

1. News Summary (3 page)

2020년 6월 22일

News	
WTI comment	국제유가 오름세 지속...WTI 2.3%↑
Headline	[주간가격] 에틸렌, WoW \$35/mt 상승해 CFR SEA \$790/mt로 마감
News 1.	[주간가격] MEG, WoW \$11/mt 상승해 CFR China \$427/mt로 마감
News 2.	[주간가격] BD, 플랫한 모습 보이며 FOB Korea \$330/mt로 마감
News 3.	[주간가격] SBR, 플랫한 모습 보이며 CFR SEA \$940/mt로 마감
News 4.	[주간가격] PX, WoW \$63.67/mt 상승해 FOB Korea \$560.00/mt로 마감

Conclusion	
높아진 에틸렌 가격은 여전히 부담. 다만 타이탄한 수급이 가격을 지지 MEG가격이 소폭 반등세를 보였으나, 여전히 높은 재고는 부담 요소 업스트림 원유가격의 불확실성에 거래가 부진, 가격 변동 축소된 모습 고무 생산 대비 수요가 부족해 가격 약세 지속될 것으로 판단 유가상승에 PX 상승 동반했으나 PTA 시장 약세에 상승 제한될 전망	

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	39.8	2.3	9.6	22.3	77.2	(29.8)
Dubai	\$/bbl	43.0	4.5	11.8	29.4	49.8	(31.4)
Gasoline	\$/bbl	50.0	4.2	18.4	32.6	71.4	(26.5)
Diesel	\$/bbl	49.3	3.4	11.8	32.8	21.6	(34.4)
Complex margin	\$/bbl	2.9	0.1	1.0	1.2	(1.7)	(1.8)
1M lagging	\$/bbl	12.7	1.7	(0.7)	(2.5)	34.5	17.6
Petrochemical			%	%	%	%	%
Naphtha	\$/t	390	5.3	12.6	34.5	68.0	(18.8)
Butadiene	\$/t	330	0.0	0.0	6.5	(53.8)	(69.7)
HDPE	\$/t	840	0.0	1.2	13.5	6.3	(11.6)
MEG	\$/t	427	1.7	2.6	1.7	2.4	(20.6)
PX	\$/t	560	4.2	12.8	14.5	11.5	(29.0)
SM	\$/t	641	0.8	3.1	5.3	9.6	(38.2)
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	1.67	1.9	(3.6)	(11.3)	(11.1)	(32.1)
Natural rubber	\$/t	1,160	2.7	2.7	7.4	(0.9)	(21.1)
Cotton	C/lbs	61.6	0.6	2.9	6.9	14.7	0.6

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Utility				%	%	%	%
SMP	06/19	원/kwh	74	(3.4)	(1.9)	(11.9)	(8.5)
Petrochemical				%	%	%	%
Ethylene	06/15	\$/t	770	11.6	41.3	31.6	8.5
Propylene	06/15	\$/t	700	(0.7)	2.9	(1.4)	(13.6)
Benzene	06/15	\$/t	445	3.5	21.1	(16.4)	(28.2)
Toluene	06/15	\$/t	450	5.9	20.8	(14.3)	(29.1)
Xylene	06/15	\$/t	435	1.2	13.0	(20.9)	(36.0)
PP	06/15	\$/t	878	2.3	8.7	(1.7)	(16.2)
PVC	06/15	\$/t	790	12.9	23.4	(8.1)	(7.1)
ABS	06/15	\$/t	1,340	2.3	16.5	1.5	(4.3)
SBR	06/15	\$/t	940	0.0	(13.8)	(26.0)	(32.9)
SM	06/15	\$/t	648	(1.9)	5.3	(12.5)	(39.8)
BPA	06/15	\$/t	1,423	6.6	6.0	16.4	1.8
Caustic	06/15	\$/t	248	(1.2)	(6.1)	(0.4)	(28.9)
Solar				%	%	%	%
Polysilicon	06/17	\$/kg	6.19	(0.3)	(1.4)	(11.3)	(24.1)
Module	06/17	\$/W	0.165	(0.6)	(3.5)	(9.3)	(23.3)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	46.0	(2.0)	(2.5)	4.6	33.5	(39.0)
ARAMCO	SAR	33	0.0	2.3	(0.7)	12.8	-
Petrochina	CNY	4.30	0.2	0.9	(3.6)	(11.9)	(38.0)
Gazprom	RUB	195.8	1.5	(0.5)	0.8	12.2	(15.8)
Petrobras	BRL	21.5	(0.6)	4.2	14.9	75.8	(22.0)
Refinery							
Phillips66	USD	74.7	(2.0)	(3.3)	(0.7)	63.5	(14.7)
Valero	USD	63.2	(2.3)	(1.0)	(1.4)	68.8	(19.2)
JX	JPY	394.4	(0.1)	(1.5)	1.4	23.1	(24.7)
Neste Oil	EUR	35.4	0.0	1.5	7.1	57.7	21.5

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	50.8	(5.9)	(1.5)	12.1	26.1	(18.3)
DowDuPont	USD	52.6	0.0	3.1	10.1	66.1	(27.9)
SABIC	SAR	91.2	0.0	2.5	11.2	36.9	(23.2)
Formosa Pla.	TWD	85.8	(0.5)	(0.7)	(0.5)	28.8	(24.1)
Shin-Etsu	JPY	12,405	0.2	(0.4)	2.1	36.7	31.8
Renewable							
Wacker	EUR	62.8	1.3	7.3	16.2	90.2	(8.4)
First Solar	USD	50.20	(0.5)	1.6	16.1	50.0	(20.0)
GCL-Poly	HKD	0.23	2.7	(8.9)	(1.7)	(4.6)	(47.4)
Tesla Motors	USD	1,000.9	(0.3)	7.0	23.9	134.1	342.0

4. Coverage Summary

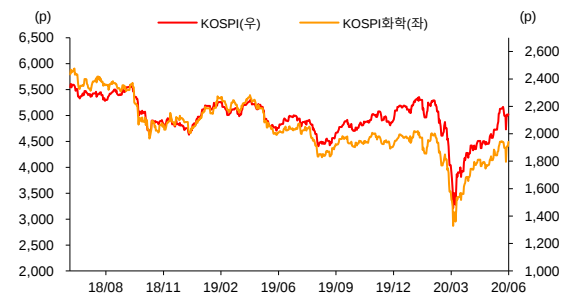
	06/19	1D	1W	1M	3M	6M	12M
KOSPI	2,141	0.4	0.4	7.6	36.7	(2.5)	0.8
KOSPI확화	4,491	2.0	2.7	8.1	43.6	(2.0)	(6.0)
LG화학	512,000	4.3	10.8	41.2	87.9	65.7	46.9
롯데케미칼	183,500	7.3	4.0	(4.2)	24.4	(19.2)	(29.2)
한화솔루션	18,550	1.1	0.3	17.8	76.7	(0.5)	(17.7)
금호석유화학	78,200	4.8	10.8	8.8	37.0	0.9	(21.1)
KCC	143,500	(1.0)	1.8	(4.3)	15.7	(39.2)	(47.6)
OCI	38,900	1.7	0.3	(1.9)	28.4	(38.3)	(58.6)
SKC	59,000	1.9	1.4	9.1	83.8	22.4	62.1
SK이노베이션	126,000	0.0	9.6	21.7	94.4	(17.1)	(21.0)
S-Oil	67,900	0.3	(1.7)	(4.2)	28.8	(29.8)	(16.4)
GS	37,900	1.1	0.5	(0.3)	6.0	(27.4)	(26.0)
SK가스	73,900	(0.3)	(0.3)	(8.5)	35.8	(13.0)	(5.4)
포스코인터내셔널	14,700	(1.3)	2.4	(1.3)	51.1	(24.2)	(18.3)
LG상사	15,950	(5.3)	8.5	14.3	101.9	7.4	(6.5)
한국전력	20,300	0.2	(4.0)	(5.8)	17.3	(28.5)	(20.7)
한국가스공사	27,150	(0.4)	(2.2)	(2.0)	40.3	(29.8)	(35.4)

투자의견	TP	%	P/E	P/B
* 추정치는 12M fwd 기준임				
* 모든 coverage 업체의 실적은 연결기준임				
매수	350,000	(31.6)	44.06	2.51
매수	220,000	19.9	14.52	0.51
매수	16,000	(13.7)	11.02	0.52
매수	75,000	(4.1)	12.67	0.91
매수	160,000	11.5	18.28	0.31
매수	45,000	15.7	6.59	0.39
매수	53,000	(10.2)	35.59	1.50
매수	110,000	(12.7)	11.84	0.68
매수	70,000	3.1	14.21	1.13
매수	48,000	26.6	7.23	0.42
매수	75,000	1.5	5.33	0.46
매수	14,000	(4.8)	8.26	0.57
매수	11,000	(31.0)	12.44	0.53
매수	24,000	18.2	7.32	0.17
매수	26,000	(4.2)	8.85	0.35

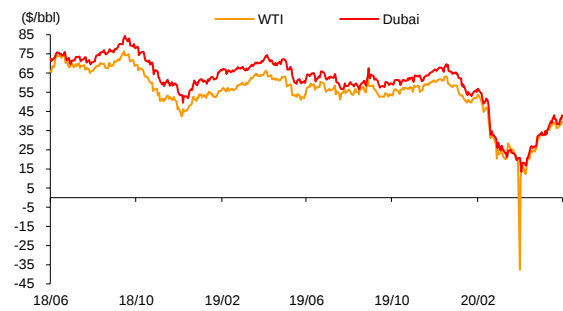
• 작성자(손지우)는 본 조사분석자료에 게재된 내용들이 본인의 의견을 정확히 반영하고 있으며, 외부의 부당한 압력이나 간섭없이 신의성실하게 작성되었음을 확인합니다.
• 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.
• 본 보고서는 기관투자자 또는 제 3자에게 사전 제공된 사실이 없습니다.
• 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

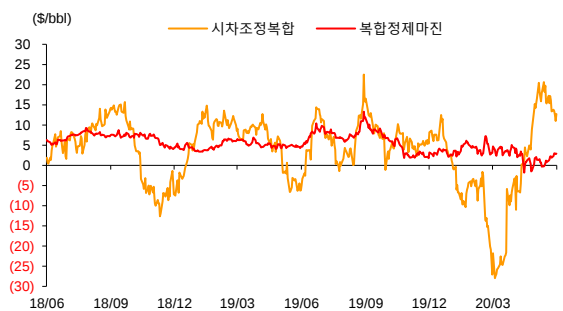
KOSPI/KOSPI화학



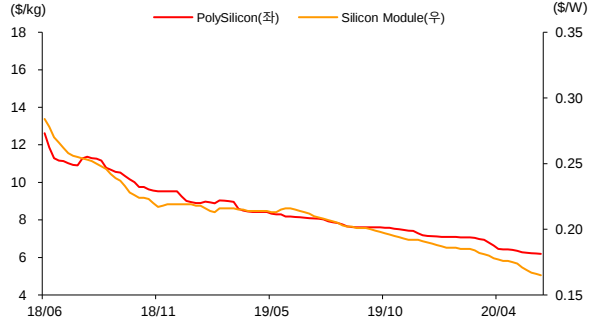
WTI/Dubai



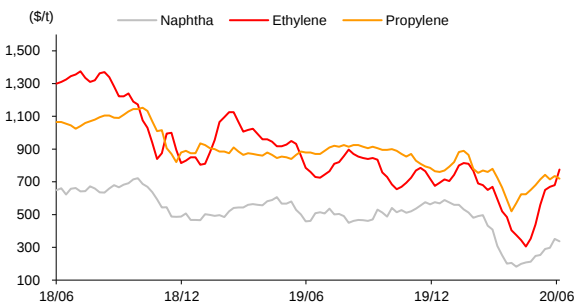
Complex & 1M lagging margin



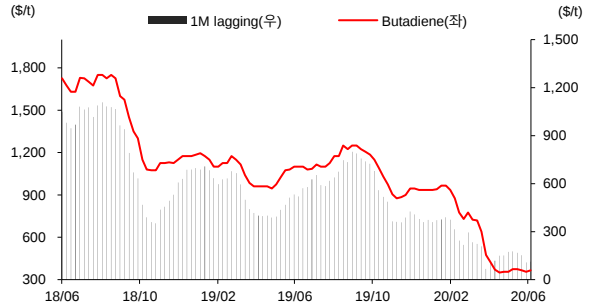
Polysilicon & Module prices



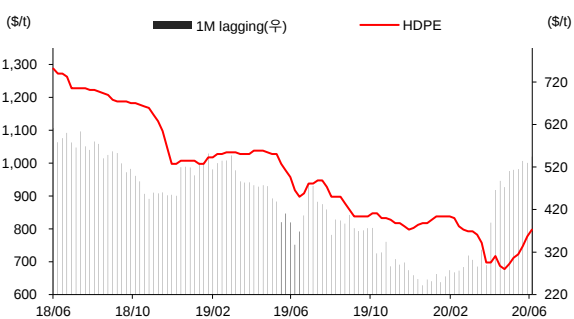
Naphtha/Ethylene/Propylene prices



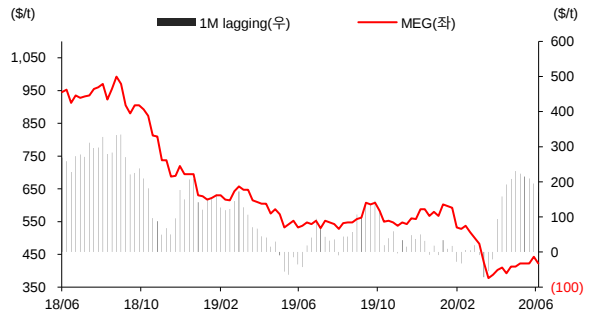
Butadiene price & 1M lagging naphtha spread



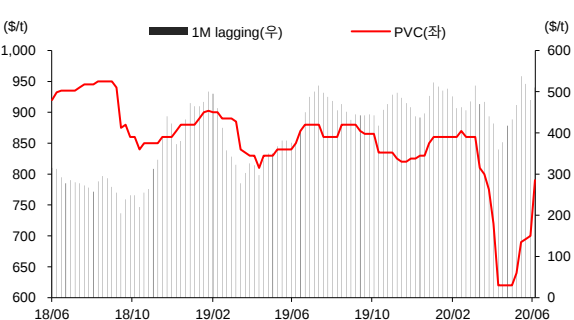
HDPE price & 1M lagging naphtha spread



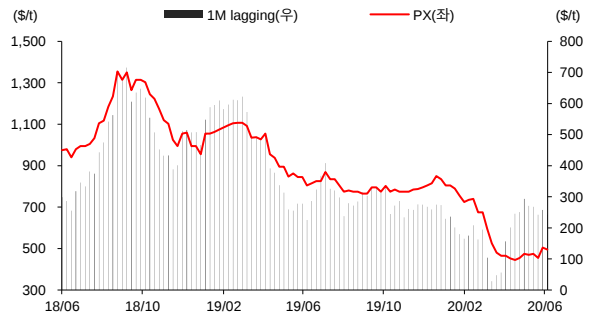
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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



News Comment

Headline	(출처: Platts)
제목	[주간가격] 에틸렌, WoW \$35/mt 상승해 CFR SEA \$790/mt로 마감
결론	높아진 에틸렌 가격은 여전히 부담. 다만 타이트한 수급이 가격을 지지
사실	1) NE 아시아 기준 7월 카고 수급은 다소 제한. 반면 8월 카고를 찾기 시작 2) 중국에서 여전히 7월 물 카고에 대한 수요가 높은 편이나 공급이 제한 3) 트레이더에 따르면 7월에 크래커 가동률 하락이 예상되고 있음 4) 납사-에틸렌 스프레드는 \$473.375/톤으로 통상 BEP 수준보다 높게 형성 5) 높아진 에틸렌 가격은 여전히 부담. 다만 타이트한 수급이 가격을 지지

Issue 1	(출처: Platts)
제목	[주간가격] MEG, WoW \$11/mt 상승해 CFR China \$427/mt로 마감
결론	MEG가격이 소폭 반등세를 보였으나, 여전히 높은 재고는 부담 요소
사실	1) 중국 내수 MEG 선물가격은 활발하게 거래되며 업스트림 가격을 따라감 2) 다만 코로나19로 인한 PE 수요 약세에 가격 상승 여부에 대해서 의문 3) 따라서 시장의 셀러들은 MEG 가격 움직임에 주목하며 관망세를 유지 4) 중국 동부항 MEG 재고는 약 140만톤로 높은 수준을 기록 중임 5) MEG가격이 소폭 반등세를 보였으나, 여전히 높은 재고는 부담 요소

Issue 3	(출처: Platts)
제목	[주간가격] SBR, 플랫한 모습 보이며 CFR SEA \$940/mt로 마감
결론	고무 생산 대비 수요가 부족해 가격 약세 지속될 것으로 판단
사실	1) 자동차산업의 경영 난항에 바이어들의センチ먼트는 Bearish를 형성 2) 태국 내수 자동차 판매는 2020년 30-50% 가량 감소할 것으로 전망됨 3) 그럼에도 업스트림 유가 상승에 지난 주 가격은 지지되었음 4) 말레이시아 천연고무 생산은 한달 전 대비 0.3% 상승, 재고는 0.5% 상승 5) 고무 생산 대비 수요가 부족해 가격 약세 지속될 것으로 판단

Issue 5	(출처: Platts)
제목	[주간가격] PTA, WoW \$15.00/mt 상승해 CFR China \$445/mt로 마감
결론	업스트림 가격 인상에 상승했으나, 펀더 약세 및 추가 물량에 약세 전망
사실	1) 업스트림의 상승세와 Bearish PTA 펀더 속에서 시장의 거래 자체는 혼조 2) 다만, PX 가격의 상승세로 PTA 가격은 지난 주 소폭 상승하였음 3) 이에 따라 PTA-PX 스프레드는 3년 최저인 \$60.63/mt으로 좁혀짐 4) 중국 Hanbang PC는 220만톤/년 PTA 유닛을 재가동할 계획임 5) 업스트림 가격 인상에 상승했으나, 펀더 약세 및 추가 물량에 약세 전망

WTI Comment	(출처: 연합뉴스)
제목	국제유가 오름세 지속...WTI 2.3%↑
상승	주요 산유국들의 감산 훈풍
요인	요인
하락	하락
요인	요인

Issue 2	(출처: Platts)
제목	[주간가격] BD, 플랫한 모습 보이며 FOB Korea \$330/mt로 마감
결론	업스트림 원유가격의 불확실성에 거래가 부진, 가격 변동 축소된 모습
사실	1) 여전히 업스트림 원유 가격이 높은 편이기 때문에 셀러들의 거래는 부진 2) 시장 참여자들의 거래 자체가 다소 부진하면서 가격은 안정적이었음 3) 말레이시아 천연고무 생산량은 지난 달 대비해서 약 0.3% 가량 상승 4) 다만 천연고무 수출량은 전월 대비해서 10.2% 하락한 40,596톤을 기록 5) 업스트림 원유가격의 불확실성에 거래가 부진, 가격 변동 축소된 모습

Issue 4	(출처: Platts)
제목	[주간가격] PX, WoW \$63.67/mt 상승해 FOB Korea \$560.00/mt로 마감
결론	유가상승에 PX 상승 동반됐으나 PTA 시장 약세에 상승 제한될 전망
사실	1) PX 가격은 지난 주 건조했던 업스트림 원유가격 상승세에 동반 상승 2) 글로벌 경기회복에 대한 불확실성 속 PX 단기 전망은 혼조세인 모습 3) PTA-PX 스프레드는 \$68/톤 근처를 오고가며 저점에 머물고 있음 4) 현재 PTA 재고는 375만톤/년에 가까울 정도로 높아 펀더는 Bearish 5) 유가상승에 PX 상승 동반됐으나 PTA 시장 약세에 상승 제한될 전망

Issue 6	(출처: PV Insights)
제목	공급과잉 우려로 태양광 패널 가격 하락
결론	공급과잉 여건 속 글로벌 업체들의 가격경쟁 지속에 약세 전망
사실	1) 폴리실리콘, 중국 최대 생산 업체의 생산재개 소식에 가격 하락함 2) Mono-wafer, 공급과잉과 높은 재고에 대한 우려감으로 가격을 억누름 3) Mono-PERC 셀, 공장들이 생산 증대시키고 있으나 수요 받침될지는 의문 4) Mono-PERC 모듈, 원가 부담 속 가격 경쟁에 대한 우려감에 신저점 기록 5) 공급과잉 여건 속 글로벌 업체들의 가격경쟁 지속에 약세 전망

Commodity Price Data

Daily Price		06/19	1D	1W	1M	3M	6M	12M	YTD	2018avg.	2019avg.	2020acc.
F/X	USD/EUR	0.895	0.893	0.888	0.916	0.935	0.899	0.891	0.892	0.848	0.893	0.909
	Change, %		0.2	0.7	(2.3)	(4.3)	(0.5)	0.4	0.3	5.5	0.1	(1.5)
	USD/JPY	106.9	107.0	107.4	107.7	110.7	109.4	108.1	108.8	110.4	109.0	108.3
	Change, %		(0.1)	(0.5)	(0.8)	(3.5)	(2.3)	(1.1)	(1.7)	(3.2)	(2.0)	(1.3)
	USD/KRW	1,209.9	1,208.3	1,204.2	1,225.2	1,285.7	1,165.7	1,176.0	1,154.8	1,100.3	1,165.7	1,206.9
	Change, %		0.1	0.5	(1.2)	(5.9)	3.8	2.9	4.8	10.0	3.8	0.2
Agriculture	Corn	332.5	331.0	330.0	321.3	345.5	386.5	441.0	387.8	368.2	383.5	350.0
	Change, %		0.5	0.8	3.5	(3.8)	(14.0)	(24.6)	(14.2)	(9.7)	(13.3)	(5.0)
	Soybean	876.5	873.0	871.3	842.5	843.3	924.5	903.3	943.0	931.9	889.8	871.7
	Change, %		0.4	0.6	4.0	3.9	(5.2)	(3.0)	(7.1)	(5.9)	(1.5)	0.5
	Wheat	481.3	483.5	502.0	498.8	535.0	545.3	522.3	558.8	495.4	494.7	536.2
	Change, %		(0.5)	(4.1)	(3.5)	(10.0)	(11.7)	(7.9)	(13.9)	(2.8)	(2.7)	(10.2)
	Rice	14.0	14.0	16.1	16.1	13.9	12.8	11.4	13.1	11.5	11.3	14.7
	Change, %		(0.1)	(12.7)	(12.8)	0.7	9.6	23.4	6.7	21.5	23.6	(4.7)
	Oats	306.0	306.0	317.0	315.8	261.3	297.3	285.5	292.0	256.2	286.9	296.7
	Change, %		0.0	(3.5)	(3.1)	17.1	2.9	7.2	4.8	19.4	6.6	3.1
	Palm Oil	2,538.0	2,454.0	2,433.0	2,230.0	2,271.0	2,853.0	2,026.0	3,041.0	2,250.9	2,176.0	2,487.6
	Change, %		3.4	4.3	13.8	11.8	(11.0)	25.3	(16.5)	12.8	16.6	2.0
	Cocoa	2,387.0	2,419.0	2,396.0	2,435.0	2,216.0	2,435.0	2,538.0	2,540.0	2,308.4	2,387.4	2,525.2
	Change, %		(1.3)	(0.4)	(2.0)	7.7	(2.0)	(5.9)	(6.0)	3.4	(0.0)	(5.5)
	Cotton	61.6	61.2	59.8	59.2	54.9	67.6	65.4	69.1	82.1	67.3	61.1
	Change, %		0.6	2.9	4.0	12.1	(8.9)	(5.8)	(10.8)	(25.0)	(8.5)	0.8
	Sugar	12.1	11.9	11.9	10.9	10.6	13.6	12.5	13.4	12.3	12.4	12.3
	Change, %		1.3	1.5	11.1	13.8	(11.1)	(3.6)	(10.2)	(1.7)	(2.4)	(1.9)
	Coffee	93.8	94.6	95.2	107.1	116.7	127.2	96.3	129.7	112.7	101.4	108.6
	Change, %		(0.9)	(1.5)	(12.4)	(19.6)	(26.3)	(2.6)	(27.7)	(16.8)	(7.5)	(13.7)
Energy	WTI	39.8	38.8	36.3	32.5	25.2	61.2	53.8	61.1	64.8	57.0	37.3
	Change, %		2.3	9.6	22.3	57.6	(35.1)	(26.1)	(34.9)	(38.7)	(30.3)	6.6
	Brent	42.2	41.5	38.7	34.7	28.5	66.5	61.8	66.0	71.6	64.2	42.4
	Change, %		1.6	8.9	21.8	48.2	(36.6)	(31.8)	(36.1)	(41.0)	(34.3)	(0.4)
	Natural Gas	1.7	1.6	1.7	1.8	1.7	2.3	2.3	2.2	3.1	2.5	1.8
	Change, %		1.9	(3.6)	(8.8)	0.9	(26.6)	(26.7)	(23.8)	(45.6)	(34.0)	(8.2)
	Ethanol	1.2	1.2	1.2	1.2	1.0	1.4	1.6	1.4	1.4	1.4	1.2
	Change, %		0.8	3.5	5.4	21.9	(9.9)	(20.7)	(9.8)	(9.7)	(10.9)	6.7
	RBOB Gasoline	127.2	125.8	112.4	104.5	68.5	170.7	173.6	169.8	191.7	172.6	114.4
	Change, %		1.1	13.1	21.7	85.6	(25.5)	(26.7)	(25.1)	(33.7)	(26.3)	11.1
	Coal	53.1	53.0	53.0	51.8	66.2	66.5	70.6	67.7	107.1	78.1	62.1
	Change, %		0.3	0.2	2.5	(19.7)	(20.1)	(24.8)	(21.6)	(50.4)	(32.0)	(14.6)
Metal	Gold	1,743.9	1,722.9	1,730.8	1,745.1	1,471.2	1,478.8	1,360.4	1,517.3	1,269.3	1,393.8	1,641.9
	Change, %		1.2	0.8	(0.1)	18.5	17.9	28.2	14.9	37.4	25.1	6.2
	Silver	17.6	17.4	17.5	17.3	12.1	17.1	15.2	17.9	15.7	16.2	16.6
	Change, %		1.4	0.8	1.6	45.4	3.3	16.3	(1.3)	12.2	8.7	6.2
	Copper	5,849.5	5,805.0	5,784.5	5,355.0	4,825.0	6,215.0	5,918.0	6,174.0	6,543.8	6,025.4	5,495.9
	Change, %		0.8	1.1	9.2	21.2	(5.9)	(1.2)	(5.3)	(10.6)	(2.9)	6.4
	Nickel	975.0	984.9	967.5	943.8	854.0	1,036.5	891.8	1,029.3	897.6	994.1	940.1
	Change, %		(1.0)	0.8	3.3	14.2	(5.9)	9.3	(5.3)	8.6	(1.9)	3.7
	Zinc	2,082.0	2,052.0	1,977.0	2,033.5	1,847.0	2,325.0	2,478.0	2,272.0	2,893.0	2,507.3	2,052.6
	Change, %		1.5	5.3	2.4	12.7	(10.5)	(16.0)	(8.4)	(28.0)	(17.0)	1.4
	Lead	1,774.5	1,804.5	1,741.0	1,675.3	1,620.5	1,909.0	1,898.3	1,917.0	2,244.6	2,000.7	1,758.1
	Change, %		(1.7)	1.9	5.9	9.5	(7.0)	(6.5)	(7.4)	(20.9)	(11.3)	0.9
	Aluminum	13,740.0	13,780.0	13,865.0	13,215.0	11,915.0	14,275.0	13,890.0	14,345.0	14,252.6	13,912.8	13,143.0
	Change, %		(0.3)	(0.9)	4.0	15.3	(3.7)	(1.1)	(4.2)	(3.6)	(1.2)	4.5
	Cobalt	28,850.0	28,850.0	29,000.0	29,557.0	29,566.0	32,304.0	28,000.0	32,300.0	72,883.1	33,221.6	30,940.9
	Change, %		0.0	(0.5)	(2.4)	(2.4)	(10.7)	3.0	(10.7)	(60.4)	(13.2)	(6.8)
	HR Coil	501.0	500.0	511.0	474.0	577.0	557.0	567.0	588.0	828.8	603.3	540.3
	Change, %		0.2	(2.0)	5.7	(13.2)	(10.1)	(11.6)	(14.8)	(39.6)	(17.0)	(7.3)
	Scrap	303.0	303.0	315.0	337.0	250.0	288.0	264.0	288.0	390.2	301.1	291.6
	Change, %		0.0	(3.8)	(10.1)	21.2	5.2	14.8	5.2	(22.4)	0.6	3.9

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용



Refining Price Data

Daily Price		06/19	1D	1W	1M	3M	6M	12M	YTD	2018avg.	2019avg.	2020acc.
Crude Oil	WTI	39.8	38.8	36.3	32.5	22.4	60.4	56.7	61.2	64.7	56.3	36.9
	Change, %		2.3	9.6	22.3	77.2	(34.2)	(29.8)	(35.0)	(38.6)	(29.5)	7.8
	Dubai	43.0	41.1	38.4	33.2	28.7	66.9	62.6	65.7	69.3	62.6	40.3
	Change, %		4.5	11.8	29.4	49.8	(35.8)	(31.4)	(34.6)	(38.1)	(31.4)	6.5
Crude Oil	Gasoline(휘발유)	50.0	48.0	42.2	37.7	29.2	75.3	68.0	73.7	79.8	71.9	44.9
Product	Change, %		4.2	18.4	32.6	71.4	(33.6)	(26.5)	(32.2)	(37.4)	(30.5)	11.4
	Kerosene(등유)	44.4	42.4	39.3	34.1	33.2	80.3	75.3	80.3	84.7	76.2	44.8
	Change, %		4.6	13.1	30.2	33.8	(44.7)	(41.1)	(44.7)	(47.6)	(41.8)	(0.8)
	Diesel(경유)	49.3	47.7	44.1	37.2	40.6	80.4	75.2	80.7	84.0	76.3	48.9
	Change, %		3.4	11.8	32.8	21.6	(38.7)	(34.4)	(38.8)	(41.3)	(35.4)	0.9
	Bunker-C	38.7	36.2	35.1	31.5	29.9	49.8	59.3	49.1	65.1	57.0	36.0
	Change, %		7.0	10.4	23.1	29.4	(22.2)	(34.6)	(21.2)	(40.5)	(32.1)	7.7
	Naphtha	42.2	39.8	36.0	29.8	26.0	63.0	53.7	63.0	67.0	56.3	37.2
	Change, %		6.1	17.4	41.4	62.4	(33.0)	(21.3)	(33.0)	(37.0)	(25.1)	13.4
Dubai	Gasoline(휘발유)	7.0	6.9	3.8	4.5	0.5	8.5	5.4	8.0	10.5	9.3	4.5
Spread	Change		0.2	3.2	2.5	6.6	(1.4)	1.7	(1.0)	(3.5)	(2.2)	2.5
	Kerosene(등유)	1.4	1.3	0.8	0.9	4.5	13.4	12.7	14.6	15.3	13.6	4.4
	Change		0.1	0.6	0.5	(3.1)	(12.0)	(11.3)	(13.2)	(13.9)	(12.1)	(3.0)
	Diesel(경유)	6.4	6.6	5.7	4.0	11.9	13.5	12.6	15.0	14.6	13.7	8.5
	Change		(0.3)	0.7	2.4	(5.5)	(7.2)	(6.2)	(8.6)	(8.3)	(7.3)	(2.2)
	Bunker-C	(4.2)	(4.9)	(3.3)	(1.7)	1.3	(17.1)	(3.4)	(16.6)	(4.2)	(5.6)	(4.4)
	Change		0.7	(0.9)	(2.5)	(5.5)	12.8	(0.9)	12.4	(0.0)	1.4	0.2
	Naphtha	(0.8)	(1.3)	(2.5)	(3.3)	(2.7)	(3.9)	(9.0)	(2.7)	(2.3)	(6.3)	(3.1)
	Change		0.6	1.7	2.6	1.9	3.1	8.2	2.0	1.6	5.6	2.4
Refining	Simple(단순)	(0.5)	(0.8)	(0.7)	(0.2)	3.1	(4.1)	1.4	(3.4)	2.5	1.3	(0.1)
Margin	Change		0.3	0.2	(0.3)	(3.7)	3.6	(1.9)	2.9	(3.1)	(1.8)	(0.4)
	Complex(복합)	2.9	2.8	1.9	1.8	4.7	3.2	4.7	3.9	7.2	5.9	3.0
	Change		0.1	1.0	1.2	(1.7)	(0.3)	(1.8)	(1.0)	(4.3)	(3.0)	(0.1)
	Complex(lagging)	12.7	11.0	13.4	15.2	(21.8)	8.2	(4.9)	6.2	6.8	6.3	(2.0)
	Change		1.7	(0.7)	(2.5)	34.5	4.5	17.6	6.5	5.9	6.4	14.7

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

Utility SMP Data

Daily Price		06/19	1D	1W	1M	3M	6M	12M	YTD	2018avg.	2019avg.	2020acc.
Electricity	SMP	73.9	72.8	76.5	75.3	83.8	84.9	80.7	81.9	94.5	90.3	85.0
	Change, %		1.5	(3.4)	(1.9)	(11.9)	(13.0)	(8.5)	(9.8)	(21.8)	(18.2)	(13.2)

자료 : EPSIS, SK증권

Petrochemical Price Data

Daily Price			06/19	06/18	06/17	06/16	06/15	06/12	06/11	06/10	06/09	06/08
Spot Price	Naphtha	CFR Japan	389.8	370.1	367.1	365.4	340.9	346.3	353.6	351.9	348.6	367.8
	Ethylene	CFR SE Asia	790.0	790.0	790.0	790.0	790.0	755.0	755.0	755.0	705.0	680.0
	Propylene	FOB Korea	740.0	735.0	730.0	730.0	730.0	730.0	735.0	735.0	735.0	735.0
	Butadiene	FOB Korea	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
	HDPE	CFR FE Asia	840.0	840.0	840.0	840.0	840.0	830.0	810.0	810.0	810.0	810.0
	LDPE	CFR FE Asia	890.0	880.0	880.0	880.0	880.0	870.0	850.0	850.0	850.0	850.0
	LLDPE	CFR FE Asia	790.0	790.0	790.0	790.0	790.0	780.0	760.0	760.0	760.0	760.0
	MEG	CFR China	427.0	420.0	415.0	415.0	408.0	416.0	421.0	427.0	422.0	429.0
	PP	CFR FE Asia	890.0	890.0	890.0	890.0	890.0	895.0	880.0	875.0	875.0	855.0
	PX	CFR China	560.0	537.7	533.3	529.3	498.3	496.3	506.3	507.3	510.3	520.7
	PTA	CFR China	445.0	440.0	435.0	430.0	430.0	433.0	433.0	433.0	435.0	440.0
	Benzene	FOB Korea	429.7	423.3	428.3	427.0	412.7	426.3	436.3	443.8	443.3	453.0
	Toluene	FOB Korea	434.0	423.5	426.0	424.0	404.0	409.0	417.0	429.0	429.0	431.0
	Xylene	FOB Korea	437.0	429.5	439.0	430.5	425.0	425.0	430.0	432.0	436.0	439.0
	SM	FOB Korea	641.0	636.0	634.0	634.0	616.0	622.0	629.0	633.0	632.0	637.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2018avg.	2019avg.	2020acc.
Spot Price	Naphtha	CFR Japan	336.5	351.5	253.0	308.5	576.0	462.0	588.5	614.2	523.8	367.1
	Change, %			(4.3)	33.0	9.1	(41.6)	(27.2)	(42.8)	(45.2)	(35.8)	(8.3)
	Ethylene	CFR SE Asia	770.0	690.0	545.0	585.0	630.0	710.0	665.0	1,145.9	829.1	607.3
	Change, %			11.6	41.3	31.6	22.2	8.5	15.8	(32.8)	(7.1)	26.8
	Propylene	CFR SE Asia	700.0	705.0	680.0	710.0	810.0	810.0	815.0	987.0	839.4	724.3
	Change, %			(0.7)	2.9	(1.4)	(13.6)	(13.6)	(14.1)	(29.1)	(16.6)	(3.4)
	Butadiene	CFR SE Asia	315.0	305.0	325.0	675.0	900.0	1,050.0	885.0	1,391.5	1,045.4	591.0
	Change, %			3.3	(3.1)	(53.3)	(65.0)	(70.0)	(64.4)	(77.4)	(69.9)	(46.7)
	Benzene	CFR SE Asia	445.0	430.0	367.5	532.5	732.5	620.0	750.0	827.8	643.2	517.4
	Change, %			3.5	21.1	(16.4)	(39.2)	(28.2)	(40.7)	(46.2)	(30.8)	(14.0)
	Toluene	CFR SE Asia	450.0	425.0	372.5	525.0	710.0	635.0	730.0	773.5	680.4	517.0
	Change, %			5.9	20.8	(14.3)	(36.6)	(29.1)	(38.4)	(41.8)	(33.9)	(13.0)
	Xylene	CFR SE Asia	435.0	430.0	385.0	550.0	710.0	680.0	710.0	802.5	705.3	527.2
	Change, %			1.2	13.0	(20.9)	(38.7)	(36.0)	(38.7)	(45.8)	(38.3)	(17.5)
Spread	Ethylene	-Naphtha	433.5	338.5	292.0	276.5	54.0	248.0	76.5	531.7	305.3	240.2
	Change, %			28.1	48.5	56.8	702.8	74.8	466.7	(18.5)	42.0	80.5
	Propylene	-Naphtha	363.5	353.5	427.0	401.5	234.0	348.0	226.5	372.8	315.7	357.2
	Change, %			2.8	(14.9)	(9.5)	55.3	4.5	60.5	(2.5)	15.1	1.8
	Butadiene	-Naphtha	(21.5)	(46.5)	72.0	366.5	324.0	588.0	296.5	777.3	521.6	223.9
	Change, %			(53.8)	(129.9)	(105.9)	(106.6)	(103.7)	(107.3)	(102.8)	(104.1)	(109.6)
	Benzene	-Naphtha	108.5	78.5	114.5	224.0	156.5	158.0	161.5	213.6	119.4	150.3
	Change, %			38.2	(5.2)	(51.6)	(30.7)	(31.3)	(32.8)	(49.2)	(9.1)	(27.8)
	Toluene	-Naphtha	113.5	73.5	119.5	216.5	134.0	173.0	141.5	159.3	156.7	149.9
	Change, %			54.4	(5.0)	(47.6)	(15.3)	(34.4)	(19.8)	(28.7)	(27.6)	(24.3)
	Xylene	-Naphtha	98.5	78.5	132.0	241.5	134.0	218.0	121.5	188.3	181.5	160.1
	Change, %			25.5	(25.4)	(59.2)	(26.5)	(54.8)	(18.9)	(47.7)	(45.7)	(38.5)

자료 : Ciscem, Platts, Bloomberg, SK증권

참고 : Spread는 Polymer와 Naphtha의 가격차임

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2018avg.	2019avg.	2020acc.
Spot Price	HDPE	CFR SE Asia	797.5	777.5	712.5	792.5	802.5	917.5	817.5	1,211.4	933.9	772.1
	Change, %			2.6	11.9	0.6	(0.6)	(13.1)	(2.4)	(34.2)	(14.6)	3.3
	MEG	CFR SE Asia	422.5	442.5	422.5	482.5	587.5	537.5	567.5	918.4	579.6	478.3
	Change, %			(4.5)	0.0	(12.4)	(28.1)	(21.4)	(25.6)	(54.0)	(27.1)	(11.7)
	PVC	CFR SE Asia	790.0	700.0	640.0	860.0	825.0	850.0	830.0	920.1	858.4	775.6
	Change, %			12.9	23.4	(8.1)	(4.2)	(7.1)	(4.8)	(14.1)	(8.0)	1.9
	PP	CFR SE Asia	877.5	857.5	807.5	892.5	957.5	1,047.5	952.5	1,236.5	1,061.5	882.1
	Change, %			2.3	8.7	(1.7)	(8.4)	(16.2)	(7.9)	(29.0)	(17.3)	(0.5)
	2-EH	CFR Korea	820.0	795.0	750.0	850.0	840.0	985.0	830.0	1,117.0	965.2	805.2
	Change, %			3.1	9.3	(3.5)	(2.4)	(16.8)	(1.2)	(26.6)	(15.0)	1.8
	ABS	CFR SE Asia	1,340.0	1,310.0	1,150.0	1,320.0	1,370.0	1,400.0	1,400.0	1,902.0	1,461.5	1,286.6
	Change, %			2.3	16.5	1.5	(2.2)	(4.3)	(4.3)	(29.5)	(8.3)	4.2
	SBR	CFR SE Asia	940.0	940.0	1,090.0	1,270.0	1,390.0	1,400.0	1,390.0	1,701.4	1,389.6	1,216.0
	Change, %			0.0	(13.8)	(26.0)	(32.4)	(32.9)	(32.4)	(44.8)	(32.4)	(22.7)
	SM	CFR SE Asia	647.5	660.0	615.0	740.0	880.0	1,075.0	890.0	1,343.7	1,007.1	729.6
	Change, %			(1.9)	5.3	(12.5)	(26.4)	(39.8)	(27.2)	(51.8)	(35.7)	(11.3)
	Caustic	FOB NEA	248.0	251.0	264.0	249.0	281.0	349.0	270.0	483.2	312.2	253.1
	Change, %			(1.2)	(6.1)	(0.4)	(11.7)	(28.9)	(8.1)	(48.7)	(20.6)	(2.0)
	PX	CFR SE Asia	495.0	505.0	470.0	595.0	805.0	805.0	850.0	1,056.0	891.8	605.9
	Change, %			(2.0)	5.3	(16.8)	(38.5)	(38.5)	(41.8)	(53.1)	(44.5)	(18.3)
	PO	CFR China	1,422.5	1,335.0	1,342.5	1,222.5	1,477.5	1,397.5	1,457.5	1,829.5	1,464.2	1,281.5
	Change, %			6.6	6.0	16.4	(3.7)	1.8	(2.4)	(22.2)	(2.8)	11.0
	Caprolactam	CFR SE Asia	1,080.0	1,040.0	980.0	1,120.0	1,180.0	1,460.0	1,210.0	2,092.4	1,508.2	1,108.4
	Change, %			3.8	10.2	(3.6)	(8.5)	(26.0)	(10.7)	(48.4)	(28.4)	(2.6)
	PTA	CFR SE Asia	442.5	435.0	427.5	502.5	625.0	722.5	642.5	869.4	745.1	511.4
	Change, %			1.7	3.5	(11.9)	(29.2)	(38.8)	(31.1)	(49.1)	(40.6)	(13.5)
Spread	HDPE		461.0	426.0	459.5	484.0	226.5	455.5	229.0	597.2	410.2	405.0
	Change, %			8.2	0.3	(4.8)	103.5	1.2	101.3	(22.8)	12.4	13.8
	MEG		86.0	91.0	169.5	174.0	11.5	75.5	(21.0)	304.2	55.9	111.2
	Change, %			(5.5)	(49.3)	(50.6)	647.8	13.9	(509.5)	(71.7)	53.9	(22.7)
	PVC		453.5	348.5	387.0	551.5	249.0	388.0	241.5	305.9	334.7	408.5
	Change, %			30.1	17.2	(17.8)	82.1	16.9	87.8	48.3	35.5	11.0
	PP		541.0	506.0	554.5	584.0	381.5	585.5	364.0	622.3	537.8	515.0
	Change, %			6.9	(2.4)	(7.4)	41.8	(7.6)	48.6	(13.1)	0.6	5.0
	2-EH		483.5	443.5	497.0	541.5	264.0	523.0	241.5	502.8	441.4	438.1
	Change, %			9.0	(2.7)	(10.7)	83.1	(7.6)	100.2	(3.8)	9.5	10.4
	ABS		1,003.5	958.5	897.0	1,011.5	794.0	938.0	811.5	1,287.8	937.8	919.5
	Change, %			4.7	11.9	(0.8)	26.4	7.0	23.7	(22.1)	7.0	9.1
	SBR	BD spread	625.0	635.0	765.0	595.0	490.0	350.0	505.0	310.0	344.2	625.0
	Change, %			(1.6)	(18.3)	5.0	27.6	78.6	23.8	101.6	81.6	0.0
	SM		311.0	308.5	362.0	431.5	304.0	613.0	301.5	729.5	483.3	362.5
	Change, %			0.8	(14.1)	(27.9)	2.3	(49.3)	3.2	(57.4)	(35.7)	(14.2)
	Caustic											
	Change, %											
	PX		158.5	153.5	217.0	286.5	229.0	343.0	261.5	441.8	368.0	238.8
	Change, %			3.3	(27.0)	(44.7)	(30.8)	(53.8)	(39.4)	(64.1)	(56.9)	(33.6)
	PO	propylene spread	722.5	630.0	662.5	512.5	667.5	587.5	642.5	842.5	624.8	557.2
	Change, %			14.7	9.1	41.0	8.2	23.0	12.5	(14.2)	15.6	29.7
	Caprolactam	benzene spread	635.0	610.0	612.5	587.5	447.5	840.0	460.0	1,264.6	865.0	591.0
	Change, %			4.1	3.7	8.1	41.9	(24.4)	38.0	(49.8)	(26.6)	7.4
	PTA	px spread	96.0	81.5	98.5	86.0	61.5	159.0	47.5	130.2	120.9	87.3
	Change, %			17.8	(2.5)	11.6	56.1	(39.6)	102.1	(26.3)	(20.6)	10.0

자료 : Ciscem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용



Global peers

	Currency	06/19	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA	
											20E	21E	20E	21E	20E	21E
Petrochemical																
DuPont	USD	52.6	0.0	3.1	10.1	66.1	(17.7)	(27.9)	(18.1)	38,598	18.3	16.2	1.0	0.9	11.7	11.1
Corteva	USD	30.9	(1.3)	(1.5)	13.1	16.6	(2.1)	(0.1)	(8.2)	20,328	19.7	16.7	0.8	0.8	9.8	9.2
Eastman	USD	69.5	(1.3)	(0.2)	9.6	68.5	(13.0)	(5.9)	(12.3)	9,443	11.8	10.1	1.5	1.4	8.8	8.0
BASF	EUR	50.8	(5.9)	(1.5)	12.1	26.1	(24.4)	(18.3)	(24.6)	52,205	21.1	14.4	1.2	1.2	9.6	8.0
Akzo Nobel	EUR	80.3	1.4	8.2	12.6	65.6	(10.5)	(1.4)	(11.4)	17,378	25.1	19.6	2.6	2.4	13.8	11.5
Arkema	EUR	81.5	(0.8)	1.8	8.8	50.5	(13.6)	2.2	(13.9)	7,002	16.2	12.3	1.1	1.1	7.5	6.7
Lanxess	EUR	48.2	0.5	6.1	7.2	65.1	(19.5)	1.3	(19.5)	4,715	15.7	12.0	1.3	1.3	7.0	6.1
Sumitomo Chemical	JPY	337	(0.6)	1.5	4.0	19.5	(33.9)	(30.8)	(32.3)	5,222	16.9	9.1	0.6	0.6	10.2	8.4
Mitsubishi Chemical	JPY	648	(1.6)	1.2	8.0	5.8	(21.8)	(13.0)	(20.7)	9,139	19.1	10.2	0.8	0.7	8.8	7.4
Shin-Etsu Chemical	JPY	12,405	0.2	(0.4)	2.1	36.7	3.7	31.8	2.9	48,378	17.3	15.7	1.8	1.7	8.1	7.3
Asahi Kasei	JPY	865	(1.9)	(0.6)	11.4	38.5	(31.7)	(24.9)	(29.9)	11,279	13.7	10.7	0.9	0.8	7.3	6.2
JSR	JPY	2,026	(0.3)	3.0	2.9	25.8	(2.7)	22.1	0.7	4,288	26.8	16.6	1.1	1.0	9.4	7.5
Nitto Denko	JPY	5,950	0.0	(1.0)	10.0	40.7	(5.6)	14.8	(3.7)	8,841	21.0	18.6	1.3	1.3	6.0	5.6
SABIC	SAR	91.2	0.0	2.5	11.2	36.9	(1.2)	(23.2)	(2.0)	72,931	79.0	30.2	1.7	1.7	12.6	9.7
Yansab	SAR	53.1	0.0	2.7	5.1	28.0	(2.6)	(16.2)	(5.2)	7,962	44.1	26.1	1.9	2.0	15.6	12.1
Formosa Plastics	TWD	85.8	(0.5)	(0.7)	(0.5)	28.8	(14.1)	(24.1)	(14.0)	18,458	20.9	15.6	1.6	1.5	20.0	16.7
Formosa Fiber	TWD	73.1	(0.9)	(1.5)	(0.1)	23.3	(16.9)	(34.7)	(16.5)	14,479	21.0	18.2	1.2	1.2	15.8	15.1
Nan Ya Plastics	TWD	63.8	(1.7)	(2.3)	0.3	34.9	(12.5)	(19.1)	(12.4)	17,099	23.8	18.1	1.4	1.4	16.1	15.7
Sinopec Shanghai	CNY	3.55	(0.3)	0.3	(10.4)	(14.7)	(7.8)	(30.4)	(8.3)	4,622	25.4	16.5	1.3	1.2	11.6	7.2
Sinopec Yizheng(Fiber)	CNY	1.75	0.6	0.6	(4.4)	(13.4)	(22.2)	(29.7)	(22.6)	3,715	30.7	24.3	3.8	3.1	9.1	8.2
Reliance	INR	1,759	6.3	10.7	24.9	93.5	9.3	37.7	17.7	150,755	24.4	17.7	2.2	2.0	14.7	11.6
Industries Qatar	QAR	8.4	0.0	0.1	4.4	19.1	(17.9)	(27.2)	(18.2)	13,830	31.5	22.4	1.5	1.5	1,844.3	654.2
PTT Chemical	THB	46.8	(0.5)	2.7	1.6	93.2	(18.3)	(26.4)	(18.0)	6,771	34.1	16.0	0.7	0.7	12.0	9.0
Petronas	MYR	6.3	(1.7)	(8.7)	7.4	52.6	(14.8)	(25.0)	(14.7)	11,754	26.2	19.0	1.6	1.6	11.1	8.8
LG화학	KRW	512,000	4.3	10.8	43.4	122.6	65.7	46.9	61.3	29,851	50.1	28.4	2.2	2.1	12.6	9.6
롯데케미칼	KRW	183,500	7.3	4.0	(4.4)	56.8	(19.2)	(29.2)	(18.1)	5,195	14.7	8.1	0.5	0.5	5.1	3.7
한화솔루션	KRW	18,550	1.1	0.3	17.8	95.3	(0.5)	(17.7)	(1.6)	2,449	11.6	7.7	0.5	0.5	7.9	7.1
금호석유	KRW	78,200	4.8	10.8	7.9	77.9	0.9	(21.1)	0.9	1,968	7.5	6.8	0.9	0.8	5.7	5.3
SKC	KRW	59,000	1.9	1.4	9.7	110.3	22.4	62.1	15.7	1,829	13.8	15.5	1.2	1.2	12.1	9.4
국도화학	KRW	36,850	1.9	(2.4)	(7.2)	10.3	(20.9)	(20.1)	(21.7)	177	-	-	-	-	-	-
효성	KRW	65,300	0.0	(2.4)	(2.1)	31.3	(20.3)	(12.3)	(17.4)	1,136	8.7	6.5	0.5	0.5	12.5	10.5
Average			0.4	1.6	6.8	46.5	(9.4)	(8.7)	(9.3)							
Refinery																
Valero	USD	63.2	(2.3)	(1.0)	(1.4)	68.8	(33.2)	(19.2)	(32.6)	25,750	-	15.7	1.5	1.4	19.4	7.1
Conoco Phillips	USD	43.7	(1.7)	(0.1)	2.4	70.8	(30.8)	(26.7)	(32.8)	46,865	-	207.1	1.6	1.7	11.6	7.5
Formosa Petrochemical	TWD	88.1	(0.5)	(3.2)	(4.3)	30.9	(9.5)	(25.7)	(9.6)	28,361	35.3	21.3	2.6	2.4	20.5	12.9
Marathon Petroleum	USD	38.2	(0.7)	4.3	10.7	128.4	(37.5)	(23.1)	(36.6)	24,833	-	16.6	1.1	1.2	11.7	7.2
Devon Energy	USD	12.9	(0.1)	1.1	5.1	97.6	(48.5)	(51.9)	(50.2)	4,952	-	-	1.3	1.4	5.8	6.5
Hollyfrontier	USD	32.2	(1.0)	2.7	9.4	53.7	(36.7)	(22.2)	(36.4)	5,219	-	16.1	1.0	1.0	12.2	6.6
Phillips 66	USD	74.7	(2.0)	(3.3)	(0.7)	63.5	(33.8)	(14.7)	(33.0)	32,620	32.7	11.6	1.4	1.3	14.6	7.4
Murphy Oil	USD	15.1	1.4	3.1	26.6	171.5	(40.7)	(37.5)	(43.6)	2,322	-	-	0.5	0.5	5.5	6.3
JX Holdings	JPY	394.4	(0.1)	(1.5)	1.4	23.1	(22.0)	(24.7)	(20.8)	11,925	14.3	7.4	0.7	0.6	8.2	6.8
Idemitsu	JPY	2,349.0	(0.6)	1.0	(6.6)	(3.4)	(22.1)	(26.0)	(22.5)	6,549	15.1	7.4	0.6	0.6	9.1	7.7
Nesteoil	EUR	35.4	0.0	1.5	7.1	57.7	18.6	21.5	14.2	30,507	24.8	20.3	4.4	4.1	15.8	12.7
Ashland	USD	68.8	(0.5)	3.3	13.3	51.1	(9.8)	(12.2)	(10.2)	4,156	31.1	22.7	1.3	1.3	12.2	10.8
Fuchs Petrolub	EUR	36.5	0.9	2.2	6.5	14.8	(15.7)	4.5	(17.3)	5,212	28.4	23.3	3.1	3.0	13.8	11.8
SK이노베이션	KRW	126,000	0.0	9.6	21.7	119.9	(17.1)	(21.0)	(16.0)	9,622	-	17.7	0.7	0.7	-	8.3
S-Oil	KRW	67,900	0.3	(1.7)	(6.2)	36.1	(29.8)	(16.4)	(28.8)	6,314	-	11.2	1.3	1.2	55.1	8.5
GS	KRW	37,900	1.1	0.5	(1.4)	6.5	(27.4)	(26.0)	(26.6)	2,908	11.4	5.2	0.4	0.4	8.8	6.8
Average			(0.4)	1.2	5.2	61.9	(24.7)	(20.1)	(25.2)							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임



Global peers

	Currency	06/19	1D	1W	1M	3M	6M	12M	YTD	MKT CAP		PER		PBR		EV/EBITDA	
										(mil USD)		20E	21E	20E	21E	20E	21E
E&P/Shale																	
Exxon Mobil	USD	46	(2.0)	(2.5)	4.6	33.5	(33.7)	(39.0)	(34.1)	194,413	-	36.7		1.1	1.2	14.1	9.2
BP	GBP	321	2.1	(0.5)	2.3	33.5	(33.5)	(40.6)	(31.8)	80,548	101.8	11.8		1.0	1.0	7.0	5.3
Shell	EUR	1,376	1.0	1.9	5.1	34.8	(39.4)	(46.0)	(38.4)	130,210	41.2	13.2		0.7	0.7	6.7	5.0
Chevron	USD	91	(1.4)	(1.9)	1.1	57.9	(23.3)	(26.3)	(24.8)	169,204	761.6	42.9		1.3	1.3	10.6	8.3
Total	EUR	36	0.0	1.7	8.3	58.6	(27.2)	(26.1)	(27.5)	103,940	35.5	15.5		0.9	0.9	7.6	5.8
ARAMCO	SAR	33	0.0	2.3	(0.7)	12.8	(6.8)	-	(5.7)	1,764,600	33.0	24.0		6.5	6.5	14.2	11.0
Sinopec	CNY	4	0.0	(0.7)	(8.7)	(9.9)	(20.8)	(24.2)	(21.5)	65,482	29.1	12.0		0.7	0.6	6.0	4.8
Petrochina	CNY	4	0.2	0.9	(3.6)	(11.9)	(26.1)	(38.0)	(26.2)	106,063	-	32.3		0.6	0.6	7.1	5.7
CNOOC	CNY	14	0.6	0.4	0.2	14.6	(24.9)	46.4	(29.5)	51,442	24.3	11.5		0.8	0.8	4.4	3.3
Gazprom	RUB	196	1.5	(0.5)	0.8	12.2	(22.1)	(15.8)	(23.6)	66,692	9.8	5.5		0.3	0.3	5.5	4.4
Rosneft	RUB	376	0.7	0.0	(0.1)	42.3	(16.7)	(8.1)	(16.4)	57,355	25.5	7.3		1.0	1.0	6.8	5.2
OCCIDENTAL	USD	20	0.2	6.5	37.2	82.0	(72.9)	(71.8)	(52.2)	17,739	-	-		0.8	1.0	12.0	9.4
Petrobras	BRL	21	(0.6)	4.2	14.9	75.8	(29.9)	(22.0)	(28.9)	53,802	-	15.5		0.5	0.5	6.8	5.3
Lukoil	USD	5,460	2.1	2.1	3.6	26.0	(10.2)	4.1	(11.5)	54,427	17.6	10.1		0.9	0.9	5.4	4.4
Kinder	USD	16	(1.6)	0.1	1.2	38.6	(25.5)	(25.9)	(26.7)	35,098	22.0	17.3		1.1	1.1	9.9	9.7
Equinor ASA	NOK	142	1.2	(1.7)	(3.3)	30.9	(18.4)	(16.1)	(19.3)	49,178	91.5	18.7		1.4	1.3	4.6	3.3
BHP	AUD	35	(1.9)	(2.7)	(0.1)	28.1	(12.0)	(14.6)	(10.0)	112,870	15.5	15.3		2.3	2.2	6.4	6.3
PTT E&P	THB	96	1.6	4.9	8.5	73.6	(23.3)	(27.4)	(23.3)	12,239	17.6	15.5		1.0	1.0	3.5	3.3
Petronas gas	MYR	17	(1.0)	(2.7)	14.1	17.3	1.9	(2.7)	3.6	7,938	18.4	18.4		2.5	2.4	9.6	9.5
Noble Energy	USD	10	(2.2)	(2.4)	8.4	153.8	(57.2)	(51.2)	(59.7)	4,797	-	-		1.1	1.1	7.6	7.2
Average			0.0	0.5	4.7	40.2	(27.1)	(23.4)	(25.4)								
PV																	
WACKER	EUR	62.8	1.3	7.3	16.2	90.2	(7.0)	(8.4)	(7.1)	3,667	117.4	23.4		1.6	1.5	8.0	5.7
GCL-Poly	HKD	0.2	2.7	(8.9)	(1.7)	(4.6)	(27.1)	(47.4)	(23.4)	579	-	-		0.2	0.2	9.1	8.2
SunPower	USD	7.3	2.8	(1.2)	(2.5)	30.9	(5.3)	(30.4)	(6.7)	1,237	-	101.1		70.0	42.1	47.6	11.9
Canadian Solar	USD	18.1	1.6	1.7	(6.3)	28.4	(12.4)	(19.3)	(18.3)	1,066	6.2	5.8		0.7	0.6	6.1	5.2
LONGI Green Energy	CNY	34.0	2.1	1.8	4.7	42.1	36.9	51.6	36.7	18,111	21.1	17.2		3.9	3.2	14.8	12.1
First Solar	USD	50.2	(0.5)	1.6	16.1	50.0	(12.0)	(20.0)	(10.3)	5,317	17.7	13.5		1.0	0.9	8.2	5.7
OCI	KRW	38,900.0	1.7	0.3	0.0	46.2	(38.3)	(58.6)	(37.9)	766	-	15.5		0.4	0.4	18.6	6.1
Average			1.7	0.4	3.8	40.5	(9.3)	(18.9)	(9.6)								
Gas Company																	
Towngas China	HKD	3.7	(1.6)	(5.2)	(7.2)	16.2	(35.6)	(38.8)	(29.2)	1,359	7.2	6.7		0.5	0.5	8.4	7.8
Kulun	HKD	5.1	(0.8)	5.6	4.3	68.6	(26.7)	(24.7)	(25.7)	5,709	6.6	5.8		0.7	0.7	4.1	3.9
Beijing Enterprise	HKD	27.4	(1.6)	2.8	2.4	9.8	(22.2)	(31.1)	(23.4)	4,462	4.4	4.0		0.4	0.4	9.1	8.6
ENN Energy	HKD	91.8	0.0	0.4	3.0	45.6	10.1	23.6	7.8	13,326	15.5	13.6		3.1	2.6	10.2	8.8
China Resources Gas	HKD	40.9	(0.7)	(0.5)	0.2	12.7	(3.8)	7.2	(4.4)	12,211	16.9	15.4		2.8	2.6	9.6	8.7
China Gas Holdings	HKD	28.2	1.3	4.8	5.2	23.4	(1.4)	0.9	(3.4)	18,988	13.1	11.6		2.9	2.4	10.9	9.7
Shenzen Gas	HKD	13.0	(0.3)	0.2	(6.2)	15.7	(24.9)	(10.7)	(20.8)	3,622	8.7	7.1		0.8	0.8	6.3	6.1
Shaan Xi	CNY	6.2	0.3	(1.8)	(1.3)	6.2	(14.9)	(22.5)	(13.9)	970	13.4	13.1	-	-	-	-	-
Suntien	HKD	1.9	(0.5)	0.5	2.7	29.5	(12.3)	(4.0)	(14.2)	925	4.3	4.0		0.5	0.5	7.3	6.6
China Oil & Gas	HKD	0.2	2.1	3.0	3.0	6.2	(17.2)	(36.8)	(22.6)	179	-	-		-	-	-	-
Average			(0.2)	1.0	0.6	23.4	(14.9)	(13.7)	(15.0)								
EV																	
LG화학	KRW	512,000	4.3	10.8	43.4	122.6	65.7	46.9	61.3	29,851	50.1	28.4		2.2	2.1	12.6	9.6
삼성SDI	KRW	385,000	2.1	1.4	21.3	110.4	68.5	64.2	63.1	21,865	49.3	26.3		2.1	1.9	17.9	13.2
Panasonic	JPY	959.3	(0.9)	0.8	10.8	37.0	(6.5)	9.4	(6.8)	22,028	16.3	11.2		1.1	1.0	6.1	5.3
GS Yuasa	JPY	1813.0	(2.3)	(1.0)	7.8	53.4	(25.4)	(10.2)	(23.3)	1,404	11.8	11.1		0.8	0.7	5.4	5.3
NEC	JPY	5000.0	(1.4)	0.5	3.1	42.2	10.5	21.1	10.6	12,190	15.9	13.5		1.3	1.2	6.6	6.3
CATL	CNY	165.9	4.4	4.1	15.8	44.2	77.9	138.1	55.9	51,783	72.2	55.6		8.2	7.2	34.7	26.8
GuoXuan	CNY	29.4	6.6	(2.3)	8.0	53.9	116.3	111.2	101.7	4,688	57.1	57.8		3.6	3.3	26.8	24.8
Wanxiang	CNY	4.9	0.2	(0.4)	0.0	(3.1)	(8.2)	(16.1)	(8.0)	1,923	-	-		-	-	-	-
BYD Auto	CNY	67.0	0.4	9.0	15.1	30.4	49.0	35.1	40.5	24,243	73.1	60.4		3.2	3.0	16.0	14.5
Tesla Motors	USD	1000.9	(0.3)	7.0	23.9	134.1	147.7	342.0	139.3	185,678	270.9	85.1		19.2	14.3	53.8	33.3
Geely	CNY	12.5	(0.6)	4.0	(3.5)	21.6	(15.2)	(1.6)	(17.8)	15,851	12.6	10.5		1.7	1.5	8.0	6.8
NIO	CNY	7.3	2.2	20.3	98.9	208.4	180.2	167.9	82.6	8,773	-	-		-	-	-	-
Average			1.2	4.5	20.4	71.3	55.0	67.3	41.6								

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임