

1. News Summary (3 page)

2016년 1월 6일

News	Conclusion
WTI comment 공급과잉 우려로 유가 하락	
Headline First Solar, 골드만삭스의 "재무최우수" 평가에 추가 +8.0%	재무압박 심화되는 상황에서 재무우수기업 premium 있을 것
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	36.0	(2.1)	(5.0)	(4.5)	(24.8)	(28.1)
Dubai	\$/bbl	31.7	(2.7)	(1.4)	(17.4)	(35.3)	(37.9)
Gasoline	\$/bbl	56.3	1.1	4.8	0.7	(18.3)	(8.8)
Diesel	\$/bbl	41.8	(3.4)	(3.0)	(20.6)	(34.5)	(38.6)
Complex margin	\$/bbl	10.3	0.3	0.8	0.6	1.1	2.4
1M lagging	\$/bbl	0.5	(1.3)	(1.4)	(4.5)	(14.0)	18.8
Petrochemical			%	%	%	%	%
Naphtha	\$/t	423	1.5	2.6	(5.2)	(6.1)	(5.5)
Butadiene	\$/t	710	1.4	1.4	6.0	(20.2)	(23.2)
HDPE	\$/t	1,075	0.0	0.0	2.9	(7.3)	(6.9)
MEG	\$/t	583	(0.2)	(5.2)	5.0	(10.6)	(21.5)
PX	\$/t	745	0.2	0.6	(3.8)	(4.3)	(7.8)
SM	\$/t	914	0.7	2.1	4.8	4.4	(1.8)
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	2.33	(0.4)	(1.9)	9.3	(17.5)	(32.8)
Natural rubber	\$/t	1,080	(2.7)	(4.4)	(6.9)	(15.0)	(26.5)
Cotton	C/lbs	62.7	0.1	(1.9)	(2.7)	1.3	(4.5)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	01/04	\$/t	1,090	(0.9)	1.4	24.6	9.5
Propylene	01/04	\$/t	650	0.0	5.7	42.9	(3.7)
Benzene	01/04	\$/t	580	3.1	(6.1)	0.4	(17.1)
Toluene	01/04	\$/t	630	0.0	(3.8)	(3.8)	(3.1)
Xylene	01/04	\$/t	625	(4.2)	(7.4)	(8.1)	1.6
PP	01/04	\$/t	835	1.2	(5.6)	(16.9)	(26.8)
PVC	01/04	\$/t	715	1.4	0.0	(9.5)	(10.1)
ABS	01/04	\$/t	1,130	2.7	1.1	(7.0)	(28.7)
SBR	01/04	\$/t	1,150	6.0	4.1	(6.5)	(23.1)
SM	01/04	\$/t	910	0.0	(0.8)	(1.1)	(6.7)
BPA	01/04	\$/t	1,258	(3.8)	(13.0)	(17.4)	(29.8)
Caustic	01/04	\$/t	285	0.0	(1.7)	(9.5)	3.6
2-EH	01/04	\$/t	680	0.0	(0.7)	(13.9)	(39.8)
Caprolactam	01/04	\$/t	1,260	(1.9)	(3.1)	(6.7)	(34.4)
Solar				%	%	%	%
Polysilicon	12/30	\$/kg	13.2	(0.5)	(2.7)	(10.5)	(31.6)
Module	12/30	\$/W	0.56	0.0	(0.5)	(0.4)	(10.2)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	78.1	0.9	(1.3)	(0.9)	1.7	(13.5)
Shell	EUR	1,526	0.7	(2.2)	(3.8)	(9.7)	(26.6)
Petrochina	CNY	8.07	(0.7)	(4.2)	(5.9)	(1.9)	(32.1)
Gazprom	RUB	136.5	1.1	(0.8)	(0.9)	(0.3)	1.9
Petrobras	BRL	6.7	(2.8)	(0.1)	(11.2)	(14.6)	(22.4)
Refinery							
Phillips66	USD	81.0	1.1	(2.1)	(10.2)	(1.0)	19.3
Valero	USD	71.2	1.7	0.1	(0.3)	10.2	47.4
JX	JPY	504.7	(1.6)	(1.0)	(2.2)	12.1	8.0
Neste Oil	EUR	27.3	0.8	(1.4)	4.0	27.8	37.1

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	67.8	(0.3)	(5.3)	(7.8)	(2.0)	1.0
Dow Chemical	USD	49.6	(0.8)	(6.1)	(7.1)	7.0	12.2
SABIC	SAR	72.8	(3.2)	(6.7)	(16.7)	(8.2)	(8.4)
Formosa Pla.	TWD	72.9	0.7	0.0	(2.5)	3.3	2.0
Shin-Etsu	JPY	6,474	(0.1)	(2.4)	(4.9)	0.5	(17.9)
Renewable							
Wacker	EUR	75.5	(0.2)	(4.3)	(3.7)	7.4	(12.8)
Yingli	USD	4.13	(7.4)	(17.1)	(37.4)	(8.2)	(81.9)
Tesla	USD	223.4	0.0	(5.8)	(3.0)	(9.2)	6.3
BYD	CNY	59.4	1.0	(8.1)	(4.0)	(1.1)	47.4

4. Coverage Summary

	01/05	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	1,931	0.6	(1.8)	(2.2)	(3.8)	(6.0)	0.2				* 추정치는 12M fwd 기준임	
KOSPI화학	5,321	0.1	(0.7)	1.8	4.0	2.1	43.3				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	339,500	(0.6)	2.3	9.9	18.3	24.8	88.6	매수	380,000	11.9	15.13	1.86
롯데케미칼	250,000	2.0	4.0	3.5	(9.9)	(10.6)	55.3	매수	290,000	16.0	11.12	1.04
한화케미칼	26,450	(0.9)	(4.3)	1.0	19.7	38.1	133.0	매수	30,000	13.4	9.35	0.76
금호석유화학	52,200	(0.2)	(1.3)	(10.0)	(14.1)	(27.8)	(35.3)	매수	70,000	34.1	11.54	1.07
KCC	410,000	1.0	(1.1)	(8.6)	(5.1)	(13.7)	(23.4)	매수	550,000	34.1	12.74	0.64
OCI	73,600	1.2	(6.4)	(9.6)	(14.1)	(32.8)	(4.4)	매수	85,000	15.5	17.52	0.73
SKC	31,650	(3.7)	(6.2)	(8.5)	(16.2)	(15.3)	20.6	매수	43,000	35.9	9.57	0.77
국도화학	56,600	(0.4)	(4.6)	(3.7)	(21.6)	(15.3)	39.9	매수	100,000	76.7	7.00	0.68
SK이노베이션	127,000	0.8	(4.5)	(1.9)	11.4	13.9	51.2	매수	140,000	10.2	6.94	0.68
S-Oil	78,600	0.8	(0.4)	5.6	11.6	25.6	61.7	매수	85,000	8.1	12.75	1.47
GS	49,600	1.0	(2.2)	(0.3)	1.2	(1.6)	24.5	매수	60,000	21.0	6.40	0.81
SK가스	71,100	0.1	(3.0)	(9.2)	(14.3)	(19.2)	(21.0)	매수	90,000	26.6	7.85	0.63
대우인터내셔널	16,150	2.2	(3.6)	(13.6)	(24.9)	(37.5)	(46.9)	매수	22,000	36.2	8.94	0.77
LG상사	33,500	(0.7)	(2.2)	(4.1)	5.8	(13.9)	14.5	매수	40,000	19.4	10.79	0.87

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

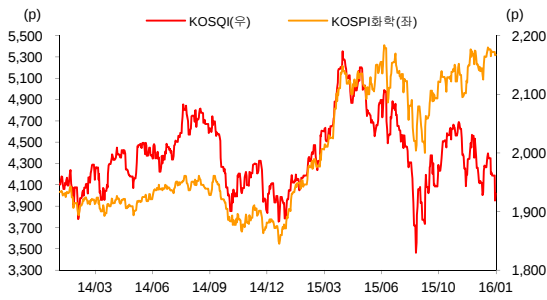
* 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.

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

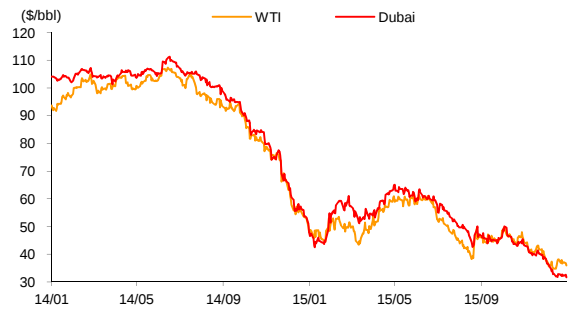
* 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

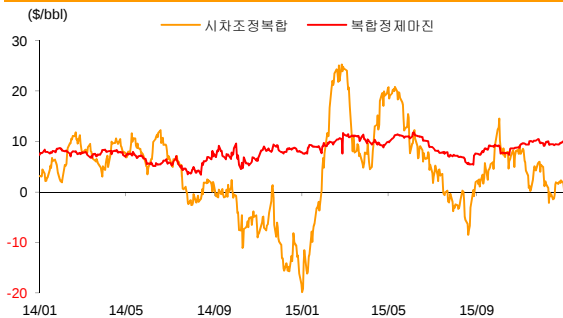
KOSPI/KOSPI화학



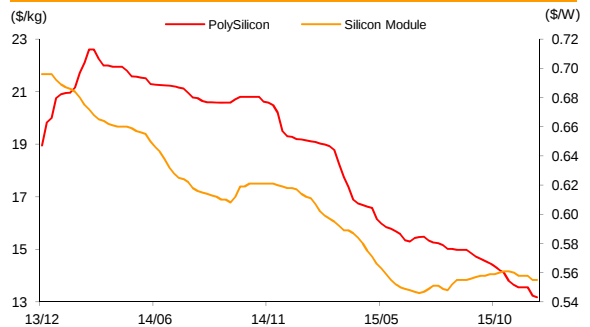
WTI/Dubai



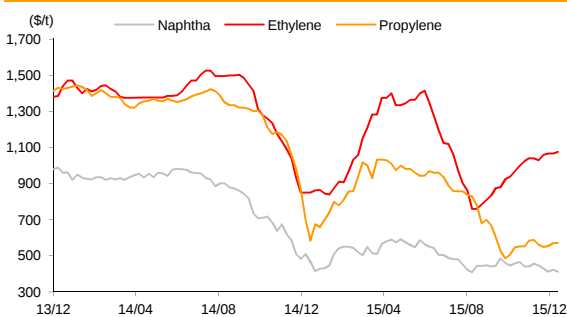
Complex & 1M lagging margin



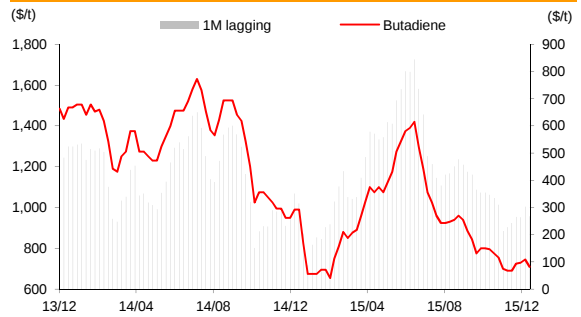
Polysilicon & Module prices



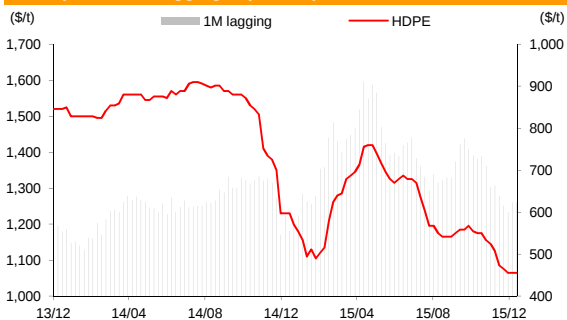
Naphtha/Ethylene/Propylene prices



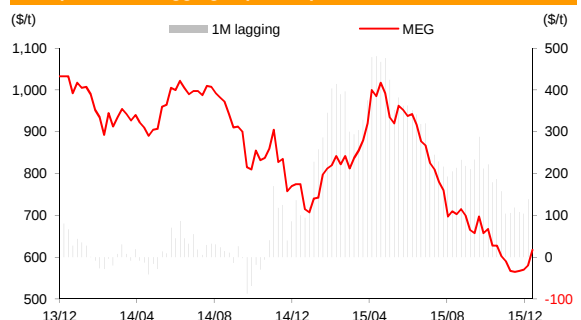
Butadiene price & 1M lagging naphtha spread



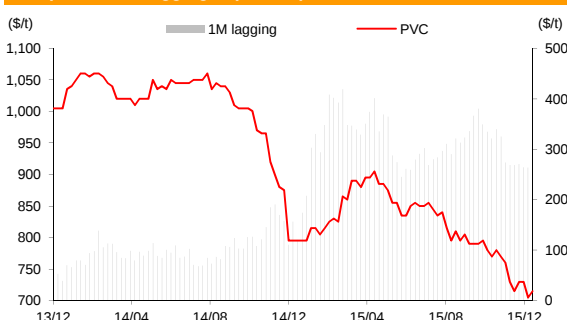
HDPE price & 1M lagging naphtha spread



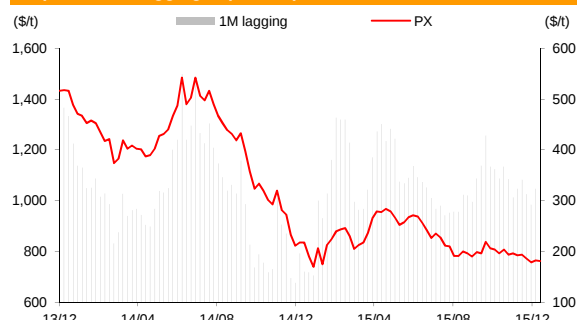
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

News Comment

Headline	(출처: Bloomberg)
제목	First Solar, 골드만삭스의 "재무최우수" 평가에 주가 +8.0%
결론	재무압박 심화되는 상황에서 재무우수기업 premium 있을 것
세부	1) 주가 15개월래 최고치 도달, 골드만삭스 "strongest B/S" 보유 평가 2) Developer 중에서 재무 감당 여력이 가장 우수한 부분을 높게 평가 3) 동사는 이미 지난 해 70% 이상 상승했으며, 연초에도 강세임 4) 현금 및 현금등가물을 \$18억 보유하고 있음, 시가총액은 \$73억 5) 재무압박 심화되는 상황에서 재무우수기업 premium 있을 것

WTI Comment	(출처: 연합뉴스)
제목	공급과잉 우려로 유가 하락
상승	
요인	
하락	도이치뱅크, 올 해 중국 성장을 6.7%로 예측
요인	ECB 3월 추가 금리인하 전망, 달러 강세

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	0.930	0.923	0.916	0.919	0.894	0.901	0.838	0.921	0.753	0.754	0.901
	Change, %		0.8	1.6	1.2	4.1	3.3	11.0	1.0	(3.9)	13.7	3.2
	USD/JPY	119.1	119.4	120.5	123.1	120.5	122.8	119.6	120.6	97.7	105.9	121.1
	Change, %		(0.3)	(1.2)	(3.3)	(1.2)	(3.0)	(0.5)	(1.2)	21.5	13.8	(1.6)
	USD/KRW	1,188.2	1,187.6	1,169.7	1,156.5	1,172.2	1,123.0	1,109.7	1,172.6	1,094.6	1,053.0	1,131.2
	Change, %		0.0	1.6	2.7	1.4	5.8	7.1	1.3	50.3	3.3	5.0
Agriculture	Corn	353.0	351.5	362.5	376.3	393.5	419.8	406.0	358.8	579.2	415.6	376.8
	Change, %		0.4	(2.6)	(6.2)	(10.3)	(15.9)	(13.1)	(1.6)	(39.6)	(5.9)	(6.3)
	Soybean	867.8	864.5	870.0	906.0	884.3	1,045.3	1,039.8	871.3	1,407.0	1,245.5	945.4
	Change, %		0.4	(0.3)	(4.2)	(1.9)	(17.0)	(16.5)	(0.4)	(7.5)	(22.3)	(8.2)
	Wheat	461.3	458.3	475.8	471.3	515.5	585.8	589.0	470.0	684.3	588.0	508.1
	Change, %		0.7	(3.0)	(2.1)	(10.5)	(21.3)	(21.7)	(1.9)	(22.2)	(2.6)	(9.2)
	Rice	11.7	11.5	11.7	11.2	13.4	10.4	11.3	11.6	15.5	14.0	11.1
	Change, %		1.4	0.0	4.4	(12.9)	12.4	3.0	0.9	4.4	(25.9)	5.6
	Oats	210.3	210.5	220.5	260.5	216.0	250.0	306.0	217.3	367.5	373.1	250.2
	Change, %		(0.1)	(4.6)	(19.3)	(2.7)	(15.9)	(31.3)	(3.2)	1.9	(14.3)	(16.0)
MYR/mt	Palm Oil	2,275.0	2,290.0	2,288.0	2,189.0	2,365.0	2,263.0	2,298.0	2,398.0	2,405.0	2,415.1	2,190.3
	Change, %		(0.7)	(0.6)	3.9	(3.8)	0.5	(1.0)	(5.1)	13.3	(12.8)	3.9
	Cocoa	3,059.0	3,124.0	3,211.0	3,369.0	3,092.0	3,294.0	2,944.0	3,211.0	2,403.9	3,006.8	3,091.6
	Change, %		(2.1)	(4.7)	(9.2)	(1.1)	(7.1)	3.9	(4.7)	21.2	7.4	(1.1)
	Cotton	62.7	62.6	63.9	63.2	60.9	66.4	60.7	63.3	83.3	76.4	63.3
	Change, %		0.1	(1.9)	(0.9)	2.9	(5.5)	3.2	(0.9)	12.6	(28.8)	(0.9)
	Sugar	14.6	15.0	14.8	15.5	13.6	12.3	14.3	15.2	17.5	16.3	13.1
	Change, %		(2.7)	(1.4)	(5.9)	6.8	18.5	2.2	(4.4)	(15.9)	(11.5)	10.9
	Coffee	123.0	123.9	121.5	124.0	127.6	125.6	168.1	126.7	126.0	177.1	132.6
	Change, %		(0.7)	1.3	(0.8)	(3.6)	(2.1)	(26.8)	(2.9)	(23.0)	50.5	(7.3)
Energy	WTI	36.0	36.8	37.9	40.0	46.3	56.9	50.0	37.0	98.0	92.9	48.8
	Change, %		(2.1)	(5.0)	(10.0)	(22.2)	(36.8)	(28.1)	(2.9)	7.2	(45.9)	(26.4)
	Brent	36.5	37.2	37.8	43.0	49.3	60.3	53.1	37.3	108.7	99.5	53.7
	Change, %		(1.9)	(3.4)	(15.1)	(25.8)	(39.5)	(31.2)	(2.0)	(0.3)	(48.3)	(32.0)
	Natural Gas	2.3	2.3	2.4	2.2	2.5	2.8	2.9	2.3	3.7	4.3	2.6
	Change, %		(0.4)	(2.0)	6.4	(5.1)	(17.6)	(19.3)	(0.5)	26.2	(31.7)	(11.6)
	Ethanol	1.4	1.4	1.4	1.5	1.6	1.6	1.6	1.4	2.3	2.1	1.5
	Change, %		(0.7)	(3.2)	(10.2)	(16.1)	(16.8)	(15.5)	(3.2)	(12.7)	(14.9)	(10.2)
	RBOB Gasoline	125.7	129.1	127.6	127.0	138.5	203.4	138.1	126.7	285.0	262.6	163.6
	Change, %		(2.6)	(1.5)	(1.1)	(9.3)	(38.2)	(9.0)	(0.8)	(0.9)	(48.5)	(23.2)
	Coal	43.3	43.3	43.9	43.0	42.1	40.8	47.7	43.3	56.1	57.5	45.2
	Change, %		0.0	(1.3)	0.8	2.8	6.1	(9.1)	0.0	(1.0)	(15.5)	(4.1)
Metal	Gold	1,077.7	1,074.6	1,069.1	1,086.8	1,135.7	1,168.5	1,204.8	1,061.4	1,410.4	1,266.5	1,160.6
	Change, %		0.3	0.8	(0.8)	(5.1)	(7.8)	(10.6)	1.5	(28.0)	(1.3)	(7.1)
	Silver	14.0	13.9	14.0	14.6	15.7	15.7	16.2	13.8	23.8	19.1	15.7
	Change, %		0.8	0.2	(3.9)	(10.7)	(10.9)	(13.6)	1.2	(35.8)	(18.9)	(11.0)
	Platinum	889.5	883.9	888.1	880.5	914.2	1,083.0	1,212.8	891.1	1,485.7	1,384.6	1,055.7
	Change, %		0.6	0.2	1.0	(2.7)	(17.9)	(26.7)	(0.2)	(11.2)	(11.5)	(15.7)
	Palladium	535.6	540.0	558.3	567.3	692.7	686.7	794.1	563.0	725.9	803.4	691.9
	Change, %		(0.8)	(4.1)	(5.6)	(22.7)	(22.0)	(32.6)	(4.9)	1.7	11.4	(22.6)
	Copper	4,645.0	4,609.5	4,729.0	4,612.0	5,177.0	5,759.0	6,145.0	4,705.0	7,352.6	6,828.1	5,503.1
	Change, %		0.8	(1.8)	0.7	(10.3)	(19.3)	(24.4)	(1.3)	(7.2)	(14.4)	(15.6)
	Uranium	35.0	34.5	34.5	36.1	37.0	36.3	35.2	34.4	38.5	33.5	36.9
	Change, %		1.6	1.6	(3.0)	(5.4)	(3.6)	(0.4)	1.7	(20.9)	2.5	(5.0)
	HR Coil	395.0	395.0	364.0	368.0	420.0	475.0	605.0	391.0	630.4	653.2	461.5
	Change, %		0.0	8.5	7.3	(6.0)	(16.8)	(34.7)	1.0	3.1	(10.4)	(14.4)
	Scrap	250.0	250.0	250.0	161.0	245.0	270.0	355.0	250.0	396.9	401.3	252.9
	Change, %		0.0	0.0	55.3	2.0	(7.4)	(29.6)	0.0	(1.2)	(16.5)	(1.2)
	Zinc	1,573.0	1,568.0	1,602.0	1,552.0	1,666.0	2,019.0	2,185.0	1,609.0	1,940.3	2,165.0	1,941.9
	Change, %		0.3	(1.8)	1.4	(5.6)	(22.1)	(28.0)	(2.2)	(1.2)	6.0	(19.0)

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		01/05	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Crude Oil	WTI	36.0	36.8	37.9	37.7	47.8	52.8	50.0	53.2	93.1	48.8	36.6
	Change, %		(2.1)	(5.0)	(4.5)	(24.8)	(31.8)	(28.1)	(32.4)	(61.4)	(26.3)	(1.7)
	Dubai	31.7	32.5	32.1	38.4	49.0	56.7	51.0	53.6	96.7	50.8	32.1
	Change, %		(2.7)	(1.4)	(17.4)	(35.3)	(44.2)	(37.9)	(40.9)	(67.3)	(37.7)	(1.5)
Crude Oil	Gasoline(휘발유)	56.3	55.7	53.7	55.9	68.9	77.7	61.8	64.8	110.9	69.5	55.6
Product	Change, %		1.1	4.8	0.7	(18.3)	(27.6)	(8.8)	(13.0)	(49.2)	(19.0)	1.3
	Kerosene(등유)	42.8	44.3	44.1	52.6	63.3	68.6	68.3	71.2	112.6	64.7	43.8
	Change, %		(3.3)	(2.9)	(18.6)	(32.3)	(37.5)	(37.3)	(39.8)	(62.0)	(33.8)	(2.1)
	Diesel(경유)	41.8	43.3	43.1	52.7	63.8	68.7	68.2	70.2	112.8	64.8	42.8
	Change, %		(3.4)	(3.0)	(20.6)	(34.5)	(39.1)	(38.6)	(40.4)	(62.9)	(35.4)	(2.2)
	Bunker-C	25.7	26.5	25.2	32.2	39.7	50.0	44.7	48.8	86.5	45.3	25.9
	Change, %		(3.0)	2.1	(20.0)	(35.2)	(48.5)	(42.4)	(47.2)	(70.2)	(43.1)	(0.5)
	Naphtha	45.2	44.4	43.4	47.4	50.8	54.6	46.0	48.0	94.3	52.6	44.4
	Change, %		1.9	4.4	(4.6)	(10.9)	(17.1)	(1.7)	(5.8)	(52.0)	(14.0)	2.0
Dubai	Gasoline(휘발유)	24.7	23.2	21.6	17.6	20.0	21.1	10.8	11.2	14.2	18.7	23.5
Spread	Change		1.5	3.0	7.1	4.7	3.6	13.9	13.5	10.4	5.9	1.2
	Kerosene(등유)	11.2	11.7	12.0	14.3	14.3	11.9	17.4	17.6	15.9	14.0	11.6
	Change		(0.6)	(0.8)	(3.1)	(3.1)	(0.7)	(6.2)	(6.4)	(4.7)	(2.8)	(0.5)
	Diesel(경유)	10.2	10.7	11.0	14.3	14.8	12.0	17.2	16.6	16.0	14.0	10.6
	Change		(0.6)	(0.8)	(4.2)	(4.7)	(1.8)	(7.0)	(6.4)	(5.9)	(3.8)	(0.5)
	Bunker-C	(5.9)	(6.0)	(6.9)	(6.2)	(9.3)	(6.7)	(6.3)	(4.8)	(10.3)	(5.5)	(6.3)
	Change		0.1	1.0	0.3	3.3	0.8	0.4	(1.1)	4.3	(0.4)	0.4
	Naphtha	13.6	11.8	11.2	9.1	1.8	(2.1)	(4.9)	(5.6)	(2.4)	1.8	12.2
	Change		1.7	2.3	4.5	11.8	15.7	18.5	19.1	16.0	11.8	1.4
Refining	Simple(단순)	3.7	3.6	3.0	3.6	2.0	2.0	2.8	3.3	(0.1)	3.3	3.5
Margin	Change		0.1	0.7	0.0	1.7	1.7	0.9	0.4	3.8	0.4	0.2
	Complex(복합)	10.3	10.0	9.4	9.6	9.1	8.4	7.9	8.0	7.1	9.3	10.0
	Change		0.3	0.8	0.6	1.1	1.8	2.4	2.3	3.2	1.0	0.3
	Complex(lagging)	0.5	1.8	1.9	5.0	14.5	4.0	(18.3)	(14.3)	2.2	6.5	1.5
	Change		(1.3)	(1.4)	(4.5)	(14.0)	(3.5)	18.8	14.8	(1.7)	(6.0)	(1.0)

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			01/05	01/04	01/01	12/31	12/30	12/29	12/28	12/25	12/24	12/23
Spot Price	Naphtha	CFR Japan	422.9	416.5	410.5	410.5	416.3	412.3	416.5	423.0	423.0	406.8
	Ethylene	CFR SE Asia	1,085.0	1,085.0	1,085.0	1,085.0	1,085.0	1,085.0	1,085.0	1,085.0	1,085.0	1,085.0
	Propylene	FOB Korea	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0	587.0
	Butadiene	FOB Korea	710.0	700.0	700.0	700.0	700.0	700.0	705.0	710.0	710.0	710.0
	HDPE	CFR FE Asia	1,075.0	1,075.0	1,075.0	1,075.0	1,075.0	1,075.0	1,055.0	1,055.0	1,055.0	1,045.0
	LDPE	CFR FE Asia	1,075.0	1,075.0	1,075.0	1,075.0	1,075.0	1,090.0	1,070.0	1,070.0	1,070.0	1,050.0
	LLDPE	CFR FE Asia	1,060.0	1,060.0	1,060.0	1,060.0	1,060.0	1,060.0	1,040.0	1,040.0	1,040.0	1,040.0
	MEG	CFR China	583.0	584.0	616.0	616.0	619.0	615.0	613.0	585.0	585.0	580.0
	PP	CFR FE Asia	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0
	PX	CFR China	744.7	743.3	745.5	745.5	747.0	740.3	742.5	747.8	747.8	739.0
	PTA	CFR China	573.0	571.0	571.0	571.0	571.0	569.0	572.0	572.0	572.0	572.0
	Benzene	FOB Korea	590.0	595.0	596.0	596.0	590.0	582.0	580.0	577.5	577.5	577.5
	Toluene	FOB Korea	607.0	614.0	609.0	609.0	610.5	601.0	598.0	603.0	603.0	593.0
	Xylene	FOB Korea	637.0	637.0	637.0	637.0	643.0	644.0	644.0	644.0	644.0	644.0
	SM	FOB Korea	914.0	908.0	900.0	900.0	900.0	895.0	895.0	895.0	891.0	889.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	Naphtha	CFR Japan	413.5	423.5	446.5	445.0	445.5	467.0	413.5	865.9	493.0	413.5
	Change, %			(2.4)	(7.4)	(7.1)	(7.2)	(11.5)	0.0	(52.2)	(16.1)	0.0
	Ethylene	CFR SE Asia	1,090.0	1,100.0	1,075.0	875.0	815.0	995.0	1,090.0	1,401.1	1,103.7	1,090.0
	Change, %			(0.9)	1.4	24.6	33.7	9.5	0.0	(22.2)	(1.2)	0.0
	Propylene	CFR SE Asia	650.0	650.0	615.0	455.0	660.0	675.0	650.0	1,254.2	770.0	592.5
	Change, %			0.0	5.7	42.9	(1.5)	(3.7)	0.0	(48.2)	(15.6)	9.7
	Butadiene	CFR SE Asia	720.0	695.0	640.0	795.0	890.0	940.0	720.0	1,281.7	877.5	720.0
	Change, %			3.6	12.5	(9.4)	(19.1)	(23.4)	0.0	(43.8)	(17.9)	0.0
	Benzene	CFR SE Asia	580.0	562.5	617.5	577.5	590.0	700.0	580.0	1,243.1	690.0	580.0
	Change, %			3.1	(6.1)	0.4	(1.7)	(17.1)	0.0	(53.3)	(15.9)	0.0
	Toluene	CFR SE Asia	630.0	630.0	655.0	655.0	600.0	650.0	630.0	1,082.5	700.8	630.0
	Change, %			0.0	(3.8)	(3.8)	5.0	(3.1)	0.0	(41.8)	(10.1)	0.0
	Xylene	CFR SE Asia	625.0	652.5	675.0	680.0	650.0	615.0	625.0	1,055.7	699.3	625.0
	Change, %			(4.2)	(7.4)	(8.1)	(3.8)	1.6	0.0	(40.8)	(10.6)	0.0
Spread	Ethylene	-Naphtha	676.5	676.5	628.5	430.0	369.5	528.0	676.5	535.2	610.6	676.5
	Change, %			0.0	7.6	57.3	83.1	28.1	0.0	26.4	10.8	0.0
	Propylene	-Naphtha	236.5	226.5	168.5	10.0	214.5	208.0	236.5	388.3	277.0	179.0
	Change, %			4.4	40.4	2,265.0	10.3	13.7	0.0	(39.1)	(14.6)	32.1
	Butadiene	-Naphtha	306.5	271.5	193.5	350.0	444.5	473.0	306.5	415.9	384.5	306.5
	Change, %			12.9	58.4	(12.4)	(31.0)	(35.2)	0.0	(26.3)	(20.3)	0.0
	Benzene	-Naphtha	166.5	139.0	171.0	132.5	144.5	233.0	166.5	377.3	197.0	166.5
	Change, %			19.8	(2.6)	25.7	15.2	(28.5)	0.0	(55.9)	(15.5)	0.0
	Toluene	-Naphtha	216.5	206.5	208.5	210.0	154.5	183.0	216.5	216.6	207.8	216.5
	Change, %			4.8	3.8	3.1	40.1	18.3	0.0	(0.1)	4.2	0.0
	Xylene	-Naphtha	211.5	229.0	228.5	235.0	204.5	148.0	211.5	189.9	206.3	211.5
	Change, %			(7.6)	(7.4)	(10.0)	3.4	42.9	0.0	11.4	2.5	0.0

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	1,065.0	1,065.0	1,085.0	1,185.0	1,165.0	1,230.0	1,065.0	1,524.9	1,230.1	1,065.0
	Change, %			0.0	(1.8)	(10.1)	(8.6)	(13.4)	0.0	(30.2)	(13.4)	0.0
	MEG	CFR SE Asia	617.5	580.0	565.0	657.5	702.5	775.0	617.5	934.1	780.8	617.5
	Change, %			6.5	9.3	(6.1)	(12.1)	(20.3)	0.0	(33.9)	(20.9)	0.0
	PVC	CFR SE Asia	715.0	705.0	715.0	790.0	810.0	795.0	715.0	1,013.9	820.8	715.0
	Change, %			1.4	0.0	(9.5)	(11.7)	(10.1)	0.0	(29.5)	(12.9)	0.0
	PP	CFR SE Asia	835.0	825.0	885.0	1,005.0	985.0	1,140.0	835.0	1,503.0	1,109.8	835.0
	Change, %			1.2	(5.6)	(16.9)	(15.2)	(26.8)	0.0	(44.4)	(24.8)	0.0
	2-EH	CFR Korea	680.0	680.0	685.0	790.0	900.0	1,130.0	680.0	1,397.1	930.1	680.0
	Change, %			0.0	(0.7)	(13.9)	(24.4)	(39.8)	0.0	(51.3)	(26.9)	0.0
	ABS	CFR SE Asia	1,130.0	1,100.0	1,117.5	1,215.0	1,275.0	1,585.0	1,130.0	1,897.7	1,431.1	1,130.0
	Change, %			2.7	1.1	(7.0)	(11.4)	(28.7)	0.0	(40.5)	(21.0)	0.0
	SBR	CFR SE Asia	1,150.0	1,085.0	1,105.0	1,230.0	1,200.0	1,495.0	1,150.0		1,332.1	1,150.0
	Change, %			6.0	4.1	(6.5)	(4.2)	(23.1)	0.0		(13.7)	0.0
	SM	CFR SE Asia	910.0	910.0	917.5	920.0	980.0	975.0	910.0	1,547.1	1,100.7	910.0
	Change, %			0.0	(0.8)	(1.1)	(7.1)	(6.7)	0.0	(41.2)	(17.3)	0.0
	Caustic	FOB NEA	285.0	285.0	290.0	315.0	317.5	275.0	285.0	310.0	296.8	285.0
	Change, %			0.0	(1.7)	(9.5)	(10.2)	3.6	0.0	(8.1)	(4.0)	0.0
	PX	CFR SE Asia	762.5	765.0	787.5	792.5	800.0	835.0	762.5	1,228.5	842.9	762.5
	Change, %			(0.3)	(3.2)	(3.8)	(4.7)	(8.7)	0.0	(37.9)	(9.5)	0.0
	PO	CFR China	1,257.5	1,307.5	1,445.0	1,522.5	1,570.0	1,792.5	1,257.5	2,179.2	1,683.4	1,257.5
	Change, %			(3.8)	(13.0)	(17.4)	(19.9)	(29.8)	0.0	(42.3)	(25.3)	0.0
	Caprolactam	CFR SE Asia	1,260.0	1,285.0	1,300.0	1,350.0	1,340.0	1,920.0	1,260.0	2,233.4	1,581.5	1,260.0
	Change, %			(1.9)	(3.1)	(6.7)	(6.0)	(34.4)	0.0	(43.6)	(20.3)	0.0
	PTA	CFR SE Asia	585.0	577.5	620.0	597.5	565.0	655.0	585.0	911.7	648.0	585.0
	Change, %			1.3	(5.6)	(2.1)	3.5	(10.7)	0.0	(35.8)	(9.7)	0.0
Spread	HDPE		651.5	641.5	638.5	740.0	719.5	763.0	651.5	659.0	737.1	651.5
	Change, %			1.6	2.0	(12.0)	(9.5)	(14.6)	0.0	(1.1)	(11.6)	0.0
	MEG		204.0	156.5	118.5	212.5	257.0	308.0	204.0	68.2	287.8	204.0
	Change, %			30.4	72.2	(4.0)	(20.6)	(33.8)	0.0	199.0	(29.1)	0.0
	PVC		301.5	281.5	268.5	345.0	364.5	328.0	301.5	148.0	327.8	301.5
	Change, %			7.1	12.3	(12.6)	(17.3)	(8.1)	0.0	103.7	(8.0)	0.0
	PP		421.5	401.5	438.5	560.0	539.5	673.0	421.5	637.1	616.8	421.5
	Change, %			5.0	(3.9)	(24.7)	(21.9)	(37.4)	0.0	(33.8)	(31.7)	0.0
	2-EH		266.5	256.5	238.5	345.0	454.5	663.0	266.5	531.3	437.0	266.5
	Change, %			3.9	11.7	(22.8)	(41.4)	(59.8)	0.0	(49.8)	(39.0)	0.0
	ABS		716.5	676.5	671.0	770.0	829.5	1,118.0	716.5	1,031.9	938.1	716.5
	Change, %			5.9	6.8	(6.9)	(13.6)	(35.9)	0.0	(30.6)	(23.6)	0.0
	SBR	BD spread	430.0	390.0	465.0	435.0	310.0	555.0	430.0		454.7	430.0
	Change, %			10.3	(7.5)	(1.1)	38.7	(22.5)	0.0		(5.4)	0.0
	SM		496.5	486.5	471.0	475.0	534.5	508.0	496.5	681.2	607.7	496.5
	Change, %			2.1	5.4	4.5	(7.1)	(2.3)	0.0	(27.1)	(18.3)	0.0
	Caustic											
	Change, %											
	PX		349.0	341.5	341.0	347.5	354.5	368.0	349.0	362.6	349.9	349.0
	Change, %			2.2	2.3	0.4	(1.6)	(5.2)	0.0	(3.8)	(0.2)	0.0
	PO	propylene spread	607.5	657.5	830.0	1,067.5	910.0	1,117.5	607.5	925.0	913.4	665.0
	Change, %			(7.6)	(26.8)	(43.1)	(33.2)	(45.6)	0.0	(34.3)	(33.5)	(8.6)
	Caprolactam	benzene spread	680.0	722.5	682.5	772.5	750.0	1,220.0	680.0	990.3	891.6	680.0
	Change, %			(5.9)	(0.4)	(12.0)	(9.3)	(44.3)	0.0	(31.3)	(23.7)	0.0
	PTA	px spread	51.3	42.0	68.8	42.8	5.0	70.5	51.3	51.8	58.0	51.3
	Change, %			22.0	(25.5)	19.9	925.0	(27.3)	0.0	(1.0)	(11.7)	0.0

자료 : Ciscem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	01/05	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	49.6	(0.8)	(6.1)	(7.1)	7.0	(3.6)	12.2	(3.7)	57,409	15.2	14.3	2.6	2.4	8.1	8.1
Du Pont	USD	64.3	1.9	(4.9)	(5.1)	25.4	7.2	(5.7)	(3.5)	56,335	23.3	20.0	5.4	5.4	12.2	11.9
Eastman	USD	67.1	0.7	(2.8)	(8.5)	(1.9)	(16.3)	(9.1)	(0.6)	9,973	9.3	8.8	2.4	2.0	7.4	7.2
BASF	EUR	67.8	(0.3)	(5.3)	(7.8)	(2.0)	(15.4)	1.0	(4.1)	66,948	13.5	13.0	2.1	2.0	7.2	7.1
Akzo Nobel	EUR	59.8	(0.3)	(4.6)	(5.9)	2.1	(8.8)	6.0	(3.0)	15,923	15.1	14.3	2.5	2.3	8.0	7.7
Arkema	EUR	61.4	(1.6)	(6.2)	(7.2)	1.2	(5.5)	18.9	(5.0)	4,909	14.0	11.9	1.3	1.3	6.0	5.6
Lanxess	EUR	40.7	(1.5)	(6.6)	(9.6)	(4.3)	(25.3)	14.9	(4.6)	4,004	18.2	13.8	1.6	1.4	5.8	5.2
Sumitomo Chemical	JPY	629	(5.4)	(10.7)	(12.9)	(5.8)	(15.0)	31.3	(10.3)	8,751	12.1	10.3	1.2	1.1	7.3	7.0
Mitsubishi Chemical	JPY	745	(0.1)	(4.0)	(6.1)	11.9	(4.1)	26.2	(3.8)	9,428	15.5	11.2	1.1	1.0	6.5	6.3
Shin-Etsu Chemical	JPY	6,474	(0.1)	(2.4)	(4.9)	0.5	(14.4)	(17.9)	(2.2)	23,510	18.9	17.6	1.3	1.3	6.6	6.2
Asahi Kasei	JPY	849	3.4	2.5	3.1	(2.7)	(15.1)	(22.8)	3.2	10,011	12.6	11.4	1.0	1.0	5.8	5.6
JSR	JPY	1,854	0.2	(3.6)	(2.4)	1.0	(16.6)	(10.6)	(2.4)	3,522	14.3	13.0	1.1	1.1	5.9	5.4
Nitto Denko	JPY	8,577	(0.3)	(3.7)	(0.3)	7.0	(17.6)	25.8	(3.8)	12,525	15.7	14.9	2.1	1.9	7.4	7.1
SABIC	SAR	72.8	(3.2)	(6.7)	(16.7)	(8.2)	(24.3)	(8.4)	(4.8)	58,217	11.5	10.8	1.3	1.3	6.2	5.8
Yansab	SAR	29.2	(5.9)	(12.0)	(34.7)	(36.0)	(46.6)	(31.1)	(9.8)	4,381	13.6	9.2	1.1	1.1	7.8	6.6
Formosa Plastics	TWD	72.9	0.7	0.0	(2.5)	3.3	0.6	2.0	(5.3)	14,001	15.8	15.8	1.5	1.5	23.0	22.6
Formosa Fiber	TWD	68.5	0.4	(1.7)	(2.7)	(1.2)	(7.2)	3.8	(7.4)	12,114	16.2	15.8	1.3	1.3	13.1	13.1
Nan Ya Plastics	TWD	57.5	0.2	(1.7)	(3.8)	(1.9)	(18.6)	(10.0)	(5.7)	13,759	12.5	13.1	1.4	1.3	12.7	12.8
Sinopec Shanghai	CNY	5.81	(1.4)	(13.5)	(11.2)	(8.9)	(34.2)	23.6	(10.3)	7,910	22.4	20.5	3.3	2.9	9.5	9.1
Sinopec Yizheng(Fiber)	CNY	7.15	(3.1)	(15.2)	(18.2)	(25.6)	(37.9)	23.1	(12.4)	13,741	#N/A	N/A	#N/A	N/A	45.9	24.0
Reliance	INR	1,005	1.0	(1.0)	4.1	13.2	(0.2)	14.8	(1.0)	48,991	12.1	10.8	1.3	1.2	9.6	8.1
Industries Qatar	QAR	104.8	(0.9)	(4.7)	(3.9)	(14.1)	(25.4)	(37.2)	(5.7)	17,412	12.7	12.6	1.9	1.8	51.0	52.6
PTT Chemical	THB	49.5	(1.0)	(2.9)	(2.9)	(12.0)	(27.2)	(3.9)	(1.0)	6,120	7.8	7.5	0.9	0.8	5.7	5.3
Petronas	MYR	7.5	5.7	3.3	10.5	22.1	16.4	43.7	2.6	13,691	21.9	19.3	2.5	2.3	11.1	9.8
LG화학	KRW	339,500	(0.6)	2.3	9.9	17.9	21.0	94.6	3.3	18,905	19.5	16.0	1.9	1.7	7.4	6.7
롯데케미칼	KRW	250,000	2.0	4.0	3.5	(8.6)	(16.5)	60.8	2.7	7,200	8.0	7.6	1.1	1.0	4.0	3.8
한화케미칼	KRW	26,450	(0.9)	(4.3)	1.0	20.5	31.9	132.0	(2.8)	3,599	18.2	11.8	0.9	0.9	10.5	8.8
금호석유	KRW	52,200	(0.2)	(1.3)	(10.0)	(15.3)	(26.1)	(35.0)	0.2	1,336	11.8	9.4	1.0	1.0	8.8	7.3
SKC	KRW	31,650	(3.7)	(6.2)	(8.5)	(18.4)	(17.8)	19.7	(6.4)	979	4.4	7.9	0.8	0.8	7.0	6.7
국도화학	KRW	56,600	(0.4)	(4.6)	(3.7)	(19.7)	(19.7)	41.0	(4.6)	276	5.9	6.8	0.8	0.7	4.0	3.7
효성	KRW	2,595	0.6	(0.2)	(6.3)	(11.0)	(15.3)	(3.4)	(0.6)	3,423	8.7	7.1	1.3	1.1	7.2	6.5
Average			(0.5)	(4.0)	(5.5)	(2.1)	(12.8)	12.9	(3.6)							
Refinery																
Valero	USD	71.2	1.7	0.1	(0.3)	10.2	10.0	47.4	0.6	34,264	8.2	9.4	1.6	1.4	4.3	4.8
Conoco Phillips	USD	47.4	1.1	(0.8)	(7.4)	(10.5)	(21.7)	(27.8)	1.5	58,522	#N/A	N/A	#N/A	N/A	9.0	7.7
Formosa Petrochemical	TWD	76.3	(0.8)	(2.7)	1.1	(3.4)	(2.7)	13.2	(3.2)	21,929	17.7	18.9	2.7	2.7	11.9	12.3
Tesoro	USD	106.3	(0.8)	3.3	(5.4)	1.4	16.5	47.5	0.9	12,795	7.4	11.4	2.4	2.1	4.6	5.9
Marathon Petroleum	USD	50.6	(1.2)	(3.0)	(9.0)	0.0	(6.3)	13.6	(2.4)	26,968	8.5	9.3	2.1	1.9	4.7	4.8
Devon Energy	USD	32.8	1.6	1.8	(19.0)	(23.5)	(43.3)	(44.1)	2.6	13,493	13.1	800.7	1.1	1.2	5.4	7.6
Hollyfrontier	USD	41.1	2.2	1.4	(14.2)	(19.8)	(8.3)	11.8	3.1	7,519	8.1	9.6	1.4	1.3	4.4	5.0
Phillips 66	USD	81.0	1.1	(2.1)	(10.2)	(1.0)	(0.6)	19.3	(1.0)	43,209	10.3	11.1	1.9	1.7	6.1	6.5
Murphy Oil	USD	22.6	(1.6)	(0.4)	(11.3)	(17.0)	(45.5)	(52.7)	0.6	3,886	#N/A	N/A	#N/A	N/A	4.3	4.9
JX Holdings	JPY	504.7	(1.6)	(1.0)	(2.2)	12.1	(2.9)	8.0	(0.7)	10,585	218.3	8.5	0.6	0.6	14.0	10.2
Cosmo Oil	JPY	164.0	0.0	0.0	0.0	0.0	(17.2)	(3.5)	0.0	1,151	#N/A	N/A	#N/A	N/A	#N/A	N/A
Idemitsu	JPY	1,969.0	0.7	0.8	(6.1)	5.4	(20.5)	(1.2)	1.6	2,648	19.4	6.6	0.5	0.5	13.2	9.0
Tonengeneral	JPY	1,025.0	(1.0)	(1.0)	(14.7)	(16.2)	(11.1)	0.2	0.3	4,869	36.7	10.4	1.5	1.3	29.7	11.3
Nesteoil	EUR	27.3	0.8	(1.4)	4.0	27.8	23.5	37.1	(1.2)	0	11.7	11.7	2.3	2.1	7.9	7.4
Ashland	USD	102.5	0.3	(1.6)	(9.4)	(2.2)	(15.9)	(12.9)	(0.2)	6,478	14.9	13.6	2.2	2.3	8.1	7.9
Fuchs Petrolub	EUR	43.1	0.2	(1.8)	(0.8)	4.8	12.9	33.4	(0.9)	5,972	24.8	22.7	6.0	5.0	14.3	13.0
SK이노베이션	KRW	127,000	0.8	(4.5)	(1.9)	17.1	6.7	54.9	(2.3)	9,867	9.9	9.2	0.7	0.7	6.3	6.3
S-Oil	KRW	78,600	0.8	(0.4)	5.6	19.1	18.4	62.9	(1.0)	7,436	11.5	10.9	1.7	1.5	7.5	7.4
GS	KRW	49,600	1.0	(2.2)	(0.3)	2.9	(3.9)	26.9	(2.2)	3,872	8.4	7.0	0.7	0.7	7.5	6.6
Average			0.3	(0.8)	(5.3)	0.4	(5.9)	12.3	(0.2)							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	01/05	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	78	0.9	(1.3)	(0.9)	1.7	(6.0)	(13.5)	0.2	325,209	20.1	20.7	1.9	1.9	8.4	8.1	
BP	GBP	348	0.2	(3.5)	(3.2)	(5.4)	(19.9)	(10.7)	(1.7)	93,827	14.2	14.9	0.9	0.9	5.3	4.8	
Shell	EUR	1,526	0.7	(2.2)	(3.8)	(9.7)	(15.8)	(26.6)	0.0	144,218	12.9	11.8	0.8	0.8	4.5	4.1	
Chevron	USD	90	0.9	(1.8)	(0.1)	6.6	(6.5)	(17.1)	(0.4)	168,649	25.9	24.0	1.1	1.1	6.7	6.2	
Total	EUR	40	(0.9)	(4.7)	(7.6)	(6.6)	(8.3)	0.4	(2.7)	105,226	10.4	12.1	1.1	1.0	5.4	5.4	
Sinopec	CNY	5	(0.8)	(4.4)	(5.8)	0.0	(29.8)	(33.6)	(4.4)	84,357	14.4	11.7	0.9	0.8	5.3	4.8	
Petrochina	CNY	8	(0.7)	(4.2)	(5.9)	(1.9)	(31.8)	(32.1)	(3.4)	213,797	30.5	25.4	1.2	1.2	7.2	7.0	
CNOOC	CNY	14	(0.7)	(10.0)	(12.6)	(10.3)	(35.3)	(36.3)	(9.0)	7,891	33.4	30.9	1.4	1.4	11.8	11.2	
Gazprom	RUB	136	1.1	(0.8)	(0.9)	(0.3)	(5.5)	1.9	0.3	44,041	2.6	2.6	0.3	0.2	2.3	2.4	
Rosneft	RUB	253	0.9	(0.7)	0.7	3.8	10.9	28.7	(0.0)	36,586	6.5	6.1	0.8	0.7	3.3	3.4	
Anadarko	USD	49	(1.2)	(2.4)	(14.6)	(27.0)	(36.8)	(36.0)	(0.1)	24,655	#N/A	N/A	#N/A	N/A	9.0	8.7	
Petrobras	BRL	7	(2.8)	(0.1)	(11.2)	(14.6)	(43.1)	(22.4)	(0.3)	25,004	9.3	6.9	0.3	0.3	6.2	5.6	
Lukoil	USD	2,380	3.0	1.1	(4.4)	8.4	(1.9)	3.7	1.5	27,490	5.9	5.3	0.3	0.3	N/A	N/A	
Kinder	USD	16	2.0	3.2	(7.4)	(49.7)	(59.0)	(62.6)	4.4	47,497	23.9	21.4	0.9	0.9	10.7	10.1	
Statoil	NOK	121	(2.4)	(2.8)	(5.2)	(9.1)	(12.7)	(4.4)	(2.6)	43,130	18.6	16.1	1.1	1.1	2.7	2.7	
BHP	AUD	18	(1.2)	(2.9)	(2.0)	(25.2)	(33.9)	(36.2)	(1.6)	63,442	30.6	19.8	1.1	1.1	6.7	5.8	
PTT E&P	THB	54	(3.1)	(6.5)	(12.6)	(24.5)	(49.8)	(49.5)	(5.7)	5,933	9.7	10.1	0.5	0.5	1.7	1.7	
Petronas gas	MYR	22	2.3	(1.6)	(5.0)	(1.2)	3.0	1.5	(2.5)	10,050	24.2	23.5	3.9	3.7	13.8	13.5	
Chesapeake	USD	5	1.2	9.4	10.1	(40.5)	(53.5)	(72.9)	11.3	3,332	#N/A	N/A	#N/A	N/A	6.8	9.5	
Noble Energy	USD	34	0.4	0.7	(0.6)	1.2	(18.0)	(20.6)	2.2	14,403	358.0	#N/A	N/A	1.2	1.3	9.3	8.1
Average		0	(0.0)	(1.8)	(4.6)	(10.2)	(22.7)	(21.9)	(0.7)								
PV																	
WACKER	EUR	75.5	(0.2)	(4.3)	(3.7)	7.4	(20.4)	(12.8)	(2.6)	4,230	22.5	19.7	1.6	1.6	5.2	4.9	
GCL-Poly	HKD	1.2	1.8	(0.9)	(20.6)	(28.4)	(31.4)	(38.0)	(0.9)	2,758	8.8	6.6	0.9	0.8	8.1	6.9	
REC	NOK	107.5	0.0	0.0	0.0	0.0	1.4	5.9	0.0	519	#N/A	N/A	#N/A	N/A	#N/A	N/A	
SunEdison	USD	5.7	(1.6)	12.7	55.5	(37.4)	(81.0)	(69.8)	11.2	1,793	#N/A	N/A	#N/A	N/A	#N/A	N/A	
Canadian Solar	USD	27.5	(1.7)	(5.0)	11.8	40.7	0.4	18.8	(5.0)	1,539	11.3	10.5	1.9	1.5	9.4	6.9	
JA Solar	USD	9.5	(1.0)	(2.9)	4.8	16.2	12.9	19.7	(1.9)	481	6.7	6.4	0.5	0.5	3.9	3.6	
Trina Solar	USD	11.0	1.2	(0.6)	7.3	9.9	(4.8)	20.8	(0.4)	1,012	12.2	8.1	0.8	0.8	7.4	5.5	
Solar City	USD	50.4	(4.5)	1.4	40.2	6.8	(3.5)	0.8	(1.1)	4,922	#N/A	N/A	#N/A	N/A	#N/A	N/A	
Yingli	USD	4.1	(7.4)	(17.1)	(37.4)	(8.2)	(64.1)	(81.9)	(8.8)	75	#N/A	N/A	#N/A	N/A	9.4	9.1	
First Solar	USD	72.0	8.0	8.5	20.4	54.4	59.5	72.2	9.2	7,269	16.1	17.2	1.3	1.3	8.0	10.4	
한화솔라원	USD	21.9	(2.1)	(1.7)	11.9	42.0	32.9	96.9	(0.4)	#N/A	N/A	#N/A	N/A	#N/A	N/A	N/A	
OCI	KRW	73,600	1.2	(6.4)	(9.6)	(10.2)	(32.8)	(1.3)	(1.9)	1,475	7.5	13.7	0.6	0.6	11.5	9.3	
웅진에너지	KRW	1,730	1.8	0.0	(6.5)	10.9	(2.8)	21.0	0.0	108	N/A	0.6	0.6	11.5	9.3	8.7	
신성솔라에너지	KRW	1,945	1.3	(6.7)	(1.3)	50.8	51.4	85.2	(3.7)	123	N/A	0.6	11.5	9.3	8.7	7.1	
Average			(0.2)	(1.6)	5.2	11.1	(5.9)	9.8	(0.5)								
Gas Company																	
Towngas China	HKD	4.4	0.7	(4.6)	(8.0)	(13.8)	(38.6)	(44.2)	(3.1)	1,499	9.1	8.2	0.8	0.7	11.1	9.5	
Kulun	HKD	6.7	0.1	(1.9)	(2.5)	14.3	(13.0)	(13.4)	(2.5)	7,008	14.2	12.1	1.0	0.9	6.0	5.5	
Beijing Enterprise	HKD	45.4	(1.2)	(3.0)	(3.5)	(4.4)	(21.7)	(25.5)	(3.4)	7,505	10.3	9.1	0.9	0.9	15.0	13.8	
ENN Energy	HKD	39.6	(0.9)	(4.6)	0.8	1.7	(14.4)	(11.5)	(4.2)	5,530	14.1	12.1	2.5	2.2	9.2	8.2	
China Resources Gas	HKD	21.6	(3.1)	(5.1)	(0.2)	6.4	(6.1)	8.9	(6.7)	6,197	16.1	13.7	2.6	2.3	9.9	8.6	
China Gas Holdings	HKD	10.7	(0.2)	(1.8)	1.3	(3.6)	(14.9)	(11.3)	(4.7)	6,827	14.3	11.8	2.5	2.1	11.5	9.8	
Shenzen Gas	HKD	13.9	(0.7)	(1.8)	5.3	25.1	5.0	23.1	(2.8)	3,415	12.8	12.1	1.3	1.2	10.0	9.8	
Shann Xi	CNY	11.5	(0.9)	(8.1)	(7.2)	0.6	(25.1)	2.9	(8.5)	1,966	20.1	16.8	#N/A	N/A	#N/A	N/A	
Suntien	HKD	1.2	1.7	0.0	(3.9)	(13.5)	(21.3)	(31.1)	(1.6)	585	9.2	7.4	0.5	0.5	7.7	6.2	
China Oil & Gas	HKD	0.5	0.0	(1.9)	(8.6)	11.6	(19.7)	(43.4)	0.0	398	11.5	8.3	0.8	0.7	6.4	5.3	
Average			(0.5)	(3.3)	(2.7)	2.4	(17.0)	(14.5)	(3.7)								
EV																	
LG화학	KRW	339,500	(0.6)	2.3	9.9	17.9	21.0	94.6	3.3	18,905	18.4	14.7	1.9	1.7	7.5	6.9	
삼성SDI	KRW	115,000	2.2	0.9	(2.5)	9.0	2.2	0.0	0.9	6,645	26.1	11.9	0.7	0.7	12.1	11.0	
Panasonic	JPY	1215.5	(0.2)	(2.0)	(10.8)	(2.8)	(27.2)	(14.8)	(2.0)	25,058	14.5	12.0	1.4	1.3	4.2	3.9	
GS Yuasa	JPY	443.0	(0.2)	(1.3)	(4.9)	(8.5)	(8.7)	(15.1)	(2.0)	1,540	13.8	11.9	1.1	1.1	6.8	6.3	
NEC	JPY	377.0	0.0	(1.6)	(7.1)	(0.3)	1.6	7.1	(2.1)	8,253	13.8	11.6	1.1	1.0	6.6	6.2	
BYD Auto	CNY	59.4	1.0	(8.1)	(4.0)	(1.1)	19.8	47.4	(7.8)	19,021	64.1	52.2	5.1	4.5	20.5	17.1	
Tesla Motors	USD	223.4	0.0	(5.8)	(3.0)	(9.2)	(20.2)	6.3	(6.9)	29,258	#N/A	N/A	130.4	25.9	22.0	131.9	
Kandi Technologies	USD	10.6	(0.7)	(7.7)	7.2	72.2	22.2	(17.1)	(2.7)	498	#N/A	N/A	#N/A	N/A	#N/A	N/A	
Average			0.2	(2.9)	(1.9)	9.7	1.4	13.6	(2.4)								

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임