

1. News Summary (3 page)

2017년 6월 23일

News	
WTI comment	소폭 반등...WTI 0.49%↑
Headline	멕시코 국경장벽이 태양열 발전?...트럼프, 내 생각 어때
News 1.	China Gas Holdings, 최대 이익 기록하며 9.2% 상승 마감
News 2.	-
News 3.	-
News 4.	-

Conclusion	
Sunpower, Canadian Solar 등 태양광 관련주 주가 상승에 영향을 줌	중국 가스 관련 정책에 힘입어 가스인프라의 굴기가 이뤄질 전망
-	-
-	-
-	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	42.7	0.5	(3.9)	(12.6)	(10.4)	(14.7)
Dubai	\$/bbl	43.5	(1.9)	(4.1)	(17.6)	(11.5)	(6.4)
Gasoline	\$/bbl	56.3	(0.9)	(2.5)	(15.4)	(11.1)	(6.0)
Diesel	\$/bbl	54.8	(2.0)	(3.5)	(14.3)	(9.2)	(5.7)
Complex margin ¹	\$/bbl	7.7	0.0	0.3	0.7	0.8	1.6
1M lagging	\$/bbl	(1.6)	(1.6)	(3.5)	(10.4)	(3.2)	(9.7)
Petrochemical			%	%	%	%	%
Naphtha	\$/t	399	(1.0)	(2.4)	(13.7)	(11.5)	(9.3)
Butadiene	\$/t	875	1.7	1.2	(13.4)	(58.3)	(9.3)
HDPE	\$/t	1,085	0.0	(0.5)	(2.3)	(6.5)	(2.7)
MEG	\$/t	773	(0.3)	(4.0)	0.1	(0.1)	26.9
PX	\$/t	744	(2.3)	(4.0)	(9.7)	(10.9)	(7.6)
SM	\$/t	1,083	(1.5)	(3.9)	(1.8)	(10.4)	8.6
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	2.90	0.2	(5.2)	(11.5)	(11.4)	(4.2)
Natural rubber	\$/t	1,370	0.7	(4.2)	(8.1)	(27.9)	6.2
Cotton	C/lbs	71.1	0.4	(1.1)	(7.8)	(7.9)	9.6

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	06/19	\$/t	855	0.0	(14.1)	(20.5)	(17.6)
Propylene	06/19	\$/t	738	1.7	(1.3)	(14.7)	0.3
Benzene	06/19	\$/t	783	2.6	0.3	(5.7)	28.3
Toluene	06/19	\$/t	645	(0.8)	(1.5)	(6.5)	5.7
Xylene	06/19	\$/t	620	(0.8)	(1.6)	(13.9)	(1.6)
PP	06/19	\$/t	1,058	1.0	1.9	(4.5)	9.6
PVC	06/19	\$/t	880	0.0	0.0	(6.4)	12.1
ABS	06/19	\$/t	1,710	4.3	4.9	(5.0)	33.6
SBR	06/19	\$/t	1,450	(3.3)	(17.1)	(47.2)	9.0
SM	06/19	\$/t	1,165	2.6	4.7	(9.7)	15.6
BPA	06/19	\$/t	1,395	(2.3)	3.3	(2.6)	6.1
Caustic	06/19	\$/t	438	0.0	(2.2)	(1.9)	48.3
2-EH	06/19	\$/t	925	(1.6)	(2.6)	(8.0)	20.1
Caprolactam	06/19	\$/t	1,600	0.0	(5.9)	(30.4)	26.0
Solar				%	%	%	%
Polysilicon	06/21	\$/kg	13.9	(0.7)	3.4	(10.2)	(17.5)
Module	06/21	\$/W	0.33	(0.3)	(0.3)	(3.2)	(34.1)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	81.1	(0.4)	(1.4)	(1.5)	(0.8)	(11.1)
Shell	EUR	2,066	0.0	(0.8)	(2.1)	(1.9)	14.1
Petrochina	CNY	7.69	(0.4)	0.5	0.0	(3.6)	6.5
Gazprom	RUB	119.6	1.3	3.5	(2.4)	(9.2)	(16.4)
Petrobras	BRL	12.0	3.4	(4.6)	(10.1)	(11.9)	28.9
Refinery							
Phillips66	USD	78.9	0.0	(0.2)	0.5	0.1	(0.8)
Valero	USD	64.8	0.2	0.2	1.5	(4.1)	22.7
JX	JPY	475.6	(0.5)	(2.0)	(4.6)	(10.1)	15.4
Neste Oil	EUR	34.8	(2.1)	0.0	(6.5)	(4.1)	12.2

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	85.5	(0.3)	0.7	0.1	(3.5)	21.6
Dow Chemical	USD	63.8	0.2	(0.4)	4.7	1.7	19.9
SABIC	SAR	102.3	(1.7)	3.4	3.5	7.3	24.5
Formosa Pla.	TWD	91.0	0.3	1.0	3.4	(1.3)	16.1
Shin-Etsu	JPY	10,060	(0.1)	1.0	2.3	6.2	66.8
Renewable							
Wacker	EUR	94.3	(1.4)	2.9	(2.9)	(6.1)	12.3
First Solar	USD	38.42	3.2	7.5	5.5	33.1	(21.0)
GCL-Poly	HKD	0.73	0.0	0.0	(18.0)	(29.1)	(29.1)
Tesla Motors	USD	382.6	1.6	1.9	23.3	50.0	94.6

4. Coverage Summary

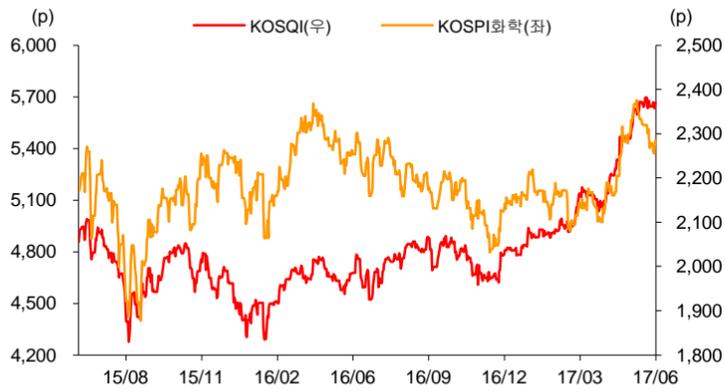
	06/22	1D	1W	1M	3M	6M	12M
KOSPI	2,370	0.5	0.4	2.5	9.3	16.3	19.6
KOSPI화학	5,445	0.8	0.8	(2.0)	7.1	7.1	2.5
LG화학	287,000	2.5	3.8	(0.9)	0.2	8.9	11.5
롯데케미칼	342,500	1.8	3.0	(7.3)	(3.5)	(2.3)	23.6
한화케미칼	29,650	(1.3)	4.0	1.4	17.4	14.9	20.8
금호석유화학	73,400	0.7	(2.7)	(6.1)	(2.8)	(11.6)	17.8
KCC	419,500	1.6	5.1	9.7	18.0	12.6	9.1
OCI	91,100	(3.6)	2.1	3.6	7.9	18.8	(3.6)
SKC	32,550	(1.8)	(3.0)	6.4	6.5	(0.6)	15.2
국도화학	53,900	(1.1)	0.0	13.1	10.2	(4.4)	(8.6)
SK이노베이션	156,500	(0.3)	0.0	(8.7)	(4.3)	6.8	13.0
S-Oil	94,300	0.2	0.1	(8.9)	(1.9)	12.5	24.6
GS	66,800	(0.7)	(0.4)	(3.3)	17.4	24.6	38.4
SK가스	129,500	(2.3)	2.4	7.9	3.6	5.7	51.1
포스코대우	22,000	(1.8)	(3.3)	(6.2)	(3.7)	(21.7)	(12.4)
LG상사	30,300	(1.1)	(2.7)	(4.6)	0.0	(0.8)	(21.9)
한국전력	42,100	0.8	(2.5)	(0.1)	(11.3)	(7.3)	(28.2)
한국가스공사	52,500	1.2	4.6	2.5	17.3	9.8	32.1

투자 의견	TP	%	P/E	P/B
* 추정치는 12M fwd 기준임				
* 모든 coverage 업체의 실적은 연결기준임				
매수	330,000	15.0	13.15	1.41
매수	410,000	19.7	10.54	1.22
매수	28,000	(5.6)	12.76	0.87
매수	100,000	36.2	10.83	1.32
매수	450,000	7.3	18.42	0.66
매수	100,000	9.8	15.83	0.69
매수	40,000	22.9	11.24	0.81
매수	70,000	29.9	9.76	0.63
매수	180,000	15.0	10.09	0.82
매수	100,000	6.0	13.24	1.46
매수	70,000	4.8	9.29	1.00
매수	140,000	8.1	12.31	1.15
매수	29,000	31.8	10.88	1.06
매수	42,000	38.6	10.51	0.92
매수	60,000	42.5	7.27	0.33
매수	60,000	14.3	8.91	0.62

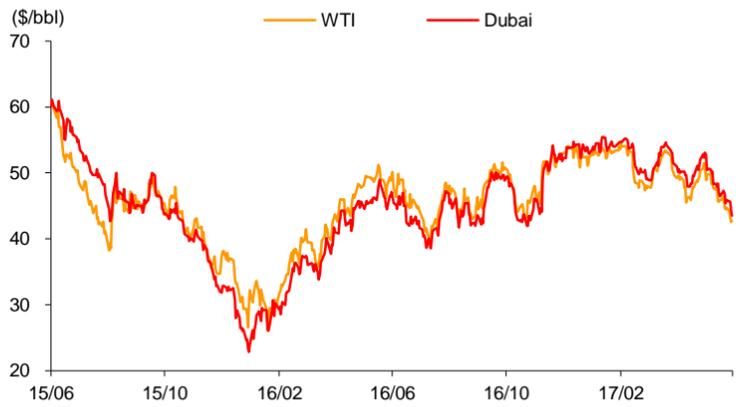
· 작성자(손지우)는 본 조사분석자료에 게재된 내용들이 본인의 의견을 정확하게 반영하고 있으며, 외부의 부당한 압력이나 간섭없이 신의성실하게 작성되었음을 확인합니다.
· 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.
· 본 보고서는 기관투자자 또는 제 3자에게 사전 제공된 사실이 없습니다.
· 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

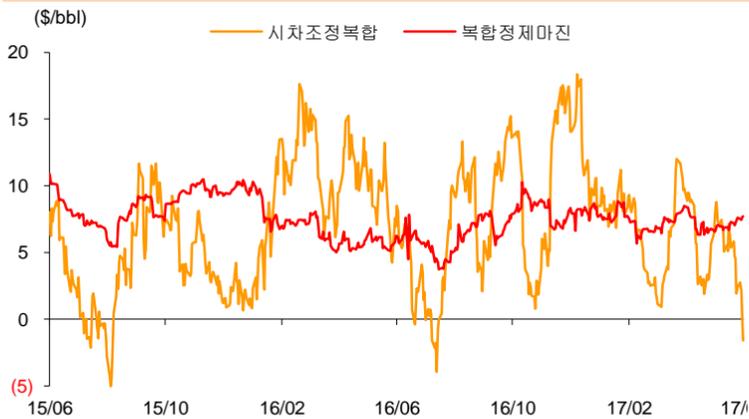
KOSPI/KOSPI화학



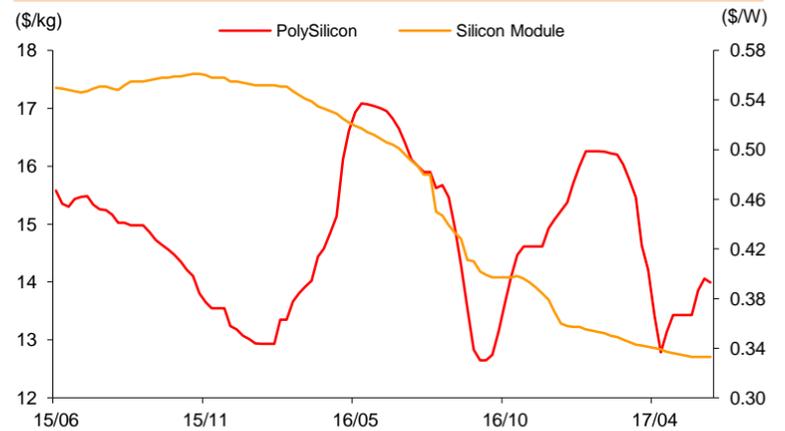
WTI/Dubai



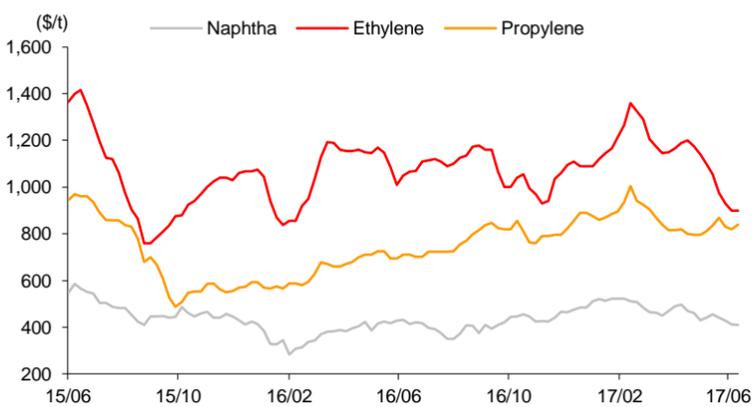
Complex & 1M lagging margin



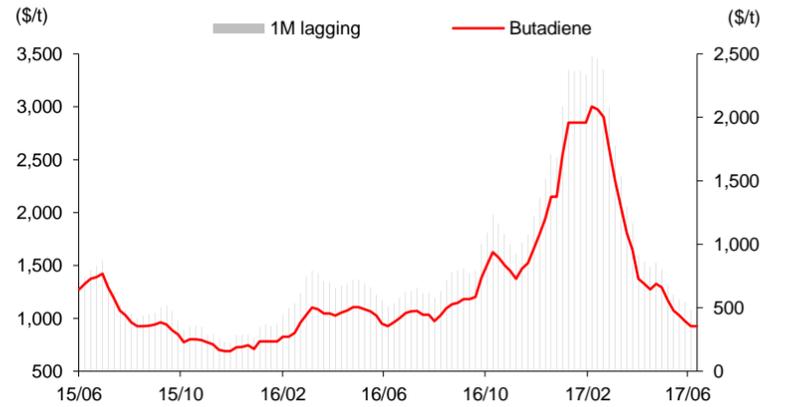
Polysilicon & Module prices



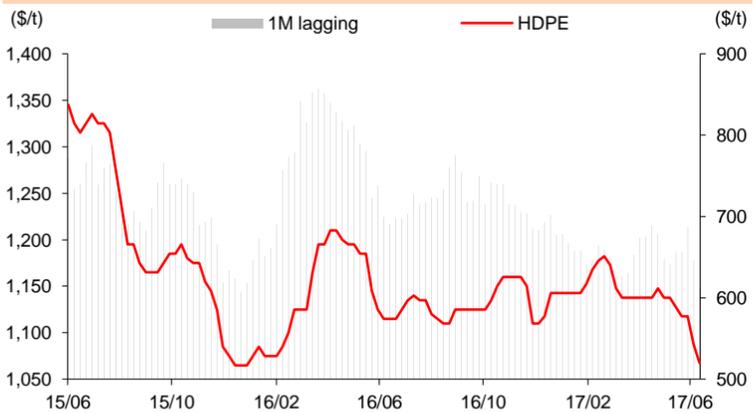
Naphtha/Ethylene/Propylene prices



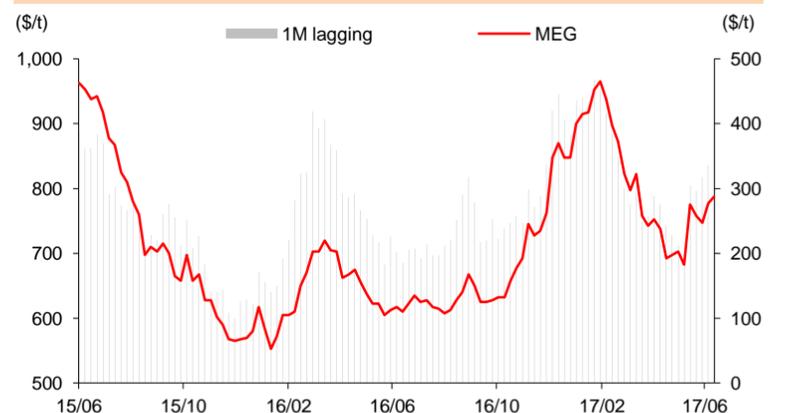
Butadiene price & 1M lagging naphtha spread



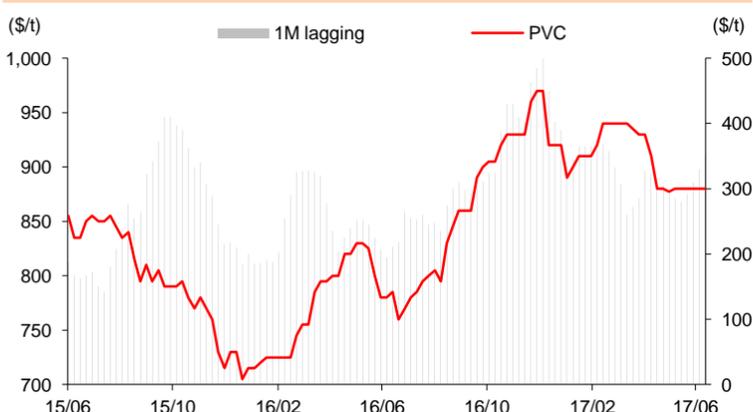
HDPE price & 1M lagging naphtha spread



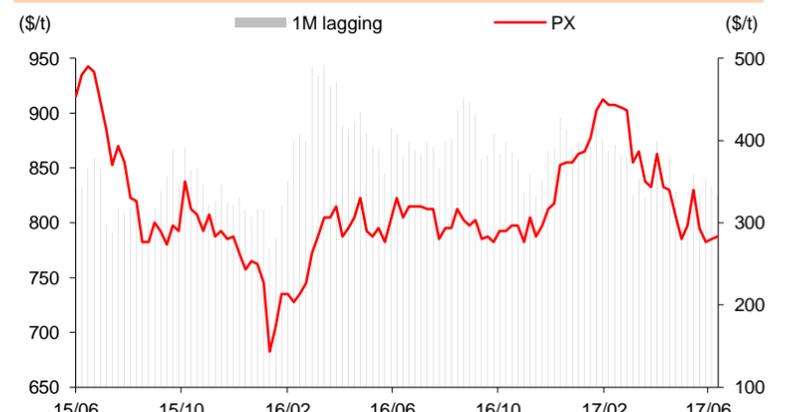
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

News Comment

Headline (출처: 뉴스1)

제목 멕시코 국경장벽이 태양열 발전?...트럼프, 내 생각 어때

결론 Sunpower, Canadian Solar 등 태양광 관련주 주가 상승에 영향을 줌

세부

- 1) 트럼프, "건설 계획중인 멕시코 국경장벽에 태양광 패널 설치 고려중"
- 2) 아이오와 주에서 유세 형식의 연설을 통해 발언함
- 3) 많은 햇빛과 많은 열이 있는 남부 국경에 관한 사항
- 4) Solar Wall가 스스로 전력을 생산하고, 비용도 스스로 댈 수 있다는 것
- 5) Sunpower, Canadian Solar 등 태양광 관련주 주가 상승에 영향을 줌

Issue 1 (출처: Bloomberg)

제목 China Gas Holdings, 최대 이익 기록하며 9.2% 상승 마감

결론 중국 가스 관련 정책에 힘입어 가스인프라의 굴기가 이뤄질 전망

세부

- 1) 중국 정부의 탈석탄 정책에 힘입어 이익이 82% 증가한 China Gas
- 2) 이에 따라 9.2% 상승하며 2015년 4월 이후 최고가인 14.2HKD에 마감
- 3) 시진핑의 정책으로, 5월에 중국 가스 생산량을 최고치를 기록함
- 4) 중국의 가스 수입량은 전년대비 50% 증가, 수요는 YTD 12% 증가함
- 5) 중국 가스 관련 정책에 힘입어 가스인프라의 굴기가 이뤄질 전망

Issue 3

제목

결론

세부

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

Issue 5

제목

결론

세부

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

WTI Comment (출처: 연합뉴스)

제목 소폭 반등...WTI 0.49%↑

상승

요인

하락 OPEC 회원국과 비회원국의 감산합의가 거의 무용지물이 됨

요인 공급과잉 문제에 대한 시장의 전망

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	2015avg.	2016avg.	2017acc.	
F/X	USD/EUR	0.897	0.895	0.897	0.890	0.926	0.958	0.885	0.951	0.901	0.904	0.925	
	Change, %		0.2	(0.1)	0.8	(3.2)	(6.4)	1.3	(5.7)	(0.5)	(0.8)	(3.1)	
	USD/JPY	111.3	111.4	110.9	111.3	111.2	117.5	104.4	117.0	121.1	108.8	112.4	
	Change, %		(0.0)	0.4	0.0	0.2	(5.3)	6.6	(4.8)	(8.0)	2.4	(1.0)	
	USD/KRW	1,141.1	1,144.0	1,124.2	1,118.6	1,123.3	1,199.1	1,154.9	1,205.8	1,131.2	1,160.5	1,142.2	
	Change, %		(0.3)	1.5	2.0	1.6	(4.8)	(1.2)	(5.4)	0.9	(1.7)	(0.1)	
	Agriculture	Corn	362.8	368.8	379.5	375.0	358.8	347.3	393.0	352.0	376.8	358.5	366.3
		Change, %		(1.6)	(4.4)	(3.3)	1.1	4.5	(7.7)	3.1	(3.7)	1.2	(1.0)
Soybean		904.0	918.8	934.8	956.5	999.8	994.5	1,137.5	996.5	945.4	987.5	983.7	
Change, %			(1.6)	(3.3)	(5.5)	(9.6)	(9.1)	(20.5)	(9.3)	(4.4)	(8.5)	(8.1)	
	Wheat	461.3	464.5	453.8	434.3	422.3	397.0	458.8	408.0	508.1	436.4	430.5	
	Change, %		(0.7)	1.7	6.2	9.2	16.2	0.5	13.1	(9.2)	5.7	7.1	
	Rice	11.1	11.2	11.5	11.1	9.8	9.3	11.0	9.4	11.1	10.3	10.0	
	Change, %		(0.6)	(3.2)	0.5	13.5	19.6	1.1	18.7	0.4	7.4	11.0	
	Oats	257.3	258.8	261.3	246.8	251.5	218.0	206.5	228.5	250.2	196.3	245.4	
	Change, %		(0.6)	(1.5)	4.3	2.3	18.0	24.6	12.6	2.8	31.1	4.8	
	MYR/mt	Palm Oil	2,597.0	2,587.0	2,650.0	2,900.0	2,975.0	3,125.0	2,431.0	3,218.0	2,190.3	2,653.8	2,941.1
		Change, %		0.4	(2.0)	(10.4)	(12.7)	(16.9)	6.8	(19.3)	18.6	(2.1)	(11.7)
Cocoa		1,793.0	1,813.0	2,026.0	2,035.0	2,165.0	2,189.0	3,205.0	2,126.0	3,091.6	2,854.0	2,019.8	
Change, %			(1.1)	(11.5)	(11.9)	(17.2)	(18.1)	(44.1)	(15.7)	(42.0)	(37.2)	(11.2)	
	Cotton	71.1	70.9	71.9	78.4	77.3	70.2	62.9	70.7	63.3	65.6	76.1	
	Change, %		0.4	(1.1)	(9.2)	(8.0)	1.3	13.0	0.7	12.4	8.5	(6.6)	
	Sugar	12.8	13.1	13.5	16.5	17.3	18.2	19.0	19.5	13.1	18.2	17.6	
	Change, %		(1.7)	(4.7)	(22.2)	(25.8)	(29.3)	(32.6)	(34.2)	(2.3)	(29.3)	(27.0)	
	Coffee	113.5	119.4	125.8	130.6	141.7	139.1	137.0	137.1	132.6	136.1	138.1	
	Change, %		(4.9)	(9.8)	(13.1)	(19.9)	(18.4)	(17.2)	(17.2)	(14.5)	(16.6)	(17.9)	
	Energy	WTI	42.8	42.5	44.5	50.7	48.0	53.0	49.1	53.7	48.8	43.4	50.4
		Change, %		0.6	(3.8)	(15.7)	(10.9)	(19.2)	(12.9)	(20.4)	(12.4)	(1.4)	(15.1)
Brent		45.3	44.8	46.9	53.9	50.6	55.1	49.9	56.8	53.7	45.1	53.1	
Change, %			1.0	(3.5)	(16.0)	(10.6)	(17.8)	(9.2)	(20.3)	(15.7)	0.4	(14.7)	
	Natural Gas	2.9	2.9	3.1	3.3	3.0	3.5	2.7	3.7	2.6	2.6	3.1	
	Change, %		0.1	(5.2)	(13.0)	(3.8)	(18.1)	8.2	(22.2)	10.2	13.5	(7.1)	
	Ethanol	1.5	1.5	1.6	1.5	1.5	1.6	1.6	1.6	1.5	1.5	1.5	
	Change, %		(1.1)	(4.8)	1.9	(2.5)	(5.8)	(5.4)	(6.7)	(0.8)	(1.1)	(2.6)	
	RBOB Gasoline	143.3	141.1	143.6	166.3	160.2	160.4	158.8	166.5	163.6	140.0	158.8	
	Change, %		1.6	(0.2)	(13.8)	(10.5)	(10.6)	(9.7)	(13.9)	(12.4)	2.4	(9.8)	
	Coal	80.6	80.7	80.8	74.8	80.4	86.8	53.0	88.4	59.0	65.5	80.9	
	Change, %		(0.1)	(0.2)	7.8	0.2	(7.1)	52.2	(8.8)	36.7	23.1	(0.3)	
Metal	Gold	1,250.5	1,246.6	1,253.9	1,260.6	1,248.5	1,128.4	1,266.3	1,152.3	1,160.6	1,248.5	1,238.2	
	Change, %		0.3	(0.3)	(0.8)	0.2	10.8	(1.3)	8.5	7.7	0.2	1.0	
	Silver	16.6	16.5	16.8	17.2	17.5	15.8	17.3	15.9	15.7	17.1	17.4	
	Change, %		0.3	(1.2)	(3.6)	(5.6)	4.8	(4.1)	4.0	5.3	(3.2)	(4.7)	
	Copper	5,742.0	5,742.0	5,661.0	5,703.0	5,808.0	5,518.0	4,701.0	5,535.5	5,503.1	4,872.0	5,767.8	
	Change, %		0.0	1.4	0.7	(1.1)	4.1	22.1	3.7	4.3	17.9	(0.4)	
	Nickel	582.8	578.2	573.4	605.5	658.4	729.8	619.0	682.0	759.5	646.4	646.2	
	Change, %		0.8	1.6	(3.7)	(11.5)	(20.1)	(5.8)	(14.5)	(23.3)	(9.8)	(9.8)	
	Zinc	2,700.0	2,640.0	2,505.0	2,633.5	2,856.5	2,630.0	2,046.0	2,576.0	1,941.9	2,097.5	2,694.2	
	Change, %		2.3	7.8	2.5	(5.5)	2.7	32.0	4.8	39.0	28.7	0.2	
	Lead	2,196.0	2,176.0	2,073.5	2,083.8	2,367.8	2,111.8	1,712.3	2,003.5	1,791.2	1,868.3	2,216.3	
	Change, %		0.9	5.9	5.4	(7.3)	4.0	28.3	9.6	22.6	17.5	(0.9)	
	Aluminum	13,805.0	13,850.0	13,415.0	13,990.0	13,735.0	12,875.0	12,535.0	12,765.0	12,184.0	12,373.5	13,722.9	
	Change, %		(0.3)	2.9	(1.3)	0.5	7.2	10.1	8.1	13.3	11.6	0.6	
	Cobalt	58,125.0	58,250.0	56,600.0	54,500.0	54,000.0	32,477.0	23,656.5	32,734.0	28,444.4	25,480.1	49,275.8	
	Change, %		(0.2)	2.7	6.7	7.6	79.0	145.7	77.6	104.3	128.1	18.0	
	HR Coil	589.0	589.0	589.0	613.0	653.0	585.0	629.0	633.0	461.5	519.3	620.5	
	Change, %		0.0	0.0	(3.9)	(9.8)	0.7	(6.4)	(7.0)	27.6	13.4	(5.1)	
	Scrap	350.0	350.0	350.0	350.0	345.0	302.0	257.0	302.0	252.9	275.7	337.5	
	Change, %		0.0	0.0	0.0	1.4	15.9	36.2	15.9	38.4	27.0	3.7	

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		06/22	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	WTI	42.7	42.5	44.5	48.9	47.7	53.0	50.1	53.7	48.8	43.4	50.3
	<i>Change, %</i>		0.5	(3.9)	(12.6)	(10.4)	(19.3)	(14.7)	(20.4)	(12.4)	(1.4)	(15.0)
	Dubai	43.5	44.3	45.4	52.8	49.2	51.8	46.5	53.8	50.8	41.3	51.6
	<i>Change, %</i>		(1.9)	(4.1)	(17.6)	(11.5)	(16.0)	(6.4)	(19.2)	(14.3)	5.3	(15.7)
Crude Oil Product	Gasoline(휘발유)	56.3	56.8	57.7	66.5	63.3	68.4	59.9	69.8	69.5	56.3	66.2
	<i>Change, %</i>		(0.9)	(2.5)	(15.4)	(11.1)	(17.8)	(6.0)	(19.4)	(19.0)	0.1	(14.9)
	Kerosene(등유)	54.5	55.6	56.4	64.1	59.9	64.0	58.6	66.4	64.7	52.9	62.7
	<i>Change, %</i>		(2.0)	(3.5)	(15.1)	(9.0)	(14.9)	(7.0)	(18.0)	(15.8)	3.0	(13.1)
	Diesel(경유)	54.8	56.0	56.8	64.0	60.4	62.8	58.2	65.5	64.8	52.1	63.2
	<i>Change, %</i>		(2.0)	(3.5)	(14.3)	(9.2)	(12.7)	(5.7)	(16.3)	(15.3)	5.2	(13.2)
	Bunker-C	43.6	44.2	44.5	49.7	44.4	50.6	38.0	52.1	45.3	35.5	47.9
	<i>Change, %</i>		(1.3)	(2.1)	(12.2)	(1.7)	(13.8)	14.9	(16.2)	(3.6)	22.8	(9.0)
	Naphtha	42.6	43.5	44.2	49.9	48.9	51.9	46.2	53.5	52.6	42.6	51.5
	<i>Change, %</i>		(2.2)	(3.6)	(14.6)	(12.9)	(18.0)	(7.8)	(20.4)	(19.1)	(0.0)	(17.4)
Dubai Spread	Gasoline(휘발유)	12.8	12.5	12.4	13.7	14.1	16.7	13.4	16.0	18.7	14.9	14.5
	<i>Change</i>		0.3	0.4	(0.9)	(1.3)	(3.9)	(0.6)	(3.2)	(5.9)	(2.2)	(1.8)
	Kerosene(등유)	11.0	11.3	11.1	11.4	10.7	12.3	12.1	12.6	14.0	11.6	11.0
	<i>Change</i>		(0.3)	(0.1)	(0.4)	0.3	(1.3)	(1.1)	(1.6)	(3.0)	(0.6)	(0.1)
	Diesel(경유)	11.3	11.7	11.5	11.2	11.3	11.0	11.7	11.7	14.0	10.8	11.6
	<i>Change</i>		(0.3)	(0.1)	0.1	0.1	0.3	(0.3)	(0.3)	(2.6)	0.5	(0.2)
Dubai Spread	Bunker-C	0.1	(0.1)	(0.8)	(3.1)	(4.8)	(1.2)	(8.5)	(1.8)	(5.5)	(5.8)	(3.7)
	<i>Change</i>		0.2	0.9	3.2	4.9	1.3	8.6	1.9	5.6	5.9	3.8
	Naphtha	(0.9)	(0.8)	(1.2)	(2.9)	(0.3)	0.1	(0.3)	(0.4)	1.8	1.3	(0.1)
	<i>Change</i>		(0.1)	0.3	2.0	(0.6)	(1.1)	(0.6)	(0.6)	(2.7)	(2.2)	(0.8)
Refining Margin	Simple(단순)	4.3	4.2	3.8	2.6	2.0	4.1	0.5	3.8	3.3	1.9	2.6
	<i>Change</i>		0.1	0.5	1.7	2.3	0.2	3.8	0.5	1.0	2.4	1.7
	Complex(복합)	7.7	7.7	7.4	7.0	6.9	8.4	6.1	8.3	9.3	7.0	7.4
	<i>Change</i>		0.0	0.3	0.7	0.8	(0.7)	1.6	(0.6)	(1.6)	0.7	0.3
Refining Margin	Complex(lagging)	(1.6)	0.0	1.9	8.8	1.6	14.1	8.1	18.0	7.3	8.5	6.7
	<i>Change</i>		(1.6)	(3.5)	(10.4)	(3.2)	(15.6)	(9.7)	(19.6)	(8.8)	(10.1)	(8.3)

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			06/22	06/21	06/20	06/19	06/16	06/15	06/14	06/13	06/12	06/09	
Spot Price	Naphtha	CFR Japan	399.0	403.0	409.0	414.0	411.3	409.0	417.8	420.8	421.3	416.8	
	Ethylene	CFR SE Asia	880.0	880.0	880.0	880.0	880.0	880.0	880.0	880.0	880.0	875.0	875.0
	Propylene	FOB Korea	830.0	835.0	835.0	835.0	825.0	815.0	804.0	804.0	804.0	800.0	810.0
	Butadiene	FOB Korea	875.0	860.0	825.0	825.0	825.0	865.0	865.0	865.0	865.0	865.0	865.0
	HDPE	CFR FE Asia	1,085.0	1,085.0	1,075.0	1,075.0	1,080.0	1,090.0	1,090.0	1,090.0	1,090.0	1,090.0	1,090.0
	LDPE	CFR FE Asia	1,125.0	1,125.0	1,125.0	1,125.0	1,135.0	1,140.0	1,140.0	1,140.0	1,140.0	1,150.0	1,150.0
	LLDPE	CFR FE Asia	1,075.0	1,075.0	1,050.0	1,050.0	1,050.0	1,075.0	1,075.0	1,075.0	1,080.0	1,080.0	1,080.0
	MEG	CFR China	773.0	775.0	760.0	750.0	785.0	805.0	810.0	810.0	810.0	790.0	775.0
	PP	CFR FE Asia	960.0	965.0	965.0	965.0	960.0	960.0	960.0	970.0	970.0	975.0	970.0
	PX	CFR China	743.7	761.3	770.3	776.3	777.0	774.7	783.0	783.0	781.3	774.3	772.3
	PTA	CFR China	612.0	612.0	614.0	614.0	617.0	620.0	620.0	620.0	620.0	617.0	617.0
	Benzene	FOB Korea	726.0	733.0	750.0	752.5	749.5	763.0	778.0	778.0	773.0	766.0	743.0
	Toluene	FOB Korea	576.0	594.0	603.0	605.0	609.0	608.0	610.0	610.0	610.0	612.0	612.0
	Xylene	FOB Korea	619.5	630.5	633.5	636.5	636.5	636.0	640.0	640.0	640.0	635.0	632.0
	SM	FOB Korea	1,082.5	1,098.5	1,095.5	1,093.5	1,104.0	1,126.0	1,132.0	1,132.0	1,120.0	1,110.0	1,106.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Spot Price	Naphtha	CFR Japan	409.5	411.5	455.0	462.5	511.5	413.5	484.5	493.0	399.5	475.1
	<i>Change, %</i>			(0.5)	(10.0)	(11.5)	(19.9)	(1.0)	(15.5)	(16.9)	2.5	(13.8)
	Ethylene	CFR SE Asia	855.0	855.0	995.0	1,075.0	1,185.0	1,037.5	990.0	1,103.7	1,040.9	1,046.6
	<i>Change, %</i>			0.0	(14.1)	(20.5)	(27.8)	(17.6)	(13.6)	(22.5)	(17.9)	(18.3)
	Propylene	CFR SE Asia	737.5	725.0	747.5	865.0	1,030.0	735.0	815.0	770.0	705.7	861.5
	<i>Change, %</i>			1.7	(1.3)	(14.7)	(28.4)	0.3	(9.5)	(4.2)	4.5	(14.4)
	Butadiene	CFR SE Asia	875.0	875.0	1,025.0	2,000.0	2,925.0	920.0	2,100.0	877.5	1,116.8	1,872.8
	<i>Change, %</i>			0.0	(14.6)	(56.3)	(70.1)	(4.9)	(58.3)	(0.3)	(21.7)	(53.3)
	Benzene	CFR SE Asia	782.5	762.5	780.0	830.0	1,055.0	610.0	822.5	690.0	646.7	870.6
	<i>Change, %</i>			2.6	0.3	(5.7)	(25.8)	28.3	(4.9)	13.4	21.0	(10.1)
	Toluene	CFR SE Asia	645.0	650.0	655.0	690.0	765.0	610.0	690.0	700.8	630.5	698.2
	<i>Change, %</i>			(0.8)	(1.5)	(6.5)	(15.7)	5.7	(6.5)	(8.0)	2.3	(7.6)
	Xylene	CFR SE Asia	620.0	625.0	630.0	720.0	725.0	630.0	675.0	699.3	627.7	685.6
	<i>Change, %</i>			(0.8)	(1.6)	(13.9)	(14.5)	(1.6)	(8.1)	(11.3)	(1.2)	(9.6)
	Spread	Ethylene	-Naphtha	445.5	443.5	540.0	612.5	673.5	624.0	505.5	610.6	641.4
<i>Change, %</i>				0.5	(17.5)	(27.3)	(33.9)	(28.6)	(11.9)	(27.0)	(30.5)	(22.0)
Propylene		-Naphtha	328.0	313.5	292.5	402.5	518.5	321.5	330.5	277.0	306.2	386.4
<i>Change, %</i>				4.6	12.1	(18.5)	(36.7)	2.0	(0.8)	18.4	7.1	(15.1)
Butadiene		-Naphtha	465.5	463.5	570.0	1,537.5	2,413.5	506.5	1,615.5	384.5	717.3	1,397.7
<i>Change, %</i>				0.4	(18.3)	(69.7)	(80.7)	(8.1)	(71.2)	21.1	(35.1)	(66.7)
Benzene		-Naphtha	373.0	351.0	325.0	367.5	543.5	196.5	338.0	197.0	247.2	395.5
<i>Change, %</i>				6.3	14.8	1.5	(31.4)	89.8	10.4	89.4	50.9	(5.7)
Toluene		-Naphtha	235.5	238.5	200.0	227.5	253.5	196.5	205.5	207.8	231.0	223.1
<i>Change, %</i>				(1.3)	17.8	3.5	(7.1)	19.8	14.6	13.4	1.9	5.6
Xylene		-Naphtha	210.5	213.5	175.0	257.5	213.5	216.5	190.5	206.3	228.2	210.5
<i>Change, %</i>				(1.4)	20.3	(18.3)	(1.4)	(2.8)	10.5	2.1	(7.8)	0.0

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	1,067.5	1,087.5	1,127.5	1,137.5	1,177.5	1,115.0	1,142.5	1,230.1	1,134.6	1,139.1
	Change, %			(1.8)	(5.3)	(6.2)	(9.3)	(4.3)	(6.6)	(13.2)	(5.9)	(6.3)
	MEG	CFR SE Asia	787.5	777.5	775.0	822.5	897.5	610.0	847.5	780.8	660.8	810.3
	Change, %			1.3	1.6	(4.3)	(12.3)	29.1	(7.1)	0.9	19.2	(2.8)
	PVC	CFR SE Asia	880.0	880.0	880.0	940.0	940.0	785.0	920.0	820.8	823.4	907.3
	Change, %			0.0	0.0	(6.4)	(6.4)	12.1	(4.3)	7.2	6.9	(3.0)
	PP	CFR SE Asia	1,057.5	1,047.5	1,037.5	1,107.5	1,107.5	965.0	1,032.5	1,109.8	978.4	1,071.5
	Change, %			1.0	1.9	(4.5)	(4.5)	9.6	2.4	(4.7)	8.1	(1.3)
	2-EH	CFR Korea	925.0	940.0	950.0	1,005.0	990.0	770.0	865.0	930.1	772.4	951.2
	Change, %			(1.6)	(2.6)	(8.0)	(6.6)	20.1	6.9	(0.5)	19.8	(2.8)
	ABS	CFR SE Asia	1,710.0	1,640.0	1,630.0	1,800.0	1,940.0	1,280.0	1,635.0	1,431.1	1,347.1	1,744.0
	Change, %			4.3	4.9	(5.0)	(11.9)	33.6	4.6	19.5	26.9	(1.9)
	SBR	CFR SE Asia	1,450.0	1,500.0	1,750.0	2,745.0	3,100.0	1,330.0	2,000.0	1,332.1	1,483.0	2,368.4
	Change, %			(3.3)	(17.1)	(47.2)	(53.2)	9.0	(27.5)	8.8	(2.2)	(38.8)
	SM	CFR SE Asia	1,165.0	1,135.0	1,112.5	1,290.0	1,495.0	1,007.5	1,205.0	1,100.7	1,064.6	1,250.7
	Change, %			2.6	4.7	(9.7)	(22.1)	15.6	(3.3)	5.8	9.4	(6.9)
	Caustic	FOB NEA	437.5	437.5	447.5	446.0	427.5	295.0	422.5	296.8	316.6	435.9
	Change, %			0.0	(2.2)	(1.9)	2.3	48.3	3.6	47.4	38.2	0.4
	PX	CFR SE Asia	787.5	785.0	830.0	865.0	907.5	805.0	855.0	842.9	790.4	847.3
	Change, %			0.3	(5.1)	(9.0)	(13.2)	(2.2)	(7.9)	(6.6)	(0.4)	(7.1)
PO	CFR China	1,395.0	1,427.5	1,350.0	1,432.5	1,557.5	1,315.0	1,562.5	1,683.4	1,396.8	1,481.0	
Change, %			(2.3)	3.3	(2.6)	(10.4)	6.1	(10.7)	(17.1)	(0.1)	(5.8)	
Caprolactam	CFR SE Asia	1,600.0	1,600.0	1,700.0	2,300.0	2,275.0	1,270.0	1,850.0	1,581.5	1,344.9	1,995.0	
Change, %			0.0	(5.9)	(30.4)	(29.7)	26.0	(13.5)	1.2	19.0	(19.8)	
PTA	CFR SE Asia	635.0	635.0	647.5	667.5	702.5	622.5	642.5	648.0	613.7	659.6	
Change, %			0.0	(1.9)	(4.9)	(9.6)	2.0	(1.2)	(2.0)	3.5	(3.7)	
Spread	HDPE		658.0	676.0	672.5	675.0	666.0	701.5	658.0	737.1	735.1	664.0
	Change, %			(2.7)	(2.2)	(2.5)	(1.2)	(6.2)	0.0	(10.7)	(10.5)	(0.9)
	MEG		378.0	366.0	320.0	360.0	386.0	196.5	363.0	287.8	261.3	335.2
	Change, %			3.3	18.1	5.0	(2.1)	92.4	4.1	31.3	44.7	12.8
	PVC		470.5	468.5	425.0	477.5	428.5	371.5	435.5	327.8	423.9	432.2
	Change, %			0.4	10.7	(1.5)	9.8	26.6	8.0	43.5	11.0	8.9
	PP		648.0	636.0	582.5	645.0	596.0	551.5	548.0	616.8	578.9	596.4
	Change, %			1.9	11.2	0.5	8.7	17.5	18.2	5.1	11.9	8.7
	2-EH		515.5	528.5	495.0	542.5	478.5	356.5	380.5	437.0	372.9	476.1
	Change, %			(2.5)	4.1	(5.0)	7.7	44.6	35.5	18.0	38.3	8.3
	ABS		1,300.5	1,228.5	1,175.0	1,337.5	1,428.5	866.5	1,150.5	938.1	947.6	1,268.9
	Change, %			5.9	10.7	(2.8)	(9.0)	50.1	13.0	38.6	37.2	2.5
	SBR	BD spread	575.0	625.0	725.0	745.0	175.0	410.0	(100.0)	454.7	366.2	495.6
	Change, %			(8.0)	(20.7)	(22.8)	228.6	40.2	(675.0)	26.5	57.0	16.0
	SM		755.5	723.5	657.5	827.5	983.5	594.0	720.5	607.7	665.1	775.6
	Change, %			4.4	14.9	(8.7)	(23.2)	27.2	4.9	24.3	13.6	(2.6)
	Caustic											
	Change, %											
	PX		378.0	373.5	375.0	402.5	396.0	391.5	370.5	349.9	390.9	372.2
	Change, %			1.2	0.8	(6.1)	(4.5)	(3.4)	2.0	8.0	(3.3)	1.6
PO	propylene spread	657.5	702.5	602.5	567.5	527.5	580.0	747.5	913.4	691.1	619.5	
Change, %			(6.4)	9.1	15.9	24.6	13.4	(12.0)	(28.0)	(4.9)	6.1	
Caprolactam	benzene spread	817.5	837.5	920.0	1,470.0	1,220.0	660.0	1,027.5	891.6	698.2	1,124.4	
Change, %			(2.4)	(11.1)	(44.4)	(33.0)	23.9	(20.4)	(8.3)	17.1	(27.3)	
PTA	px spread	83.8	85.5	66.5	62.0	67.3	59.0	44.0	58.0	60.4	66.5	
Change, %			(2.0)	25.9	35.1	24.5	41.9	90.3	44.4	38.6	26.0	

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	06/22	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	63.8	0.2	(0.4)	4.7	1.7	8.6	19.9	11.6	77,981	15.7	14.4	2.9	2.7	8.9	8.3	
Du Pont	USD	81.3	0.5	(1.0)	5.1	2.7	8.4	19.5	10.8	70,524	21.2	19.8	6.2	5.5	12.9	12.3	
Eastman	USD	82.9	(0.5)	0.7	4.9	6.5	9.1	15.7	10.2	12,082	11.1	10.3	2.4	2.2	8.6	8.2	
BASF	EUR	85.5	(0.3)	0.7	0.1	(3.5)	(2.4)	21.6	(3.2)	87,572	15.3	14.4	2.3	2.2	8.1	7.8	
Akzo Nobel	EUR	77.6	(1.1)	0.3	2.5	2.4	30.9	30.0	30.6	21,863	17.9	17.2	3.0	2.9	9.8	9.5	
Arkema	EUR	94.9	(0.8)	0.0	(0.1)	3.4	1.6	32.4	2.1	8,019	14.4	13.0	1.7	1.5	6.7	6.3	
Lanxess	EUR	66.6	(0.3)	(1.4)	2.9	9.3	7.1	59.3	6.8	6,800	18.6	15.0	2.2	2.0	6.0	5.7	
Sumitomo Chemical	JPY	611	0.3	4.3	(0.5)	(3.2)	5.7	32.5	9.9	9,086	10.1	9.4	1.1	1.0	7.7	7.4	
Mitsubishi Chemical	JPY	891	(0.1)	4.5	6.5	6.1	14.1	79.0	17.5	12,054	9.1	8.7	1.1	1.0	6.7	6.5	
Shin-Etsu Chemical	JPY	10,060	(0.1)	1.0	2.3	6.2	8.8	66.8	11.0	39,050	20.7	18.4	1.9	1.8	8.9	7.9	
Asahi Kasei	JPY	1,193	0.7	7.0	11.6	11.1	13.7	72.0	17.0	15,032	14.9	14.0	1.4	1.3	7.0	6.6	
JSR	JPY	1,854	0.2	2.3	(2.7)	(2.6)	(0.7)	30.0	0.6	3,765	14.9	13.7	1.1	1.0	6.5	5.9	
Nitto Denko	JPY	8,867	(1.1)	(0.2)	(1.3)	3.0	(2.8)	37.3	(1.1)	13,840	19.9	17.6	2.1	1.9	8.4	7.7	
SABIC	SAR	102.3	(1.7)	3.4	3.5	7.3	11.3	24.5	11.8	81,827	15.2	14.3	1.8	1.7	7.5	7.2	
Yansab	SAR	55.8	(0.3)	0.7	0.8	1.0	8.4	37.1	2.4	8,365	13.5	13.6	1.9	1.8	8.5	8.5	
Formosa Plastics	TWD	91.0	0.3	1.0	3.4	(1.3)	4.5	16.1	2.0	19,048	14.4	14.5	1.8	1.7	19.7	19.7	
Formosa Fiber	TWD	92.1	0.1	2.2	1.0	(3.6)	(2.5)	12.5	(4.4)	17,751	12.6	13.3	1.6	1.6	10.5	10.7	
Nan Ya Plastics	TWD	72.5	0.0	0.3	1.5	1.3	1.8	19.2	1.8	18,907	15.8	16.0	1.7	1.6	16.7	15.5	
Sinopec Shanghai	CNY	6.53	0.5	0.6	(0.2)	0.6	(2.2)	12.4	1.4	8,814	12.6	12.3	2.5	2.2	7.1	7.2	
Sinopec Yizheng(Fiber)	CNY	3.43	(0.3)	(1.2)	(16.1)	(8.8)	(18.1)	(9.5)	(16.3)	6,391	#N/A	N/A	39.4	6.6	6.6	23.2	15.6
Reliance	INR	1,433	0.7	3.5	8.2	13.7	36.0	46.1	32.4	72,100	16.1	13.4	1.6	1.4	10.6	8.7	
Industries Qatar	QAR	95.5	3.8	(3.4)	(9.0)	(14.7)	(18.1)	(4.4)	(18.7)	15,532	14.5	13.1	1.7	1.7	47.7	46.2	
PTT Chemical	THB	68.5	0.4	(1.8)	(5.8)	(4.5)	8.7	16.6	8.7	8,993	10.2	9.9	1.2	1.2	5.2	5.0	
Petronas	MYR	7.2	0.0	(0.1)	(2.7)	(4.4)	3.5	11.0	2.4	13,331	16.2	15.9	2.0	1.8	8.8	8.5	
LG화학	KRW	287,000	2.5	3.8	0.0	(1.2)	8.7	12.3	10.0	17,779	12.1	11.3	1.4	1.3	5.1	4.7	
롯데케미칼	KRW	342,500	1.8	3.0	(8.3)	(5.3)	(1.4)	20.6	(7.2)	10,302	5.3	5.3	1.0	0.9	3.5	3.3	
한화케미칼	KRW	29,650	(1.3)	4.0	0.5	17.9	16.0	18.6	20.0	4,288	5.8	6.0	0.8	0.7	7.3	6.7	
금호석유	KRW	73,400	0.7	(2.7)	(5.4)	0.1	(10.4)	16.3	(10.5)	1,962	14.5	11.9	1.4	1.2	9.3	8.0	
SKC	KRW	32,550	(1.8)	(3.0)	10.2	7.8	(1.5)	14.8	(1.4)	1,072	10.4	8.4	0.8	0.8	8.5	7.3	
국도화학	KRW	53,900	(1.1)	0.0	13.8	11.5	(4.9)	(8.6)	(1.8)	275	11.8	8.7	0.7	0.6	3.3	2.9	
효성	KRW	5,840	0.3	(2.2)	(18.1)	(30.9)	(7.9)	58.7	(14.1)	5,285	9.1	8.2	1.5	1.3	7.1	6.5	
Average			0.1	0.8	0.4	1.0	4.3	26.8	4.6								
Refinery																	
Valero	USD	64.8	0.2	0.2	1.5	(4.1)	(5.7)	22.7	(5.1)	28,990	14.2	11.0	1.5	1.5	6.3	5.5	
Conoco Phillips	USD	44.8	(0.3)	(1.3)	(4.5)	0.4	(13.1)	1.9	(10.6)	55,435	92.6	24.9	1.6	1.6	8.1	6.7	
Formosa Petrochemical	TWD	110.0	0.0	3.8	3.8	3.3	4.3	23.2	(1.8)	34,456	16.3	19.0	3.3	3.3	10.1	11.5	
Tesoro	USD	91.1	(0.1)	(0.7)	9.4	11.1	0.8	18.5	4.1	14,565	18.2	12.6	1.6	1.6	7.6	6.2	
Marathon Petroleum	USD	51.2	(1.1)	(3.4)	(3.4)	3.2	1.6	45.1	1.6	26,544	17.7	14.4	1.9	1.7	8.3	7.3	
Devon Energy	USD	30.0	(0.5)	(4.7)	(21.2)	(23.7)	(36.0)	(20.9)	(34.3)	15,776	16.1	12.1	2.2	1.9	7.6	6.5	
Hollyfrontier	USD	26.6	2.9	4.7	(0.1)	(3.3)	(18.4)	9.8	(18.7)	4,723	20.6	11.9	1.0	1.0	8.0	6.3	
Phillips 66	USD	78.9	0.0	(0.2)	0.5	0.1	(9.9)	(0.8)	(8.7)	40,479	18.5	12.9	1.8	1.8	9.7	7.9	
Murphy Oil	USD	24.5	(0.5)	0.8	(8.4)	(7.2)	(24.1)	(22.3)	(21.2)	4,231	134.0	30.8	0.8	0.8	4.4	4.1	
JX Holdings	JPY	475.6	(0.5)	(2.0)	(4.6)	(10.1)	(5.6)	15.4	(3.9)	14,641	7.4	6.9	0.6	0.6	7.5	7.2	
Idemitsu	JPY	3,130.0	(0.5)	(1.6)	(7.9)	(18.5)	(0.5)	32.4	0.8	4,499	6.0	5.9	0.8	0.7	8.5	7.9	
Nesteoil	EUR	34.8	(2.1)	0.0	(6.5)	(4.1)	(4.7)	12.2	(4.7)	0	13.3	13.1	2.2	2.0	7.6	7.7	
Ashland	USD	66.7	(0.3)	1.1	5.0	11.8	25.7	17.7	24.7	4,147	15.6	20.4	1.0	1.0	7.7	9.5	
Fuchs Petrolub	EUR	50.4	(0.8)	0.9	3.5	17.5	26.9	39.4	26.4	7,317	25.9	24.7	5.2	4.7	14.8	14.1	
SK이노베이션	KRW	156,500	(0.3)	0.0	(7.1)	(4.0)	6.8	7.2	6.8	12,699	6.0	6.3	0.8	0.7	3.6	3.3	
S-Oil	KRW	94,300	0.2	0.1	(7.5)	(2.9)	11.9	18.6	11.3	9,316	8.9	8.0	1.6	1.4	6.7	5.7	
GS	KRW	66,800	(0.7)	(0.4)	(1.3)	19.9	24.2	34.3	23.5	5,447	6.3	6.0	0.8	0.7	7.0	6.7	
Average			(0.3)	(0.2)	(2.9)	(0.6)	(0.9)	15.0	(0.6)								

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	06/22	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	81	(0.4)	(1.4)	(1.5)	(0.8)	(10.8)	(11.1)	(10.2)	343,557	21.2	18.2	2.0	1.9	9.2	8.4		
BP	GBP	457	0.0	(0.9)	(3.6)	0.4	(9.2)	19.1	(10.4)	113,859	17.3	13.8	1.2	1.2	5.7	5.0		
Shell	EUR	2,066	0.0	(0.8)	(2.1)	(1.9)	(6.7)	14.1	(7.9)	216,641	14.8	12.5	1.1	1.1	6.0	5.4		
Chevron	USD	104	(0.0)	(1.8)	(1.6)	(3.6)	(12.1)	2.1	(11.3)	197,887	23.2	18.8	1.4	1.3	7.3	6.5		
Total	EUR	44	(0.1)	(0.3)	(8.3)	(4.1)	(8.0)	3.1	(9.0)	122,883	12.1	10.8	1.1	1.1	5.7	5.1		
Sinopec	CNY	6	0.5	0.8	0.3	4.0	5.9	25.9	10.4	103,835	13.2	12.0	1.0	0.9	4.5	4.4		
Petrochina	CNY	8	(0.4)	0.5	0.0	(3.6)	(5.8)	6.5	(3.3)	195,679	40.1	25.4	1.2	1.1	6.5	6.2		
CNOOC	CNY	11	0.0	(2.2)	(16.2)	(12.3)	(15.8)	(9.1)	(13.1)	48,829	13.6	10.6	0.9	0.8	3.8	3.5		
Gazprom	RUB	120	1.3	3.5	(2.4)	(9.2)	(20.4)	(16.4)	(22.6)	47,349	4.1	3.6	0.2	0.2	3.5	3.2		
Rosneft	RUB	319	0.2	5.8	3.8	(0.4)	(18.5)	(5.6)	(20.8)	56,562	8.6	6.5	0.9	0.8	4.6	4.0		
Anadarko	USD	45	(0.6)	(2.2)	(15.5)	(26.8)	(36.3)	(17.1)	(35.3)	25,266	#N/A	N/A	105.6	1.7	1.6	6.7	5.6	
Petrobras	BRL	12	3.4	(4.6)	(10.1)	(11.9)	(14.1)	28.9	(19.0)	49,460	8.6	7.6	0.5	0.5	4.9	4.6		
Lukoil	USD	2,761	1.2	1.8	(1.8)	(11.5)	(18.0)	3.8	(20.0)	38,650	5.3	4.6	0.6	0.5	N/A	N/A		
Kinder	USD	19	0.4	(1.2)	(4.8)	(11.4)	(11.5)	0.4	(10.3)	47,497	28.0	25.0	1.2	1.2	11.3	10.8		
Statoil	NOK	139	(0.9)	(3.1)	(9.4)	(4.8)	(11.8)	(0.1)	(12.1)	53,560	15.3	13.2	1.4	1.4	3.0	2.7		
BHP	AUD	22	0.2	(3.7)	(10.1)	(7.4)	(11.9)	18.4	(11.6)	84,367	13.2	14.2	1.5	1.4	5.6	5.7		
PTT E&P	THB	87	(0.3)	(1.4)	(8.5)	(5.2)	(5.5)	3.6	(10.1)	10,106	13.6	11.7	0.8	0.8	2.8	2.6		
Petronas gas	MYR	19	1.1	(0.4)	(4.5)	(5.4)	(11.2)	(13.1)	(11.3)	8,716	21.0	19.5	3.0	2.8	12.0	11.1		
Chesapeake	USD	5	(0.4)	(10.0)	(21.5)	(10.0)	(38.7)	(0.2)	(35.9)	4,086	5.5	4.3	#N/A	N/A	#N/A	N/A	7.1	5.7
Noble Energy	USD	28	(1.3)	(6.6)	(10.7)	(17.2)	(29.8)	(24.5)	(27.1)	13,503	#N/A	N/A	75.2	1.2	1.3	7.7	6.4	
Average		0	0.2	(1.4)	(6.4)	(7.2)	(14.5)	1.4	(14.5)									
PV																		
WACKER	EUR	94.3	(1.4)	2.9	(2.9)	(6.1)	(2.9)	12.3	(4.6)	5,488	24.1	19.1	1.7	1.6	5.8	5.5		
GCL-Poly	HKD	0.7	0.0	0.0	(18.0)	(29.1)	(24.0)	(29.1)	(21.5)	1,740	6.3	6.0	0.5	0.5	5.4	4.9		
SunPower	USD	8.7	13.2	14.5	12.4	40.4	23.6	(42.1)	31.5	1,212	#N/A	N/A	413.8	1.8	3.4	46.6	10.0	
Canadian Solar	USD	15.1	7.7	19.1	15.8	26.0	19.9	(4.8)	23.7	874	10.9	7.3	0.8	0.8	9.8	9.4		
JA Solar	USD	6.5	0.6	3.9	(10.4)	17.7	31.4	(3.3)	35.5	307	27.8	13.2	1.6	1.6	4.3	3.2		
Yingli	USD	2.2	5.3	3.8	(3.5)	5.3	(21.3)	(46.6)	(16.2)	40	#N/A	N/A	#N/A	N/A	#N/A	N/A	39.7	23.6
First Solar	USD	38.4	3.2	7.5	5.5	33.1	17.6	(21.0)	19.7	4,007	69.4	56.8	0.7	0.7	8.5	6.3		
한화큐셀	USD	7.0	4.5	7.3	1.9	(2.2)	(14.9)	(49.5)	(13.7)	586	38.1	30.6	#N/A	N/A	#N/A	N/A	6.7	6.4
OCI	KRW	91,100	(3.6)	2.1	2.9	9.0	18.9	(8.0)	15.8	1,907	22.7	17.7	0.7	0.6	7.7	7.2		
웅진에너지	KRW	7,130	1.9	15.9	20.8	46.7	62.6	(29.5)	50.6	156	N/A	0.7	0.6	7.7	7.2	9.1		
신성솔라에너지	KRW	2,180	5.6	15.6	6.9	16.3	5.8	(2.5)	(1.4)	331	N/A	0.6	7.7	7.2	9.1	8.2		
Average			3.4	8.4	2.9	14.3	10.6	(20.4)	10.9									
Gas Company																		
Towngas China	HKD	5.2	2.8	7.0	9.8	16.2	29.6	17.8	26.7	1,797	12.1	11.4	1.0	0.9	11.5	10.9		
Kulun	HKD	6.4	0.3	(0.8)	(9.6)	(9.8)	9.0	2.1	10.7	6,645	10.7	10.0	1.1	1.1	5.4	5.2		
Beijing Enterprise	HKD	38.1	1.2	2.3	3.0	(8.9)	10.1	(9.1)	3.8	6,157	7.5	7.0	0.8	0.7	13.3	12.8		
ENN Energy	HKD	43.6	2.4	3.8	6.5	0.5	41.9	16.6	36.5	6,040	12.2	11.2	2.3	2.0	7.9	7.4		
China Resources Gas	HKD	24.3	1.5	1.9	0.0	(13.4)	13.6	6.8	11.2	6,915	14.0	12.6	2.6	2.2	8.8	8.1		
China Gas Holdings	HKD	14.2	9.2	11.3	21.4	10.2	38.9	24.6	35.0	9,046	14.4	12.7	2.8	2.5	11.9	10.7		
Shenzen Gas	HKD	14.2	(1.0)	3.4	12.4	22.0	23.7	24.2	25.5	3,560	12.5	11.6	1.4	1.3	8.6	8.0		
Shann Xi	CNY	9.0	0.1	1.8	6.0	(4.8)	(8.2)	(12.3)	(6.5)	1,463	16.9	14.5	1.8	1.7	#N/A	N/A	#N/A	N/A
Suntien	HKD	1.4	0.0	5.1	(5.3)	(5.3)	41.2	77.8	44.0	686	7.2	6.2	0.6	0.5	8.7	7.5		
China Oil & Gas	HKD	0.5	0.0	(5.5)	(8.8)	(14.8)	(11.9)	(17.5)	(14.8)	388	9.0	7.8	0.9	0.8	5.9	5.3		
Average			1.6	3.0	3.5	(0.8)	18.8	13.1	17.2									
EV																		
LG화학	KRW	287,000	2.5	3.8	0.0	(1.2)	8.7	12.3	10.0	17,779	11.2	10.7	1.4	1.3	5.2	5.0		
삼성SDI	KRW	164,000	3.8	7.9	4.8	21.5	54.0	51.9	50.5	9,896	18.3	12.3	1.0	0.9	18.3	11.9		
Panasonic	JPY	1515.5	(0.2)	4.4	10.7	25.8	22.5	63.3	27.4	33,396	19.2	15.4	1.9	1.8	5.9	5.2		
GS Yuasa	JPY	488.0	(1.8)	(2.4)	(1.8)	(6.5)	0.2	21.1	0.4	1,813	14.5	13.1	1.2	1.1	6.5	6.1		
NEC	JPY	291.0	0.3	1.7	5.1	4.3	(5.8)	15.5	(6.1)	6,809	21.2	16.5	0.9	0.9	7.8	6.7		
BYD Auto	CNY	50.8	(0.4)	(1.8)	4.9	3.8	(1.2)	(16.7)	2.2	19,164	25.6	19.1	2.5	2.2	12.5	10.0		
Tesla Motors	USD	382.6	1.6	1.9	23.3	50.0	83.6	94.6	79.0	62,847	#N/A	N/A	#N/A	N/A	13.2	11.5	73.9	30.4
Kandi Technologies	USD	4.1	3.8	2.5	(2.4)	12.3	(19.6)	(41.0)	(16.3)	197	#N/A	N/A	#N/A	N/A	#N/A	N/A	#N/A	N/A
Average			1.2	2.3	5.6	13.8	17.8	25.1	18.4									

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임