

1. News Summary (3 page)

2016년 6월 13일

News	Conclusion
WTI comment	강달러, rig 증대에 하락
Headline	[주간가격] 중국/대만 단오절 여파, 에틸렌/프로필렌 거래 한산
News 1.	[주간가격] polyester 계열 2주 연속 소폭 상승
News 2.	[주간가격] 합성고무계열, BD 반등 불구 합성고무 3주 연속 급락
News 3.	미국 5월 PE 내수판매 1월 이후 최저 / 재고 4개월 만에 상승
News 4.	SK이노베이션, 중국 상하이 SECCO 지분인수추진설에 "확정된 바 없음"
	성수기 막바지에 이르렀지만 종동 등 신규물량 유입은 여전히 부담임
	유가상승 지속에도 불구하고 가격 억제 상황은 여전히
	공급과다/수요약세 현상은 여전히. 가격약세 상황 지속 중임
	신규설비 진입으로 PE 수급 글로벌하게 풀리는 양상임
	단기 시장 상 merit는 높지 않음, 다만 까다로운 중국 연이은 진출은 긍정

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	49.1	(2.9)	0.9	6.1	27.5	(19.3)
Dubai	\$/bbl	48.2	(1.5)	4.2	14.3	32.6	(24.0)
Gasoline	\$/bbl	61.0	(1.5)	0.9	8.7	12.3	(31.4)
Diesel	\$/bbl	60.0	(1.9)	2.5	15.0	26.2	(23.9)
Complex margin	\$/bbl	5.4	(0.1)	(0.8)	(0.1)	(2.1)	(6.1)
1M lagging	\$/bbl	11.4	(1.8)	1.0	1.6	(6.2)	(1.1)
Petrochemical			%	%	%	%	%
Naphtha	\$/t	433	(1.3)	1.2	11.7	16.3	(27.6)
Butadiene	\$/t	940	(1.1)	3.3	(12.6)	(6.5)	(27.1)
HDPE	\$/t	1,100	0.0	0.0	(2.7)	(2.7)	(16.7)
MEG	\$/t	613	0.0	0.7	(0.8)	(14.3)	(36.5)
PX	\$/t	805	(0.7)	2.5	4.6	4.7	(12.8)
SM	\$/t	990	(0.6)	2.3	(1.9)	(10.1)	(26.6)
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	2.56	(2.3)	6.6	13.9	20.5	(18.0)
Natural rubber	\$/t	1,200	(4.0)	(6.3)	(13.7)	(4.8)	(22.6)
Cotton	C/lbs	65.1	(0.4)	1.8	7.5	14.5	0.7

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	05/30	\$/t	1,090	(3.5)	(3.1)	10.1	(22.4)
Propylene	05/30	\$/t	690	(0.7)	(5.5)	8.7	(21.1)
Benzene	05/30	\$/t	625	(2.3)	(5.3)	11.1	(16.4)
Toluene	05/30	\$/t	620	(4.6)	(7.5)	5.1	(22.5)
Xylene	05/30	\$/t	640	(0.8)	(3.0)	10.3	(20.0)
PP	05/30	\$/t	955	(1.0)	(6.4)	8.5	(29.5)
PVC	05/30	\$/t	800	(3.0)	(2.4)	7.4	(6.4)
ABS	05/30	\$/t	1,270	0.0	(5.6)	10.0	(23.5)
SBR	05/30	\$/t	1,440	(4.6)	(6.2)	17.1	(4.0)
SM	05/30	\$/t	1,018	(2.6)	(6.0)	(2.2)	(22.6)
BPA	05/30	\$/t	1,235	(5.9)	1.0	6.7	(30.4)
Caustic	05/30	\$/t	295	0.9	1.7	2.6	(4.1)
2-EH	05/30	\$/t	790	(2.5)	(2.5)	12.9	(24.8)
Caprolactam	05/30	\$/t	1,340	0.0	1.5	16.5	(26.0)
Solar				%	%	%	%
Polysilicon	06/08	\$/kg	17.0	(0.2)	0.4	23.2	9.1
Module	06/08	\$/W	0.51	(0.6)	(1.9)	(6.4)	(7.5)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	90.0	(0.8)	1.8	(0.0)	9.5	5.6
Shell	EUR	1,780	(0.3)	6.2	3.5	8.6	(6.2)
Petrochina	CNY	7.30	0.0	(0.8)	1.5	(5.1)	(43.8)
Gazprom	RUB	142.4	(1.8)	(0.7)	(9.2)	(3.1)	(2.2)
Petrobras	BRL	8.8	(4.4)	2.5	(14.0)	10.4	(32.7)
Refinery							
Phillips66	USD	80.1	(1.3)	(0.1)	1.0	(6.3)	2.9
Valero	USD	53.4	(0.7)	(3.1)	(4.6)	(16.7)	(8.2)
JX	JPY	432.0	(2.9)	1.7	(3.5)	(5.9)	(22.6)
Neste Oil	EUR	30.6	(1.0)	0.1	6.8	3.8	37.2

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	67.4	(3.0)	(1.3)	(2.5)	7.9	(18.9)
Dow Chemical	USD	53.4	(0.4)	0.4	3.6	8.7	2.7
SABIC	SAR	82.6	0.0	0.0	(0.8)	8.0	(20.3)
Formosa Pla.	TWD	81.3	0.0	2.9	5.4	2.9	10.3
Shin-Etsu	JPY	6,262	(1.2)	2.1	0.8	4.6	(14.3)
Renewable							
Wacker	EUR	82.7	(1.1)	(1.3)	0.6	11.0	(19.2)
Yingli	USD	4.06	(7.3)	10.3	18.7	(11.7)	(65.3)
Tesla	USD	218.8	(4.6)	(0.1)	4.8	6.6	(12.7)
BYD	CNY	60.4	0.0	0.6	2.8	17.2	(20.4)

4. Coverage Summary

	06/10	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	2,018	(0.3)	1.6	1.9	2.3	3.4	(1.6)				* 추정치는 12M fwd 기준임	
KOSPI화학	5,434	(1.0)	1.3	(0.4)	4.8	5.2	7.6				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	272,500	0.6	3.8	(5.4)	(8.1)	(13.2)	1.9	매수	400,000	46.8	12.01	1.44
롯데케미칼	268,500	0.0	(0.6)	(10.5)	(14.9)	15.7	(2.5)	매수	340,000	26.6	9.08	1.04
한화케미칼	24,350	(1.4)	5.0	0.6	1.2	(7.8)	19.7	매수	30,000	23.2	9.62	0.79
금호석유화학	63,500	(2.5)	1.9	(6.2)	3.9	18.0	(15.8)	매수	70,000	10.2	12.52	1.26
KCC	399,000	0.9	0.1	(1.4)	(3.0)	(8.0)	(20.7)	매수	550,000	37.8	14.19	0.61
OCI	94,600	(2.8)	0.3	(14.4)	1.2	23.7	2.6	매수	120,000	26.8	17.77	0.82
SKC	28,800	(1.9)	3.6	(2.0)	(8.7)	(14.3)	(21.1)	매수	37,000	28.5	8.98	0.71
국도화학	64,200	(5.2)	4.1	0.6	0.3	11.7	(0.6)	매수	100,000	55.8	7.30	0.74
SK이노베이션	157,000	1.3	0.6	0.6	1.6	26.6	26.1	매수	180,000	14.6	11.75	0.96
S-Oil	84,000	0.4	2.1	(1.5)	(0.9)	12.1	25.9	매수	100,000	19.0	11.84	1.46
GS	51,300	0.6	0.6	(4.1)	(3.4)	3.1	5.7	매수	65,000	26.7	7.35	0.86
SK가스	90,000	2.4	3.4	8.3	14.8	25.2	(11.8)	매수	100,000	11.1	12.77	0.79
대우인터내셔널	26,800	8.7	13.3	15.8	28.8	58.1	7.8	매수	27,000	0.7	12.39	1.19
LG상사	39,650	2.3	5.0	10.4	10.9	16.6	2.6	매수	42,000	5.9	11.71	1.02

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

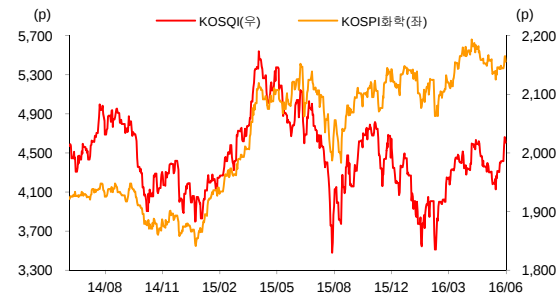
* 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.

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

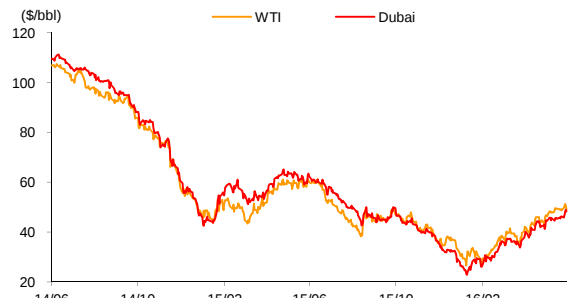
* 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

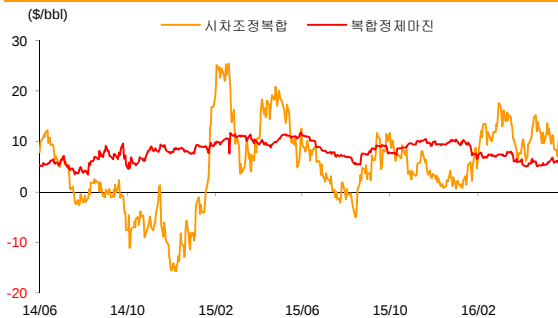
KOSPI/KOSPI화학



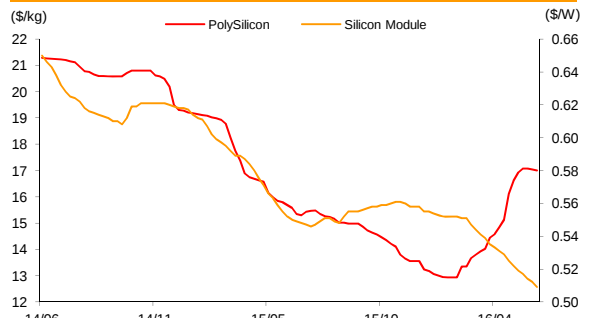
WTI/Dubai



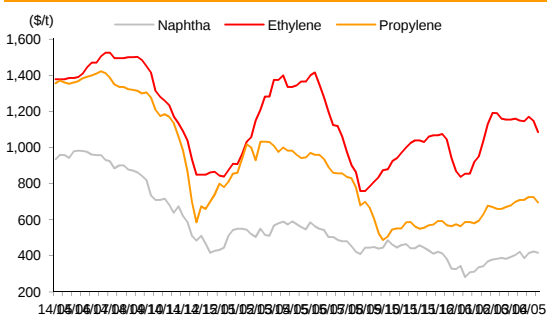
Complex & 1M lagging margin



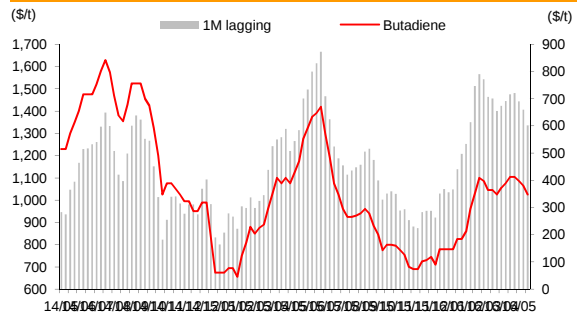
Polysilicon & Module prices



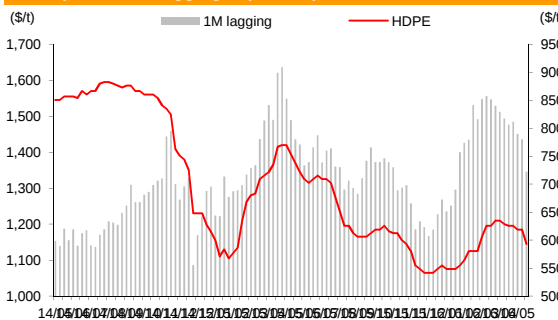
Naphtha/Ethylene/Propylene prices



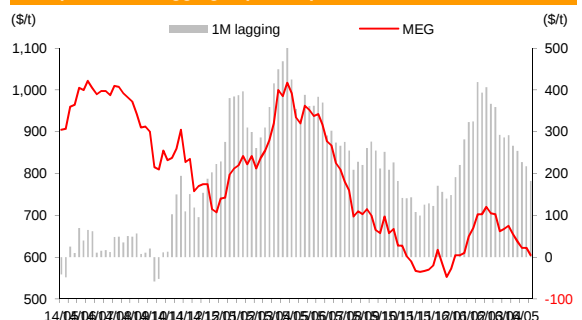
Butadiene price & 1M lagging naphtha spread



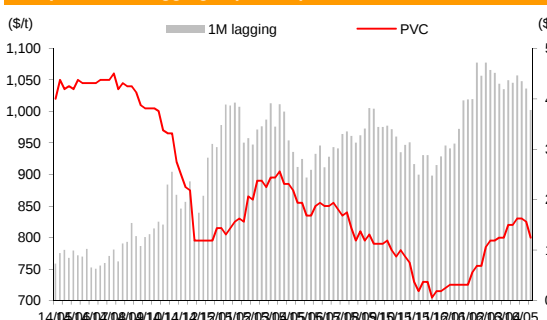
HDPE price & 1M lagging naphtha spread



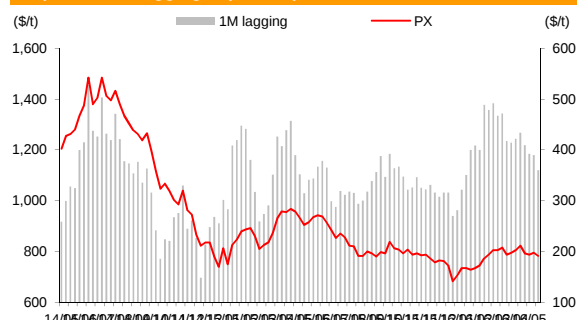
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

News Comment

Headline	(출처: Platts)
제목	[주간가격] 중국/대만 단오절 여파, 에틸렌/프로필렌 거래 한산
결론	성수기 막바지에 이르렀지만 중동 등 신규물량 유입은 여전한 부담임
세부	1) Ethylene \$1,045/t(WoW -), Propylene \$705/t(WoW +\$6/t) 2) 10일 중국, 대만 시장 단오절 휴장, 전체적인 거래량 한산 3) 다만 유가상승세 지속과 단기하락에 따른 수요발생으로 가격 지지 4) 프로필렌은 중국 일부설비 트러블로 소폭 상승 5) 성수기 막바지에 이르렀지만 중동 등 신규물량 유입은 여전한 부담임

WTI Comment	(출처: 연합뉴스)
제목	강달러, rig 증대에 하락
상승	
요인	
하락	미국 원유rig, 전주대비 3개 늘어나며 2주 연속 상승
요인	브렉시트 우려 등으로 달러 강세

Issue 1	(출처: Platts)
제목	[주간가격] polyester 계열 2주 연속 소폭 상승
결론	유가상승 지속에도 불구하고 가격 약세 상황은 여전함
세부	1) MEG \$613/t(WoW +\$4/t), PX \$804.8/t(+\$19.8/t), PTA \$607/t(WoW +\$4/t) 2) 6월 하반기 물량에 대한 short-covering 발생, 전반적 가격 지지 3) MEG는 대만 Formosa의 가동중지 여파로 인하여 공급물량 축소 4) PX는 유가상승세 영향으로 상승, 다만 수요는 여전히 약함 5) 유가상승 지속에도 불구하고 가격 약세 상황은 여전함

Issue 2	(출처: Platts)
제목	[주간가격] 합성고무계열, BD 반등 불구 합성고무 3주 연속 급락
결론	공급과다/수요약세 현상은 여전함. 가격약세 상황 지속 중임
세부	1) 부타디엔 \$940/t(WoW +\$30/t), SBR \$1,330/t(WoW -\$70/t) 2) 중국 8~9월 G20회의 진행, 상해-항주-닝보 내 BD 설비 일부 중지될 것 3) 또한 대만과 일본 BD 설비 일부 정기보수로 곧 가동중지에 진입 4) 그렇지만 합성고무는 BD 반등에도 불구하고 수요약세로 여전히 하락 5) 공급과다/수요약세 현상은 여전함. 가격약세 상황 지속 중임

Issue 3	(출처: Platts)
제목	미국 5월 PE 내수판매 1월 이후 최저 / 재고 4개월 만에 상승
결론	신규설비 진입으로 PE 수급 글로벌하게 풀리는 양상임
세부	1) 5월 PE 재고 1.8억파운드(HD 0.8억 + LD 0.6억 + LLD 0.5억) 2) 내수판매가 1월 이후 최저였을 뿐만 아니라 수출도 지난 10월 이후 최저 3) 지난 해 강한 re-stocking으로 PE 가격 상승했지만 5월은 유지되었음 4) 유럽은 이미 중동 물량의 급격한 유입으로 물량과다를 겪고 있음 5) 신규설비 진입으로 PE 수급 글로벌하게 풀리는 양상임

Issue 4	(출처: 각종언론)
제목	SK이노베이션, 중국 상하이 SECCO 지분인수추진설에 "확정된 바 없음"
결론	단기 시황 상 merit는 높지 않음, 다만 까다로운 중국 연이은 진출은 긍정
세부	1) 상하이 SECCO는 BP 50%, Sinopec 30%, 상해석유화학공사 20% 보유 2) \$27억(약 3.2조원) 규모로 공동출자한 JV이며 상해 내의 NCC임 3) 관계자, "중국 기업은 해외지분 50% 넘을 수 없음, BP 지분 인수할 것." 4) 이미 SK이노는 우한NCC, 상해용제JV 등 Sinopec과 사업합작 다수 보유 5) 단기 시황 상 merit는 높지 않음, 다만 까다로운 중국 연이은 진출은 긍정

Issue 5	(출처: 각종언론)
제목	롯데케미칼, 그룹 사정으로 액시올(Axiall) 인수 철회
결론	미국 화학시장 공급과잉 우려 증폭 중, 오히려 재무우려 경감 요인임
세부	1) 지난 7일 Axiall 인수를 위한 제안서 제출한 바 있음 2) 관계자, "롯데가 직면한 어려운 상황과 인수경쟁 과열 고려 인수 철회" 3) 가격도 문제였지만, 검찰의 롯데그룹 전격조사 영향이 큰 것으로 판단 4) 롯데케미칼 측, "앞으로도 좋은 매물 나오면 M&A 진행." 5) 미국 화학시장 공급과잉 우려 증폭 중, 오히려 재무우려 경감 요인임

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	0.889	0.884	0.880	0.879	0.895	0.914	0.883	0.921	0.754	0.901	0.896
	Change, %		0.6	1.0	1.1	(0.6)	(2.8)	0.7	(3.5)	17.9	(1.4)	(0.8)
	USD/JPY	107.0	107.1	106.5	109.3	113.2	121.6	122.7	120.6	105.9	121.1	112.5
	Change, %		(0.1)	0.4	(2.1)	(5.5)	(12.0)	(12.8)	(11.3)	1.0	(11.6)	(4.9)
	USD/KRW	1,165.3	1,155.9	1,183.6	1,172.9	1,203.4	1,181.5	1,108.0	1,172.6	1,053.0	1,131.2	1,183.8
	Change, %		0.8	(1.5)	(0.6)	(3.2)	(1.4)	5.2	(0.6)	10.7	3.0	(1.6)
Agriculture	Corn	423.0	426.5	418.3	378.5	362.5	377.3	357.3	358.8	415.6	376.8	373.9
	Change, %		(0.8)	1.1	11.8	16.7	12.1	18.4	17.9	1.8	12.2	13.1
	Soybean	1,178.3	1,176.0	1,132.0	1,076.0	881.8	878.3	949.5	871.3	1,245.5	945.4	946.8
	Change, %		0.2	4.1	9.5	33.6	34.2	24.1	35.2	(5.4)	24.6	24.4
	Wheat	495.0	510.3	497.3	451.5	471.5	484.5	513.5	470.0	588.0	508.1	468.8
	Change, %		(3.0)	(0.5)	9.6	5.0	2.2	(3.6)	5.3	(15.8)	(2.6)	5.6
	Rice	11.4	11.3	11.4	11.2	10.1	11.1	9.9	11.6	14.0	11.1	10.8
	Change, %		0.3	(0.1)	1.7	12.4	2.2	15.0	(1.8)	(18.6)	2.7	4.9
	Oats	201.8	205.3	188.0	181.3	177.8	261.5	255.8	217.3	373.1	250.2	191.7
	Change, %		(1.7)	7.3	11.3	13.5	(22.8)	(21.1)	(7.1)	(45.9)	(19.4)	5.3
MYR/mt	Palm Oil	2,626.0	2,635.0	2,680.0	2,670.0	2,489.0	2,160.0	2,279.0	2,398.0	2,415.1	2,190.3	2,537.7
	Change, %		(0.3)	(2.0)	(1.6)	5.5	21.6	15.2	9.5	8.7	19.9	3.5
	Cocoa	3,135.0	3,116.0	3,031.0	3,081.0	3,031.0	3,344.0	3,128.0	3,211.0	3,006.8	3,091.6	2,965.1
	Change, %		0.6	3.4	1.8	3.4	(6.3)	0.2	(2.4)	4.3	1.4	5.7
	Cotton	64.8	65.0	63.9	60.9	56.8	63.8	64.9	63.3	76.4	63.3	60.8
	Change, %		(0.3)	1.3	6.3	13.9	1.5	(0.2)	2.3	(15.2)	2.3	6.4
	Sugar	19.7	19.7	18.8	16.0	14.8	14.6	12.0	15.2	16.3	13.1	15.3
	Change, %		(0.2)	5.1	23.0	32.9	35.4	64.0	29.3	20.7	49.9	29.1
	Coffee	137.0	134.0	127.1	126.9	120.6	122.7	136.5	126.7	177.1	132.6	122.0
	Change, %		2.2	7.7	7.9	13.6	11.7	0.4	8.1	(22.7)	3.2	12.3
Energy	WTI	49.1	50.6	48.6	44.7	37.8	36.8	61.4	37.0	92.9	48.8	38.6
	Change, %		(2.9)	0.9	9.9	29.7	33.5	(20.1)	32.5	(47.2)	0.5	27.0
	Brent	50.5	52.0	49.6	45.5	40.1	39.7	65.7	37.3	99.5	53.7	40.2
	Change, %		(2.7)	1.8	11.0	26.2	27.2	(23.1)	35.6	(49.2)	(5.8)	25.7
	Natural Gas	2.6	2.6	2.4	2.2	1.8	2.0	2.9	2.3	4.3	2.6	2.0
	Change, %		(2.3)	6.6	18.4	43.0	26.8	(11.6)	9.4	(40.1)	(2.8)	24.8
	Ethanol	1.7	1.7	1.7	1.5	1.4	1.5	1.5	1.4	2.1	1.5	1.5
	Change, %		(1.1)	(1.1)	8.5	16.1	13.1	9.7	18.4	(19.6)	9.8	12.7
	RBOB Gasoline	156.0	161.9	160.8	148.6	143.9	128.0	214.6	126.7	262.6	163.6	134.0
	Change, %		(3.6)	(3.0)	5.0	8.4	21.8	(27.3)	23.1	(40.6)	(4.7)	16.4
Metal	Coal	39.5	39.6	39.6	43.6	43.5	43.3	44.1	43.3	57.5	45.2	43.2
	Change, %		(0.3)	(0.3)	(9.5)	(9.2)	(8.7)	(10.4)	(8.8)	(31.3)	(12.6)	(8.6)
	Gold	1,273.9	1,269.7	1,244.2	1,265.8	1,272.3	1,071.6	1,186.3	1,061.4	1,266.5	1,160.6	1,211.2
	Change, %		0.3	2.4	0.6	0.1	18.9	7.4	20.0	0.6	9.8	5.2
	Silver	17.3	17.3	16.4	17.1	15.6	14.1	16.0	13.8	19.1	15.7	15.6
	Change, %		0.3	5.6	1.2	11.1	22.7	8.0	25.4	(9.2)	10.2	10.9
	Platinum	991.7	1,003.0	987.3	1,053.6	979.4	855.0	1,115.3	891.1	1,384.6	1,055.7	957.9
	Change, %		(1.1)	0.4	(5.9)	1.3	16.0	(11.1)	11.3	(28.4)	(6.1)	3.5
	Palladium	544.4	560.2	554.2	595.9	571.7	541.6	745.1	563.0	803.4	691.9	546.9
	Change, %		(2.8)	(1.8)	(8.7)	(4.8)	0.5	(26.9)	(3.3)	(32.2)	(21.3)	(0.5)
	Copper	4,510.0	4,515.0	4,688.0	4,680.0	4,890.0	4,590.0	6,030.0	4,705.0	6,828.1	5,503.1	4,712.8
	Change, %		(0.1)	(3.8)	(3.6)	(7.8)	(1.7)	(25.2)	(4.1)	(33.9)	(18.0)	(4.3)
	Uranium	28.2	28.3	28.3	27.8	28.5	36.2	36.0	34.4	33.5	36.9	30.5
	Change, %		(0.4)	(0.5)	1.4	(1.2)	(22.1)	(21.8)	(18.2)	(16.0)	(23.6)	(7.8)
	HR Coil	625.0	628.0	615.0	560.0	407.0	364.0	464.0	391.0	653.2	461.5	467.6
	Change, %		(0.5)	1.6	11.6	53.6	71.7	34.7	59.8	(4.3)	35.4	33.7
	Scrap	275.0	265.0	265.0	274.9	250.0	161.2	270.2	250.0	401.3	252.9	300.6
	Change, %		3.8	3.8	0.1	10.0	70.6	1.8	10.0	(31.5)	8.7	(8.5)
	Zinc	2,086.0	2,069.5	1,992.0	1,848.0	1,766.0	1,532.0	2,136.0	1,609.0	2,165.0	1,941.9	1,779.1
	Change, %		0.8	4.7	12.9	18.1	36.2	(2.3)	29.6	(3.6)	7.4	17.3

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		06/10	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Crude Oil	WTI	49.1	50.6	48.6	46.2	38.5	36.3	60.8	37.0	93.1	48.8	38.6
	Change, %		(2.9)	0.9	6.1	27.5	35.1	(19.3)	32.5	(47.3)	0.6	27.0
	Dubai	48.2	49.0	46.3	42.2	36.4	34.6	63.4	32.2	96.7	50.8	35.8
	Change, %		(1.5)	4.2	14.3	32.6	39.2	(24.0)	49.8	(50.1)	(5.0)	34.6
Crude Oil	Gasoline(휘발유)	61.0	62.0	60.5	56.1	54.3	56.2	89.0	54.8	110.9	69.5	53.1
Product	Change, %		(1.5)	0.9	8.7	12.3	8.6	(31.4)	11.4	(45.0)	(12.2)	14.9
	Kerosene(등유)	59.9	60.7	58.7	52.0	49.1	47.6	77.4	44.2	112.6	64.7	47.3
	Change, %		(1.4)	2.1	15.1	21.9	25.7	(22.6)	35.4	(46.8)	(7.5)	26.6
	Diesel(경유)	60.0	61.2	58.5	52.2	47.6	47.3	78.8	43.2	112.8	64.8	45.9
	Change, %		(1.9)	2.5	15.0	26.2	26.8	(23.9)	38.8	(46.8)	(7.4)	30.9
	Bunker-C	37.6	37.8	36.0	33.0	27.9	28.1	58.7	25.3	86.5	45.3	28.2
	Change, %		(0.6)	4.5	13.9	34.8	33.9	(36.1)	48.5	(56.6)	(17.0)	33.0
	Naphtha	46.3	47.0	45.7	41.8	38.3	44.1	62.8	43.5	94.3	52.6	39.8
	Change, %		(1.4)	1.4	10.9	21.0	5.0	(26.3)	6.6	(50.9)	(12.0)	16.5
Dubai	Gasoline(휘발유)	12.8	13.0	14.2	14.0	18.0	21.6	25.6	22.6	14.2	18.7	17.3
Spread	Change		(0.2)	(1.4)	(1.2)	(5.2)	(8.8)	(12.8)	(9.8)	(1.4)	(5.9)	(4.5)
	Kerosene(등유)	11.6	11.7	12.4	9.8	12.7	13.0	14.0	12.0	15.9	14.0	11.5
	Change		(0.1)	(0.7)	1.8	(1.1)	(1.4)	(2.3)	(0.4)	(4.2)	(2.3)	0.2
	Diesel(경유)	11.8	12.2	12.3	10.0	11.2	12.7	15.4	11.0	16.0	14.0	10.0
	Change		(0.4)	(0.5)	1.8	0.6	(0.9)	(3.6)	0.7	(4.3)	(2.2)	1.7
	Bunker-C	(10.7)	(11.2)	(10.3)	(9.2)	(8.5)	(6.6)	(4.7)	(6.9)	(10.3)	(5.5)	(7.6)
Refining Margin	Change		0.5	(0.3)	(1.5)	(2.2)	(4.1)	(6.0)	(3.8)	(0.4)	(5.1)	(3.1)
	Naphtha	(1.9)	(2.0)	(0.6)	(0.4)	1.9	9.5	(0.6)	11.3	(2.4)	1.8	3.9
	Change		0.1	(1.3)	(1.5)	(3.8)	(11.4)	(1.3)	(13.2)	0.5	(3.7)	(5.8)
	Simple(단순)	(0.7)	(0.8)	(0.1)	(0.3)	1.4	3.5	4.4	3.2	(0.1)	3.3	1.4
Refining Margin	Change		0.1	(0.6)	(0.4)	(2.1)	(4.2)	(5.1)	(3.8)	(0.6)	(4.0)	(2.1)
	Complex(복합)	5.4	5.5	6.2	5.4	7.5	10.0	11.5	9.7	7.1	9.3	7.1
	Change		(0.1)	(0.8)	(0.1)	(2.1)	(4.6)	(6.1)	(4.3)	(1.7)	(3.9)	(1.8)
	Complex(lagging)	11.4	13.2	10.4	9.8	17.6	3.0	12.6	2.1	2.3	7.3	9.3
Refining Margin	Change		(1.8)	1.0	1.6	(6.2)	8.4	(1.1)	9.3	9.1	4.2	2.1

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			06/10	06/09	06/08	06/07	06/06	06/03	06/02	06/01	05/31	05/30
Spot Price	Naphtha	CFR Japan	432.5	438.0	431.3	427.9	427.8	427.5	430.5	415.1	423.3	421.4
	Ethylene	CFR SE Asia	1,045.0	1,045.0	1,045.0	1,045.0	1,045.0	1,045.0	1,065.0	1,065.0	1,065.0	1,065.0
	Propylene	FOB Korea	705.0	705.0	705.0	704.0	699.0	699.0	699.0	699.0	695.0	695.0
	Butadiene	FOB Korea	940.0	950.0	915.0	915.0	910.0	910.0	930.0	935.0	945.0	945.0
	HDPE	CFR FE Asia	1,100.0	1,100.0	1,100.0	1,100.0	1,095.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0
	LDPE	CFR FE Asia	1,110.0	1,110.0	1,110.0	1,110.0	1,100.0	1,115.0	1,115.0	1,115.0	1,115.0	1,115.0
	LLDPE	CFR FE Asia	1,085.0	1,085.0	1,085.0	1,095.0	1,095.0	1,090.0	1,090.0	1,090.0	1,090.0	1,090.0
	MEG	CFR China	613.0	613.0	613.0	610.0	609.0	609.0	610.0	602.0	611.0	603.0
	PP	CFR FE Asia	900.0	900.0	900.0	900.0	900.0	900.0	905.0	910.0	910.0	905.0
	PX	CFR China	804.8	810.7	800.0	793.5	788.5	785.0	773.7	771.5	776.5	767.8
	PTA	CFR China	607.0	607.0	607.0	606.0	605.0	603.0	602.0	602.0	602.0	600.0
	Benzene	FOB Korea	619.0	626.0	621.0	610.0	605.0	601.0	593.0	599.0	605.5	601.5
	Toluene	FOB Korea	579.0	587.0	578.0	578.0	572.0	573.0	573.0	574.0	569.5	566.5
	Xylene	FOB Korea	694.0	699.0	694.0	688.0	686.0	681.0	673.5	677.0	682.0	680.0
	SM	FOB Korea	990.0	996.0	980.5	968.5	962.0	968.0	968.0	970.0	972.0	957.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	Naphtha	CFR Japan	417.0	424.5	422.5	338.0	345.5	559.0	413.5	865.9	493.0	370.8
	Change, %			(1.8)	(1.3)	23.4	20.7	(25.4)	0.8	(51.8)	(15.4)	12.5
	Ethylene	CFR SE Asia	1,090.0	1,130.0	1,125.0	990.0	885.0	1,405.0	1,090.0	1,401.1	1,103.7	1,063.6
	Change, %			(3.5)	(3.1)	10.1	23.2	(22.4)	0.0	(22.2)	(1.2)	2.5
	Propylene	CFR SE Asia	690.0	695.0	730.0	635.0	645.0	875.0	650.0	1,254.2	770.0	642.3
	Change, %			(0.7)	(5.5)	8.7	7.0	(21.1)	6.2	(45.0)	(10.4)	7.4
	Butadiene	CFR SE Asia	985.0	1,025.0	1,065.0	920.0	740.0	1,125.0	720.0	1,281.7	877.5	921.4
	Change, %			(3.9)	(7.5)	7.1	33.1	(12.4)	36.8	(23.2)	12.3	6.9
	Benzene	CFR SE Asia	625.0	640.0	660.0	562.5	547.5	747.5	580.0	1,243.1	690.0	605.0
	Change, %			(2.3)	(5.3)	11.1	14.2	(16.4)	7.8	(49.7)	(9.4)	3.3
	Toluene	CFR SE Asia	620.0	650.0	670.0	590.0	575.0	800.0	630.0	1,082.5	700.8	627.5
	Change, %			(4.6)	(7.5)	5.1	7.8	(22.5)	(1.6)	(42.7)	(11.5)	(1.2)
	Xylene	CFR SE Asia	640.0	645.0	660.0	580.0	575.0	800.0	625.0	1,055.7	699.3	621.6
	Change, %			(0.8)	(3.0)	10.3	11.3	(20.0)	2.4	(39.4)	(8.5)	3.0
Spread	Ethylene	-Naphtha	673.0	705.5	702.5	652.0	539.5	846.0	676.5	535.2	610.6	692.8
	Change, %			(4.6)	(4.2)	3.2	24.7	(20.4)	(0.5)	25.7	10.2	(2.9)
	Propylene	-Naphtha	273.0	270.5	307.5	297.0	299.5	316.0	236.5	388.3	277.0	271.5
	Change, %			0.9	(11.2)	(8.1)	(8.8)	(13.6)	15.4	(29.7)	(1.4)	0.6
	Butadiene	-Naphtha	568.0	600.5	642.5	582.0	394.5	566.0	306.5	415.9	384.5	550.6
	Change, %			(5.4)	(11.6)	(2.4)	44.0	0.4	85.3	36.6	47.7	3.2
	Benzene	-Naphtha	208.0	215.5	237.5	224.5	202.0	188.5	166.5	377.3	197.0	234.2
	Change, %			(3.5)	(12.4)	(7.3)	3.0	10.3	24.9	(44.9)	5.6	(11.2)
	Toluene	-Naphtha	203.0	225.5	247.5	252.0	229.5	241.0	216.5	216.6	207.8	256.7
	Change, %			(10.0)	(18.0)	(19.4)	(11.5)	(15.8)	(6.2)	(6.3)	(2.3)	(20.9)
	Xylene	-Naphtha	223.0	220.5	237.5	242.0	229.5	241.0	211.5	189.9	206.3	250.8
	Change, %			1.1	(6.1)	(7.9)	(2.8)	(7.5)	5.4	17.4	8.1	(11.1)

자료 : Cischem, 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	1,145.0	1,185.0	1,195.0	1,125.0	1,075.0	1,370.0	1,065.0	1,524.9	1,230.1	1,140.5
	Change, %			(3.4)	(4.2)	1.8	6.5	(16.4)	7.5	(24.9)	(6.9)	0.4
	MEG	CFR SE Asia	605.0	622.5	655.0	670.0	605.0	920.0	617.5	934.1	780.8	643.1
	Change, %			(2.8)	(7.6)	(9.7)	0.0	(34.2)	(2.0)	(35.2)	(22.5)	(5.9)
	PVC	CFR SE Asia	800.0	825.0	820.0	745.0	725.0	855.0	715.0	1,013.9	820.8	769.5
	Change, %			(3.0)	(2.4)	7.4	10.3	(6.4)	11.9	(21.1)	(2.5)	4.0
	PP	CFR SE Asia	955.0	965.0	1,020.0	880.0	835.0	1,355.0	835.0	1,503.0	1,109.8	935.9
	Change, %			(1.0)	(6.4)	8.5	14.4	(29.5)	14.4	(36.5)	(13.9)	2.0
	2-EH	CFR Korea	790.0	810.0	810.0	700.0	685.0	1,050.0	680.0	1,397.1	930.1	746.6
	Change, %			(2.5)	(2.5)	12.9	15.3	(24.8)	16.2	(43.5)	(15.1)	5.8
	ABS	CFR SE Asia	1,270.0	1,270.0	1,345.0	1,155.0	1,120.0	1,660.0	1,130.0	1,897.7	1,431.1	1,232.0
	Change, %			0.0	(5.6)	10.0	13.4	(23.5)	12.4	(33.1)	(11.3)	3.1
	SBR	CFR SE Asia	1,440.0	1,510.0	1,535.0	1,230.0	1,210.0	1,500.0	1,150.0		1,332.1	1,349.8
	Change, %			(4.6)	(6.2)	17.1	19.0	(4.0)	25.2		8.1	6.7
	SM	CFR SE Asia	1,017.5	1,045.0	1,082.5	1,040.0	940.0	1,315.0	910.0	1,547.1	1,100.7	1,040.5
	Change, %			(2.6)	(6.0)	(2.2)	8.2	(22.6)	11.8	(34.2)	(7.6)	(2.2)
	Caustic	FOB NEA	295.0	292.5	290.0	287.5	290.0	307.5	285.0	310.0	296.8	287.7
	Change, %			0.9	1.7	2.6	1.7	(4.1)	3.5	(4.8)	(0.6)	2.5
	PX	CFR SE Asia	782.5	795.0	822.5	745.0	735.0	905.0	762.5	1,228.5	842.9	769.3
	Change, %			(1.6)	(4.9)	5.0	6.5	(13.5)	2.6	(36.3)	(7.2)	1.7
	PO	CFR China	1,235.0	1,312.5	1,222.5	1,157.5	1,057.5	1,775.0	1,257.5	2,179.2	1,683.4	1,221.0
	Change, %			(5.9)	1.0	6.7	16.8	(30.4)	(1.8)	(43.3)	(26.6)	1.1
	Caprolactam	CFR SE Asia	1,340.0	1,340.0	1,320.0	1,150.0	1,240.0	1,810.0	1,260.0	2,233.4	1,581.5	1,247.3
	Change, %			0.0	1.5	16.5	8.1	(26.0)	6.3	(40.0)	(15.3)	7.4
	PTA	CFR SE Asia	627.5	627.5	632.5	580.0	562.5	707.5	585.0	911.7	648.0	601.0
	Change, %			0.0	(0.8)	8.2	11.6	(11.3)	7.3	(31.2)	(3.2)	4.4
Spread	HDPE		728.0	760.5	772.5	787.0	729.5	811.0	651.5	659.0	737.1	769.7
	Change, %			(4.3)	(5.8)	(7.5)	(0.2)	(10.2)	11.7	10.5	(1.2)	(5.4)
	MEG		188.0	198.0	232.5	332.0	259.5	361.0	204.0	68.2	287.8	272.3
	Change, %			(5.1)	(19.1)	(43.4)	(27.6)	(47.9)	(7.8)	175.5	(34.7)	(31.0)
	PVC		383.0	400.5	397.5	407.0	379.5	296.0	301.5	148.0	327.8	398.8
	Change, %			(4.4)	(3.6)	(5.9)	0.9	29.4	27.0	158.7	16.8	(3.9)
	PP		538.0	540.5	597.5	542.0	489.5	796.0	421.5	637.1	616.8	565.1
	Change, %			(0.5)	(10.0)	(0.7)	9.9	(32.4)	27.6	(15.6)	(12.8)	(4.8)
	2-EH		373.0	385.5	387.5	362.0	339.5	491.0	266.5	531.3	437.0	375.8
	Change, %			(3.2)	(3.7)	3.0	9.9	(24.0)	40.0	(29.8)	(14.7)	(0.7)
	ABS		853.0	845.5	922.5	817.0	774.5	1,101.0	716.5	1,031.9	938.1	861.3
	Change, %			0.9	(7.5)	4.4	10.1	(22.5)	19.1	(17.3)	(9.1)	(1.0)
	SBR	BD spread	455.0	485.0	470.0	310.0	470.0	375.0	430.0		454.7	428.4
	Change, %			(6.2)	(3.2)	46.8	(3.2)	21.3	5.8		0.1	6.2
	SM		600.5	620.5	660.0	702.0	594.5	756.0	496.5	681.2	607.7	669.7
	Change, %			(3.2)	(9.0)	(14.5)	1.0	(20.6)	20.9	(11.8)	(1.2)	(10.3)
	Caustic											
	Change, %											
	PX		365.5	370.5	400.0	407.0	389.5	346.0	349.0	362.6	349.9	398.5
	Change, %			(1.3)	(8.6)	(10.2)	(6.2)	5.6	4.7	0.8	4.5	(8.3)
	PO	propylene spread	545.0	617.5	492.5	522.5	412.5	900.0	607.5	925.0	913.4	578.8
	Change, %			(11.7)	10.7	4.3	32.1	(39.4)	(10.3)	(41.1)	(40.3)	(5.8)
	Caprolactam	benzene spread	715.0	700.0	660.0	587.5	692.5	1,062.5	680.0	990.3	891.6	642.3
	Change, %			2.1	8.3	21.7	3.2	(32.7)	5.1	(27.8)	(19.8)	11.3
	PTA	px spread	79.8	71.0	56.8	58.5	48.0	74.0	51.3	51.8	58.0	62.5
	Change, %			12.3	40.5	36.3	66.1	7.8	55.6	54.1	37.5	27.6

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	06/10	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA			
											15	16E	15	16E	15	16E		
Petrochemical																		
Dow Chemical	USD	53.4	(0.4)	0.4	3.6	8.7	(2.8)	2.7	3.7	60,095	15.2	13.6	2.5	2.4	8.4	7.7		
Du Pont	USD	67.6	(0.5)	(1.8)	4.0	8.7	(9.4)	2.1	1.4	59,045	21.5	18.3	6.2	4.9	12.2	10.5		
Eastman	USD	72.9	1.6	0.2	(3.9)	5.1	5.0	(7.2)	8.0	10,777	10.4	9.4	2.3	2.1	8.0	7.7		
BASF	EUR	67.4	(3.0)	(1.3)	(2.5)	7.9	(4.6)	(18.9)	(4.7)	69,830	14.7	13.4	2.0	1.9	7.6	7.1		
Akzo Nobel	EUR	59.3	(2.8)	(3.8)	(4.4)	8.0	(4.9)	(13.8)	(3.9)	16,643	14.1	13.5	2.2	2.0	7.8	7.4		
Arkema	EUR	69.4	(2.8)	(5.1)	2.0	12.7	8.4	1.4	7.4	5,909	13.9	12.0	1.4	1.3	6.0	5.6		
Lanxess	EUR	40.8	(2.8)	(5.0)	(7.7)	0.7	(6.6)	(20.4)	(4.4)	4,212	18.9	14.6	1.5	1.4	5.4	5.0		
Sumitomo Chemical	JPY	473	(3.5)	(2.3)	(3.9)	(4.6)	(30.6)	(37.6)	(32.5)	7,310	9.1	8.2	0.9	0.9	6.7	6.2		
Mitsubishi Chemical	JPY	532	(0.9)	(0.9)	(7.1)	(12.3)	(30.5)	(27.1)	(31.4)	7,474	8.7	7.9	0.8	0.7	5.6	5.4		
Shin-Etsu Chemical	JPY	6,262	(1.2)	2.1	0.8	4.6	(7.1)	(14.3)	(5.4)	25,260	17.6	16.4	1.3	1.2	6.2	5.7		
Asahi Kasei	JPY	694	1.8	(0.2)	(8.0)	3.9	(13.0)	(33.5)	(15.7)	9,087	10.5	9.6	0.8	0.8	5.0	4.8		
JSR	JPY	1,545	(0.8)	(3.0)	(0.3)	(10.5)	(15.5)	(28.6)	(18.6)	3,261	13.7	12.7	0.9	0.9	5.7	5.2		
Nitto Denko	JPY	7,077	0.5	2.7	3.5	5.3	(17.5)	(24.4)	(20.6)	11,480	17.5	15.5	1.7	1.6	7.3	6.6		
SABIC	SAR	82.6	0.0	0.0	(0.8)	8.0	(5.6)	(20.3)	7.9	66,052	16.7	14.9	1.4	1.4	7.7	7.0		
Yansab	SAR	44.3	0.0	5.4	13.9	15.6	9.4	(16.2)	36.7	6,648	18.5	16.5	1.6	1.6	9.5	9.1		
Formosa Plastics	TWD	81.3	0.0	2.9	5.4	2.9	12.6	10.3	5.6	16,104	16.6	15.4	1.7	1.7	24.6	22.3		
Formosa Fiber	TWD	83.6	0.0	2.0	4.1	8.3	23.9	11.9	13.0	15,247	16.7	16.2	1.6	1.6	13.9	13.0		
Nan Ya Plastics	TWD	62.4	0.0	0.0	0.8	(5.2)	7.2	(13.9)	2.3	15,399	14.3	14.6	1.4	1.4	13.9	13.5		
Sinopec Shanghai	CNY	6.19	0.0	(0.5)	1.0	2.1	(1.0)	(33.9)	(4.5)	8,614	17.1	17.7	2.9	2.6	8.5	8.8		
Sinopec Yizheng(Fiber)	CNY	3.99	0.0	(0.5)	(3.6)	(20.5)	(51.6)	(60.6)	(51.1)	7,735	#N/A	N/A	399.0	2.3	2.3	15.7	13.3	
Reliance	INR	977	0.6	1.8	(0.6)	(3.5)	2.8	7.8	(3.8)	47,334	11.2	9.5	1.2	1.0	9.0	7.3		
Industries Qatar	QAR	99.5	0.0	4.5	0.5	(9.0)	(3.1)	(25.9)	(10.4)	16,536	14.9	13.6	1.8	1.8	55.4	54.3		
PTT Chemical	THB	61.5	0.4	(0.8)	4.7	5.1	23.6	(8.6)	23.0	7,784	11.4	10.5	1.2	1.1	5.4	5.1		
Petronas	MYR	6.5	(1.8)	0.6	1.9	(4.2)	(2.1)	5.7	(10.0)	12,832	19.1	17.3	2.0	1.9	9.3	8.5		
LG화학	KRW	272,500	0.6	3.8	(3.4)	(7.6)	(13.2)	1.9	(17.0)	15,430	0.0	13.4	0.0	1.4	0.0	5.3		
롯데케미칼	KRW	268,500	0.0	(0.6)	(6.8)	(16.4)	15.7	(2.5)	10.3	7,863	0.0	6.8	0.0	1.1	0.0	3.8		
한화케미칼	KRW	24,350	(1.4)	5.0	1.5	1.5	(7.8)	19.7	(10.5)	3,429	0.0	9.0	0.0	0.8	0.0	8.4		
금호석유	KRW	63,500	(2.5)	1.9	(4.9)	4.3	18.0	(15.8)	21.9	1,653	0.0	14.5	0.0	1.2	0.0	10.4		
SKC	KRW	28,800	(1.9)	3.6	4.9	(11.0)	(14.3)	(21.1)	(14.8)	910	0.0	8.7	0.0	0.7	0.0	7.6		
국도화학	KRW	64,200	(5.2)	4.1	2.6	1.4	11.7	(0.6)	8.3	319	0.0	8.1	0.0	0.8	0.0	4.0		
효성	KRW	3,810	(1.2)	(4.3)	(7.4)	27.2	41.1	25.3	46.0	3,886	0.0	8.0	0.0	1.2	0.0	7.2		
Average			(0.9)	0.4	(0.3)	1.2	(2.0)	(11.5)	(2.1)									
Refinery																		
Valero	USD	53.4	(0.7)	(3.1)	(4.6)	(16.7)	(25.1)	(8.2)	(24.4)	25,102	9.2	7.8	1.2	1.1	4.8	4.4		
Conoco Phillips	USD	44.5	(4.4)	0.7	3.8	14.0	(9.6)	(30.5)	(4.7)	55,121	#N/A	N/A	146.9	1.5	1.5	14.8	7.8	
Formosa Petrochemical	TWD	88.5	0.0	1.4	0.1	1.6	19.6	13.6	12.3	26,232	18.2	18.7	3.1	3.0	11.7	11.7		
Tesoro	USD	77.2	(2.0)	(3.5)	0.1	(10.3)	(27.9)	(8.4)	(26.7)	9,263	10.6	10.3	1.7	1.5	6.0	5.6		
Marathon Petroleum	USD	36.4	(1.5)	2.7	2.7	0.2	(30.5)	(28.5)	(29.8)	19,286	10.4	8.7	1.4	1.3	7.0	6.3		
Devon Energy	USD	35.1	(6.2)	(2.2)	11.4	56.2	(1.1)	(45.0)	9.7	18,403	#N/A	N/A	40.6	2.9	2.8	16.6	9.8	
Hollyfrontier	USD	27.0	0.7	(0.3)	(6.9)	(23.6)	(40.6)	(34.4)	(32.2)	4,771	12.1	8.1	0.9	0.9	6.1	5.0		
Phillips 66	USD	80.1	(1.3)	(0.1)	1.0	(6.3)	(7.7)	2.9	(2.1)	42,083	14.8	11.6	1.8	1.6	8.4	7.1		
Murphy Oil	USD	29.4	(7.6)	(3.3)	(1.7)	28.1	26.1	(33.1)	30.9	5,061	#N/A	N/A	#N/A	N/A	1.0	1.0	9.2	6.6
JX Holdings	JPY	432.0	(2.9)	1.7	(3.5)	(5.9)	(15.1)	(22.6)	(15.0)	10,064	7.7	7.4	0.6	0.6	8.4	8.4		
Cosmo Oil	JPY	164.0	0.0	0.0	0.0	0.0	0.0	(23.0)	0.0	1,151	#N/A	N/A	#N/A	N/A	#N/A	N/A	#N/A	N/A
Idemitsu	JPY	2,436.0	(0.3)	9.3	7.6	30.4	21.0	(3.4)	25.7	3,639	6.9	6.5	0.7	0.6	6.8	6.5		
Tonengeneral	JPY	1,056.0	(2.6)	2.5	6.0	17.6	(8.6)	(12.7)	3.3	3,608	9.9	9.5	1.5	1.4	6.6	6.7		
Nesteoil	EUR	30.6	(1.0)	0.1	6.8	3.8	15.8	37.2	10.9	0	11.8	12.6	2.2	2.0	7.3	7.7		
Ashland	USD	116.4	(0.7)	1.8	3.1	18.2	8.7	(8.8)	13.3	7,221	16.4	15.1	2.7	2.8	9.2	8.9		
Fuchs Petrolub	EUR	35.2	(2.7)	(3.2)	(5.1)	(6.3)	(18.1)	(9.6)	(19.1)	5,239	19.7	18.7	4.0	3.6	11.4	10.8		
SK이노베이션	KRW	157,000	1.3	0.6	3.6	1.0	26.6	26.1	20.8	12,404	0.0	7.9	0.0	0.8	0.0	4.5		
S-Oil	KRW	84,000	0.4	2.1	0.8	(2.7)	12.1	25.9	5.8	8,080	0.0	7.7	0.0	1.5	0.0	5.3		
GS	KRW	51,300	0.6	0.6	(3.9)	(4.5)	3.1	5.7	1.2	4,073	0.0	7.2	0.0	0.7	0.0	8.4		
Average			(1.6)	0.4	1.1	5.0	(2.7)	(8.2)	(1.1)									

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	06/10	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	(0.8)	1.8	(0.0)	9.5	18.9	5.6	15.4	373,112	34.0	21.2	2.2	2.2	11.5	8.7			
BP	GBP	371	(0.9)	3.4	3.7	8.0	5.6	(16.4)	4.7	99,142	29.4	13.9	1.1	1.1	6.1	4.8			
Shell	EUR	1,780	(0.3)	6.2	3.5	8.6	17.0	(6.2)	16.6	205,308	22.5	13.2	1.0	1.0	7.4	5.5			
Chevron	USD	102	(0.8)	1.3	0.7	8.6	14.2	0.1	13.4	192,202	76.3	21.9	1.3	1.3	9.3	6.5			
Total	EUR	42	(1.9)	(0.6)	(1.4)	3.1	(2.4)	(6.6)	1.9	117,556	15.9	11.4	1.2	1.1	7.4	5.7			
Sinopec	CNY	5	0.0	0.8	4.3	6.6	(0.8)	(38.9)	(2.2)	89,188	18.7	13.1	0.8	0.8	5.7	5.0			
Petrochina	CNY	7	0.0	(0.8)	1.5	(5.1)	(12.4)	(43.8)	(12.6)	195,652	88.0	23.4	1.1	1.1	8.1	6.6			
CNOOC	CNY	13	0.0	1.1	2.7	1.2	(19.4)	(57.8)	(18.2)	7,329	92.7	42.6	1.3	1.3	14.4	11.8			
Gazprom	RUB	142	(1.8)	(0.7)	(9.2)	(3.1)	5.0	(2.2)	4.7	51,806	3.9	3.7	0.3	0.3	3.7	3.3			
Rosneft	RUB	338	(1.6)	7.3	4.4	12.0	35.7	37.3	33.4	55,010	10.5	7.6	1.2	1.0	4.9	4.1			
Anadarko	USD	53	(2.7)	3.0	12.7	24.7	3.5	(37.4)	9.1	27,053	#N/A	N/A	#N/A	N/A	2.0	2.1	13.7	8.8	
Petrobras	BRL	9	(4.4)	2.5	(14.0)	10.4	17.9	(32.7)	31.0	38,317	28.1	6.1	0.5	0.4	5.7	4.8			
Lukoil	USD	2,636	0.0	1.9	2.0	(2.1)	7.8	3.3	12.4	34,903	6.0	5.1	0.5	0.5	N/A	N/A			
Kinder	USD	18	(3.2)	(2.7)	1.9	(1.1)	2.9	(56.5)	17.4	47,497	26.4	22.5	1.1	1.1	11.4	10.7			
Statoil	NOK	137	(1.0)	3.7	2.0	4.7	10.6	(6.6)	10.4	52,869	34.2	15.2	1.3	1.2	4.1	3.0			
BHP	AUD	19	(4.1)	1.5	5.4	6.2	7.6	(32.0)	5.3	69,634	33.6	20.8	1.3	1.3	7.8	6.6			
PTT E&P	THB	82	(2.4)	1.5	10.8	9.3	49.1	(26.1)	43.2	9,238	28.9	16.9	0.8	0.8	3.2	2.9			
Petronas gas	MYR	22	(0.9)	0.3	1.2	(3.2)	(4.9)	(0.9)	(5.0)	10,463	23.5	23.1	3.5	3.4	13.7	13.3			
Chesapeake	USD	4	(9.4)	8.1	2.8	(4.1)	(3.1)	(66.2)	(1.8)	3,026	#N/A	N/A	10.4	2.5	1.9	15.9	9.5		
Noble Energy	USD	37	(2.6)	5.4	0.5	14.2	7.4	(21.7)	10.9	15,689	#N/A	N/A	#N/A	N/A	1.6	1.7	11.2	9.1	
Average		0	(1.9)	2.3	1.8	5.4	8.0	(20.3)	9.5										
PV																			
WACKER	EUR	82.7	(1.1)	(1.3)	0.6	11.0	7.5	(19.2)	6.7	4,864	30.0	17.5	1.6	1.5	5.5	4.9			
GCL-Poly	HKD	1.1	(3.6)	(4.5)	(7.8)	(17.2)	(23.6)	(43.7)	(8.6)	2,538	6.7	6.1	0.8	0.7	6.5	5.7			
REC	NOK	107.5	0.0	0.0	0.0	0.0	0.0	1.9	0.0	519	#N/A	N/A	#N/A	N/A	#N/A	N/A	#N/A	N/A	
SunPower	USD	15.6	(7.4)	(5.2)	(6.0)	(31.6)	(30.3)	(50.6)	(48.0)	2,154	11.8	9.6	1.4	1.3	7.4	6.0			
Canadian Solar	USD	16.4	(8.4)	(6.5)	6.0	(13.3)	(32.3)	(49.7)	(43.4)	941	7.6	6.4	0.9	0.8	8.1	6.7			
JA Solar	USD	7.0	(4.2)	(3.7)	(14.2)	(22.2)	(21.5)	(21.2)	(27.5)	334	5.0	5.1	0.3	0.3	3.1	2.9			
Trina Solar	USD	7.2	(3.6)	(4.5)	(15.7)	(30.8)	(27.3)	(43.4)	(34.7)	666	5.8	6.1	0.5	0.5	6.0	5.7			
Solar City	USD	21.2	(6.3)	(1.9)	19.1	(18.8)	(42.1)	(61.4)	(58.4)	2,087	#N/A	N/A	#N/A	N/A	5.7	#N/A	N/A	#N/A	N/A
Yingli	USD	4.1	(7.3)	10.3	18.7	(11.7)	(26.4)	(65.3)	(10.4)	74	#N/A	N/A	#N/A	N/A	#N/A	N/A	7.4	13.3	
First Solar	USD	48.5	(3.8)	(1.5)	(5.4)	(29.9)	(10.7)	(3.5)	(26.5)	4,960	11.3	15.3	0.8	0.8	5.6	6.2			
한화솔라원	USD	12.6	(2.0)	4.5	15.2	(22.4)	(41.7)	(21.2)	(42.5)	1,059	7.5	7.3	#N/A	N/A	#N/A	N/A	5.4	5.3	
OCI	KRW	94,600	(2.8)	0.3	(12.0)	(1.4)	23.7	2.6	26.1	1,928	0.0	7.1	0.0	0.7	0.0	8.3			
웅진에너지	KRW	1,245	4.2	(0.4)	11.2	(27.6)	(27.0)	(10.1)	(28.0)	115	N/A	0.0	0.7	0.0	8.3	0.0			
신성솔라에너지	KRW	1,895	1.9	13.5	19.2	9.4	10.6	51.6	2.1	163	N/A	0.7	0.0	8.3	0.0	8.0			
Average			(3.2)	(0.1)	2.1	(14.8)	(17.2)	(23.8)	(20.9)										
Gas Company																			
Towngas China	HKD	4.4	(1.3)	(1.1)	7.6	1.4	1.1	(41.7)	(2.2)	1,510	9.3	8.8	0.9	0.8	11.2	10.6			
Kulun	HKD	6.4	(4.0)	(0.5)	4.1	1.7	(0.9)	(20.1)	(7.2)	6,655	13.2	10.4	1.0	0.9	5.3	4.9			
Beijing Enterprise	HKD	42.2	0.5	1.6	9.5	5.5	(8.6)	(32.7)	(10.2)	6,896	8.5	8.0	0.9	0.8	13.9	12.6			
ENN Energy	HKD	39.9	(1.6)	6.3	3.4	2.3	3.5	(20.2)	(3.5)	5,563	12.6	11.2	2.3	2.0	8.0	7.2			
China Resources Gas	HKD	22.5	(2.0)	1.1	3.7	3.7	3.4	(1.3)	(2.8)	6,446	14.5	13.1	2.5	2.2	9.2	8.3			
China Gas Holdings	HKD	11.5	(2.4)	4.0	7.7	7.5	12.1	(7.4)	2.7	7,261	13.1	11.5	2.3	2.0	10.5	9.3			
Shenzen Gas	HKD	11.8	(1.8)	0.7	(5.4)	(1.5)	(10.5)	(7.5)	(17.6)	2,893	11.2	10.2	1.1	1.0	7.5	6.9			
Shann Xi	CNY	10.3	0.0	(1.6)	8.0	19.7	(16.6)	(49.3)	(18.4)	1,742	16.3	13.9	#N/A	N/A	#N/A	N/A	#N/A	N/A	
Suntien	HKD	0.8	(1.2)	0.0	(5.7)	(13.7)	(30.5)	(53.9)	(33.9)	392	8.7	6.8	0.3	0.3	9.1	7.5			
China Oil & Gas	HKD	0.6	(3.2)	3.4	11.1	37.9	5.3	(22.1)	13.2	450	11.1	9.7	1.1	1.0	6.1	5.4			
Average			(1.7)	1.4	4.4	6.5	(4.2)	(25.6)	(8.0)										
EV																			
LG화학	KRW	272,500	0.6	3.8	(3.4)	(7.6)	(13.2)	1.9	(17.0)	15,430	12.6	11.3	1.4	1.2	5.5	5.0			
삼성SDI	KRW	110,500	(1.3)	(0.9)	(3.9)	9.4	(12.0)	(2.2)	(3.1)	6,492	19.6	24.7	0.7	0.7	#N/A	N/A	7.9		
Panasonic	JPY	950.0	(1.2)	(1.5)	(0.3)	(3.1)	(25.6)	(44.6)	(23.4)	21,755	12.8	10.6	1.1	1.0	3.4	3.1			
GS Yuasa	JPY	443.0	(3.9)	(2.2)	(1.3)	(7.9)	(1.8)	(15.8)	(2.0)	1,710	12.6	10.7	1.0	1.0	6.0	5.5			
NEC	JPY	258.0	0.8	2.8	0.4	(5.5)	(33.7)	(33.7)	(33.0)	6,274	10.6	9.5	0.8	0.8	6.0	5.7			
BYD Auto	CNY	60.4	0.0	0.6	2.8	17.2	(3.3)	(20.4)	(6.3)	19,783	33.5	28.9	4.0	3.5	15.5	13.6			
Tesla Motors	USD	218.8	(4.6)	(0.1)	4.8	6.6	(3.6)	(12.7)	(8.8)	32,223	335.6	78.1	16.7	13.8	41.5	23.2			
Kandi Technologies	USD	7.1	(3.8)	3.5	8.2	(5.0)	(28.7)	(23.3)	(34.9)	339	#N/A	N/A	#N/A	N/A	#N/A	N/A	#N/A	N/A	
Average			(1.7)	0.7	0.9	0.5	(15.2)	(18.9)	(16.1)										

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임