

1. News Summary (3 page)

2017년 11월 14일

News	
WTI comment	중동불안·원유시추기 증가에 혼조
Headline	사우디, 아랍연맹 긴급회의 소집... 고강도 화이란 제재 추진할 듯
News 1.	두차례 연기' 테슬라 전기트럭 16일 첫선...머스크 "넌 나갈 것"
News 2.	조선3사 주가 동반 하락세, 북해 해양시설 놓친 여파 계속
News 3.	-
News 4.	-

Conclusion	
시아파 견제를 통한 중동 정세 혼란으로 유가 단기 상승 가능성 열림	
모델3 생산 차질이 해결되지 않은 상황에서 트럭 양산은 쉽지 않을 것	
컨테이너선에 이어 해양플랜트 시장에서도 가격 변수가 중요해짐	
-	
-	

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	56.8	0.0	(1.0)	9.4	19.3	31.0
Dubai	\$/bbl	61.6	(0.7)	1.7	10.1	22.4	46.9
Gasoline	\$/bbl	77.2	(0.2)	1.8	8.4	14.3	37.0
Diesel	\$/bbl	73.0	(0.5)	1.6	5.5	14.3	32.7
Complex margin	\$/bbl	7.7	0.1	(0.0)	(0.6)	(1.5)	(1.1)
1M lagging	\$/bbl	14.6	(1.0)	0.2	3.1	1.8	12.9
Petrochemical			%	%	%	%	%
Naphtha	\$/t	602	(0.5)	2.3	13.8	30.8	41.6
Butadiene	\$/t	945	0.0	0.0	(19.9)	(10.1)	(29.7)
HDPE	\$/t	1,260	0.8	1.6	5.9	12.5	7.7
MEG	\$/t	910	0.0	0.0	2.2	7.1	22.6
PX	\$/t	888	0.9	1.3	6.7	10.4	12.4
SM	\$/t	1,253	0.1	5.4	5.2	9.1	5.7
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	3.14	(2.2)	0.2	1.1	(1.8)	(2.1)
Natural rubber	\$/t	1,420	1.4	(2.1)	0.0	(4.7)	(13.9)
Cotton	C/lbs	68.9	(0.2)	0.0	2.0	0.6	(0.0)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	11/06	\$/t	1,130	0.0	(8.3)	9.7	15.9
Propylene	11/06	\$/t	775	(4.0)	(5.8)	0.6	17.4
Benzene	11/06	\$/t	818	0.9	3.5	9.0	24.8
Toluene	11/06	\$/t	705	2.2	0.0	8.5	8.5
Xylene	11/06	\$/t	663	1.1	1.9	4.7	1.1
PP	11/06	\$/t	1,128	(1.7)	(3.4)	3.7	7.4
PVC	11/06	\$/t	890	0.0	(6.3)	3.5	(4.3)
ABS	11/06	\$/t	1,890	(1.6)	(5.5)	2.2	27.7
SBR	11/06	\$/t	1,570	(7.6)	(10.3)	5.4	(16.0)
SM	11/06	\$/t	1,195	(1.2)	(3.6)	3.9	6.0
BPA	11/06	\$/t	1,873	11.1	13.0	21.4	38.2
Caustic	11/06	\$/t	651	8.9	29.9	39.3	73.6
2-EH	11/06	\$/t	1,000	0.0	0.0	4.2	28.2
Caprolactam	11/06	\$/t	2,170	0.0	13.0	23.3	52.8
Solar				%	%	%	%
Polysilicon	11/08	\$/kg	16.7	(0.1)	(0.2)	7.1	15.1
Module	11/08	\$/W	0.32	(0.3)	(1.3)	(3.4)	(20.6)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	82.9	(0.1)	(1.0)	0.6	6.0	(3.2)
Shell	EUR	2,435	0.7	(0.9)	6.5	14.1	24.9
Petrochina	CNY	8.40	0.1	0.2	5.3	5.4	13.5
Gazprom	RUB	133.3	0.6	5.9	5.1	14.0	(9.8)
Petrobras	BRL	16.6	(0.5)	(4.5)	3.5	28.5	18.8
Refinery							
Phillips66	USD	93.3	(0.4)	(1.2)	(1.2)	11.8	13.5
Valero	USD	80.7	(0.9)	(1.0)	3.3	22.0	29.2
JX	JPY	648.8	1.7	6.3	16.1	25.6	58.2
Neste Oil	EUR	48.4	0.8	(1.2)	23.6	39.2	33.0

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	93.8	(0.4)	(3.7)	5.5	17.3	16.0
DowDuPont	USD	70.5	0.7	0.3	(1.4)	11.4	31.3
SABIC	SAR	100.0	0.1	(0.5)	1.2	1.6	16.2
Formosa Pla.	TWD	93.0	1.0	1.3	(0.5)	1.1	9.4
Shin-Etsu	JPY	12,310	(1.1)	(0.1)	20.9	29.0	49.4
Renewable							
Wacker	EUR	134.9	(0.1)	(4.2)	12.6	33.9	71.7
First Solar	USD	61.57	(0.0)	0.2	29.3	29.5	92.0
GCL-Poly	HKD	1.49	3.5	5.7	24.2	71.3	49.0
Tesla Motors	USD	315.4	4.1	4.2	(11.3)	(11.9)	67.3

4. Coverage Summary

	11/13	1D	1W	1M	3M	6M	12M
KOSPI	2,530	(0.5)	(0.7)	2.3	8.4	10.7	27.5
KOSPI확화	5,999	(1.4)	(1.8)	4.0	5.5	10.2	19.3
LG화학	394,500	(3.0)	(3.5)	5.2	14.8	37.2	66.8
롯데케미칼	356,000	(4.8)	(3.9)	(9.9)	(8.6)	1.1	14.7
한화케미칼	29,900	(2.6)	(5.5)	(10.3)	(15.8)	8.3	24.6
금호석유화학	73,200	0.8	(3.2)	9.1	(0.3)	(3.3)	0.5
KCC	398,000	(1.7)	(1.7)	4.5	0.0	12.0	2.8
OCI	122,500	(0.8)	(3.5)	23.4	34.0	47.8	50.1
SKC	42,000	0.0	2.7	4.1	11.3	43.3	44.3
SK이노베이션	203,000	(3.8)	(4.2)	(3.1)	16.7	17.3	27.3
S-Oil	121,000	(4.0)	(5.1)	(8.3)	3.4	14.7	42.2
GS	64,000	(3.5)	(2.7)	(4.8)	(9.3)	3.2	17.6
SK가스	95,800	(1.3)	2.2	2.8	(14.8)	(18.8)	(6.1)
포스코대우	19,600	(1.3)	(1.0)	2.6	(11.5)	(16.9)	(23.9)
LG상사	29,300	(0.3)	(1.0)	6.5	1.9	(9.6)	(5.5)
한국전력	38,250	(0.9)	(1.2)	(2.2)	(12.1)	(11.6)	(16.5)
한국가스공사	41,800	(2.3)	1.0	(4.7)	(12.8)	(14.0)	(4.6)

투자의견	TP	%	P/E	P/B
			* 추정치는 12M fwd 기준임	
			* 모든 coverage 업체의 실적은 연결기준임	
매수	400,000	1.4	12.50	2.06
매수	410,000	15.2	5.60	1.23
매수	39,000	30.4	5.04	0.83
매수	100,000	36.6	12.41	1.36
매수	450,000	13.1	22.09	0.58
매수	120,000	(2.0)	15.56	0.94
매수	45,000	7.1	11.61	1.14
매수	210,000	3.4	8.19	1.09
매수	140,000	15.7	13.09	2.28
매수	80,000	25.0	6.07	0.95
매수	130,000	35.7	7.24	0.71
매수	25,000	27.6	10.98	0.85
매수	38,000	29.7	10.67	0.95
매수	55,000	43.8	7.33	0.31
매수	60,000	43.5	8.54	0.54

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

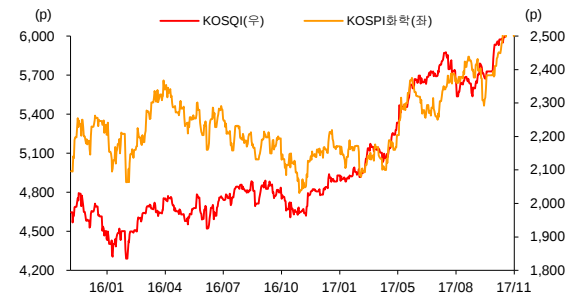
* 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.

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

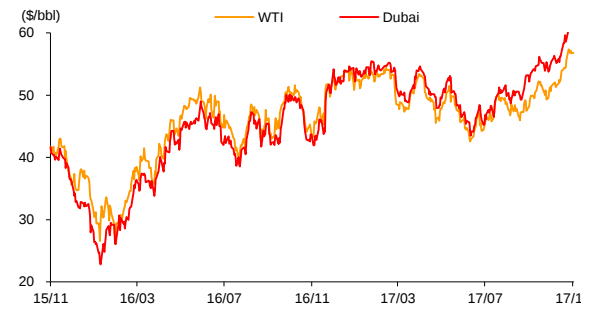
* 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

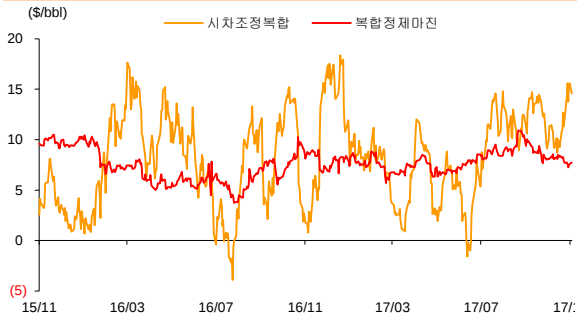
KOSPI/KOSPI화학



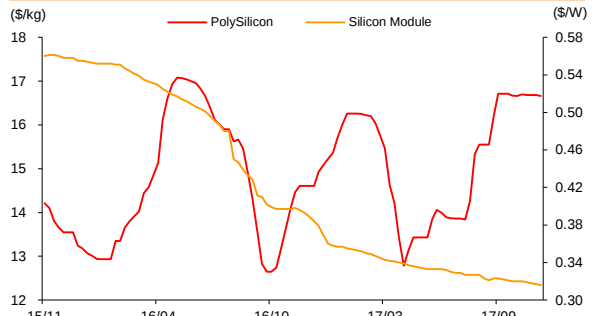
WTI/Dubai



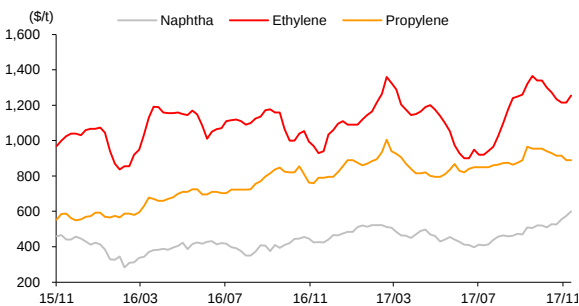
Complex & 1M lagging margin



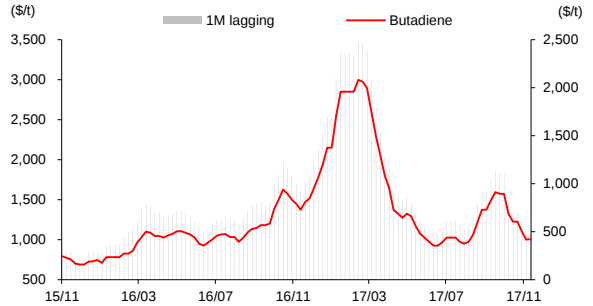
Polysilicon & Module prices



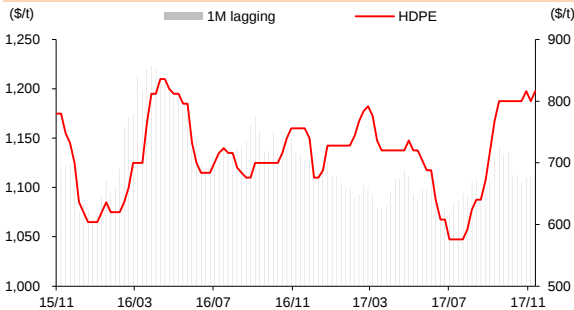
Naphtha/Ethylene/Propylene prices



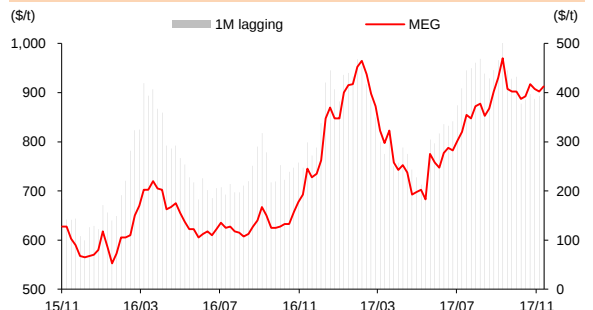
Butadiene price & 1M lagging naphtha spread



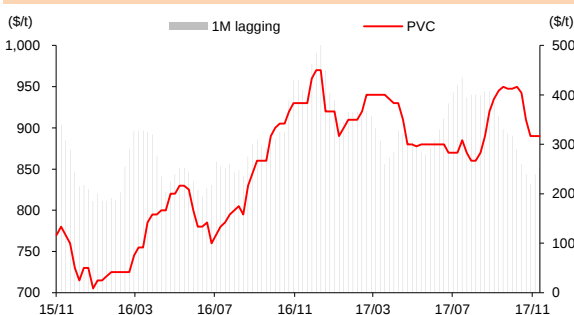
HDPE price & 1M lagging naphtha spread



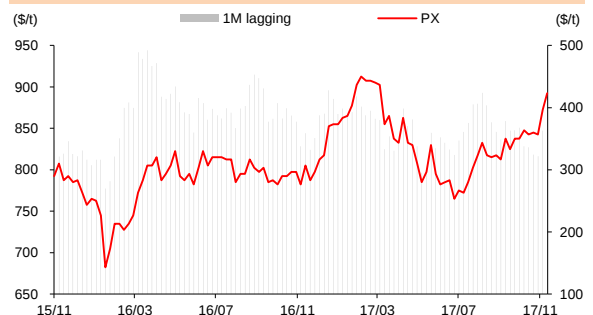
MEG price & 1M lagging naphtha spread



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: 조선일보)
제목	사우디, 아랍연맹 긴급회의 소집... 고강도 화이란 제재 추진할 듯
결론	시아파 견제를 통한 중동 정세 혼란으로 유가 단기 상승 가능성 열림
세부	1) 아랍연맹이 사우디의 요청에 따라 오는 19일 긴급회의를 소집 2) 사우디, "예멘 반군의 미사일 공격은 사실상 이란의 지시에 의한 것" 3) 이번 회의 안건으로 이란의 레바논 정치 개입 문제를 꺼낼 것으로 보임 4) 사우디가 아랍연맹을 통해 강도 높은 대(對)이란 제재를 추진할 것 5) 시아파 견제를 통한 중동 정세 혼란으로 유가 단기 상승 가능성 열림

Issue 1	(출처: 연합뉴스)
제목	두차례 연기' 테슬라 전기트럭 16일 첫선...머스크 "넛 나갈 것"
결론	모델3 생산 차질이 해결되지 않은 상황에서 트럭 양산은 쉽지 않을 것
세부	1) 일론 머스크 CEO, "세미 트럭이 당신의 넛을 나가게 할 것" 2) 미래형 외형을 통해 시각적으로 자극적이면서 대형 배터리를 보유 3) 당초 9월에 공개하겠다고 밝힌 뒤 10월 26일로 미뤘다가 또 3주일 연기 4) 연기는 생산 부진에 시달리는 모델3 생산에 집중하기 위한 포석 5) 모델3 생산 차질이 해결되지 않은 상황에서 트럭 양산은 쉽지 않을 것

Issue 3
제목
결론
세부
1)
2)
3)
4)
5)

Issue 5
제목
결론
세부
1)
2)
3)
4)
5)

WTI Comment	(출처: 연합뉴스)
제목	중동불안·원유시추기 증가'에 혼조
상승	중동의 정세불안
요인	
하락	미국의 오일 리그 숫자가 6월 이후 최대 수준으로 증가
요인	

Issue 2	(출처: 비즈니스포스트)
제목	조선3사 주가 동반 하락세, 북해 해양시설 농친 여파 계속
결론	컨테이너선에 이어 해양플랜트 시장에서도 가격 변수가 중요해짐
세부	1) 현대중공업과 대우조선해양, 삼성중공업 등 조선3사 주가가 떨어짐 2) 스타토일이 발주하는 요한카스트버그 해양플랜트 수주 실패 3) 셉코프마린이 가격경쟁력을 앞세워 스타토일과 투자의향을 맺음 4) 셉코프마린은 조선3사보다 17~22% 정도 낮은 입찰가를 제시함 5) 컨테이너선에 이어 해양플랜트 시장에서도 가격 변수가 중요해짐

Issue 4
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	2015avg.	2016avg.	2017acc.
F/X	USD/EUR	0.857	0.857	0.861	0.846	0.846	0.915	0.921	0.951	0.901	0.904	0.893
	Change, %		(0.0)	(0.5)	1.3	1.3	(6.3)	(6.9)	(9.8)	(4.9)	(5.2)	(4.0)
	USD/JPY	113.6	113.5	113.7	111.8	109.2	113.4	106.7	117.0	121.1	108.8	112.1
	Change, %		0.1	(0.1)	1.6	4.1	0.2	6.5	(2.9)	(6.1)	4.5	1.4
	USD/KRW	1,120.7	1,117.0	1,115.1	1,129.0	1,143.7	1,127.5	1,164.7	1,205.8	1,131.2	1,160.5	1,137.5
	Change, %		0.3	0.5	(0.7)	(2.0)	(0.6)	(3.8)	(7.1)	(0.9)	(3.4)	(1.5)
Agriculture	Corn	342.3	343.5	348.0	352.8	360.8	361.8	340.3	352.0	376.8	358.5	361.7
	Change, %		(0.4)	(1.7)	(3.0)	(5.1)	(5.4)	0.6	(2.8)	(9.2)	(4.5)	(5.4)
	Soybean	963.5	977.3	984.0	1,000.3	935.5	954.0	978.5	996.5	945.4	987.5	975.7
	Change, %		(1.4)	(2.1)	(3.7)	3.0	1.0	(1.5)	(3.3)	1.9	(2.4)	(1.3)
	Wheat	424.3	431.5	430.8	439.5	439.3	425.0	403.0	408.0	508.1	436.4	439.2
	Change, %		(1.7)	(1.5)	(3.5)	(3.4)	(0.2)	5.3	4.0	(16.5)	(2.8)	(3.4)
	Rice	11.1	11.2	11.2	12.2	12.5	10.2	9.5	9.4	11.1	10.3	10.9
	Change, %		(0.4)	(1.1)	(8.7)	(11.0)	8.7	17.2	18.9	0.6	7.5	1.9
	Oats	273.5	272.0	269.0	266.8	264.0	247.0	224.8	228.5	250.2	196.3	253.3
	Change, %		0.6	1.7	2.5	3.6	10.7	21.7	19.7	9.3	39.3	8.0
	Palm Oil	2,702.0	2,740.0	2,772.0	2,716.0	2,683.0	2,860.0	2,975.0	3,218.0	2,190.3	2,653.8	2,834.3
	Change, %		(1.4)	(2.5)	(0.5)	0.7	(5.5)	(9.2)	(16.0)	23.4	1.8	(4.7)
	Cocoa	2,208.0	2,223.0	2,117.0	2,087.0	1,990.0	2,045.0	2,453.0	2,126.0	3,091.6	2,854.0	2,010.0
	Change, %		(0.7)	4.3	5.8	11.0	8.0	(10.0)	3.9	(28.6)	(22.6)	9.9
MYR/mt	Cotton	68.9	69.1	68.9	68.6	69.2	82.2	68.4	70.7	63.3	65.6	73.4
	Change, %		(0.2)	0.0	0.4	(0.5)	(16.2)	0.6	(2.5)	8.9	5.0	(6.2)
	Sugar	15.1	15.0	14.6	14.4	13.2	15.5	21.7	19.5	13.1	18.2	16.0
	Change, %		1.1	3.9	5.0	14.6	(2.5)	(30.3)	(22.5)	15.1	(16.6)	(5.3)
	Coffee	127.6	127.6	125.6	126.5	140.3	132.6	159.5	137.1	132.6	136.1	134.5
	Change, %		0.0	1.6	0.9	(9.1)	(3.8)	(20.0)	(6.9)	(3.8)	(6.2)	(5.1)
Energy	WTI	56.7	56.7	57.4	51.5	48.8	47.8	43.4	53.7	48.8	43.4	49.9
	Change, %		(0.0)	(1.1)	10.3	16.2	18.6	30.7	5.6	16.2	30.8	13.6
	Brent	63.1	63.5	64.3	57.2	52.1	50.8	44.8	56.8	53.7	45.1	53.5
	Change, %		(0.7)	(1.9)	10.3	21.1	24.1	41.0	11.0	17.5	39.9	17.9
	Natural Gas	3.1	3.2	3.1	3.0	3.0	3.4	2.6	3.7	2.6	2.6	3.0
	Change, %		(2.2)	0.2	4.7	5.3	(8.3)	19.9	(15.7)	19.5	23.1	3.1
	Ethanol	1.4	1.5	1.5	1.4	1.6	1.5	1.5	1.6	1.5	1.5	1.5
	Change, %		(1.0)	(2.6)	0.8	(8.4)	(4.4)	(5.1)	(10.2)	(4.5)	(4.8)	(5.2)
	RBOB Gasoline	178.8	181.2	183.0	162.2	161.3	157.6	130.5	166.5	163.6	140.0	161.2
	Change, %		(1.4)	(2.3)	10.2	10.8	13.4	36.9	7.4	9.3	27.7	10.9
	Coal	97.8	97.7	98.8	95.8	95.8	73.6	109.9	88.4	59.0	65.5	86.7
	Change, %		0.2	(1.0)	2.1	2.1	32.9	(11.0)	10.6	65.9	49.4	12.8
Metal	Gold	1,278.4	1,275.5	1,282.1	1,304.6	1,289.4	1,228.1	1,227.9	1,152.3	1,160.6	1,248.5	1,256.1
	Change, %		0.2	(0.3)	(2.0)	(0.9)	4.1	4.1	10.9	10.2	2.4	1.8
	Silver	17.1	16.9	17.2	17.4	17.1	16.5	17.4	15.9	15.7	17.1	17.2
	Change, %		1.1	(1.0)	(2.1)	(0.3)	3.6	(1.8)	7.2	8.5	(0.3)	(0.6)
	Copper	6,895.0	6,786.0	6,970.0	6,882.0	6,411.0	5,559.5	5,549.0	5,535.5	5,503.1	4,872.0	6,095.2
	Change, %		1.6	(1.1)	0.2	7.5	24.0	24.3	24.6	25.3	41.5	13.1
	Nickel	817.3	789.5	837.1	756.2	681.4	599.2	757.7	682.0	759.5	646.4	670.0
	Change, %		3.5	(2.4)	8.1	19.9	36.4	7.9	19.8	7.6	26.4	22.0
	Zinc	3,213.0	3,219.0	3,232.0	3,235.0	2,896.5	2,554.0	2,472.0	2,576.0	1,941.9	2,097.5	2,841.4
	Change, %		(0.2)	(0.6)	(0.7)	10.9	25.8	30.0	24.7	65.5	53.2	13.1
	Lead	2,514.0	2,514.8	2,507.0	2,518.8	2,305.8	2,119.8	2,097.3	2,003.5	1,791.2	1,868.3	2,289.7
	Change, %		(0.0)	0.3	(0.2)	9.0	18.6	19.9	25.5	40.4	34.6	9.8
	Aluminum	15,380.0	15,340.0	15,955.0	16,365.0	15,880.0	13,755.0	15,155.0	12,765.0	12,184.0	12,373.5	14,546.5
	Change, %		0.3	(3.6)	(6.0)	(3.1)	11.8	1.5	20.5	26.2	24.3	5.7
	Cobalt	60,000.0	60,750.0	60,860.0	59,538.0	56,750.0	54,550.0	29,250.0	32,734.0	28,444.4	25,480.1	53,879.2
	Change, %		(1.2)	(1.4)	0.8	5.7	10.0	105.1	83.3	110.9	135.5	11.4
	HR Coil	606.0	609.0	611.0	595.0	621.0	610.0	492.0	633.0	461.5	519.3	618.6
	Change, %		(0.5)	(0.8)	1.8	(2.4)	(0.7)	23.2	(4.3)	31.3	16.7	(2.0)
	Scrap	330.0	328.9	330.0	330.0	360.0	350.0	255.0	302.0	252.9	275.7	343.3
	Change, %		0.3	0.0	0.0	(8.3)	(5.7)	29.4	9.3	30.5	19.7	(3.9)

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		11/13	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	WTI	56.8	56.7	57.4	51.9	47.6	48.9	43.3	53.7	48.8	43.4	49.9
	Change, %		0.0	(1.0)	9.4	19.3	16.2	31.0	5.7	16.4	30.9	13.8
	Dubai	61.6	62.1	60.6	56.0	50.4	50.8	42.0	53.8	50.8	41.3	51.9
	Change, %		(0.7)	1.7	10.1	22.4	21.3	46.9	14.5	21.3	49.2	18.8
Crude Oil	Gasoline(휘발유)	77.2	77.3	75.8	71.1	67.5	65.4	56.3	69.8	69.5	56.3	66.9
Product	Change, %		(0.2)	1.8	8.4	14.3	17.9	37.0	10.5	11.0	37.1	15.4
	Kerosene(등유)	74.6	75.0	73.4	68.6	63.0	60.8	54.7	66.4	64.7	52.9	63.7
	Change, %		(0.6)	1.6	8.7	18.4	22.7	36.4	12.3	15.2	41.0	17.0
	Diesel(경유)	73.0	73.3	71.8	69.2	63.9	61.2	55.0	65.5	64.8	52.1	64.2
	Change, %		(0.5)	1.6	5.5	14.3	19.1	32.7	11.4	12.6	40.0	13.6
	Bunker-C	57.6	58.0	57.3	52.3	48.3	47.2	40.4	52.1	45.3	35.5	48.6
	Change, %		(0.8)	0.5	10.0	19.2	21.9	42.6	10.5	27.2	62.0	18.4
	Naphtha	65.7	65.6	64.2	57.9	49.9	49.6	45.1	53.5	52.6	42.6	52.1
	Change, %		0.0	2.3	13.5	31.5	32.5	45.5	22.8	24.8	54.2	26.1
Dubai	Gasoline(휘발유)	15.5	15.3	15.2	15.2	17.1	14.6	14.4	16.0	18.7	14.9	15.0
Spread	Change		0.2	0.3	0.4	(1.6)	0.9	1.2	(0.5)	(3.2)	0.6	0.5
	Kerosene(등유)	12.9	12.9	12.8	12.6	12.6	10.0	12.7	12.6	14.0	11.6	11.9
	Change		0.0	0.1	0.3	0.3	3.0	0.2	0.3	(1.0)	1.4	1.1
	Diesel(경유)	11.3	11.3	11.2	13.2	13.5	10.4	13.0	11.7	14.0	10.8	12.4
	Change		0.1	0.1	(1.9)	(2.2)	0.9	(1.7)	(0.4)	(2.7)	0.5	(1.0)
	Bunker-C	(4.1)	(4.1)	(3.3)	(3.7)	(2.1)	(3.6)	(1.6)	(1.8)	(5.5)	(5.8)	(3.3)
	Change		(0.0)	(0.8)	(0.4)	(2.0)	(0.5)	(2.5)	(2.3)	1.4	1.7	(0.8)
	Naphtha	4.0	3.6	3.6	1.9	(0.4)	(1.3)	3.2	(0.4)	1.8	1.3	0.2
	Change		0.5	0.4	2.1	4.5	5.3	0.8	4.4	2.2	2.7	3.8
Refining	Simple(단순)	2.7	2.6	3.0	3.3	4.3	2.3	4.5	3.8	3.3	1.9	3.2
Margin	Change		0.1	(0.3)	(0.6)	(1.7)	0.4	(1.9)	(1.1)	(0.6)	0.7	(0.5)
	Complex(복합)	7.7	7.6	7.7	8.3	9.2	6.8	8.8	8.3	9.3	7.0	8.0
	Change		0.1	(0.0)	(0.6)	(1.5)	0.9	(1.1)	(0.5)	(1.6)	0.8	(0.2)
	Complex(lagging)	14.6	15.6	14.4	11.4	12.8	3.3	1.7	18.0	7.3	8.5	8.6
	Change		(1.0)	0.2	3.1	1.8	11.2	12.9	(3.4)	7.3	6.1	6.0

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			11/13	11/10	11/09	11/08	11/07	11/06	11/03	11/02	11/01	10/31
Spot Price	Naphtha	CFR Japan	601.5	604.4	592.9	593.4	587.4	588.1	580.0	573.1	567.0	564.5
	Ethylene	CFR SE Asia	1,160.0	1,160.0	1,160.0	1,160.0	1,140.0	1,140.0	1,140.0	1,140.0	1,140.0	1,140.0
	Propylene	FOB Korea	875.0	875.0	894.0	899.0	903.0	918.0	918.0	918.0	923.0	925.0
	Butadiene	FOB Korea	945.0	945.0	945.0	945.0	945.0	945.0	945.0	945.0	945.0	950.0
	HDPE	CFR FE Asia	1,260.0	1,250.0	1,250.0	1,250.0	1,250.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0
	LDPE	CFR FE Asia	1,250.0	1,250.0	1,250.0	1,250.0	1,250.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0
	LLDPE	CFR FE Asia	1,185.0	1,190.0	1,190.0	1,190.0	1,180.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0
	MEG	CFR China	910.0	910.0	913.0	913.0	915.0	910.0	900.0	898.0	898.0	898.0
	PP	CFR FE Asia	1,120.0	1,115.0	1,120.0	1,120.0	1,120.0	1,120.0	1,130.0	1,130.0	1,120.0	1,115.0
	PX	CFR China	888.3	880.0	881.0	883.0	887.0	877.0	864.3	855.3	854.7	840.7
	PTA	CFR China	685.0	685.0	685.0	685.0	685.0	665.0	660.0	660.0	655.0	653.0
	Benzene	FOB Korea	836.0	835.0	836.0	872.0	856.0	828.0	815.0	811.0	812.0	794.0
	Toluene	FOB Korea	686.0	687.0	684.0	691.0	695.0	682.0	676.0	676.0	678.0	668.0
	Xylene	FOB Korea	693.0	697.0	697.0	705.0	708.0	689.0	677.0	677.0	671.0	664.0
	SM	FOB Korea	1,253.0	1,252.0	1,256.0	1,263.0	1,228.0	1,189.0	1,168.0	1,169.0	1,161.0	1,159.5

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Spot Price	Naphtha	CFR Japan	574.0	554.5	509.5	464.0	409.0	425.0	484.5	493.0	399.5	480.1
	Change, %			3.5	12.7	23.7	40.3	35.1	18.5	16.4	43.7	19.6
	Ethylene	CFR SE Asia	1,130.0	1,130.0	1,232.5	1,030.0	875.0	975.0	990.0	1,103.7	1,040.9	1,071.9
	Change, %			0.0	(8.3)	9.7	29.1	15.9	14.1	2.4	8.6	5.4
	Propylene	CFR SE Asia	775.0	807.5	822.5	770.0	755.0	660.0	815.0	770.0	705.7	877.2
	Change, %			(4.0)	(5.8)	0.6	2.6	17.4	(4.9)	0.6	9.8	(11.6)
	Butadiene	CFR SE Asia	950.0	1,050.0	1,275.0	925.0	975.0	1,400.0	2,100.0	877.5	1,116.8	1,540.1
	Change, %			(9.5)	(25.5)	2.7	(2.6)	(32.1)	(54.8)	8.3	(14.9)	(38.3)
	Benzene	CFR SE Asia	817.5	810.0	790.0	750.0	742.5	655.0	822.5	690.0	646.7	831.4
	Change, %			0.9	3.5	9.0	10.1	24.8	(0.6)	18.5	26.4	(1.7)
	Toluene	CFR SE Asia	705.0	690.0	705.0	650.0	630.0	650.0	690.0	700.8	630.5	685.2
	Change, %			2.2	0.0	8.5	11.9	8.5	2.2	0.6	11.8	2.9
	Xylene	CFR SE Asia	662.5	655.0	650.0	632.5	615.0	655.0	675.0	699.3	627.7	664.1
	Change, %			1.1	1.9	4.7	7.7	1.1	(1.9)	(5.3)	5.5	(0.2)
Spread	Ethylene	-Naphtha	556.0	575.5	723.0	566.0	466.0	550.0	505.5	610.6	641.4	591.8
	Change, %			(3.4)	(23.1)	(1.8)	19.3	1.1	10.0	(8.9)	(13.3)	(6.1)
	Propylene	-Naphtha	201.0	253.0	313.0	306.0	346.0	235.0	330.5	277.0	306.2	397.1
	Change, %			(20.6)	(35.8)	(34.3)	(41.9)	(14.5)	(39.2)	(27.4)	(34.3)	(49.4)
	Butadiene	-Naphtha	376.0	495.5	765.5	461.0	566.0	975.0	1,615.5	384.5	717.3	1,060.0
	Change, %			(24.1)	(50.9)	(18.4)	(33.6)	(61.4)	(76.7)	(2.2)	(47.6)	(64.5)
	Benzene	-Naphtha	243.5	255.5	280.5	286.0	333.5	230.0	338.0	197.0	247.2	351.3
	Change, %			(4.7)	(13.2)	(14.9)	(27.0)	5.9	(28.0)	23.6	(1.5)	(30.7)
	Toluene	-Naphtha	131.0	135.5	195.5	186.0	221.0	225.0	205.5	207.8	231.0	205.1
	Change, %			(3.3)	(33.0)	(29.6)	(40.7)	(41.8)	(36.3)	(36.9)	(43.3)	(36.1)
	Xylene	-Naphtha	88.5	100.5	140.5	168.5	206.0	230.0	190.5	206.3	228.2	184.1
	Change, %			(11.9)	(37.0)	(47.5)	(57.0)	(61.5)	(53.5)	(57.1)	(61.2)	(51.9)

자료 : Ciscem, Platts, Bloomberg, SK증권

참고 : Spread는 Polymer와 Naphtha의 가격차이임

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Spot Price	HDPE	CFR SE Asia	1,187.5	1,197.5	1,187.5	1,077.5	1,047.5	1,160.0	1,142.5	1,230.1	1,134.6	1,134.0
	Change, %			(0.8)	0.0	10.2	13.4	2.4	3.9	(3.5)	4.7	4.7
	MEG	CFR SE Asia	902.5	907.5	887.5	877.5	820.0	692.5	847.5	780.8	660.8	842.8
	Change, %			(0.6)	1.7	2.8	10.1	30.3	6.5	15.6	36.6	7.1
	PVC	CFR SE Asia	890.0	890.0	950.0	860.0	870.0	930.0	920.0	820.8	823.4	905.3
	Change, %			0.0	(6.3)	3.5	2.3	(4.3)	(3.3)	8.4	8.1	(1.7)
	PP	CFR SE Asia	1,127.5	1,147.5	1,167.5	1,087.5	1,027.5	1,050.0	1,032.5	1,109.8	978.4	1,090.9
	Change, %			(1.7)	(3.4)	3.7	9.7	7.4	9.2	1.6	15.2	3.4
	2-EH	CFR Korea	1,000.0	1,000.0	1,000.0	960.0	910.0	780.0	865.0	930.1	772.4	960.7
	Change, %			0.0	0.0	4.2	9.9	28.2	15.6	7.5	29.5	4.1
	ABS	CFR SE Asia	1,890.0	1,920.0	2,000.0	1,850.0	1,790.0	1,480.0	1,635.0	1,431.1	1,347.1	1,820.5
	Change, %			(1.6)	(5.5)	2.2	5.6	27.7	15.6	32.1	40.3	3.8
	SBR	CFR SE Asia	1,570.0	1,700.0	1,750.0	1,490.0	1,450.0	1,870.0	2,000.0	1,332.1	1,483.0	2,028.6
	Change, %			(7.6)	(10.3)	5.4	8.3	(16.0)	(21.5)	17.9	5.9	(22.6)
	SM	CFR SE Asia	1,195.0	1,210.0	1,240.0	1,150.0	1,160.0	1,127.5	1,205.0	1,100.7	1,064.6	1,243.2
	Change, %			(1.2)	(3.6)	3.9	3.0	6.0	(0.8)	8.6	12.2	(3.9)
	Caustic	FOB NEA	651.0	598.0	501.0	467.5	452.5	375.0	422.5	296.8	316.6	464.7
	Change, %			8.9	29.9	39.3	43.9	73.6	54.1	119.4	105.6	40.1
	PX	CFR SE Asia	872.5	842.5	847.5	832.5	772.5	782.5	855.0	842.9	790.4	836.4
	Change, %			3.6	2.9	4.8	12.9	11.5	2.0	3.5	10.4	4.3
	PO	CFR China	1,872.5	1,685.0	1,657.5	1,542.5	1,497.5	1,355.0	1,562.5	1,683.4	1,396.8	1,565.6
	Change, %			11.1	13.0	21.4	25.0	38.2	19.8	11.2	34.1	19.6
	Caprolactam	CFR SE Asia	2,170.0	2,170.0	1,920.0	1,760.0	1,610.0	1,420.0	1,850.0	1,581.5	1,344.9	1,916.6
	Change, %			0.0	13.0	23.3	34.8	52.8	17.3	37.2	61.4	13.2
	PTA	CFR SE Asia	670.0	667.5	672.5	657.5	635.0	612.5	642.5	648.0	613.7	660.6
	Change, %			0.4	(0.4)	1.9	5.5	9.4	4.3	3.4	9.2	1.4
Spread	HDPE		613.5	643.0	678.0	613.5	638.5	735.0	658.0	737.1	735.1	654.0
	Change, %			(4.6)	(9.5)	0.0	(3.9)	(16.5)	(6.8)	(16.8)	(16.5)	(6.2)
	MEG		328.5	353.0	378.0	413.5	411.0	267.5	363.0	287.8	261.3	362.8
	Change, %			(6.9)	(13.1)	(20.6)	(20.1)	22.8	(9.5)	14.1	25.7	(9.4)
	PVC		316.0	335.5	440.5	396.0	461.0	505.0	435.5	327.8	423.9	425.3
	Change, %			(5.8)	(28.3)	(20.2)	(31.5)	(37.4)	(27.4)	(3.6)	(25.5)	(25.7)
	PP		553.5	593.0	658.0	623.5	618.5	625.0	548.0	616.8	578.9	610.8
	Change, %			(6.7)	(15.9)	(11.2)	(10.5)	(11.4)	1.0	(10.3)	(4.4)	(9.4)
	2-EH		426.0	445.5	490.5	496.0	501.0	355.0	380.5	437.0	372.9	480.6
	Change, %			(4.4)	(13.1)	(14.1)	(15.0)	20.0	12.0	(2.5)	14.3	(11.4)
	ABS		1,316.0	1,365.5	1,490.5	1,386.0	1,381.0	1,055.0	1,150.5	938.1	947.6	1,340.5
	Change, %			(3.6)	(11.7)	(5.1)	(4.7)	24.7	14.4	40.3	38.9	(1.8)
	SBR	BD spread	620.0	650.0	475.0	565.0	475.0	470.0	(100.0)	454.7	366.2	488.5
	Change, %			(4.6)	30.5	9.7	30.5	31.9	(720.0)	36.4	69.3	26.9
	SM		621.0	655.5	730.5	686.0	751.0	702.5	720.5	607.7	665.1	763.1
	Change, %			(5.3)	(15.0)	(9.5)	(17.3)	(11.6)	(13.8)	2.2	(6.6)	(18.6)
	Caustic											
	Change, %											
	PX		298.5	288.0	338.0	368.5	363.5	357.5	370.5	349.9	390.9	356.3
	Change, %			3.6	(11.7)	(19.0)	(17.9)	(16.5)	(19.4)	(14.7)	(23.6)	(16.2)
	PO	propylene spread	1,097.5	877.5	835.0	772.5	742.5	695.0	747.5	913.4	691.1	688.4
	Change, %			25.1	31.4	42.1	47.8	57.9	46.8	20.2	58.8	59.4
	Caprolactam	benzene spread	1,352.5	1,360.0	1,130.0	1,010.0	867.5	765.0	1,027.5	891.6	698.2	1,085.2
	Change, %			(0.6)	19.7	33.9	55.9	76.8	31.6	51.7	93.7	24.6
	PTA	px spread	59.3	77.8	79.3	74.8	94.3	64.8	44.0	58.0	60.4	75.1
	Change, %			(23.8)	(25.2)	(20.7)	(37.1)	(8.5)	34.7	2.1	(1.9)	(21.1)

자료 : Ciscchem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	11/13	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA		
											17E	18E	17E	18E	17E	18E	
Petrochemical																	
DowDuPont	USD	70.5	0.7	0.3	(1.4)	11.4	13.6	31.3	23.1	164,876	20.7	17.2	1.6	1.8	11.5	10.0	
Eastman	USD	91.4	0.7	1.2	3.1	9.9	18.0	21.6	21.6	13,142	13.0	11.3	2.6	2.4	9.3	8.6	
BASF	EUR	93.8	(0.4)	(3.7)	5.5	17.3	4.7	16.0	6.2	100,438	15.3	15.3	2.5	2.4	8.2	8.0	
Akzo Nobel	EUR	78.0	(0.2)	0.0	(1.1)	2.7	2.9	32.7	31.4	22,918	19.0	18.2	3.3	3.2	10.2	9.8	
Arkema	EUR	105.0	(1.3)	(3.7)	0.5	12.2	8.6	21.9	13.0	9,287	14.9	13.7	2.0	1.8	6.8	6.5	
Lanxess	EUR	66.6	(0.7)	(4.7)	(1.0)	4.7	2.0	15.0	6.8	7,110	17.6	15.3	2.3	2.1	7.6	8.6	
Sumitomo Chemical	JPY	831	(1.0)	1.1	18.2	32.5	33.2	73.1	49.5	12,108	11.2	10.8	1.5	1.4	7.9	7.6	
Mitsubishi Chemical	JPY	1,191	(0.9)	(2.0)	6.1	27.8	34.8	75.6	57.1	15,789	9.7	9.6	1.4	1.3	6.5	6.4	
Shin-Etsu Chemical	JPY	12,310	(1.1)	(0.1)	20.9	29.0	23.9	49.4	35.8	46,816	24.0	21.1	2.3	2.1	10.8	9.4	
Asahi Kasei	JPY	1,487	(1.3)	8.4	9.7	15.8	33.8	53.5	45.9	18,357	16.0	15.7	1.7	1.5	7.9	7.7	
JSR	JPY	2,232	(1.8)	1.7	8.5	16.5	12.6	48.0	21.1	4,442	15.6	15.1	1.3	1.2	8.5	8.0	
Nitto Denko	JPY	11,215	(0.4)	(1.0)	18.1	14.4	20.3	44.6	25.0	17,151	21.1	19.3	2.6	2.4	9.5	8.9	
SABIC	SAR	100.0	0.1	(0.5)	1.2	1.6	3.5	16.2	9.3	79,965	14.8	14.0	1.8	1.7	7.5	7.2	
Yansab	SAR	57.0	0.7	2.6	(0.9)	4.5	4.1	21.2	4.6	8,547	14.3	13.4	2.4	2.3	9.1	8.8	
Formosa Plastics	TWD	93.0	1.0	1.3	(0.5)	1.1	4.6	9.4	4.3	19,616	13.5	14.2	1.8	1.8	19.6	19.4	
Formosa Fiber	TWD	94.2	0.9	2.6	0.3	3.0	3.1	(0.9)	(2.2)	18,294	12.0	12.8	1.7	1.6	10.4	10.6	
Nan Ya Plastics	TWD	74.7	0.1	0.1	0.7	(0.1)	6.4	15.5	4.9	19,630	14.3	14.7	1.7	1.7	15.0	15.4	
Sinopec Shanghai	CNY	6.52	1.2	1.4	3.8	(2.2)	3.2	8.7	1.2	9,279	12.7	12.1	2.5	2.2	6.9	6.9	
Sinopec Yizheng(Fiber)	CNY	3.02	(1.3)	(1.6)	(4.1)	(5.6)	(2.9)	(23.7)	(26.3)	5,837	#N/A	N/A	55.9	5.8	28.4	14.8	
Reliance	INR	875	(1.0)	(6.1)	(0.1)	13.2	29.6	74.7	61.7	86,954	16.3	13.5	1.8	1.6	11.3	9.4	
Industries Qatar	QAR	94.9	0.4	(0.1)	(3.0)	2.0	(9.4)	(6.1)	(19.2)	14,971	16.1	13.8	1.6	1.6	54.2	50.8	
PTT Chemical	THB	79.5	0.6	2.6	(2.2)	12.0	10.8	35.3	26.2	10,802	10.4	10.5	1.4	1.3	5.5	5.3	
Petronas	MYR	7.5	0.1	1.1	1.5	6.1	3.0	9.4	6.7	14,221	15.2	15.4	2.1	1.9	8.7	8.7	
LG화학	KRW	394,500	(3.0)	(3.5)	5.2	16.2	37.2	66.8	51.1	24,842	14.6	13.9	1.9	1.7	6.5	6.1	
롯데케미칼	KRW	356,000	(4.8)	(3.9)	(9.9)	(5.8)	1.1	14.7	(3.5)	10,885	5.3	5.3	1.1	0.9	3.6	3.2	
한화케미칼	KRW	29,900	(2.6)	(5.5)	(10.3)	(11.3)	8.3	24.6	21.1	4,396	4.9	5.4	0.8	0.7	6.5	6.5	
금호석유	KRW	73,200	0.8	(3.2)	9.1	0.3	(3.3)	0.5	(10.7)	1,989	12.8	12.0	1.3	1.2	9.5	8.5	
SKC	KRW	42,000	0.0	2.7	4.1	13.1	43.3	44.3	27.3	1,406	11.0	9.9	1.0	0.9	9.6	8.2	
국도화학	KRW	58,600	(0.3)	(3.8)	5.0	6.0	20.8	5.4	6.7	304	0.0	0.0	0.0	0.0	0.0	0.0	
효성	KRW	7,370	(4.2)	(5.4)	3.1	22.8	3.8	32.3	8.4	3,978	7.5	7.5	1.1	1.0	7.1	6.3	
Average			(0.6)	(0.7)	3.0	9.0	12.5	27.7	16.9								
Refinery																	
Valero	USD	80.7	(0.9)	(1.0)	3.3	22.0	21.5	29.2	18.1	35,300	16.4	12.9	1.8	1.7	7.1	6.1	
Conoco Phillips	USD	52.6	(0.8)	(2.0)	6.4	17.4	11.9	19.6	4.8	62,848	112.8	35.9	2.1	2.1	9.0	6.9	
Formosa Petrochemical	TWD	106.5	0.5	0.9	0.9	2.4	1.4	4.9	(4.9)	33,615	14.8	18.0	3.2	3.2	9.8	11.4	
Andeavor	USD	106.2	(1.0)	(4.9)	0.7	12.4	31.3	24.3	21.4	16,559	15.2	13.1	1.6	1.6	8.9	7.1	
Marathon Petroleum	USD	62.2	0.8	(0.2)	10.3	19.2	18.1	41.5	23.5	30,379	16.9	15.0	2.5	2.4	8.3	7.4	
Devon Energy	USD	39.7	(1.9)	(3.0)	10.5	25.4	4.7	(5.3)	(13.2)	20,836	22.5	18.2	2.9	2.5	9.4	8.4	
Hollyfrontier	USD	41.9	(0.5)	(0.5)	15.0	46.5	51.4	61.0	27.7	7,419	20.0	16.0	1.5	1.5	8.6	7.3	
Phillips 66	USD	93.3	(0.4)	(1.2)	(1.2)	11.8	17.0	13.5	8.0	47,289	20.6	15.0	2.1	2.1	10.4	8.6	
Murphy Oil	USD	29.0	(0.7)	(0.7)	12.9	13.3	8.9	5.6	(7.0)	4,996	#N/A	N/A	249.6	1.1	1.1	5.3	4.8
JX Holdings	JPY	648.8	1.7	6.3	16.1	25.6	23.3	58.2	31.2	19,569	9.9	9.1	1.0	0.9	7.8	7.3	
Idemitsu	JPY	3,565.0	0.0	3.8	13.5	35.1	(7.8)	48.8	14.8	6,526	8.0	8.0	1.0	0.9	9.0	8.6	
Nesteoil	EUR	48.4	0.8	(1.2)	23.6	39.2	28.6	33.0	32.6	14,474	15.6	15.6	2.9	2.7	9.0	9.5	
Ashland	USD	67.1	1.7	(1.9)	1.0	10.3	12.6	27.5	25.5	4,187	16.7	20.2	1.3	1.2	7.7	9.6	
Fuchs Petrolub	EUR	46.2	(1.2)	(4.6)	(8.3)	(1.9)	(5.6)	23.1	15.8	7,043	24.4	22.9	4.8	4.3	14.0	13.2	
SK이노베이션	KRW	203,000	(3.8)	(4.2)	(3.1)	18.0	17.3	27.3	38.6	16,744	8.0	7.7	1.0	0.9	5.0	4.5	
S-Oil	KRW	121,000	(4.0)	(5.1)	(8.3)	4.8	14.7	42.2	42.9	12,152	11.9	9.2	2.1	1.9	9.2	6.8	
GS	KRW	64,000	(3.5)	(2.7)	(4.8)	(11.8)	3.2	17.6	18.3	5,305	6.2	5.9	0.8	0.7	7.1	6.8	
Average			(0.8)	(1.3)	5.2	17.0	14.9	27.8	17.5								

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	11/13	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA		
											17E	18E	17E	18E	17E	18E	
E&P/Shale																	
Exxon Mobil	USD	83	(0.1)	(1.0)	0.6	6.0	0.4	(3.2)	(8.2)	351,214	23.4	20.8	2.0	2.0	10.0	9.0	
BP	GBP	507	0.0	(2.7)	3.3	13.2	10.2	16.4	(0.5)	131,662	22.6	17.3	1.4	1.4	6.5	5.8	
Shell	EUR	2,435	0.7	(0.9)	6.5	14.1	13.5	24.9	8.6	266,785	17.5	15.9	1.4	1.3	6.9	6.4	
Chevron	USD	117	0.0	0.2	(1.6)	7.3	10.6	9.9	(0.4)	222,664	29.5	23.5	1.5	1.5	8.3	7.2	
Total	EUR	48	(1.0)	(2.1)	3.9	11.3	(0.8)	12.1	(2.3)	140,193	13.5	12.9	1.3	1.2	6.2	5.6	
Sinopec	CNY	6	0.5	(1.3)	5.3	2.0	4.3	22.2	13.1	106,729	14.1	13.1	1.0	1.0	4.5	4.4	
Petrochina	CNY	8	0.1	0.2	5.3	5.4	10.5	13.5	5.7	219,571	52.8	32.3	1.3	1.2	6.8	6.3	
CNOOC	CNY	12	(1.7)	0.5	1.0	6.6	8.4	(7.3)	(9.8)	63,292	13.7	12.0	1.1	1.0	4.3	4.1	
Gazprom	RUB	133	0.6	5.9	5.1	14.0	0.6	(9.8)	(13.7)	53,119	4.7	4.2	0.3	0.2	3.9	3.5	
Rosneft	RUB	325	(1.3)	2.3	1.6	6.9	5.7	(5.0)	(19.3)	57,971	10.2	7.2	0.9	0.8	5.1	4.3	
Anadarko	USD	50	(1.7)	(3.1)	5.1	15.4	(2.7)	(17.7)	(28.0)	27,484	#N/A	N/A	2.0	1.9	7.7	6.8	
Petrobras	BRL	17	(0.5)	(4.5)	3.5	28.5	7.7	18.8	11.9	67,738	14.5	10.3	0.7	0.6	5.7	5.2	
Lukoil	USD	3,326	(0.6)	5.0	10.2	16.3	16.5	7.6	(3.6)	47,649	7.1	6.5	0.7	0.7	N/A	N/A	
Kinder	USD	17	(1.2)	(3.4)	(6.9)	(8.4)	(12.3)	(15.4)	(15.7)	47,497	27.1	25.0	1.1	1.1	11.0	10.6	
Statoil	NOK	169	0.1	1.3	5.7	16.4	12.6	24.0	6.9	68,516	16.8	17.9	1.8	1.7	3.6	3.5	
BHP	AUD	28	0.7	2.2	7.3	10.7	19.1	13.4	12.8	108,639	15.4	17.9	1.9	1.9	6.1	6.5	
PTT E&P	THB	94	0.0	2.2	1.4	10.0	0.3	16.1	(2.6)	11,255	14.8	13.0	0.9	0.9	3.5	3.2	
Petronas gas	MYR	17	(2.0)	2.0	(6.2)	(7.1)	(6.2)	(19.6)	(18.1)	8,234	19.5	18.2	2.8	2.6	11.1	10.3	
Chesapeake	USD	4	0.2	(0.7)	7.0	0.2	(26.3)	(23.6)	(40.9)	3,771	6.0	5.8	#N/A	N/A	7.6	6.6	
Noble Energy	USD	28	(2.1)	(5.1)	1.4	11.7	(12.7)	(23.8)	(27.7)	13,396	#N/A	N/A	983.2	1.4	1.4	8.1	7.5
Average		0	(0.5)	(0.2)	3.0	9.0	3.0	2.7	(6.6)								
PV																	
WACKER	EUR	134.9	(0.1)	(4.2)	12.6	33.9	33.9	71.7	36.4	8,202	25.7	22.7	2.2	2.1	7.6	7.1	
GCL-Poly	HKD	1.5	3.5	5.7	24.2	71.3	58.5	49.0	60.2	3,550	10.8	10.4	1.0	0.9	6.9	6.4	
SunPower	USD	8.7	(0.3)	(1.4)	24.6	(6.8)	21.4	33.4	31.2	1,210	#N/A	N/A	1.6	1.5	18.7	12.4	
Canadian Solar	USD	17.7	(0.3)	(5.5)	9.0	3.1	35.2	50.5	45.6	1,028	12.3	7.8	1.0	1.0	9.9	9.1	
JA Solar	USD	8.1	1.6	1.1	10.0	31.9	10.1	46.8	69.3	383	7.8	15.2	1.9	1.9	3.5	3.3	
Yingli	USD	2.2	(1.8)	1.4	(4.7)	(2.6)	(9.8)	(39.5)	(15.0)	40	#N/A	N/A	#N/A	N/A	#N/A	N/A	
First Solar	USD	61.6	(0.0)	0.2	29.3	29.5	69.2	92.0	91.9	6,430	24.7	52.6	1.0	1.2	11.6	12.6	
한화큐셀	USD	8.4	1.0	0.7	5.2	14.8	27.1	(10.8)	3.4	703	93.8	38.4	#N/A	N/A	8.9	8.6	
OCI	KRW	122,500	(0.8)	(3.5)	23.4	36.9	47.8	50.1	55.7	2,606	13.9	15.3	0.9	0.8	7.6	6.4	
웅진에너지	KRW	8,290	6.0	7.4	17.4	6.4	58.2	69.2	75.1	185	N/A	0.9	0.8	7.6	6.4	7.5	
신성솔라에너지	KRW	1,765	(0.3)	0.9	3.8	(17.1)	(8.1)	(26.0)	(20.1)	272	N/A	0.8	7.6	6.4	7.5	7.5	
Average			0.8	0.2	14.1	18.3	31.2	35.1	39.4								
Gas Company																	
Towngas China	HKD	6.3	(1.6)	(3.2)	12.5	20.7	31.0	59.1	54.4	2,236	14.5	13.1	1.2	1.1	12.9	11.9	
Kulun	HKD	6.8	(3.9)	(3.9)	(7.1)	(7.8)	(2.8)	20.6	17.9	7,077	10.9	9.9	1.2	1.1	5.6	5.4	
Beijing Enterprise	HKD	45.1	(1.9)	(1.0)	(1.5)	14.3	20.6	31.0	22.9	7,287	8.6	7.9	0.9	0.8	15.8	14.6	
ENN Energy	HKD	57.3	(0.3)	(1.5)	(2.5)	12.0	38.1	66.6	79.6	7,951	15.3	13.4	3.0	2.5	9.3	8.3	
China Resources Gas	HKD	28.7	(0.9)	1.8	0.2	1.1	15.3	23.0	31.4	8,167	16.3	14.6	3.1	2.7	9.6	8.7	
China Gas Holdings	HKD	24.0	(1.2)	1.7	(3.2)	27.5	96.7	118.2	128.1	15,284	20.6	17.4	4.8	4.0	16.2	13.8	
Shenzen Gas	HKD	14.8	1.0	(1.3)	(5.0)	8.7	12.0	25.7	30.8	3,842	12.1	11.6	1.4	1.3	9.0	8.4	
Shann Xi	CNY	8.2	(0.4)	(1.0)	(3.9)	(3.5)	(0.1)	(18.3)	(14.4)	1,374	17.4	15.6	1.7	1.5	#N/A	N/A	
Suntien	HKD	2.0	1.0	(4.7)	(3.3)	22.3	27.7	89.7	103.0	967	7.6	6.6	0.7	0.7	9.9	8.5	
China Oil & Gas	HKD	0.5	0.0	0.0	(7.0)	0.0	(5.4)	(8.6)	(13.1)	396	9.1	7.9	0.9	0.8	6.2	5.6	
Average			(0.8)	(1.3)	(2.1)	9.5	23.3	40.7	44.1								
EV																	
LG화학	KRW	394,500	(3.0)	(3.5)	5.2	16.2	37.2	66.8	51.1	24,842	13.7	13.3	1.9	1.7	6.6	6.4	
삼성SDI	KRW	212,500	(3.8)	(2.3)	(1.6)	25.7	38.9	130.2	95.0	13,035	21.6	13.4	1.3	1.2	23.2	14.6	
Panasonic	JPY	1714.0	(2.0)	0.9	6.6	16.2	27.1	71.2	44.1	37,005	22.4	17.0	2.3	2.1	7.3	6.3	
GS Yuasa	JPY	571.0	(0.2)	0.5	(3.1)	3.4	11.5	28.0	17.5	2,078	17.3	15.7	1.4	1.3	7.8	7.2	
NEC	JPY	3005.0	(2.0)	0.0	(2.0)	0.5	6.9	4.0	(3.1)	6,889	16.3	16.7	0.9	0.9	7.1	6.6	
BYD Auto	CNY	70.1	3.6	6.9	3.5	46.5	46.0	27.1	41.1	27,598	40.3	28.1	3.5	3.1	16.7	13.4	
Tesla Motors	USD	315.4	4.1	4.2	(11.3)	(11.9)	(2.9)	67.3	47.6	53,008	#N/A	N/A	10.9	10.5	140.5	32.0	
Kandi Technologies	USD	7.8	9.2	6.9	(6.1)	113.8	91.4	98.7	58.2	372	#N/A	N/A	#N/A	N/A	#N/A	N/A	
Average			0.7	1.7	(1.1)	26.3	32.0	61.7	43.9								

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임