - Ethylene/EDC	496	521	-5%	496	484	n.a.	↗
TPIPL	LDPE	60%	LDPE - Ethylene	221	237	-7%	221	189	170	↘
TOP	PX	60%	PX - naphtha	527	577	-9%	527	654	568	↘
	BZ	21%	BZ - naphtha	476	443	7%	476	481	398	↗
IVL	PTA	25%	PTA - PX	85	78	9%	85	102	119	↗
	PET/Polyester	67%	PET spread	180	179	1%	180	188	n.a.	↗
	MEG - NA	8%								·
VNT	PVC	63%	PVC - ethylene	293	289	1%	293	335	370	↗
TPC	PVC	100%	PVC - Ethylene/EDC	496	521	-5%	496	484	n.a.	↗

Source: Datastream, SCBS Investment Research

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