

1. News Summary (3 page)

2016년 5월 30일

News	Conclusion
WTI comment	달러강세에 유가 소폭하락
Headline	[주간가격] 부타디엔 전주 대비 -\$130/t 급락
News 1.	[주간가격] polyester 계열 하락세 지속
News 2.	[주간가격] 에틸렌/프로필렌 동반 가격하락
News 3.	SABIC / MEGlobal / Shell, 아시아 6월 MEG CP 일제히 하향 조정
News 4.	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	49.3	(0.3)	3.3	8.8	50.5	(14.5)
Dubai	\$/bbl	45.3	(0.9)	(0.7)	6.4	48.9	(25.3)
Gasoline	\$/bbl	60.2	(1.6)	(1.1)	2.4	26.5	(26.3)
Diesel	\$/bbl	56.4	(1.7)	(0.4)	5.6	40.4	(26.0)
Complex margin	\$/bbl	5.8	(0.5)	(0.2)	(0.8)	(1.7)	(5.0)
1M lagging	\$/bbl	8.5	(2.7)	(4.1)	(4.3)	(3.3)	(1.3)
Petrochemical			%	%	%	%	%
Naphtha	\$/t	418	(2.2)	(1.5)	(0.5)	28.9	(26.1)
Butadiene	\$/t	945	(10.0)	(12.1)	(10.0)	5.0	(14.1)
HDPE	\$/t	1,100	0.0	(1.8)	(2.2)	(1.3)	(18.8)
MEG	\$/t	602	0.0	(2.7)	(7.4)	(8.1)	(34.4)
PX	\$/t	765	(0.1)	(1.3)	(4.5)	5.8	(14.7)
SM	\$/t	950	(1.1)	(4.4)	(9.2)	(4.6)	(25.2)
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	2.17	0.8	(1.7)	(6.6)	7.0	(28.4)
Natural rubber	\$/t	1,240	0.8	(1.6)	(15.6)	10.7	(21.5)
Cotton	C/lbs	64.3	(0.1)	4.2	0.8	12.1	(1.8)

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	05/23	\$/t	1,130	0.4	0.4	19.6	(19.6)
Propylene	05/23	\$/t	695	0.0	(6.4)	7.8	(22.3)
Benzene	05/23	\$/t	640	(2.7)	(0.4)	15.3	(12.3)
Toluene	05/23	\$/t	650	0.0	(1.5)	11.1	(19.3)
Xylene	05/23	\$/t	645	0.0	(1.9)	11.2	(19.4)
PP	05/23	\$/t	965	(3.0)	(6.8)	13.5	(29.3)
PVC	05/23	\$/t	825	(0.6)	0.6	13.8	(5.7)
ABS	05/23	\$/t	1,270	(1.2)	(5.6)	11.4	(23.7)
SBR	05/23	\$/t	1,510	(2.3)	4.1	24.8	0.7
SM	05/23	\$/t	1,045	(0.2)	(4.1)	5.0	(26.4)
BPA	05/23	\$/t	1,313	6.9	5.2	6.9	(25.0)
Caustic	05/23	\$/t	293	(0.8)	0.9	1.7	(2.5)
2-EH	05/23	\$/t	810	0.0	(1.2)	17.4	(24.7)
Caprolactam	05/23	\$/t	1,340	0.0	1.5	20.7	(26.0)
Solar				%	%	%	%
Polysilicon	05/25	\$/kg	17.1	(0.1)	6.0	27.9	8.1
Module	05/25	\$/W	0.51	(0.6)	(2.1)	(6.7)	(7.4)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	90.0	0.2	0.3	1.8	10.1	5.8
Shell	EUR	1,675	(0.4)	(0.3)	(7.5)	2.0	(14.4)
Petrochina	CNY	7.20	(0.3)	(0.1)	(4.4)	(0.8)	(46.1)
Gazprom	RUB	149.9	0.7	2.2	(6.9)	8.1	1.5
Petrobras	BRL	8.2	(5.1)	(7.5)	(19.7)	69.0	(34.4)
Refinery							
Phillips66	USD	80.6	0.7	3.5	(9.4)	1.9	1.8
Valero	USD	54.6	0.9	(2.8)	(12.3)	(8.5)	(7.7)
JX	JPY	432.9	0.7	2.5	(10.0)	(4.5)	(21.8)
Neste Oil	EUR	30.0	0.2	4.0	12.0	2.4	29.7

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	69.8	0.1	4.0	(3.4)	14.6	(19.6)
Dow Chemical	USD	52.2	0.4	1.6	(2.6)	7.1	1.9
SABIC	SAR	82.4	0.0	(0.8)	(2.8)	15.4	(20.6)
Formosa Pla.	TWD	78.4	0.4	2.8	(4.0)	(0.8)	3.8
Shin-Etsu	JPY	6,293	(0.3)	(0.7)	(3.5)	5.8	(16.7)
Renewable							
Wacker	EUR	83.9	0.9	(1.3)	4.9	14.4	(17.9)
Yingli	USD	3.71	2.5	2.2	(25.8)	(13.6)	(63.6)
Tesla	USD	223.0	(0.9)	1.3	(11.3)	17.2	(9.9)
BYD	CNY	57.8	(1.7)	(2.2)	(7.3)	10.4	(24.0)

4. Coverage Summary

	05/27	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	1,969	0.6	1.1	(2.3)	2.6	(3.0)	(6.6)				* 추정치는 12M fwd 기준임	
KOSPI화학	5,377	1.5	1.0	(3.0)	4.9	0.5	6.4				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	275,000	0.9	0.2	(10.4)	(6.3)	(15.1)	6.4	매수	400,000	45.5	12.12	1.45
롯데케미칼	292,500	3.9	4.7	(5.0)	(5.9)	18.7	23.7	매수	340,000	16.2	9.89	1.14
한화케미칼	23,850	3.0	2.1	(6.8)	(3.6)	(7.4)	23.6	매수	30,000	25.8	9.42	0.77
금호석유화학	63,600	3.2	(0.3)	(10.5)	3.8	4.3	(20.7)	매수	70,000	10.1	12.54	1.26
KCC	409,000	0.2	3.8	(5.0)	(6.5)	(12.3)	(24.5)	매수	550,000	34.5	14.55	0.63
OCI	98,000	(0.2)	(8.0)	(10.9)	11.1	28.8	3.5	매수	120,000	22.4	18.41	0.85
SKC	28,000	0.4	0.7	(3.4)	(10.5)	(23.8)	(28.0)	매수	37,000	32.1	8.73	0.69
국도화학	59,100	0.3	(1.2)	(9.4)	0.7	0.7	(4.8)	매수	100,000	69.2	6.72	0.68
SK이노베이션	162,500	4.2	7.6	3.2	12.1	24.5	47.1	매수	180,000	10.8	12.16	0.99
S-Oil	87,700	6.0	5.8	(0.8)	9.6	14.6	26.7	매수	100,000	14.0	12.36	1.52
GS	52,900	1.9	4.8	(5.9)	(0.8)	2.7	4.5	매수	65,000	22.9	7.57	0.88
SK가스	86,200	1.1	3.9	0.9	19.4	6.6	(11.9)	매수	100,000	16.0	12.23	0.75
대우인터내셔널	23,350	0.0	0.9	(1.1)	24.5	22.9	(11.2)	매수	27,000	15.6	10.80	1.04
LG상사	39,150	1.0	4.3	8.1	17.4	6.4	(5.2)	매수	42,000	7.3	11.56	1.00

* 작성자(손지우)는 본 조사분석자료에 게재된 내용들이 본인의 의견을 정확하게 반영하고 있으며, 외부의 부당한 압력이나 간섭없이 신의성실하게 작성되었음을 확인합니다.

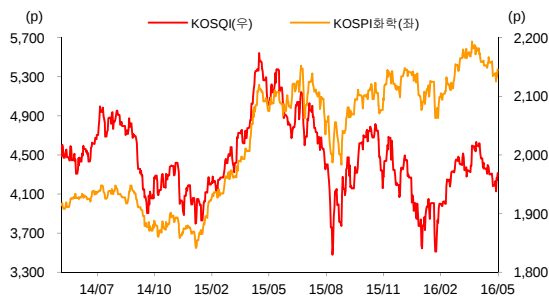
* 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.

* 본 보고서는 기관투자자 또는 제 3자에게 사전 제공된 사실이 없습니다.

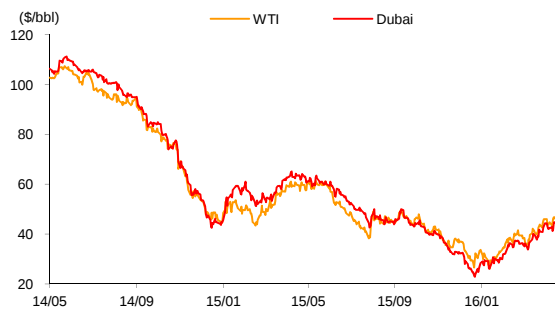
* 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

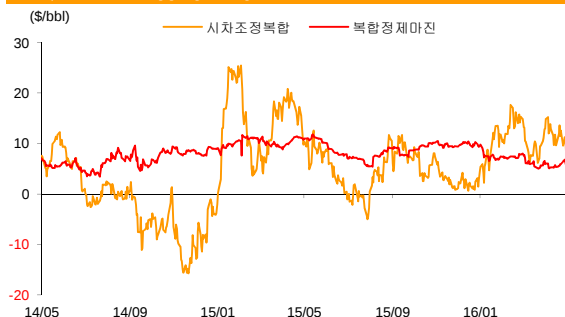
KOSPI/KOSPI화학



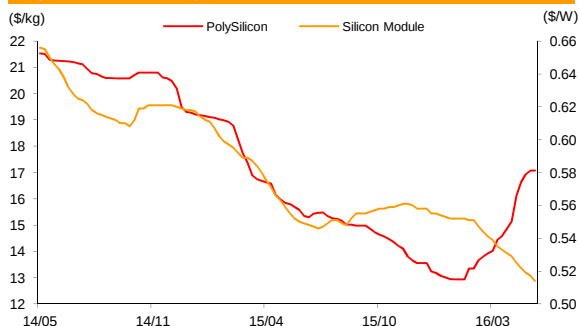
WTI/Dubai



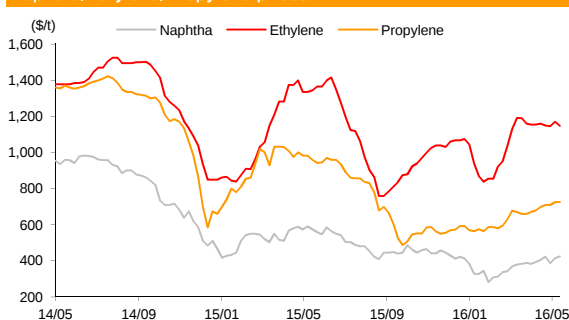
Complex & 1M lagging margin



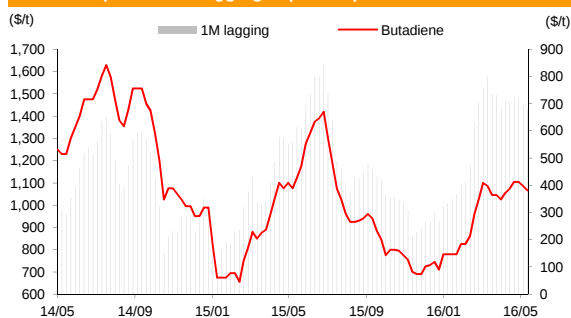
Polysilicon & Module prices



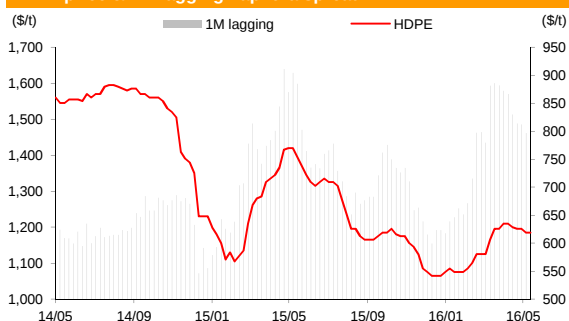
Naphtha/Ethylene/Propylene prices



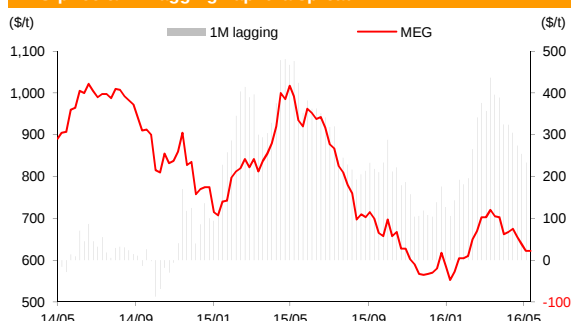
Butadiene price & 1M lagging naphtha spread



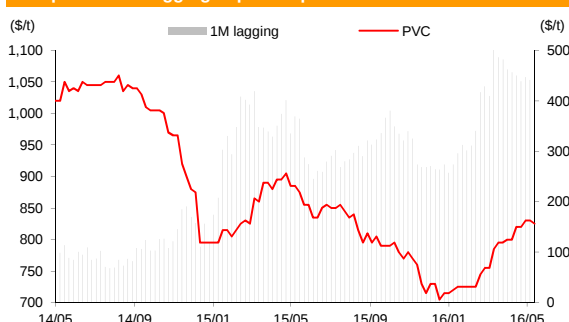
HDPE price & 1M lagging naphtha spread



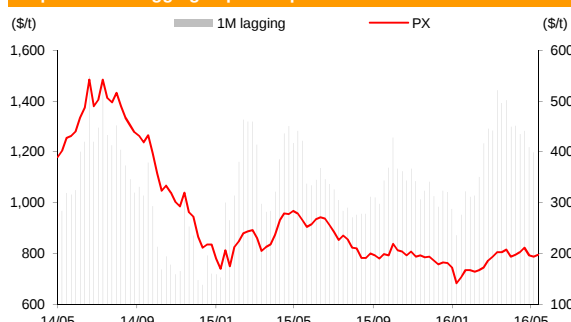
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



자료: Bloomberg, Ciscem, Petronet, Platts, Pvsights, SK증권
참고: 상기 데이터는 일괄적으로 과거 2년치 적용

News Comment

Headline	(출처: Platts)
제목 [주간가격] 부타디엔 전주대비 -\$130/t 급락	
결론 천연고무와 일시상승 이후 동반 급락세, 성수기 효과 없는 상황임	
세부	
1) 부타디엔 \$945/t(WoW -\$130/t), SBR \$1,440/t(WoW -\$70/t)	
2) 유럽과 중동 물량 지속 유입 중, 그러나 buyer들은 방관모드로 일관	
3) 중국 4월 BD 수입물량도 1.3만톤으로 발표, MoM -54% / YoY -54%	
4) 합성고무도 중국수요약세와 도교선물시장 천연고무 급락으로 하락	
5) 천연고무와 일시상승 이후 동반 급락세, 성수기 효과 없는 상황임	

WTI Comment	(출처: 연합뉴스)
제목 달러강세에 유가 소폭하락	
상승	
요인	
하락 미국 1분기 경제성장을 잠정치에서 상향조정, 달러강세	
요인	

Issue 1	(출처: Platts)
제목 [주간가격] polyester 계열 하락세 지속	
결론 성수기 불구하고 미래에 대한 불안감 때문에 가격은 약세 중	
세부	
1) MEG \$602/t(WoW -\$17/t), PX \$765.3/t(-\$10/t), PTA \$600/t(WoW -\$3/t)	
2) 중국 HCE 선물시장 내 대규모 short 포지션 생성 증임	
3) 중국경기지표 약세, 위안화 절하 등으로 단기간 내 심리개선 어려울 듯	
4) PX는 아시아 대표 업체들의 6월 CP 하향조정으로 인하여 약세	
5) 성수기 불구하고 미래에 대한 불안감 때문에 가격은 약세 중	

Issue 2	(출처: Platts)
제목 [주간가격] 에틸렌/프로필렌 동반 가격하락	
결론 이외의 성수기 중 de-stocking, 약했던 fundamental 부각되는 증임	
세부	
1) Ethylene \$1,100/t(WoW -\$35/t), Propylene \$700/t(WoW -\$10/t)	
2) 에틸렌 2개월래 최저치, 시장 sentiment 지속 악화 중	
3) downstream 제품군의 하락이 지속되면서 재고축적 중단 증임	
4) 프로필렌 역시 PP 시장 약세 때문에 구매수요 약세 전환	
5) 이외의 성수기 중 de-stocking, 약했던 fundamental 부각되는 증임	

Issue 3	(출처: Platts)
제목 SABIC / MEGlobal / Shell, 아시아 6월 MEG CP 일제히 하향 조정	
결론 MEG의 하향트렌드는 6월에도 지속될 가능성 높음	
세부	
1) MEG CP의 대표격인 사우디 SABIC은 전월대비 \$60/t 하향한 \$790/t 발표	
2) MEGlobal은 \$40/t 하향한 \$770/t, Shell은 \$20/t 하향한 \$780/t 발표	
3) MEGlobal은 평시와 똑같은 "아시아 시장 내 단기 수급여건 반영"만 언급	
4) 단 대표 3사의 동반 가격하향 조정을 중국선물시장은 악재로 반영했음	
5) MEG의 하향트렌드는 6월에도 지속될 가능성 높음	

Issue 4	
제목	
결론	
세부	
1)	
2)	
3)	
4)	
5)	

Issue 5	
제목	
결론	
세부	
1)	
2)	
3)	
4)	
5)	

Issue 6	
제목	
결론	
세부	
1)	
2)	
3)	
4)	
5)	

Commodity Price Data

Daily Price		Today	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
F/X	USD/EUR	0.900	0.893	0.891	0.883	0.915	0.944	0.917	0.921	0.754	0.901	0.897
	Change, %		0.7	1.0	1.9	(1.7)	(4.7)	(1.9)	(2.3)	19.3	(0.2)	0.3
	USD/JPY	110.3	109.8	110.2	111.5	114.0	122.8	123.7	120.6	105.9	121.1	113.0
	Change, %		0.5	0.1	(1.0)	(3.2)	(10.2)	(10.8)	(8.5)	4.1	(8.9)	(2.3)
	USD/KRW	1,179.3	1,180.4	1,190.1	1,148.3	1,238.1	1,153.0	1,105.6	1,172.6	1,053.0	1,131.2	1,184.5
	Change, %		(0.1)	(0.9)	2.7	(4.7)	2.3	6.7	0.6	12.0	4.3	(0.4)
Agriculture	Corn	412.8	408.3	394.5	380.8	354.5	359.3	349.5	358.8	415.6	376.8	369.6
	Change, %		1.1	4.6	8.4	16.4	14.9	18.1	15.1	(0.7)	9.5	11.7
	Soybean	1,086.5	1,079.8	1,074.3	1,019.0	855.0	873.0	927.0	871.3	1,245.5	945.4	929.2
	Change, %		0.6	1.1	6.6	27.1	24.5	17.2	24.7	(12.8)	14.9	16.9
	Wheat	481.5	481.3	467.8	474.3	443.3	465.8	487.8	470.0	588.0	508.1	466.5
	Change, %		0.1	2.9	1.5	8.6	3.4	(1.3)	2.4	(18.1)	(5.2)	3.2
	Rice	10.8	11.1	11.8	10.8	10.4	12.0	9.4	11.6	14.0	11.1	10.8
	Change, %		(2.7)	(8.5)	(0.6)	3.6	(10.0)	14.2	(6.9)	(22.9)	(2.6)	(0.1)
	Oats	193.0	191.3	189.5	196.0	171.0	232.8	236.5	217.3	373.1	250.2	191.4
	Change, %		0.9	1.8	(1.5)	12.9	(17.1)	(18.4)	(11.2)	(48.3)	(22.9)	0.8
MYR/mt	Palm Oil	2,587.0	2,618.0	2,557.0	2,615.0	2,462.0	2,159.0	2,145.0	2,398.0	2,415.1	2,190.3	2,527.8
	Change, %		(1.2)	1.2	(1.1)	5.1	19.8	20.6	7.9	7.1	18.1	2.3
	Cocoa	3,005.0	2,916.0	2,912.0	3,170.0	2,882.0	3,308.0	3,134.0	3,211.0	3,006.8	3,091.6	2,955.7
	Change, %		3.1	3.2	(5.2)	4.3	(9.2)	(4.1)	(6.4)	(0.1)	(2.8)	1.7
	Cotton	64.3	64.3	61.7	64.1	57.9	62.6	63.1	63.3	76.4	63.3	60.5
	Change, %		(0.1)	4.2	0.3	11.0	2.6	2.0	1.6	(15.8)	1.6	6.3
	Sugar	17.5	17.4	17.1	15.6	13.9	15.0	11.9	15.2	16.3	13.1	14.9
	Change, %		0.6	2.6	12.7	26.0	17.0	47.6	15.0	7.3	33.3	17.2
	Coffee	121.3	121.5	124.7	121.1	113.0	121.0	124.5	126.7	177.1	132.6	121.3
	Change, %		(0.2)	(2.7)	0.2	7.3	0.2	(2.6)	(4.3)	(31.5)	(8.6)	(0.0)
Energy	WTI	49.3	49.5	47.8	45.3	32.8	41.7	57.5	37.0	92.9	48.8	37.6
	Change, %		(0.3)	3.3	8.8	50.5	18.3	(14.2)	33.2	(46.9)	1.0	31.1
	Brent	49.3	49.6	48.7	47.2	35.1	44.9	62.1	37.3	99.5	53.7	39.2
	Change, %		(0.5)	1.2	4.5	40.5	9.9	(20.5)	32.3	(50.4)	(8.1)	25.7
	Natural Gas	2.2	2.0	2.1	2.0	1.8	2.2	2.8	2.3	4.3	2.6	2.0
	Change, %		10.5	5.2	8.7	21.1	(1.9)	(22.9)	(7.2)	(49.2)	(17.5)	7.6
	Ethanol	1.7	1.6	1.6	1.5	1.4	1.5	1.5	1.4	2.1	1.5	1.5
	Change, %		0.9	3.2	7.7	19.5	12.6	8.2	18.4	(19.6)	9.8	14.1
	RBOB Gasoline	163.2	162.0	163.6	158.1	101.7	139.1	194.5	126.7	262.6	163.6	131.5
	Change, %		0.8	(0.2)	3.2	60.5	17.4	(16.1)	28.8	(37.9)	(0.2)	24.1
Metal	Coal	44.8	44.8	43.6	43.5	44.2	42.1	45.1	43.3	57.5	45.2	43.5
	Change, %		0.0	2.7	3.0	1.5	6.5	(0.7)	3.4	(22.1)	(0.9)	3.0
	Gold	1,213.0	1,219.8	1,252.2	1,245.8	1,222.7	1,057.4	1,188.1	1,061.4	1,266.5	1,160.6	1,208.5
	Change, %		(0.6)	(3.1)	(2.6)	(0.8)	14.7	2.1	14.3	(4.2)	4.5	0.4
	Silver	16.2	16.3	16.5	17.2	14.7	14.1	16.7	13.8	19.1	15.7	15.5
	Change, %		(0.6)	(1.8)	(5.9)	10.4	15.1	(2.9)	17.5	(14.9)	3.2	4.4
	Platinum	977.0	993.2	1,022.0	1,026.3	914.0	835.8	1,118.2	891.1	1,384.6	1,055.7	955.2
	Change, %		(1.6)	(4.4)	(4.8)	6.9	16.9	(12.6)	9.6	(29.4)	(7.5)	2.3
	Palladium	537.8	543.6	561.0	610.8	485.1	551.1	786.7	563.0	803.4	691.9	546.6
	Change, %		(1.1)	(4.1)	(12.0)	10.9	(2.4)	(31.6)	(4.5)	(33.1)	(22.3)	(1.6)
	Copper	4,695.0	4,661.0	4,578.0	4,903.0	4,706.0	4,573.0	6,080.5	4,705.0	6,828.1	5,503.1	4,721.3
	Change, %		0.7	2.6	(4.2)	(0.2)	2.7	(22.8)	(0.2)	(31.2)	(14.7)	(0.6)
	Uranium	27.3	27.3	28.7	27.7	32.0	36.1	35.0	34.4	33.5	36.9	30.8
	Change, %		0.0	(4.9)	(1.4)	(14.8)	(24.5)	(22.1)	(20.8)	(18.7)	(26.1)	(11.5)
	HR Coil	608.0	608.0	581.0	550.0	400.0	376.0	474.0	391.0	653.2	461.5	453.6
	Change, %		0.0	4.6	10.5	52.0	61.7	28.3	55.5	(6.9)	31.8	34.0
	Scrap	270.0	270.0	270.0	260.0	250.0	190.0	250.0	250.0	401.3	252.9	303.6
	Change, %		0.0	0.0	3.8	8.0	42.1	8.0	8.0	(32.7)	6.7	(11.1)
	Zinc	1,899.0	1,876.0	1,866.0	1,886.0	1,758.0	1,549.0	2,186.0	1,609.0	2,165.0	1,941.9	1,758.4
	Change, %		1.2	1.8	0.7	8.0	22.6	(13.1)	18.0	(12.3)	(2.2)	8.0

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		05/27	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Crude Oil	WTI	49.3	49.5	47.8	45.3	32.8	41.7	57.7	37.0	93.1	48.8	37.6
	Change, %		(0.3)	3.3	8.8	50.5	18.4	(14.5)	33.2	(47.0)	1.1	31.2
	Dubai	45.3	45.7	45.7	42.6	30.4	39.9	60.6	32.2	96.7	50.8	34.8
	Change, %		(0.9)	(0.7)	6.4	48.9	13.6	(25.3)	40.8	(53.2)	(10.8)	30.2
Crude Oil	Gasoline(휘발유)	60.2	61.3	60.9	58.8	47.6	58.2	81.7	54.8	110.9	69.5	52.4
Product	Change, %		(1.6)	(1.1)	2.4	26.5	3.5	(26.3)	9.9	(45.7)	(13.4)	15.0
	Kerosene(등유)	57.3	58.1	57.0	53.7	42.7	55.7	74.6	44.2	112.6	64.7	46.2
	Change, %		(1.4)	0.4	6.7	34.1	2.8	(23.2)	29.5	(49.2)	(11.6)	23.9
	Diesel(경유)	56.4	57.4	56.6	53.4	40.2	55.8	76.2	43.2	112.8	64.8	44.7
	Change, %		(1.7)	(0.4)	5.6	40.4	1.2	(26.0)	30.5	(50.0)	(12.9)	26.4
	Bunker-C	34.7	35.5	35.4	33.2	24.1	33.8	57.4	25.3	86.5	45.3	27.5
	Change, %		(2.2)	(2.0)	4.3	43.8	2.5	(39.6)	37.1	(59.9)	(23.4)	26.1
	Naphtha	44.2	45.3	45.3	45.0	35.3	48.0	60.3	43.5	94.3	52.6	39.2
	Change, %		(2.3)	(2.3)	(1.7)	25.5	(7.8)	(26.6)	1.8	(53.1)	(15.9)	12.8
Dubai	Gasoline(휘발유)	14.9	15.5	15.3	16.3	17.2	18.3	21.1	22.6	14.2	18.7	17.6
Spread	Change		(0.6)	(0.4)	(1.3)	(2.3)	(3.4)	(6.2)	(7.7)	0.7	(3.8)	(2.7)
	Kerosene(등유)	12.0	12.3	11.4	11.1	12.3	15.8	13.9	12.0	15.9	14.0	11.4
	Change		(0.4)	0.6	0.9	(0.3)	(3.9)	(2.0)	(0.1)	(3.9)	(2.0)	0.5
	Diesel(경유)	11.1	11.7	11.0	10.8	9.8	15.9	15.6	11.0	16.0	14.0	9.9
	Change		(0.5)	0.1	0.3	1.4	(4.8)	(4.5)	0.1	(4.9)	(2.9)	1.3
	Bunker-C	(10.7)	(10.3)	(10.3)	(9.4)	(6.3)	(6.0)	(3.3)	(6.9)	(10.3)	(5.5)	(7.3)
Refining Margin	Change		(0.4)	(0.4)	(1.3)	(4.3)	(4.6)	(7.4)	(3.8)	(0.4)	(5.1)	(3.3)
	Naphtha	(1.1)	(0.5)	(0.4)	2.4	4.8	8.1	(0.3)	11.3	(2.4)	1.8	4.4
	Change		(0.6)	(0.7)	(3.5)	(5.9)	(9.2)	(0.7)	(12.3)	1.3	(2.9)	(5.5)
	Simple(단순)	(0.4)	(0.0)	(0.3)	0.4	2.2	4.3	4.6	3.2	(0.1)	3.3	1.6
Refining Margin	Change		(0.4)	(0.2)	(0.8)	(2.6)	(4.7)	(5.1)	(3.6)	(0.3)	(3.7)	(2.0)
	Complex(복합)	5.8	6.3	5.9	6.6	7.4	10.5	10.8	9.7	7.1	9.3	7.3
	Change		(0.5)	(0.2)	(0.8)	(1.7)	(4.7)	(5.0)	(3.9)	(1.3)	(3.5)	(1.5)
	Complex(lagging)	8.5	11.2	12.6	12.8	11.8	5.9	9.8	2.1	2.3	7.3	9.2
Refining Margin	Change		(2.7)	(4.1)	(4.3)	(3.3)	2.6	(1.3)	6.4	6.2	1.3	(0.7)

자료 : Petronet, SK증권

참고 1) Crude Oil 가격은 현물(spot) 기준으로 선물(future) 가격과 다를 수 있음

참고 2) Gasoline은 95RON, 경유는 L/P 0.5%, Bunker-C는 380cst/4.0% 기준임

Petrochemical Price Data

Daily Price			05/27	05/26	05/25	05/24	05/23	05/20	05/19	05/18	05/17	05/16
Spot Price	Naphtha	CFR Japan	418.3	427.5	427.9	422.9	422.3	424.6	418.4	427.5	429.3	427.3
	Ethylene	CFR SE Asia	1,100.0	1,110.0	1,120.0	1,130.0	1,130.0	1,135.0	1,140.0	1,140.0	1,140.0	1,140.0
	Propylene	FOB Korea	700.0	690.0	690.0	695.0	705.0	710.0	710.0	710.0	710.0	709.0
	Butadiene	FOB Korea	945.0	1,050.0	1,060.0	1,065.0	1,070.0	1,075.0	1,075.0	1,075.0	1,075.0	1,075.0
	HDPE	CFR FE Asia	1,100.0	1,100.0	1,100.0	1,110.0	1,120.0	1,120.0	1,130.0	1,130.0	1,110.0	1,130.0
	LDPE	CFR FE Asia	1,130.0	1,130.0	1,130.0	1,120.0	1,130.0	1,130.0	1,140.0	1,140.0	1,130.0	1,150.0
	LLDPE	CFR FE Asia	1,110.0	1,110.0	1,110.0	1,100.0	1,110.0	1,110.0	1,120.0	1,120.0	1,120.0	1,135.0
	MEG	CFR China	602.0	602.0	603.0	604.0	614.0	619.0	614.0	618.0	626.0	620.0
	PP	CFR FE Asia	905.0	905.0	905.0	910.0	930.0	930.0	930.0	930.0	935.0	940.0
	PX	CFR China	765.3	766.3	759.3	759.7	764.7	775.3	772.3	781.0	786.8	778.7
	PTA	CFR China	600.0	598.0	598.0	598.0	599.0	603.0	605.0	610.0	602.0	600.0
	Benzene	FOB Korea	597.8	612.5	610.0	613.5	628.0	630.0	630.0	633.0	630.0	631.0
	Toluene	FOB Korea	568.5	573.5	576.5	578.5	582.0	588.0	586.0	588.5	590.0	593.5
	Xylene	FOB Korea	675.0	683.0	682.0	680.0	689.0	695.0	691.0	695.0	691.0	686.0
	SM	FOB Korea	950.0	961.0	974.0	972.0	986.0	994.0	994.0	996.0	999.5	996.5

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	Naphtha	CFR Japan	424.5	415.5	405.0	313.0	326.5	575.5	413.5	865.9	493.0	368.6
	Change, %			2.2	4.8	35.6	30.0	(26.2)	2.7	(51.0)	(13.9)	15.2
	Ethylene	CFR SE Asia	1,130.0	1,125.0	1,125.0	945.0	925.0	1,405.0	1,090.0	1,401.1	1,103.7	1,062.4
	Change, %			0.4	0.4	19.6	22.2	(19.6)	3.7	(19.3)	2.4	6.4
	Propylene	CFR SE Asia	695.0	695.0	742.5	645.0	645.0	895.0	650.0	1,254.2	770.0	639.8
	Change, %			0.0	(6.4)	7.8	7.8	(22.3)	6.9	(44.6)	(9.7)	8.6
	Butadiene	CFR SE Asia	1,025.0	1,045.0	1,035.0	820.0	740.0	1,075.0	720.0	1,281.7	877.5	918.3
	Change, %			(1.9)	(1.0)	25.0	38.5	(4.7)	42.4	(20.0)	16.8	11.6
	Benzene	CFR SE Asia	640.0	657.5	642.5	555.0	537.5	730.0	580.0	1,243.1	690.0	604.0
	Change, %			(2.7)	(0.4)	15.3	19.1	(12.3)	10.3	(48.5)	(7.2)	6.0
	Toluene	CFR SE Asia	650.0	650.0	660.0	585.0	575.0	805.0	630.0	1,082.5	700.8	627.9
	Change, %			0.0	(1.5)	11.1	13.0	(19.3)	3.2	(40.0)	(7.2)	3.5
	Xylene	CFR SE Asia	645.0	645.0	657.5	580.0	570.0	800.0	625.0	1,055.7	699.3	620.7
	Change, %			0.0	(1.9)	11.2	13.2	(19.4)	3.2	(38.9)	(7.8)	3.9
Spread	Ethylene	-Naphtha	705.5	709.5	720.0	632.0	598.5	829.5	676.5	535.2	610.6	693.8
	Change, %			(0.6)	(2.0)	11.6	17.9	(14.9)	4.3	31.8	15.5	1.7
	Propylene	-Naphtha	270.5	279.5	337.5	332.0	318.5	319.5	236.5	388.3	277.0	271.2
	Change, %			(3.2)	(19.9)	(18.5)	(15.1)	(15.3)	14.4	(30.3)	(2.3)	(0.2)
	Butadiene	-Naphtha	600.5	629.5	630.0	507.0	413.5	499.5	306.5	415.9	384.5	549.7
	Change, %			(4.6)	(4.7)	18.4	45.2	20.2	95.9	44.4	56.2	9.2
	Benzene	-Naphtha	215.5	242.0	237.5	242.0	211.0	154.5	166.5	377.3	197.0	235.5
	Change, %			(11.0)	(9.3)	(11.0)	2.1	39.5	29.4	(42.9)	9.4	(8.5)
	Toluene	-Naphtha	225.5	234.5	255.0	272.0	248.5	229.5	216.5	216.6	207.8	259.3
	Change, %			(3.8)	(11.6)	(17.1)	(9.3)	(1.7)	4.2	4.1	8.5	(13.0)
	Xylene	-Naphtha	220.5	229.5	252.5	267.0	243.5	224.5	211.5	189.9	206.3	252.1
	Change, %			(3.9)	(12.7)	(17.4)	(9.4)	(1.8)	4.3	16.1	6.9	(12.5)

자료 : Ciscem, Platts, Bloomberg, SK증권

참고 : Spread는 Polymer와 Naphtha의 가격차임

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	HDPE	CFR SE Asia	1,185.0	1,185.0	1,200.0	1,100.0	1,075.0	1,395.0	1,065.0	1,524.9	1,230.1	1,140.2
	Change, %			0.0	(1.3)	7.7	10.2	(15.1)	11.3	(22.3)	(3.7)	3.9
	MEG	CFR SE Asia	622.5	622.5	675.0	650.0	572.5	935.0	617.5	934.1	780.8	644.9
	Change, %			0.0	(7.8)	(4.2)	8.7	(33.4)	0.8	(33.4)	(20.3)	(3.5)
	PVC	CFR SE Asia	825.0	830.0	820.0	725.0	725.0	875.0	715.0	1,013.9	820.8	768.1
	Change, %			(0.6)	0.6	13.8	13.8	(5.7)	15.4	(18.6)	0.5	7.4
	PP	CFR SE Asia	965.0	995.0	1,035.0	850.0	820.0	1,365.0	835.0	1,503.0	1,109.8	935.0
	Change, %			(3.0)	(6.8)	13.5	17.7	(29.3)	15.6	(35.8)	(13.0)	3.2
	2-EH	CFR Korea	810.0	810.0	820.0	690.0	685.0	1,075.0	680.0	1,397.1	930.1	744.5
	Change, %			0.0	(1.2)	17.4	18.2	(24.7)	19.1	(42.0)	(12.9)	8.8
	ABS	CFR SE Asia	1,270.0	1,285.0	1,345.0	1,140.0	1,100.0	1,665.0	1,130.0	1,897.7	1,431.1	1,230.2
	Change, %			(1.2)	(5.6)	11.4	15.5	(23.7)	12.4	(33.1)	(11.3)	3.2
	SBR	CFR SE Asia	1,510.0	1,545.0	1,450.0	1,210.0	1,210.0	1,500.0	1,150.0		1,332.1	1,345.5
	Change, %			(2.3)	4.1	24.8	24.8	0.7	31.3		13.4	12.2
	SM	CFR SE Asia	1,045.0	1,047.5	1,090.0	995.0	905.0	1,420.0	910.0	1,547.1	1,100.7	1,041.5
	Change, %			(0.2)	(4.1)	5.0	15.5	(26.4)	14.8	(32.5)	(5.1)	0.3
	Caustic	FOB NEA	292.5	295.0	290.0	287.5	285.0	300.0	285.0	310.0	296.8	287.4
	Change, %			(0.8)	0.9	1.7	2.6	(2.5)	2.6	(5.7)	(1.4)	1.8
	PX	CFR SE Asia	795.0	787.5	805.0	735.0	705.0	932.5	762.5	1,228.5	842.9	768.7
	Change, %			1.0	(1.2)	8.2	12.8	(14.7)	4.3	(35.3)	(5.7)	3.4
	PO	CFR China	1,312.5	1,227.5	1,247.5	1,227.5	995.0	1,750.0	1,257.5	2,179.2	1,683.4	1,220.4
	Change, %			6.9	5.2	6.9	31.9	(25.0)	4.4	(39.8)	(22.0)	7.6
	Caprolactam	CFR SE Asia	1,340.0	1,340.0	1,320.0	1,110.0	1,250.0	1,810.0	1,260.0	2,233.4	1,581.5	1,242.9
	Change, %			0.0	1.5	20.7	7.2	(26.0)	6.3	(40.0)	(15.3)	7.8
	PTA	CFR SE Asia	627.5	625.0	625.0	582.5	555.0	755.0	585.0	911.7	648.0	599.8
	Change, %			0.4	0.4	7.7	13.1	(16.9)	7.3	(31.2)	(3.2)	4.6
Spread	HDPE		760.5	769.5	795.0	787.0	748.5	819.5	651.5	659.0	737.1	771.6
	Change, %			(1.2)	(4.3)	(3.4)	1.6	(7.2)	16.7	15.4	3.2	(1.4)
	MEG		198.0	207.0	270.0	337.0	246.0	359.5	204.0	68.2	287.8	276.3
	Change, %			(4.3)	(26.7)	(41.2)	(19.5)	(44.9)	(2.9)	190.2	(31.2)	(28.3)
	PVC		400.5	414.5	415.0	412.0	398.5	299.5	301.5	148.0	327.8	399.5
	Change, %			(3.4)	(3.5)	(2.8)	0.5	33.7	32.8	170.6	22.2	0.3
	PP		540.5	579.5	630.0	537.0	493.5	789.5	421.5	637.1	616.8	566.4
	Change, %			(6.7)	(14.2)	0.7	9.5	(31.5)	28.2	(15.2)	(12.4)	(4.6)
	2-EH		385.5	394.5	415.0	377.0	358.5	499.5	266.5	531.3	437.0	375.9
	Change, %			(2.3)	(7.1)	2.3	7.5	(22.8)	44.7	(27.4)	(11.8)	2.5
	ABS		845.5	869.5	940.0	827.0	773.5	1,089.5	716.5	1,031.9	938.1	861.6
	Change, %			(2.8)	(10.1)	2.2	9.3	(22.4)	18.0	(18.1)	(9.9)	(1.9)
	SBR	BD spread	485.0	500.0	415.0	390.0	470.0	425.0	430.0		454.7	427.1
	Change, %			(3.0)	16.9	24.4	3.2	14.1	12.8		6.7	13.5
	SM		620.5	632.0	685.0	682.0	578.5	844.5	496.5	681.2	607.7	673.0
	Change, %			(1.8)	(9.4)	(9.0)	7.3	(26.5)	25.0	(8.9)	2.1	(7.8)
	Caustic											
	Change, %											
	PX		370.5	372.0	400.0	422.0	378.5	357.0	349.0	362.6	349.9	400.1
	Change, %			(0.4)	(7.4)	(12.2)	(2.1)	3.8	6.2	2.2	5.9	(7.4)
	PO	propylene spread	617.5	532.5	505.0	582.5	350.0	855.0	607.5	925.0	913.4	580.6
	Change, %			16.0	22.3	6.0	76.4	(27.8)	1.6	(33.2)	(32.4)	6.4
	Caprolactam	benzene spread	700.0	682.5	677.5	555.0	712.5	1,080.0	680.0	990.3	891.6	638.8
	Change, %			2.6	3.3	26.1	(1.8)	(35.2)	2.9	(29.3)	(21.5)	9.6
	PTA	px spread	71.0	73.8	61.5	68.0	61.5	102.3	51.3	51.8	58.0	61.7
	Change, %			(3.7)	15.4	4.4	15.4	(30.6)	38.5	37.2	22.4	15.1

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	05/27	1D	1W	1M	3M	6M	12M	YTD	MKT CAP	PER		PBR		EV/EBITDA			
										(mil USD)	15	16E	15	16E	15	16E		
Petrochemical																		
Dow Chemical	USD	52.2	0.4	1.6	(2.6)	7.1	0.3	1.9	1.4	58,589	14.8	13.3	2.4	2.4	8.1	7.5		
Du Pont	USD	67.2	0.3	2.2	(0.4)	9.2	0.1	(0.1)	0.9	58,674	21.4	18.2	6.2	4.8	12.1	10.5		
Eastman	USD	73.8	0.1	0.7	(5.1)	13.2	3.5	(3.7)	9.3	10,904	10.5	9.5	2.4	2.1	8.1	7.7		
BASF	EUR	69.8	0.1	4.0	(3.4)	14.6	(10.1)	(19.6)	(1.3)	71,399	15.3	13.7	2.0	2.0	7.8	7.3		
Akzo Nobel	EUR	62.2	(2.3)	1.0	(1.5)	16.6	(6.2)	(12.1)	0.8	17,239	14.9	14.2	2.3	2.1	8.1	7.7		
Arkema	EUR	73.0	(0.8)	2.0	3.5	30.5	9.6	2.5	12.9	6,135	14.6	12.6	1.4	1.4	6.2	5.8		
Lanxess	EUR	43.0	(0.2)	1.4	(5.8)	13.0	(9.3)	(17.4)	0.8	4,383	19.9	15.3	1.6	1.5	5.6	5.2		
Sumitomo Chemical	JPY	486	1.0	(1.0)	(7.3)	(2.8)	(32.0)	(31.5)	(30.7)	7,319	9.1	8.0	0.9	0.8	6.7	6.2		
Mitsubishi Chemical	JPY	556	0.3	(1.4)	(7.6)	(4.5)	(32.7)	(27.8)	(28.2)	7,614	9.0	8.0	0.8	0.7	5.5	5.2		
Shin-Etsu Chemical	JPY	6,293	(0.3)	(0.7)	(3.5)	5.8	(9.8)	(16.7)	(4.9)	24,736	17.8	16.5	1.3	1.2	6.1	5.7		
Asahi Kasei	JPY	732	(1.7)	1.7	(7.2)	14.0	(11.4)	(34.1)	(11.1)	9,336	10.9	9.7	0.9	0.8	5.2	4.9		
JSR	JPY	1,590	(0.9)	(0.9)	1.3	(0.3)	(17.4)	(28.3)	(16.3)	3,270	13.8	12.8	1.0	0.9	5.6	5.1		
Nitto Denko	JPY	7,184	2.6	6.4	16.9	21.4	(13.1)	(24.2)	(19.4)	11,355	17.8	15.7	1.8	1.6	7.4	6.7		
SABIC	SAR	82.4	0.0	(0.8)	(2.8)	15.4	(8.1)	(20.6)	7.8	65,933	16.7	14.9	1.4	1.4	7.7	7.0		
Yansab	SAR	40.7	0.0	(1.6)	(4.6)	25.3	(11.9)	(23.6)	25.6	6,106	17.0	15.2	1.5	1.5	8.7	8.3		
Formosa Plastics	TWD	78.4	0.4	2.8	(4.0)	(0.8)	4.7	3.8	1.8	15,334	16.0	14.9	1.6	1.6	23.7	21.5		
Formosa Fiber	TWD	81.5	1.4	0.9	(3.2)	9.0	13.8	6.3	10.1	14,677	16.4	15.8	1.6	1.5	13.6	12.8		
Nan Ya Plastics	TWD	60.8	0.2	2.7	(6.5)	(4.7)	1.7	(17.5)	(0.3)	14,815	13.8	14.1	1.4	1.4	14.0	13.5		
Sinopec Shanghai	CNY	6.05	(1.3)	(1.0)	(13.8)	3.4	(7.2)	(39.9)	(6.6)	8,413	16.7	17.3	2.9	2.6	8.3	8.6		
Sinopec Yizheng(Fiber)	CNY	3.86	(0.8)	(2.3)	(16.1)	(40.9)	(55.6)	(62.4)	(52.7)	7,470	#N/A	N/A	386.0	2.3	2.2	15.3	12.9	
Reliance	INR	975	2.9	4.3	(4.4)	2.6	(0.4)	10.1	(4.0)	47,185	11.1	9.4	1.1	1.0	9.0	7.3		
Industries Qatar	QAR	98.0	0.0	(1.1)	(6.5)	(5.8)	(8.0)	(28.9)	(11.8)	16,283	14.6	13.4	1.8	1.7	54.5	53.4		
PTT Chemical	THB	61.0	0.4	3.8	(2.0)	11.4	13.5	(5.8)	22.0	7,626	11.0	10.1	1.1	1.1	5.3	5.0		
Petronas	MYR	6.6	1.2	3.7	(0.9)	(2.1)	(1.2)	6.4	(8.7)	13,031	19.4	17.6	2.0	1.9	9.5	8.7		
LG화학	KRW	275,000	0.9	0.2	(10.4)	(6.3)	(14.3)	6.4	(16.3)	15,412	0.0	13.5	0.0	1.4	0.0	5.3		
롯데케미칼	KRW	292,500	3.9	4.7	(5.0)	(5.9)	18.4	23.7	20.1	8,478	0.0	7.3	0.0	1.1	0.0	4.1		
한화케미칼	KRW	23,850	3.0	2.1	(6.8)	(3.6)	(7.2)	23.6	(12.3)	3,324	0.0	9.0	0.0	0.8	0.0	8.3		
금호석유	KRW	63,600	3.2	(0.3)	(10.5)	3.8	3.8	(20.7)	22.1	1,639	0.0	14.6	0.0	1.2	0.0	10.4		
SKC	KRW	28,000	0.4	0.7	(3.4)	(10.5)	(21.9)	(28.0)	(17.2)	876	0.0	8.4	0.0	0.7	0.0	7.5		
국도화학	KRW	59,100	0.3	(1.2)	(9.4)	0.7	(1.3)	(4.8)	(0.3)	290	0.0	6.8	0.0	0.7	0.0	3.7		
효성	KRW	4,090	(0.7)	(7.3)	(1.6)	52.6	41.8	18.2	56.7	3,445	0.0	7.2	0.0	1.1	0.0	6.9		
Average			0.5	0.9	(4.3)	5.8	(5.4)	(11.8)	(1.6)									
Refinery																		
Valero	USD	54.6	0.9	(2.8)	(12.3)	(8.5)	(25.2)	(7.7)	(22.8)	25,637	9.3	7.9	1.2	1.1	4.8	4.4		
Conoco Phillips	USD	44.3	(0.9)	1.7	(7.9)	29.9	(17.1)	(30.5)	(5.1)	54,898	#N/A	N/A	187.8	1.4	1.5	14.7	8.0	
Formosa Petrochemical	TWD	89.9	1.1	3.6	(2.8)	6.5	16.8	17.5	14.1	26,312	18.6	18.9	3.1	3.0	11.7	11.9		
Tesoro	USD	78.5	1.5	(0.8)	(10.0)	(2.3)	(33.1)	(11.2)	(25.5)	9,415	10.6	10.5	1.7	1.5	6.0	5.7		
Marathon Petroleum	USD	35.1	1.6	(4.1)	(15.1)	2.6	(40.1)	(30.4)	(32.3)	18,603	9.9	8.4	1.4	1.2	6.8	6.2		
Devon Energy	USD	35.9	0.0	4.8	(2.7)	76.9	(20.0)	(45.6)	12.2	18,812	#N/A	N/A	46.7	3.0	2.9	16.9	10.2	
Hollyfrontier	USD	27.0	1.3	(3.2)	(27.9)	(18.0)	(45.8)	(35.1)	(32.4)	4,759	11.9	8.0	0.9	0.9	6.0	4.9		
Phillips 66	USD	80.6	0.7	3.5	(9.4)	1.9	(13.1)	1.8	(1.4)	42,378	14.9	11.7	1.8	1.7	8.4	7.1		
Murphy Oil	USD	30.7	(1.1)	4.4	(15.3)	79.1	8.1	(29.2)	36.7	5,285	#N/A	N/A	#N/A	N/A	1.1	1.1	9.6	6.8
JX Holdings	JPY	432.9	0.7	2.5	(10.0)	(4.5)	(14.0)	(21.8)	(14.9)	9,827	7.6	7.2	0.6	0.6	8.4	8.5		
Cosmo Oil	JPY	164.0	0.0	0.0	0.0	0.0	0.0	(20.8)	0.0	1,151	#N/A	N/A	#N/A	N/A	#N/A	N/A	#N/A	N/A
Idemitsu	JPY	2,271.0	(1.0)	(0.7)	(5.9)	28.5	9.8	(6.8)	17.2	3,305	6.5	6.2	0.6	0.6	6.8	6.5		
Tonengeneral	JPY	1,046.0	1.1	1.9	(3.1)	17.0	(12.0)	(11.9)	2.3	3,483	9.9	9.4	1.5	1.4	6.6	6.7		
Nesteoil	EUR	30.0	0.2	4.0	12.0	2.4	14.5	29.7	8.6	0	11.6	12.3	2.2	2.0	7.2	7.6		
Ashland	USD	114.2	0.5	1.6	0.8	19.0	1.6	(11.0)	11.2	7,086	16.0	14.8	2.6	2.6	9.0	8.8		
Fuchs Petrolub	EUR	37.3	0.1	1.2	(4.9)	(1.0)	(16.0)	(7.5)	(14.4)	5,482	20.8	19.8	4.3	3.8	12.0	11.5		
SK이노베이션	KRW	162,500	4.2	7.6	3.2	12.1	23.1	47.1	25.0	12,706	0.0	8.4	0.0	0.9	0.0	4.8		
S-Oil	KRW	87,700	6.0	5.8	(0.8)	9.6	14.2	26.7	10.5	8,350	0.0	8.1	0.0	1.6	0.0	5.5		
GS	KRW	52,900	1.9	4.8	(5.9)	(0.8)	2.1	4.5	4.3	4,157	0.0	7.3	0.0	0.7	0.0	8.1		
Average			1.0	1.9	(6.2)	13.2	(7.7)	(7.5)	(0.4)									

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	05/27	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA	
											15	16E	15	16E	15	16E
E&P/Shale																
Exxon Mobil	USD	90	0.2	0.3	1.8	10.1	10.8	5.8	15.5	373,236	34.5	21.6	2.2	2.2	11.6	8.9
BP	GBP	362	(0.7)	0.1	(5.4)	3.5	(6.4)	(20.3)	2.2	98,810	29.3	13.9	1.1	1.1	6.1	4.8
Shell	EUR	1,675	(0.4)	(0.3)	(7.5)	2.0	1.1	(14.4)	9.8	196,948	21.9	12.8	0.9	0.9	7.3	5.4
Chevron	USD	102	0.5	2.2	(1.8)	20.9	12.9	(1.1)	13.4	192,277	78.3	22.5	1.3	1.3	9.3	6.6
Total	EUR	44	(0.3)	2.1	(2.4)	7.5	(5.8)	(7.4)	6.4	121,193	16.4	11.7	1.2	1.2	7.6	5.8
Sinopec	CNY	5	(0.2)	0.9	(3.7)	8.7	(3.3)	(41.5)	(4.4)	86,400	18.7	13.0	0.8	0.8	5.6	4.9
Petrochina	CNY	7	(0.3)	(0.1)	(4.4)	(0.8)	(14.9)	(46.1)	(13.8)	192,191	87.8	23.2	1.1	1.1	8.0	6.5
CNOOC	CNY	12	(0.7)	(0.6)	(4.6)	(2.4)	(23.6)	(57.2)	(21.3)	6,894	89.1	41.0	1.3	1.2	13.8	11.4
Gazprom	RUB	150	0.7	2.2	(6.9)	8.1	6.6	1.5	10.1	53,730	3.7	3.6	0.3	0.3	3.8	3.4
Rosneft	RUB	321	0.1	(1.2)	(4.3)	13.2	19.5	29.5	26.6	51,453	10.8	7.1	1.1	0.9	4.8	4.0
Anadarko	USD	52	(1.4)	4.5	(5.9)	35.5	(15.1)	(38.8)	6.1	26,302	#N/A	#N/A	2.0	2.0	13.7	9.0
Petrobras	BRL	8	(5.1)	(7.5)	(19.7)	69.0	8.3	(34.4)	22.8	34,428	27.5	5.6	0.4	0.4	5.6	4.9
Lukoil	USD	2,682	0.1	(1.1)	(1.9)	3.7	5.6	5.5	14.3	34,635	6.5	5.1	0.4	0.4	N/A	N/A
Kinder	USD	18	(0.4)	0.6	(2.4)	0.5	(25.2)	(57.5)	19.6	47,497	26.8	22.9	1.1	1.1	11.5	10.8
Statoil	NOK	135	(2.2)	0.6	(6.7)	8.7	0.5	(7.9)	9.2	51,785	36.0	15.7	1.2	1.2	4.1	3.0
BHP	AUD	19	(0.2)	2.8	(1.4)	24.2	3.2	(34.0)	8.5	70,755	36.6	20.8	1.3	1.3	8.0	6.7
PTT E&P	THB	81	2.8	8.3	7.6	20.8	19.5	(26.5)	41.9	9,040	29.0	16.9	0.8	0.8	3.2	2.8
Petronas gas	MYR	22	0.9	1.6	(0.6)	(1.7)	(5.2)	0.0	(4.0)	10,582	23.6	23.3	3.6	3.4	13.8	13.4
Chesapeake	USD	4	(1.7)	11.8	(41.7)	54.1	(20.9)	(71.8)	(7.6)	2,848	#N/A	#N/A	2.7	2.9	14.6	9.7
Noble Energy	USD	36	0.7	0.7	(3.3)	20.7	(1.8)	(17.2)	9.0	15,414	#N/A	#N/A	1.6	1.7	10.9	9.1
Average		0	(0.4)	1.4	(5.8)	15.3	(1.7)	(21.7)	8.2							
PV																
WACKER	EUR	83.9	0.9	(1.3)	4.9	14.4	(0.4)	(17.9)	8.2	4,874	31.0	18.1	1.6	1.5	5.6	5.0
GCL-Poly	HKD	1.1	0.0	1.8	(4.3)	(5.1)	(25.2)	(47.5)	(3.4)	2,681	7.1	6.5	0.8	0.7	6.1	5.3
REC	NOK	107.5	0.0	0.0	0.0	0.0	0.0	2.4	0.0	519	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
SunPower	USD	17.3	0.9	8.5	(21.9)	(23.7)	(28.0)	(45.1)	(42.5)	2,383	12.1	10.7	1.5	1.6	7.9	6.3
Canadian Solar	USD	18.7	(0.5)	3.7	(1.4)	(16.4)	(16.8)	(43.7)	(35.4)	1,075	8.6	6.8	1.0	0.9	8.5	7.1
JA Solar	USD	7.9	(3.3)	(1.0)	(11.3)	(11.8)	(7.8)	(10.9)	(19.1)	373	5.1	4.3	0.4	0.4	2.5	2.1
Trina Solar	USD	8.2	(6.1)	(1.6)	(18.7)	(20.4)	(15.7)	(34.4)	(25.8)	756	6.4	6.5	0.6	0.5	5.9	5.5
Solar City	USD	22.3	(6.2)	1.5	(33.2)	18.4	(25.5)	(63.8)	(56.4)	2,188	#N/A	#N/A	6.0	#N/A	#N/A	#N/A
Yingli	USD	3.7	2.5	2.2	(25.8)	(13.6)	(43.1)	(63.6)	(18.1)	67	#N/A	#N/A	#N/A	#N/A	6.8	13.0
First Solar	USD	49.9	0.3	3.9	(19.6)	(29.0)	(11.1)	(2.7)	(24.4)	5,102	11.6	15.8	0.8	0.8	5.9	6.5
한화솔라원	USD	12.3	0.2	1.5	(8.3)	(26.5)	(30.2)	(38.5)	(43.9)	1,033	7.3	7.2	#N/A	#N/A	5.3	5.2
OCI	KRW	98,000	(0.2)	(8.0)	(10.9)	11.1	28.9	3.5	30.7	1,976	0.0	7.4	0.0	0.7	0.0	8.5
웅진에너지	KRW	1,130	0.9	2.7	(8.5)	(32.7)	(28.0)	(22.1)	(34.7)	103	N/A	0.0	0.7	0.0	8.5	0.0
신성솔라에너지	KRW	1,620	(1.5)	0.9	(4.4)	(7.0)	6.9	25.0	(12.7)	138	N/A	0.7	0.0	8.5	0.0	7.2
Average			(0.9)	1.1	(11.7)	(10.1)	(14.0)	(25.7)	(19.8)							
Gas Company																
Towngas China	HKD	4.1	1.0	(0.5)	(0.2)	6.8	(13.7)	(49.9)	(8.7)	1,410	8.6	8.2	0.8	0.7	10.5	10.0
Kulun	HKD	6.3	0.0	2.5	(10.2)	11.0	(6.0)	(26.5)	(9.3)	6,507	12.9	10.1	0.9	0.9	5.3	4.9
Beijing Enterprise	HKD	39.5	2.2	1.0	(3.5)	7.2	(18.7)	(44.3)	(16.0)	6,452	7.9	7.5	0.8	0.7	13.4	12.1
ENN Energy	HKD	37.5	(0.7)	2.2	(4.7)	4.2	(4.5)	(29.9)	(9.3)	5,226	11.8	10.5	2.1	1.9	7.6	6.9
China Resources Gas	HKD	21.6	0.0	0.5	(2.3)	7.8	0.5	(10.4)	(6.9)	6,171	14.0	12.6	2.4	2.1	8.9	8.0
China Gas Holdings	HKD	10.8	0.0	1.3	(0.7)	6.5	(2.5)	(19.1)	(3.0)	6,854	12.4	10.9	2.2	1.9	10.1	9.0
Shenzen Gas	HKD	11.5	(0.5)	0.5	(9.0)	(3.4)	(9.7)	(18.6)	(19.7)	2,817	10.7	9.9	1.1	1.0	7.4	6.8
Shann Xi	CNY	9.9	(0.6)	(1.0)	1.0	13.9	(20.1)	(45.5)	(21.8)	1,669	15.6	13.3	#N/A	#N/A	#N/A	#N/A
Suntien	HKD	0.8	(2.4)	(2.4)	(12.9)	(12.0)	(35.2)	(59.5)	(34.7)	387	8.6	6.5	0.3	0.3	8.7	7.2
China Oil & Gas	HKD	0.5	1.9	3.8	(1.8)	21.3	(8.5)	(41.2)	1.9	405	10.0	8.7	1.0	0.9	5.9	5.2
Average			0.1	0.8	(4.4)	6.3	(11.8)	(34.5)	(12.7)							
EV																
LG화학	KRW	275,000	0.9	0.2	(10.4)	(6.3)	(14.3)	6.4	(16.3)	15,412	12.7	11.4	1.4	1.3	5.4	5.0
삼성SDI	KRW	108,000	(0.5)	0.9	(7.3)	9.1	(12.9)	(13.9)	(5.3)	6,280	16.7	23.4	0.7	0.6	#N/A	#N/A
Panasonic	JPY	965.0	(0.4)	(0.1)	(6.4)	2.0	(31.2)	(47.4)	(22.2)	21,534	11.9	10.3	1.1	1.0	3.3	3.0
GS Yuasa	JPY	461.0	1.1	(0.4)	(1.1)	(0.9)	(0.4)	(15.3)	2.0	1,734	12.9	11.2	1.1	1.0	6.2	5.7
NEC	JPY	252.0	0.4	3.3	(8.0)	(12.5)	(39.6)	(38.8)	(34.5)	5,971	9.7	8.7	0.7	0.7	5.4	5.2
BYD Auto	CNY	57.8	(1.7)	(2.2)	(7.3)	10.4	(4.2)	(24.0)	(10.3)	19,007	35.0	27.6	4.0	3.5	15.4	13.2
Tesla Motors	USD	223.0	(0.9)	1.3	(11.3)	17.2	(3.7)	(9.9)	(7.1)	32,537	334.9	85.7	17.0	14.1	43.4	25.2
Kandi Technologies	USD	6.9	(0.9)	3.6	(6.8)	(3.8)	(30.6)	(29.1)	(36.8)	329	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Average			(0.2)	0.8	(7.3)	1.9	(17.1)	(21.5)	(16.3)							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임