

1. News Summary (3 page)

2016년 2월 15일

News	Conclusion
WTI comment 감산 기대에 급등	
Headline 미국 E&P 주가 급반등 불구 Chesapeake은 채무부담으로 -10.7%	저유가 상황 지속되면서 한계기업 속출 중, M&A 가능성 상승 중
News 1.	-
News 2.	-
News 3.	-
News 4.	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	29.4	12.3	(4.7)	(3.4)	(27.7)	(42.5)
Dubai	\$/bbl	26.9	3.0	(8.1)	1.4	(34.1)	(50.9)
Gasoline	\$/bbl	42.7	4.8	(7.1)	(16.2)	(26.6)	(38.2)
Diesel	\$/bbl	36.0	4.6	(6.2)	(0.1)	(35.3)	(49.1)
Complex margin	\$/bbl	7.4	0.6	(0.1)	(2.8)	(2.1)	(2.3)
1M lagging	\$/bbl	1.7	1.0	(2.4)	3.3	(2.6)	(9.4)
Petrochemical			%	%	%	%	%
Naphtha	\$/t	310	6.2	(4.8)	(9.7)	(30.8)	(40.6)
Butadiene	\$/t	800	0.0	0.0	9.6	7.4	26.0
HDPE	\$/t	1,070	0.0	0.0	(0.5)	(4.9)	(4.5)
MEG	\$/t	610	0.0	0.0	7.4	2.5	(22.8)
PX	\$/t	710	0.7	(0.8)	2.8	(8.4)	(11.7)
SM	\$/t	941	0.5	0.3	5.0	3.3	(2.0)
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	1.97	(1.4)	(4.7)	(7.6)	(23.4)	(40.9)
Natural rubber	\$/t	1,040	1.0	(3.7)	(1.9)	(11.9)	(26.8)
Cotton	C/lbs	58.6	(0.1)	(3.2)	(5.3)	(6.4)	(9.6)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	02/08	\$/t	890	0.6	(18.7)	(16.4)	(2.2)
Propylene	02/08	\$/t	650	0.8	4.0	5.7	(15.3)
Benzene	02/08	\$/t	550	0.5	(5.6)	(11.3)	(15.1)
Toluene	02/08	\$/t	585	1.7	(7.1)	(15.2)	(7.9)
Xylene	02/08	\$/t	588	2.2	(8.2)	(15.5)	(8.9)
PP	02/08	\$/t	840	0.6	1.2	(13.8)	(16.0)
PVC	02/08	\$/t	725	0.0	1.4	(7.1)	(9.9)
ABS	02/08	\$/t	1,120	0.0	(0.9)	(10.0)	(24.6)
SBR	02/08	\$/t	1,195	(1.2)	(0.4)	1.7	(2.4)
SM	02/08	\$/t	970	3.2	1.6	2.4	1.3
BPA	02/08	\$/t	1,138	7.6	(5.6)	(26.4)	(37.2)
Caustic	02/08	\$/t	288	(0.9)	0.9	(4.2)	8.5
2-EH	02/08	\$/t	680	(0.7)	(0.7)	(6.2)	(26.9)
Caprolactam	02/08	\$/t	1,110	(10.5)	(11.2)	(18.4)	(28.4)
Solar				%	%	%	%
Polysilicon	02/10	\$/kg	12.9	0.0	(0.6)	(8.3)	(32.0)
Module	02/10	\$/W	0.55	0.0	(0.2)	(1.6)	(8.3)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	81.0	1.8	1.2	7.8	2.0	(12.3)
Shell	EUR	1,526	5.8	(0.6)	12.9	(3.7)	(27.8)
Petrochina	CNY	7.23	0.0	0.0	(6.8)	(20.6)	(35.3)
Gazprom	RUB	131.3	0.6	(2.3)	(1.7)	(3.9)	(16.7)
Petrobras	BRL	4.5	5.2	(2.0)	(19.5)	(41.3)	(53.2)
Refinery							
Phillips66	USD	75.2	3.2	(4.0)	(3.4)	(15.7)	0.1
Valero	USD	57.8	3.9	1.1	(18.9)	(16.8)	2.1
JX	JPY	424.2	(4.3)	(12.4)	(3.9)	(9.7)	(8.6)
Neste Oil	EUR	26.2	1.6	(5.6)	(3.3)	6.2	19.9

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	58.1	1.7	(1.5)	(10.1)	(21.8)	(29.7)
Dow Chemical	USD	46.0	2.7	(1.5)	2.7	(8.8)	(6.4)
SABIC	SAR	63.7	0.0	(5.4)	(5.9)	(22.8)	(33.0)
Formosa Pla.	TWD	75.3	0.0	0.0	3.3	(0.4)	(2.2)
Shin-Etsu	JPY	5,182	(5.7)	(11.1)	(15.1)	(28.3)	(36.0)
Renewable							
Wacker	EUR	59.6	1.5	(1.7)	(14.1)	(26.8)	(41.3)
Yingli	USD	3.72	(0.3)	(14.5)	3.3	(45.8)	(83.3)
Tesla	USD	151.0	0.4	(7.1)	(28.1)	(29.1)	(25.6)
BYD	CNY	50.1	0.0	0.0	(16.3)	(29.1)	32.2

4. Coverage Summary

	02/12	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	1,835	(1.4)	(4.3)	(4.2)	(7.0)	(7.5)	(5.7)				* 추정치는 12M fwd 기준임	
KOSPI화학	4,879	(3.5)	(7.1)	(8.5)	(1.7)	0.8	18.7				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	283,000	(1.0)	(6.0)	(14.6)	(5.5)	25.5	31.9	매수	380,000	34.3	13.74	1.56
롯데케미칼	269,000	(3.9)	(6.4)	3.3	19.0	12.8	52.0	매수	290,000	7.8	12.16	1.13
한화케미칼	22,550	(7.6)	(8.9)	(15.7)	7.1	18.7	72.1	매수	30,000	33.0	7.97	0.64
금호석유화학	51,900	(2.6)	(8.1)	(4.2)	(9.7)	(13.4)	(39.2)	매수	70,000	34.9	14.13	1.06
KCC	422,500	0.4	(3.1)	0.6	(1.5)	6.2	(20.1)	매수	550,000	30.2	14.60	0.66
OCI	65,300	0.3	(5.4)	(7.8)	(13.7)	(26.7)	(24.2)	매수	85,000	30.2	15.54	0.65
SKC	27,800	(4.5)	(7.0)	(14.3)	(23.1)	(28.0)	(8.4)	매수	43,000	54.7	8.66	0.71
국도화학	51,400	(4.6)	(8.9)	(9.8)	(12.7)	(32.9)	11.6	매수	100,000	94.6	6.36	0.61
SK이노베이션	129,500	(1.9)	(8.8)	(3.7)	13.6	30.9	28.9	매수	150,000	15.8	10.23	0.81
S-Oil	74,100	(3.5)	(11.8)	(7.1)	8.5	18.4	19.5	매수	85,000	14.7	12.02	1.38
GS	49,500	(2.2)	(5.0)	0.1	1.0	11.7	17.0	매수	60,000	21.2	5.12	0.82
SK가스	71,300	(1.5)	(4.8)	5.3	(11.3)	(17.6)	(16.4)	매수	90,000	26.2	8.92	0.63
대우인터내셔널	18,100	13.1	10.4	24.8	(4.5)	(15.8)	(38.0)	매수	22,000	21.5	10.02	0.86
LG상사	31,800	(0.5)	(3.2)	0.3	(2.8)	19.1	(19.2)	매수	40,000	25.8	12.23	0.89

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

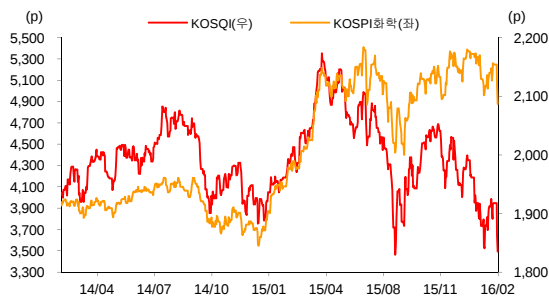
* 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.

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

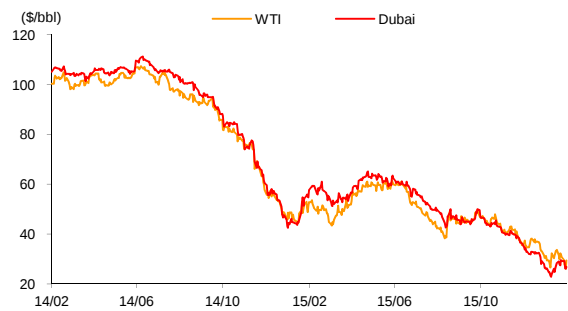
* 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

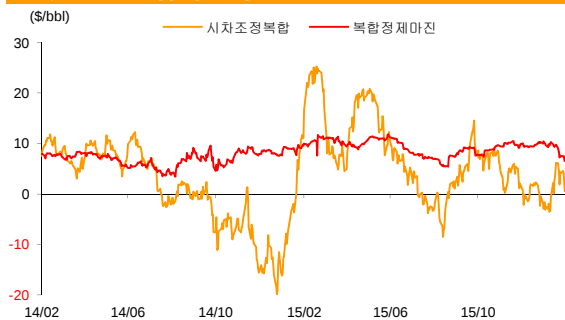
KOSPI/KOSPI화학



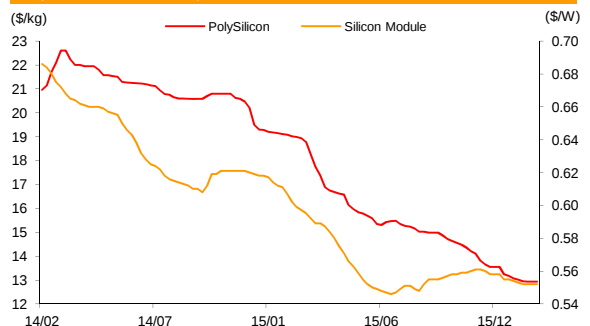
WTI/Dubai



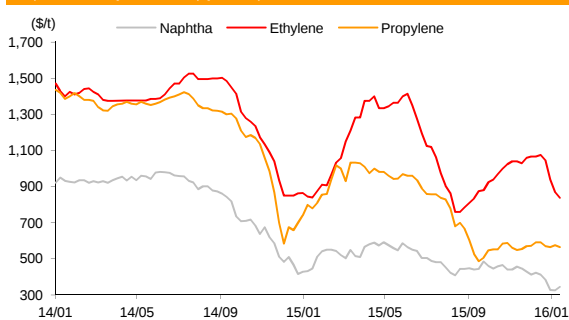
Complex & 1M lagging margin



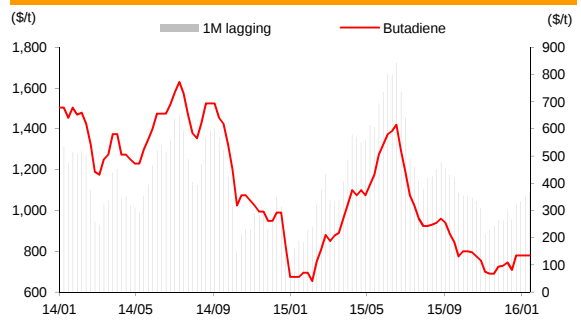
Polysilicon & Module prices



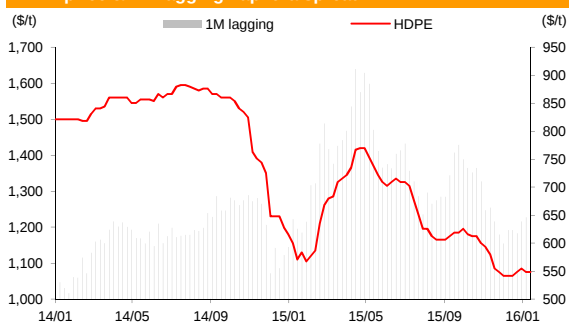
Naphtha/Ethylene/Propylene prices



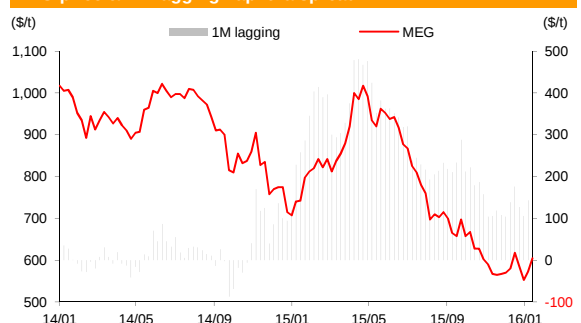
Butadiene price & 1M lagging naphtha spread



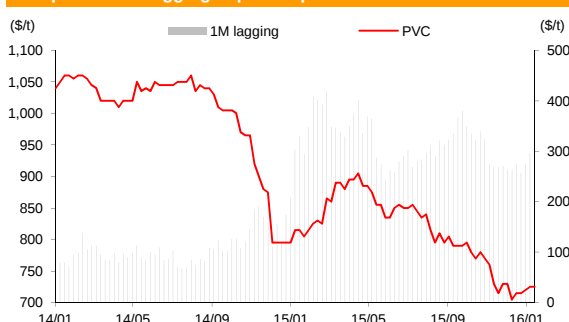
HDPE price & 1M lagging naphtha spread



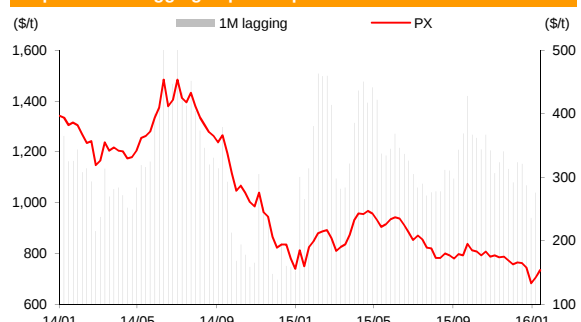
MEG price & 1M lagging naphtha spread



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: Bloomberg)

제목 미국 E&P 추가 급반등 불구 Chesapeake은 채무부담으로 -10.7%

결론 저유가 상황 지속되면서 한계기업 속출 중, M&A 가능성 상승 중

세부

- 1) 3월에 \$5억의 채무 상환해야 하는 상황. 현금과 유동성 총동원할 듯
- 2) 또한 2017년에는 \$10억의 상환이 있기에 현재 자산매각도 검토 중임
- 3) 현재 총 \$100억 가량의 부채가 있음, 추가적인 재무부담도 불가피함
- 4) 아직까지는 파산보호신청까지 할 계획은 없는 것으로 알려짐
- 5) 저유가 상황 지속되면서 한계기업 속출 중, M&A 가능성 상승 중

WTI Comment

(출처: 연합뉴스)

제목 감산 기대에 급등

상승 UAE 석유장관, "OPEC 모든 회원국은 감산할 준비가 돼 있다."

요인

하락

요인

Issue 1

제목

결론

세부

- 1)
- 2)
- 3)
- 4)
- 5)

Issue 2

제목

결론

세부

- 1)
- 2)
- 3)
- 4)
- 5)

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	2013avg.	2014avg.	2015acc.
F/X	USD/EUR	0.888	0.883	0.896	0.921	0.925	0.896	0.877	0.921	0.753	0.754	0.901
	Change, %		0.6	(0.9)	(3.5)	(3.9)	(0.9)	1.3	(3.6)	(3.9)	13.7	(1.4)
	USD/JPY	113.3	112.4	116.9	117.7	122.6	124.2	119.1	120.6	97.7	105.9	121.1
	Change, %		0.7	(3.1)	(3.7)	(7.6)	(8.8)	(4.9)	(6.1)	21.5	13.8	(6.4)
	USD/KRW	1,211.5	1,202.7	1,197.5	1,210.3	1,158.3	1,190.4	1,110.8	1,172.6	1,094.6	1,053.0	1,131.2
	Change, %		0.7	1.2	0.1	4.6	1.8	9.1	3.3	50.3	3.3	7.1
Agriculture	Corn	358.8	360.3	365.8	356.8	362.0	357.3	383.0	358.8	579.2	415.6	376.8
	Change, %		(0.4)	(1.9)	0.6	(0.9)	0.4	(6.3)	0.0	(39.6)	(5.9)	(4.8)
	Soybean	872.8	873.5	867.5	890.8	869.3	951.0	983.8	871.3	1,407.0	1,245.5	945.4
	Change, %		(0.1)	0.6	(2.0)	0.4	(8.2)	(11.3)	0.2	(7.5)	(22.3)	(7.7)
	Wheat	457.5	458.3	466.8	481.3	498.0	492.3	521.3	470.0	684.3	588.0	508.1
	Change, %		(0.2)	(2.0)	(4.9)	(8.1)	(7.1)	(12.2)	(2.7)	(22.2)	(2.6)	(10.0)
	Rice	10.8	11.0	11.1	11.5	12.1	11.7	10.3	11.6	15.5	14.0	11.1
	Change, %		(2.3)	(3.2)	(6.3)	(11.1)	(8.1)	4.2	(6.9)	4.4	(25.9)	(2.6)
	Oats	196.3	191.5	197.0	205.5	230.0	226.8	273.3	217.3	367.5	373.1	250.2
	Change, %		2.5	(0.4)	(4.5)	(14.7)	(13.5)	(28.2)	(9.7)	1.9	(14.3)	(21.6)
MYR/mt	Palm Oil	2,548.0	2,490.0	2,497.0	2,224.0	2,180.0	1,970.0	2,265.0	2,398.0	2,405.0	2,415.1	2,190.3
	Change, %		2.3	2.0	14.6	16.9	29.3	12.5	6.3	13.3	(12.8)	16.3
	Cocoa	2,827.0	2,766.0	2,772.0	2,860.0	3,309.0	3,035.0	2,955.0	3,211.0	2,403.9	3,006.8	3,091.6
	Change, %		2.2	2.0	(1.2)	(14.6)	(6.9)	(4.3)	(12.0)	21.2	7.4	(8.6)
	Cotton	58.9	58.4	60.0	61.6	61.8	65.7	62.5	63.3	83.3	76.4	63.3
	Change, %		0.8	(1.8)	(4.4)	(4.8)	(10.4)	(5.7)	(6.9)	12.6	(28.8)	(6.9)
	Sugar	13.2	13.1	13.3	14.1	15.0	10.5	15.0	15.2	17.5	16.3	13.1
	Change, %		0.6	(0.9)	(6.4)	(12.2)	24.8	(12.6)	(13.7)	(15.9)	(11.5)	0.1
	Coffee	115.6	113.0	120.4	114.4	115.3	131.9	164.6	126.7	126.0	177.1	132.6
	Change, %		2.3	(4.0)	1.0	0.2	(12.4)	(29.8)	(8.8)	(23.0)	50.5	(12.9)
Energy	WTI	29.4	26.2	30.9	30.4	41.8	43.3	51.2	37.0	98.0	92.9	48.8
	Change, %		12.3	(4.7)	(3.3)	(29.5)	(32.0)	(42.5)	(20.5)	7.2	(45.9)	(39.7)
	Brent	33.4	30.1	34.1	30.9	44.1	49.7	57.1	37.3	108.7	99.5	53.7
	Change, %		11.0	(2.1)	8.1	(24.3)	(32.8)	(41.5)	(10.5)	(0.3)	(48.3)	(37.8)
	Natural Gas	2.0	2.0	2.1	2.3	2.3	2.9	2.7	2.3	3.7	4.3	2.6
	Change, %		(1.4)	(4.7)	(12.9)	(13.0)	(32.9)	(27.5)	(15.9)	26.2	(31.7)	(25.2)
	Ethanol	1.4	1.4	1.4	1.3	1.5	1.4	1.4	1.4	2.3	2.1	1.5
	Change, %		0.2	(4.2)	3.7	(7.5)	(3.9)	(4.2)	(1.7)	(12.7)	(14.9)	(8.9)
	RBOB Gasoline	104.3	94.2	99.3	108.5	127.3	176.4	159.6	126.7	285.0	262.6	163.6
	Change, %		10.8	5.1	(3.8)	(18.1)	(40.8)	(34.6)	(17.7)	(0.9)	(48.5)	(36.2)
	Coal	43.2	43.1	43.1	43.6	41.8	42.9	51.5	43.3	56.1	57.5	45.2
	Change, %		0.2	0.2	(1.0)	3.4	0.7	(16.2)	(0.3)	(1.0)	(15.5)	(4.4)
Metal	Gold	1,237.9	1,246.7	1,173.8	1,086.6	1,085.2	1,124.5	1,222.2	1,061.4	1,410.4	1,266.5	1,160.6
	Change, %		(0.7)	5.5	13.9	14.1	10.1	1.3	16.6	(28.0)	(1.3)	6.7
	Silver	15.8	15.8	15.0	13.8	14.3	15.5	16.9	13.8	23.8	19.1	15.7
	Change, %		0.0	4.9	14.3	10.2	1.3	(6.5)	14.0	(35.8)	(18.9)	0.2
	Platinum	956.5	960.3	912.0	836.4	877.4	1,001.0	1,199.7	891.1	1,485.7	1,384.6	1,055.7
	Change, %		(0.4)	4.9	14.4	9.0	(4.4)	(20.3)	7.3	(11.2)	(11.5)	(9.4)
	Palladium	523.6	523.9	502.2	470.7	560.7	627.8	774.8	563.0	725.9	803.4	691.9
	Change, %		(0.0)	4.3	11.3	(6.6)	(16.6)	(32.4)	(7.0)	1.7	11.4	(24.3)
	Copper	4,500.0	4,445.0	4,630.0	4,352.0	4,823.5	5,189.5	5,740.0	4,705.0	7,352.6	6,828.1	5,503.1
	Change, %		1.2	(2.8)	3.4	(6.7)	(13.3)	(21.6)	(4.4)	(7.2)	(14.4)	(18.2)
	Uranium	34.2	34.2	34.4	34.5	36.0	36.4	37.8	34.4	38.5	33.5	36.9
	Change, %		0.0	(0.7)	(1.0)	(5.1)	(6.2)	(9.5)	(0.7)	(20.9)	2.5	(7.3)
	HR Coil	397.0	397.0	400.0	395.0	388.0	467.0	532.0	391.0	630.4	653.2	461.5
	Change, %		0.0	(0.7)	0.5	2.3	(15.0)	(25.4)	1.5	3.1	(10.4)	(14.0)
	Scrap	250.0	250.0	250.0	250.0	190.0	255.0	275.0	250.0	396.9	401.3	252.9
	Change, %		0.0	0.0	0.0	31.6	(2.0)	(9.1)	0.0	(1.2)	(16.5)	(1.2)
	Zinc	1,705.0	1,706.0	1,677.0	1,468.0	1,615.0	1,829.0	2,146.0	1,609.0	1,940.3	2,165.0	1,941.9
	Change, %		(0.1)	1.7	16.1	5.6	(6.8)	(20.5)	6.0	(1.2)	6.0	(12.2)

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		02/12	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Crude Oil	WTI	29.4	26.2	30.9	30.5	40.7	41.9	51.2	37.0	93.1	48.8	31.2
	Change, %		12.3	(4.7)	(3.4)	(27.7)	(29.7)	(42.5)	(20.5)	(68.4)	(39.6)	(5.7)
	Dubai	26.9	26.1	29.2	26.5	40.8	48.5	54.8	32.2	96.7	50.8	27.4
	Change, %		3.0	(8.1)	1.4	(34.1)	(44.7)	(50.9)	(16.6)	(72.2)	(47.1)	(2.1)
Crude Oil	Gasoline(휘발유)	42.7	40.7	46.0	51.0	58.2	67.9	69.1	54.8	110.9	69.5	49.0
Product	Change, %		4.8	(7.1)	(16.2)	(26.6)	(37.1)	(38.2)	(22.1)	(61.5)	(38.6)	(12.9)
	Kerosene(등유)	38.5	36.9	41.1	37.9	55.6	57.6	72.3	44.2	112.6	64.7	38.6
	Change, %		4.4	(6.3)	1.7	(30.8)	(33.2)	(46.8)	(12.9)	(65.8)	(40.5)	(0.2)
	Diesel(경유)	36.0	34.4	38.4	36.1	55.7	57.9	70.7	43.2	112.8	64.8	36.7
	Change, %		4.6	(6.2)	(0.1)	(35.3)	(37.7)	(49.1)	(16.7)	(68.1)	(44.4)	(1.8)
	Bunker-C	22.6	22.1	24.6	21.8	34.0	41.1	52.5	25.3	86.5	45.3	23.2
	Change, %		2.1	(8.1)	3.6	(33.7)	(45.1)	(57.0)	(10.8)	(73.9)	(50.1)	(2.8)
	Naphtha	32.3	31.1	34.5	37.8	46.2	48.2	55.6	43.5	94.3	52.6	36.0
	Change, %		4.0	(6.3)	(14.7)	(30.2)	(33.0)	(42.0)	(25.7)	(65.8)	(38.6)	(10.3)
Dubai	Gasoline(휘발유)	15.8	14.7	16.7	24.5	17.4	19.3	14.3	22.6	14.2	18.7	21.6
Spread	Change		1.2	(0.9)	(8.7)	(1.6)	(3.5)	1.5	(6.8)	1.6	(2.9)	(5.7)
	Kerosene(등유)	11.6	10.8	11.9	11.4	14.8	9.1	17.6	12.0	15.9	14.0	11.1
	Change		0.9	(0.2)	0.3	(3.2)	2.6	(5.9)	(0.4)	(4.2)	(2.3)	0.5
	Diesel(경유)	9.2	8.4	9.2	9.6	14.9	9.3	16.0	11.0	16.0	14.0	9.2
	Change		0.8	(0.0)	(0.4)	(5.8)	(0.2)	(6.8)	(1.9)	(6.9)	(4.8)	(0.1)
	Bunker-C	(4.3)	(4.0)	(4.7)	(4.7)	(6.7)	(7.4)	(2.3)	(6.9)	(10.3)	(5.5)	(4.2)
	Change		(0.3)	0.4	0.4	2.4	3.1	(2.0)	2.6	6.0	1.2	(0.1)
	Naphtha	5.4	5.0	5.3	11.4	5.5	(0.4)	0.9	11.3	(2.4)	1.8	8.6
	Change		0.5	0.2	(5.9)	(0.0)	5.8	4.5	(5.8)	7.8	3.6	(3.1)
Refining	Simple(단순)	2.9	2.6	2.8	4.1	3.3	0.8	5.0	3.2	(0.1)	3.3	3.7
Margin	Change		0.3	0.1	(1.2)	(0.4)	2.1	(2.1)	(0.3)	3.0	(0.4)	(0.8)
	Complex(복합)	7.4	6.7	7.5	10.2	9.4	6.9	9.6	9.7	7.1	9.3	9.1
	Change		0.6	(0.1)	(2.8)	(2.1)	0.5	(2.3)	(2.3)	0.3	(1.9)	(1.8)
	Complex(lagging)	1.7	0.6	4.1	(1.6)	4.3	0.3	11.1	2.3	2.2	6.5	0.8
	Change		1.0	(2.4)	3.3	(2.6)	1.4	(9.4)	(0.6)	(0.6)	(4.8)	0.9

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			02/12	02/11	02/10	02/09	02/08	02/05	02/04	02/03	02/02	02/01
Spot Price	Naphtha	CFR Japan	310.3	292.3	284.0	325.8	325.8	325.8	330.3	308.3	334.5	346.5
	Ethylene	CFR SE Asia	895.0	895.0	895.0	890.0	890.0	890.0	890.0	890.0	890.0	935.0
	Propylene	FOB Korea	582.0	582.0	582.0	582.0	582.0	582.0	575.0	575.0	575.0	570.0
	Butadiene	FOB Korea	800.0	800.0	800.0	800.0	800.0	800.0	760.0	750.0	750.0	750.0
	HDPE	CFR FE Asia	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,080.0	1,080.0
	LDPE	CFR FE Asia	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	1,095.0	1,095.0
	LLDPE	CFR FE Asia	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0
	MEG	CFR China	610.0	610.0	610.0	610.0	610.0	610.0	613.0	601.0	593.0	597.0
	PP	CFR FE Asia	810.0	810.0	810.0	810.0	810.0	810.0	810.0	810.0	810.0	810.0
	PX	CFR China	710.0	705.0	691.0	716.0	716.0	716.0	719.0	707.3	714.7	714.7
	PTA	CFR China	560.0	560.0	560.0	560.0	560.0	560.0	550.0	542.0	545.0	545.0
	Benzene	FOB Korea	527.0	528.0	523.0	549.0	549.0	549.0	550.0	542.0	542.0	538.0
	Toluene	FOB Korea	525.0	518.0	529.0	545.5	545.5	545.5	550.5	542.5	547.5	543.5
	Xylene	FOB Korea	582.0	567.0	544.0	583.0	583.0	583.0	593.0	562.0	591.0	591.0
	SM	FOB Korea	941.0	936.0	933.0	938.0	938.0	938.0	941.0	924.0	927.0	926.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	Naphtha	CFR Japan	283.5	345.5	384.5	465.5	486.0	512.0	413.5	865.9	493.0	346.9
	Change, %			(17.9)	(26.3)	(39.1)	(41.7)	(44.6)	(31.4)	(67.3)	(42.5)	(18.3)
	Ethylene	CFR SE Asia	890.0	885.0	1,095.0	1,065.0	880.0	910.0	1,090.0	1,401.1	1,103.7	980.8
	Change, %			0.6	(18.7)	(16.4)	1.1	(2.2)	(18.3)	(36.5)	(19.4)	(9.3)
	Propylene	CFR SE Asia	650.0	645.0	625.0	615.0	465.0	767.5	650.0	1,254.2	770.0	575.8
	Change, %			0.8	4.0	5.7	39.8	(15.3)	0.0	(48.2)	(15.6)	12.9
	Butadiene	CFR SE Asia	785.0	740.0	740.0	725.0	725.0	645.0	720.0	1,281.7	877.5	744.2
	Change, %			6.1	6.1	8.3	8.3	21.7	9.0	(38.8)	(10.5)	5.5
	Benzene	CFR SE Asia	550.0	547.5	582.5	620.0	600.0	647.5	580.0	1,243.1	690.0	557.1
	Change, %			0.5	(5.6)	(11.3)	(8.3)	(15.1)	(5.2)	(55.8)	(20.3)	(1.3)
	Toluene	CFR SE Asia	585.0	575.0	630.0	690.0	665.0	635.0	630.0	1,082.5	700.8	596.7
	Change, %			1.7	(7.1)	(15.2)	(12.0)	(7.9)	(7.1)	(46.0)	(16.5)	(2.0)
	Xylene	CFR SE Asia	587.5	575.0	640.0	695.0	680.0	645.0	625.0	1,055.7	699.3	601.3
	Change, %			2.2	(8.2)	(15.5)	(13.6)	(8.9)	(6.0)	(44.4)	(16.0)	(2.3)
Spread	Ethylene	-Naphtha	606.5	539.5	710.5	599.5	394.0	398.0	676.5	535.2	610.6	633.9
	Change, %			12.4	(14.6)	1.2	53.9	52.4	(10.3)	13.3	(0.7)	(4.3)
	Propylene	-Naphtha	366.5	299.5	240.5	149.5	(21.0)	255.5	236.5	388.3	277.0	228.9
	Change, %			22.4	52.4	145.2	(1,845.2)	43.4	55.0	(5.6)	32.3	60.1
	Butadiene	-Naphtha	501.5	394.5	355.5	259.5	239.0	133.0	306.5	415.9	384.5	397.3
	Change, %			27.1	41.1	93.3	109.8	277.1	63.6	20.6	30.4	26.2
	Benzene	-Naphtha	266.5	202.0	198.0	154.5	114.0	135.5	166.5	377.3	197.0	210.2
	Change, %			31.9	34.6	72.5	133.8	96.7	60.1	(29.4)	35.3	26.8
	Toluene	-Naphtha	301.5	229.5	245.5	224.5	179.0	123.0	216.5	216.6	207.8	249.8
	Change, %			31.4	22.8	34.3	68.4	145.1	39.3	39.2	45.1	20.7
	Xylene	-Naphtha	304.0	229.5	255.5	229.5	194.0	133.0	211.5	189.9	206.3	254.3
	Change, %			32.5	19.0	32.5	56.7	128.6	43.7	60.1	47.4	19.5

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	1,075.0	1,075.0	1,075.0	1,175.0	1,185.0	1,130.0	1,065.0	1,524.9	1,230.1	1,075.0
	Change, %			0.0	0.0	(8.5)	(9.3)	(4.9)	0.9	(29.5)	(12.6)	0.0
	MEG	CFR SE Asia	605.0	605.0	585.0	627.5	697.5	797.5	617.5	934.1	780.8	589.6
	Change, %			0.0	3.4	(3.6)	(13.3)	(24.1)	(2.0)	(35.2)	(22.5)	2.6
	PVC	CFR SE Asia	725.0	725.0	715.0	780.0	790.0	805.0	715.0	1,013.9	820.8	720.8
	Change, %			0.0	1.4	(7.1)	(8.2)	(9.9)	1.4	(28.5)	(11.7)	0.6
	PP	CFR SE Asia	840.0	835.0	830.0	975.0	995.0	1,000.0	835.0	1,503.0	1,109.8	832.5
	Change, %			0.6	1.2	(13.8)	(15.6)	(16.0)	0.6	(44.1)	(24.3)	0.9
	2-EH	CFR Korea	680.0	685.0	685.0	725.0	790.0	930.0	680.0	1,397.1	930.1	683.3
	Change, %			(0.7)	(0.7)	(6.2)	(13.9)	(26.9)	0.0	(51.3)	(26.9)	(0.5)
	ABS	CFR SE Asia	1,120.0	1,120.0	1,130.0	1,245.0	1,200.0	1,485.0	1,130.0	1,897.7	1,431.1	1,116.7
	Change, %			0.0	(0.9)	(10.0)	(6.7)	(24.6)	(0.9)	(41.0)	(21.7)	0.3
	SBR	CFR SE Asia	1,195.0	1,210.0	1,200.0	1,175.0	1,255.0	1,225.0	1,150.0		1,332.1	1,193.3
	Change, %			(1.2)	(0.4)	1.7	(4.8)	(2.4)	3.9		(10.3)	0.1
	SM	CFR SE Asia	970.0	940.0	955.0	947.5	942.5	957.5	910.0	1,547.1	1,100.7	935.8
	Change, %			3.2	1.6	2.4	2.9	1.3	6.6	(37.3)	(11.9)	3.7
	Caustic	FOB NEA	287.5	290.0	285.0	300.0	315.0	265.0	285.0	310.0	296.8	286.3
	Change, %			(0.9)	0.9	(4.2)	(8.7)	8.5	0.9	(7.3)	(3.1)	0.4
	PX	CFR SE Asia	735.0	735.0	745.0	807.5	837.5	825.0	762.5	1,228.5	842.9	727.5
	Change, %			0.0	(1.3)	(9.0)	(12.2)	(10.9)	(3.6)	(40.2)	(12.8)	1.0
	PO	CFR China	1,137.5	1,057.5	1,205.0	1,545.0	1,587.5	1,812.5	1,257.5	2,179.2	1,683.4	1,127.1
	Change, %			7.6	(5.6)	(26.4)	(28.3)	(37.2)	(9.5)	(47.8)	(32.4)	0.9
	Caprolactam	CFR SE Asia	1,110.0	1,240.0	1,250.0	1,360.0	1,350.0	1,550.0	1,260.0	2,233.4	1,581.5	1,226.7
	Change, %			(10.5)	(11.2)	(18.4)	(17.8)	(28.4)	(11.9)	(50.3)	(29.8)	(9.5)
	PTA	CFR SE Asia	580.0	562.5	582.5	625.0	627.5	612.5	585.0	911.7	648.0	571.3
	Change, %			3.1	(0.4)	(7.2)	(7.6)	(5.3)	(0.9)	(36.4)	(10.5)	1.5
Spread	HDPE		791.5	729.5	690.5	709.5	699.0	618.0	651.5	659.0	737.1	728.1
	Change, %			8.5	14.6	11.6	13.2	28.1	21.5	20.1	7.4	8.7
	MEG		321.5	259.5	200.5	162.0	211.5	285.5	204.0	68.2	287.8	242.7
	Change, %			23.9	60.3	98.5	52.0	12.6	57.6	371.2	11.7	32.5
	PVC		441.5	379.5	330.5	314.5	304.0	293.0	301.5	148.0	327.8	373.9
	Change, %			16.3	33.6	40.4	45.2	50.7	46.4	198.3	34.7	18.1
	PP		556.5	489.5	445.5	509.5	509.0	488.0	421.5	637.1	616.8	485.6
	Change, %			13.7	24.9	9.2	9.3	14.0	32.0	(12.7)	(9.8)	14.6
	2-EH		396.5	339.5	300.5	259.5	304.0	418.0	266.5	531.3	437.0	336.4
	Change, %			16.8	31.9	52.8	30.4	(5.1)	48.8	(25.4)	(9.3)	17.9
	ABS		836.5	774.5	745.5	779.5	714.0	973.0	716.5	1,031.9	938.1	769.8
	Change, %			8.0	12.2	7.3	17.2	(14.0)	16.7	(18.9)	(10.8)	8.7
	SBR	BD spread	410.0	470.0	460.0	450.0	530.0	580.0	430.0		454.7	449.2
	Change, %			(12.8)	(10.9)	(8.9)	(22.6)	(29.3)	(4.7)		(9.8)	(8.7)
	SM		686.5	594.5	570.5	482.0	456.5	445.5	496.5	681.2	607.7	588.9
	Change, %			15.5	20.3	42.4	50.4	54.1	38.3	0.8	13.0	16.6
	Caustic											
	Change, %											
	PX		451.5	389.5	360.5	342.0	351.5	313.0	349.0	362.6	349.9	380.6
	Change, %			15.9	25.2	32.0	28.4	44.2	29.4	24.5	29.0	18.6
	PO	propylene spread	487.5	412.5	580.0	930.0	1,122.5	1,045.0	607.5	925.0	913.4	551.3
	Change, %			18.2	(15.9)	(47.6)	(56.6)	(53.3)	(19.8)	(47.3)	(46.6)	(11.6)
	Caprolactam	benzene spread	560.0	692.5	667.5	740.0	750.0	902.5	680.0	990.3	891.6	669.6
	Change, %			(19.1)	(16.1)	(24.3)	(25.3)	(38.0)	(17.6)	(43.5)	(37.2)	(16.4)
	PTA	px spread	65.5	48.0	61.0	59.8	41.3	35.0	51.3	51.8	58.0	62.0
	Change, %			36.5	7.4	9.6	58.8	87.1	27.8	26.6	12.9	5.6

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naptha spread로 일괄적용

Global peers

	Currency	02/12	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	46.0	2.7	(1.5)	2.7	(8.8)	0.7	(6.4)	(10.6)	51,398	13.3	11.6	2.2	2.1	7.1	6.5		
Du Pont	USD	58.4	3.1	(0.8)	(0.3)	(11.7)	9.6	(19.4)	(12.3)	50,906	19.4	16.7	5.3	4.5	10.8	9.5		
Eastman	USD	60.7	3.8	0.4	(3.7)	(10.0)	(21.7)	(19.2)	(10.1)	9,015	8.7	7.8	2.0	1.7	7.3	6.9		
BASF	EUR	58.1	1.7	(1.5)	(10.1)	(21.8)	(25.0)	(29.7)	(17.8)	60,044	12.2	11.2	1.8	1.7	6.6	6.2		
Akzo Nobel	EUR	50.2	(0.1)	(10.1)	(15.3)	(22.3)	(20.7)	(20.1)	(18.7)	14,048	12.2	11.5	1.9	1.8	6.5	6.2		
Arkema	EUR	49.4	1.2	(7.5)	(13.6)	(22.5)	(29.4)	(25.0)	(23.6)	4,135	10.0	8.2	1.0	1.0	4.9	4.5		
Lanxess	EUR	34.2	2.4	(7.1)	(9.7)	(25.8)	(32.2)	(25.6)	(20.0)	3,516	12.5	10.1	1.2	1.1	4.7	4.3		
Sumitomo Chemical	JPY	443	(10.0)	(18.7)	(23.0)	(33.5)	(29.2)	(18.1)	(36.8)	6,478	7.2	6.5	0.8	0.7	6.1	5.8		
Mitsubishi Chemical	JPY	543	(9.4)	(15.4)	(20.0)	(32.2)	(27.8)	(11.0)	(29.8)	7,229	8.2	7.4	0.7	0.7	5.5	5.3		
Shin-Etsu Chemical	JPY	5,182	(5.7)	(11.1)	(15.1)	(28.3)	(30.5)	(36.0)	(21.7)	19,779	14.4	13.3	1.0	1.0	4.7	4.4		
Asahi Kasei	JPY	646	(7.5)	(11.1)	(15.4)	(14.5)	(35.9)	(45.7)	(21.5)	8,004	8.7	8.0	0.7	0.7	4.7	4.5		
JSR	JPY	1,457	(7.4)	(12.9)	(13.7)	(24.0)	(30.9)	(29.7)	(23.3)	2,910	10.4	9.7	0.8	0.8	4.2	4.0		
Nitto Denko	JPY	5,215	(8.8)	(15.6)	(28.0)	(40.0)	(38.2)	(31.2)	(41.5)	8,004	9.5	8.9	1.2	1.1	3.9	3.7		
SABIC	SAR	63.7	0.0	(5.4)	(5.9)	(22.8)	(29.9)	(33.0)	(16.7)	50,965	12.3	10.0	1.2	1.1	6.2	5.5		
Yansab	SAR	26.6	0.0	(10.8)	(0.6)	(39.7)	(45.4)	(45.5)	(17.8)	3,994	10.9	8.7	1.0	1.0	5.9	5.5		
Formosa Plastics	TWD	75.3	0.0	0.0	3.3	(0.4)	9.6	(2.2)	(2.2)	14,396	15.8	14.9	1.5	1.4	23.7	22.7		
Formosa Fiber	TWD	70.5	0.0	0.0	1.1	(1.4)	(0.8)	(0.7)	(4.7)	12,410	16.1	15.6	1.3	1.3	13.5	13.2		
Nan Ya Plastics	TWD	58.8	0.0	0.0	2.6	(4.7)	(4.9)	(11.2)	(3.6)	14,005	13.9	13.3	1.3	1.3	13.7	13.2		
Sinopec Shanghai	CNY	5.48	0.0	0.0	(2.0)	(26.7)	(34.8)	35.0	(15.4)	7,522	17.7	16.9	2.7	2.4	8.3	8.1		
Sinopec Yizheng(Fiber)	CNY	6.32	0.0	0.0	(6.1)	(35.4)	(32.4)	2.4	(22.5)	12,012	#N/A	N/A	84.3	3.9	3.8	20.6	15.9	
Reliance	INR	907	(1.9)	(6.6)	(13.3)	(2.4)	(3.9)	(0.3)	(10.7)	43,084	9.9	8.8	1.1	1.0	7.6	6.6		
Industries Qatar	QAR	99.9	0.0	(3.0)	(0.3)	(10.0)	(27.0)	(34.5)	(10.1)	16,598	12.2	11.6	1.8	1.7	49.5	45.9		
PTT Chemical	THB	51.5	3.0	(2.8)	12.6	(7.2)	(13.8)	(11.6)	3.0	6,456	8.6	7.9	0.9	0.8	5.6	5.2		
Petronas	MYR	6.9	(0.9)	(1.1)	(6.1)	5.8	15.4	30.9	(5.1)	13,293	17.9	17.0	2.2	2.0	9.0	8.5		
LG화학	KRW	283,000	(1.0)	(6.0)	(12.2)	(5.0)	32.9	34.1	(13.9)	15,547	0.0	14.0	0.0	1.5	0.0	5.7		
롯데케미칼	KRW	269,000	(3.9)	(6.4)	2.7	19.6	17.7	53.7	10.5	7,643	0.0	8.0	0.0	1.1	0.0	4.0		
한화케미칼	KRW	22,550	(7.6)	(8.9)	(14.4)	7.1	19.3	76.9	(17.1)	3,027	14.8	9.5	0.8	0.7	9.8	8.1		
금호석유	KRW	51,900	(2.6)	(8.1)	0.8	(8.3)	(11.4)	(39.3)	(0.4)	1,311	0.0	12.2	0.0	1.0	0.0	8.9		
SKC	KRW	27,800	(4.5)	(7.0)	(13.3)	(25.0)	(23.2)	(8.6)	(17.8)	848	0.0	7.7	0.0	0.7	0.0	6.8		
국도화학	KRW	51,400	(4.6)	(8.9)	(9.3)	(15.0)	(31.4)	11.6	(13.3)	248	0.0	6.8	0.0	0.7	0.0	3.7		
효성	KRW	2,400	(3.6)	(10.3)	1.3	(20.0)	(12.7)	(34.7)	(8.0)	3,304	0.0	7.5	0.0	1.1	0.0	6.3		
Average			(2.0)	(6.4)	(7.2)	(15.7)	(15.7)	(9.5)	(14.6)									
Refinery																		
Valero	USD	57.8	3.9	1.1	(18.9)	(16.8)	(17.7)	2.1	(18.3)	27,807	7.6	7.5	1.2	1.1	4.0	4.1		
Conoco Phillips	USD	32.9	3.2	0.0	(18.3)	(36.7)	(36.2)	(51.6)	(29.5)	40,620	#N/A	N/A	63.4	1.0	1.1	9.1	5.5	
Formosa Petrochemical	TWD	80.4	0.0	0.0	4.6	5.8	12.1	15.4	2.0	23,002	18.3	18.1	2.8	2.7	12.3	12.9		
Tesoro	USD	71.1	(1.3)	(6.8)	(32.1)	(36.3)	(35.0)	(12.7)	(32.6)	8,556	7.8	8.8	1.4	1.3	3.9	4.2		
Marathon Petroleum	USD	31.7	2.9	(1.8)	(31.6)	(42.0)	(45.1)	(37.4)	(38.8)	16,911	7.1	6.5	1.1	1.0	3.5	3.2		
Devon Energy	USD	21.7	2.1	(12.7)	(15.7)	(51.9)	(54.7)	(67.0)	(32.2)	8,915	#N/A	N/A	22.4	0.8	0.8	8.3	5.7	
Hollyfrontier	USD	30.7	2.6	(1.0)	(20.2)	(35.8)	(42.9)	(24.1)	(23.0)	5,617	8.6	7.9	1.0	1.0	4.5	4.3		
Phillips 66	USD	75.2	3.2	(4.0)	(3.4)	(15.7)	(10.8)	0.1	(8.1)	40,115	11.2	10.0	1.6	1.5	6.4	5.8		
Murphy Oil	USD	16.8	5.1	(15.4)	(7.9)	(41.4)	(50.8)	(67.0)	(25.2)	2,888	#N/A	N/A	#N/A	N/A	0.5	0.5	6.7	4.4
JX Holdings	JPY	424.2	(4.3)	(12.4)	(3.9)	(9.7)	(16.8)	(8.6)	(16.6)	9,351	7.7	7.1	0.6	0.6	9.7	9.3		
Cosmo Oil	JPY	164.0	0.0	0.0	0.0	0.0	(21.5)	(7.3)	0.0	1,151	#N/A	N/A	#N/A	N/A	#N/A	N/A	#N/A	N/A
Idemitsu	JPY	1,645.0	(3.3)	(13.8)	(5.2)	(17.4)	(26.2)	(18.6)	(15.1)	2,325	5.7	5.2	0.4	0.4	8.2	8.4		
Tonengeneral	JPY	894.0	(4.3)	(11.0)	(7.2)	(28.8)	(27.0)	(18.9)	(12.5)	4,463	8.9	8.1	1.2	1.1	9.2	9.3		
Nesteoil	EUR	26.2	1.6	(5.6)	(3.3)	6.2	8.8	19.9	(5.4)	0	9.8	11.0	1.9	1.7	6.4	6.9		
Ashland	USD	91.9	3.0	(1.1)	(7.6)	(14.9)	(18.1)	(27.3)	(10.5)	5,812	12.9	11.5	2.3	2.0	7.9	7.6		
Fuchs Petrolub	EUR	34.7	2.0	(1.6)	(14.4)	(17.4)	(17.0)	(12.7)	(20.3)	5,138	18.5	17.6	4.1	3.7	10.8	10.3		
SK이노베이션	KRW	129,500	(1.9)	(8.8)	(1.9)	12.1	39.5	33.2	(0.4)	9,926	0.0	8.4	0.0	0.7	0.0	5.4		
S-Oil	KRW	74,100	(3.5)	(11.8)	(5.8)	8.2	26.0	23.7	(6.7)	6,915	0.0	9.2	0.0	1.4	0.0	6.3		
GS	KRW	49,500	(2.2)	(5.0)	0.4	(2.4)	13.7	17.6	(2.4)	3,813	0.0	6.9	0.0	0.7	0.0	6.7		
Average			0.5	(5.9)	(10.1)	(17.6)	(16.8)	(12.7)	(15.6)									

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	02/12	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	81	1.8	1.2	7.8	2.0	2.8	(12.3)	4.0	337,323	30.7	18.1	2.0	2.0	10.0	7.5
BP	GBP	333	7.2	(5.2)	2.9	(9.5)	(13.3)	(25.2)	(6.1)	88,960	23.0	11.8	1.0	0.9	5.2	4.2
Shell	EUR	1,526	5.8	(0.6)	12.9	(3.7)	(18.7)	(27.8)	(0.0)	142,022	17.3	10.4	0.8	0.8	4.9	3.8
Chevron	USD	85	2.9	3.1	4.0	(4.9)	(1.6)	(22.9)	(5.0)	160,782	46.0	17.3	1.1	1.1	7.3	5.1
Total	EUR	38	7.6	(2.3)	2.0	(15.4)	(14.7)	(19.7)	(7.9)	104,871	14.4	10.5	1.1	1.0	6.2	4.8
Sinopec	CNY	4	0.0	0.0	(7.3)	(17.8)	(28.1)	(25.6)	(12.5)	77,450	13.5	10.1	0.8	0.8	5.2	4.3
Petrochina	CNY	7	0.0	0.0	(6.8)	(20.6)	(34.2)	(35.3)	(13.4)	190,893	43.8	21.9	1.1	1.1	7.6	6.4
CNOOC	CNY	13	0.0	0.0	(6.6)	(28.9)	(43.1)	(30.0)	(18.2)	6,958	40.2	21.1	1.2	1.2	11.2	9.9
Gazprom	RUB	131	0.6	(2.3)	(1.7)	(3.9)	(8.2)	(16.7)	(3.5)	39,676	2.8	2.6	0.2	0.2	3.0	2.7
Rosneft	RUB	271	2.2	(3.9)	12.8	2.9	12.8	(1.2)	6.9	36,620	7.2	4.8	0.8	0.6	3.5	2.9
Anadarko	USD	38	6.0	(7.3)	1.3	(35.4)	(51.6)	(56.7)	(22.2)	19,213	#N/A	#N/A	#N/A	#N/A	10.3	6.7
Petrobras	BRL	4	5.2	(2.0)	(19.5)	(41.3)	(55.0)	(53.2)	(33.6)	18,028	5.3	2.9	0.2	0.2	5.6	4.6
Lukoil	USD	2,396	0.2	(7.6)	7.8	(6.2)	(5.7)	(23.2)	2.1	25,781	6.3	4.4	0.3	0.3	N/A	N/A
Kinder	USD	15	7.2	(4.5)	10.0	(36.2)	(55.8)	(64.2)	0.3	47,497	20.9	18.2	0.9	0.9	10.0	9.3
Statoil	NOK	114	3.3	(6.2)	8.8	(13.7)	(16.1)	(20.5)	(7.7)	42,438	25.2	13.0	1.1	1.0	3.1	2.5
BHP	AUD	15	(1.0)	(6.9)	0.5	(26.8)	(40.1)	(47.4)	(15.5)	55,698	30.7	15.6	1.0	1.0	6.6	5.3
PTT E&P	THB	56	2.8	(6.7)	14.4	(24.0)	(31.5)	(52.2)	(3.1)	6,193	18.4	11.4	0.6	0.5	2.2	2.0
Petronas gas	MYR	22	(0.2)	(1.2)	2.5	(3.2)	3.5	2.6	(2.0)	10,598	23.6	23.1	3.7	3.6	13.5	13.1
Chesapeake	USD	2	(10.7)	(48.0)	(60.7)	(74.8)	(80.2)	(92.2)	(64.7)	1,057	#N/A	#N/A	#N/A	#N/A	10.3	7.6
Noble Energy	USD	29	2.9	(1.8)	0.5	(18.6)	(18.6)	(41.2)	(12.8)	12,297	#N/A	#N/A	#N/A	#N/A	9.1	8.0
Average		0	2.2	(5.1)	(0.7)	(19.0)	(24.9)	(33.2)	(10.7)							
PV																
WACKER	EUR	59.6	1.5	(1.7)	(14.1)	(26.8)	(29.3)	(41.3)	(23.1)	3,495	18.5	11.8	1.2	1.1	4.2	3.9
GCL-Poly	HKD	1.0	3.1	0.0	(8.2)	(32.1)	(29.5)	(35.3)	(12.9)	2,411	6.1	5.2	0.7	0.6	6.9	6.0
REC	NOK	0.4	0.0	0.0	0.0	0.0	0.0	5.9	0.0	519	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
SunEdison	USD	1.4	(30.9)	(47.6)	(53.3)	(68.9)	(90.1)	(93.3)	(72.3)	447	#N/A	#N/A	#N/A	#N/A	18.6	10.8
Canadian Solar	USD	16.4	3.8	(15.7)	(24.5)	(25.1)	(32.5)	(43.8)	(43.4)	917	6.6	5.4	0.9	0.8	5.6	4.9
JA Solar	USD	8.3	2.9	(3.5)	(3.9)	3.5	6.8	(7.4)	(14.4)	419	5.0	4.9	0.4	0.4	3.2	2.9
Trina Solar	USD	8.8	3.6	(7.5)	(14.0)	(6.5)	(6.4)	(17.3)	(20.0)	813	6.4	5.0	0.6	0.5	5.0	3.9
Solar City	USD	17.4	4.3	(41.2)	(61.1)	(30.7)	(65.8)	(69.6)	(65.9)	1,702	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Yingli	USD	3.7	(0.3)	(14.5)	3.3	(45.8)	(55.2)	(83.3)	(17.9)	68	#N/A	#N/A	#N/A	#N/A	9.1	9.0
First Solar	USD	61.0	(0.6)	(6.3)	(6.5)	13.1	17.6	23.4	(7.6)	6,155	14.8	17.2	1.1	1.0	8.7	7.9
한화솔라원	USD	14.0	(5.7)	(15.0)	(22.4)	(10.5)	27.6	20.7	(36.2)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
OCI	KRW	65,300	0.3	(5.4)	(7.9)	(15.5)	(26.5)	(22.8)	(12.9)	1,291	14.0	11.3	0.6	0.5	16.1	12.1
웅진에너지	KRW	1,630	(5.0)	0.6	6.2	10.5	11.6	9.0	(5.8)	100	N/A	0.6	0.5	16.1	12.1	0.0
신성솔라에너지	KRW	1,755	2.0	(0.8)	(4.1)	27.6	45.6	42.1	(13.1)	110	N/A	0.5	16.1	12.1	0.0	7.5
Average			(1.5)	(11.3)	(15.0)	(14.8)	(16.1)	(22.3)	(24.7)							
Gas Company																
Towngas China	HKD	3.6	(1.4)	(5.8)	(7.3)	(28.7)	(45.5)	(48.6)	(21.1)	1,215	6.6	6.1	0.6	0.6	8.4	7.9
Kulun	HKD	5.8	2.3	0.2	2.3	(4.9)	(15.7)	(22.8)	(15.4)	6,054	11.2	9.5	0.8	0.8	5.2	4.9
Beijing Enterprise	HKD	32.7	0.2	(7.0)	(20.2)	(31.3)	(38.6)	(43.4)	(30.4)	5,387	6.6	6.1	0.6	0.6	11.3	10.8
ENN Energy	HKD	32.3	(1.4)	(6.0)	(7.4)	(22.2)	(31.0)	(25.3)	(21.9)	4,490	10.1	8.8	1.8	1.5	7.0	6.2
China Resources Gas	HKD	19.6	1.3	(1.4)	0.6	(4.7)	(13.2)	(0.6)	(15.4)	5,592	12.4	10.9	2.1	1.8	7.9	7.1
China Gas Holdings	HKD	9.4	(0.2)	(1.0)	(6.5)	(17.9)	(26.5)	(23.0)	(15.6)	5,983	10.5	9.2	1.9	1.6	9.0	8.1
Shenzen Gas	HKD	11.7	(1.7)	(4.4)	(4.7)	(7.4)	(5.5)	15.7	(18.5)	2,848	10.4	9.3	1.0	1.0	8.6	7.8
Shann Xi	CNY	9.0	0.0	0.0	(18.4)	(33.2)	(45.4)	(35.8)	(29.0)	1,514	13.0	9.8	#N/A	#N/A	#N/A	#N/A
Suntien	HKD	0.8	(4.9)	(12.5)	(31.3)	(42.5)	(45.0)	(50.0)	(37.9)	367	6.2	5.0	0.3	0.3	6.4	5.4
China Oil & Gas	HKD	0.4	(3.3)	(6.3)	(11.0)	(14.4)	(31.5)	(50.6)	(16.0)	333	6.7	6.0	0.6	0.5	4.3	3.8
Average			(0.9)	(4.4)	(10.4)	(20.7)	(29.8)	(28.4)	(22.1)							
EV																
LG화학	KRW	283,000	(1.0)	(6.0)	(12.2)	(5.0)	32.9	34.1	(13.9)	15,547	13.2	11.7	1.4	1.3	5.9	5.4
삼성SDI	KRW	92,200	(0.3)	(3.5)	(15.4)	(13.8)	14.3	(30.7)	(19.1)	5,256	22.3	18.4	0.5	0.5	11.1	8.8
Panasonic	JPY	801.7	(6.4)	(14.8)	(28.2)	(43.5)	(43.7)	(41.6)	(35.4)	17,371	8.1	7.2	0.9	0.8	2.6	2.4
GS Yuasa	JPY	413.0	(6.6)	(9.8)	1.5	(9.0)	(17.4)	(20.0)	(8.6)	1,509	11.3	10.0	1.0	0.9	5.7	5.3
NEC	JPY	250.0	(7.1)	(16.7)	(28.8)	(35.7)	(38.9)	(24.5)	(35.1)	5,752	7.8	7.1	0.7	0.6	5.1	4.9
BYD Auto	CNY	50.1	0.0	0.0	(16.3)	(29.1)	(19.2)	32.2	(22.3)	16,145	41.6	28.7	3.8	3.5	14.6	12.7
Tesla Motors	USD	151.0	0.4	(7.1)	(28.1)	(29.1)	(36.6)	(25.6)	(37.1)	19,779	121.4	49.0	17.1	12.8	27.0	17.0
Kandi Technologies	USD	6.4	1.8	(12.4)	(28.3)	(35.0)	(9.2)	(48.7)	(41.7)	298	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Average			(2.4)	(8.8)	(19.5)	(25.0)	(14.7)	(15.6)	(26.6)							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임