

1. News Summary (3 page)

2017년 8월 8일

News	
WTI comment	원유생산 증가 소식에 하락...WTI 0.4%↓
Headline	GS칼텍스, 화재로 제2 아로마틱스 설비 섯다운...3분기 타격
News 1.	테슬라, 1조7천억 사채 첫 발행...모델3 생산자금 조달
News 2.	SK이노베이션, 주유소사업 통합 작업 추진
News 3.	-
News 4.	-

Conclusion	
	중국 PTA 설비 정기보수 종료가 맞물려 PX 솟티지 전망됨
	모델3가 규모의 경제에 다다를때까지 현금에서 부침을 겪을 것
	주유소사업 매각으로 SK네트웍스는 렌탈 사업 등 신사업 집중 가능함
	-
	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	49.4	(0.4)	(1.6)	11.2	6.4	14.8
Dubai	\$/bbl	50.8	0.9	0.8	12.3	5.9	22.1
Gasoline	\$/bbl	66.8	0.9	0.7	12.3	10.1	31.5
Diesel	\$/bbl	63.5	0.2	(2.8)	9.0	9.4	26.7
Complex margin ¹	\$/bbl	8.4	(0.0)	(1.1)	(0.1)	2.1	4.6
1M lagging	\$/bbl	10.9	0.5	(3.7)	5.5	7.7	10.4
Petrochemical			%	%	%	%	%
Naphtha	\$/t	465	(0.5)	(0.6)	14.9	7.9	31.6
Butadiene	\$/t	910	0.0	0.0	(6.7)	(25.7)	(9.5)
HDPE	\$/t	1,120	0.0	1.4	3.7	0.0	(1.3)
MEG	\$/t	880	0.6	1.5	7.7	25.9	45.2
PX	\$/t	818	(0.6)	1.2	7.6	6.0	4.7
SM	\$/t	1,110	0.0	(1.1)	0.1	10.8	10.7
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	2.80	1.0	0.3	(4.2)	(14.6)	(8.5)
Natural rubber	\$/t	1,490	2.8	4.9	3.5	2.1	15.5
Cotton	C/lbs	71.2	0.3	1.0	5.2	(7.2)	(6.4)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	07/31	\$/t	975	6.6	11.4	(12.2)	(6.3)
Propylene	07/31	\$/t	763	0.7	2.7	5.2	12.1
Benzene	07/31	\$/t	743	0.7	(2.3)	(6.9)	18.3
Toluene	07/31	\$/t	635	0.8	0.8	(5.2)	10.4
Xylene	07/31	\$/t	623	0.8	2.0	(5.7)	3.8
PP	07/31	\$/t	1,073	1.4	3.4	0.5	3.6
PVC	07/31	\$/t	860	(1.1)	(1.1)	(2.3)	7.5
ABS	07/31	\$/t	1,820	0.6	1.7	8.0	31.4
SBR	07/31	\$/t	1,490	(0.7)	2.8	(21.6)	6.4
SM	07/31	\$/t	1,173	0.2	1.7	5.9	11.9
BPA	07/31	\$/t	1,540	0.7	3.7	14.3	(0.2)
Caustic	07/31	\$/t	463	0.0	3.4	3.4	54.2
2-EH	07/31	\$/t	970	2.1	5.4	4.3	29.3
Caprolactam	07/31	\$/t	1,730	1.8	7.5	(7.5)	32.1
Solar				%	%	%	%
Polysilicon	08/02	\$/kg	15.3	7.5	10.7	14.2	(3.5)
Module	08/02	\$/W	0.33	0.0	(0.6)	(2.7)	(31.9)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	80.2	(0.1)	0.1	(0.1)	(2.3)	(8.5)
Shell	EUR	2,198	0.7	3.0	7.5	6.3	15.7
Petrochina	CNY	8.19	0.1	0.7	5.0	8.5	13.1
Gazprom	RUB	119.5	0.0	2.9	(2.8)	(11.1)	(11.8)
Petrobras	BRL	13.6	1.1	2.0	13.6	(4.6)	16.3
Refinery							
Phillips66	USD	85.1	(0.6)	1.6	3.0	7.2	8.7
Valero	USD	68.0	(0.8)	(1.4)	(0.3)	4.1	27.1
JX	JPY	492.9	(0.4)	0.6	0.3	(1.9)	35.8
Neste Oil	EUR	34.9	(1.4)	(4.7)	(0.2)	(9.7)	(3.2)

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	81.6	(0.3)	1.3	0.5	(9.7)	17.5
Dow Chemical	USD	63.9	(0.4)	(0.6)	(0.0)	1.3	19.1
SABIC	SAR	97.7	0.3	0.3	(3.5)	2.1	20.6
Formosa Pla.	TWD	93.0	0.6	2.6	(0.4)	3.3	18.3
Shin-Etsu	JPY	10,015	(0.2)	(0.9)	0.7	4.3	46.3
Renewable							
Wacker	EUR	106.5	2.3	1.5	12.3	6.7	31.1
First Solar	USD	48.57	1.2	(1.5)	23.3	40.6	10.1
GCL-Poly	HKD	0.90	5.9	8.4	3.4	(5.3)	(15.1)
Tesla Motors	USD	355.2	(0.5)	9.8	13.4	15.2	54.4

4. Coverage Summary

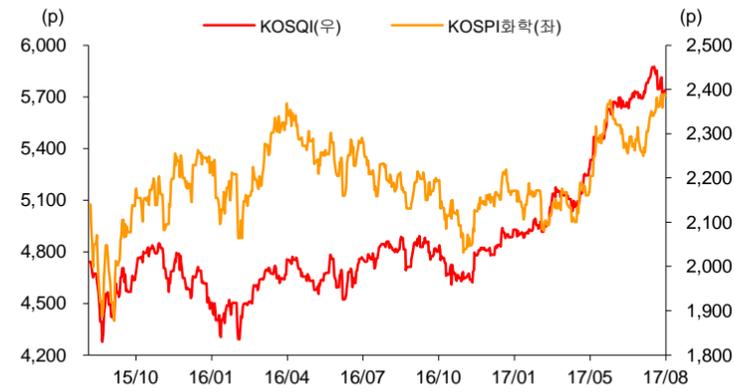
	08/07	1D	1W	1M	3M	6M	12M
KOSPI	2,399	0.1	(0.2)	0.8	4.6	15.7	18.9
KOSPI화학	5,705	(0.1)	1.0	6.0	6.6	12.1	11.4
LG화학	344,000	0.4	4.9	19.0	22.9	24.9	39.6
롯데케미칼	393,500	(0.3)	6.6	12.4	11.9	0.0	30.7
한화케미칼	33,550	1.4	(0.4)	6.5	31.6	27.6	31.8
금호석유화학	75,700	(3.7)	0.1	2.2	0.4	(5.7)	20.2
KCC	411,500	(4.5)	(5.7)	(0.4)	18.8	27.8	(1.4)
OCI	95,100	(0.1)	3.1	8.6	17.6	11.4	4.7
SKC	36,350	(3.5)	0.3	4.0	26.0	15.9	16.9
국도화학	56,200	(1.4)	(1.7)	6.0	16.7	10.2	(4.9)
SK이노베이션	176,500	(1.9)	0.0	10.7	2.6	12.8	17.7
S-Oil	116,000	(1.7)	(0.4)	19.1	13.7	43.4	50.8
GS	74,400	(0.5)	(1.3)	7.5	25.9	45.9	54.0
SK가스	117,000	1.7	1.7	(1.3)	(1.7)	10.4	39.3
포스코대우	23,900	(0.6)	1.7	7.4	0.8	(6.6)	10.6
LG상사	29,250	1.0	(0.5)	(4.1)	(9.4)	(13.2)	(18.0)
한국전력	44,050	(0.9)	(1.1)	3.6	(3.8)	5.0	(27.9)
한국가스공사	49,950	(0.7)	(0.5)	(1.3)	9.4	8.5	18.6

투자 의견	TP	%	P/E	P/B
			* 추정치는 12M fwd 기준임	
			* 모든 coverage 업체의 실적은 연결기준임	
매수	330,000	(4.1)	13.69	1.84
매수	410,000	4.2	8.13	1.43
매수	33,000	(1.6)	8.01	1.00
매수	100,000	32.1	14.39	1.44
매수	450,000	9.4	23.40	0.66
매수	100,000	5.2	19.24	0.74
매수	40,000	10.0	13.70	0.97
매수	70,000	24.6	9.43	0.68
매수	180,000	2.0	7.93	0.96
매수	100,000	(13.8)	15.58	2.26
매수	80,000	7.5	6.19	1.10
매수	150,000	28.2	7.10	0.85
매수	27,000	13.0	8.30	0.99
매수	42,000	43.6	9.04	0.95
매수	60,000	36.2	7.61	0.35
매수	60,000	20.1	8.48	0.59

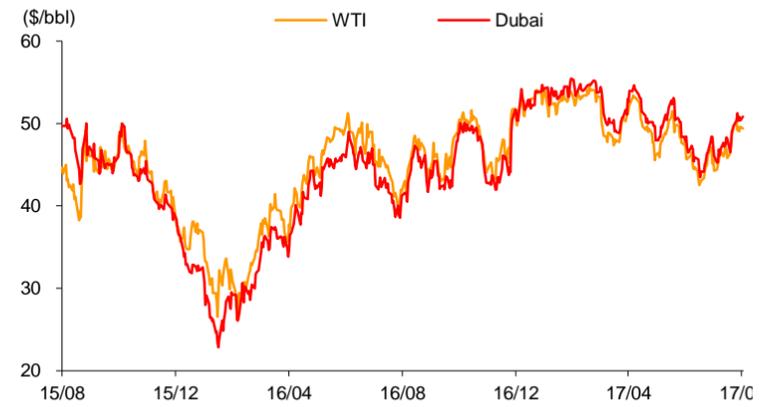
· 작성자(손지우)는 본 조사분석자료에 게재된 내용들이 본인의 의견을 정확하게 반영하고 있으며, 외부의 부당한 압력이나 간섭없이 신의성실하게 작성되었음을 확인합니다.
· 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.
· 본 보고서는 기관투자가 또는 제 3자에게 사전 제공된 사실이 없습니다.
· 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

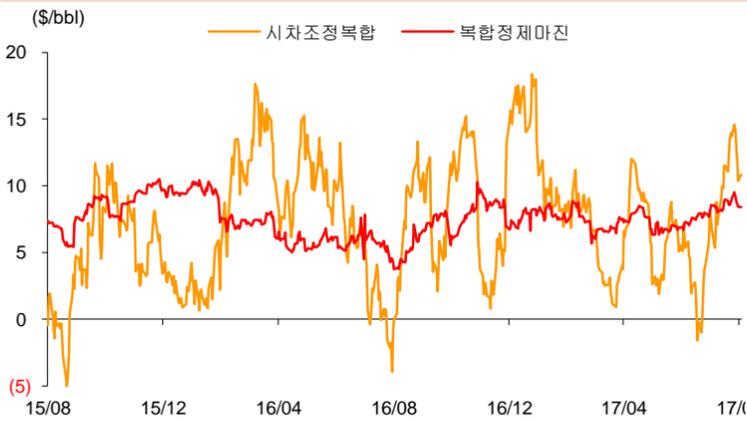
KOSPI/KOSPI화학



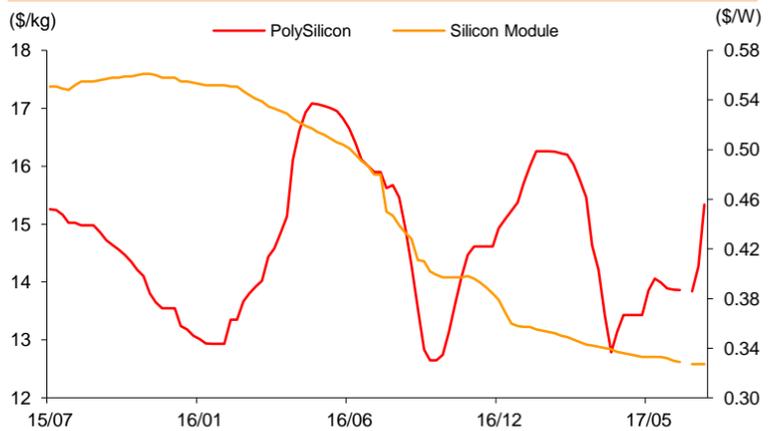
WTI/Dubai



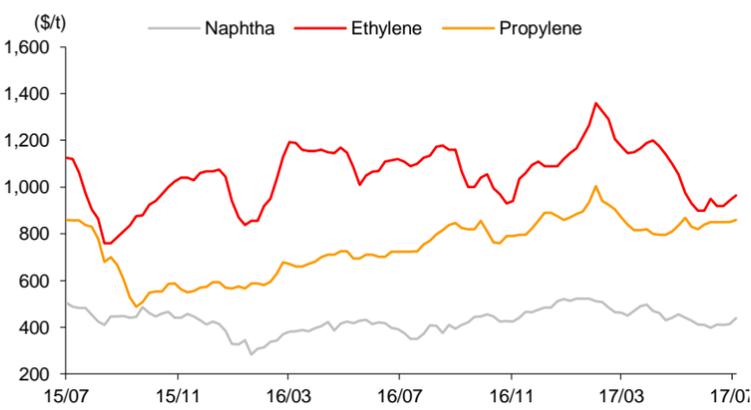
Complex & 1M lagging margin



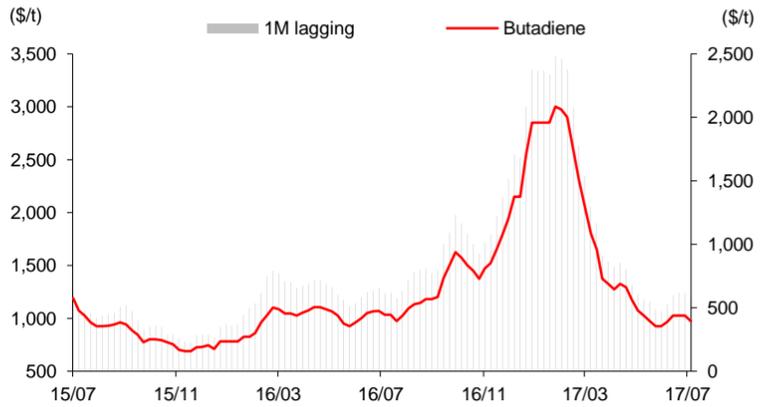
Polysilicon & Module prices



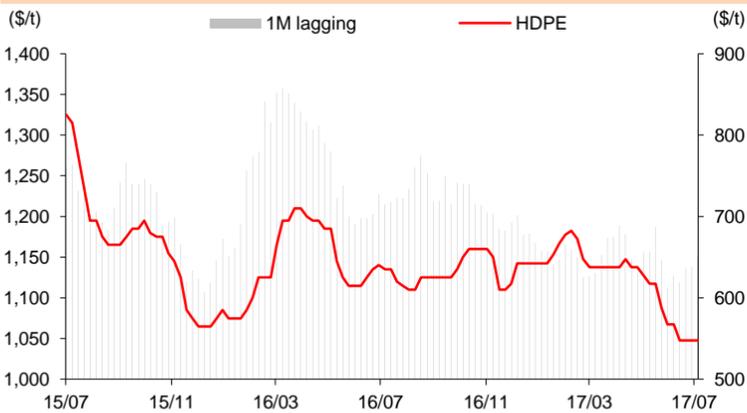
Naphtha/Ethylene/Propylene prices



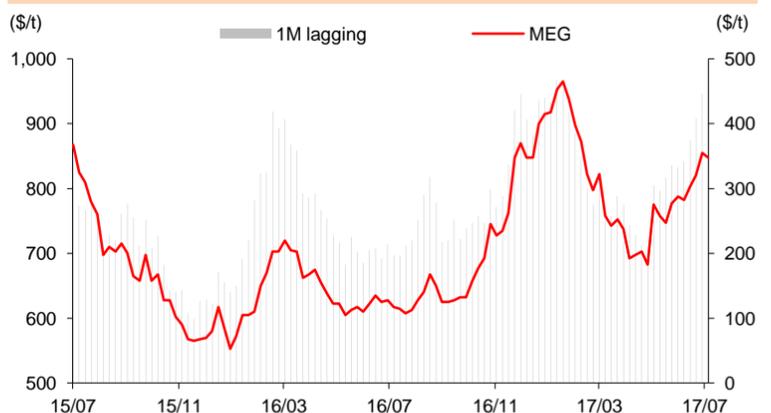
Butadiene price & 1M lagging naphtha spread



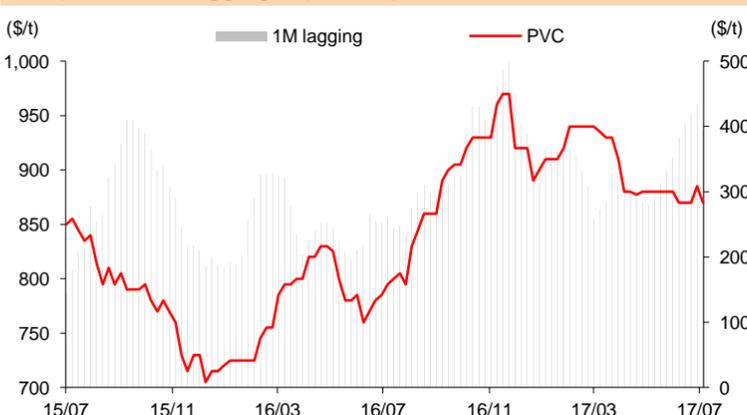
HDPE price & 1M lagging naphtha spread



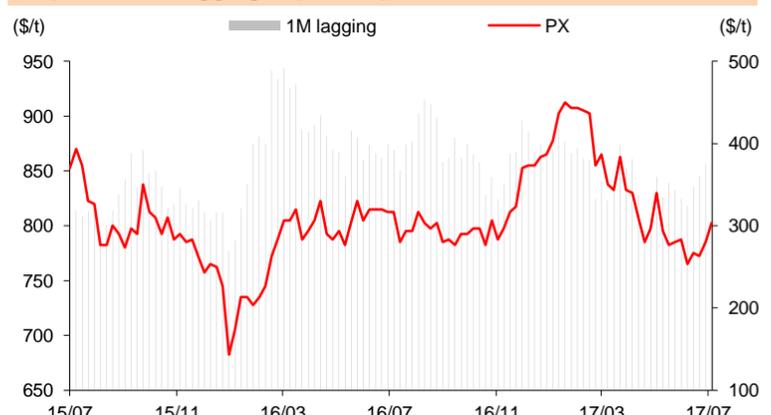
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

News Comment

Headline (출처: EBN)

제목 GS칼텍스, 화재로 제2 아로마틱스 설비 섯다운...3분기 타격

결론 중국 PTA 설비 정기보수 종료가 맞물려 PX 솟티지 전망됨

세부

- 1) GS칼텍스 여수 공장 화재로 제2 아로마틱스 설비 가동이 중단
- 2) BTX 원료 생산하는 4.5만b/d의 Reformer와 No.2 아로마틱스 가동 중단
- 3) 아로마틱스 설비는 이번 화재의 영향을 받지 않았지만 MCC가 전소됨
- 4) GS칼텍스는 PX 135만톤 등 총 280만톤의 방향족 생산규모를 보유함
- 5) 중국 PTA 설비 정기보수 종료가 맞물려 PX 솟티지 전망됨

Issue 1 (출처: 연합뉴스)

제목 테슬라, 1조7천억 사채 첫 발행...모델3 생산자금 조달

결론 모델3가 규모의 경제에 다다를때까지 현금에서 부침을 겪을 것

세부

- 1) 채권은 2025년 만기로, 모델3의 생산자금을 조달하는 데 쓰일 예정
- 2) CB 외에 기업 채권을 발행하는 것은 이번이 처음
- 3) 미 경제매체들, "테슬라가 정크본드 시장에 데뷔했다"
- 4) 모델3 대량생산에 막대한 자금이 소요될 것으로 보여 채권 발행
- 5) 모델3가 규모의 경제에 다다를때까지 현금에서 부침을 겪을 것

Issue 3

제목

결론

세부

- 1)
- 2)
- 3)
- 4)
- 5)

Issue 5

제목

결론

세부

- 1)
- 2)
- 3)
- 4)
- 5)

WTI Comment (출처: 연합뉴스)

제목 원유생산 증가 소식에 하락...WTI 0.4%↓

상승

요인

하락 리비아의 원유생산이 증가했다는 소식

요인 OPEC 원유 감산 여부에 대해 회의적 관측이 제기됨

Issue 2 (출처: 파이낸셜뉴스)

제목 SK이노베이션, 주유소사업 통합 작업 추진

결론 주유소사업 매각으로 SK네트웍스는 렌탈 사업 등 신사업 집중 가능함

세부

- 1) SKI, SK에너지와 SK네트웍스가 운영하는 주유소사업 통합작업 추진
- 2) SK네트웍스로부터 석유제품을 공급하는 가맹 주유소 사업 인수 검토중
- 3) SK네트웍스는 지난 3월 LPG 충전소 사업을 SK가스에 매각
- 4) 매각가는 3000억원 초반 수준으로 알려짐
- 5) 주유소사업 매각으로 SK네트웍스는 렌탈 사업 등 신사업 집중 가능함

Issue 4

제목

결론

세부

- 1)
- 2)
- 3)
- 4)
- 5)

Issue 6

제목

결론

세부

- 1)
- 2)
- 3)
- 4)
- 5)

Commodity Price Data

Daily Price		Today	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.	
F/X	USD/EUR	0.848	0.849	0.845	0.877	0.909	0.936	0.902	0.951	0.901	0.904	0.913	
	Change, %		(0.2)	0.4	(3.4)	(6.8)	(9.4)	(6.0)	(10.8)	(5.9)	(6.2)	(7.1)	
	USD/JPY	110.8	110.7	110.3	113.9	112.7	112.4	101.8	117.0	121.1	108.8	112.3	
	Change, %		0.1	0.4	(2.8)	(1.7)	(1.5)	8.8	(5.3)	(8.5)	1.8	(1.4)	
	USD/KRW	1,127.2	1,125.0	1,119.3	1,154.3	1,140.1	1,144.1	1,110.7	1,205.8	1,131.2	1,160.5	1,140.3	
	Change, %		0.2	0.7	(2.3)	(1.1)	(1.5)	1.5	(6.5)	(0.3)	(2.9)	(1.1)	
	Agriculture	Corn	372.3	366.5	370.8	382.3	361.8	368.5	324.3	352.0	376.8	358.5	367.5
		Change, %		1.6	0.4	(2.6)	2.9	1.0	14.8	5.8	(1.2)	3.8	1.3
Soybean		959.8	949.3	994.5	996.0	963.0	1,042.8	1,003.8	996.5	945.4	987.5	981.5	
Change, %			1.1	(3.5)	(3.6)	(0.3)	(8.0)	(4.4)	(3.7)	1.5	(2.8)	(2.2)	
	Wheat	463.5	454.8	474.5	515.3	427.5	430.8	416.0	408.0	508.1	436.4	443.1	
	Change, %		1.9	(2.3)	(10.0)	8.4	7.6	11.4	13.6	(8.8)	6.2	4.6	
	Rice	12.0	12.3	12.3	11.7	9.6	9.4	9.3	9.4	11.1	10.3	10.4	
	Change, %		(2.3)	(1.8)	2.8	25.2	27.8	29.4	28.8	8.9	16.5	15.9	
	Oats	274.3	283.8	284.3	282.5	254.0	257.5	178.8	228.5	250.2	196.3	253.6	
	Change, %		(3.3)	(3.5)	(2.9)	8.0	6.5	53.4	20.0	9.6	39.7	8.1	
	MYR/mt	Palm Oil	2,581.0	2,590.0	2,672.0	2,668.0	2,775.0	3,278.0	2,505.0	3,218.0	2,190.3	2,653.8	2,875.6
		Change, %		(0.3)	(3.4)	(3.3)	(7.0)	(21.3)	3.0	(19.8)	17.8	(2.7)	(10.2)
Cocoa		2,029.0	1,994.0	2,060.0	1,835.0	1,866.0	2,005.0	3,021.0	2,126.0	3,091.6	2,854.0	2,000.1	
Change, %			1.8	(1.5)	10.6	8.7	1.2	(32.8)	(4.6)	(34.4)	(28.9)	1.4	
	Cotton	71.2	71.0	70.5	75.3	79.8	75.1	76.6	70.7	63.3	65.6	75.1	
	Change, %		0.3	1.0	(5.4)	(10.7)	(5.2)	(7.1)	0.8	12.6	8.6	(5.2)	
	Sugar	13.9	14.1	14.9	14.2	15.3	20.7	20.4	19.5	13.1	18.2	16.8	
	Change, %		(1.9)	(7.0)	(2.0)	(9.4)	(33.1)	(31.8)	(28.9)	5.6	(23.6)	(17.6)	
	Coffee	142.1	140.2	139.3	126.6	133.1	142.6	142.5	137.1	132.6	136.1	136.7	
	Change, %		1.4	2.0	12.2	6.7	(0.4)	(0.3)	3.6	7.1	4.4	3.9	
	Energy	WTI	49.4	49.6	50.2	44.2	46.2	52.2	41.8	53.7	48.8	43.4	49.6
		Change, %		(0.4)	(1.6)	11.7	6.9	(5.3)	18.2	(8.1)	1.1	13.8	(0.4)
Brent		52.4	52.4	52.7	46.7	49.1	55.1	44.3	56.8	53.7	45.1	52.3	
Change, %			(0.1)	(0.5)	12.1	6.7	(4.9)	18.3	(7.8)	(2.4)	16.2	0.2	
	Natural Gas	2.8	2.8	2.8	2.9	3.3	3.1	2.8	3.7	2.6	2.6	3.1	
	Change, %		1.0	0.3	(2.2)	(14.2)	(10.5)	1.0	(24.8)	6.5	9.7	(9.1)	
	Ethanol	1.6	1.6	1.6	1.5	1.5	1.6	1.4	1.6	1.5	1.5	1.5	
	Change, %		1.2	2.6	5.1	6.3	1.5	12.9	(0.7)	5.7	5.3	3.8	
	RBOB Gasoline	163.0	164.6	170.6	149.8	150.5	148.8	137.6	166.5	163.6	140.0	158.3	
	Change, %		(1.0)	(4.4)	8.8	8.3	9.6	18.4	(2.1)	(0.4)	16.4	2.9	
	Coal	95.0	95.4	93.2	82.6	78.0	80.4	65.0	88.4	59.0	65.5	81.9	
	Change, %		(0.4)	1.9	15.1	21.8	18.2	46.2	7.5	61.1	45.1	16.0	
Metal	Gold	1,257.9	1,258.8	1,269.4	1,213.2	1,221.6	1,233.9	1,335.6	1,152.3	1,160.6	1,248.5	1,239.6	
	Change, %		(0.1)	(0.9)	3.7	3.0	1.9	(5.8)	9.2	8.4	0.8	1.5	
	Silver	16.3	16.3	16.8	15.6	16.3	17.7	19.7	15.9	15.7	17.1	17.2	
	Change, %		0.1	(3.3)	4.2	(0.4)	(8.1)	(17.4)	2.3	3.5	(4.8)	(5.1)	
	Copper	6,414.0	6,372.0	6,369.0	5,828.0	5,585.0	5,795.0	4,789.0	5,535.5	5,503.1	4,872.0	5,827.2	
	Change, %		0.7	0.7	10.1	14.8	10.7	33.9	15.9	16.6	31.7	10.1	
	Nickel	662.7	659.0	655.5	580.8	589.7	696.9	716.3	682.0	759.5	646.4	640.4	
	Change, %		0.6	1.1	14.1	12.4	(4.9)	(7.5)	(2.8)	(12.7)	2.5	3.5	
	Zinc	2,858.0	2,812.0	2,795.0	2,793.0	2,582.0	2,795.0	2,266.0	2,576.0	1,941.9	2,097.5	2,712.7	
	Change, %		1.6	2.3	2.3	10.7	2.3	26.1	10.9	47.2	36.3	5.4	
	Lead	2,343.3	2,346.3	2,315.5	2,282.3	2,178.3	2,346.3	1,777.0	2,003.5	1,791.2	1,868.3	2,231.1	
	Change, %		(0.1)	1.2	2.7	7.6	(0.1)	31.9	17.0	30.8	25.4	5.0	
	Aluminum	14,860.0	14,570.0	14,285.0	14,030.0	13,880.0	13,510.0	12,420.0	12,765.0	12,184.0	12,373.5	13,825.4	
	Change, %		2.0	4.0	5.9	7.1	10.0	19.6	16.4	22.0	20.1	7.5	
	Cobalt	57,500.0	59,000.0	56,940.0	60,000.0	55,050.0	38,250.0	26,250.0	32,734.0	28,444.4	25,480.1	51,213.3	
	Change, %		(2.5)	1.0	(4.2)	4.5	50.3	119.0	75.7	102.1	125.7	12.3	
	HR Coil	619.0	619.0	628.0	625.0	610.0	620.0	596.0	633.0	461.5	519.3	620.6	
	Change, %		0.0	(1.4)	(1.0)	1.5	(0.2)	3.9	(2.2)	34.1	19.2	(0.3)	
	Scrap	360.0	354.0	354.0	360.0	360.0	302.0	260.0	302.0	252.9	275.7	340.8	
	Change, %		1.7	1.7	0.0	0.0	19.2	38.5	19.2	42.3	30.6	5.6	

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		08/07	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.	
Crude Oil	WTI	49.4	49.6	50.2	44.4	46.4	53.0	43.0	53.7	48.8	43.4	49.6	
	<i>Change, %</i>		(0.4)	(1.6)	11.2	6.4	(6.8)	14.8	(8.1)	1.3	13.9	(0.3)	
	Dubai	50.8	50.4	50.4	45.2	48.0	55.3	41.6	53.8	50.8	41.3	50.8	
	<i>Change, %</i>		0.9	0.8	12.3	5.9	(8.2)	22.1	(5.6)	0.0	23.0	0.0	
Crude Oil Product	Gasoline(휘발유)	66.8	66.2	66.4	59.5	60.7	71.2	50.8	69.8	69.5	56.3	65.3	
	<i>Change, %</i>		0.9	0.7	12.3	10.1	(6.2)	31.5	(4.4)	(3.9)	18.7	2.3	
	Kerosene(등유)	63.4	63.4	64.3	57.2	57.5	66.9	50.0	66.4	64.7	52.9	62.1	
	<i>Change, %</i>		0.1	(1.3)	11.0	10.4	(5.2)	26.8	(4.5)	(2.0)	19.9	2.2	
	Diesel(경유)	63.5	63.4	65.4	58.3	58.0	67.0	50.2	65.5	64.8	52.1	62.7	
	<i>Change, %</i>		0.2	(2.8)	9.0	9.4	(5.1)	26.7	(3.0)	(1.9)	21.9	1.3	
	Bunker-C	47.7	46.9	48.1	44.6	44.8	49.9	34.9	52.1	45.3	35.5	47.5	
	<i>Change, %</i>		1.6	(0.8)	7.0	6.4	(4.4)	36.8	(8.4)	5.4	34.3	0.4	
	Naphtha	50.5	50.1	50.3	43.4	46.8	57.2	37.6	53.5	52.6	42.6	50.4	
	<i>Change, %</i>		0.7	0.4	16.2	7.8	(11.8)	34.3	(5.6)	(4.1)	18.5	0.1	
	Dubai Spread	Gasoline(휘발유)	16.0	15.8	16.0	14.3	12.7	15.9	9.2	16.0	18.7	14.9	14.5
		<i>Change</i>		0.2	0.0	1.7	3.3	0.1	6.8	(0.0)	(2.7)	1.1	1.5
Kerosene(등유)		12.6	13.0	13.9	11.9	9.5	11.6	8.4	12.6	14.0	11.6	11.3	
<i>Change</i>			(0.4)	(1.3)	0.7	3.1	1.0	4.2	0.0	(1.3)	1.0	1.4	
Diesel(경유)		12.7	13.1	15.0	13.1	10.1	11.7	8.6	11.7	14.0	10.8	11.9	
<i>Change</i>			(0.3)	(2.3)	(0.3)	2.7	1.1	4.2	1.0	(1.3)	1.9	0.8	
Bunker-C		(3.1)	(3.4)	(2.3)	(0.6)	(3.2)	(5.4)	(6.7)	(1.8)	(5.5)	(5.8)	(3.3)	
<i>Change</i>			0.3	(0.8)	(2.5)	0.1	2.3	3.6	(1.3)	2.4	2.7	0.2	
Naphtha		(0.3)	(0.2)	(0.1)	(1.8)	(1.2)	1.9	(4.0)	(0.4)	1.8	1.3	(0.4)	
<i>Change</i>			(0.1)	(0.2)	1.5	0.8	(2.2)	3.7	0.0	(2.1)	(1.6)	0.1	
Refining Margin	Simple(단순)	3.5	3.5	4.6	4.5	2.2	2.1	(0.3)	3.8	3.3	1.9	2.9	
	<i>Change</i>		0.0	(1.1)	(1.0)	1.3	1.4	3.9	(0.3)	0.2	1.6	0.6	
	Complex(복합)	8.4	8.4	9.5	8.5	6.3	7.5	3.8	8.3	9.3	7.0	7.6	
	<i>Change</i>		(0.0)	(1.1)	(0.1)	2.1	0.9	4.6	0.1	(0.9)	1.4	0.8	
Complex(lagging)	10.9	10.4	14.6	5.4	3.2	8.8	0.4	18.0	7.3	8.5	7.0		
<i>Change</i>		0.5	(3.7)	5.5	7.7	2.0	10.4	(7.1)	3.6	2.4	3.8		

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			08/07	08/04	08/03	08/02	08/01	07/31	07/28	07/27	07/26	07/25
Spot Price	Naphtha	CFR Japan	464.5	466.8	468.8	463.8	476.3	467.3	458.5	448.9	439.8	426.3
	Ethylene	CFR SE Asia	1,020.0	1,020.0	1,010.0	970.0	940.0	905.0	905.0	905.0	900.0	890.0
	Propylene	FOB Korea	855.0	857.0	850.0	850.0	849.0	855.0	856.0	857.0	857.0	858.0
	Butadiene	FOB Korea	910.0	910.0	910.0	910.0	910.0	910.0	910.0	910.0	910.0	910.0
	HDPE	CFR FE Asia	1,120.0	1,120.0	1,110.0	1,110.0	1,110.0	1,105.0	1,100.0	1,095.0	1,090.0	1,090.0
	LDPE	CFR FE Asia	1,160.0	1,160.0	1,160.0	1,160.0	1,150.0	1,150.0	1,140.0	1,140.0	1,140.0	1,140.0
	LLDPE	CFR FE Asia	1,120.0	1,110.0	1,100.0	1,100.0	1,095.0	1,090.0	1,090.0	1,085.0	1,080.0	1,080.0
	MEG	CFR China	880.0	875.0	863.0	877.0	880.0	867.0	870.0	860.0	855.0	848.0
	PP	CFR FE Asia	1,020.0	1,020.0	1,010.0	1,020.0	1,020.0	1,010.0	1,005.0	1,010.0	1,020.0	1,020.0
	PX	CFR China	817.7	822.5	823.2	824.0	818.3	807.7	804.7	809.7	798.7	791.7
	PTA	CFR China	636.0	638.0	637.0	640.0	642.0	645.0	645.0	645.0	652.0	652.0
	Benzene	FOB Korea	751.0	746.0	739.0	727.0	731.0	732.5	728.5	729.5	732.0	726.5
	Toluene	FOB Korea	644.0	643.0	627.0	624.0	606.0	602.5	596.5	600.5	602.5	596.5
	Xylene	FOB Korea	670.0	669.0	662.0	658.0	656.0	655.0	653.0	653.0	643.0	641.0
	SM	FOB Korea	1,110.0	1,110.0	1,100.0	1,109.0	1,113.0	1,122.5	1,128.5	1,128.5	1,134.5	1,128.5

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.	
Spot Price	Naphtha	CFR Japan	456.5	438.5	411.5	460.5	469.5	349.5	484.5	493.0	399.5	464.7	
	<i>Change, %</i>			4.1	10.9	(0.9)	(2.8)	30.6	(5.8)	(7.4)	14.3	(1.8)	
	Ethylene	CFR SE Asia	975.0	915.0	875.0	1,110.0	1,045.0	1,040.0	990.0	990.0	1,103.7	1,040.9	1,018.5
	<i>Change, %</i>			6.6	11.4	(12.2)	(6.7)	(6.3)	(1.5)	(11.7)	(6.3)	(4.3)	
	Propylene	CFR SE Asia	762.5	757.5	742.5	725.0	775.0	680.0	815.0	815.0	770.0	705.7	860.1
	<i>Change, %</i>			0.7	2.7	5.2	(1.6)	12.1	(6.4)	(1.0)	8.1	(11.3)	
	Butadiene	CFR SE Asia	900.0	925.0	975.0	1,275.0	1,600.0	995.0	2,100.0	2,100.0	877.5	1,116.8	1,693.1
	<i>Change, %</i>			(2.7)	(7.7)	(29.4)	(43.8)	(9.5)	(57.1)	2.6	(19.4)	(46.8)	
	Benzene	CFR SE Asia	742.5	737.5	760.0	797.5	815.0	627.5	822.5	822.5	690.0	646.7	846.4
	<i>Change, %</i>			0.7	(2.3)	(6.9)	(8.9)	18.3	(9.7)	7.6	14.8	(12.3)	
	Toluene	CFR SE Asia	635.0	630.0	630.0	670.0	675.0	575.0	690.0	690.0	700.8	630.5	685.3
	<i>Change, %</i>			0.8	0.8	(5.2)	(5.9)	10.4	(8.0)	(9.4)	0.7	(7.3)	
	Xylene	CFR SE Asia	622.5	617.5	610.0	660.0	710.0	600.0	675.0	675.0	699.3	627.7	672.0
	<i>Change, %</i>			0.8	2.0	(5.7)	(12.3)	3.8	(7.8)	(11.0)	(0.8)	(7.4)	

Spread	Ethylene	-Naphtha	518.5	476.5	463.5	649.5	575.5	690.5	505.5	610.6	641.4	553.8
	<i>Change, %</i>			8.8	11.9	(20.2)	(9.9)	(24.9)	2.6	(15.1)	(19.2)	(6.4)
	Propylene	-Naphtha	306.0	319.0	331.0	264.5	305.5	330.5	330.5	277.0	306.2	395.4
	<i>Change, %</i>			(4.1)	(7.6)	15.7	0.2	(7.4)	(7.4)	10.5	(0.1)	(22.6)
	Butadiene	-Naphtha	443.5	486.5	563.5	814.5	1,130.5	645.5	1,615.5	384.5	717.3	1,228.4
	<i>Change, %</i>			(8.8)	(21.3)	(45.5)	(60.8)	(31.3)	(72.5)	15.4	(38.2)	(63.9)
	Benzene	-Naphtha	286.0	299.0	348.5	337.0	345.5	278.0	338.0	197.0	247.2	381.7
	<i>Change, %</i>			(4.3)	(17.9)	(15.1)	(17.2)	2.9	(15.4)	45.2	15.7	(25.1)
Toluene	-Naphtha	178.5	191.5	218.5	209.5	205.5	225.5	205.5	207.8	231.0	220.6	
<i>Change, %</i>			(6.8)	(18.3)	(14.8)	(13.1)	(20.8)	(13.1)	(14.1)	(22.7)	(19.1)	
Xylene	-Naphtha	166.0	179.0	198.5	199.5	240.5	250.5	190.5	206.3	228.2	207.3	
<i>Change, %</i>			(7.3)	(16.4)	(16.8)	(31.0)	(33.7)	(12.9)	(19.5)	(27.3)	(19.9)	

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	1,057.5	1,047.5	1,047.5	1,147.5	1,137.5	1,135.0	1,142.5	1,230.1	1,134.6	1,122.3
	Change, %			1.0	1.0	(7.8)	(7.0)	(6.8)	(7.4)	(14.0)	(6.8)	(5.8)
	MEG	CFR SE Asia	872.5	847.5	802.5	697.5	742.5	615.0	847.5	780.8	660.8	814.1
	Change, %			2.9	8.7	25.1	17.5	41.9	2.9	11.7	32.0	7.2
	PVC	CFR SE Asia	860.0	870.0	870.0	880.0	930.0	800.0	920.0	820.8	823.4	900.2
	Change, %			(1.1)	(1.1)	(2.3)	(7.5)	7.5	(6.5)	4.8	4.4	(4.5)
	PP	CFR SE Asia	1,072.5	1,057.5	1,037.5	1,067.5	1,057.5	1,035.0	1,032.5	1,109.8	978.4	1,066.7
	Change, %			1.4	3.4	0.5	1.4	3.6	3.9	(3.4)	9.6	0.5
	2-EH	CFR Korea	970.0	950.0	920.0	930.0	1,035.0	750.0	865.0	930.1	772.4	948.1
	Change, %			2.1	5.4	4.3	(6.3)	29.3	12.1	4.3	25.6	2.3
	ABS	CFR SE Asia	1,820.0	1,810.0	1,790.0	1,685.0	1,660.0	1,385.0	1,635.0	1,431.1	1,347.1	1,754.8
	Change, %			0.6	1.7	8.0	9.6	31.4	11.3	27.2	35.1	3.7
	SBR	CFR SE Asia	1,490.0	1,500.0	1,450.0	1,900.0	2,545.0	1,400.0	2,000.0	1,332.1	1,483.0	2,192.7
	Change, %			(0.7)	2.8	(21.6)	(41.5)	6.4	(25.5)	11.9	0.5	(32.0)
	SM	CFR SE Asia	1,172.5	1,170.0	1,152.5	1,107.5	1,185.0	1,047.5	1,205.0	1,100.7	1,064.6	1,233.9
	Change, %			0.2	1.7	5.9	(1.1)	11.9	(2.7)	6.5	10.1	(5.0)
	Caustic	FOB NEA	462.5	462.5	447.5	447.5	449.0	300.0	422.5	296.8	316.6	439.3
	Change, %			0.0	3.4	3.4	3.0	54.2	9.5	55.9	46.1	5.3
	PX	CFR SE Asia	817.5	802.5	775.0	807.5	832.5	785.0	855.0	842.9	790.4	835.5
	Change, %			1.9	5.5	1.2	(1.8)	4.1	(4.4)	(3.0)	3.4	(2.2)
PO	CFR China	1,540.0	1,530.0	1,485.0	1,347.5	1,537.5	1,542.5	1,562.5	1,683.4	1,396.8	1,486.0	
Change, %			0.7	3.7	14.3	0.2	(0.2)	(1.4)	(8.5)	10.3	3.6	
Caprolactam	CFR SE Asia	1,730.0	1,700.0	1,610.0	1,870.0	2,250.0	1,310.0	1,850.0	1,581.5	1,344.9	1,927.3	
Change, %			1.8	7.5	(7.5)	(23.1)	32.1	(6.5)	9.4	28.6	(10.2)	
PTA	CFR SE Asia	667.5	672.5	630.0	647.5	662.5	625.0	642.5	648.0	613.7	657.6	
Change, %			(0.7)	6.0	3.1	0.8	6.8	3.9	3.0	8.8	1.5	
Spread	HDPE		601.0	609.0	636.0	687.0	668.0	785.5	658.0	737.1	735.1	657.7
	Change, %			(1.3)	(5.5)	(12.5)	(10.0)	(23.5)	(8.7)	(18.5)	(18.2)	(8.6)
	MEG		416.0	409.0	391.0	237.0	273.0	265.5	363.0	287.8	261.3	349.4
	Change, %			1.7	6.4	75.5	52.4	56.7	14.6	44.5	59.2	19.0
	PVC		403.5	431.5	458.5	419.5	460.5	450.5	435.5	327.8	423.9	435.6
	Change, %			(6.5)	(12.0)	(3.8)	(12.4)	(10.4)	(7.3)	23.1	(4.8)	(7.4)
	PP		616.0	619.0	626.0	607.0	588.0	685.5	548.0	616.8	578.9	602.0
	Change, %			(0.5)	(1.6)	1.5	4.8	(10.1)	12.4	(0.1)	6.4	2.3
	2-EH		513.5	511.5	508.5	469.5	565.5	400.5	380.5	437.0	372.9	483.5
	Change, %			0.4	1.0	9.4	(9.2)	28.2	35.0	17.5	37.7	6.2
	ABS		1,363.5	1,371.5	1,378.5	1,224.5	1,190.5	1,035.5	1,150.5	938.1	947.6	1,290.2
	Change, %			(0.6)	(1.1)	11.4	14.5	31.7	18.5	45.4	43.9	5.7
	SBR	BD spread	590.0	575.0	475.0	625.0	945.0	405.0	(100.0)	454.7	366.2	499.7
	Change, %			2.6	24.2	(5.6)	(37.6)	45.7	(690.0)	29.8	61.1	18.1
	SM		716.0	731.5	741.0	647.0	715.5	698.0	720.5	607.7	665.1	769.2
	Change, %			(2.1)	(3.4)	10.7	0.1	2.6	(0.6)	17.8	7.7	(6.9)
	Caustic											
	Change, %											
	PX		361.0	364.0	363.5	347.0	363.0	435.5	370.5	349.9	390.9	370.8
	Change, %			(0.8)	(0.7)	4.0	(0.6)	(17.1)	(2.6)	3.2	(7.6)	(2.6)
PO	propylene spread	777.5	772.5	742.5	622.5	762.5	862.5	747.5	913.4	691.1	625.9	
Change, %			0.6	4.7	24.9	2.0	(9.9)	4.0	(14.9)	12.5	24.2	
Caprolactam	benzene spread	987.5	962.5	850.0	1,072.5	1,435.0	682.5	1,027.5	891.6	698.2	1,080.9	
Change, %			2.6	16.2	(7.9)	(31.2)	44.7	(3.9)	10.8	41.4	(8.6)	
PTA	px spread	95.3	110.8	87.5	82.3	79.8	75.5	44.0	58.0	60.4	72.7	
Change, %			(14.0)	8.9	15.8	19.4	26.2	116.5	64.2	57.6	30.9	

자료 : Ciscem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	08/07	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA		
											17E	18E	17E	18E	17E	18E	
Petrochemical																	
Dow Chemical	USD	63.9	(0.4)	(0.6)	(0.0)	1.3	6.8	19.1	11.6	78,154	15.7	14.3	2.9	2.7	8.8	8.2	
Du Pont	USD	81.8	(0.3)	(0.5)	(0.3)	0.8	7.5	18.2	11.4	70,978	21.0	19.8	6.4	5.4	13.4	12.6	
Eastman	USD	84.5	0.5	1.6	0.7	6.1	8.7	29.2	12.3	12,235	11.3	10.4	2.4	2.3	8.6	8.2	
BASF	EUR	81.6	(0.3)	1.3	0.5	(9.7)	(8.3)	17.5	(7.6)	88,387	14.0	13.9	2.2	2.1	7.8	7.6	
Akzo Nobel	EUR	77.3	0.3	1.1	(0.3)	(2.7)	21.4	33.0	30.1	23,157	17.9	17.4	3.1	3.0	9.9	9.6	
Arkema	EUR	96.5	(0.1)	0.3	1.0	(3.2)	4.6	23.3	3.8	8,619	14.2	13.1	1.7	1.6	6.4	6.1	
Lanxess	EUR	67.4	0.2	3.3	1.8	(2.4)	2.4	55.0	8.0	7,267	18.2	15.3	2.3	2.1	5.9	5.8	
Sumitomo Chemical	JPY	634	1.1	(2.2)	(1.2)	0.0	3.6	53.5	14.0	9,478	10.3	9.5	1.2	1.1	7.5	7.1	
Mitsubishi Chemical	JPY	954	1.7	2.7	0.3	7.6	23.1	74.0	25.8	12,972	9.5	9.3	1.2	1.1	6.4	6.2	
Shin-Etsu Chemical	JPY	10,015	(0.2)	(0.9)	0.7	4.3	5.4	46.3	10.5	39,078	20.1	18.0	1.9	1.7	8.7	7.7	
Asahi Kasei	JPY	1,309	1.3	3.5	9.0	21.9	24.4	70.4	28.3	16,573	15.6	14.7	1.5	1.4	7.5	7.1	
JSR	JPY	1,917	(0.6)	(1.6)	(1.4)	(5.0)	(4.3)	37.5	4.0	3,914	15.3	14.2	1.1	1.1	7.9	7.3	
Nitto Denko	JPY	10,210	(0.5)	3.6	5.8	14.1	10.3	57.3	13.8	16,020	21.2	19.2	2.4	2.2	9.3	8.7	
SABIC	SAR	97.7	0.3	0.3	(3.5)	2.1	1.4	20.6	6.8	78,162	14.6	14.1	1.7	1.7	7.4	7.2	
Yansab	SAR	54.3	(0.2)	(1.3)	1.0	(0.3)	(7.0)	31.3	(0.3)	8,144	13.9	13.1	2.3	2.2	8.6	8.1	
Formosa Plastics	TWD	93.0	0.6	2.6	(0.4)	3.3	2.5	18.3	4.3	19,593	14.4	14.8	1.8	1.8	19.6	20.1	
Formosa Fiber	TWD	92.7	0.5	1.9	3.0	1.3	(5.4)	10.9	(3.7)	17,982	12.7	13.3	1.6	1.6	10.2	10.6	
Nan Ya Plastics	TWD	76.0	0.3	0.0	1.2	7.0	1.2	23.4	6.7	19,948	16.0	16.5	1.8	1.7	16.8	16.3	
Sinopec Shanghai	CNY	7.09	2.8	3.8	5.5	11.8	7.1	17.2	10.1	9,850	14.6	13.7	2.7	2.4	7.7	7.6	
Sinopec Yizheng(Fiber)	CNY	3.27	1.6	1.6	(0.9)	3.2	(15.1)	(14.6)	(20.2)	6,208	#N/A	N/A	48.1	7.0	7.4	38.2	17.7
Reliance	INR	1,616	(0.4)	0.1	8.4	21.7	56.8	59.1	49.3	82,327	17.9	14.7	1.7	1.5	11.8	9.6	
Industries Qatar	QAR	94.2	(0.2)	(2.2)	0.2	(5.3)	(15.1)	(14.4)	(19.8)	15,653	14.7	13.1	1.6	1.6	47.3	44.8	
PTT Chemical	THB	72.0	(1.0)	0.3	2.9	(3.7)	4.3	18.0	14.3	9,646	10.1	10.1	1.3	1.2	5.2	5.1	
Petronas	MYR	7.0	0.3	1.2	(0.8)	(1.7)	(2.5)	6.5	0.7	13,129	15.8	15.7	1.9	1.8	8.6	8.5	
LG화학	KRW	344,000	0.4	4.9	19.0	24.6	26.0	39.6	31.8	21,538	13.4	13.0	1.7	1.5	5.9	5.5	
롯데케미칼	KRW	393,500	(0.3)	6.6	12.4	11.6	1.8	30.7	6.6	11,962	6.2	6.1	1.2	1.0	4.0	3.6	
한화케미칼	KRW	33,550	1.4	(0.4)	6.5	33.1	31.6	31.8	35.8	4,904	6.4	6.6	0.9	0.8	7.6	7.0	
금호석유	KRW	75,700	(3.7)	0.1	2.2	(1.4)	(4.2)	20.2	(7.7)	2,046	14.8	13.3	1.4	1.3	9.8	8.7	
SKC	KRW	36,350	(3.5)	0.3	4.0	27.1	15.4	16.9	10.2	1,210	11.7	9.4	0.9	0.8	8.9	7.5	
국도화학	KRW	56,200	(1.4)	(1.7)	6.0	18.1	6.0	(4.9)	2.4	290	9.2	9.9	0.7	0.7	5.3	5.4	
효성	KRW	6,740	0.6	11.6	18.9	(11.9)	(15.1)	32.2	(0.9)	5,342	10.1	8.7	1.5	1.3	7.7	6.9	
Average			0.0	1.3	3.3	5.6	6.3	28.3	9.4								
Refinery																	
Valero	USD	68.0	(0.8)	(1.4)	(0.3)	4.1	3.9	27.1	(0.5)	30,033	16.6	12.3	1.6	1.6	6.8	5.8	
Conoco Phillips	USD	45.2	(0.9)	(0.4)	5.0	(3.4)	(8.6)	11.3	(9.9)	54,970	230.5	34.6	1.8	1.8	8.8	6.7	
Formosa Petrochemical	TWD	106.5	0.0	0.5	2.4	2.4	1.9	17.4	(4.9)	33,577	16.4	18.9	3.3	3.2	9.9	11.2	
Andeavor	USD	97.2	(0.8)	(2.4)	0.9	20.2	14.1	30.1	11.1	15,542	20.4	14.0	1.8	1.9	8.0	6.3	
Marathon Petroleum	USD	54.9	(1.6)	(1.9)	1.5	8.4	14.5	31.0	9.0	27,793	20.2	16.3	2.2	1.9	8.9	7.9	
Devon Energy	USD	32.4	(3.7)	(2.7)	9.7	(14.8)	(26.6)	(18.0)	(29.1)	17,029	19.3	15.2	2.4	2.1	8.2	7.4	
Hollyfrontier	USD	30.5	(0.1)	5.7	12.6	13.2	7.2	15.3	(6.9)	5,405	24.4	13.9	1.1	1.2	8.7	6.5	
Phillips 66	USD	85.1	(0.6)	1.6	3.0	7.2	8.3	8.7	(1.6)	43,514	20.6	15.0	1.9	1.9	10.2	8.4	
Murphy Oil	USD	25.9	(2.1)	(2.7)	5.7	(1.2)	(7.4)	(7.0)	(16.9)	4,464	#N/A	N/A	76.1	1.0	1.0	4.7	4.4
JX Holdings	JPY	492.9	(0.4)	0.6	0.3	(1.9)	(7.2)	35.8	(0.4)	15,253	7.8	7.2	0.7	0.7	7.9	7.6	
Idemitsu	JPY	2,630.0	0.6	(1.8)	(6.2)	(27.8)	(25.3)	43.6	(15.3)	4,940	5.1	4.9	0.7	0.6	9.3	8.7	
Nesteoil	EUR	34.9	(1.4)	(4.7)	(0.2)	(9.7)	12.0	(3.2)	(4.4)	0	13.5	13.3	2.2	2.0	7.7	8.0	
Ashland	USD	63.4	(0.1)	(2.4)	(3.5)	5.0	10.2	13.4	18.6	3,957	14.3	17.1	1.1	1.0	8.2	9.4	
Fuchs Petrolub	EUR	48.0	0.8	(4.5)	(0.3)	(1.5)	12.1	19.0	20.3	7,460	24.6	23.3	4.9	4.4	14.5	13.7	
SK이노베이션	KRW	176,500	(1.9)	0.0	10.7	3.5	16.5	17.7	20.5	14,475	7.4	7.3	0.9	0.8	4.4	4.0	
S-Oil	KRW	116,000	(1.7)	(0.4)	19.1	16.0	42.5	50.8	37.0	11,583	12.5	9.7	2.0	1.9	9.5	7.1	
GS	KRW	74,400	(0.5)	(1.3)	7.5	25.9	45.0	54.0	37.5	6,131	6.4	6.3	0.9	0.8	7.3	6.9	
Average			(0.9)	(1.1)	4.0	2.7	6.7	20.4	3.8								

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	08/07	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	(0.1)	0.1	(0.1)	(2.3)	(3.2)	(8.5)	(11.2)	339,646	23.0	20.5	1.9	1.9	9.7	8.9
BP	GBP	468	1.1	5.1	5.5	3.8	2.5	11.7	(8.1)	120,509	21.3	16.3	1.3	1.3	6.2	5.6
Shell	EUR	2,198	0.7	3.0	7.5	6.3	2.0	15.7	(2.0)	237,877	16.6	14.5	1.2	1.2	6.5	5.9
Chevron	USD	110	(0.3)	0.5	6.1	3.8	(1.4)	9.2	(6.7)	208,033	27.2	22.1	1.4	1.4	7.9	7.2
Total	EUR	44	(0.2)	2.0	3.3	(8.7)	(6.0)	2.1	(10.0)	129,287	13.0	11.9	1.2	1.1	6.1	5.5
Sinopec	CNY	6	(1.0)	(1.1)	0.0	7.1	2.9	25.6	11.6	105,156	14.3	12.9	1.0	1.0	4.8	4.7
Petrochina	CNY	8	0.1	0.7	5.0	8.5	(3.8)	13.1	3.0	210,941	54.6	31.5	1.2	1.2	7.0	6.6
CNOOC	CNY	11	1.3	0.6	2.6	7.9	(11.0)	(5.1)	(10.8)	49,598	15.7	12.0	0.9	0.8	3.9	3.6
Gazprom	RUB	120	0.0	2.9	(2.8)	(11.1)	(19.6)	(11.8)	(22.7)	47,145	4.3	3.8	0.2	0.2	3.6	3.2
Rosneft	RUB	316	0.1	1.6	(0.5)	1.2	(18.8)	(4.1)	(21.5)	55,856	9.8	6.9	0.8	0.7	5.0	4.3
Anadarko	USD	44	(1.2)	(2.8)	2.3	(15.6)	(33.9)	(15.9)	(36.4)	24,863	#N/A	#N/A	1.7	1.7	6.8	6.2
Petrobras	BRL	14	1.1	2.0	13.6	(4.6)	(7.8)	16.3	(8.9)	57,645	9.9	8.1	0.6	0.6	5.3	4.8
Lukoil	USD	2,918	0.5	4.3	2.2	3.8	(13.7)	3.6	(15.4)	41,235	5.8	5.2	0.6	0.6	N/A	N/A
Kinder	USD	20	(0.2)	(1.4)	5.1	(0.2)	(8.9)	(1.0)	(2.7)	47,497	31.2	28.3	1.3	1.3	11.8	11.3
Statoil	NOK	151	0.5	2.1	10.7	2.7	(0.8)	11.6	(5.0)	62,348	16.8	17.9	1.6	1.6	3.4	3.3
BHP	AUD	26	1.7	1.2	6.4	15.6	0.8	30.6	4.4	104,850	17.6	18.1	1.8	1.8	6.8	6.8
PTT E&P	THB	87	0.3	(0.9)	3.3	(7.7)	(9.4)	7.7	(9.4)	10,403	13.1	12.1	0.8	0.8	3.1	2.9
Petronas gas	MYR	19	0.9	0.6	2.1	1.1	(8.9)	(14.2)	(11.5)	8,712	21.0	19.4	3.0	2.8	12.0	11.0
Chesapeake	USD	4	(4.0)	(12.3)	(4.2)	(20.3)	(29.5)	(11.0)	(38.0)	3,951	5.9	4.9	#N/A	#N/A	145.0	7.4
Noble Energy	USD	26	(1.5)	(11.7)	(5.4)	(17.7)	(34.2)	(23.4)	(32.9)	12,426	#N/A	#N/A	1.2	1.2	7.8	6.7
Average		0	(0.0)	(0.2)	3.1	(1.3)	(10.1)	2.6	(11.7)							
PV																
WACKER	EUR	106.5	2.3	1.5	12.3	6.7	(2.7)	31.1	7.7	6,545	29.1	22.0	1.8	1.8	6.7	6.4
GCL-Poly	HKD	0.9	5.9	8.4	3.4	(5.3)	(10.9)	(15.1)	(3.2)	2,138	7.4	7.1	0.6	0.6	5.7	5.2
SunPower	USD	9.8	5.5	(12.4)	11.7	41.2	39.2	(35.4)	47.7	1,361	#N/A	#N/A	1.9	1.9	42.1	14.0
Canadian Solar	USD	17.6	5.5	4.1	13.3	32.5	46.7	21.0	44.7	1,023	13.7	8.4	1.0	0.9	10.3	9.9
JA Solar	USD	6.3	3.8	1.0	2.3	(10.7)	36.6	(19.8)	33.2	302	158.3	16.0	1.6	1.5	4.9	3.5
Yingli	USD	2.3	(2.5)	(2.5)	(0.9)	(0.4)	(12.7)	(40.3)	(10.4)	42	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
First Solar	USD	48.6	1.2	(1.5)	23.3	40.6	52.8	10.1	51.4	5,072	28.4	48.4	0.9	1.0	9.3	9.9
한화큐셀	USD	8.5	3.9	2.7	26.8	28.7	7.2	(36.4)	4.4	709	65.5	38.7	#N/A	#N/A	7.7	7.3
OCI	KRW	95,100	(0.1)	3.1	8.6	17.6	11.9	4.7	20.8	2,012	15.9	20.9	0.7	0.7	7.8	7.3
웅진에너지	KRW	8,370	0.5	4.0	19.4	62.8	78.7	(0.9)	76.8	185	N/A	0.7	0.7	7.8	7.3	10.1
신성솔라에너지	KRW	2,260	2.7	0.0	5.4	25.6	17.7	(1.7)	2.3	347	N/A	0.7	7.8	7.3	10.1	8.7
Average			2.6	0.8	11.4	21.7	24.0	(7.5)	25.0							
Gas Company																
Towngas China	HKD	5.6	0.9	1.5	9.0	20.0	31.5	16.5	37.0	1,978	12.8	11.9	1.0	1.0	11.6	10.8
Kulun	HKD	7.6	(0.4)	(2.1)	8.7	11.9	25.9	30.0	31.6	7,874	12.5	11.4	1.4	1.3	5.9	5.6
Beijing Enterprise	HKD	40.6	0.1	(2.3)	6.2	10.8	3.8	(9.5)	10.6	6,543	7.9	7.5	0.8	0.7	13.5	13.1
ENN Energy	HKD	53.3	(0.5)	0.5	4.7	28.7	36.5	41.0	67.1	7,370	14.5	12.9	2.8	2.4	9.1	8.2
China Resources Gas	HKD	29.6	0.5	(0.2)	4.2	15.9	17.3	29.6	35.6	8,401	16.9	15.0	3.2	2.7	10.3	9.3
China Gas Holdings	HKD	19.1	1.2	0.8	10.9	60.2	67.2	53.7	81.2	12,106	17.4	14.8	3.8	3.2	13.9	12.1
Shenzen Gas	HKD	14.0	(0.9)	4.5	2.2	9.0	25.0	24.2	23.7	3,613	12.0	11.3	1.3	1.2	7.7	7.2
Shann Xi	CNY	8.8	(0.3)	(0.2)	(1.6)	3.2	(6.7)	(15.1)	(8.2)	1,457	18.6	16.7	1.8	1.6	#N/A	#N/A
Suntien	HKD	1.7	(1.7)	2.4	21.6	9.7	34.1	87.8	69.0	803	7.3	6.3	0.6	0.6	8.7	7.4
China Oil & Gas	HKD	0.6	0.0	1.9	0.0	(3.5)	(11.3)	(6.8)	(9.8)	410	9.5	8.2	0.9	0.8	6.0	5.4
Average			(0.1)	0.7	6.6	16.6	22.3	25.1	33.8							
EV																
LG화학	KRW	344,000	0.4	4.9	19.0	24.6	26.0	39.6	31.8	21,538	12.9	12.7	1.7	1.5	6.1	5.9
삼성SDI	KRW	181,000	(0.3)	7.4	2.3	30.2	47.2	55.4	66.1	11,039	18.9	12.3	1.1	1.0	21.2	13.3
Panasonic	JPY	1523.0	1.3	0.1	4.0	13.7	29.6	56.7	28.0	33,737	19.9	15.3	2.0	1.9	6.4	5.5
GS Yuasa	JPY	517.0	1.2	(0.8)	6.6	(1.9)	10.2	31.9	6.4	1,931	15.6	14.4	1.3	1.2	7.1	6.6
NEC	JPY	302.0	0.0	0.7	2.4	7.1	14.0	21.8	(2.6)	7,103	21.3	17.0	0.9	0.9	7.3	6.3
BYD Auto	CNY	48.9	0.8	(0.2)	(3.5)	1.2	(0.9)	(16.8)	(1.5)	18,868	23.9	17.6	2.4	2.2	13.7	10.8
Tesla Motors	USD	355.2	(0.5)	9.8	13.4	15.2	37.9	54.4	66.2	59,273	#N/A	#N/A	12.1	10.5	72.6	26.3
Kandi Technologies	USD	4.0	0.0	(1.3)	(10.2)	(9.2)	(4.8)	(46.0)	(19.4)	190	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Average			0.4	2.6	4.2	10.1	19.9	24.6	21.9							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임