

1. News Summary (3 page)

2018년 7월 20일

News	
WTI comment	엇갈린 수급 신호에 혼조...WTI 1%↑
Headline	북극과 시베리아 지역 러시아가 가스가 중국으로 흘러든다
News 1.	아람코, 세계 4위 화학사인 SABIC 지분 매입
News 2.	-
News 3.	-
News 4.	-

Conclusion	
	러시아 PNG의 본격 유입에 앞서 중국은 LNG로 수요 일부 충당할 전망 다운사이클에 접어든 화학 부문 인수가 기업가치를 높일지는 미지수
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2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	69.5	1.0	(1.2)	4.9	1.7	48.5
Dubai	\$/bbl	70.4	1.0	(3.0)	(3.1)	(0.5)	45.7
Gasoline	\$/bbl	80.5	1.5	(1.9)	(1.2)	(2.7)	27.1
Diesel	\$/bbl	82.9	1.4	(1.9)	(4.1)	(3.5)	33.6
Complex margin	\$/bbl	6.8	0.5	0.6	0.5	(0.2)	(2.1)
1M lagging	\$/bbl	6.2	4.6	1.8	4.3	(9.0)	(5.3)
Petrochemical			%	%	%	%	%
Naphtha	\$/t	633	1.1	(3.3)	0.2	2.0	47.1
Butadiene	\$/t	1,650	0.0	0.0	(1.2)	24.1	71.0
HDPE	\$/t	1,320	0.0	(1.5)	(2.6)	(1.9)	22.2
MEG	\$/t	899	0.7	0.1	1.6	(13.6)	5.1
PX	\$/t	987	1.3	(0.2)	5.5	3.2	27.9
SM	\$/t	1,350	0.8	(1.7)	0.6	2.2	17.0
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	2.77	1.8	(1.0)	(6.8)	0.3	(5.2)
Natural rubber	\$/t	1,310	(0.8)	0.8	(0.8)	(6.4)	(17.6)
Cotton	C/lbs	88.3	(0.6)	(1.1)	6.1	6.4	27.0

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	07/16	\$/t	1,290	0.0	2.4	1.2	44.5
Propylene	07/16	\$/t	970	0.5	(4.4)	(0.8)	28.5
Benzene	07/16	\$/t	830	1.2	(0.3)	(0.3)	13.3
Toluene	07/16	\$/t	795	0.0	(2.5)	7.4	26.2
Xylene	07/16	\$/t	823	0.9	(0.6)	8.2	33.7
PP	07/16	\$/t	1,253	(0.8)	(3.1)	0.4	19.6
PVC	07/16	\$/t	935	0.0	0.3	(2.6)	5.6
ABS	07/16	\$/t	1,930	(1.5)	(6.3)	(3.0)	7.2
SBR	07/16	\$/t	1,750	(1.1)	(7.9)	7.4	20.7
SM	07/16	\$/t	1,403	2.6	(6.0)	2.7	16.6
BPA	07/16	\$/t	1,798	3.6	0.6	(6.1)	17.5
Caustic	07/16	\$/t	410	(13.7)	(23.9)	(34.5)	(10.4)
2-EH	07/16	\$/t	1,090	(0.9)	(2.7)	(5.6)	16.9
Caprolactam	07/16	\$/t	2,145	0.2	(0.2)	(3.4)	33.2
Solar				%	%	%	%
Polysilicon	07/18	\$/kg	11.0	(1.0)	(7.2)	(28.5)	(20.4)
Module	07/18	\$/W	0.26	(1.5)	(7.2)	(14.0)	(21.1)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	82.0	(0.3)	(0.8)	1.6	3.3	1.4
Shell	EUR	2,662	1.3	1.2	3.9	7.1	29.1
Petrochina	CNY	7.24	(0.5)	(5.2)	(2.3)	(6.6)	(10.7)
Gazprom	RUB	137.6	(0.5)	(5.2)	1.5	(4.1)	14.5
Petrobras	BRL	18.4	1.9	2.5	19.3	(17.1)	39.1
Refinery							
Phillips66	USD	110.9	0.0	(0.2)	(3.2)	0.2	33.7
Valero	USD	107.0	0.3	0.2	(8.2)	(1.1)	57.3
JX	JPY	792.6	2.8	3.6	7.1	12.1	62.1
Neste Oil	EUR	67.4	1.3	0.0	2.6	21.7	84.1

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	83.6	(0.8)	2.5	(1.9)	(2.7)	2.2
DowDuPont	USD	66.1	(0.7)	(0.2)	(0.3)	(0.6)	(0.9)
SABIC	SAR	129.6	0.2	2.2	2.4	5.6	31.1
Formosa Pla.	TWD	107.5	(0.9)	1.4	1.9	1.9	16.8
Shin-Etsu	JPY	10,550	0.2	2.1	8.1	(5.9)	4.2
Renewable							
Wacker	EUR	118.9	(0.8)	1.8	5.2	(21.3)	17.2
First Solar	USD	53.88	(0.2)	(1.5)	3.2	(30.0)	18.0
GCL-Poly	HKD	0.66	(2.9)	(4.3)	(9.6)	(32.7)	(29.8)
Tesla Motors	USD	320.2	(1.1)	1.1	(9.2)	6.7	(1.5)

4. Coverage Summary

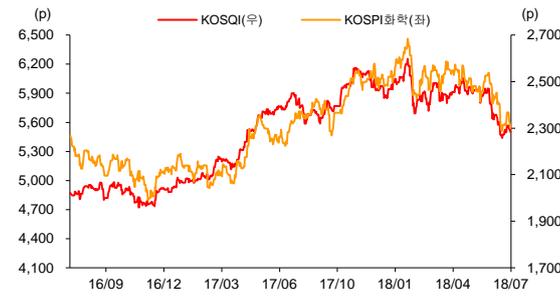
	07/19	1D	1W	1M	3M	6M	12M
KOSPI	2,282	(0.3)	(0.1)	(2.5)	(7.8)	(9.3)	(5.9)
KOSPI화학	5,536	(0.9)	(1.4)	(4.4)	(9.9)	(10.9)	(0.7)
LG화학	336,000	1.5	3.9	(3.9)	(9.8)	(20.1)	2.9
롯데케미칼	338,000	(0.1)	(2.5)	(4.5)	(17.4)	(13.2)	(5.6)
한화케미칼	20,000	(2.2)	(1.5)	(10.9)	(32.2)	(40.9)	(38.2)
금호석유화학	112,000	0.4	(1.3)	7.2	18.1	10.3	53.6
KCC	314,500	(0.6)	(0.8)	(3.8)	(16.1)	(21.6)	(26.3)
OCI	94,400	(1.5)	(2.7)	(9.7)	(41.5)	(44.8)	10.8
SKC	41,950	(0.9)	(3.3)	4.7	12.2	(4.2)	9.4
SK이노베이션	194,500	1.6	2.1	(5.1)	(2.3)	(1.8)	15.4
S-Oil	116,500	1.7	9.9	6.4	(0.4)	2.6	12.6
GS	51,800	(0.4)	2.2	(6.0)	(14.7)	(21.2)	(28.1)
SK가스	87,400	(0.9)	(3.5)	(7.4)	(9.0)	(9.1)	(25.6)
포스코대우	19,900	(2.7)	(2.5)	(5.0)	(15.9)	(1.2)	(14.8)
LG상사	22,200	(0.9)	(1.8)	(11.2)	(18.1)	(24.0)	(25.4)
한국전력	30,850	(1.0)	(2.1)	(7.9)	(13.8)	(15.0)	(27.7)
한국가스공사	57,500	(1.0)	(5.1)	(5.7)	15.0	19.5	17.5

투자의견	TP	%	P/E	P/B
			* 추정치는 12M fwd 기준임	
			* 모든 coverage 업체의 실적은 연결기준임	
매수	400,000	19.0	13.27	1.50
매수	400,000	18.3	10.49	0.96
매수	30,000	50.0	8.98	0.49
매수	150,000	33.9	10.44	1.45
매수	400,000	27.2	27.27	0.49
매수	140,000	48.3	7.18	0.68
매수	50,000	19.2	11.44	0.99
매수	230,000	18.3	11.44	0.97
매수	140,000	20.2	13.30	1.95
매수	80,000	54.4	4.80	0.58
매수	130,000	48.7	8.26	0.59
매수	25,000	25.6	10.44	0.78
매수	38,000	71.2	8.22	0.63
매수	45,000	45.9	7.47	0.24
매수	75,000	30.4	8.92	0.75

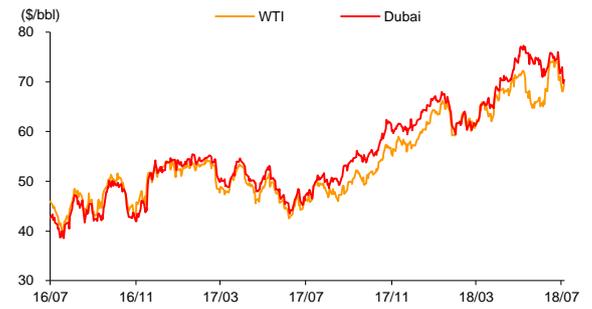
• 작성자(손지우)는 본 조사분석자료에 게재된 내용들이 본인의 의견을 정확하게 반영하고 있으며, 외부의 부당한 압력이나 간섭없이 신의성실하게 작성되었음을 확인합니다.
• 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.
• 본 보고서는 기관투자자 또는 제 3자에게 사전 제공된 사실이 없습니다.
• 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

KOSPI/KOSPI화학



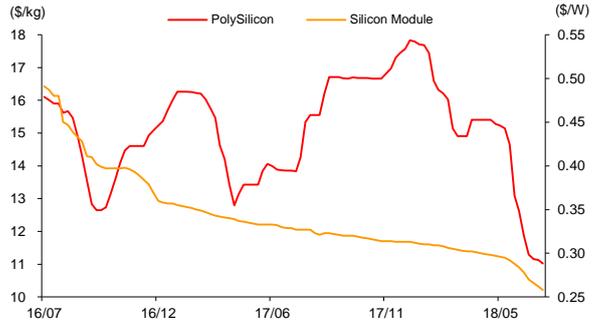
WTI/Dubai



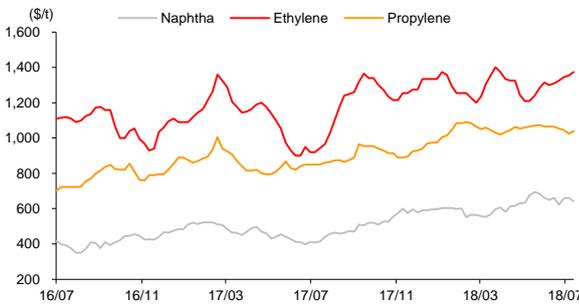
Complex & 1M lagging margin



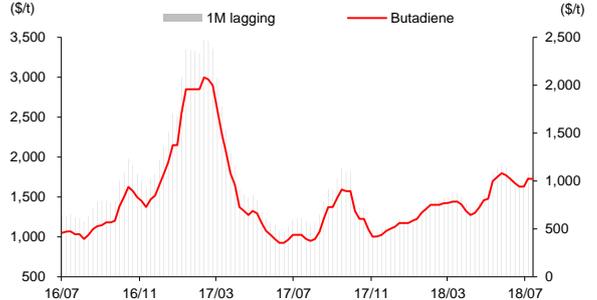
Polysilicon & Module prices



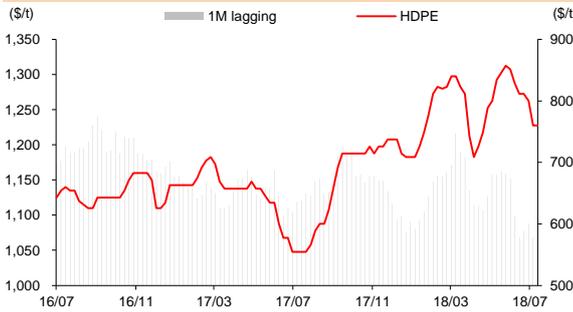
Naphtha/Ethylene/Propylene prices



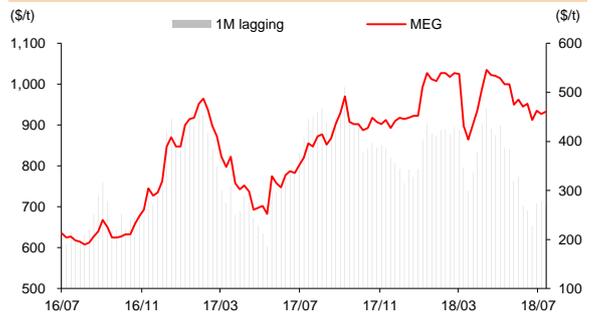
Butadiene price & 1M lagging naphtha spread



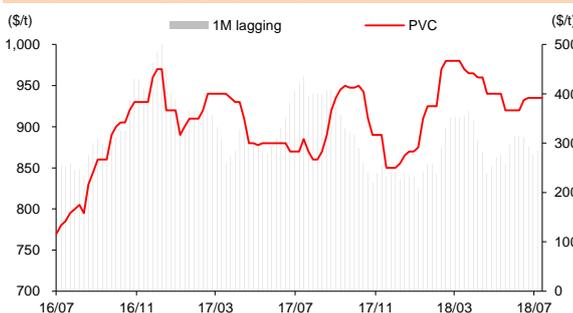
HDPE price & 1M lagging naphtha spread



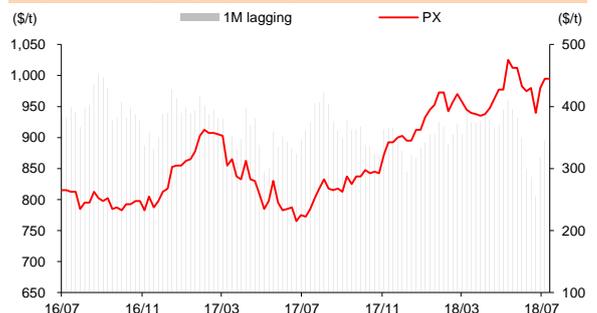
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



자료: Bloomberg, Cischem, Petronet, Platts, Pvinfosights, SK증권
참고: 상기 데이터는 일괄적으로 과거 2년치 적용

News Comment

Headline (출처: Reuters)

제목 북극과 시베리아 지역 러시아 가스가 중국으로 흘러든다
결론 러시아 PNG의 본격 유입에 앞서 중국은 LNG로 수요 일부 충당할 전망
세부

- 1) CNPC, "Power of Siberia I 가동이 내년 시작돼 2019년에는 5bcm 유입"
- 2) CNPC, "2024년에는 full capa로 유입되어 38bcm에 이를 것"
- 3) Novatek에 의하면 Yamal LNG plant 2단계가 8월 초 생산 시작됨
- 4) Yamal 2단계는 CNPC가 20%, 중국 실크로드 펀드가 9.9% 지분 보유중
- 5) 러시아 PNG의 본격 유입에 앞서 중국은 LNG로 수요 일부 충당할 전망

Issue 1 (출처: Reuters)

제목 아람코, 세계 4위 화학사인 SABIC 지분 매입
결론 다운사이클에 접어든 화학 부문 인수가 기업가치를 높일지는 미지수
세부

- 1) 아람코가 SABIC의 지분을 매입하며 상장 전 기업가치를 끌어 올림
- 2) 아람코, "지분 취득 방법에 대해 국부펀드인 PIF와 논의 시작한 단계"
- 3) SABIC은 국부펀드인 PIF가 70%를 보유하고 시가총액은 \$1,030억 수준
- 4) 매입하고자 하는 지분의 규모나 액수에 대해서는 알려진 바 없음
- 5) 다운사이클에 접어든 화학 부문 인수가 기업가치를 높일지는 미지수

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 엇갈린 수급 신호에 혼조...WTI 1% ↑
상승 미 오클라호마 주 쿠싱의 원유 재고가 180만 배럴 줄었다는 소식
요인

하락 주요 산유국들이 원유생산을 늘려 수급이 완화될 것이라는 전망
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	0.859	0.859	0.857	0.863	0.810	0.818	0.868	0.833	0.904	0.887	0.830	
	Change, %		(0.0)	0.2	(0.4)	6.0	5.0	(1.1)	3.1	(5.0)	(3.1)	3.6	
	USD/JPY	112.5	112.9	112.6	110.1	107.4	110.8	112.0	112.6	108.8	112.1	109.0	
	Change, %		(0.3)	(0.1)	2.2	4.7	1.5	0.4	(0.1)	3.4	0.3	3.2	
	USD/KRW	1,133.2	1,132.4	1,126.0	1,109.2	1,061.6	1,065.9	1,120.7	1,066.7	1,160.5	1,130.9	1,080.4	
	Change, %		0.1	0.6	2.2	6.7	6.3	1.1	6.2	(2.4)	0.2	4.9	
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	Agriculture	Corn	351.3	347.3	336.5	353.8	382.0	352.5	382.5	350.8	358.5	359.4	371.7
Change, %			1.2	4.4	(0.7)	(8.0)	(0.4)	(8.2)	0.1	(2.0)	(2.3)	(5.5)	
Soybean		846.0	842.3	830.0	889.0	1,037.3	977.3	999.8	951.8	987.5	975.9	985.2	
Change, %			0.4	1.9	(4.8)	(18.4)	(13.4)	(15.4)	(11.1)	(14.3)	(13.3)	(14.1)	
Wheat		504.3	494.5	482.5	477.8	476.8	422.8	503.0	427.0	436.4	436.0	477.8	
Change, %			2.0	4.5	5.5	5.8	19.3	0.2	18.1	15.6	15.6	5.5	
Rice		11.9	11.8	11.8	12.2	13.1	12.2	11.9	11.7	10.3	11.1	12.2	
Change, %			0.3	0.3	(2.8)	(9.3)	(2.8)	0.0	1.6	14.7	7.3	(2.8)	
Oats		232.0	234.0	257.5	235.0	234.5	258.0	293.0	241.0	196.3	252.3	246.0	
Change, %			(0.9)	(9.9)	(1.3)	(1.1)	(10.1)	(20.8)	(3.7)	18.2	(8.0)	(5.7)	
MYR/mt		Palm Oil	2,180.0	2,200.0	2,138.0	2,264.0	2,388.0	2,435.0	2,580.0	2,444.0	2,653.8	2,787.3	2,407.3
		Change, %		(0.9)	2.0	(3.7)	(8.7)	(10.5)	(15.5)	(10.8)	(17.9)	(21.8)	(9.4)
		Cocoa	2,292.0	2,337.0	2,489.0	2,468.0	2,831.0	1,931.0	1,944.0	1,892.0	2,854.0	2,005.2	2,397.1
		Change, %		(1.9)	(7.9)	(7.1)	(19.0)	18.7	17.9	21.1	(19.7)	14.3	(4.4)
	Cotton	88.3	88.8	89.2	83.3	83.0	83.4	68.8	78.6	65.6	73.5	83.9	
	Change, %		(0.6)	(1.1)	6.0	6.4	5.8	28.4	12.3	34.6	20.1	5.3	
	Sugar	11.0	11.1	11.1	11.8	11.8	13.3	14.5	15.2	18.2	15.8	12.5	
	Change, %		(1.0)	(1.0)	(7.3)	(6.6)	(17.2)	(24.3)	(27.6)	(39.6)	(30.6)	(12.6)	
Coffee	105.3	104.6	108.7	114.1	114.3	121.3	131.2	126.2	136.1	133.0	118.1		
Change, %		0.6	(3.2)	(7.8)	(7.9)	(13.2)	(19.8)	(16.6)	(22.6)	(20.9)	(10.9)		
<hr/>													
Energy	WTI	69.5	68.8	70.3	65.1	68.3	63.4	47.1	60.4	43.4	51.0	66.1	
	Change, %		1.0	(1.2)	6.7	1.7	9.6	47.4	15.0	60.1	36.3	5.2	
	Brent	72.6	72.9	74.5	75.1	73.8	68.6	49.7	66.9	45.1	54.9	71.6	
	Change, %		(0.4)	(2.5)	(3.3)	(1.6)	5.8	46.0	8.5	61.0	32.3	1.4	
	Natural Gas	2.8	2.7	2.8	2.9	2.7	3.2	3.1	3.0	2.6	3.0	2.8	
	Change, %		1.8	(1.0)	(4.5)	4.1	(13.1)	(9.7)	(6.2)	8.5	(8.4)	(2.4)	
	Ethanol	1.4	1.4	1.4	1.4	1.5	1.3	1.5	1.3	1.5	1.5	1.4	
	Change, %		0.6	0.6	1.9	(5.8)	6.6	(7.8)	7.6	(6.3)	(5.1)	(1.2)	
	RBOB Gasoline	204.4	204.4	207.2	203.8	207.7	186.4	161.7	179.9	140.0	162.9	199.8	
	Change, %		(0.0)	(1.4)	0.3	(1.6)	9.7	26.4	13.6	46.0	25.5	2.3	
Coal	119.3	119.6	118.1	115.4	93.8	106.8	85.9	100.8	65.5	88.2	104.7		
Change, %		(0.3)	1.1	3.4	27.3	11.8	39.0	18.4	82.2	35.3	14.0		
<hr/>													
Metal	Gold	1,222.9	1,227.6	1,247.4	1,274.7	1,345.6	1,331.9	1,241.2	1,302.6	1,248.5	1,258.6	1,310.8	
	Change, %		(0.4)	(2.0)	(4.1)	(9.1)	(8.2)	(1.5)	(6.1)	(2.0)	(2.8)	(6.7)	
	Silver	15.3	15.6	15.9	16.3	17.3	17.1	16.3	16.9	17.1	17.1	16.6	
	Change, %		(1.6)	(4.0)	(6.1)	(11.2)	(10.5)	(6.0)	(9.6)	(10.5)	(10.3)	(7.6)	
	Copper	6,065.0	6,150.0	6,228.0	6,840.0	6,984.0	7,041.0	5,966.5	7,247.0	4,872.0	6,199.4	6,878.4	
	Change, %		(1.4)	(2.6)	(11.3)	(13.2)	(13.9)	1.7	(16.3)	24.5	(2.2)	(11.8)	
	Nickel	923.3	933.9	970.4	998.9	997.2	807.8	619.0	809.1	646.4	680.2	918.0	
	Change, %		(1.1)	(4.9)	(7.6)	(7.4)	14.3	49.2	14.1	42.8	35.7	0.6	
	Zinc	2,545.5	2,600.0	2,581.0	3,002.0	3,223.0	3,416.5	2,747.0	3,319.0	2,097.5	2,888.5	3,185.8	
	Change, %		(2.1)	(1.4)	(15.2)	(21.0)	(25.5)	(7.3)	(23.3)	21.4	(11.9)	(20.1)	
	Lead	2,108.8	2,163.5	2,194.0	2,414.5	2,339.3	2,591.8	2,201.3	2,482.8	1,868.3	2,315.7	2,432.2	
	Change, %		(2.5)	(3.9)	(12.7)	(9.9)	(18.6)	(4.2)	(15.1)	12.9	(8.9)	(13.3)	
	Aluminum	14,015.0	13,970.0	13,970.0	14,225.0	15,190.0	14,645.0	14,320.0	15,020.0	12,373.5	14,556.6	14,340.5	
	Change, %		0.3	0.3	(1.5)	(7.7)	(4.3)	(2.1)	(6.7)	13.3	(3.7)	(2.3)	
	Cobalt	69,750.0	69,750.0	70,250.0	80,000.0	91,250.0	79,369.5	58,500.0	75,205.0	25,480.1	55,906.9	83,445.0	
	Change, %		0.0	(0.7)	(12.8)	(23.6)	(12.1)	19.2	(7.3)	173.7	24.8	(16.4)	
	HR Coil	912.0	919.0	918.0	900.0	859.0	675.0	617.0	662.0	519.3	620.1	825.1	
Change, %		(0.8)	(0.7)	1.3	6.2	35.1	47.8	37.8	75.6	47.1	10.5		
Scrap	393.0	393.0	398.0	400.0	382.0	389.0	352.0	367.0	275.7	344.7	389.4		
Change, %		0.0	(1.3)	(1.8)	2.9	1.0	11.6	7.1	42.6	14.0	0.9		

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		07/19	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	WTI	69.5	68.8	70.3	66.2	68.3	64.0	46.8	53.7	43.4	50.9	66.0
	Change, %		1.0	(1.2)	4.9	1.7	8.6	48.5	29.3	60.2	36.5	5.2
	Dubai	70.4	69.7	72.6	72.7	70.8	66.4	48.3	53.8	41.3	53.1	68.6
	Change, %		1.0	(3.0)	(3.1)	(0.5)	6.0	45.7	30.8	70.5	32.6	2.6
Crude Oil Product	Gasoline(휘발유)	80.5	79.3	82.1	81.5	82.7	78.9	63.3	69.8	56.3	68.0	81.2
	Change, %		1.5	(1.9)	(1.2)	(2.7)	2.0	27.1	15.2	43.1	18.4	(0.9)
	Kerosene(등유)	84.8	83.4	86.6	86.4	87.0	80.8	60.9	66.4	52.9	65.2	84.1
	Change, %		1.7	(2.1)	(1.9)	(2.5)	5.0	39.3	27.7	60.4	30.0	0.9
	Diesel(경유)	82.9	81.8	84.5	86.5	86.0	80.6	62.0	65.5	52.1	65.6	83.1
	Change, %		1.4	(1.9)	(4.1)	(3.5)	2.8	33.6	26.5	59.1	26.4	(0.2)
	Bunker-C	68.4	66.7	69.8	68.7	62.9	59.0	47.2	52.1	35.5	49.7	62.7
	Change, %		2.5	(2.0)	(0.5)	8.8	15.9	45.1	31.4	92.6	37.8	9.0
	Naphtha	69.2	68.4	71.4	69.2	68.0	66.7	46.4	53.5	42.6	53.7	67.6
	Change, %		1.1	(3.1)	(0.1)	1.7	3.7	49.2	29.4	62.4	28.7	2.2
Dubai Spread	Gasoline(휘발유)	10.1	9.6	9.5	8.8	12.0	12.5	15.0	16.0	14.9	14.9	12.6
	Change		0.5	0.5	1.2	(1.9)	(2.4)	(4.9)	(5.9)	(4.9)	(4.8)	(2.5)
	Kerosene(등유)	14.4	13.7	14.1	13.8	16.3	14.4	12.6	12.6	11.6	12.1	15.5
	Change		0.7	0.3	0.6	(1.8)	0.1	1.8	1.8	2.8	2.3	(1.1)
	Diesel(경유)	12.5	12.1	11.9	13.8	15.2	14.2	13.7	11.7	10.8	12.5	14.4
	Change		0.4	0.6	(1.3)	(2.7)	(1.7)	(1.2)	0.8	1.7	(0.0)	(2.0)
	Bunker-C	(2.0)	(3.0)	(2.8)	(3.9)	(7.9)	(7.4)	(1.2)	(1.8)	(5.8)	(3.4)	(5.9)
	Change		1.0	0.8	1.9	5.9	5.4	(0.8)	(0.2)	3.8	1.4	3.9
	Naphtha	(1.3)	(1.3)	(1.2)	(3.5)	(2.8)	0.3	(2.0)	(0.4)	1.3	0.6	(1.0)
	Change		0.0	(0.1)	2.2	1.5	(1.5)	0.7	(0.9)	(2.5)	(1.9)	(0.3)
Refining Margin	Simple(단순)	2.9	2.3	2.3	2.0	1.2	1.3	4.5	3.8	1.9	3.2	2.1
	Change		0.6	0.6	0.9	1.7	1.6	(1.6)	(0.9)	1.0	(0.2)	0.9
	Complex(복합)	6.8	6.3	6.2	6.3	7.0	7.0	8.8	8.3	7.0	8.0	7.4
	Change		0.5	0.6	0.5	(0.2)	(0.3)	(2.1)	(1.5)	(0.2)	(1.2)	(0.6)
Complex(lagging)	6.2	1.6	4.4	1.9	15.2	13.2	11.5	18.0	8.5	8.9	9.3	
Change		4.6	1.8	4.3	(9.0)	(7.0)	(5.3)	(11.8)	(2.3)	(2.7)	(3.1)	

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			07/19	07/18	07/17	07/16	07/13	07/12	07/11	07/10	07/09	07/06	
Spot Price	Naphtha	CFR Japan	633.4	626.8	631.5	651.4	647.3	655.3	669.9	680.4	671.3	665.0	
	Ethylene	CFR SE Asia	1,270.0	1,270.0	1,280.0	1,280.0	1,280.0	1,280.0	1,270.0	1,270.0	1,270.0	1,270.0	
	Propylene	FOB Korea	1,060.0	1,050.0	1,050.0	1,050.0	1,035.0	1,035.0	1,035.0	1,040.0	1,040.0	1,060.0	
	Butadiene	FOB Korea	1,650.0	1,650.0	1,650.0	1,650.0	1,650.0	1,650.0	1,650.0	1,610.0	1,610.0	1,610.0	
	HDPE	CFR FE Asia	1,320.0	1,320.0	1,340.0	1,340.0	1,340.0	1,340.0	1,340.0	1,340.0	1,340.0	1,340.0	
	LDPE	CFR FE Asia	1,150.0	1,150.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	
	LLDPE	CFR FE Asia	1,115.0	1,115.0	1,115.0	1,110.0	1,110.0	1,110.0	1,115.0	1,115.0	1,115.0	1,120.0	
	MEG	CFR China	899.0	893.0	895.0	905.0	898.0	898.0	900.0	891.0	891.0	894.0	893.0
	PP	CFR FE Asia	1,220.0	1,220.0	1,230.0	1,230.0	1,230.0	1,230.0	1,230.0	1,230.0	1,230.0	1,235.0	1,240.0
	PX	CFR China	986.7	973.7	974.3	985.3	986.0	989.0	991.0	995.3	989.0	988.5	
	PTA	CFR China	844.0	844.0	844.0	844.0	842.0	848.0	852.0	852.0	852.0	850.0	
	Benzene	FOB Korea	828.0	823.0	825.3	833.7	831.3	831.0	834.7	834.7	831.7	832.0	
	Toluene	FOB Korea	746.0	741.0	740.0	752.0	752.0	747.0	747.0	752.0	751.0	747.0	
	Xylene	FOB Korea	825.0	813.0	808.0	823.0	816.0	814.0	823.0	831.0	831.0	833.0	
	SM	FOB Korea	1,350.0	1,339.5	1,331.5	1,346.5	1,379.0	1,374.0	1,364.0	1,364.0	1,353.0	1,337.0	1,349.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	Naphtha	CFR Japan	642.5	662.0	661.5	613.0	568.0	414.0	484.5	399.5	493.5	616.5
	<i>Change, %</i>			(2.9)	(2.9)	4.8	13.1	55.2	32.6	60.8	30.2	4.2
	Ethylene	CFR SE Asia	1,290.0	1,290.0	1,260.0	1,275.0	1,250.0	892.5	990.0	1,040.9	1,090.9	1,237.5
	<i>Change, %</i>			0.0	2.4	1.2	3.2	44.5	30.3	23.9	18.2	4.2
	Propylene	CFR SE Asia	970.0	965.0	1,015.0	977.5	980.0	755.0	815.0	705.7	823.6	1,053.8
	<i>Change, %</i>			0.5	(4.4)	(0.8)	(1.0)	28.5	19.0	37.5	17.8	(8.0)
	Butadiene	CFR SE Asia	1,675.0	1,680.0	1,625.0	1,250.0	1,390.0	975.0	2,100.0	1,116.8	1,481.1	1,441.4
	<i>Change, %</i>			(0.3)	3.1	34.0	20.5	71.8	(20.2)	50.0	13.1	16.2
	Benzene	CFR SE Asia	830.0	820.0	832.5	832.5	867.5	732.5	822.5	646.7	838.8	868.0
	<i>Change, %</i>			1.2	(0.3)	(0.3)	(4.3)	13.3	0.9	28.3	(1.1)	(4.4)
	Toluene	CFR SE Asia	795.0	795.0	815.0	740.0	720.0	630.0	690.0	630.5	689.5	768.0
	<i>Change, %</i>			0.0	(2.5)	7.4	10.4	26.2	15.2	26.1	15.3	3.5
	Xylene	CFR SE Asia	822.5	815.0	827.5	760.0	762.5	615.0	675.0	627.7	668.8	782.1
	<i>Change, %</i>			0.9	(0.6)	8.2	7.9	33.7	21.9	31.0	23.0	5.2

Spread			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Ethylene	-Naphtha		647.5	628.0	598.5	662.0	682.0	478.5	505.5	641.4	597.4	621.0
	<i>Change, %</i>			3.1	8.2	(2.2)	(5.1)	35.3	28.1	1.0	8.4	4.3
Propylene	-Naphtha		327.5	303.0	353.5	364.5	412.0	341.0	330.5	306.2	330.1	437.4
	<i>Change, %</i>			8.1	(7.4)	(10.2)	(20.5)	(4.0)	(0.9)	7.0	(0.8)	(25.1)
Butadiene	-Naphtha		1,032.5	1,018.0	963.5	637.0	822.0	561.0	1,615.5	717.3	987.6	824.9
	<i>Change, %</i>			1.4	7.2	62.1	25.6	84.0	(36.1)	43.9	4.5	25.2
Benzene	-Naphtha		187.5	158.0	171.0	219.5	299.5	318.5	338.0	247.2	345.3	251.6
	<i>Change, %</i>			18.7	9.6	(14.6)	(37.4)	(41.1)	(44.5)	(24.1)	(45.7)	(25.5)
Toluene	-Naphtha		152.5	133.0	153.5	127.0	152.0	216.0	205.5	231.0	196.0	151.6
	<i>Change, %</i>			14.7	(0.7)	20.1	0.3	(29.4)	(25.8)	(34.0)	(22.2)	0.6
Xylene	-Naphtha		180.0	153.0	166.0	147.0	194.5	201.0	190.5	228.2	175.3	165.6
	<i>Change, %</i>			17.6	8.4	22.4	(7.5)	(10.4)	(5.5)	(21.1)	2.7	8.7

자료 : Cischem, 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	1,227.5	1,227.5	1,272.5	1,197.5	1,282.5	1,047.5	1,142.5	1,134.6	1,142.5	1,257.1
	Change, %			0.0	(3.5)	2.5	(4.3)	17.2	7.4	8.2	7.4	(2.4)
	MEG	CFR SE Asia	932.5	927.5	952.5	1,035.0	865.0	855.0	847.5	660.8	850.6	977.2
	Change, %			0.5	(2.1)	(9.9)	7.8	9.1	10.0	41.1	9.6	(4.6)
	PVC	CFR SE Asia	935.0	935.0	932.5	960.0	970.0	885.0	920.0	823.4	899.9	942.2
	Change, %			0.0	0.3	(2.6)	(3.6)	5.6	1.6	13.6	3.9	(0.8)
	PP	CFR SE Asia	1,252.5	1,262.5	1,292.5	1,247.5	1,297.5	1,047.5	1,032.5	978.4	1,099.6	1,261.4
	Change, %			(0.8)	(3.1)	0.4	(3.5)	19.6	21.3	28.0	13.9	(0.7)
	2-EH	CFR Korea	1,090.0	1,100.0	1,120.0	1,155.0	1,130.0	932.5	865.0	772.4	970.0	1,117.1
	Change, %			(0.9)	(2.7)	(5.6)	(3.5)	16.9	26.0	41.1	12.4	(2.4)
	ABS	CFR SE Asia	1,930.0	1,960.0	2,060.0	1,990.0	2,020.0	1,800.0	1,635.0	1,347.1	1,844.7	2,027.1
	Change, %			(1.5)	(6.3)	(3.0)	(4.5)	7.2	18.0	43.3	4.6	(4.8)
	SBR	CFR SE Asia	1,750.0	1,770.0	1,900.0	1,630.0	1,750.0	1,450.0	2,000.0	1,483.0	1,980.5	1,753.6
	Change, %			(1.1)	(7.9)	7.4	0.0	20.7	(12.5)	18.0	(11.6)	(0.2)
	SM	CFR SE Asia	1,402.5	1,367.5	1,492.5	1,365.0	1,337.5	1,202.5	1,205.0	1,064.6	1,253.8	1,400.5
	Change, %			2.6	(6.0)	2.7	4.9	16.6	16.4	31.7	11.9	0.1
	Caustic	FOB NEA	410.0	475.0	539.0	626.0	601.0	457.5	422.5	316.6	491.2	568.4
	Change, %			(13.7)	(23.9)	(34.5)	(31.8)	(10.4)	(3.0)	29.5	(16.5)	(27.9)
	PX	CFR SE Asia	995.0	995.0	980.0	947.5	940.0	785.0	855.0	790.4	844.4	966.4
	Change, %			0.0	1.5	5.0	5.9	26.8	16.4	25.9	17.8	3.0
PO	CFR China	1,797.5	1,735.0	1,787.5	1,915.0	1,875.0	1,530.0	1,562.5	1,396.8	1,601.2	1,874.7	
Change, %			3.6	0.6	(6.1)	(4.1)	17.5	15.0	28.7	12.3	(4.1)	
Caprolactam	CFR SE Asia	2,145.0	2,140.0	2,150.0	2,220.0	2,180.0	1,610.0	1,850.0	1,344.9	1,936.4	2,121.1	
Change, %			0.2	(0.2)	(3.4)	(1.6)	33.2	15.9	59.5	10.8	1.1	
PTA	CFR SE Asia	855.0	865.0	857.5	792.5	790.0	665.0	642.5	613.7	667.8	806.1	
Change, %			(1.2)	(0.3)	7.9	8.2	28.6	33.1	39.3	28.0	6.1	
Spread	HDPE		585.0	565.5	611.0	584.5	714.5	633.5	658.0	735.1	649.0	640.6
	Change, %			3.4	(4.3)	0.1	(18.1)	(7.7)	(11.1)	(20.4)	(9.9)	(8.7)
	MEG		290.0	265.5	291.0	422.0	297.0	441.0	363.0	261.3	357.1	360.8
	Change, %			9.2	(0.3)	(31.3)	(2.4)	(34.2)	(20.1)	11.0	(18.8)	(19.6)
	PVC		292.5	273.0	271.0	347.0	402.0	471.0	435.5	423.9	406.4	325.8
	Change, %			7.1	7.9	(15.7)	(27.2)	(37.9)	(32.8)	(31.0)	(28.0)	(10.2)
	PP		610.0	600.5	631.0	634.5	729.5	633.5	548.0	578.9	606.1	644.9
	Change, %			1.6	(3.3)	(3.9)	(16.4)	(3.7)	11.3	5.4	0.6	(5.4)
	2-EH		447.5	438.0	458.5	542.0	562.0	518.5	380.5	372.9	476.5	500.7
	Change, %			2.2	(2.4)	(17.4)	(20.4)	(13.7)	17.6	20.0	(6.1)	(10.6)
	ABS		1,287.5	1,298.0	1,398.5	1,377.0	1,452.0	1,386.0	1,150.5	947.6	1,351.2	1,410.7
	Change, %			(0.8)	(7.9)	(6.5)	(11.3)	(7.1)	11.9	35.9	(4.7)	(8.7)
	SBR	BD spread	75.0	90.0	275.0	380.0	360.0	475.0	(100.0)	366.2	499.4	312.1
	Change, %			(16.7)	(72.7)	(80.3)	(79.2)	(84.2)	(175.0)	(79.5)	(85.0)	(76.0)
	SM		760.0	705.5	831.0	752.0	769.5	788.5	720.5	665.1	760.3	784.1
	Change, %			7.7	(8.5)	1.1	(1.2)	(3.6)	5.5	14.3	(0.0)	(3.1)
	Caustic											
	Change, %											
	PX		352.5	333.0	318.5	334.5	372.0	371.0	370.5	390.9	351.0	349.9
	Change, %			5.9	10.7	5.4	(5.2)	(5.0)	(4.9)	(9.8)	0.4	0.7
PO	propylene spread	827.5	770.0	772.5	937.5	895.0	775.0	747.5	691.1	777.6	820.9	
Change, %			7.5	7.1	(11.7)	(7.5)	6.8	10.7	19.7	6.4	0.8	
Caprolactam	benzene spread	1,315.0	1,320.0	1,317.5	1,387.5	1,312.5	877.5	1,027.5	698.2	1,097.6	1,253.0	
Change, %			(0.4)	(0.2)	(5.2)	0.2	49.9	28.0	88.3	19.8	4.9	
PTA	px spread	158.5	168.5	171.5	129.3	132.0	115.5	44.0	60.4	76.7	129.6	
Change, %			(5.9)	(7.6)	22.6	20.1	37.2	260.2	162.3	106.7	22.3	

자료 : Ciscchem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	07/19	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA	
											18E	19E	18E	19E	18E	19E
Petrochemical																
DowDuPont	USD	66.1	(0.7)	(0.2)	(0.3)	(0.6)	(13.0)	(0.9)	(7.1)	168,245	17.7	14.9	1.8	1.7	10.2	9.2
Eastman	USD	100.7	(0.7)	1.5	(3.3)	(6.3)	2.6	16.9	8.7	13,550	11.6	10.7	2.5	2.2	8.7	8.1
BASF	EUR	83.6	(0.8)	2.5	(1.9)	(2.7)	(14.5)	2.2	(8.9)	101,214	14.6	13.6	2.4	2.2	7.8	7.4
Akzo Nobel	EUR	77.4	(0.9)	5.5	3.7	(1.1)	3.4	(1.0)	6.0	22,073	17.0	15.8	3.0	2.8	9.3	8.8
Arkema	EUR	104.7	(1.2)	2.8	3.5	(4.8)	(2.5)	4.4	3.1	9,270	13.2	12.2	1.7	1.6	6.3	6.0
Lanxess	EUR	68.9	(1.0)	2.7	(1.4)	11.1	(6.7)	0.8	3.9	7,282	15.5	13.1	2.1	1.9	9.3	8.2
Sumitomo Chemical	JPY	631	0.2	3.6	3.4	(2.6)	(26.8)	(3.7)	(22.1)	11,911	10.1	10.5	1.3	1.2	7.4	8.0
Mitsubishi Chemical	JPY	962	0.6	5.0	4.1	(9.5)	(20.4)	(2.8)	(22.2)	16,544	9.2	8.7	1.3	1.2	6.3	6.1
Shin-Etsu Chemical	JPY	10,550	0.2	2.1	8.1	(5.9)	(15.3)	4.2	(7.9)	43,948	18.5	16.6	1.9	1.8	8.1	7.4
Asahi Kasei	JPY	1,465	(0.8)	4.7	2.3	(3.2)	(1.3)	14.3	0.8	18,109	14.4	13.6	1.5	1.4	7.4	7.0
JSR	JPY	1,949	0.2	1.6	4.8	(17.7)	(13.5)	(1.0)	(12.1)	4,455	14.5	13.4	1.2	1.1	7.7	7.2
Nitto Denko	JPY	8,080	0.8	1.8	(5.1)	(6.6)	(19.5)	(17.6)	(19.3)	15,450	15.7	14.6	2.1	1.9	7.3	7.0
SABIC	SAR	129.6	0.2	2.2	2.4	5.6	21.8	31.1	27.8	80,773	14.2	13.7	1.7	1.7	7.3	7.1
Yansab	SAR	76.8	0.4	2.1	5.2	4.0	19.0	43.9	30.2	8,861	13.7	13.9	2.2	1.9	9.0	8.9
Formosa Plastics	TWD	107.5	(0.9)	1.4	1.9	1.9	7.0	16.8	8.9	21,114	14.4	13.9	1.8	1.8	18.9	19.2
Formosa Fiber	TWD	113.0	(0.4)	(0.9)	1.8	3.2	5.1	22.6	9.7	20,511	13.7	13.4	1.7	1.7	11.6	11.5
Nan Ya Plastics	TWD	83.9	(2.0)	(0.9)	1.3	0.1	3.5	12.5	7.7	20,648	14.8	15.3	1.7	1.7	16.2	16.4
Sinopec Shanghai	CNY	5.20	(0.2)	(5.8)	(12.0)	(11.0)	(23.8)	(21.9)	(17.9)	9,462	12.0	12.6	2.2	2.0	6.8	7.3
Sinopec Yizheng(Fibe	CNY	1.86	(1.1)	(1.1)	(3.6)	(9.3)	(36.5)	(40.8)	(30.3)	5,394	50.4	66.3	5.3	5.0	13.9	10.3
Reliance	INR	1,105	1.1	2.1	10.9	17.3	18.6	44.1	21.4	93,404	14.4	12.9	1.7	1.5	9.4	8.7
Industries Qatar	QAR	118.6	(0.3)	4.4	12.0	5.4	7.8	19.7	22.3	16,144	14.5	13.9	1.6	1.5	46.4	27.2
PTT Chemical	THB	77.0	0.3	(0.6)	(3.4)	(24.9)	(18.1)	10.4	(9.4)	11,766	10.7	10.4	1.4	1.3	5.5	5.4
Petronas	MYR	8.8	(0.6)	3.2	5.3	3.8	8.6	26.8	14.3	15,624	16.1	15.5	2.0	1.9	9.2	8.9
LG화학	KRW	336,000	1.5	3.9	(3.9)	(10.6)	(20.7)	5.5	(17.0)	27,313	13.8	12.8	1.8	1.6	6.5	6.1
롯데케미칼	KRW	338,000	(0.1)	(2.5)	(4.5)	(15.8)	(12.8)	(5.3)	(8.2)	11,632	5.5	5.2	0.9	0.8	3.6	3.3
한화케미칼	KRW	20,000	(2.2)	(1.5)	(10.9)	(31.4)	(40.7)	(39.2)	(36.7)	5,050	5.7	5.5	0.8	0.7	6.7	6.5
금호석유	KRW	112,000	0.4	(1.3)	7.2	15.7	5.2	53.8	12.6	2,969	14.1	11.9	1.6	1.5	9.3	8.4
SKC	KRW	41,950	(0.9)	(3.3)	4.7	11.6	(5.0)	9.4	(10.7)	1,643	9.9	8.7	1.1	1.0	8.8	7.9
국도화학	KRW	55,400	(2.5)	(4.5)	(13.2)	(6.1)	(13.4)	0.7	(12.2)	359	#N/A	N/A	#N/A	N/A	#N/A	N/A
효성	KRW	6,420	7.0	1.6	(6.8)	(27.9)	(27.2)	3.5	(15.3)	4,595	8.2	7.3	1.1	1.0	7.2	6.8
Average			(0.1)	1.1	0.4	(3.9)	(7.6)	7.0	(2.7)							
Refinery																
Valero	USD	107.0	0.3	0.2	(8.2)	(1.1)	10.0	57.3	16.4	40,608	14.1	13.4	2.0	2.0	6.9	6.9
Conoco Phillips	USD	69.7	(0.9)	(2.5)	5.2	5.1	16.6	59.6	27.0	66,136	34.0	25.9	2.2	2.2	7.2	6.7
Formosa Petrochemi	TWD	120.0	(0.4)	1.3	1.3	0.8	(0.8)	14.8	3.9	37,040	18.2	18.7	3.2	3.2	11.7	12.1
Andeavor	USD	137.5	0.4	2.9	(0.4)	18.0	16.2	40.7	20.2	17,904	12.9	11.4	1.8	1.7	7.3	7.1
Marathon Petroleum	USD	72.9	0.4	3.3	(2.2)	(8.2)	1.3	31.2	10.4	32,812	15.0	12.8	2.6	2.7	7.7	7.5
Devon Energy	USD	44.1	0.9	0.5	6.1	23.7	3.0	35.8	6.6	22,192	17.5	14.0	2.7	2.3	8.4	7.4
Hollyfrontier	USD	71.8	0.3	5.7	(3.9)	23.3	41.0	158.9	40.2	9,094	16.8	15.2	1.8	1.8	8.0	8.0
Phillips 66	USD	110.9	0.0	(0.2)	(3.2)	0.2	5.0	33.7	9.6	51,561	15.6	14.5	2.3	2.2	9.0	8.8
Murphy Oil	USD	32.1	(0.6)	(2.6)	(5.9)	4.9	(6.4)	21.9	3.3	5,548	162.4	113.2	1.2	1.1	4.9	4.5
JX Holdings	JPY	792.6	2.8	3.6	7.1	12.1	2.6	62.1	9.0	22,130	8.8	8.0	0.9	0.9	7.0	6.6
Idemitsu	JPY	4,950.0	3.1	3.6	38.8	22.4	13.8	83.5	9.4	8,360	7.9	7.5	1.0	0.9	6.8	6.8
Nesteoil	EUR	67.4	1.3	0.0	2.6	21.7	15.5	84.1	26.3	16,473	16.7	16.7	2.9	2.7	10.2	10.3
Ashland	USD	81.3	0.7	0.2	3.6	15.4	9.3	21.5	14.1	4,550	21.6	18.7	1.3	1.3	10.2	9.6
Fuchs Petrolub	EUR	43.8	0.3	0.9	0.3	(0.4)	(2.4)	(12.0)	(1.0)	7,127	22.1	20.9	4.1	3.7	13.0	12.3
SK이노베이션	KRW	194,500	1.6	2.1	(5.1)	(1.8)	0.0	16.1	(4.9)	17,975	7.9	7.7	0.9	0.9	4.9	4.8
S-Oil	KRW	116,500	1.7	9.9	6.4	0.4	3.1	12.6	(0.4)	12,400	9.3	8.1	1.8	1.6	7.6	6.6
GS	KRW	51,800	(0.4)	2.2	(6.0)	(15.6)	(19.8)	(28.3)	(16.7)	5,467	6.0	5.5	0.7	0.6	6.9	6.3
Average			0.7	1.8	2.1	7.1	6.4	40.8	10.2							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	07/19	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	82	(0.3)	(0.8)	1.6	3.3	(5.9)	1.4	(1.9)	347,217	16.4	15.1	1.8	1.7	7.6	7.1
BP	GBP	570	1.4	(0.3)	(0.1)	10.3	11.8	27.8	9.0	147,927	13.6	12.5	1.4	1.4	5.2	5.0
Shell	EUR	2,662	1.3	1.2	3.9	7.1	5.7	29.1	7.3	292,442	12.2	10.9	1.4	1.4	5.7	5.4
Chevron	USD	122	0.1	(2.1)	(3.1)	(1.6)	(7.3)	16.5	(2.8)	232,506	15.0	14.3	1.5	1.5	6.2	6.0
Total	EUR	53	(0.0)	(0.7)	2.1	5.1	11.8	21.9	14.8	163,626	11.6	10.8	1.3	1.2	5.4	5.1
Sinopec	CNY	6	0.6	(1.6)	(3.1)	(9.4)	(11.2)	2.5	2.0	110,607	10.0	9.5	1.0	0.9	3.7	3.7
Petrochina	CNY	7	(0.5)	(5.2)	(2.3)	(6.6)	(19.6)	(10.7)	(10.5)	187,097	23.0	19.5	1.1	1.1	5.2	5.1
CNOOC	CNY	9	0.0	(3.7)	(2.9)	(23.1)	(26.9)	(16.9)	(14.5)	69,959	8.7	8.7	1.2	1.1	3.8	3.7
Gazprom	RUB	138	(0.5)	(5.2)	1.5	(4.1)	(7.7)	14.5	5.4	51,070	3.0	3.1	0.2	0.2	2.5	2.5
Rosneft	RUB	401	(0.1)	(1.5)	2.1	18.7	22.1	25.7	37.4	66,555	7.6	6.5	0.9	0.8	4.5	4.4
Anadarko	USD	71	(0.6)	(3.5)	2.9	7.6	22.1	58.3	32.5	36,612	23.5	19.0	3.9	3.4	6.8	5.9
Petrobras	BRL	18	1.9	2.5	19.3	(17.1)	0.8	39.1	14.3	66,638	6.9	6.1	0.7	0.7	4.4	4.1
Lukoil	USD	4,334	0.8	2.3	5.9	7.9	13.3	49.7	30.0	57,872	5.5	5.7	0.8	0.7	N/A	N/A
Kinder	USD	18	1.2	(0.2)	3.7	8.8	(5.4)	(8.5)	(0.4)	47,497	20.7	18.3	1.2	1.2	10.4	10.3
Equinor ASA	NOK	214	1.0	(1.9)	(0.1)	6.7	17.7	53.8	22.2	86,596	13.6	12.5	1.9	1.8	3.3	3.2
BHP	AUD	34	0.1	0.1	3.9	8.7	9.5	35.4	13.7	124,036	14.6	16.4	2.2	2.1	6.0	6.3
PTT E&P	THB	131	0.8	(2.2)	4.4	(1.5)	13.9	55.0	31.0	15,541	12.7	12.0	1.3	1.2	3.9	3.6
Petronas gas	MYR	18	(0.2)	2.9	6.6	(0.9)	1.2	(2.3)	5.4	8,947	19.4	19.2	2.8	2.7	10.6	10.5
Chesapeake	USD	5	0.2	(8.8)	(2.5)	54.1	18.2	(5.8)	17.9	4,258	5.6	6.0	311.3	5.3	6.3	6.0
Noble Energy	USD	35	1.2	(3.3)	(0.3)	2.7	9.7	17.0	19.3	16,834	30.8	21.8	1.6	1.5	7.7	6.4
Average		0	0.4	(1.6)	2.2	3.8	3.7	20.2	11.6							
PV																
WACKER	EUR	118.9	(0.8)	1.8	5.2	(21.3)	(31.3)	17.2	(26.7)	7,194	17.3	15.3	1.8	1.8	6.0	5.7
GCL-Poly	HKD	0.7	(2.9)	(4.3)	(9.6)	(32.7)	(52.5)	(29.8)	(52.9)	1,544	5.9	5.2	0.4	0.4	6.3	5.8
SunPower	USD	7.6	2.4	(5.1)	(6.6)	(22.6)	(12.6)	(32.2)	(10.3)	1,065	#N/A	N/A	#N/A	N/A	20.3	11.8
Canadian Solar	USD	13.1	1.9	0.1	10.1	(18.6)	(17.3)	(25.0)	(22.5)	766	8.7	8.8	0.8	0.7	7.8	8.4
JA Solar	USD	7.5	0.0	0.4	7.5	8.4	0.3	14.0	0.4	356	#N/A	N/A	#N/A	N/A	4.9	7.1
Yingli	USD	0.4	19.3	0.4	(72.7)	(77.0)	(77.9)	(83.1)	(75.1)	8	#N/A	N/A	#N/A	N/A	#N/A	N/A
First Solar	USD	53.9	(0.2)	(1.5)	3.2	(30.0)	(23.1)	18.0	(20.2)	5,645	31.6	17.4	1.0	1.0	9.6	5.2
한화큐셀	USD	5.7	0.0	0.2	(6.5)	(23.3)	(22.3)	(34.5)	(18.7)	475	10.2	21.1	#N/A	N/A	7.8	8.0
OCI	KRW	94,400	(1.5)	(2.7)	(9.7)	(42.4)	(43.3)	7.9	(30.6)	1,977	0.0	9.4	0.0	0.6	0.0	4.4
웅진에너지	KRW	3,145	(6.7)	(10.9)	(35.9)	(47.8)	(67.7)	(62.9)	(61.7)	82	N/A	0.0	0.6	0.0	4.4	0.0
신성솔라에너지	KRW	1,315	(2.2)	(2.6)	(16.2)	(19.1)	(41.8)	(36.9)	(31.3)	200	N/A	0.6	0.0	4.4	0.0	2.3
Average			0.8	(2.2)	(11.9)	(29.7)	(35.4)	(22.5)	(31.8)							
Gas Company																
Towngas China	HKD	7.7	(1.7)	(2.7)	8.5	11.8	26.9	41.5	22.6	2,756	15.1	13.5	1.3	1.2	12.6	11.5
Kulun	HKD	6.7	(1.6)	(3.3)	(4.2)	3.1	(12.8)	(11.7)	(18.2)	6,849	9.7	8.4	1.1	1.0	5.6	5.1
Beijing Enterprise	HKD	37.8	0.1	(2.1)	(6.8)	(6.4)	(20.5)	(9.7)	(18.6)	6,069	6.6	5.9	0.6	0.6	11.8	11.2
ENN Energy	HKD	86.2	1.7	6.9	14.9	24.9	61.8	63.3	54.5	11,910	19.5	16.4	3.9	3.4	11.3	9.9
China Resources Gas	HKD	36.5	2.7	6.7	21.5	29.0	51.5	22.1	28.7	10,341	19.0	17.0	3.3	2.8	10.3	9.4
China Gas Holdings	HKD	34.0	(0.4)	(0.3)	7.9	23.5	52.9	79.4	57.2	21,489	21.9	18.4	5.0	4.2	16.4	13.9
Shenzen Gas	HKD	14.6	(2.1)	(2.7)	(11.5)	(13.7)	(5.9)	7.5	(2.0)	3,917	8.9	7.7	1.2	1.0	5.7	4.9
Shann Xi	CNY	7.3	(0.3)	0.8	9.5	(1.0)	(10.0)	(14.5)	(14.1)	1,185	16.7	14.6	1.4	1.3	#N/A	N/A
Suntien	HKD	2.4	(0.4)	4.0	3.1	(0.8)	15.2	35.1	13.5	1,112	6.2	5.5	0.8	0.7	8.4	7.3
China Oil & Gas	HKD	0.6	5.2	1.7	(4.7)	1.7	(23.8)	7.0	(28.2)	454	#N/A	N/A	#N/A	N/A	#N/A	N/A
Average			0.3	0.9	3.8	7.2	13.5	22.0	9.5							
EV																
LG화학	KRW	336,000	1.5	3.9	(3.9)	(10.6)	(20.7)	5.5	(17.0)	20,826	12.7	11.5	1.4	1.3	5.9	5.3
삼성SDI	KRW	235,000	3.5	0.6	8.8	24.0	15.2	32.0	14.9	14,189	22.0	15.9	1.4	1.3	15.1	11.8
Panasonic	JPY	1450.5	(0.1)	3.3	(4.4)	(7.5)	(14.5)	(3.6)	(12.1)	31,527	13.2	11.6	1.8	1.6	4.8	4.4
GS Yuasa	JPY	505.0	(0.2)	2.0	2.6	(13.8)	(14.3)	(0.4)	(10.0)	1,851	15.2	14.0	1.1	1.1	7.0	6.5
NEC	JPY	3070.0	0.8	4.7	(1.3)	4.2	(1.1)	3.7	1.0	7,085	23.3	13.1	0.9	0.8	7.3	5.6
BYD Auto	CNY	42.2	(2.7)	(9.4)	(6.3)	(21.8)	(33.3)	(15.0)	(35.2)	16,306	24.9	18.8	2.0	1.8	11.5	9.9
Tesla Motors	USD	320.2	(1.1)	1.1	(9.2)	6.7	(8.5)	(1.5)	2.9	54,373	#N/A	N/A	136.6	10.7	9.9	62.5
Kandi Technologies	USD	4.2	(3.1)	(0.6)	(15.2)	(15.2)	(37.8)	(1.2)	(38.2)	214	#N/A	N/A	#N/A	N/A	#N/A	N/A
Average			(0.2)	0.7	(3.6)	(4.2)	(14.4)	2.4	(11.7)							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임