

1. News Summary (3 page)

2016년 5월 24일

News	Conclusion
WTI comment	사우디 증산 예상에 약세
Headline	Bayer-Monsanto 합병? Dupont-Dow 이어 또하나 농화학 공룡 탄생
News 1.	프랑스 정유업계 노동자 파업 확산, 주유난에 전력비축유도 공급
News 2.	한화케미칼, 울산 염소/가성소다 공장 유닛드에 매각
News 3.	-
News 4.	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	49.5	(0.2)	2.7	12.4	50.9	(14.0)
Dubai	\$/bbl	45.7	1.0	2.2	12.0	50.3	(26.4)
Gasoline	\$/bbl	61.3	(0.3)	2.0	8.1	28.6	(27.0)
Diesel	\$/bbl	57.4	(0.1)	3.1	11.8	42.8	(26.3)
Complex margin	\$/bbl	6.3	(0.5)	0.4	(0.0)	(1.1)	(4.7)
1M lagging	\$/bbl	11.2	(0.0)	(0.3)	0.1	(0.6)	0.1
Petrochemical			%	%	%	%	%
Naphtha	\$/t	428	(0.1)	2.2	5.3	26.7	(24.2)
Butadiene	\$/t	1,050	(0.9)	(2.3)	0.0	12.9	(4.5)
HDPE	\$/t	1,100	0.0	(2.7)	(3.5)	(1.3)	(18.8)
MEG	\$/t	602	(0.2)	(2.0)	(6.5)	(9.1)	(34.4)
PX	\$/t	766	0.9	(0.8)	(3.5)	5.3	(14.7)
SM	\$/t	961	(1.3)	(3.3)	(8.1)	(4.3)	(26.7)
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	2.15	(1.4)	(2.0)	(4.5)	6.5	(29.7)
Natural rubber	\$/t	1,230	0.0	(6.1)	(19.6)	8.8	(22.2)
Cotton	C/lbs	64.3	2.3	5.3	1.0	11.7	(2.7)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

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)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	89.8	(0.5)	(0.3)	2.5	9.8	5.2
Shell	EUR	1,683	(0.1)	2.1	(4.7)	2.5	(12.9)
Petrochina	CNY	7.22	0.4	0.6	(4.2)	(0.6)	(44.7)
Gazprom	RUB	148.9	1.6	0.4	(8.7)	7.4	2.5
Petrobras	BRL	8.7	0.0	(3.2)	(10.3)	78.0	(30.0)
Refinery							
Phillips66	USD	80.0	(0.1)	3.1	(9.5)	1.2	0.9
Valero	USD	54.1	(1.0)	(2.4)	(12.5)	(9.3)	(9.1)
JX	JPY	430.0	1.4	1.7	(10.6)	(5.1)	(22.3)
Neste Oil	EUR	29.9	1.7	5.2	3.1	2.2	29.8

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	69.8	0.3	4.6	(1.6)	14.6	(18.9)
Dow Chemical	USD	52.0	(1.6)	2.4	(3.1)	6.7	2.7
SABIC	SAR	82.4	1.0	(0.8)	(1.5)	15.4	(20.9)
Formosa Pla.	TWD	78.1	(1.1)	2.9	(3.3)	(1.1)	2.8
Shin-Etsu	JPY	6,314	(0.3)	0.3	0.7	6.2	(16.7)
Renewable							
Wacker	EUR	83.2	(0.4)	(1.0)	4.9	13.4	(18.1)
Yingli	USD	3.62	(1.9)	8.1	(26.9)	(15.7)	(68.0)
Tesla	USD	225.1	2.5	4.6	(11.3)	18.3	(9.0)
BYD	CNY	58.8	(0.6)	0.3	(5.3)	12.3	(22.7)

4. Coverage Summary

	05/26	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	1,957	(0.2)	0.5	(3.1)	1.9	(2.6)	(8.7)				* 추정치는 12M fwd 기준임	
KOSPI화학	5,300	(0.7)	(0.2)	(4.2)	3.4	(0.0)	3.0				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	272,500	(0.5)	0.6	(10.5)	(7.2)	(15.4)	1.1	매수	400,000	46.8	12.01	1.44
롯데케미칼	281,500	1.6	(1.1)	(7.9)	(9.5)	13.1	16.6	매수	340,000	20.8	9.52	1.09
한화케미칼	23,150	1.3	(1.7)	(8.9)	(6.5)	(8.5)	16.0	매수	30,000	29.6	9.15	0.75
금호석유화학	61,600	0.3	(1.0)	(13.2)	0.5	0.2	(23.9)	매수	70,000	13.6	12.15	1.22
KCC	408,000	0.4	2.8	(5.7)	(6.7)	(12.5)	(25.8)	매수	550,000	34.8	14.52	0.63
OCI	98,200	(8.7)	(6.0)	(8.2)	11.3	30.1	2.1	매수	120,000	22.2	18.45	0.85
SKC	27,900	0.4	(0.2)	(5.9)	(10.9)	(22.9)	(31.2)	매수	37,000	32.6	8.70	0.69
국도화학	58,900	0.0	(0.7)	(10.1)	0.3	0.3	(9.0)	매수	100,000	69.8	6.70	0.68
SK이노베이션	156,000	3.0	4.0	(1.6)	7.6	20.0	35.7	매수	180,000	15.4	11.67	0.95
S-Oil	82,700	1.1	(0.8)	(5.5)	3.4	11.2	17.6	매수	100,000	20.9	11.66	1.44
GS	51,900	0.6	2.2	(7.0)	(2.6)	1.8	1.2	매수	65,000	25.2	7.43	0.87
SK가스	85,300	(0.1)	2.0	0.0	18.1	6.2	(14.4)	매수	100,000	17.2	12.10	0.74
대우인터내셔널	23,350	0.9	0.2	(1.1)	24.5	22.6	(12.4)	매수	27,000	15.6	10.80	1.04
LG상사	38,750	0.3	5.4	7.5	16.2	3.1	(8.3)	매수	42,000	8.4	11.44	0.99

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

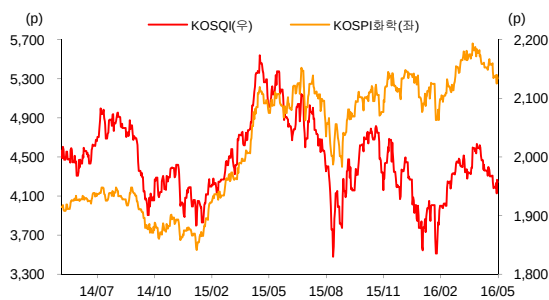
* 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.

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

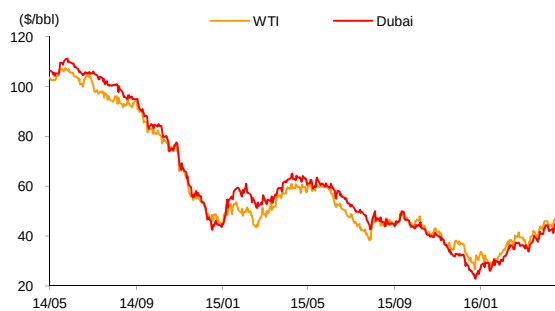
* 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

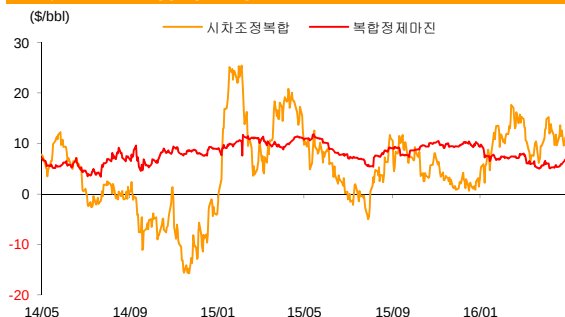
KOSPI/KOSPI화학



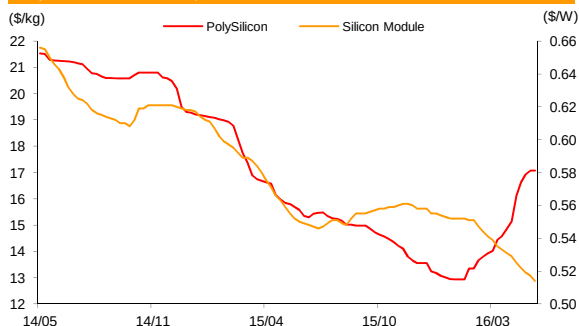
WTI/Dubai



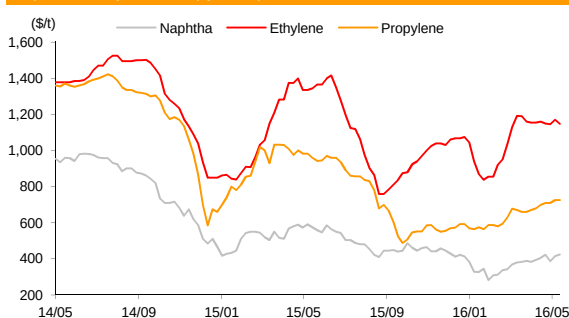
Complex & 1M lagging margin



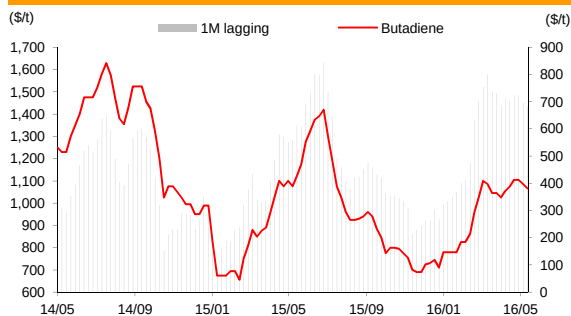
Polysilicon & Module prices



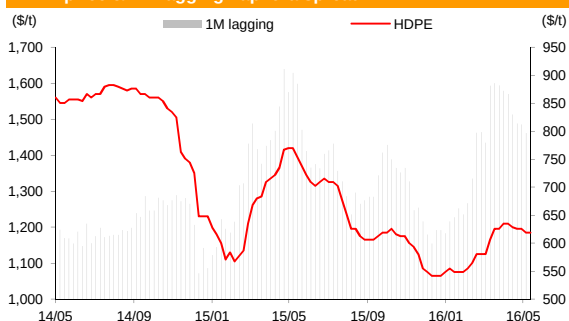
Naphtha/Ethylene/Propylene prices



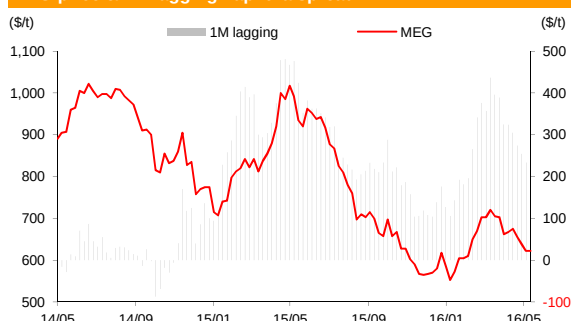
Butadiene price & 1M lagging naphtha spread



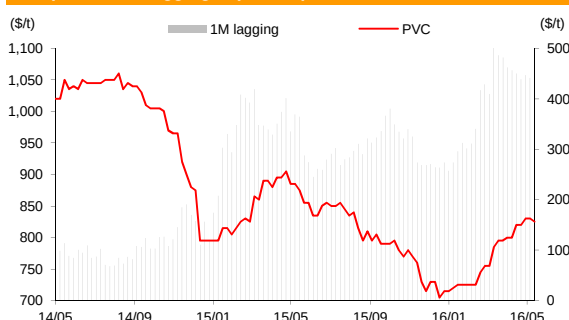
HDPE price & 1M lagging naphtha spread



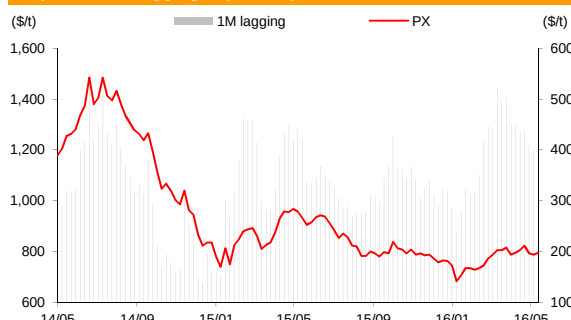
MEG price & 1M lagging naphtha spread



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: EBN화학정보)
제목	Bayer-Monsanto 합병? Dupont-Dow 이어 또하나 농화학 공룡 탄생
결론	지속되는 글로벌 농화학 공룡들의 합병, 시장 과점화 가능성 높아짐
세부	1) Bayer, Monsanto를 현금 \$620억(74조원)에 인수하겠다고 제안 2) 일단 Monsanto 이사회는 제시금액이 가치에 미치지 못한다며 거절 3) 현재 BASF도 인수에 관심보이는 것으로 보아 M&A 진행 가능성은 높음 4) Monsanto는 매출 18조원 규모의 세계최대 농화학/종자회사임 5) 지속되는 글로벌 농화학 공룡들의 합병, 시장 과점화 가능성 높아짐

WTI Comment	(출처: 연합뉴스)
제목	사우디 증산 예상에 약세
상승	
요인	
하락	사우디, 산유량 늘려 시장점유율 유지할 가능성 주목
요인	미국 제조업 지표 호조, 6~7월 금리인상 가능성 탄력

Issue 1	(출처: EBN화학정보)
제목	프랑스 정유업계 노동자 파업 확산, 주유난에 전략비축유도 공급
결론	단기간 유가상승 요인, 다만 파업 특성 상 큰 이슈로서 작용하지 못할 것
세부	1) 프랑스 정유업계 노동조합, 노동법 개정안에 반발하며 일제히 파업 돌입 2) 이에 Total은 투자철회 가능성 제기되고 정부는 비축유 풀기 시작 3) 현재 프랑스 주유소 1/5는 기름 바닥나거나 부족 상황 4) 알랭 비달리 교통장관, "115일분의 비축유에서 사흘분을 이미 사용" 5) 단기간 유가상승 요인, 다만 파업 특성 상 큰 이슈로서 작용하지 못할 것

Issue 2	(출처: EBN화학정보)
제목	한화케미칼, 울산 염소/가성소다 공장 유니드에 매각
결론	매각대금 842억원, 한화케미칼의 재무구조 개선에 도움될 것
세부	1) CA 사업은 소금물 전기분해로 염소와 가성소다 생산 2) 유니드는 인수한 설비를 개조해 가성칼륨(KOH) 생산할 계획임 3) 한화케미칼을 동 매각을 통해 가성소다 공급과잉을 일부 해소 계획 4) 유니드는 공장 이전비용을 줄이고 안정적 원재료 공급 가능해짐 5) 매각대금 842억원, 한화케미칼의 재무구조 개선에 도움될 것

Issue 3
제목
결론
세부
1)
2)
3)
4)
5)

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	0.893	0.897	0.893	0.885	0.915	0.943	0.920	0.921	0.754	0.901	0.897
	Change, %		(0.3)	0.1	0.9	(2.3)	(5.2)	(2.9)	(3.0)	18.5	(0.9)	(0.4)
	USD/JPY	109.8	110.2	110.0	111.3	114.0	122.6	123.1	120.6	105.9	121.1	113.0
	Change, %		(0.4)	(0.2)	(1.4)	(3.7)	(10.5)	(10.8)	(9.0)	3.6	(9.3)	(2.8)
	USD/KRW	1,180.4	1,182.8	1,191.8	1,151.0	1,238.1	1,147.3	1,101.0	1,172.6	1,053.0	1,131.2	1,184.5
	Change, %		(0.2)	(1.0)	2.6	(4.7)	2.9	7.2	0.7	12.1	4.4	(0.3)
Agriculture	Corn	408.3	404.8	390.0	382.3	354.5	366.0	355.0	358.8	415.6	376.8	369.2
	Change, %		0.9	4.7	6.8	15.2	11.5	15.0	13.8	(1.8)	8.3	10.6
	Soybean	1,079.8	1,085.5	1,071.5	1,017.8	855.0	875.3	922.5	871.3	1,245.5	945.4	928.1
	Change, %		(0.5)	0.8	6.1	26.3	23.4	17.0	23.9	(13.3)	14.2	16.3
	Wheat	481.3	466.0	468.8	479.8	443.3	479.3	493.5	470.0	588.0	508.1	466.4
	Change, %		3.3	2.7	0.3	8.6	0.4	(2.5)	2.4	(18.2)	(5.3)	3.2
	Rice	11.1	11.2	11.8	11.0	10.4	12.1	9.4	11.6	14.0	11.1	10.8
	Change, %		(1.6)	(6.6)	1.0	6.4	(8.8)	17.4	(4.4)	(20.7)	0.0	2.6
	Oats	191.3	190.0	188.3	195.8	171.0	244.3	238.5	217.3	373.1	250.2	191.4
	Change, %		0.7	1.6	(2.3)	11.8	(21.7)	(19.8)	(12.0)	(48.7)	(23.6)	(0.1)
MYR/mt	Palm Oil	2,618.0	2,574.0	2,552.0	2,654.0	2,462.0	2,135.0	2,167.0	2,398.0	2,415.1	2,190.3	2,527.6
	Change, %		1.7	2.6	(1.4)	6.3	22.6	20.8	9.2	8.4	19.5	3.6
	Cocoa	2,916.0	2,924.0	2,893.0	3,181.0	2,882.0	3,301.0	3,150.0	3,211.0	3,006.8	3,091.6	2,954.7
	Change, %		(0.3)	0.8	(8.3)	1.2	(11.7)	(7.4)	(9.2)	(3.0)	(5.7)	(1.3)
	Cotton	64.3	62.9	61.1	63.5	57.9	62.0	63.3	63.3	76.4	63.3	60.5
	Change, %		2.3	5.3	1.4	11.1	3.8	1.6	1.7	(15.7)	1.7	6.4
	Sugar	17.4	17.2	16.7	15.8	13.9	14.9	12.1	15.2	16.3	13.1	14.9
	Change, %		1.5	4.3	10.5	25.2	16.8	44.2	14.3	6.7	32.6	16.7
	Coffee	121.5	121.4	124.0	125.3	113.0	122.9	124.1	126.7	177.1	132.6	121.3
	Change, %		0.1	(2.0)	(3.0)	7.5	(1.1)	(2.1)	(4.1)	(31.4)	(8.4)	0.1
Energy	WTI	49.5	49.6	48.2	44.0	32.8	43.0	58.0	37.0	92.9	48.8	37.5
	Change, %		(0.2)	2.7	12.4	50.9	15.0	(14.7)	33.6	(46.8)	1.3	31.8
	Brent	49.6	49.7	48.8	45.7	35.1	45.5	63.7	37.3	99.5	53.7	39.2
	Change, %		(0.3)	1.6	8.4	41.3	9.1	(22.2)	33.0	(50.1)	(7.6)	26.6
	Natural Gas	2.0	2.0	2.0	2.0	1.8	2.2	2.8	2.3	4.3	2.6	2.0
	Change, %		(1.5)	(3.7)	(3.4)	9.6	(11.0)	(30.4)	(16.0)	(54.0)	(25.3)	(2.5)
	Ethanol	1.6	1.6	1.6	1.5	1.4	1.5	1.6	1.4	2.1	1.5	1.5
	Change, %		0.1	2.9	6.3	18.5	10.6	4.9	17.4	(20.3)	8.8	13.3
	RBOB Gasoline	162.0	164.2	163.4	156.6	101.7	139.6	199.8	126.7	262.6	163.6	131.3
	Change, %		(1.3)	(0.9)	3.4	59.3	16.0	(19.0)	27.8	(38.3)	(1.0)	23.3
Metal	Coal	44.8	43.5	43.6	43.6	44.2	42.1	44.5	43.3	57.5	45.2	43.5
	Change, %		3.0	2.7	2.7	1.5	6.5	0.7	3.4	(22.1)	(0.9)	3.1
	Gold	1,219.8	1,224.5	1,254.7	1,243.5	1,222.7	1,072.2	1,187.3	1,061.4	1,266.5	1,160.6	1,208.5
	Change, %		(0.4)	(2.8)	(1.9)	(0.2)	13.8	2.7	14.9	(3.7)	5.1	0.9
	Silver	16.3	16.3	16.5	17.2	14.7	14.3	16.8	13.8	19.1	15.7	15.5
	Change, %		0.0	(1.0)	(4.9)	11.0	14.3	(2.6)	18.2	(14.4)	3.8	5.1
	Platinum	993.2	992.5	1,014.5	1,013.4	914.0	852.5	1,127.1	891.1	1,384.6	1,055.7	955.2
	Change, %		0.1	(2.1)	(2.0)	8.7	16.5	(11.9)	11.5	(28.3)	(5.9)	4.0
	Palladium	543.6	534.4	559.4	604.6	485.1	556.6	781.5	563.0	803.4	691.9	546.7
	Change, %		1.7	(2.8)	(10.1)	12.1	(2.3)	(30.4)	(3.4)	(32.3)	(21.4)	(0.6)
	Copper	4,661.0	4,654.0	4,580.0	4,962.0	4,706.0	4,636.0	6,106.5	4,705.0	6,828.1	5,503.1	4,721.3
	Change, %		0.2	1.8	(6.1)	(1.0)	0.5	(23.7)	(0.9)	(31.7)	(15.3)	(1.3)
	Uranium	27.3	27.9	28.7	27.7	32.0	36.1	35.2	34.4	33.5	36.9	30.8
	Change, %		(2.3)	(4.9)	(1.4)	(14.8)	(24.5)	(22.5)	(20.8)	(18.7)	(26.1)	(11.5)
	HR Coil	608.0	613.0	581.0	488.0	400.0	376.0	450.0	391.0	653.2	461.5	452.6
	Change, %		(0.8)	4.6	24.6	52.0	61.7	35.1	55.5	(6.9)	31.8	34.3
	Scrap	270.0	270.0	270.0	410.0	250.0	190.0	250.0	250.0	401.3	252.9	303.8
	Change, %		0.0	0.0	(34.1)	8.0	42.1	8.0	8.0	(32.7)	6.7	(11.1)
	Zinc	1,876.0	1,833.5	1,860.0	1,896.0	1,758.0	1,604.0	2,177.0	1,609.0	2,165.0	1,941.9	1,757.3
	Change, %		2.3	0.9	(1.1)	6.7	17.0	(13.8)	16.6	(13.3)	(3.4)	6.8

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		05/26	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Crude Oil	WTI	49.5	49.6	48.2	44.0	32.8	41.7	57.5	37.0	93.1	48.8	37.5
	Change, %		(0.2)	2.7	12.4	50.9	18.6	(14.0)	33.6	(46.9)	1.4	32.0
	Dubai	45.7	45.3	44.8	40.8	30.4	40.4	62.1	32.2	96.7	50.8	34.7
	Change, %		1.0	2.2	12.0	50.3	13.3	(26.4)	42.1	(52.7)	(9.9)	31.8
Crude Oil	Gasoline(휘발유)	61.3	61.4	60.0	56.6	47.6	58.3	83.9	54.8	110.9	69.5	52.3
Product	Change, %		(0.3)	2.0	8.1	28.6	5.1	(27.0)	11.8	(44.8)	(11.9)	17.0
	Kerosene(등유)	58.1	58.1	56.1	51.7	42.7	55.8	76.2	44.2	112.6	64.7	46.1
	Change, %		(0.1)	3.5	12.3	35.9	4.0	(23.8)	31.3	(48.4)	(10.3)	25.9
	Diesel(경유)	57.4	57.5	55.7	51.3	40.2	55.9	77.9	43.2	112.8	64.8	44.5
	Change, %		(0.1)	3.1	11.8	42.8	2.7	(26.3)	32.8	(49.1)	(11.4)	28.9
	Bunker-C	35.5	35.3	34.3	31.3	24.1	34.2	58.6	25.3	86.5	45.3	27.4
	Change, %		0.4	3.5	13.3	47.0	3.6	(39.5)	40.2	(59.0)	(21.7)	29.3
	Naphtha	45.3	45.4	44.5	43.3	35.3	48.1	61.6	43.5	94.3	52.6	39.2
	Change, %		(0.2)	1.8	4.6	28.5	(5.8)	(26.5)	4.2	(52.0)	(13.9)	15.6
Dubai	Gasoline(휘발유)	15.5	16.1	15.3	15.8	17.2	17.9	21.8	22.6	14.2	18.7	17.6
Spread	Change		(0.6)	0.2	(0.3)	(1.7)	(2.4)	(6.3)	(7.1)	1.3	(3.2)	(2.1)
	Kerosene(등유)	12.3	12.8	11.4	10.9	12.3	15.5	14.1	12.0	15.9	14.0	11.4
	Change		(0.5)	1.0	1.4	0.0	(3.1)	(1.8)	0.3	(3.6)	(1.6)	0.9
	Diesel(경유)	11.7	12.2	11.0	10.5	9.8	15.5	15.8	11.0	16.0	14.0	9.8
	Change		(0.5)	0.7	1.2	1.9	(3.9)	(4.1)	0.6	(4.4)	(2.3)	1.8
	Bunker-C	(10.3)	(10.0)	(10.5)	(9.6)	(6.3)	(6.1)	(3.5)	(6.9)	(10.3)	(5.5)	(7.3)
	Change		(0.3)	0.2	(0.7)	(4.0)	(4.2)	(6.8)	(3.4)	(0.0)	(4.8)	(3.0)
	Naphtha	(0.5)	0.1	(0.3)	2.5	4.8	7.7	(0.5)	11.3	(2.4)	1.8	4.5
	Change		(0.5)	(0.2)	(2.9)	(5.3)	(8.2)	0.0	(11.7)	1.9	(2.3)	(4.9)
Refining	Simple(단순)	(0.0)	0.4	(0.4)	0.2	2.2	4.0	4.7	3.2	(0.1)	3.3	1.6
Margin	Change		(0.5)	0.4	(0.2)	(2.2)	(4.0)	(4.7)	(3.2)	0.1	(3.3)	(1.6)
	Complex(복합)	6.3	6.8	5.9	6.3	7.4	10.1	11.0	9.7	7.1	9.3	7.3
	Change		(0.5)	0.4	(0.0)	(1.1)	(3.8)	(4.7)	(3.4)	(0.8)	(3.0)	(1.0)
	Complex(lagging)	11.2	11.2	11.5	11.1	11.8	7.4	11.1	2.1	2.3	7.3	9.2
	Change		(0.0)	(0.3)	0.1	(0.6)	3.8	0.1	9.1	8.9	3.9	2.0

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			05/26	05/25	05/24	05/23	05/20	05/19	05/18	05/17	05/16	05/13
Spot Price	Naphtha	CFR Japan	427.5	427.9	422.9	422.3	424.6	418.4	427.5	429.3	427.3	415.8
	Ethylene	CFR SE Asia	1,090.0	1,120.0	1,130.0	1,130.0	1,135.0	1,140.0	1,140.0	1,140.0	1,140.0	1,140.0
	Propylene	FOB Korea	690.0	690.0	695.0	705.0	710.0	710.0	710.0	710.0	709.0	715.0
	Butadiene	FOB Korea	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	1,075.0
	HDPE	CFR FE Asia	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	1,130.0
	LDPE	CFR FE Asia	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	1,150.0
	LLDPE	CFR FE Asia	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	1,135.0
	MEG	CFR China	602.0	603.0	604.0	614.0	619.0	614.0	618.0	626.0	620.0	619.0
	PP	CFR FE Asia	905.0	905.0	910.0	930.0	930.0	930.0	930.0	935.0	940.0	940.0
	PX	CFR China	766.3	759.3	759.7	764.7	775.3	772.3	781.0	786.8	778.7	769.7
	PTA	CFR China	598.0	598.0	598.0	599.0	603.0	605.0	610.0	602.0	600.0	600.0
	Benzene	FOB Korea	612.5	610.0	613.5	628.0	630.0	630.0	633.0	630.0	631.0	644.5
	Toluene	FOB Korea	573.5	576.5	578.5	582.0	588.0	586.0	588.5	590.0	593.5	590.0
	Xylene	FOB Korea	683.0	682.0	680.0	689.0	695.0	691.0	695.0	691.0	686.0	686.0
	SM	FOB Korea	961.0	974.0	972.0	986.0	994.0	994.0	996.0	999.5	996.5	990.5

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 : 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	1,185.0	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 : Ciscem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	05/26	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	52.0	(1.6)	2.4	(3.1)	6.7	0.1	2.7	1.0	58,376	14.8	13.3	2.4	2.3	8.1	7.5		
Du Pont	USD	67.0	(1.9)	4.0	(0.9)	8.9	(0.4)	(0.4)	0.5	58,490	21.4	18.2	6.1	4.8	12.1	10.5		
Eastman	USD	73.7	(1.1)	0.9	(4.2)	13.1	3.9	(3.6)	9.1	10,891	10.5	9.5	2.3	2.1	8.1	7.7		
BASF	EUR	69.8	0.3	4.6	(1.6)	14.6	(10.9)	(18.9)	(1.4)	71,611	15.3	13.8	2.0	2.0	7.8	7.3		
Akzo Nobel	EUR	63.6	1.0	4.6	1.5	19.3	(4.5)	(7.8)	3.2	17,708	15.2	14.5	2.3	2.2	8.3	7.9		
Arkema	EUR	73.5	1.3	4.3	6.0	31.6	8.6	5.5	13.8	6,205	14.7	12.6	1.4	1.4	6.3	5.9		
Lanxess	EUR	43.1	1.0	4.1	(5.9)	13.3	(9.7)	(15.6)	1.0	4,409	20.1	15.3	1.6	1.5	5.7	5.2		
Sumitomo Chemical	JPY	481	(1.2)	(2.2)	(8.7)	(3.8)	(33.0)	(32.3)	(31.4)	7,252	8.8	7.8	0.9	0.8	6.6	6.2		
Mitsubishi Chemical	JPY	554	0.0	0.5	(6.9)	(4.8)	(33.3)	(29.1)	(28.5)	7,599	9.0	8.0	0.8	0.7	5.5	5.2		
Shin-Etsu Chemical	JPY	6,314	(0.3)	0.3	0.7	6.2	(10.4)	(16.7)	(4.6)	24,848	17.8	16.6	1.3	1.2	6.1	5.7		
Asahi Kasei	JPY	744	2.9	2.4	(5.5)	15.9	(10.8)	(32.2)	(9.6)	9,505	11.1	9.9	0.9	0.8	5.2	4.9		
JSR	JPY	1,605	1.1	3.1	0.4	0.7	(16.7)	(27.6)	(15.5)	3,305	13.9	12.9	1.0	0.9	5.6	5.2		
Nitto Denko	JPY	7,000	0.9	2.1	12.7	18.2	(16.1)	(25.9)	(21.5)	11,077	17.1	15.2	1.7	1.6	7.1	6.4		
SABIC	SAR	82.4	1.0	(0.8)	(1.5)	15.4	(8.1)	(20.9)	7.8	65,933	16.7	14.9	1.4	1.4	7.7	7.0		
Yansab	SAR	40.7	0.0	(1.6)	(2.5)	25.3	(11.9)	(24.4)	25.6	6,106	17.0	15.2	1.5	1.5	8.7	8.3		
Formosa Plastics	TWD	78.1	(1.1)	2.9	(3.3)	(1.1)	2.1	2.8	1.4	15,304	16.0	14.8	1.6	1.6	23.6	21.4		
Formosa Fiber	TWD	80.4	(1.1)	0.8	(3.9)	7.5	8.9	3.9	8.6	14,506	16.2	15.6	1.6	1.5	13.5	12.6		
Nan Ya Plastics	TWD	60.7	(0.7)	2.2	(5.6)	(4.9)	(0.3)	(17.0)	(0.5)	14,819	13.8	14.0	1.4	1.4	14.0	13.5		
Sinopec Shanghai	CNY	6.13	1.5	(0.2)	(11.7)	4.8	(13.3)	(36.4)	(5.4)	8,516	16.9	17.6	2.9	2.6	8.4	8.7		
Sinopec Yizheng(Fiber)	CNY	3.89	0.3	(1.3)	(14.5)	(40.4)	(59.1)	(61.1)	(52.3)	7,536	#N/A	N/A	389.0	2.3	2.2	15.4	13.0	
Reliance	INR	947	(0.5)	(0.5)	(6.9)	(0.4)	(4.2)	7.0	(6.7)	45,852	10.8	9.2	1.1	1.0	8.8	7.2		
Industries Qatar	QAR	98.0	0.0	(1.1)	(6.6)	(5.8)	(8.0)	(29.6)	(11.8)	16,283	14.6	13.4	1.8	1.7	54.5	53.4		
PTT Chemical	THB	60.8	(0.8)	3.4	(6.2)	11.0	12.0	(5.1)	21.5	7,607	11.0	10.1	1.1	1.0	5.3	5.0		
Petronas	MYR	6.6	1.1	3.1	(1.9)	(3.2)	(4.1)	5.3	(9.8)	12,904	19.2	17.4	2.0	1.9	9.4	8.5		
LG화학	KRW	272,500	(0.5)	0.6	(10.5)	(7.2)	(15.9)	1.1	(17.0)	15,291	0.0	13.4	0.0	1.4	0.0	5.2		
롯데케미칼	KRW	281,500	1.6	(1.1)	(7.9)	(9.5)	14.2	16.6	15.6	8,170	0.0	7.0	0.0	1.1	0.0	3.9		
한화케미칼	KRW	23,150	1.3	(1.7)	(8.9)	(6.5)	(10.1)	16.0	(14.9)	3,231	0.0	8.9	0.0	0.8	0.0	8.3		
금호석유	KRW	61,600	0.3	(1.0)	(13.2)	0.5	1.0	(23.9)	18.2	1,589	0.0	14.1	0.0	1.2	0.0	10.2		
SKC	KRW	27,900	0.4	(0.2)	(5.9)	(10.9)	(24.1)	(31.2)	(17.5)	874	0.0	8.3	0.0	0.7	0.0	7.5		
국도화학	KRW	58,900	0.0	(0.7)	(10.1)	0.3	0.3	(9.0)	(0.7)	290	0.0	6.8	0.0	0.7	0.0	3.7		
효성	KRW	4,120	1.2	(2.7)	(5.9)	53.7	41.6	14.9	57.9	3,449	0.0	7.2	0.0	1.1	0.0	6.9		
Average			0.2	1.0	(4.6)	5.4	(6.8)	(12.7)	(2.1)									
Refinery																		
Valero	USD	54.1	(1.0)	(2.4)	(12.5)	(9.3)	(25.8)	(9.1)	(23.5)	25,412	9.2	7.8	1.2	1.1	4.8	4.4		
Conoco Phillips	USD	44.7	(0.4)	3.2	(7.0)	31.1	(17.7)	(29.9)	(4.2)	55,393	#N/A	N/A	189.5	1.5	1.5	14.8	8.0	
Formosa Petrochemical	TWD	88.9	(1.8)	0.7	(2.8)	5.3	14.4	14.6	12.8	26,069	18.4	18.7	3.1	3.0	11.6	11.7		
Tesoro	USD	77.3	(1.8)	(0.7)	(10.2)	(3.7)	(34.1)	(12.9)	(26.6)	9,279	10.5	10.2	1.7	1.5	5.9	5.6		
Marathon Petroleum	USD	34.6	(3.2)	(4.3)	(16.7)	1.0	(40.5)	(31.2)	(33.4)	18,306	9.7	8.3	1.3	1.2	6.7	6.1		
Devon Energy	USD	35.9	(1.5)	5.9	3.7	76.9	(21.8)	(45.8)	12.2	18,812	#N/A	N/A	46.7	3.0	2.9	16.9	10.2	
Hollyfrontier	USD	26.6	(2.5)	(3.3)	(28.3)	(19.1)	(46.5)	(36.2)	(33.3)	4,697	11.5	7.9	0.9	0.9	5.9	4.9		
Phillips 66	USD	80.0	(0.1)	3.1	(9.5)	1.2	(13.7)	0.9	(2.2)	42,068	14.7	11.6	1.8	1.6	8.4	7.1		
Murphy Oil	USD	31.0	(1.1)	5.7	(11.0)	81.1	5.7	(27.7)	38.3	5,345	#N/A	N/A	#N/A	N/A	1.1	1.1	9.7	6.8
JX Holdings	JPY	430.0	1.4	1.7	(10.6)	(5.1)	(14.2)	(22.3)	(15.4)	9,773	7.6	7.2	0.6	0.6	8.3	8.4		
Cosmo Oil	JPY	164.0	0.0	0.0	0.0	0.0	0.0	(19.2)	0.0	1,151	#N/A	N/A	#N/A	N/A	#N/A	N/A	#N/A	N/A
Idemitsu	JPY	2,293.0	(0.7)	2.8	(3.2)	29.7	11.9	(4.7)	18.3	3,341	6.6	6.2	0.6	0.6	6.8	6.5		
Tonengeneral	JPY	1,035.0	1.0	2.8	(3.1)	15.8	(15.8)	(11.9)	1.3	3,450	9.7	9.3	1.4	1.3	6.5	6.7		
Nesteoil	EUR	29.9	1.7	5.2	3.1	2.2	14.2	29.8	8.4	0	11.5	12.3	2.2	2.0	7.2	7.6		
Ashland	USD	113.6	(0.1)	1.4	(1.8)	18.4	1.3	(10.5)	10.6	7,048	15.9	14.7	2.6	2.5	9.0	8.7		
Fuchs Petrolub	EUR	37.2	0.5	2.4	(4.8)	(1.1)	(16.5)	(6.6)	(14.4)	5,489	20.7	19.8	4.3	3.8	12.0	11.4		
SK이노베이션	KRW	156,000	3.0	4.0	(1.6)	7.6	19.5	35.7	20.0	12,214	0.0	8.0	0.0	0.8	0.0	4.7		
S-Oil	KRW	82,700	1.1	(0.8)	(5.5)	3.4	8.1	17.6	4.2	7,884	0.0	7.7	0.0	1.5	0.0	5.3		
GS	KRW	51,900	0.6	2.2	(7.0)	(2.6)	0.8	1.2	2.4	4,083	0.0	7.2	0.0	0.7	0.0	8.1		
Average			(0.3)	1.6	(6.8)	12.2	(9.0)	(8.9)	(1.3)									

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	05/26	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	(0.5)	(0.3)	2.5	9.8	10.5	5.2	15.2	372,366	34.4	21.5	2.2	2.1	11.6	8.9
BP	GBP	364	(0.4)	2.4	(3.0)	4.3	(6.5)	(19.3)	3.0	99,608	29.0	14.1	1.1	1.1	6.2	4.9
Shell	EUR	1,683	(0.1)	2.1	(4.7)	2.5	0.6	(12.9)	10.3	198,333	22.0	12.9	0.9	1.0	7.3	5.4
Chevron	USD	102	(0.3)	1.7	(0.8)	20.3	11.7	(1.7)	12.8	191,297	77.9	22.3	1.3	1.3	9.3	6.6
Total	EUR	44	(0.1)	4.5	0.7	7.8	(6.4)	(6.0)	6.7	121,978	16.5	11.8	1.2	1.2	7.6	5.9
Sinopec	CNY	5	0.8	1.5	(3.1)	8.9	(7.9)	(40.2)	(4.2)	86,778	18.8	13.0	0.8	0.8	5.6	4.9
Petrochina	CNY	7	0.4	0.6	(4.2)	(0.6)	(19.5)	(44.7)	(13.5)	193,026	88.0	23.2	1.1	1.1	8.0	6.5
CNOOC	CNY	12	0.4	0.8	(3.8)	(1.7)	(29.7)	(56.5)	(20.7)	6,957	89.8	41.3	1.3	1.2	13.9	11.5
Gazprom	RUB	149	1.6	0.4	(8.7)	7.4	4.0	2.5	9.4	53,754	3.7	3.6	0.3	0.3	3.8	3.4
Rosneft	RUB	320	0.7	(3.0)	(3.5)	13.0	18.2	30.6	26.4	51,751	10.8	7.1	1.1	0.9	4.8	4.0
Anadarko	USD	52	0.4	6.2	(0.2)	37.5	(14.5)	(37.9)	7.6	26,685	#N/A	N/A	#N/A	N/A	13.8	9.0
Petrobras	BRL	9	0.0	(3.2)	(10.3)	78.0	9.5	(30.0)	29.4	36,480	29.0	5.9	0.5	0.4	5.7	5.0
Lukoil	USD	2,678	1.0	(0.6)	(4.2)	3.5	3.1	6.8	14.2	34,741	6.5	5.1	0.4	0.4	N/A	N/A
Kinder	USD	18	0.4	3.8	0.1	0.9	(25.6)	(57.4)	20.1	47,497	26.9	23.0	1.1	1.1	11.5	10.8
Statoil	NOK	138	(0.2)	3.8	1.2	11.1	1.1	(5.9)	11.6	53,152	37.0	16.2	1.3	1.2	4.2	3.0
BHP	AUD	19	2.7	3.7	(1.8)	24.5	2.5	(34.9)	8.7	71,321	36.9	20.9	1.3	1.3	8.1	6.7
PTT E&P	THB	79	1.9	5.3	6.0	17.5	14.5	(28.5)	38.0	8,805	28.2	16.4	0.8	0.8	3.1	2.8
Petronas gas	MYR	22	0.4	1.4	(1.3)	(2.6)	(6.0)	0.1	(4.8)	10,509	23.4	23.1	3.6	3.4	13.7	13.3
Chesapeake	USD	4	(2.8)	9.6	(35.9)	56.7	(21.8)	(71.6)	(6.0)	2,896	#N/A	N/A	9.7	2.7	3.0	14.7
Noble Energy	USD	36	(1.8)	2.3	(2.3)	19.9	(3.5)	(19.3)	8.2	15,311	#N/A	N/A	#N/A	N/A	10.9	9.1
Average		0	0.2	2.1	(3.9)	15.9	(3.3)	(21.1)	8.6							
PV																
WACKER	EUR	83.2	(0.4)	(1.0)	4.9	13.4	(1.6)	(18.1)	7.3	4,849	30.8	17.9	1.6	1.5	5.6	5.0
GCL-Poly	HKD	1.1	0.0	2.8	(5.1)	(5.1)	(27.6)	(48.2)	(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	1.9	0.0	519	#N/A	N/A	#N/A	N/A	#N/A	N/A
SunPower	USD	17.1	(2.7)	11.6	(22.0)	(24.4)	(28.0)	(46.1)	(43.0)	2,361	12.0	10.6	1.5	1.5	7.9	6.3
Canadian Solar	USD	18.8	(3.8)	8.3	0.4	(15.9)	(15.6)	(43.5)	(35.0)	1,081	8.6	6.9	1.0	0.9	8.5	7.1
JA Solar	USD	8.1	(1.0)	4.8	(7.6)	(8.8)	(5.5)	(6.7)	(16.3)	386	5.3	4.4	0.4	0.4	2.5	2.2
Trina Solar	USD	8.7	(1.6)	7.0	(12.3)	(15.2)	(9.5)	(31.0)	(21.0)	805	6.8	6.0	0.6	0.6	6.1	5.7
Solar City	USD	23.7	(1.4)	16.5	(28.1)	26.2	(18.9)	(61.3)	(53.5)	2,333	#N/A	N/A	#N/A	N/A	#N/A	N/A
Yingli	USD	3.6	(1.9)	8.1	(26.9)	(15.7)	(44.2)	(68.0)	(20.1)	66	#N/A	N/A	#N/A	N/A	#N/A	N/A
First Solar	USD	49.7	(1.6)	5.6	(18.8)	(29.2)	(11.8)	(2.6)	(24.6)	5,085	11.5	15.7	0.8	0.8	5.9	6.6
한화솔라원	USD	12.3	(1.8)	4.0	(8.2)	(26.6)	(29.0)	(41.8)	(44.0)	1,032	7.3	7.1	#N/A	N/A	5.3	5.2
OCI	KRW	98,200	(8.7)	(6.0)	(8.2)	11.3	29.0	2.1	30.9	1,983	0.0	7.4	0.0	0.7	0.0	8.5
웅진에너지	KRW	1,120	(1.8)	2.3	(10.8)	(33.3)	(30.7)	(24.8)	(35.3)	102	N/A	0.0	0.7	0.0	8.5	0.0
신성솔라에너지	KRW	1,645	(1.2)	1.2	0.6	(5.5)	0.0	25.2	(11.4)	140	N/A	0.7	0.0	8.5	0.0	7.2
Average			(2.0)	4.7	(10.1)	(9.2)	(13.8)	(25.9)	(19.2)							
Gas Company																
Towngas China	HKD	4.1	0.5	(1.9)	(2.2)	5.7	(16.9)	(50.6)	(9.6)	1,397	8.5	8.1	0.8	0.7	10.5	9.9
Kulun	HKD	6.3	1.3	3.1	(9.7)	11.0	(9.8)	(27.1)	(9.3)	6,507	12.9	10.1	0.9	0.9	5.3	4.9
Beijing Enterprise	HKD	38.6	(0.3)	(0.6)	(7.3)	4.9	(21.7)	(44.9)	(17.8)	6,313	7.8	7.3	0.8	0.7	13.2	12.0
ENN Energy	HKD	37.8	6.9	2.4	(4.4)	4.9	(5.5)	(29.4)	(8.7)	5,261	11.8	10.6	2.1	1.9	7.6	6.9
China Resources Gas	HKD	21.6	2.9	(1.4)	(2.5)	7.8	(0.5)	(9.3)	(6.9)	6,172	13.9	12.5	2.4	2.1	8.9	8.0
China Gas Holdings	HKD	10.8	(0.2)	2.3	(1.6)	6.5	(6.7)	(17.3)	(3.0)	6,854	12.4	10.9	2.2	1.9	10.1	9.0
Shenzen Gas	HKD	11.6	0.0	0.3	(9.8)	(2.9)	(10.5)	(18.0)	(19.2)	2,832	10.8	9.9	1.1	1.0	7.4	6.8
Shann Xi	CNY	9.9	(0.5)	0.6	0.1	14.6	(25.1)	(45.6)	(21.3)	1,683	15.7	13.4	#N/A	N/A	#N/A	N/A
Suntien	HKD	0.8	0.0	(1.2)	(4.6)	(9.8)	(34.6)	(58.7)	(33.1)	397	8.8	6.7	0.3	0.3	8.7	7.2
China Oil & Gas	HKD	0.5	3.9	0.0	(1.9)	19.1	(13.1)	(43.9)	0.0	398	9.8	8.5	1.0	0.9	5.8	5.2
Average			1.5	0.4	(4.4)	6.2	(14.4)	(34.5)	(12.9)							
EV																
LG화학	KRW	272,500	(0.5)	0.6	(10.5)	(7.2)	(15.9)	1.1	(17.0)	15,291	12.6	11.3	1.4	1.3	5.4	4.9
삼성SDI	KRW	108,500	0.5	1.9	(5.7)	9.6	(11.8)	(13.9)	(4.8)	6,317	16.8	23.5	0.7	0.7	#N/A	N/A
Panasonic	JPY	968.4	(0.5)	0.4	(6.7)	2.3	(31.0)	(46.8)	(21.9)	21,635	12.0	10.3	1.1	1.0	3.3	3.0
GS Yuasa	JPY	456.0	0.2	(1.7)	(1.9)	(1.9)	(1.5)	(16.6)	0.9	1,718	12.8	11.0	1.1	1.0	6.0	5.5
NEC	JPY	251.0	0.0	2.9	(10.0)	(12.8)	(39.2)	(38.6)	(34.8)	5,954	9.7	8.6	0.7	0.7	5.4	5.2
BYD Auto	CNY	58.8	(0.6)	0.3	(5.3)	12.3	(7.8)	(22.7)	(8.7)	19,226	36.2	28.6	4.0	3.6	15.5	13.3
Tesla Motors	USD	225.1	2.5	4.6	(11.3)	18.3	(2.0)	(9.0)	(6.2)	32,841	338.0	86.5	17.2	14.2	43.8	25.5
Kandi Technologies	USD	7.0	0.4	5.9	(5.7)	(2.9)	(31.5)	(29.0)	(36.2)	331	#N/A	N/A	#N/A	N/A	#N/A	N/A
Average			0.2	1.9	(7.1)	2.2	(17.6)	(21.9)	(16.1)							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임