

Petrochemical price monitor

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- **High ethylene price still hurting non-integrated producers.** Ethylene price marched up another 1.4% WoW to a 6-week high of US\$1,455/t on higher naphtha price (+0.2% WoW) and tighter regional supply. For downstream, only HDPE price moved in the same direction (+0.7% WoW). According to an industry source, despite the tight availability of ethylene in Asia, demand for downstream PE remains dull. This hurt margin for non-integrated producers like TPIPL, cutting product spread: LDPE-ethylene spread narrowed by 11.4% WoW to a 9-month low of US\$155/t. MEG-ethylene spread fell more sharply by 95.2% WoW to only US\$2/t. This could be negative for PTTGC's MEG business in the short term (~6% of total revenue) as it slashed the economics of upgrading its ethylene to MEG.
- **PX price continued to find bottom.** PX price slid 3.5% WoW and 14.3% YTD to US\$1,228/t, last seen in mid-2012, reflecting low demand from PTA producers; PTA-PX spread rose 24.8% WoW to US\$122/t, still below cash cost of US\$150/t.
- **PET/PTA margin healthier on lower feedstock cost.** Lower PX and MEG cost sent integrated PET/PTA spread up 9.6% WoW to a 12-month high of US\$348/t. PTA and PET also declined 0.5% and 0.8% WoW to reflect slow demand and lower feedstock cost. In the downstream polyester markets, demand remained sluggish keeping buying interest for feedstock PX and PTA low.

Investment view: The petrochemical sector index (+1.7% WoW) was driven by improved sentiment in the overall market (+2.9% WoW). It appears to us that weaker product spread is being ignored in the short term. Nonetheless, we still expect the olefins chain to outperform others in 2014F due to more balanced demand/supply. Our top pick remains PTTGC on its improving earnings outlook and undemanding valuation at 2014 PE of only 8x, vs. 16x for its regional peers, plus dividend yield of >5%.

Figure 1: Petrochemical price update

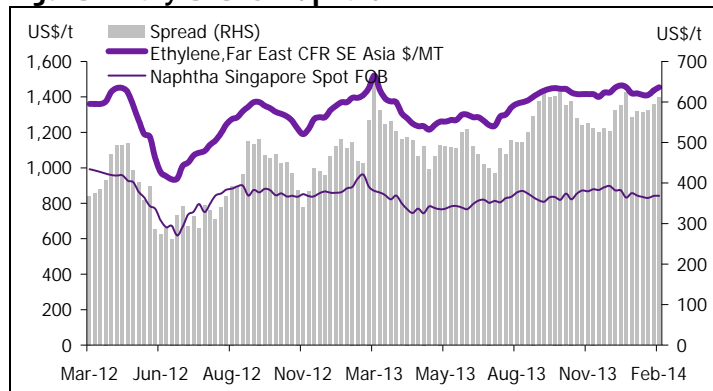
	Current 28-Feb-14	52-week High/Low	-1W	-1M	-3M	-6M	-12M	1Q14 QTD	4Q13	QoQ%	YTD	Chg.	%YoY	2014F projection
Price														
Naphtha Singapore Spot FOB	843	897/744	0.2%	-0.1%	-2.8%	-2.0%	-3.1%	848	855	-0.8%	848	-44	-4.9%	822
Ethylene, Far East CFR SE Asia \$/MT	1,455	1,465/1,215	1.4%	2.5%	2.8%	7.0%	-4.3%	1,436	1,427	0.6%	1,436	38	2.7%	1,320
Propylene (C), Spot CFR F/E US/MT	1,445	1,503/1,280	-1.2%	-2.2%	-2.0%	-0.9%	4.0%	1,479	1,472	0.5%	1,479	122	9.0%	1,370
Polye HDPE Inj, South East Asia US/MT	1,540	1,570/1,425	0.7%	-1.9%	0.7%	4.4%	0.0%	1,551	1,530	1.4%	1,551	78	5.3%	1,440
Polye LDPE-Film, Spot S.E Asia US/MT	1,610	1,680/1,420	0.0%	-3.6%	-2.4%	1.7%	4.2%	1,658	1,664	-0.4%	1,658	207	14.3%	1,490
Polye LLDPE Film, F/E Spot SE Asia \$/MT	1,530	1,585/1,410	0.0%	-3.5%	-1.0%	2.0%	-0.3%	1,566	1,546	1.3%	1,566	91	6.2%	1,480
PP Film, Spot South East Asia US/MT	1,560	1,580/1,440	0.0%	-0.6%	2.0%	2.3%	-1.3%	1,565	1,539	1.7%	1,565	26	1.7%	1,490
Related stocks														
PTTGC (+) IRPC (-) SCC (-) TPIPL (-)														
Para-Xylene CFR Chin M. Por Spot \$/MT	1,228	1,553/1,228	-3.5%	-7.9%	-13.6%	-19.0%	-23.4%	1,324	1,432	-7.5%	1,324	-361	-21.4%	1,390
Benzene, Far East CFR Spot F/E US/MT	1,275	1,368/1,218	-1.9%	-5.7%	-3.4%	-1.4%	-9.9%	1,334	1,298	2.8%	1,334	-98	-6.9%	1,220
Related stocks														
PTTGC (-) TOP (-) ESSO (-)														
MEG, Far East Spot CFR F/E US/MT	905	1,124/905	-3.7%	-10.3%	-11.3%	-17.1%	-17.0%	985	1,043	-5.5%	985	-186	-15.9%	1,040
PTA CFR South East Asia	920	1,125/920	-0.5%	-4.2%	-7.1%	-15.2%	-19.7%	958	1,009	-5.0%	958	-224	-18.9%	1,050
PET(Fibre Grade)/P Spot CFR NEA \$/MT	1,260	1,510/1,260	-0.8%	-1.6%	-2.3%	-10.0%	-17.1%	1,284	1,330	-3.5%	1,284	-249	-16.2%	n.a.
Related stocks														
PTTGC (-) IVL (+)														
ABS Asia Pac. India Spot CFR US/MT	1,890	2,015/1,870	-0.3%	0.3%	1.1%	-2.8%	-7.6%	1,890	1,904	-0.7%	1,890	-151	-7.4%	n.a.
Polystyrene-GP, Spot Hong Kong US/MT	1,755	1,915/1,755	-0.8%	-2.8%	-0.8%	-7.1%	-6.9%	1,793	1,817	-1.3%	1,793	-90	-4.8%	n.a.
Related stocks														
IRPC (-)														
PVC, Spot South East Asia US/MT	1,055	1,070/950	-1.4%	1.9%	5.5%	2.4%	-2.5%	1,038	1,003	3.5%	1,038	-10	-1.0%	1,030
Related stocks														
VNT (-) TPC (-)														
Product spread														
Ethylene - naphtha	612	626/424	3.1%	6.2%	11.8%	22.4%	-5.9%	588	572	2.7%	588	82	16.1%	498
Propylene - naphtha	602	665/444	-3.0%	-5.0%	-0.9%	0.7%	15.7%	631	617	2.4%	631	166	35.6%	548
HDPE - naphtha	697	735/615	1.2%	-4.0%	5.2%	13.3%	4.0%	703	675	4.2%	703	122	20.9%	618
LDPE - naphtha	767	851/637	-0.2%	-7.2%	-2.0%	6.1%	13.6%	810	809	0.1%	810	251	45.0%	668
LDPE - Ethylene	155	323/65	-11.4%	-38.0%	-34.0%	-30.3%	520.0%	222	237	-6.3%	222	170	325.0%	170
LLDPE - naphtha	687	750/624	-0.2%	-7.3%	1.4%	7.3%	3.3%	718	691	4.0%	718	135	23.1%	658
PP - naphtha	717	740/657	-0.2%	-1.3%	8.3%	7.8%	1.0%	717	684	4.8%	717	70	10.7%	668
PX - naphtha	384	739/384	-10.8%	-21.3%	-30.4%	-41.3%	-47.5%	476	577	-17.5%	476	-317	-39.9%	568
BZ - naphtha	432	594/396	-5.8%	-15.1%	-4.5%	-0.2%	-20.8%	486	443	9.7%	486	-54	-10.0%	398
MEG - Ethylene	2	324/2	-95.2%	-98.1%	-98.3%	-99.0%	-98.4%	95	158	-40.1%	95	-210	-68.9%	222
PTA - PX	122	155/65	24.8%	30.1%	82.3%	21.8%	18.1%	98	78	25.3%	98	11	12.2%	119
PET spread	226	273/128	2.8%	26.6%	40.3%	31.4%	-8.0%	191	179	7.2%	191	-9	-4.4%	n.a.
Integrated PET/PTA spread	348	391/211	9.6%	27.8%	52.6%	27.9%	-0.2%	289	256	12.7%	289	2	0.7%	n.a.
ABS spread	1,086	1,272/1,040	0.5%	0.8%	-3.8%	-10.7%	-5.4%	1,084	1,169	-7.3%	1,084	-81	-6.9%	n.a.
PS spread	326	565/303	-0.3%	0.3%	2.8%	-31.3%	-0.2%	323	378	-14.4%	323	-23	-6.7%	n.a.
PVC - ethylene	328	398/258	-7.1%	0.8%	12.0%	-6.4%	1.6%	320	289	10.7%	320	-29	-8.3%	370

Source: Datastream, SCBS Investment Research

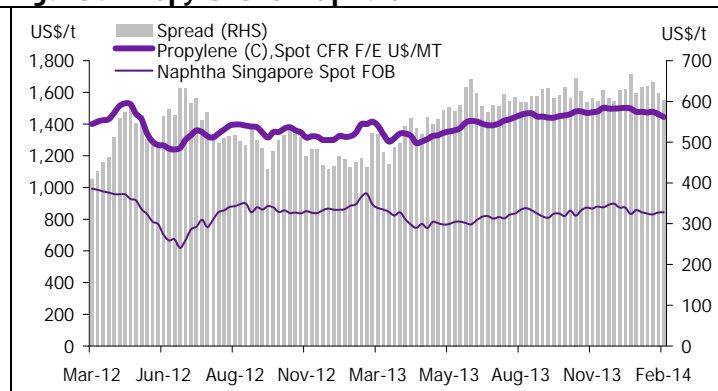
Note: Impact to related stocks is based on WoW performance

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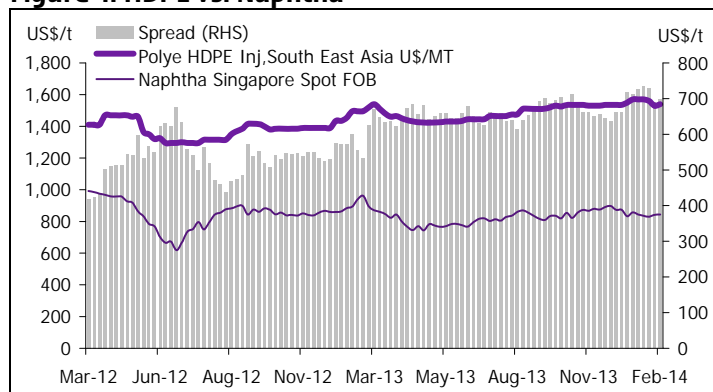
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Figure 2: Ethylene vs. Naphtha

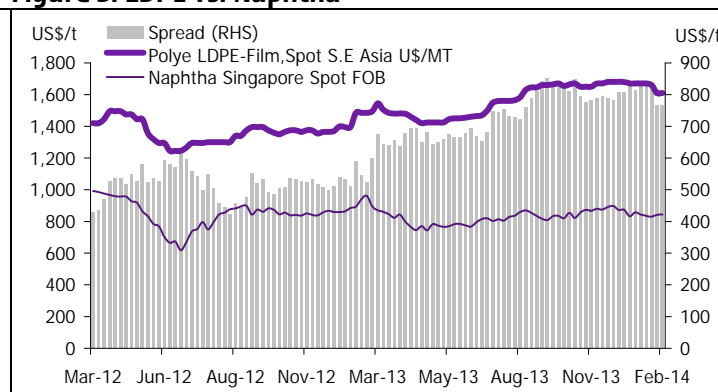
Source: Datastream, SCBS Investment Research

Figure 3: Propylene vs. Naphtha

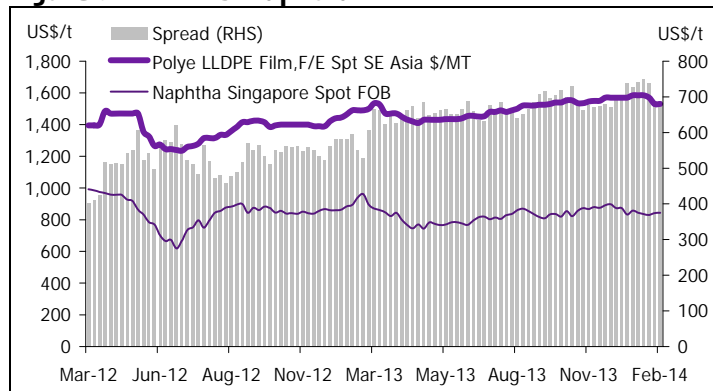
Source: Datastream, SCBS Investment Research

Figure 4: HDPE vs. Naphtha

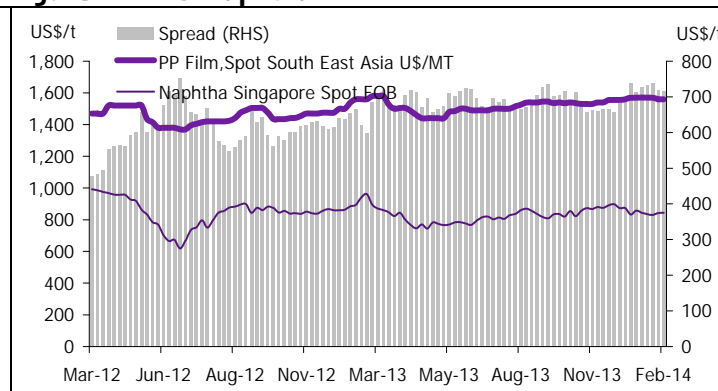
Source: Datastream, SCBS Investment Research

Figure 5: LDPE vs. Naphtha

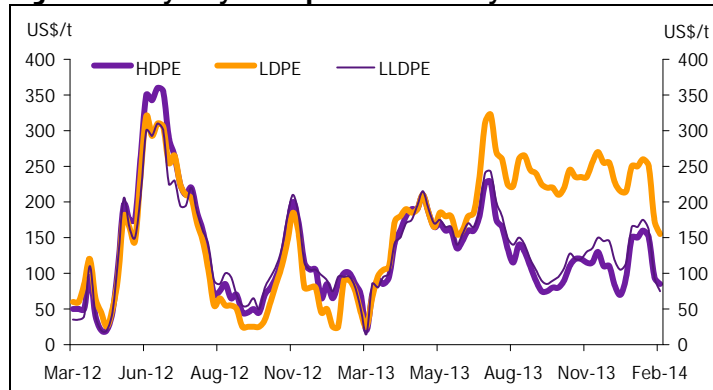
Source: Datastream, SCBS Investment Research

Figure 6: LLDPE vs. Naphtha

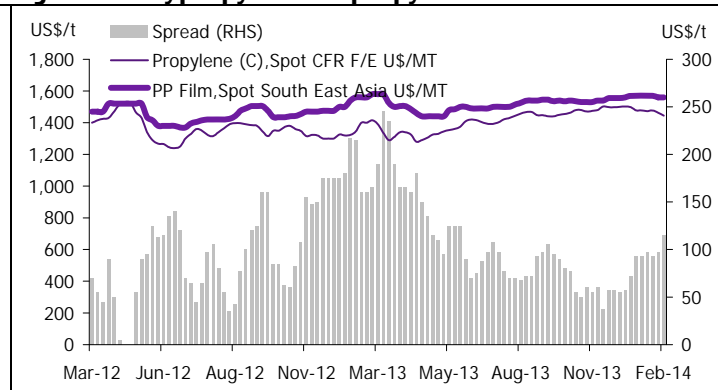
Source: Datastream, SCBS Investment Research

Figure 7: PP vs. Naphtha

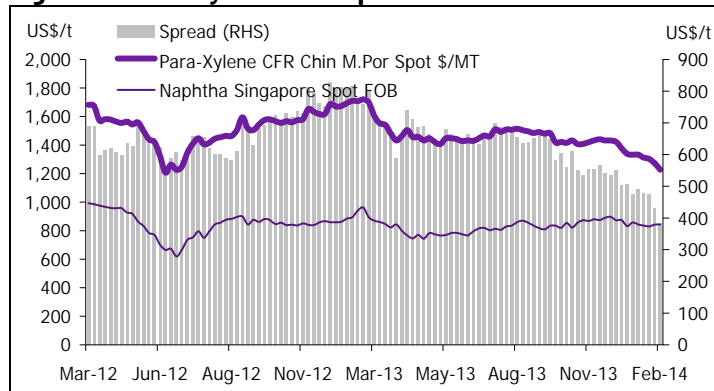
Source: Datastream, SCBS Investment Research

Figure 8: Polyethylene spread over ethylene

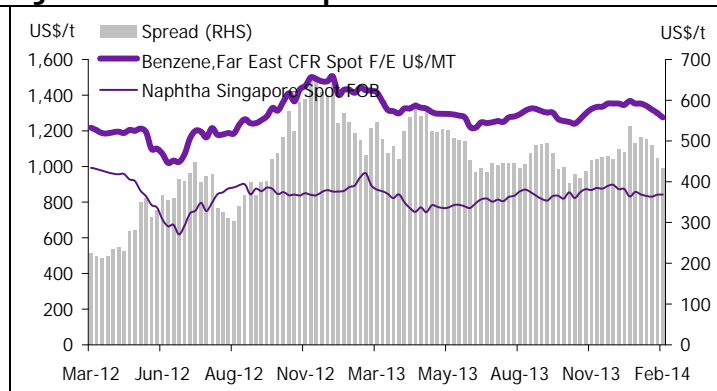
Source: Datastream, SCBS Investment Research

Figure 9: Polypropylene vs. propylene

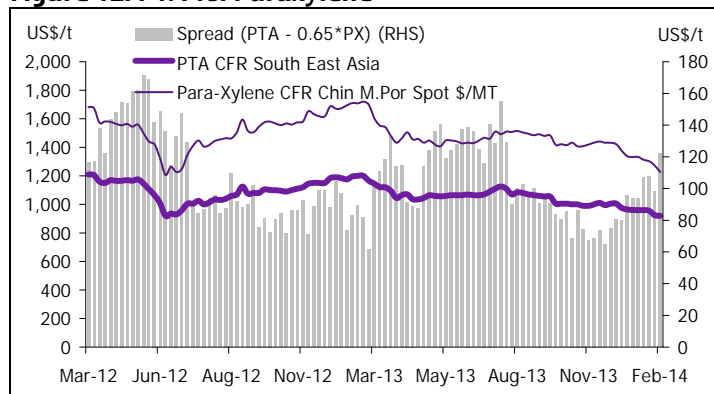
Source: Datastream, SCBS Investment Research

Figure 10: Paraxylene vs. Naphtha

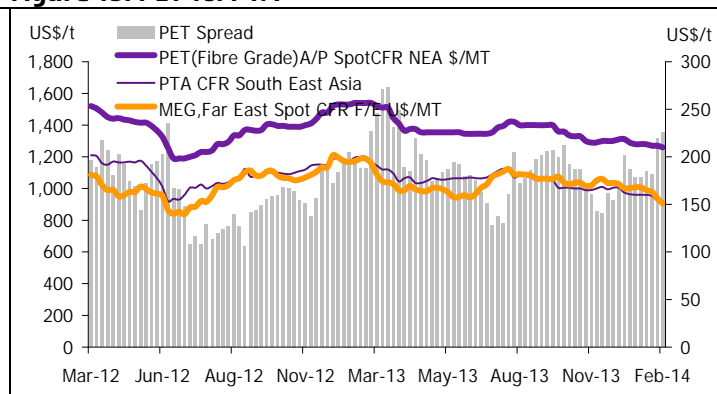
Source: Datastream, SCBS Investment Research

Figure 11: Benzene vs. Naphtha

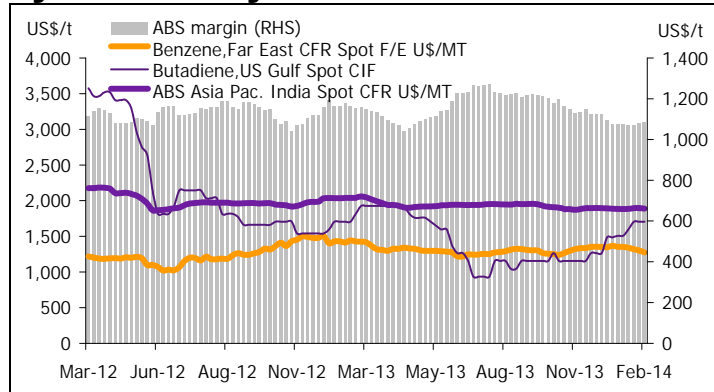
Source: Datastream, SCBS Investment Research

Figure 12: PTA vs. Paraxylene

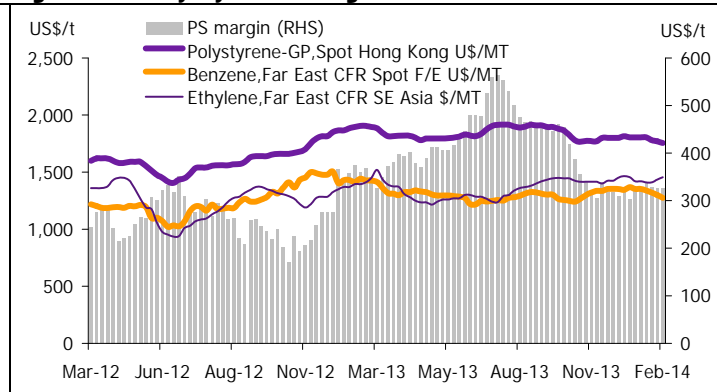
Source: Datastream, SCBS Investment Research

Figure 13: PET vs. PTA

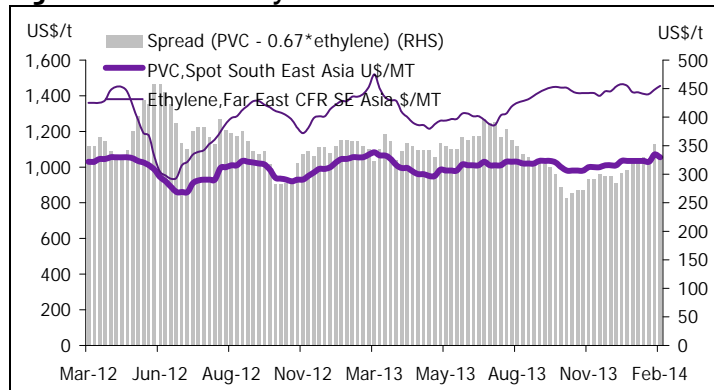
Source: Datastream, SCBS Investment Research

Figure 14: ABS margin

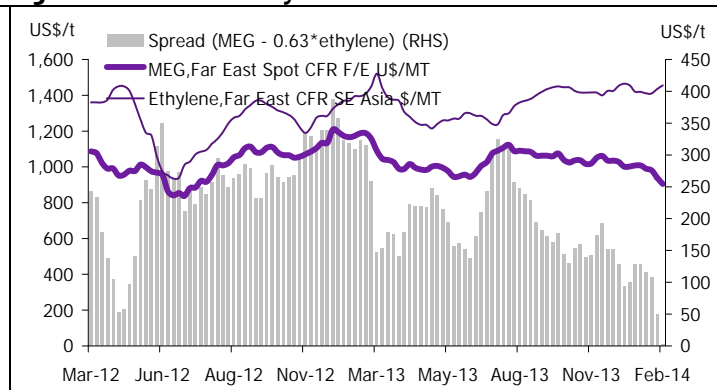
Source: Datastream, SCBS Investment Research

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	1,436	1,427	1%	1,436	1,359	1,320	↗
			Propylene (C), Spot CFR F/E US/MT	1,479	1,472	1%	1,479	1,419	1,370	↘
	HDPE	19%	Polye HDPE Inj, South East Asia US/MT	1,551	1,530	1%	1,551	1,492	1,440	↗
	LLDPE	7%	Polye LLDPE Film, F/E Spt SE Asia \$/MT	1,566	1,546	1%	1,566	1,502	1,480	↘
	LDPE	4%	Polye LDPE-Film, Spot S.E Asia US/MT	1,658	1,664	0%	1,658	1,570	1,490	↘
	MEG	6%	MEG, Far East Spot CFR F/E US/MT	985	1,043	-6%	985	1,022	1,040	↘
	PX	28%	PX - naphtha	476	577	-17%	476	610	568	↘
IRPC	BZ	15%	BZ - naphtha	486	443	10%	486	476	398	↘
	Ethylene/Propylene	15%	Ethylene - naphtha	588	572	3%	588	534	498	↗
			Propylene - naphtha	631	617	2%	631	594	548	↘
	HDPE	12%	HDPE - naphtha	703	675	4%	703	667	618	↗
	PP	28%	PP - naphtha	717	684	5%	717	694	668	↗
	ABS	7%	ABS spread	1,084	1,169	-7%	1,084	1,153	n.a.	↗
	BTX	23%	BZ - naphtha	486	443	10%	486	476	398	↘
SCC	PS	12%	PS spread	323	378	-14%	323	407	n.a.	↗
	HDPE	40%	HDPE - naphtha	703	675	4%	703	667	618	↗
	LDPE	3%	LDPE - naphtha	810	809	0%	810	745	668	↘
	LLDPE	3%	LLDPE - naphtha	718	691	4%	718	677	658	↗
	PP	25%	PP - naphtha	717	684	5%	717	694	668	↗
	PVC	28%	PVC - Ethylene/EDC	440	521	-16%	440	466	n.a.	↘
TPIPL	LDPE	60%	LDPE - Ethylene	222	237	-6%	222	212	170	↘
TOP	PX	60%	PX - naphtha	476	577	-17%	476	610	568	↘
	BZ	21%	BZ - naphtha	486	443	10%	486	476	398	↘
IVL	PTA	25%	PTA - PX	98	78	25%	98	104	119	↗
	PET/Polyester	67%	PET spread	191	179	7%	191	187	n.a.	↗
	MEG	8%								
VNT	PVC	63%	PVC - ethylene	320	289	11%	320	331	370	↘
TPC	PVC	100%	PVC - Ethylene/EDC	440	521	-16%	440	466	n.a.	↘

Source: Datastream, SCBS Investment Research

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