

1. News Summary (3 page)

2018년 1월 19일

News	
WTI comment	제자리걸음...WTI 63달러선
Headline	탈원전 · 탈석탄 정책에 LNG 직도입 활성화될까
News 1.	Gaslog, LNG운송분야 영업이익률 50% 수준 근접
News 2.	-
News 3.	-
News 4.	-

Conclusion	
카타르産보다는 미국産 LNG 도입량이 증가해 원가 하락 효과 기대됨	
Power of Siberia 1이 가동되며 중국의 LNG 수요 증가는 잦아들 전망	
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2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	64.0	(0.0)	0.2	11.3	24.7	24.5
Dubai	\$/bbl	66.4	0.2	(0.1)	8.2	19.7	25.2
Gasoline	\$/bbl	78.9	0.8	0.1	5.9	12.2	14.6
Diesel	\$/bbl	80.6	(0.2)	0.5	7.1	18.2	25.8
Complex margin	\$/bbl	7.0	0.2	0.3	(0.8)	(1.0)	(0.8)
1M lagging	\$/bbl	13.2	1.4	(0.5)	4.2	3.9	5.2
Petrochemical			%	%	%	%	%
Naphtha	\$/t	610	0.7	1.1	3.8	14.4	19.5
Butadiene	\$/t	1,190	0.0	0.8	8.2	0.8	(59.0)
HDPE	\$/t	1,310	0.0	1.6	1.6	8.3	14.4
MEG	\$/t	1,010	(1.0)	0.5	10.5	12.2	10.4
PX	\$/t	941	0.6	0.0	6.8	12.2	9.8
SM	\$/t	1,338	(0.3)	(1.5)	3.4	12.2	4.4
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	3.19	(1.3)	3.4	23.0	(1.2)	(12.7)
Natural rubber	\$/t	1,520	0.7	2.0	7.8	9.4	(31.5)
Cotton	C/lbs	82.6	0.6	(0.0)	6.0	22.8	13.7

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	01/15	\$/t	1,323	(0.6)	6.2	9.5	31.6
Propylene	01/15	\$/t	953	2.4	7.0	17.6	4.1
Benzene	01/15	\$/t	908	1.1	(1.4)	15.6	(2.7)
Toluene	01/15	\$/t	745	1.4	1.4	6.4	2.8
Xylene	01/15	\$/t	740	1.4	4.2	13.4	3.5
PP	01/15	\$/t	1,198	0.8	3.5	2.6	14.9
PVC	01/15	\$/t	910	4.0	5.2	(3.4)	1.1
ABS	01/15	\$/t	2,000	(2.4)	(3.4)	1.5	13.6
SBR	01/15	\$/t	1,650	0.0	0.0	(5.7)	(44.1)
SM	01/15	\$/t	1,363	1.5	2.3	13.1	6.9
BPA	01/15	\$/t	1,933	(9.2)	3.2	14.7	24.1
Caustic	01/15	\$/t	609	(1.0)	(1.9)	21.1	45.9
2-EH	01/15	\$/t	1,050	1.4	1.4	5.0	18.0
Caprolactam	01/15	\$/t	2,020	0.0	(1.9)	2.5	(0.5)
Solar				%	%	%	%
Polysilicon	01/17	\$/kg	17.7	(0.4)	1.5	6.2	10.7
Module	01/17	\$/W	0.31	(0.3)	(0.6)	(2.5)	(12.9)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	87.4	(0.6)	0.6	5.4	5.6	1.3
Shell	EUR	2,520	(0.1)	(2.0)	4.0	9.6	12.4
Petrochina	CNY	8.73	(1.0)	(0.3)	10.8	5.8	1.9
Gazprom	RUB	150.4	1.1	4.0	12.0	18.7	(1.6)
Petrobras	BRL	18.2	(0.8)	5.6	19.7	12.7	15.4
Refinery							
Phillips66	USD	105.3	(0.8)	2.9	5.3	16.7	25.2
Valero	USD	96.5	(1.1)	2.0	8.5	24.3	44.5
JX	JPY	761.1	0.4	(2.9)	10.9	32.3	47.2
Neste Oil	EUR	57.9	2.8	2.6	10.4	44.6	74.1

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	96.2	2.6	2.5	1.0	6.5	7.0
DowDuPont	USD	76.0	0.3	1.1	6.5	7.4	31.7
SABIC	SAR	106.4	(0.8)	4.8	4.6	8.3	13.7
Formosa Pla.	TWD	101.5	(0.5)	0.5	7.2	9.1	15.9
Shin-Etsu	JPY	12,360	1.3	3.3	4.7	16.9	29.1
Renewable							
Wacker	EUR	173.4	3.0	3.6	7.1	42.3	59.9
First Solar	USD	71.09	(1.3)	(6.8)	0.7	51.4	106.6
GCL-Poly	HKD	1.39	0.7	(4.8)	12.1	12.1	40.4
Tesla Motors	USD	344.6	(0.7)	2.0	1.7	(4.2)	44.6

4. Coverage Summary

	01/18	1D	1W	1M	3M	6M	12M
KOSPI	2,516	0.0	1.1	1.5	1.1	3.5	21.4
KOSPI확화	6,162	(0.8)	(1.5)	1.8	5.0	10.1	16.8
LG화학	417,000	(0.8)	(1.1)	4.6	8.6	30.9	49.7
롯데케미칼	382,500	(1.8)	(0.1)	6.0	(4.1)	7.1	(2.8)
한화케미칼	33,300	(1.6)	1.4	11.7	0.5	1.2	20.2
금호석유화학	100,000	(1.5)	(7.8)	4.1	47.1	37.4	8.8
KCC	397,500	(0.9)	(1.7)	4.5	1.9	(7.7)	12.4
OCI	165,000	(3.5)	(5.7)	26.0	54.9	88.6	86.0
SKC	43,800	0.0	(1.7)	2.8	12.5	14.2	38.0
SK이노베이션	192,500	(2.8)	(4.0)	(4.9)	(6.6)	14.9	18.8
S-Oil	110,500	(2.6)	(4.7)	(10.9)	(16.3)	6.8	28.8
GS	63,600	(3.2)	(0.6)	3.4	(6.9)	(11.9)	16.7
SK가스	96,800	0.7	2.8	5.0	(0.8)	(13.2)	(10.8)
포스코대우	20,000	(0.7)	(3.1)	9.6	0.5	(15.6)	(29.2)
LG상사	29,000	(0.7)	(4.6)	6.6	3.8	(4.6)	(11.2)
한국전력	35,650	(1.8)	(2.9)	(8.5)	(13.3)	(16.8)	(19.3)
한국가스공사	47,400	(1.5)	6.0	10.0	12.6	(3.8)	(0.3)

투자의견	TP	%	P/E	P/B
* 추정치는 12M fwd 기준임				
* 모든 coverage 업체의 실적은 연결기준임				
매수	450,000	7.9	13.92	1.97
매수	410,000	7.2	10.44	1.15
매수	39,000	17.1	12.71	0.86
매수	150,000	50.0	12.20	1.60
매수	450,000	13.2	14.72	0.59
매수	180,000	9.1	15.50	1.16
매수	55,000	25.6	11.02	1.08
매수	230,000	19.5	10.19	0.97
매수	140,000	26.7	12.64	2.01
매수	80,000	25.8	6.21	0.82
매수	130,000	34.3	8.39	0.65
매수	25,000	25.0	9.12	0.81
매수	38,000	31.0	9.77	0.83
매수	50,000	40.3	7.66	0.28
매수	60,000	26.6	8.95	0.70

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

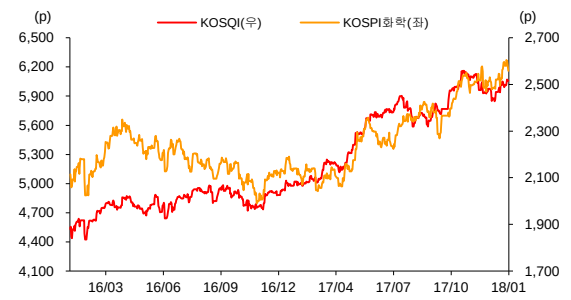
* 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.

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

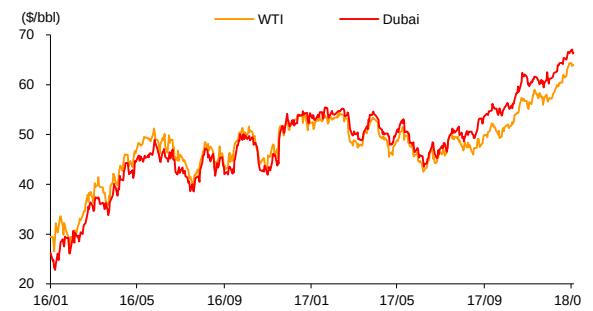
* 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

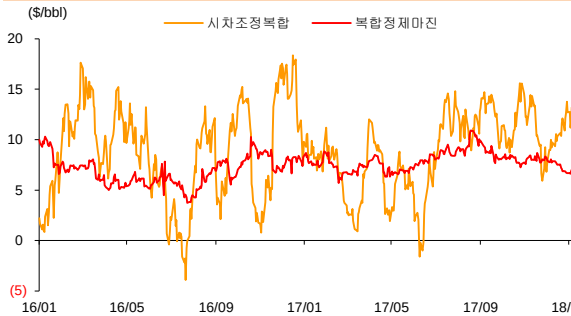
KOSPI/KOSPI화학



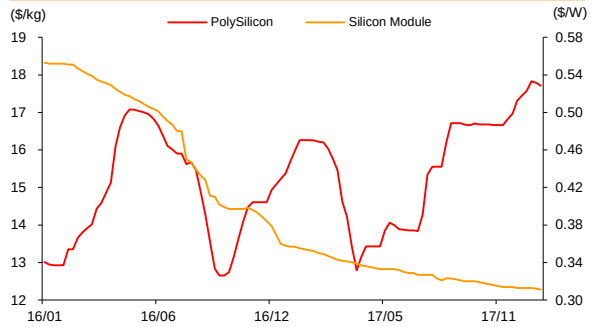
WTI/Dubai



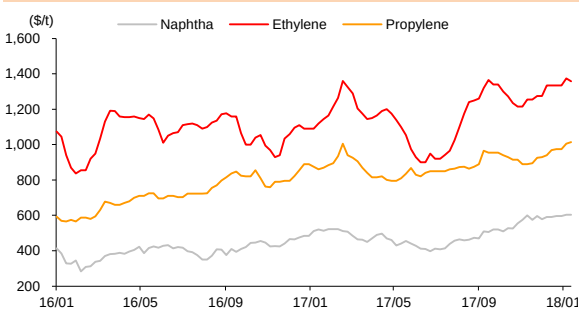
Complex & 1M lagging margin



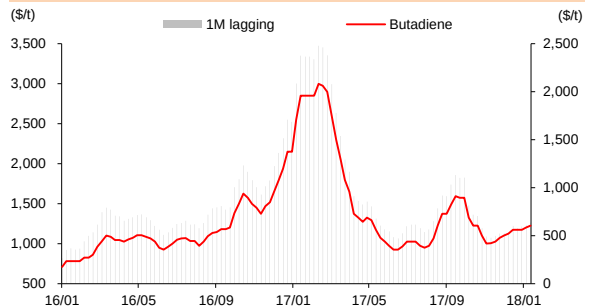
Polysilicon & Module prices



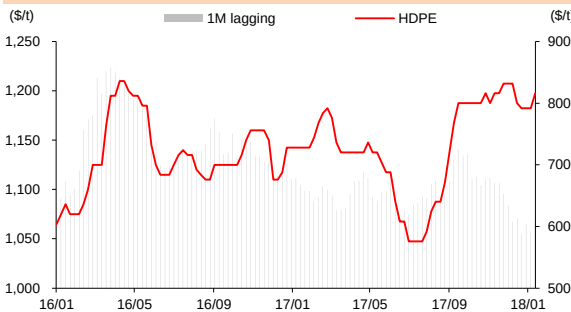
Naphtha/Ethylene/Propylene prices



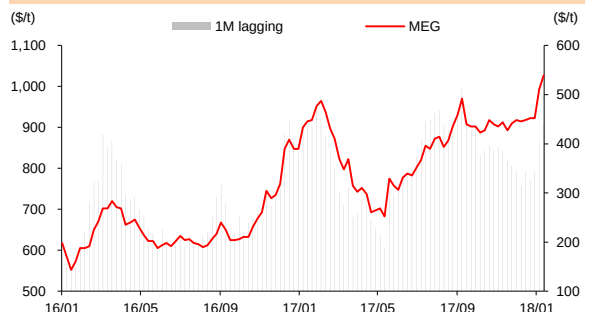
Butadiene price & 1M lagging naphtha spread



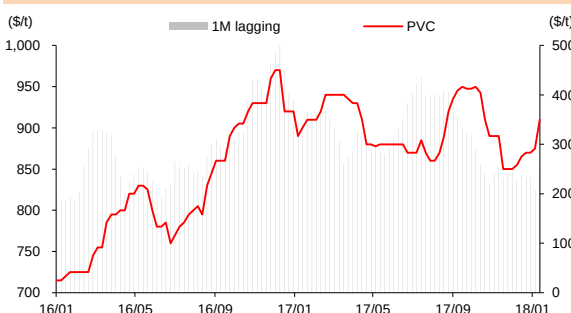
HDPE price & 1M lagging naphtha spread



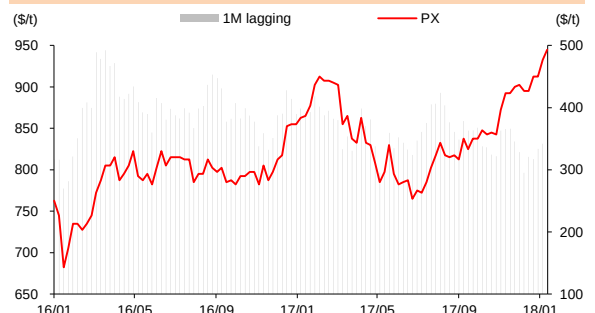
MEG price & 1M lagging naphtha spread



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: 건설경제)
제목	탈원전 · 탈석탄 정책에 LNG 직도입 활성화될까
결론	카타르産보다는 미국産 LNG 도입량이 증가해 원가 하락 효과 기대됨
세부	1) 정부는 민간의 가스직도입을 통한 가격경쟁이 긍정적이었다고 판단 2) LNG 수입은 KOGAS가 전담하지만 발전 · 산업용에 한해 직도입을 허용 3) 애경원, "국내 가스 물량은 '16년 실적 대비 1168만t이 더 필요할 것" 4) 발전업계는 LNG 직도입 경쟁에 따라 에너지 원가 하락 효과 발생 기대 5) 카타르産보다는 미국産 LNG 도입량이 증가해 원가 하락 효과 기대됨

Issue 1	(출처: NSP통신)
제목	Gaslog, LNG운송분야 영업이익률 50% 수준 근접
결론	Power of Siberia 1이 가동되며 중국의 LNG 수요 증가는 잦아들 전망
세부	1) 지난 1년간 LNG선 Spot 용선료는 70%이상 상승해 7.5만\$/day 상회 2) Gaslog의 4Q17 OPM은 41.4%, Teekay LNG Partners는 90% 상회 예상 3) OPM을 고려해 역산하면 LNG선의 하루 운항 B.E.P는 약 4만\$/day 수준 4) 미국과 호주 LNG수출이 늘고 있으며 중국과 동남아 수입이 늘고 있음 5) Power of Siberia 1이 가동되며 중국의 LNG 수요 증가는 잦아들 전망

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	제자리걸음...WTI 63달러선
상승	미국의 원유재고는 큰 폭으로 감소함
요인	
하락	OPEC은 지난해 12월 원유생산량이 증가했다고 밝힘
요인	

Issue 2
제목
결론
세부
1)
2)
3)
4)
5)

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	2016avg.	2017avg.	2018acc.
F/X	USD/EUR	0.817	0.821	0.831	0.849	0.848	0.866	0.941	0.833	0.904	0.887	0.826
	Change, %		(0.4)	(1.7)	(3.7)	(3.7)	(5.6)	(13.1)	(1.9)	(9.6)	(7.8)	(1.1)
	USD/JPY	111.1	111.3	111.3	112.6	112.9	112.1	114.7	112.6	108.8	112.1	111.9
	Change, %		(0.2)	(0.1)	(1.3)	(1.6)	(0.9)	(3.1)	(1.3)	2.2	(0.9)	(0.7)
	USD/KRW	1,070.5	1,069.1	1,072.2	1,088.6	1,130.1	1,123.3	1,166.6	1,066.7	1,160.5	1,130.9	1,065.8
	Change, %		0.1	(0.2)	(1.7)	(5.3)	(4.7)	(8.2)	0.4	(7.8)	(5.3)	0.4
Agriculture	Corn	351.5	353.0	348.8	347.0	348.5	377.0	365.0	350.8	358.5	359.4	349.7
	Change, %		(0.4)	0.8	1.3	0.9	(6.8)	(3.7)	0.2	(2.0)	(2.2)	0.5
	Soybean	973.0	968.8	940.5	961.5	984.3	989.5	1,075.0	951.8	987.5	975.9	956.3
	Change, %		0.4	3.5	1.2	(1.1)	(1.7)	(9.5)	2.2	(1.5)	(0.3)	1.7
	Wheat	425.3	421.5	433.3	420.5	430.0	503.8	431.0	427.0	436.4	436.0	427.4
	Change, %		0.9	(1.8)	1.1	(1.1)	(15.6)	(1.3)	(0.4)	(2.6)	(2.5)	(0.5)
	Rice	12.1	12.2	11.5	11.7	11.9	11.9	9.9	11.7	10.3	11.1	11.7
	Change, %		(0.0)	5.4	3.7	1.7	2.4	22.4	4.0	17.4	9.8	3.8
	Oats	259.8	254.3	250.5	251.5	267.8	291.8	257.0	241.0	196.3	252.3	249.6
	Change, %		2.2	3.7	3.3	(3.0)	(11.0)	1.1	7.8	32.3	3.0	4.1
	Palm Oil	2,465.0	2,478.0	2,509.0	2,468.0	2,734.0	2,582.0	3,243.0	2,444.0	2,653.8	2,787.3	2,514.0
	Change, %		(0.5)	(1.8)	(0.1)	(9.8)	(4.5)	(24.0)	0.9	(7.1)	(11.6)	(1.9)
	Cocoa	1,984.0	1,985.0	1,928.0	1,922.0	2,067.0	1,911.0	2,233.0	1,892.0	2,854.0	2,005.2	1,923.6
	Change, %		(0.1)	2.9	3.2	(4.0)	3.8	(11.2)	4.9	(30.5)	(1.1)	3.1
MYR/mt	Cotton	82.6	82.1	82.7	75.2	67.6	68.9	72.3	78.6	65.6	73.5	80.1
	Change, %		0.6	(0.0)	9.9	22.2	20.0	14.4	5.1	26.0	12.4	3.2
	Sugar	13.1	13.4	14.2	13.8	14.1	14.1	21.0	15.2	18.2	15.8	14.4
	Change, %		(2.5)	(7.8)	(4.9)	(7.1)	(7.2)	(37.7)	(13.7)	(27.9)	(17.3)	(9.5)
	Coffee	121.1	123.1	122.8	118.6	124.3	131.9	149.2	126.2	136.1	133.0	124.8
	Change, %		(1.6)	(1.4)	2.2	(2.6)	(8.2)	(18.8)	(4.0)	(11.0)	(8.9)	(3.0)
Energy	WTI	64.0	64.0	63.8	57.2	52.0	46.4	51.1	60.4	43.4	51.0	62.8
	Change, %		(0.0)	0.2	11.9	22.9	37.8	25.2	5.8	47.4	25.5	1.8
	Brent	69.1	69.4	69.3	63.4	58.2	48.8	53.9	66.9	45.1	54.9	68.6
	Change, %		(0.4)	(0.2)	9.0	18.9	41.5	28.2	3.4	53.4	26.0	0.7
	Natural Gas	3.2	3.2	3.1	2.7	2.9	3.1	3.3	3.0	2.6	3.0	3.0
	Change, %		(1.3)	3.4	16.2	11.7	3.3	(3.4)	8.0	24.9	5.5	5.2
	Ethanol	1.3	1.4	1.3	1.3	1.4	1.5	1.5	1.3	1.5	1.5	1.3
	Change, %		(1.3)	(0.4)	5.7	(5.0)	(13.2)	(10.8)	1.6	(11.5)	(10.4)	0.4
	RBOB Gasoline	188.4	185.8	183.7	167.3	164.3	157.9	154.9	179.9	140.0	162.9	182.5
	Change, %		1.4	2.5	12.6	14.6	19.3	21.6	4.7	34.6	15.6	3.2
	Coal	106.8	106.6	106.1	100.2	97.1	85.6	83.9	100.8	65.5	88.2	105.5
	Change, %		0.2	0.6	6.6	9.9	24.8	27.3	5.9	63.1	21.0	1.2
Metal	Gold	1,327.1	1,327.2	1,322.4	1,262.4	1,281.1	1,244.1	1,204.2	1,302.6	1,248.5	1,258.6	1,324.2
	Change, %		(0.0)	0.4	5.1	3.6	6.7	10.2	1.9	6.3	5.4	0.2
	Silver	17.0	17.0	17.0	16.1	17.0	16.3	17.1	16.9	17.1	17.1	17.1
	Change, %		(0.2)	(0.2)	5.0	(0.2)	4.1	(0.6)	0.1	(0.9)	(0.7)	(0.9)
	Copper	7,076.0	7,034.0	7,140.5	6,905.0	6,990.0	6,007.0	5,769.0	7,247.0	4,872.0	6,199.4	7,130.3
	Change, %		0.6	(0.9)	2.5	1.2	17.8	22.7	(2.4)	45.2	14.1	(0.8)
	Nickel	795.5	790.2	802.8	755.4	754.8	624.5	693.1	809.1	646.4	680.2	801.4
	Change, %		0.7	(0.9)	5.3	5.4	27.4	14.8	(1.7)	23.1	16.9	(0.7)
	Zinc	3,376.0	3,367.5	3,386.0	3,196.0	3,121.0	2,794.0	2,776.0	3,319.0	2,097.5	2,888.5	3,366.3
	Change, %		0.3	(0.3)	5.6	8.2	20.8	21.6	1.7	61.0	16.9	0.3
	Lead	2,616.3	2,552.0	2,549.3	2,584.5	2,515.8	2,259.5	2,303.3	2,482.8	1,868.3	2,315.7	2,559.4
	Change, %		2.5	2.6	1.2	4.0	15.8	13.6	5.4	40.0	13.0	2.2
	Aluminum	14,540.0	14,545.0	14,995.0	14,400.0	16,120.0	14,305.0	13,270.0	15,020.0	12,373.5	14,556.6	14,883.4
	Change, %		(0.0)	(3.0)	1.0	(9.8)	1.6	9.6	(3.2)	17.5	(0.1)	(2.3)
	Cobalt	76,869.0	76,860.0	75,092.0	72,205.0	60,286.0	58,500.0	35,250.0	75,205.0	25,480.1	55,906.9	75,629.7
	Change, %		0.0	2.4	6.5	27.5	31.4	118.1	2.2	201.7	37.5	1.6
	HR Coil	675.0	675.0	666.0	635.0	590.0	620.0	620.0	662.0	519.3	620.1	666.5
	Change, %		0.0	1.4	6.3	14.4	8.9	8.9	2.0	30.0	8.9	1.3
	Scrap	389.0	385.0	384.0	360.0	330.0	357.0	303.0	367.0	275.7	344.7	376.0
	Change, %		1.0	1.3	8.1	17.9	9.0	28.4	6.0	41.1	12.8	3.5

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		01/18	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	WTI	64.0	64.0	63.8	57.5	51.3	46.8	51.4	53.7	43.4	50.9	62.9
	Change, %		(0.0)	0.2	11.3	24.7	36.7	24.5	19.0	47.5	25.6	1.7
	Dubai	66.4	66.3	66.5	61.4	55.5	48.3	53.0	53.8	41.3	53.1	65.8
	Change, %		0.2	(0.1)	8.2	19.7	37.4	25.2	23.4	60.8	25.1	0.9
Crude Oil	Gasoline(휘발유)	78.9	78.3	78.9	74.5	70.3	63.3	68.9	69.8	56.3	68.0	77.7
Product	Change, %		0.8	0.1	5.9	12.2	24.6	14.6	13.0	40.3	16.1	1.5
	Kerosene(등유)	80.8	81.2	80.9	75.3	67.8	60.9	64.3	66.4	52.9	65.2	80.3
	Change, %		(0.5)	(0.1)	7.3	19.1	32.6	25.6	21.6	52.7	23.8	0.5
	Diesel(경유)	80.6	80.8	80.2	75.3	68.2	62.0	64.1	65.5	52.1	65.6	80.0
	Change, %		(0.2)	0.5	7.1	18.2	30.0	25.8	23.1	54.7	22.9	0.8
	Bunker-C	59.0	58.2	58.8	56.6	51.8	47.2	50.0	52.1	35.5	49.7	58.5
	Change, %		1.4	0.4	4.3	14.0	25.2	18.0	13.3	66.1	18.8	0.9
	Naphtha	66.7	66.1	66.4	64.2	57.4	46.4	55.1	53.5	42.6	53.7	66.7
	Change, %		0.9	0.5	3.9	16.3	43.9	21.0	24.8	56.6	24.1	(0.0)
Dubai	Gasoline(휘발유)	12.5	12.0	12.4	13.1	14.8	15.0	15.8	16.0	14.9	14.9	11.9
Spread	Change		0.5	0.1	(0.6)	(2.3)	(2.5)	(3.3)	(3.5)	(2.4)	(2.4)	0.6
	Kerosene(등유)	14.4	14.9	14.4	13.9	12.3	12.6	11.3	12.6	11.6	12.1	14.5
	Change		(0.6)	(0.0)	0.4	2.0	1.8	3.1	1.7	2.8	2.2	(0.1)
	Diesel(경유)	14.2	14.6	13.7	13.9	12.7	13.7	11.1	11.7	10.8	12.5	14.1
	Change		(0.3)	0.5	0.3	1.5	0.5	3.1	2.5	3.4	1.7	0.1
	Bunker-C	(7.4)	(8.1)	(7.8)	(4.8)	(3.7)	(1.2)	(3.0)	(1.8)	(5.8)	(3.4)	(7.4)
	Change		0.7	0.3	(2.6)	(3.7)	(6.2)	(4.4)	(5.6)	(1.6)	(4.0)	(0.1)
	Naphtha	0.3	(0.2)	(0.2)	2.8	1.8	(2.0)	2.1	(0.4)	1.3	0.6	0.9
	Change		0.5	0.4	(2.5)	(1.6)	2.3	(1.8)	0.7	(1.0)	(0.4)	(0.6)
Refining	Simple(단순)	1.3	1.1	1.0	2.7	3.1	4.5	3.1	3.8	1.9	3.2	1.3
Margin	Change		0.3	0.3	(1.4)	(1.8)	(3.2)	(1.8)	(2.5)	(0.6)	(1.8)	0.0
	Complex(복합)	7.0	6.9	6.7	7.9	8.0	8.8	7.8	8.3	7.0	8.0	6.9
	Change		0.2	0.3	(0.8)	(1.0)	(1.8)	(0.8)	(1.2)	0.1	(1.0)	0.1
	Complex(lagging)	13.2	11.8	13.8	9.0	9.4	11.5	8.0	18.0	8.5	8.9	12.0
	Change		1.4	(0.5)	4.2	3.9	1.7	5.2	(4.7)	4.7	4.3	1.2

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			01/18	01/17	01/16	01/15	01/12	01/11	01/10	01/09	01/08	01/05
Spot Price	Naphtha	CFR Japan	610.3	605.8	608.8	609.3	604.0	603.8	614.8	608.3	602.5	604.5
	Ethylene	CFR SE Asia	1,290.0	1,290.0	1,290.0	1,290.0	1,290.0	1,310.0	1,310.0	1,295.0	1,295.0	1,295.0
	Propylene	FOB Korea	991.0	987.0	985.0	985.0	985.0	985.0	984.0	982.0	975.0	975.0
	Butadiene	FOB Korea	1,190.0	1,190.0	1,190.0	1,190.0	1,190.0	1,180.0	1,180.0	1,180.0	1,180.0	1,180.0
	HDPE	CFR FE Asia	1,310.0	1,310.0	1,310.0	1,300.0	1,290.0	1,290.0	1,290.0	1,290.0	1,290.0	1,280.0
	LDPE	CFR FE Asia	1,230.0	1,230.0	1,230.0	1,220.0	1,210.0	1,210.0	1,210.0	1,210.0	1,200.0	1,190.0
	LLDPE	CFR FE Asia	1,190.0	1,190.0	1,190.0	1,185.0	1,180.0	1,180.0	1,180.0	1,170.0	1,160.0	1,155.0
	MEG	CFR China	1,010.0	1,020.0	1,025.0	1,035.0	1,025.0	1,005.0	1,014.0	1,014.0	1,010.0	988.0
	PP	CFR FE Asia	1,200.0	1,200.0	1,190.0	1,210.0	1,195.0	1,190.0	1,185.0	1,185.0	1,185.0	1,180.0
	PX	CFR China	940.7	935.2	939.3	942.0	936.3	940.3	940.3	937.3	931.7	925.2
	PTA	CFR China	730.0	733.0	735.0	735.0	735.0	735.0	735.0	735.0	732.0	730.0
	Benzene	FOB Korea	943.7	915.0	909.3	904.7	900.0	890.0	881.0	878.0	877.0	886.0
	Toluene	FOB Korea	743.5	736.5	741.0	739.0	732.0	730.0	725.0	715.0	713.0	713.0
	Xylene	FOB Korea	754.5	755.5	761.5	755.0	744.0	734.0	744.0	743.0	738.0	740.0
	SM	FOB Korea	1,337.5	1,341.0	1,345.0	1,358.0	1,364.0	1,358.0	1,330.0	1,322.0	1,324.0	1,316.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	Naphtha	CFR Japan	603.5	604.0	590.5	527.0	506.5	520.0	484.5	399.5	493.5	603.8
	Change, %			(0.1)	2.2	14.5	19.2	16.1	24.6	51.1	22.3	(0.0)
	Ethylene	CFR SE Asia	1,322.5	1,330.0	1,245.0	1,207.5	1,250.0	1,005.0	990.0	1,040.9	1,090.9	1,326.3
	Change, %			(0.6)	6.2	9.5	5.8	31.6	33.6	27.1	21.2	(0.3)
	Propylene	CFR SE Asia	952.5	930.0	890.0	810.0	860.0	915.0	815.0	705.7	823.6	1,010.0
	Change, %			2.4	7.0	17.6	10.8	4.1	16.9	35.0	15.7	(5.7)
	Butadiene	CFR SE Asia	1,175.0	1,150.0	1,125.0	1,175.0	1,545.0	2,800.0	2,100.0	1,116.8	1,481.1	1,162.5
	Change, %			2.2	4.4	0.0	(23.9)	(58.0)	(44.0)	5.2	(20.7)	1.1
	Benzene	CFR SE Asia	907.5	897.5	920.0	785.0	795.0	932.5	822.5	646.7	838.8	902.5
	Change, %			1.1	(1.4)	15.6	14.2	(2.7)	10.3	40.3	8.2	0.6
Spread	Toluene	CFR SE Asia	745.0	735.0	735.0	700.0	700.0	725.0	690.0	630.5	689.5	740.0
	Change, %			1.4	1.4	6.4	6.4	2.8	8.0	18.2	8.1	0.7
	Xylene	CFR SE Asia	740.0	730.0	710.0	652.5	657.5	715.0	675.0	627.7	668.8	735.0
	Change, %			1.4	4.2	13.4	12.5	3.5	9.6	17.9	10.6	0.7
Spread	Ethylene	-Naphtha	719.0	726.0	654.5	680.5	743.5	485.0	505.5	641.4	597.4	722.5
	Change, %			(1.0)	9.9	5.7	(3.3)	48.2	42.2	12.1	20.4	(0.5)
	Propylene	-Naphtha	349.0	326.0	299.5	283.0	353.5	395.0	330.5	306.2	330.1	406.3
	Change, %			7.1	16.5	23.3	(1.3)	(11.6)	5.6	14.0	5.7	(14.1)
	Butadiene	-Naphtha	571.5	546.0	534.5	648.0	1,038.5	2,280.0	1,615.5	717.3	987.6	558.8
	Change, %			4.7	6.9	(11.8)	(45.0)	(74.9)	(64.6)	(20.3)	(42.1)	2.3
	Benzene	-Naphtha	304.0	293.5	329.5	258.0	288.5	412.5	338.0	247.2	345.3	298.8
	Change, %			3.6	(7.7)	17.8	5.4	(26.3)	(10.1)	23.0	(12.0)	1.8
	Toluene	-Naphtha	141.5	131.0	144.5	173.0	193.5	205.0	205.5	231.0	196.0	136.3
	Change, %			8.0	(2.1)	(18.2)	(26.9)	(31.0)	(31.1)	(38.7)	(27.8)	3.9
	Xylene	-Naphtha	136.5	126.0	119.5	125.5	151.0	195.0	190.5	228.2	175.3	131.3
	Change, %			8.3	14.2	8.8	(9.6)	(30.0)	(28.3)	(40.2)	(22.1)	4.0

자료 : Ciscem, Platts, Bloomberg, SK증권

참고 : Spread는 Polymer와 Naphtha의 가격차이임

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	HDPE	CFR SE Asia	1,197.5	1,182.5	1,187.5	1,187.5	1,187.5	1,142.5	1,142.5	1,134.6	1,142.5	1,190.0
	Change, %			1.3	0.8	0.8	0.8	4.8	4.8	5.5	4.8	0.6
	MEG	CFR SE Asia	1,027.5	992.5	917.5	892.5	907.5	915.0	847.5	660.8	850.6	1,010.0
	Change, %			3.5	12.0	15.1	13.2	12.3	21.2	55.5	20.8	1.7
	PVC	CFR SE Asia	910.0	875.0	865.0	942.5	950.0	900.0	920.0	823.4	899.9	892.5
	Change, %			4.0	5.2	(3.4)	(4.2)	1.1	(1.1)	10.5	1.1	2.0
	PP	CFR SE Asia	1,197.5	1,187.5	1,157.5	1,167.5	1,167.5	1,042.5	1,032.5	978.4	1,099.6	1,192.5
	Change, %			0.8	3.5	2.6	2.6	14.9	16.0	22.4	8.9	0.4
	2-EH	CFR Korea	1,050.0	1,035.0	1,035.0	1,000.0	990.0	890.0	865.0	772.4	970.0	1,042.5
	Change, %			1.4	1.4	5.0	6.1	18.0	21.4	35.9	8.2	0.7
	ABS	CFR SE Asia	2,000.0	2,050.0	2,070.0	1,970.0	2,070.0	1,760.0	1,635.0	1,347.1	1,844.7	2,025.0
	Change, %			(2.4)	(3.4)	1.5	(3.4)	13.6	22.3	48.5	8.4	(1.2)
	SBR	CFR SE Asia	1,650.0	1,650.0	1,650.0	1,750.0	1,830.0	2,950.0	2,000.0	1,483.0	1,980.5	1,650.0
	Change, %			0.0	0.0	(5.7)	(9.8)	(44.1)	(17.5)	11.3	(16.7)	0.0
	SM	CFR SE Asia	1,362.5	1,342.5	1,332.5	1,205.0	1,357.5	1,275.0	1,205.0	1,064.6	1,253.8	1,352.5
	Change, %			1.5	2.3	13.1	0.4	6.9	13.1	28.0	8.7	0.7
	Caustic	FOB NEA	609.0	615.0	621.0	503.0	480.0	417.5	422.5	316.6	491.2	612.0
	Change, %			(1.0)	(1.9)	21.1	26.9	45.9	44.1	92.4	24.0	(0.5)
	PX	CFR SE Asia	945.0	932.5	895.0	842.5	825.0	865.0	855.0	790.4	844.4	938.8
	Change, %			1.3	5.6	12.2	14.5	9.2	10.5	19.6	11.9	0.7
	PO	CFR China	1,932.5	2,127.5	1,872.5	1,685.0	1,655.0	1,557.5	1,562.5	1,396.8	1,601.2	2,030.0
	Change, %			(9.2)	3.2	14.7	16.8	24.1	23.7	38.4	20.7	(4.8)
	Caprolactam	CFR SE Asia	2,020.0	2,020.0	2,060.0	1,970.0	1,780.0	2,030.0	1,850.0	1,344.9	1,936.4	2,020.0
	Change, %			0.0	(1.9)	2.5	13.5	(0.5)	9.2	50.2	4.3	0.0
	PTA	CFR SE Asia	750.0	737.5	727.5	667.5	672.5	660.0	642.5	613.7	667.8	743.8
	Change, %			1.7	3.1	12.4	11.5	13.6	16.7	22.2	12.3	0.8
Spread	HDPE		594.0	578.5	597.0	660.5	681.0	622.5	658.0	735.1	649.0	586.3
	Change, %			2.7	(0.5)	(10.1)	(12.8)	(4.6)	(9.7)	(19.2)	(8.5)	1.3
	MEG		424.0	388.5	327.0	365.5	401.0	395.0	363.0	261.3	357.1	406.3
	Change, %			9.1	29.7	16.0	5.7	7.3	16.8	62.3	18.7	4.4
	PVC		306.5	271.0	274.5	415.5	443.5	380.0	435.5	423.9	406.4	288.8
	Change, %			13.1	11.7	(26.2)	(30.9)	(19.3)	(29.6)	(27.7)	(24.6)	6.1
	PP		594.0	583.5	567.0	640.5	661.0	522.5	548.0	578.9	606.1	588.8
	Change, %			1.8	4.8	(7.3)	(10.1)	13.7	8.4	2.6	(2.0)	0.9
	2-EH		446.5	431.0	444.5	473.0	483.5	370.0	380.5	372.9	476.5	438.8
	Change, %			3.6	0.4	(5.6)	(7.7)	20.7	17.3	19.7	(6.3)	1.8
	ABS		1,396.5	1,446.0	1,479.5	1,443.0	1,563.5	1,240.0	1,150.5	947.6	1,351.2	1,421.3
	Change, %			(3.4)	(5.6)	(3.2)	(10.7)	12.6	21.4	47.4	3.4	(1.7)
	SBR	BD spread	475.0	500.0	525.0	575.0	285.0	150.0	(100.0)	366.2	499.4	487.5
	Change, %			(5.0)	(9.5)	(17.4)	66.7	216.7	(575.0)	29.7	(4.9)	(2.6)
	SM		759.0	738.5	742.0	678.0	851.0	755.0	720.5	665.1	760.3	748.8
	Change, %			2.8	2.3	11.9	(10.8)	0.5	5.3	14.1	(0.2)	1.4
	Caustic											
	Change, %											
	PX		341.5	328.5	304.5	315.5	318.5	345.0	370.5	390.9	351.0	335.0
	Change, %			4.0	12.2	8.2	7.2	(1.0)	(7.8)	(12.6)	(2.7)	1.9
	PO	propylene spread	980.0	1,197.5	982.5	875.0	795.0	642.5	747.5	691.1	777.6	1,020.0
	Change, %			(18.2)	(0.3)	12.0	23.3	52.5	31.1	41.8	26.0	(3.9)
	Caprolactam	benzene spread	1,112.5	1,122.5	1,140.0	1,185.0	985.0	1,097.5	1,027.5	698.2	1,097.6	1,117.5
	Change, %			(0.9)	(2.4)	(6.1)	12.9	1.4	8.3	59.3	1.4	(0.4)
	PTA	px spread	88.5	84.8	101.0	77.8	95.0	54.5	44.0	60.4	76.7	86.6
	Change, %			4.4	(12.4)	13.8	(6.8)	62.4	101.1	46.5	15.4	2.2

자료 : Ciscchem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	01/18	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA	
											18E	19E	18E	19E	18E	19E
Petrochemical																
DowDuPont	USD	76.0	0.3	1.1	6.5	7.4	15.6	31.7	6.8	168,245	17.7	14.9	1.8	1.7	10.2	9.2
Eastman	USD	96.8	(0.0)	(0.7)	5.5	10.0	13.8	25.4	4.5	13,550	11.6	10.7	2.5	2.2	8.7	8.1
BASF	EUR	96.2	2.6	2.5	1.0	6.5	17.5	7.0	4.9	101,214	14.6	13.6	2.4	2.2	7.8	7.4
Akzo Nobel	EUR	75.0	0.3	(1.3)	0.7	(2.5)	(3.8)	21.2	2.7	22,073	17.0	15.8	3.0	2.8	9.3	8.8
Arkema	EUR	104.4	3.1	1.1	0.6	0.4	4.9	15.9	2.8	9,270	13.2	12.2	1.7	1.6	6.3	6.0
Lanxess	EUR	73.1	2.5	6.1	12.2	10.0	7.7	9.8	10.3	7,282	15.5	13.1	2.1	1.9	9.3	8.2
Sumitomo Chemical	JPY	837	(2.0)	(2.6)	5.2	20.6	27.2	51.9	3.3	11,911	10.1	10.5	1.3	1.2	7.4	8.0
Mitsubishi Chemical	JPY	1,243	(3.5)	(3.5)	0.6	11.5	24.9	62.4	0.5	16,544	9.2	8.7	1.3	1.2	6.3	6.1
Shin-Etsu Chemical	JPY	12,360	1.3	3.3	4.7	16.9	22.1	29.1	7.9	43,948	18.5	16.6	1.9	1.8	8.1	7.4
Asahi Kasei	JPY	1,464	(2.3)	(3.3)	(0.6)	7.6	16.1	43.6	0.7	18,109	14.4	13.6	1.5	1.4	7.4	7.0
JSR	JPY	2,224	(1.5)	(3.1)	(1.7)	5.8	12.1	13.5	0.3	4,455	14.5	13.4	1.2	1.1	7.7	7.2
Nitto Denko	JPY	10,130	(1.3)	(2.4)	(2.6)	5.5	3.7	16.9	1.2	15,450	15.7	14.6	2.1	1.9	7.3	7.0
SABIC	SAR	106.4	(0.8)	4.8	4.6	8.3	6.3	13.7	4.9	80,773	14.2	13.7	1.7	1.7	7.3	7.1
Yansab	SAR	64.6	0.0	5.0	11.3	16.3	22.2	16.8	9.4	8,861	13.7	13.9	2.2	1.9	9.0	8.9
Formosa Plastics	TWD	101.5	(0.5)	0.5	7.2	9.1	11.4	15.9	2.8	21,114	14.4	13.9	1.8	1.8	18.9	19.2
Formosa Fiber	TWD	109.0	0.9	0.0	10.9	16.0	18.9	15.5	5.8	20,511	13.7	13.4	1.7	1.7	11.6	11.5
Nan Ya Plastics	TWD	81.2	(0.4)	(1.0)	8.0	8.7	9.4	10.3	4.2	20,648	14.8	15.3	1.7	1.7	16.2	16.4
Sinopec Shanghai	CNY	6.81	(0.6)	(0.9)	8.8	9.1	6.7	1.2	7.6	9,462	12.0	12.6	2.2	2.0	6.8	7.3
Sinopec Yizheng(Fiber)	CNY	2.97	(1.3)	2.4	11.2	(4.2)	(3.9)	(23.3)	11.2	5,394	50.4	66.3	5.3	5.0	13.9	10.3
Reliance	INR	920	(0.5)	(1.9)	(0.1)	0.6	21.0	78.1	1.1	93,404	14.4	12.9	1.7	1.5	9.4	8.7
Industries Qatar	QAR	110.0	(0.2)	3.8	15.8	17.0	11.2	(7.7)	13.4	16,144	14.5	13.9	1.6	1.5	46.4	27.2
PTT Chemical	THB	95.3	0.8	2.7	13.4	16.2	37.1	46.0	12.1	11,766	10.7	10.4	1.4	1.3	5.5	5.4
Petronas	MYR	8.2	0.0	1.2	9.7	11.5	18.2	13.5	6.1	15,624	16.1	15.5	2.0	1.9	9.2	8.9
LG화학	KRW	417,000	(0.8)	(1.1)	4.9	8.6	27.7	53.6	3.0	27,313	13.8	12.8	1.8	1.6	6.5	6.1
롯데케미칼	KRW	382,500	(1.8)	(0.1)	4.7	(4.5)	6.8	0.4	3.9	11,632	5.5	5.2	0.9	0.8	3.6	3.3
한화케미칼	KRW	33,300	(1.6)	1.4	12.1	(1.2)	2.9	21.3	5.4	5,050	5.7	5.5	0.8	0.7	6.7	6.5
금호석유	KRW	100,000	(1.5)	(7.8)	7.0	47.3	37.2	12.9	0.5	2,969	14.1	11.9	1.6	1.5	9.3	8.4
SKC	KRW	43,800	0.0	(1.7)	(1.5)	12.0	14.2	36.9	(6.8)	1,643	9.9	8.7	1.1	1.0	8.8	7.9
국도화학	KRW	65,700	0.3	1.5	(3.5)	15.9	21.4	20.6	4.1	359	#N/A	N/A	#N/A	N/A	#N/A	N/A
효성	KRW	8,620	0.3	5.1	9.1	23.5	38.6	0.1	13.7	4,595	8.2	7.3	1.1	1.0	7.2	6.8
Average			(0.3)	0.4	5.5	10.3	15.6	21.8	4.9							
Refinery																
Valero	USD	96.5	(1.1)	2.0	8.5	24.3	42.9	44.5	5.0	40,608	14.1	13.4	2.0	2.0	6.9	6.9
Conoco Phillips	USD	59.8	(0.2)	1.0	14.2	20.2	38.8	18.9	8.9	66,136	34.0	25.9	2.2	2.2	7.2	6.7
Formosa Petrochemical	TWD	120.5	0.4	0.8	4.8	13.1	15.3	14.8	4.3	37,040	18.2	18.7	3.2	3.2	11.7	12.1
Andeavor	USD	118.2	(2.4)	0.7	5.6	13.3	21.7	44.8	3.4	17,904	12.9	11.4	1.8	1.7	7.3	7.1
Marathon Petroleum	USD	71.5	(0.7)	1.8	8.3	26.0	30.4	46.2	8.4	32,812	15.0	12.8	2.6	2.7	7.7	7.5
Devon Energy	USD	43.2	(0.6)	0.3	13.5	22.7	37.8	(6.8)	4.3	22,192	17.5	14.0	2.7	2.3	8.4	7.4
Hollyfrontier	USD	50.9	(2.8)	(1.1)	5.1	41.1	87.1	68.5	(0.6)	9,094	16.8	15.2	1.8	1.8	8.0	8.0
Phillips 66	USD	105.3	(0.8)	2.9	5.3	16.7	28.5	25.2	4.1	51,561	15.6	14.5	2.3	2.2	9.0	8.8
Murphy Oil	USD	34.7	(0.7)	1.2	20.2	34.7	40.6	11.0	11.7	5,548	162.4	113.2	1.2	1.1	4.9	4.5
JX Holdings	JPY	761.1	0.4	(2.9)	10.9	32.3	55.4	47.2	4.7	22,130	8.8	8.0	0.9	0.9	7.0	6.6
Idemitsu	JPY	4,240.0	(0.6)	(5.4)	(1.3)	34.8	60.2	25.1	(6.3)	8,360	7.9	7.5	1.0	0.9	6.8	6.8
Nesteoil	EUR	57.9	2.8	2.6	10.4	44.6	57.9	74.1	8.6	16,473	16.7	16.7	2.9	2.7	10.2	10.3
Ashland	USD	73.0	0.6	(1.0)	2.7	10.2	9.9	35.0	2.5	4,550	21.6	18.7	1.3	1.3	10.2	9.6
Fuchs Petrolub	EUR	44.6	1.2	1.0	0.6	(11.3)	(9.9)	6.5	0.9	7,127	22.1	20.9	4.1	3.7	13.0	12.3
SK이노베이션	KRW	192,500	(2.8)	(4.0)	(4.9)	(5.6)	14.2	18.5	(5.9)	17,975	7.9	7.7	0.9	0.9	4.9	4.8
S-Oil	KRW	110,500	(2.6)	(4.7)	(10.9)	(15.3)	6.8	27.9	(5.6)	12,400	9.3	8.1	1.8	1.6	7.6	6.6
GS	KRW	63,600	(3.2)	(0.6)	3.6	(4.6)	(11.7)	18.2	2.3	5,467	6.0	5.5	0.7	0.6	6.9	6.3
Average			(0.8)	(0.3)	5.7	17.5	30.9	30.6	3.0							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	01/18	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA	
											18E	19E	18E	19E	18E	19E
E&P/Shale																
Exxon Mobil	USD	87	(0.6)	0.6	5.4	5.6	8.5	1.3	4.5	370,450	19.9	19.4	2.0	2.0	8.9	9.0
BP	GBP	517	0.0	(3.1)	1.3	5.8	16.0	2.3	(1.2)	142,368	17.4	15.3	1.5	1.4	6.0	5.5
Shell	EUR	2,520	(0.1)	(2.0)	4.0	9.6	22.3	12.4	1.6	294,315	15.2	13.9	1.4	1.4	6.7	6.3
Chevron	USD	132	(0.6)	(0.7)	9.9	11.4	26.9	13.5	5.1	249,939	22.5	21.3	1.7	1.7	7.4	7.1
Total	EUR	48	(0.6)	(1.2)	0.5	3.9	10.9	(1.4)	3.3	147,579	12.9	12.3	1.3	1.2	5.6	5.3
Sinopec	CNY	7	(0.4)	(1.1)	17.8	18.6	11.5	17.3	14.2	125,344	13.6	12.8	1.1	1.1	4.7	4.6
Petrochina	CNY	9	(1.0)	(0.3)	10.8	5.8	8.3	1.9	7.9	236,000	32.2	28.3	1.3	1.3	6.3	6.2
CNOOC	CNY	12	0.3	7.0	22.6	11.0	17.8	(1.1)	18.3	70,016	11.0	10.5	1.1	1.0	4.1	4.0
Gazprom	RUB	150	1.1	4.0	12.0	18.7	20.8	(1.6)	15.2	62,987	4.3	4.6	0.3	0.3	3.8	3.7
Rosneft	RUB	333	2.0	2.5	12.3	2.1	5.7	(13.9)	14.3	62,473	8.3	7.2	0.8	0.8	4.8	4.4
Anadarko	USD	58	(1.2)	(0.4)	20.1	19.5	33.2	(16.6)	8.7	31,894	1,240.2	91.2	2.1	2.1	7.0	6.1
Petrobras	BRL	18	(0.8)	5.6	19.7	12.7	40.8	15.4	13.2	76,850	10.6	7.7	0.7	0.6	5.2	4.8
Lukoil	USD	3,855	0.1	4.5	13.5	28.0	35.7	19.6	15.6	57,532	7.0	6.7	0.8	0.7	N/A	N/A
Kinder	USD	19	(2.9)	(1.0)	5.6	2.3	(2.5)	(15.3)	5.2	47,497	23.2	21.1	1.2	1.3	10.8	10.4
Statoil	NOK	184	(0.0)	(0.9)	8.1	14.0	32.3	15.2	5.0	77,876	17.8	16.4	1.9	1.8	3.6	3.4
BHP	AUD	31	0.1	(0.2)	9.0	13.3	22.6	16.1	4.1	125,817	18.4	18.1	2.1	2.0	7.0	6.9
PTT E&P	THB	114	0.4	5.1	16.9	24.3	34.5	20.6	14.0	14,181	14.2	13.9	1.1	1.0	3.9	3.9
Petronas gas	MYR	17	(3.5)	(6.4)	5.4	(6.4)	(7.8)	(13.9)	(0.9)	8,666	18.0	17.5	2.6	2.5	10.1	9.9
Chesapeake	USD	4	(2.4)	(4.8)	8.1	5.8	(16.2)	(42.8)	0.8	3,626	4.9	4.5	#N/A	N/A	9.0	6.4
Noble Energy	USD	32	(0.8)	(1.6)	20.3	13.5	11.6	(20.5)	8.5	15,391	88.1	39.3	1.6	1.6	7.5	6.3
Average		0	(0.5)	0.3	11.2	11.0	16.6	0.4	7.9							
PV																
WACKER	EUR	173.4	3.0	3.6	7.1	42.3	73.7	59.9	6.9	11,059	26.3	22.6	2.6	2.5	8.6	8.2
GCL-Poly	HKD	1.4	0.7	(4.8)	12.1	12.1	58.0	40.4	(0.7)	3,306	8.3	7.3	0.8	0.7	5.9	5.4
SunPower	USD	8.6	(1.0)	(9.7)	(9.2)	28.6	(22.8)	21.4	1.4	1,193	#N/A	N/A	27.5	1.6	2.0	12.7
Canadian Solar	USD	15.9	(2.8)	(8.3)	(9.6)	0.7	(5.3)	27.5	(5.9)	920	8.6	9.3	0.9	0.8	9.2	9.2
JA Solar	USD	7.5	0.3	0.4	(0.1)	0.8	17.2	50.5	0.3	356	14.2	12.4	1.7	1.6	4.0	3.7
Yingli	USD	1.9	(2.1)	(8.8)	0.5	(18.7)	(22.1)	(33.3)	10.7	34	#N/A	N/A	#N/A	N/A	#N/A	N/A
First Solar	USD	71.1	(1.3)	(6.8)	0.7	51.4	61.5	106.6	5.3	7,424	47.2	21.4	1.3	1.2	14.0	8.1
한화큐셀	USD	7.3	1.8	(2.4)	(0.8)	(2.7)	(2.8)	(13.1)	3.4	604	33.0	23.4	#N/A	N/A	8.1	7.3
OCI	KRW	165,000	(3.5)	(5.7)	26.4	57.9	93.7	85.4	21.3	3,676	18.1	17.8	1.2	1.1	9.3	7.7
웅진에너지	KRW	9,400	4.4	13.4	5.9	19.1	10.8	89.9	14.4	224	N/A	1.2	1.1	9.3	7.7	8.2
신성솔라에너지	KRW	2,300	2.2	13.3	13.6	27.8	13.9	2.7	20.1	372	N/A	1.1	9.3	7.7	8.2	7.9
Average			0.2	(1.4)	4.2	19.9	25.1	39.8	7.0							
Gas Company																
Towngas China	HKD	6.1	0.2	2.2	(4.0)	4.5	10.4	41.2	(3.3)	2,150	12.6	11.5	1.1	1.0	11.6	10.3
Kulun	HKD	7.8	0.1	(4.7)	0.3	5.4	4.9	27.1	(4.4)	8,033	10.6	9.4	1.2	1.1	5.7	5.4
Beijing Enterprise	HKD	47.6	(0.9)	5.7	8.8	(0.2)	16.5	21.6	2.5	7,676	8.4	7.6	0.9	0.8	14.4	13.7
ENN Energy	HKD	54.2	1.2	2.5	0.9	(7.9)	2.1	42.3	(2.9)	7,500	12.3	10.6	2.3	2.0	7.7	6.7
China Resources Gas	HKD	24.5	(0.2)	0.4	(11.1)	(17.1)	(16.7)	(4.7)	(13.8)	6,955	12.5	11.1	2.3	2.1	7.7	7.0
China Gas Holdings	HKD	22.0	0.0	3.8	(1.1)	(11.5)	18.3	93.3	1.9	13,982	15.1	12.7	3.6	3.0	12.0	10.4
Shenzen Gas	HKD	15.4	0.9	(2.2)	11.9	(1.0)	14.2	37.1	3.8	4,008	11.2	10.1	1.3	1.2	8.1	7.7
Shann Xi	CNY	8.2	0.4	(5.9)	(4.3)	(3.3)	(2.0)	(12.6)	(3.4)	1,412	15.5	18.1	1.5	1.4	#N/A	N/A
Suntien	HKD	2.1	(0.5)	0.0	7.8	(9.6)	24.7	66.9	0.0	984	6.4	5.4	0.7	0.6	8.4	7.3
China Oil & Gas	HKD	0.8	0.0	1.3	27.0	45.5	40.4	33.3	(5.9)	596	11.1	9.8	1.2	1.1	6.5	5.9
Average			0.1	0.3	3.6	0.5	11.3	34.6	(2.6)							
EV																
LG 화학	KRW	417,000	(0.8)	(1.1)	4.9	8.6	27.7	53.6	3.0	27,501	14.0	13.1	1.8	1.6	6.6	6.3
삼성SDI	KRW	218,000	1.6	1.6	4.8	10.1	15.3	93.8	6.6	14,005	13.5	11.6	1.2	1.1	15.0	12.0
Panasonic	JPY	1678.5	(0.9)	(2.9)	0.2	3.7	10.6	41.9	1.8	37,108	16.4	14.3	2.1	1.9	6.2	5.7
GS Yuasa	JPY	587.0	0.9	(3.8)	6.1	(1.5)	15.3	26.5	4.6	2,188	16.1	14.3	1.3	1.2	7.0	6.5
NEC	JPY	3085.0	(0.8)	(2.1)	(1.6)	(0.5)	4.2	(2.7)	1.5	7,242	18.3	15.3	0.9	0.8	6.2	6.0
BYD Auto	CNY	63.2	(0.9)	(3.4)	1.1	(6.3)	29.0	31.3	(2.9)	25,993	26.5	20.9	2.8	2.5	12.6	10.9
Tesla Motors	USD	344.6	(0.7)	2.0	1.7	(4.2)	5.0	44.6	10.7	57,911	#N/A	N/A	81.4	12.1	10.2	35.5
Kandi Technologies	USD	6.8	(0.7)	(6.8)	(0.7)	(20.5)	61.9	40.2	0.0	327	#N/A	N/A	#N/A	N/A	#N/A	N/A
Average			(0.3)	(2.1)	2.1	(1.3)	21.1	41.2	3.2							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임