

1. News Summary (3 page)

2017년 9월 20일

News	
WTI comment	소폭 조정...WTI 0.9%↓
Headline	中 수요 급증... 굴착기 수출, 사드도 못막았다
News 1.	Chevron Phillips, 텍사스 크래커 완공 시점 2018년 1분기로 연기
News 2.	조선 "배 만들면 겨우 1% 남아" VS 철강 "후판사업만 적자"
News 3.	-
News 4.	-

Conclusion	
	일대일로와 가스 인프라 투자 수요로 굴착기 판매량 꾸준히 늘어날 것
	하비 영향으로 공사가 지연되었으나 가동되는 것은 변하지 않음
	낮은 선가가 유지되는 가운데 후판가 인상은 마진스퀴즈 야기할 것
	-
	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	49.5	(0.9)	2.6	3.9	14.5	13.9
Dubai	\$/bbl	54.1	(0.2)	3.6	8.2	18.5	28.8
Gasoline	\$/bbl	70.6	(0.9)	0.5	4.4	21.5	25.0
Diesel	\$/bbl	68.2	(0.1)	1.5	9.5	19.3	29.0
Complex margin	\$/bbl	9.3	(0.1)	(0.8)	0.6	1.8	1.9
1M lagging	\$/bbl	14.7	0.6	4.1	4.4	12.6	12.6
Petrochemical			%	%	%	%	%
Naphtha	\$/t	512	(0.3)	2.1	12.7	23.6	30.2
Butadiene	\$/t	1,550	0.0	5.4	29.2	87.9	34.8
HDPE	\$/t	1,180	(0.8)	(0.8)	5.4	9.8	3.5
MEG	\$/t	918	0.8	(3.3)	7.1	22.4	46.4
PX	\$/t	832	0.6	0.5	3.7	7.2	7.8
SM	\$/t	1,329	2.1	(1.3)	13.1	21.5	34.2
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	3.12	(0.8)	4.0	5.2	5.7	0.3
Natural rubber	\$/t	1,520	0.0	(7.9)	(1.9)	10.1	10.9
Cotton	C/lbs	70.0	(0.6)	(1.0)	1.6	(1.9)	(1.2)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	09/18	\$/t	1,250	2.0	7.3	46.2	16.8
Propylene	09/18	\$/t	860	(1.1)	11.0	16.6	8.9
Benzene	09/18	\$/t	795	(3.3)	2.6	1.6	24.2
Toluene	09/18	\$/t	700	2.2	6.9	8.5	10.2
Xylene	09/18	\$/t	658	3.5	3.5	6.0	6.0
PP	09/18	\$/t	1,168	1.7	5.4	10.4	16.8
PVC	09/18	\$/t	950	0.5	6.7	8.0	10.5
ABS	09/18	\$/t	2,070	2.0	10.7	21.1	49.5
SBR	09/18	\$/t	1,830	2.2	18.8	26.2	31.2
SM	09/18	\$/t	1,358	(5.7)	13.8	16.5	31.8
BPA	09/18	\$/t	1,655	(12.3)	(18.2)	18.6	4.9
Caustic	09/18	\$/t	480	0.6	0.8	9.7	47.7
2-EH	09/18	\$/t	990	0.0	3.1	7.0	28.6
Caprolactam	09/18	\$/t	1,780	3.5	(1.1)	11.3	26.2
Solar				%	%	%	%
Polysilicon	09/13	\$/kg	16.7	0.0	7.5	19.4	23.3
Module	09/13	\$/W	0.32	(0.3)	(0.3)	(3.3)	(21.7)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	80.2	0.2	0.9	4.7	(3.1)	(4.3)
Shell	EUR	2,131	0.9	(0.2)	0.8	0.0	16.3
Petrochina	CNY	7.97	(0.4)	(0.7)	0.3	4.2	9.5
Gazprom	RUB	121.8	(0.8)	(0.2)	5.0	3.8	(10.9)
Petrobras	BRL	15.1	0.7	1.8	11.3	23.2	16.0
Refinery							
Phillips66	USD	89.1	0.9	3.9	9.2	9.7	10.9
Valero	USD	72.7	0.7	3.6	12.3	9.2	27.2
JX	JPY	565.7	3.1	4.9	6.0	16.4	44.0
Neste Oil	EUR	36.0	(0.5)	(1.3)	3.9	0.4	(2.0)

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	87.2	0.0	1.5	7.4	0.1	23.9
DowDuPont	USD	70.1	0.4	2.2	10.5	7.4	32.1
SABIC	SAR	101.2	(0.3)	0.5	3.2	(1.9)	21.8
Formosa Pla.	TWD	94.8	(1.3)	(1.0)	2.2	4.5	22.5
Shin-Etsu	JPY	10,160	1.8	3.6	5.7	1.0	44.2
Renewable							
Wacker	EUR	114.2	1.4	1.2	9.7	20.7	53.3
First Solar	USD	48.86	0.7	2.9	1.7	34.4	42.0
GCL-Poly	HKD	1.09	6.9	22.5	16.0	45.3	(3.5)
Tesla Motors	USD	375.1	(2.6)	3.4	8.0	1.4	81.8

4. Coverage Summary

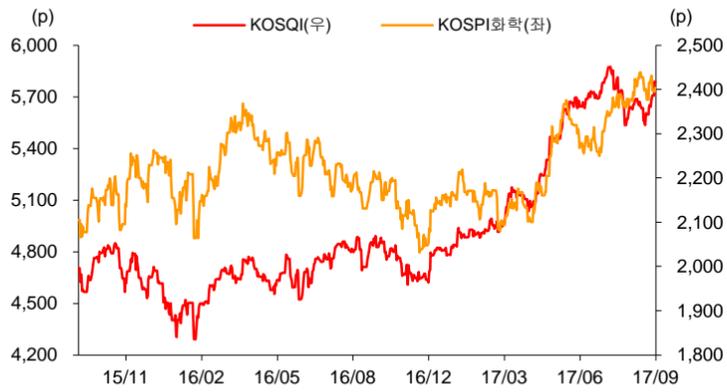
	09/19	1D	1W	1M	3M	6M	12M
KOSPI	2,416	(0.1)	2.1	2.4	2.5	12.0	20.8
KOSPI화학	5,752	0.4	(0.5)	1.2	6.5	13.8	13.9
LG화학	397,000	0.5	1.8	13.8	41.8	40.3	67.2
롯데케미칼	389,500	0.3	(6.1)	(0.9)	15.8	5.8	41.4
한화케미칼	38,000	0.0	2.6	7.6	26.5	52.6	62.0
금호석유화학	78,100	1.0	(2.6)	0.9	7.1	0.6	20.9
KCC	388,500	1.0	3.3	(3.0)	(5.9)	10.4	(0.5)
OCI	111,000	1.8	9.4	19.6	17.5	30.3	37.9
SKC	43,300	(0.2)	8.5	15.5	30.6	42.7	64.0
국도화학	54,300	2.6	6.7	(0.9)	(0.4)	12.7	(4.2)
SK이노베이션	189,500	(0.8)	(1.0)	11.1	20.7	17.0	25.1
S-Oil	120,500	1.3	(1.6)	6.2	28.1	24.7	61.7
GS	65,400	(0.9)	(3.0)	(3.8)	(2.8)	17.0	27.0
SK가스	105,000	(1.4)	(0.9)	(4.1)	(20.8)	(11.4)	4.0
포스코대우	21,350	(1.2)	1.4	(1.8)	(4.7)	(9.0)	(4.3)
LG상사	29,850	(0.2)	3.8	5.3	(2.6)	(0.5)	(14.8)
한국전력	40,150	(2.4)	(2.2)	(10.5)	(3.8)	(12.0)	(30.7)
한국가스공사	43,850	0.3	0.3	(4.8)	(15.5)	(6.6)	1.9

투자의견	TP	%	P/E	P/B
			* 추정치는 12M fwd 기준임	
			* 모든 coverage 업체의 실적은 연결기준임	
매수	330,000	(16.9)	15.80	2.13
매수	410,000	5.3	8.04	1.42
매수	33,000	(13.2)	9.07	1.13
매수	100,000	28.0	14.85	1.48
매수	450,000	15.8	22.10	0.63
매수	100,000	(9.9)	22.46	0.86
매수	40,000	(7.6)	16.32	1.15
매수	70,000	28.9	9.11	0.66
매수	180,000	(5.0)	8.52	1.03
매수	100,000	(17.0)	16.18	2.35
매수	80,000	22.3	5.44	0.96
매수	150,000	42.9	6.37	0.76
매수	27,000	26.5	7.42	0.88
매수	42,000	40.7	9.23	0.97
매수	60,000	49.4	6.94	0.32
매수	60,000	36.8	7.44	0.52

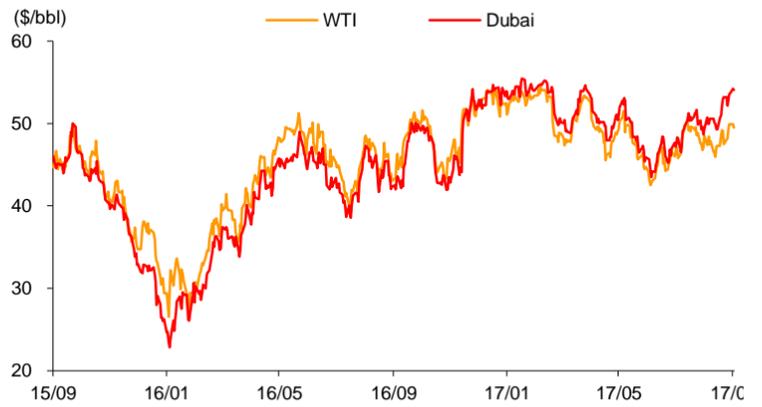
· 작성자(손지우)는 본 조사분석자료에 게재된 내용들이 본인의 의견을 정확하게 반영하고 있으며, 외부의 부당한 압력이나 간섭없이 신의성실하게 작성되었음을 확인합니다.
· 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.
· 본 보고서는 기관투자자 또는 제 3자에게 사전 제공된 사실이 없습니다.
· 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

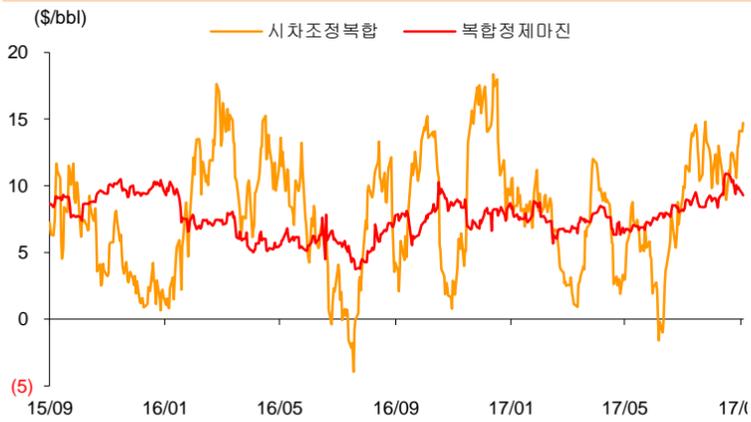
KOSPI/KOSPI화학



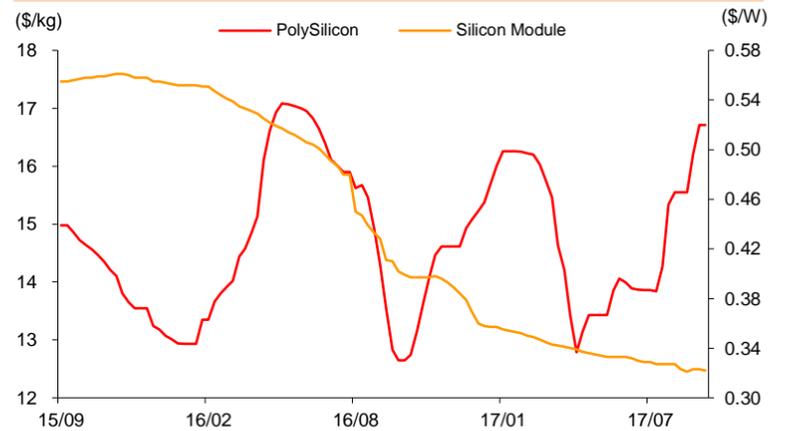
WTI/Dubai



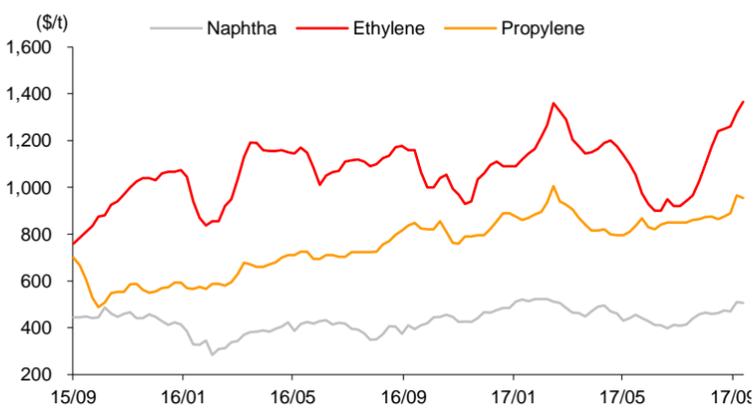
Complex & 1M lagging margin



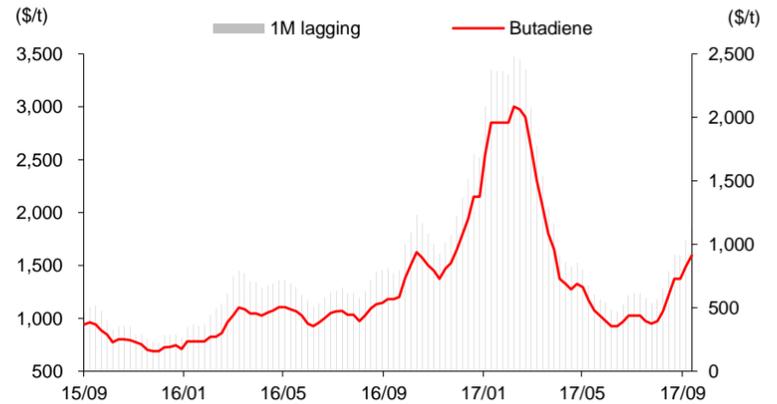
Polysilicon & Module prices



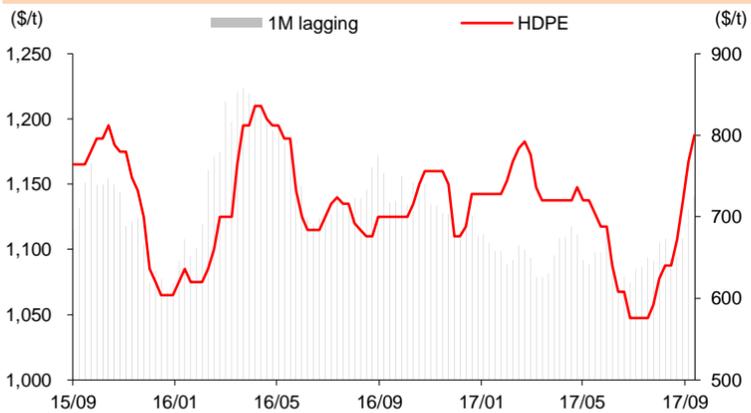
Naphtha/Ethylene/Propylene prices



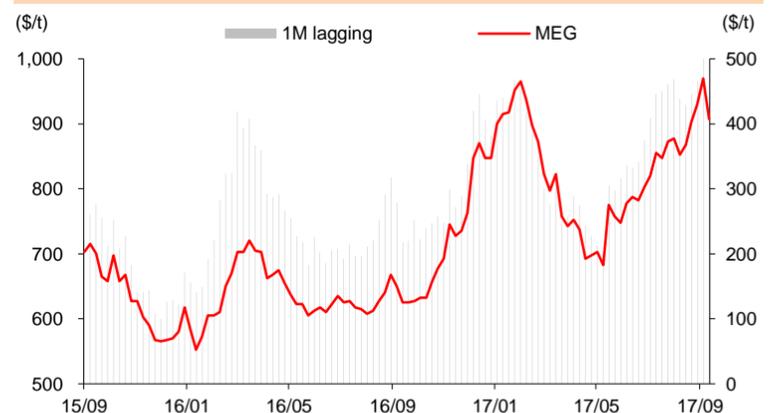
Butadiene price & 1M lagging naphtha spread



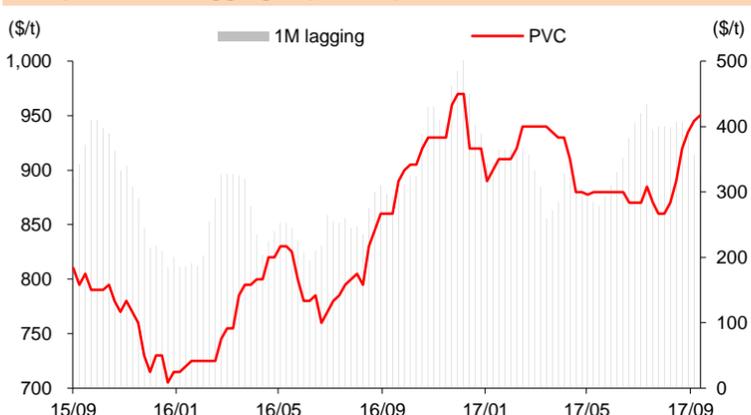
HDPE price & 1M lagging naphtha spread



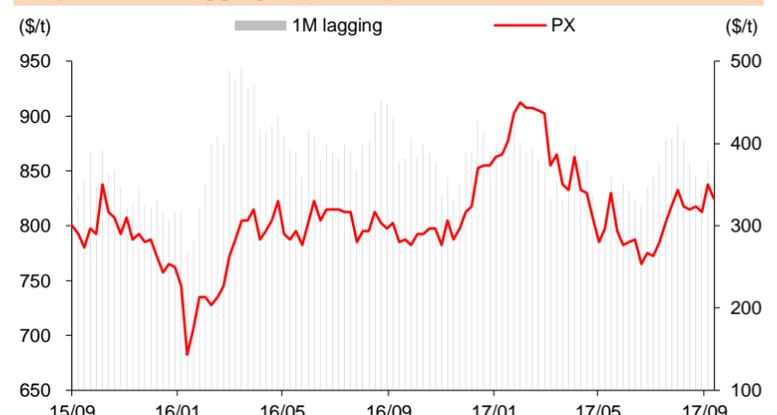
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

News Comment

Headline (출처: 조선일본)

제목 中 수요 급증... 굴착기 수출, 사드도 못막았다

결론 일대일로와 가스 인프라 투자 수요로 굴착기 판매량 꾸준히 늘어날 것

세부

- 1) 두산인프라코어, 7,163대 판매해 시장 점유율 상반기 8.6%로 확대됨
- 2) 현대건설기계, 2,665대 판매해 YoY 91.3% 증가함
- 3) 인프라 투자 재개·교체주기 겹쳐 8월까지 中전체 판매 85,766대 기록
- 4) 업계는 7만대 수준을 예상했으나 지금 추세라면 12만대까지 전망함
- 5) 일대일로와 가스 인프라 투자 수요로 굴착기 판매량 꾸준히 늘어날 것

Issue 1 (출처: Platts)

제목 Chevron Phillips, 텍사스 크래커 완공 시점 2018년 1분기로 연기

결론 하비 영향으로 공사가 지연되었으나 가동되는 것은 변하지 않음

세부

- 1) 1.5백만톤/년 규모의 휴스턴 크래커 완공 시점을 내년 1분기로 연기함
- 2) 관계자, "가동률 램프업은 내년 2분기에 이뤄질 전망"
- 3) 당초 올 4분기 완공 후 내년 1분기 램프업 예정이었음
- 4) 허리케인 하비의 영향으로 홍수 피해가 발생하여 지연됨
- 5) 하비 영향으로 공사가 지연되었으나 가동되는 것은 변하지 않음

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 소폭 조정...WTI 0.9%↓

상승

요인

하락 미국의 주간 원유재고가 늘어날 것이라는 전망

요인

Issue 2 (출처: 아시아경제)

제목 조선 "배 만들면 겨우 1% 남아" VS 철강 "후판사업만 적자"

결론 낮은 선가가 유지되는 가운데 후판가 인상은 마진스퀴즈 야기할 것

세부

- 1) 철강사들은 적자 폭을 줄이려 상반기에 후판 가격을 소폭 인상
- 2) 조선사들은 적자전환 우려로 하반기 후판 가격 인상을 반대하고 있음
- 3) VLCC 한 척을 건조해도 조선사들의 남은 이익은 9억~18억원
- 4) 철광석, 유연탄 값이 폭등하면서 열연, 냉연 가격은 꾸준히 올랐음
- 5) 낮은 선가가 유지되는 가운데 후판가 인상은 마진스퀴즈 야기할 것

Issue 4

제목

결론

세부

- 1)
- 2)
- 3)
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- 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	0.834	0.837	0.836	0.850	0.897	0.931	0.895	0.951	0.901	0.904	0.901	
	Change, %		(0.3)	(0.2)	(2.0)	(7.1)	(10.5)	(6.8)	(12.3)	(7.5)	(7.8)	(7.5)	
	USD/JPY	111.6	111.6	110.2	109.2	111.5	112.7	101.9	117.0	121.1	108.8	111.9	
	Change, %		0.0	1.3	2.2	0.1	(1.0)	9.5	(4.6)	(7.8)	2.6	(0.3)	
	USD/KRW	1,131.3	1,126.7	1,128.9	1,141.4	1,132.7	1,131.8	1,118.1	1,205.8	1,131.2	1,160.5	1,139.0	
	Change, %		0.4	0.2	(0.9)	(0.1)	(0.0)	1.2	(6.2)	0.0	(2.5)	(0.7)	
	Agriculture	Corn	348.3	351.5	340.0	352.0	375.3	367.5	337.3	352.0	376.8	358.5	364.2
		Change, %		(0.9)	2.4	(1.1)	(7.2)	(5.2)	3.3	(1.1)	(7.6)	(2.9)	(4.4)
Soybean		965.5	967.8	944.3	937.5	937.8	1,000.0	972.5	996.5	945.4	987.5	975.6	
Change, %			(0.2)	2.3	3.0	3.0	(3.5)	(0.7)	(3.1)	2.1	(2.2)	(1.0)	
	Wheat	443.0	443.5	419.5	416.0	467.0	436.3	404.0	408.0	508.1	436.4	439.8	
	Change, %		(0.1)	5.6	6.5	(5.1)	1.5	9.7	8.6	(12.8)	1.5	0.7	
	Rice	12.8	12.9	12.7	12.1	11.5	9.9	9.8	9.4	11.1	10.3	10.7	
	Change, %		(0.8)	0.7	5.2	10.9	28.9	30.9	36.6	15.6	23.6	19.1	
	Oats	240.3	239.8	235.5	254.8	268.3	250.0	173.0	228.5	250.2	196.3	251.7	
	Change, %		0.2	2.0	(5.7)	(10.4)	(3.9)	38.9	5.1	(4.0)	22.4	(4.5)	
	MYR/mt	Palm Oil	2,785.0	2,834.0	2,830.0	2,675.0	2,640.0	2,966.0	2,831.0	3,218.0	2,190.3	2,653.8	2,852.5
		Change, %		(1.7)	(1.6)	4.1	5.5	(6.1)	(1.6)	(13.5)	27.2	4.9	(2.4)
Cocoa		1,965.0	1,975.0	1,999.0	1,922.0	1,898.0	2,013.0	2,872.0	2,126.0	3,091.6	2,854.0	1,994.0	
Change, %			(0.5)	(1.7)	2.2	3.5	(2.4)	(31.6)	(7.6)	(36.4)	(31.1)	(1.5)	
	Cotton	70.0	70.4	70.7	67.8	71.4	78.4	69.0	70.7	63.3	65.6	74.4	
	Change, %		(0.6)	(1.0)	3.2	(2.0)	(10.7)	1.4	(0.9)	10.6	6.7	(5.9)	
	Sugar	13.8	14.3	14.0	13.4	13.5	18.2	22.1	19.5	13.1	18.2	16.3	
	Change, %		(3.8)	(1.9)	2.6	2.2	(24.3)	(37.7)	(29.5)	4.7	(24.2)	(15.8)	
	Coffee	134.0	139.0	133.8	128.1	124.2	140.8	151.5	137.1	132.6	136.1	135.9	
	Change, %		(3.6)	0.1	4.6	7.9	(4.9)	(11.6)	(2.3)	1.0	(1.5)	(1.5)	
	Energy	WTI	49.5	49.9	48.2	48.5	44.2	48.8	43.3	53.7	48.8	43.4	49.4
		Change, %		(0.9)	2.6	2.0	11.9	1.4	14.3	(7.9)	1.3	14.1	0.2
Brent		55.4	55.5	54.3	52.7	46.9	51.8	46.0	56.8	53.7	45.1	52.4	
Change, %			(0.2)	2.0	5.0	18.0	7.0	20.5	(2.6)	3.2	22.8	5.7	
	Natural Gas	3.1	3.1	3.0	2.9	2.9	2.9	2.9	3.7	2.6	2.6	3.1	
	Change, %		(0.8)	4.0	7.9	7.9	5.9	6.4	(16.2)	18.8	22.3	1.9	
	Ethanol	1.6	1.6	1.6	1.5	1.6	1.5	1.5	1.6	1.5	1.5	1.5	
	Change, %		(0.6)	0.5	3.3	0.5	1.0	4.1	(3.1)	3.1	2.8	1.3	
	RBOB Gasoline	165.5	166.9	165.6	162.4	145.1	159.9	142.1	166.5	163.6	140.0	159.7	
	Change, %		(0.8)	(0.1)	1.9	14.1	3.5	16.5	(0.6)	1.2	18.2	3.6	
	Coal	98.2	98.3	99.8	98.3	81.2	81.3	71.3	88.4	59.0	65.5	84.5	
	Change, %		(0.1)	(1.6)	(0.1)	20.9	20.8	37.8	11.1	66.6	50.0	16.2	
Metal	Gold	1,311.1	1,307.5	1,331.8	1,284.0	1,243.4	1,229.3	1,313.1	1,152.3	1,160.6	1,248.5	1,250.8	
	Change, %		0.3	(1.6)	2.1	5.4	6.7	(0.2)	13.8	13.0	5.0	4.8	
	Silver	17.3	17.2	17.9	17.0	16.5	17.4	19.2	15.9	15.7	17.1	17.2	
	Change, %		0.6	(3.3)	2.1	4.9	(0.5)	(9.7)	8.8	10.1	1.2	0.7	
	Copper	6,539.0	6,527.0	6,668.0	6,486.0	5,724.0	5,935.0	4,776.0	5,535.5	5,503.1	4,872.0	5,956.9	
	Change, %		0.2	(1.9)	0.8	14.2	10.2	36.9	18.1	18.8	34.2	9.8	
	Nickel	714.2	714.6	760.8	704.0	580.1	671.9	678.7	682.0	759.5	646.4	654.5	
	Change, %		(0.1)	(6.1)	1.4	23.1	6.3	5.2	4.7	(6.0)	10.5	9.1	
	Zinc	3,106.5	3,098.0	3,061.0	3,124.0	2,556.0	2,882.0	2,251.0	2,576.0	1,941.9	2,097.5	2,770.8	
	Change, %		0.3	1.5	(0.6)	21.5	7.8	38.0	20.6	60.0	48.1	12.1	
	Lead	2,405.0	2,364.3	2,281.3	2,346.3	2,107.0	2,285.5	1,951.5	2,003.5	1,791.2	1,868.3	2,247.9	
	Change, %		1.7	5.4	2.5	14.1	5.2	23.2	20.0	34.3	28.7	7.0	
	Aluminum	16,420.0	16,190.0	16,355.0	16,200.0	13,645.0	13,755.0	12,470.0	12,765.0	12,184.0	12,373.5	14,214.5	
	Change, %		1.4	0.4	1.4	20.3	19.4	31.7	28.6	34.8	32.7	15.5	
	Cobalt	59,844.5	59,850.0	60,650.0	60,296.0	57,500.0	52,750.0	26,750.0	32,734.0	28,444.4	25,480.1	52,626.3	
	Change, %		(0.0)	(1.3)	(0.7)	4.1	13.4	123.7	82.8	110.4	134.9	13.7	
	HR Coil	620.0	620.0	633.0	621.0	589.0	625.0	545.0	633.0	461.5	519.3	621.6	
	Change, %		0.0	(2.1)	(0.2)	5.3	(0.8)	13.8	(2.1)	34.4	19.4	(0.3)	
	Scrap	347.0	347.0	373.0	371.0	350.0	335.0	240.0	302.0	252.9	275.7	345.3	
	Change, %		0.0	(7.0)	(6.5)	(0.9)	3.6	44.6	14.9	37.2	25.9	0.5	

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		09/19	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	WTI	49.5	49.9	48.2	47.6	43.2	47.3	43.4	53.7	48.8	43.4	49.3
	<i>Change, %</i>		(0.9)	2.6	3.9	14.5	4.5	13.9	(7.9)	1.4	14.1	0.3
	Dubai	54.1	54.2	52.2	50.0	45.6	50.4	42.0	53.8	50.8	41.3	50.9
	<i>Change, %</i>		(0.2)	3.6	8.2	18.5	7.2	28.8	0.4	6.5	30.9	6.3
Crude Oil Product	Gasoline(휘발유)	70.6	71.2	70.2	67.6	58.1	63.8	56.4	69.8	69.5	56.3	65.9
	<i>Change, %</i>		(0.9)	0.5	4.4	21.5	10.6	25.0	1.0	1.5	25.4	7.1
	Kerosene(등유)	68.1	68.1	66.0	61.9	56.6	61.0	53.5	66.4	64.7	52.9	62.5
	<i>Change, %</i>		0.0	3.1	10.0	20.2	11.6	27.2	2.5	5.1	28.7	9.0
	Diesel(경유)	68.2	68.3	67.2	62.3	57.2	61.9	52.9	65.5	64.8	52.1	63.1
	<i>Change, %</i>		(0.1)	1.5	9.5	19.3	10.1	29.0	4.1	5.3	30.9	8.1
	Bunker-C	51.4	51.5	49.2	47.0	44.9	45.0	39.1	52.1	45.3	35.5	47.7
	<i>Change, %</i>		(0.3)	4.6	9.4	14.5	14.1	31.4	(1.2)	13.6	44.7	7.9
	Naphtha	55.0	55.2	53.8	50.1	44.3	50.2	41.7	53.5	52.6	42.6	50.6
	<i>Change, %</i>		(0.3)	2.2	9.7	24.0	9.5	31.8	2.8	4.5	29.1	8.6
Dubai Spread	Gasoline(휘발유)	16.5	17.0	18.1	17.6	12.4	13.4	14.4	16.0	18.7	14.9	15.0
	<i>Change</i>		(0.5)	(1.6)	(1.1)	4.1	3.1	2.1	0.5	(2.2)	1.5	1.4
	Kerosene(등유)	14.0	13.9	13.9	11.9	11.0	10.6	11.5	12.6	14.0	11.6	11.6
	<i>Change</i>		0.1	0.1	2.1	3.0	3.5	2.5	1.4	0.0	2.4	2.4
	Diesel(경유)	14.1	14.1	15.0	12.3	11.6	11.5	10.9	11.7	14.0	10.8	12.2
	<i>Change</i>		0.0	(0.9)	1.8	2.6	2.6	3.3	2.5	0.1	3.3	1.9
Dubai Spread	Bunker-C	(2.7)	(2.7)	(3.0)	(3.0)	(0.7)	(5.4)	(2.9)	(1.8)	(5.5)	(5.8)	(3.2)
	<i>Change</i>		(0.0)	0.4	0.3	(2.0)	2.7	0.2	(0.9)	2.9	3.1	0.5
	Naphtha	0.9	1.0	1.6	0.1	(1.3)	(0.2)	(0.3)	(0.4)	1.8	1.3	(0.2)
	<i>Change</i>		(0.1)	(0.7)	0.8	2.2	1.1	1.2	1.3	(0.9)	(0.4)	1.1
Refining Margin	Simple(단순)	4.3	4.3	4.6	3.7	3.9	1.7	3.1	3.8	3.3	1.9	3.2
	<i>Change</i>		(0.0)	(0.3)	0.6	0.4	2.6	1.1	0.4	1.0	2.3	1.1
	Complex(복합)	9.3	9.4	10.0	8.7	7.5	6.7	7.4	8.3	9.3	7.0	7.9
	<i>Change</i>		(0.1)	(0.8)	0.6	1.8	2.6	1.9	1.0	(0.0)	2.3	1.4
Refining Margin	Complex(lagging)	14.7	14.1	10.6	10.3	2.1	3.1	2.1	18.0	7.3	8.5	7.9
	<i>Change</i>		0.6	4.1	4.4	12.6	11.6	12.6	(3.3)	7.4	6.2	6.8

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			09/19	09/18	09/15	09/14	09/13	09/12	09/11	09/08	09/07	09/06
Spot Price	Naphtha	CFR Japan	511.8	513.5	504.5	504.5	504.5	501.0	500.8	511.5	508.8	501.0
	Ethylene	CFR SE Asia	1,205.0	1,205.0	1,205.0	1,200.0	1,200.0	1,200.0	1,200.0	1,185.0	1,175.0	1,165.0
	Propylene	FOB Korea	945.0	945.0	945.0	945.0	940.0	945.0	945.0	950.0	900.0	900.0
	Butadiene	FOB Korea	1,550.0	1,550.0	1,550.0	1,470.0	1,470.0	1,470.0	1,470.0	1,470.0	1,360.0	1,360.0
	HDPE	CFR FE Asia	1,180.0	1,190.0	1,190.0	1,190.0	1,190.0	1,190.0	1,190.0	1,195.0	1,195.0	1,190.0
	LDPE	CFR FE Asia	1,230.0	1,230.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,245.0	1,245.0	1,240.0
	LLDPE	CFR FE Asia	1,190.0	1,190.0	1,200.0	1,200.0	1,200.0	1,200.0	1,205.0	1,210.0	1,210.0	1,210.0
	MEG	CFR China	918.0	911.0	903.0	918.0	928.0	949.0	939.0	965.0	973.0	959.0
	PP	CFR FE Asia	1,120.0	1,120.0	1,130.0	1,130.0	1,135.0	1,135.0	1,125.0	1,130.0	1,130.0	1,140.0
	PX	CFR China	832.0	827.0	818.7	823.3	821.7	828.0	828.7	830.3	826.0	824.5
	PTA	CFR China	655.0	650.0	650.0	648.0	648.0	655.0	650.0	650.0	650.0	652.0
	Benzene	FOB Korea	787.5	776.5	777.0	774.0	778.0	783.0	794.0	801.0	804.0	810.0
	Toluene	FOB Korea	656.0	656.0	653.0	656.0	663.0	665.0	665.0	661.0	656.0	655.0
	Xylene	FOB Korea	657.0	655.0	654.5	665.5	663.0	663.0	671.0	674.5	664.5	669.0
	SM	FOB Korea	1,329.0	1,302.0	1,297.0	1,279.0	1,341.0	1,346.0	1,374.0	1,389.0	1,383.0	1,389.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Spot Price	Naphtha	CFR Japan	506.5	510.0	462.0	409.5	455.0	393.5	484.5	493.0	399.5	467.1
	<i>Change, %</i>			(0.7)	9.6	23.7	11.3	28.7	4.5	2.7	26.8	8.4
	Ethylene	CFR SE Asia	1,250.0	1,225.0	1,165.0	855.0	995.0	1,070.0	990.0	1,103.7	1,040.9	1,045.9
	<i>Change, %</i>			2.0	7.3	46.2	25.6	16.8	26.3	13.3	20.1	19.5
	Propylene	CFR SE Asia	860.0	870.0	775.0	737.5	747.5	790.0	815.0	770.0	705.7	867.4
	<i>Change, %</i>			(1.1)	11.0	16.6	15.1	8.9	5.5	11.7	21.9	(0.8)
	Butadiene	CFR SE Asia	1,545.0	1,450.0	1,175.0	875.0	1,025.0	1,135.0	2,100.0	877.5	1,116.8	1,611.7
	<i>Change, %</i>			6.6	31.5	76.6	50.7	36.1	(26.4)	76.1	38.3	(4.1)
	Benzene	CFR SE Asia	795.0	822.5	775.0	782.5	780.0	640.0	822.5	690.0	646.7	835.9
	<i>Change, %</i>			(3.3)	2.6	1.6	1.9	24.2	(3.3)	15.2	22.9	(4.9)
	Toluene	CFR SE Asia	700.0	685.0	655.0	645.0	655.0	635.0	690.0	700.8	630.5	681.7
	<i>Change, %</i>			2.2	6.9	8.5	6.9	10.2	1.4	(0.1)	11.0	2.7
	Xylene	CFR SE Asia	657.5	635.0	635.0	620.0	630.0	620.0	675.0	699.3	627.7	665.5
	<i>Change, %</i>			3.5	3.5	6.0	4.4	6.0	(2.6)	(6.0)	4.7	(1.2)

Spread	Ethylene	-Naphtha	743.5	715.0	703.0	445.5	540.0	676.5	505.5	610.6	641.4	578.7
	<i>Change, %</i>			4.0	5.8	66.9	37.7	9.9	47.1	21.8	15.9	28.5
	Propylene	-Naphtha	353.5	360.0	313.0	328.0	292.5	396.5	330.5	277.0	306.2	400.3
	<i>Change, %</i>			(1.8)	12.9	7.8	20.9	(10.8)	7.0	27.6	15.5	(11.7)
	Butadiene	-Naphtha	1,038.5	940.0	713.0	465.5	570.0	741.5	1,615.5	384.5	717.3	1,144.6
	<i>Change, %</i>			10.5	45.7	123.1	82.2	40.1	(35.7)	170.1	44.8	(9.3)
	Benzene	-Naphtha	288.5	312.5	313.0	373.0	325.0	246.5	338.0	197.0	247.2	368.8
	<i>Change, %</i>			(7.7)	(7.8)	(22.7)	(11.2)	17.0	(14.6)	46.5	16.7	(21.8)
	Toluene	-Naphtha	193.5	175.0	193.0	235.5	200.0	241.5	205.5	207.8	231.0	214.6
	<i>Change, %</i>			10.6	0.3	(17.8)	(3.3)	(19.9)	(5.8)	(6.9)	(16.2)	(9.8)
	Xylene	-Naphtha	151.0	125.0	173.0	210.5	175.0	226.5	190.5	206.3	228.2	198.4
	<i>Change, %</i>			20.8	(12.7)	(28.3)	(13.7)	(33.3)	(20.7)	(26.8)	(33.8)	(23.9)

자료 : Cischem, 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	1,167.5	1,087.5	1,067.5	1,127.5	1,125.0	1,142.5	1,230.1	1,134.6	1,122.2
	Change, %			1.7	9.2	11.2	5.3	5.6	3.9	(3.5)	4.7	5.8
	MEG	CFR SE Asia	907.5	970.0	867.5	787.5	775.0	625.0	847.5	780.8	660.8	830.1
	Change, %			(6.4)	4.6	15.2	17.1	45.2	7.1	16.2	37.3	9.3
	PVC	CFR SE Asia	950.0	945.0	890.0	880.0	880.0	860.0	920.0	820.8	823.4	902.0
	Change, %			0.5	6.7	8.0	8.0	10.5	3.3	15.7	15.4	5.3
	PP	CFR SE Asia	1,167.5	1,147.5	1,107.5	1,057.5	1,037.5	1,000.0	1,032.5	1,109.8	978.4	1,076.8
	Change, %			1.7	5.4	10.4	12.5	16.8	13.1	5.2	19.3	8.4
	2-EH	CFR Korea	990.0	990.0	960.0	925.0	950.0	770.0	865.0	930.1	772.4	953.5
	Change, %			0.0	3.1	7.0	4.2	28.6	14.5	6.4	28.2	3.8
	ABS	CFR SE Asia	2,070.0	2,030.0	1,870.0	1,710.0	1,630.0	1,385.0	1,635.0	1,431.1	1,347.1	1,788.8
	Change, %			2.0	10.7	21.1	27.0	49.5	26.6	44.6	53.7	15.7
	SBR	CFR SE Asia	1,830.0	1,790.0	1,540.0	1,450.0	1,750.0	1,395.0	2,000.0	1,332.1	1,483.0	2,091.4
	Change, %			2.2	18.8	26.2	4.6	31.2	(8.5)	37.4	23.4	(12.5)
	SM	CFR SE Asia	1,357.5	1,440.0	1,192.5	1,165.0	1,112.5	1,030.0	1,205.0	1,100.7	1,064.6	1,241.0
	Change, %			(5.7)	13.8	16.5	22.0	31.8	12.7	23.3	27.5	9.4
	Caustic	FOB NEA	480.0	477.0	476.0	437.5	447.5	325.0	422.5	296.8	316.6	445.6
	Change, %			0.6	0.8	9.7	7.3	47.7	13.6	61.8	51.6	7.7
	PX	CFR SE Asia	825.0	837.5	815.0	787.5	830.0	785.0	855.0	842.9	790.4	833.1
	Change, %			(1.5)	1.2	4.8	(0.6)	5.1	(3.5)	(2.1)	4.4	(1.0)
PO	CFR China	1,655.0	1,887.5	2,022.5	1,395.0	1,350.0	1,577.5	1,562.5	1,683.4	1,396.8	1,545.9	
Change, %			(12.3)	(18.2)	18.6	22.6	4.9	5.9	(1.7)	18.5	7.1	
Caprolactam	CFR SE Asia	1,780.0	1,720.0	1,800.0	1,600.0	1,700.0	1,410.0	1,850.0	1,581.5	1,344.9	1,897.8	
Change, %			3.5	(1.1)	11.3	4.7	26.2	(3.8)	12.5	32.4	(6.2)	
PTA	CFR SE Asia	672.5	667.5	652.5	635.0	647.5	615.0	642.5	648.0	613.7	658.1	
Change, %			0.7	3.1	5.9	3.9	9.3	4.7	3.8	9.6	2.2	
Spread	HDPE		681.0	657.5	625.5	658.0	672.5	731.5	658.0	737.1	735.1	655.1
	Change, %			3.6	8.9	3.5	1.3	(6.9)	3.5	(7.6)	(7.4)	4.0
	MEG		401.0	460.0	405.5	378.0	320.0	231.5	363.0	287.8	261.3	363.0
	Change, %			(12.8)	(1.1)	6.1	25.3	73.2	10.5	39.3	53.5	10.5
	PVC		443.5	435.0	428.0	470.5	425.0	466.5	435.5	327.8	423.9	434.9
	Change, %			2.0	3.6	(5.7)	4.4	(4.9)	1.8	35.3	4.6	2.0
	PP		661.0	637.5	645.5	648.0	582.5	606.5	548.0	616.8	578.9	609.7
	Change, %			3.7	2.4	2.0	13.5	9.0	20.6	7.2	14.2	8.4
	2-EH		483.5	480.0	498.0	515.5	495.0	376.5	380.5	437.0	372.9	486.4
	Change, %			0.7	(2.9)	(6.2)	(2.3)	28.4	27.1	10.6	29.7	(0.6)
	ABS		1,563.5	1,520.0	1,408.0	1,300.5	1,175.0	991.5	1,150.5	938.1	947.6	1,321.7
	Change, %			2.9	11.0	20.2	33.1	57.7	35.9	66.7	65.0	18.3
	SBR	BD spread	285.0	340.0	365.0	575.0	725.0	260.0	(100.0)	454.7	366.2	479.7
	Change, %			(16.2)	(21.9)	(50.4)	(60.7)	9.6	(385.0)	(37.3)	(22.2)	(40.6)
	SM		851.0	930.0	730.5	755.5	657.5	636.5	720.5	607.7	665.1	773.9
	Change, %			(8.5)	16.5	12.6	29.4	33.7	18.1	40.0	28.0	10.0
	Caustic											
	Change, %											
	PX		318.5	327.5	353.0	378.0	375.0	391.5	370.5	349.9	390.9	366.0
	Change, %			(2.7)	(9.8)	(15.7)	(15.1)	(18.6)	(14.0)	(9.0)	(18.5)	(13.0)
PO	propylene spread	795.0	1,017.5	1,247.5	657.5	602.5	787.5	747.5	913.4	691.1	678.6	
Change, %			(21.9)	(36.3)	20.9	32.0	1.0	6.4	(13.0)	15.0	17.2	
Caprolactam	benzene spread	985.0	897.5	1,025.0	817.5	920.0	770.0	1,027.5	891.6	698.2	1,061.8	
Change, %			9.7	(3.9)	20.5	7.1	27.9	(4.1)	10.5	41.1	(7.2)	
PTA	px spread	95.0	81.3	82.0	83.8	66.5	65.5	44.0	58.0	60.4	74.9	
Change, %			16.9	15.9	13.4	42.9	45.0	115.9	63.8	57.2	26.8	

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	09/19	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA		
											17E	18E	17E	18E	17E	18E	
Petrochemical																	
DowDuPont	USD	70.1	0.4	2.2	10.5	7.4	9.4	32.1	22.4	163,635	21.4	17.5	2.7	3.1	11.2	9.6	
Eastman	USD	86.7	1.5	0.5	4.5	0.8	9.5	33.8	15.2	12,557	11.5	10.7	2.5	2.3	8.8	8.4	
BASF	EUR	87.2	0.0	1.5	7.4	0.1	(2.3)	23.9	(1.2)	95,931	14.9	14.7	2.4	2.2	8.2	8.0	
Akzo Nobel	EUR	78.6	(0.1)	0.5	1.7	0.8	4.5	30.8	32.3	23,925	18.4	17.8	3.1	3.1	10.2	9.8	
Arkema	EUR	99.7	0.7	3.4	5.5	3.5	7.9	18.7	7.3	9,051	14.6	13.4	1.9	1.7	6.5	6.2	
Lanxess	EUR	65.8	0.4	0.8	5.0	(3.3)	1.5	38.1	5.5	7,206	17.0	14.9	2.3	2.1	7.6	8.2	
Sumitomo Chemical	JPY	707	2.5	4.9	8.8	18.4	7.9	54.0	27.2	10,473	10.8	10.3	1.3	1.2	7.7	7.4	
Mitsubishi Chemical	JPY	1,082	1.7	5.2	14.8	23.2	24.7	82.6	42.7	14,578	9.7	9.6	1.3	1.2	6.4	6.3	
Shin-Etsu Chemical	JPY	10,160	1.8	3.6	5.7	1.0	5.1	44.2	12.1	39,286	20.4	18.2	1.9	1.8	8.8	7.7	
Asahi Kasei	JPY	1,399	1.7	4.9	11.7	20.1	28.2	75.3	37.2	17,559	16.1	15.4	1.6	1.5	7.9	7.5	
JSR	JPY	2,163	1.9	1.4	6.1	17.2	11.0	43.4	17.4	4,377	16.4	15.6	1.3	1.2	8.6	8.0	
Nitto Denko	JPY	9,765	3.9	2.3	1.2	9.3	11.0	47.2	8.9	15,183	19.0	17.5	2.3	2.1	8.5	7.9	
SABIC	SAR	101.2	(0.3)	0.5	3.2	(1.9)	4.7	21.8	10.6	80,946	15.1	14.7	1.8	1.8	7.6	7.5	
Yansab	SAR	58.8	(1.9)	4.2	6.9	2.8	3.0	35.9	8.0	8,819	15.0	14.2	2.5	2.4	9.3	8.8	
Formosa Plastics	TWD	94.8	(1.3)	(1.0)	2.2	4.5	3.8	22.5	6.3	20,019	14.3	14.8	1.9	1.8	18.6	19.2	
Formosa Fiber	TWD	94.1	(1.2)	(2.0)	2.5	2.7	(0.1)	12.4	(2.3)	18,296	12.7	13.0	1.7	1.6	10.1	10.5	
Nan Ya Plastics	TWD	76.5	(0.3)	1.3	2.1	5.8	7.0	26.2	7.4	20,126	15.4	16.1	1.8	1.7	16.4	16.0	
Sinopec Shanghai	CNY	6.34	(0.3)	0.5	(6.1)	(2.5)	(2.0)	6.6	(1.6)	9,159	12.0	11.4	2.4	2.1	6.7	6.6	
Sinopec Yizheng(Fiber)	CNY	3.20	0.0	0.0	0.0	(7.8)	(16.4)	(17.9)	(22.0)	6,231	#N/A	#N/A	47.1	6.9	7.2	37.1	17.2
Reliance	INR	839	(0.8)	1.8	6.5	19.0	28.9	55.0	55.0	84,822	17.4	14.4	1.9	1.7	12.1	9.8	
Industries Qatar	QAR	88.0	0.8	0.7	(5.6)	(8.6)	(21.8)	(11.1)	(25.1)	14,430	14.2	12.4	1.5	1.5	50.1	45.7	
PTT Chemical	THB	79.3	1.6	2.3	7.5	13.6	11.2	33.2	25.8	10,727	10.7	10.9	1.4	1.3	5.7	5.5	
Petronas	MYR	7.4	0.1	(1.2)	2.5	2.2	(0.9)	13.2	5.4	14,047	16.1	16.1	2.0	1.9	8.9	8.7	
LG화학	KRW	397,000	0.5	1.8	13.8	42.3	42.0	70.4	52.1	24,769	15.3	14.8	2.0	1.8	6.7	6.3	
롯데케미칼	KRW	389,500	0.3	(6.1)	(0.9)	18.0	3.7	40.4	5.6	11,799	6.0	6.0	1.2	1.0	4.0	3.6	
한화케미칼	KRW	38,000	0.0	2.6	7.6	31.0	52.6	63.1	53.8	5,535	6.4	6.7	1.0	0.9	8.0	7.5	
금호석유	KRW	78,100	1.0	(2.6)	0.9	5.3	1.3	20.3	(4.8)	2,103	15.0	13.1	1.5	1.3	10.0	8.8	
SKC	KRW	43,300	(0.2)	8.5	15.5	29.6	41.3	59.8	31.2	1,436	11.9	10.6	1.1	1.0	9.7	8.2	
국도화학	KRW	54,300	2.6	6.7	(0.9)	1.1	13.1	(1.3)	(1.1)	279	8.9	9.5	0.7	0.7	5.1	5.2	
효성	KRW	6,940	(2.3)	5.2	3.4	17.4	(17.3)	34.8	2.1	4,702	9.0	7.8	1.3	1.2	7.0	6.3	
Average			0.5	1.8	4.8	9.1	9.1	33.6	14.4								
Refinery																	
Valero	USD	72.7	0.7	3.6	12.3	9.2	5.5	27.2	6.4	32,113	16.6	13.1	1.7	1.7	6.9	6.0	
Conoco Phillips	USD	47.6	1.0	5.8	10.3	2.6	4.1	21.1	(5.2)	57,866	207.6	38.8	1.9	2.0	9.7	7.1	
Formosa Petrochemical	TWD	105.0	(1.4)	(1.9)	2.9	(2.8)	(1.4)	11.8	(6.3)	33,180	16.0	18.5	3.1	3.2	9.4	11.0	
Andeavor	USD	104.6	1.4	1.1	12.6	12.7	22.5	25.1	19.6	16,404	18.1	14.3	1.6	1.6	9.1	7.2	
Marathon Petroleum	USD	54.2	1.2	0.8	8.2	(0.2)	6.7	23.9	7.6	27,439	18.9	16.0	2.2	2.3	8.6	7.7	
Devon Energy	USD	33.8	(0.6)	5.0	11.1	7.8	(16.7)	(17.3)	(26.1)	17,747	19.6	16.5	2.5	2.2	8.6	7.7	
Hollyfrontier	USD	33.7	2.4	2.1	21.7	25.9	19.1	30.4	2.8	5,969	22.5	15.7	1.2	1.3	8.9	6.9	
Phillips 66	USD	89.1	0.9	3.9	9.2	9.7	11.4	10.9	3.1	45,570	20.6	15.6	2.0	2.0	10.1	8.6	
Murphy Oil	USD	25.7	(0.6)	5.2	6.8	1.0	(5.7)	0.1	(17.5)	4,430	#N/A	#N/A	276.0	1.0	1.0	4.7	4.5
JX Holdings	JPY	565.7	3.1	4.9	6.0	16.4	4.3	44.0	14.4	17,348	8.9	8.3	0.8	0.8	8.1	7.7	
Idemitsu	JPY	2,875.0	0.9	4.3	11.3	(10.0)	(25.1)	48.3	(7.4)	5,351	6.6	6.5	0.8	0.7	8.2	7.9	
Nesteoil	EUR	36.0	(0.5)	(1.3)	3.9	0.4	3.9	(2.0)	(1.4)	0	13.7	13.7	2.2	2.0	7.9	8.3	
Ashland	USD	64.2	(0.9)	0.8	5.2	(4.2)	5.5	7.2	20.0	4,005	16.4	19.7	1.1	1.1	8.6	9.5	
Fuchs Petrolub	EUR	49.3	0.8	0.5	4.6	(4.3)	12.8	22.8	23.7	7,680	25.3	24.0	5.1	4.6	14.7	13.9	
SK이노베이션	KRW	189,500	(0.8)	(1.0)	11.1	17.7	15.2	23.5	29.4	15,486	7.8	7.6	1.0	0.9	4.7	4.2	
S-Oil	KRW	120,500	1.3	(1.6)	6.2	25.8	24.5	57.9	42.3	11,990	12.8	9.8	2.1	1.9	9.8	7.2	
GS	KRW	65,400	(0.9)	(3.0)	(3.8)	(1.8)	16.2	28.7	20.9	5,371	6.1	5.8	0.8	0.7	7.2	6.8	
Average			0.5	1.7	8.2	6.2	6.0	21.4	7.4								

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	09/19	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	80	0.2	0.9	4.7	(3.1)	(2.2)	(4.3)	(11.1)	339,901	23.5	20.8	1.9	1.9	9.8	8.8
BP	GBP	456	1.2	1.6	3.7	(3.5)	(1.5)	7.0	(10.5)	121,525	21.9	16.8	1.3	1.3	6.2	5.6
Shell	EUR	2,131	0.9	(0.2)	0.8	0.0	0.4	16.3	(5.0)	240,663	16.9	15.1	1.2	1.2	6.5	6.0
Chevron	USD	116	1.0	3.4	9.3	8.3	8.0	18.7	(1.2)	220,465	28.9	24.4	1.5	1.5	8.3	7.5
Total	EUR	45	0.5	1.5	5.9	0.1	(4.6)	8.4	(7.3)	135,354	13.5	12.6	1.2	1.2	6.3	5.6
Sinopec	CNY	6	0.3	(0.2)	0.5	0.0	7.0	22.4	10.0	105,882	13.9	13.0	1.0	0.9	4.5	4.3
Petrochina	CNY	8	(0.4)	(0.7)	0.3	4.2	0.4	9.5	0.3	209,653	55.0	33.9	1.2	1.2	6.7	6.5
CNOOC	CNY	11	(0.4)	1.1	0.7	(0.6)	(12.4)	(5.6)	(12.0)	54,293	12.5	11.0	0.9	0.9	3.8	3.6
Gazprom	RUB	122	(0.8)	(0.2)	5.0	3.8	(5.6)	(10.9)	(21.2)	49,432	4.3	3.9	0.2	0.2	3.7	3.4
Rosneft	RUB	313	(1.6)	(0.5)	4.3	0.6	(0.5)	(13.3)	(22.3)	56,892	9.8	6.9	0.8	0.8	5.1	4.3
Anadarko	USD	44	0.0	4.8	3.8	(6.3)	(30.8)	(23.9)	(37.2)	24,521	#N/A	#N/A	1.7	1.7	6.9	6.1
Petrobras	BRL	15	0.7	1.8	11.3	23.2	15.0	16.0	1.8	64,524	11.5	8.9	0.6	0.6	5.5	5.0
Lukoil	USD	3,025	(0.2)	2.1	6.9	8.8	(3.4)	0.2	(12.3)	44,297	6.2	5.7	0.7	0.6	N/A	N/A
Kinder	USD	20	0.9	1.0	5.4	2.6	(8.1)	(10.7)	(5.6)	47,497	30.1	27.8	1.2	1.2	11.6	11.2
Statoil	NOK	153	0.2	2.3	5.9	5.5	2.4	20.8	(3.4)	64,358	16.9	18.3	1.7	1.6	3.5	3.4
BHP	AUD	26	0.1	(3.0)	3.6	14.3	5.9	30.8	4.9	105,875	17.6	18.4	1.9	1.8	6.5	6.6
PTT E&P	THB	92	1.7	4.3	8.3	3.4	1.7	15.5	(4.9)	10,979	13.5	12.8	0.9	0.9	3.3	3.0
Petronas gas	MYR	18	(0.2)	(2.3)	(2.7)	(3.1)	(7.5)	(14.9)	(14.1)	8,639	20.4	19.1	2.9	2.8	11.6	10.8
Chesapeake	USD	4	(0.2)	8.0	2.0	(19.0)	(23.6)	(40.7)	(42.5)	3,670	5.9	5.4	#N/A	#N/A	20.7	7.4
Noble Energy	USD	26	1.3	5.2	11.7	(9.5)	(22.0)	(21.2)	(30.6)	12,855	#N/A	#N/A	1.3	1.4	9.5	7.2
Average		0	0.2	1.5	4.6	1.5	(4.1)	1.0	(11.2)							
PV																
WACKER	EUR	114.2	1.4	1.2	9.7	20.7	14.6	53.3	15.5	7,132	31.2	23.5	1.9	1.8	7.1	6.7
GCL-Poly	HKD	1.1	6.9	22.5	16.0	45.3	1.9	(3.5)	17.2	2,596	8.1	7.9	0.7	0.7	6.5	6.0
SunPower	USD	8.4	(0.9)	(0.7)	(9.4)	7.4	19.9	6.9	26.6	1,168	#N/A	#N/A	1.6	1.7	42.6	13.8
Canadian Solar	USD	16.7	(0.5)	1.3	0.5	28.2	21.6	39.0	37.2	969	10.5	6.9	1.0	0.9	9.5	8.5
JA Solar	USD	8.2	0.9	0.2	32.0	29.1	62.3	40.8	72.5	391	16.6	17.8	1.9	1.9	4.1	3.3
Yingli	USD	2.5	(6.5)	6.1	(2.0)	19.5	30.3	(31.2)	(5.8)	45	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
First Solar	USD	48.9	0.7	2.9	1.7	34.4	53.5	42.0	52.3	5,102	21.6	35.6	0.9	0.9	8.3	8.9
한화큐셀	USD	8.0	4.9	5.4	8.6	22.1	8.9	(24.9)	(2.5)	663	88.4	45.5	#N/A	#N/A	7.7	7.7
OCI	KRW	111,000	1.8	9.4	19.6	20.0	31.2	42.7	41.0	2,340	17.3	22.9	0.8	0.8	8.4	7.8
웅진에너지	KRW	9,200	0.3	(1.3)	11.7	29.6	85.9	29.4	94.3	203	N/A	0.8	0.8	8.4	7.8	9.0
신성솔라에너지	KRW	2,110	(1.9)	(2.3)	(1.2)	5.2	10.5	(10.8)	(4.5)	323	N/A	0.8	8.4	7.8	9.0	7.8
Average			0.6	4.1	7.9	23.8	31.0	16.7	31.3							
Gas Company																
Towngas China	HKD	5.3	0.4	2.9	3.1	9.3	14.3	22.7	29.7	1,877	12.3	11.2	1.0	0.9	11.6	10.7
Kulun	HKD	7.4	(0.1)	0.7	0.4	15.5	6.3	27.4	28.3	7,696	11.7	10.8	1.3	1.2	5.9	5.7
Beijing Enterprise	HKD	42.9	(0.8)	1.2	7.1	14.2	(0.1)	6.5	17.1	6,938	8.3	7.7	0.9	0.8	15.3	14.3
ENN Energy	HKD	53.1	1.6	(0.4)	2.2	25.9	19.2	32.6	66.3	7,353	14.0	12.4	2.7	2.3	8.8	7.9
China Resources Gas	HKD	27.1	1.5	1.3	(7.4)	11.5	(3.7)	2.9	24.1	7,709	15.4	13.8	2.9	2.6	9.2	8.3
China Gas Holdings	HKD	22.0	1.6	5.3	15.3	69.9	74.2	78.5	108.7	13,975	19.7	16.8	4.4	3.7	15.6	13.5
Shenzen Gas	HKD	14.7	(0.4)	(1.3)	3.5	6.4	26.6	15.3	29.7	3,802	12.0	11.4	1.4	1.3	9.3	8.7
Shann Xi	CNY	8.5	(0.6)	(1.0)	(0.9)	(4.2)	(9.9)	(16.9)	(11.1)	1,443	18.0	16.2	1.7	1.6	#N/A	#N/A
Suntien	HKD	1.9	0.5	0.0	6.7	31.9	25.8	69.6	90.0	904	7.3	6.3	0.7	0.6	9.8	8.4
China Oil & Gas	HKD	0.5	0.0	(5.4)	3.9	(1.9)	(13.1)	(7.0)	(13.1)	396	9.1	7.9	0.9	0.8	6.2	5.6
Average			0.4	0.3	3.4	17.9	13.9	23.2	37.0							
EV																
LG화학	KRW	397,000	0.5	1.8	13.8	42.3	42.0	70.4	52.1	24,769	14.6	14.3	1.9	1.7	6.9	6.7
삼성SDI	KRW	223,000	1.1	11.5	26.3	43.9	64.0	127.1	104.6	13,553	22.9	14.7	1.4	1.3	26.7	16.5
Panasonic	JPY	1651.5	2.5	7.4	13.0	11.7	31.4	62.8	38.8	36,253	21.5	16.4	2.2	2.0	6.9	6.0
GS Yuasa	JPY	582.0	1.4	1.6	10.0	15.0	9.2	39.9	19.8	2,154	17.6	16.2	1.4	1.3	7.7	7.2
NEC	JPY	299.0	1.0	2.7	1.0	3.1	4.5	16.3	(3.5)	6,969	18.5	16.7	0.9	0.9	7.0	6.2
BYD Auto	CNY	57.3	(1.2)	2.6	17.9	11.8	15.7	1.0	15.2	22,961	30.5	21.9	2.9	2.6	13.9	11.2
Tesla Motors	USD	375.1	(2.6)	3.4	8.0	1.4	43.4	81.8	75.5	62,599	#N/A	#N/A	12.5	10.9	85.7	29.2
Kandi Technologies	USD	5.3	0.0	21.8	45.2	34.2	37.7	(6.4)	8.2	255	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Average			0.3	6.6	16.9	20.4	31.0	49.1	38.8							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임