SK Energy Daily

에너지/Commodity/정유화학. 손지우 I 3773-8827, jwshon@sk.com
R.A. 유승우 I 3773-9180, yswbest@sk.com

SK 증권

2018년 3월 20일

1. News Summary (3 page)

News		Conclusion
WTI comment	주가하락·원유증가 우려에 약세…WTI 0.4%↓	
Headline	가스공사, 푸틴 연임으로 러시아 가스관사업 기대 부풀어	경제적으로나 에너지 공급처 다변화 목적으로나 당위성 높은 사업임
News 1.	사우디 Petro Rabigh가 3월 말 첫 PX 카고를 중국에 하역	사우디에서 PX 물량이 풀리며 아시아 역내 가격 하락 압력 지속 전망
News 2.	-	-
News 3.	-	-
News 4.	-	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	$/bbl	62.1	(0.4)	1.1	0.6	8.6	28.7
Dubai	$/bbl	62.5	1.2	1.2	1.3	2.0	24.8
Gasoline	$/bbl	76.6	1.0	1.6	2.4	2.3	22.0
Diesel	$/bbl	77.4	1.1	1.0	2.8	3.6	25.9
Complex margin	$/bbl	8.1	(0.1)	(0.2)	0.7	0.4	1.6
1M lagging	$/bbl	11.2	1.1	5.2	9.2	2.2	8.7
Petrochemical			%	%	%	%	%
Naphtha	$/t	576	0.6	1.9	2.6	(2.2)	23.6
Butadiene	$/t	1,430	0.0	2.9	5.5	30.0	(31.9)
HDPE	$/t	1,340	0.0	0.0	(0.7)	4.7	16.5
MEG	$/t	911	5.3	1.8	(10.2)	(0.8)	11.1
PX	$/t	933	0.4	(0.2)	(1.5)	5.4	9.4
SM	$/t	1,276	1.4	(3.8)	(9.9)	0.8	(1.2)
Commodity			%	%	%	%	%
Natural Gas	$/mmbtu	2.65	(1.4)	(4.6)	2.0	0.6	(7.9)
Natural rubber	$/t	1,420	(1.4)	(1.4)	0.0	(0.7)	(28.3)
Cotton	C/lbs	81.2	(2.0)	(2.5)	7.3	8.0	5.0

*참고: 정제마진의 변동률은 %가 아닌 $/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	03/19	$/t	1,250	2.5	6.6	0.4	16.3
Propylene	03/19	$/t	980	(1.5)	(3.4)	10.1	13.3
Benzene	03/19	$/t	868	(1.7)	(3.1)	(5.7)	4.5
Toluene	03/19	$/t	720	0.0	(4.0)	(2.0)	4.3
Xylene	03/19	$/t	763	(0.3)	0.7	7.4	5.9
PP	03/19	$/t	1,298	(0.8)	1.8	12.1	17.2
PVC	03/19	$/t	970	(1.0)	(1.0)	12.1	3.2
ABS	03/19	$/t	2,020	(2.4)	(1.9)	(2.4)	12.2
SBR	03/19	$/t	1,750	0.0	(0.3)	6.1	(36.2)
SM	03/19	$/t	1,338	(4.3)	(7.0)	0.4	3.7
BPA	03/19	$/t	1,875	(4.5)	(1.7)	0.1	30.9
Caustic	03/19	$/t	601	1.9	9.5	(3.2)	34.8
2-EH	03/19	$/t	1,130	0.4	4.6	9.2	12.4
Caprolactam	03/19	$/t	2,180	1.4	5.8	5.8	(5.2)
Solar				%	%	%	%
Polysilicon	03/14	$/kg	14.9	(1.5)	(8.6)	(13.9)	(5.4)
Module	03/14	$/W	0.30	(0.3)	(1.6)	(2.9)	(11.9)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	74.2	(1.3)	(1.4)	(3.1)	(10.1)	(9.6)
Shell	EUR	2,176	(1.7)	(3.4)	(3.8)	(9.9)	2.5
Petrochina	CNY	7.97	0.8	(1.0)	(0.6)	1.0	0.4
Gazprom	RUB	139.9	(0.8)	(1.0)	1.2	4.4	8.5
Petrobras	BRL	20.9	(2.3)	(6.3)	4.4	38.2	59.0
Refinery							
Phillips66	USD	94.4	(1.5)	(0.6)	2.6	(4.8)	18.1
Valero	USD	92.9	(0.9)	0.3	(0.4)	5.5	34.9
JX	JPY	628.6	(0.4)	(4.1)	(5.9)	(8.8)	15.9
Neste Oil	EUR	57.1	(0.4)	(3.4)	(1.9)	7.4	64.8

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	83.6	(1.2)	(1.8)	(3.8)	(11.4)	(6.3)
DowDuPont	USD	66.6	(2.1)	(6.7)	(7.5)	(6.8)	4.0
SABIC	SAR	109.7	(0.2)	(0.9)	4.4	7.7	13.5
Formosa Pla.	TWD	103.0	1.0	(0.5)	2.0	8.6	12.8
Shin-Etsu	JPY	10,985	(1.5)	(2.2)	(4.5)	(6.9)	13.7
Renewable							
Wacker	EUR	131.8	(1.4)	(5.9)	(5.3)	(17.6)	32.2
First Solar	USD	71.26	2.0	1.7	8.2	3.1	123.9
GCL-Poly	HKD	1.10	(3.5)	(9.8)	(9.8)	(12.7)	2.8
Tesla Motors	USD	313.6	(2.4)	(9.2)	(6.5)	(5.3)	19.9

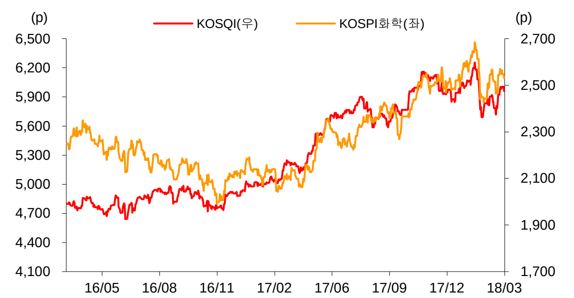
4. Coverage Summary

	03/19	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	2,475	(0.8)	(0.4)	2.2	(0.1)	3.7	14.3				* 추정치는 12M fwd 기준임	
KOSPI화학	6,089	(0.8)	(1.6)	3.5	0.6	6.1	19.8				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	405,000	(2.1)	(1.3)	8.7	1.6	1.0	44.9	매수	450,000	11.1	13.52	1.91
롯데케미칼	425,500	0.0	(0.7)	(2.3)	17.9	9.8	13.3	매수	410,000	(3.6)	11.62	1.27
한화케미칼	30,450	(1.0)	(2.9)	(5.6)	2.2	(18.5)	22.3	매수	39,000	28.1	11.62	0.79
금호석유화학	92,000	(2.0)	(1.6)	1.0	(4.3)	19.3	19.3	매수	150,000	63.0	11.23	1.47
KCC	351,000	(0.6)	(0.8)	(1.8)	(7.8)	(7.6)	(1.1)	매수	450,000	28.2	13.00	0.52
OCI	148,500	0.3	(4.8)	(5.4)	13.4	36.9	75.5	매수	180,000	21.2	13.95	1.04
SKC	39,500	(0.9)	(2.2)	8.5	(7.3)	(4.2)	28.9	매수	55,000	39.2	9.93	0.97
SK이노베이션	211,000	1.2	(1.6)	10.8	4.2	11.6	28.3	매수	230,000	9.0	11.17	1.06
S-Oil	120,000	0.4	(4.0)	6.2	(3.2)	3.0	24.0	매수	140,000	16.7	13.72	2.18
GS	63,600	0.8	(4.9)	1.1	3.4	(5.2)	13.0	매수	80,000	25.8	6.21	0.82
SK가스	94,600	(1.5)	(2.3)	2.8	2.6	(11.2)	(19.1)	매수	130,000	37.4	8.20	0.63
포스코대우	20,550	(2.6)	(0.5)	(0.2)	12.6	(2.1)	(12.9)	매수	25,000	21.7	9.37	0.83
LG상사	27,200	0.6	1.3	(1.1)	0.0	(9.8)	(11.1)	매수	38,000	39.7	9.16	0.78
한국전력	31,800	(0.8)	(3.9)	(3.9)	(18.4)	(22.8)	(28.3)	매수	50,000	57.2	6.83	0.25
한국가스공사	46,500	(1.2)	(5.7)	4.8	7.9	6.4	(0.9)	매수	60,000	29.0	8.78	0.69

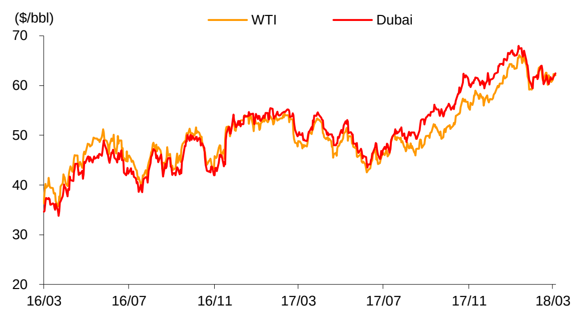
에너지/Commodity/정유화학, 손지우 I 3773-8827, jwshon@sk.com
R.A. 유승우 I 3773-9180, yswbest@sk.com

Key Chart

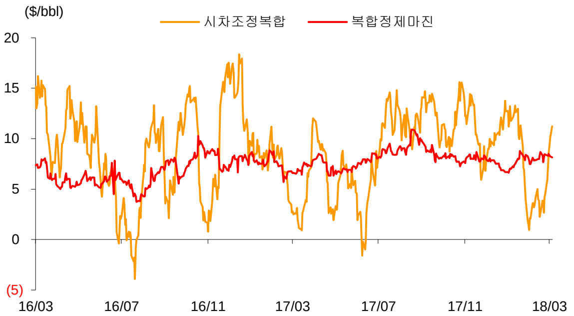
KOSPI/KOSPI화학



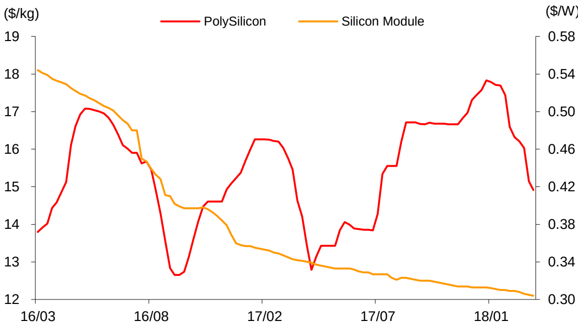
WTI/Dubai



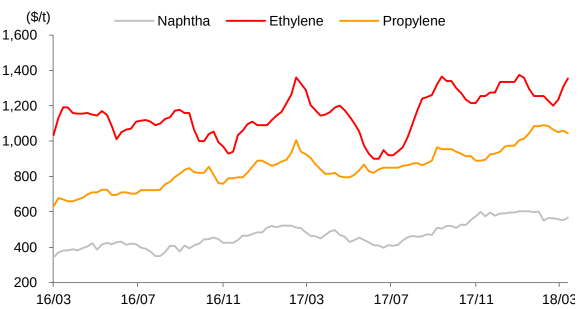
Complex & 1M lagging margin



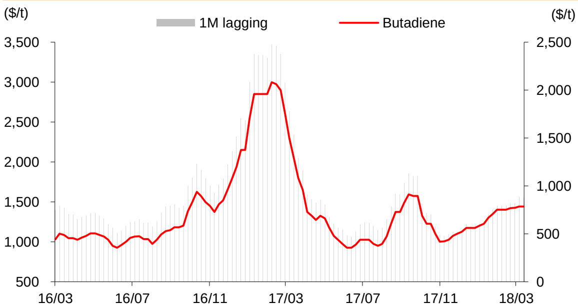
Polysilicon & Module prices



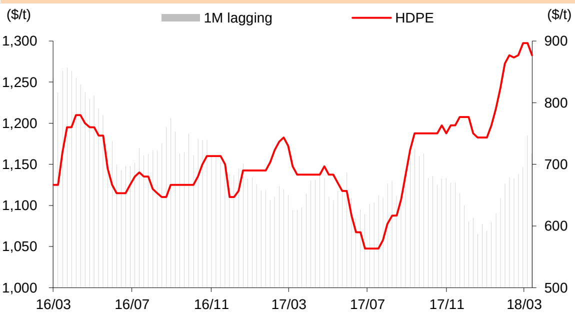
Naphtha/Ethylene/Propylene prices



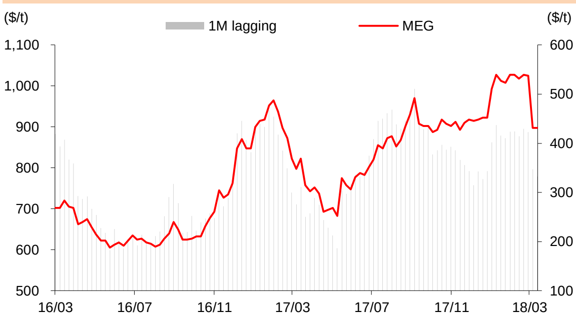
Butadiene price & 1M lagging naphtha spread



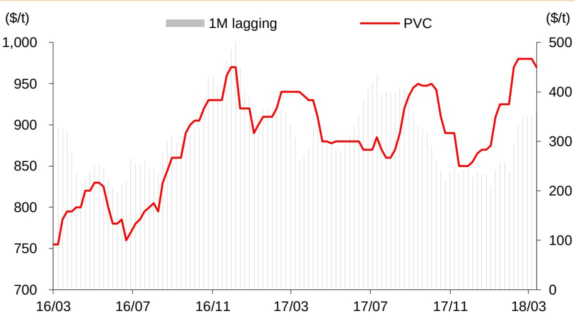
HDPE price & 1M lagging naphtha spread



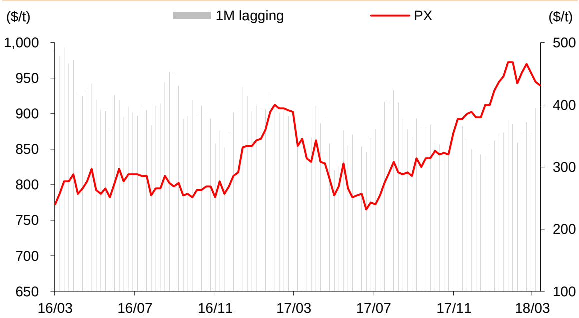
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

에너지/Commodity/정유화학. 손지우 I 3773-8827, jwshon@sk.com
R.A. 유승우 I 3773-9180, yswbest@sk.com

News Comment

Headline	(출처: 비즈니스포스트)
제목	가스공사, 푸틴 연임으로 러시아 가스관사업 기대 부풀어
결론	경제적으로나 에너지 공급처 다변화 목적으로나 당위성 높은 사업임
세부	
	1) 푸틴이 연임에 성공하며 한국, 북한, 러시아를 잇는 PNG 사업 탄력 가능
	2) 美 언론, "푸틴의 가스관사업이 김정은이 대화에 나서는 이유 중 하나"
	3) 사업 실현은 북한이 러시아 핵우산 아래에서의 안전보장 확보하는 것
	4) 3연임을 금지하는 러시아법상 푸틴은 이번 임기내 사업에 힘 실을 것
	5) 경제적으로나 에너지 공급처 다변화 목적으로나 당위성 높은 사업임

WTI Comment	(출처: 연합뉴스)
제목	주가하락·원유증가 우려에 약세…WTI 0.4%↓
상승 요인	
하락 요인	베이커 휴즈, "지난 주 미국 rig 수는 4개 늘어 800개 기록" 뉴욕증시가 페이스북 주가하락과 무역전쟁 우려 등으로 미끄러짐

Issue 1	(출처: Platts)
제목	사우디 Petro Rabigh가 3월 말 첫 PX 카고를 중국에 하역
결론	사우디에서 PX 물량이 풀리며 아시아 역내 가격 하락 압력 지속 전망
세부	
	1) 사우디 Petro Rabigh가 3월 말 첫 PX 카고를 NCC Amal로 중국에 운송
	2) Rabigh의 벤젠 생산량 43.4만톤 중 14만톤은 동북아 수출 계획임
	3) Rabigh의 phase 2 프로젝트는 PX에 톤당 50센트 할인을 적용함
	4) 이는 $3/mt 수준으로 ACP와 Platts 스팟 가격의 평균 수준임
	5) 사우디에서 PX 물량이 풀리며 아시아 역내 가격 하락 압력 지속 전망

Issue 2	
제목	
결론	
세부	
	1)
	2)
	3)
	4)
	5)

Issue 3	
제목	
결론	
세부	
	1)
	2)
	3)
	4)
	5)

Issue 4	
제목	
결론	
세부	
	1)
	2)
	3)
	4)
	5)

Issue 5	
제목	
결론	
세부	
	1)
	2)
	3)
	4)
	5)

Issue 6	
제목	
결론	
세부	
	1)
	2)
	3)
	4)
	5)

에너지/Commodity/정유화학. 손지우 | 3773-8827, jwshon@sk.com
R.A. 유승우 | 3773-9180, yswbest@sk.com

Commodity Price Data

Daily Price		Today	1D	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
F/X	**USD/EUR**	0.811	0.814	0.811	0.806	0.845	0.834	0.931	0.833	0.904	0.887	0.814
	Change, %		(0.4)	0.0	0.6	(4.0)	(2.8)	(12.9)	(2.7)	(10.3)	(8.6)	(0.4)
	USD/JPY	106.1	106.0	106.4	106.6	112.9	111.6	112.7	112.6	108.8	112.1	108.7
	Change, %		0.1	(0.3)	(0.5)	(6.0)	(4.9)	(5.9)	(5.8)	(2.4)	(5.4)	(2.4)
	USD/KRW	1,071.5	1,066.2	1,065.2	1,067.6	1,084.8	1,131.3	1,131.8	1,066.7	1,160.5	1,130.9	1,072.2
	Change, %		0.5	0.6	0.4	(1.2)	(5.3)	(5.3)	0.5	(7.7)	(5.3)	(0.1)
Agriculture	**Corn**	375.0	382.8	384.3	367.5	347.5	348.3	367.5	350.8	358.5	359.4	364.2
	Change, %		(2.0)	(2.4)	2.0	7.9	7.7	2.0	6.9	4.6	4.4	3.0
	Soybean	1,022.5	1,049.5	1,033.3	1,021.5	956.0	965.5	1,000.0	951.8	987.5	975.9	1,002.4
	Change, %		(2.6)	(1.0)	0.1	7.0	5.9	2.3	7.4	3.5	4.8	2.0
	Wheat	450.8	467.8	489.8	457.8	419.5	443.0	436.3	427.0	436.4	436.0	452.9
	Change, %		(3.6)	(8.0)	(1.5)	7.4	1.7	3.3	5.6	3.3	3.4	(0.5)
	Rice	12.3	12.5	12.1	12.0	11.7	12.8	9.9	11.7	10.3	11.1	12.1
	Change, %		(1.4)	1.2	2.2	4.9	(3.9)	23.9	5.2	18.8	11.1	1.4
	Oats	235.0	242.3	258.8	267.8	246.5	240.3	250.0	241.0	196.3	252.3	259.3
	Change, %		(3.0)	(9.2)	(12.2)	(4.7)	(2.2)	(6.0)	(2.5)	19.7	(6.8)	(9.4)
MYR/mt	**Palm Oil**	2,433.0	2,438.0	2,390.0	2,530.0	2,469.0	2,785.0	2,966.0	2,444.0	2,653.8	2,787.3	2,490.7
	Change, %		(0.2)	1.8	(3.8)	(1.5)	(12.6)	(18.0)	(0.5)	(8.3)	(12.7)	(2.3)
	Cocoa	2,445.0	2,522.0	2,565.0	2,138.0	1,912.0	1,965.0	2,013.0	1,892.0	2,854.0	2,005.2	2,128.5
	Change, %		(3.1)	(4.7)	14.4	27.9	24.4	21.5	29.2	(14.3)	21.9	14.9
	Cotton	81.2	82.9	83.3	75.7	75.0	70.0	78.4	78.6	65.6	73.5	80.2
	Change, %		(2.0)	(2.5)	7.3	8.3	16.1	3.7	3.3	23.8	10.5	1.2
	Sugar	12.9	12.7	12.9	13.4	14.4	13.8	18.2	15.2	18.2	15.8	13.6
	Change, %		1.9	(0.3)	(3.7)	(10.5)	(6.3)	(29.1)	(15.0)	(29.0)	(18.5)	(5.2)
	Coffee	118.4	117.0	118.2	118.0	121.8	134.0	140.8	126.2	136.1	133.0	121.5
	Change, %		1.2	0.2	0.3	(2.8)	(11.6)	(15.9)	(6.2)	(13.0)	(11.0)	(2.6)
Energy	**WTI**	62.1	62.3	61.4	61.7	57.5	49.5	48.8	60.4	43.4	51.0	62.6
	Change, %		(0.4)	1.1	0.6	8.0	25.4	27.2	2.7	43.1	21.8	(0.9)
	Brent	66.1	66.2	65.0	65.7	63.8	55.1	51.8	66.9	45.1	54.9	66.9
	Change, %		(0.2)	1.7	0.6	3.5	19.8	27.6	(1.2)	46.5	20.4	(1.3)
	Natural Gas	2.7	2.7	2.8	2.6	2.7	3.1	2.9	3.0	2.6	3.0	2.9
	Change, %		(1.4)	(4.6)	3.6	(1.5)	(15.1)	(10.1)	(10.2)	3.9	(12.3)	(7.6)
	Ethanol	1.5	1.5	1.5	1.5	1.3	1.6	1.5	1.3	1.5	1.5	1.4
	Change, %		(2.0)	(3.2)	(1.4)	15.4	(6.0)	(5.1)	10.8	(3.4)	(2.3)	3.0
	RBOB Gasoline	192.5	194.6	189.4	175.1	169.7	165.5	159.9	179.9	140.0	162.9	184.2
	Change, %		(1.1)	1.6	9.9	13.5	16.3	20.4	7.0	37.5	18.2	4.5
	Coal	96.8	97.2	98.0	105.3	100.3	98.2	81.3	100.8	65.5	88.2	103.6
	Change, %		(0.4)	(1.3)	(8.1)	(3.5)	(1.5)	19.0	(4.0)	47.8	9.7	(6.6)
Metal	**Gold**	1,316.9	1,314.4	1,323.1	1,346.6	1,261.8	1,311.1	1,229.3	1,302.6	1,248.5	1,258.6	1,329.0
	Change, %		0.2	(0.5)	(2.2)	4.4	0.4	7.1	1.1	5.5	4.6	(0.9)
	Silver	16.3	16.3	16.5	16.7	16.1	17.3	17.4	16.9	17.1	17.1	16.8
	Change, %		(0.1)	(1.2)	(2.1)	1.2	(5.7)	(6.2)	(3.7)	(4.6)	(4.4)	(2.8)
	Copper	6,854.0	6,888.0	6,913.0	7,118.0	6,942.0	6,539.0	5,935.0	7,247.0	4,872.0	6,199.4	7,035.9
	Change, %		(0.5)	(0.9)	(3.7)	(1.3)	4.8	15.5	(5.4)	40.7	10.6	(2.6)
	Nickel	878.5	883.6	886.8	875.3	752.2	714.2	671.9	809.1	646.4	680.2	855.3
	Change, %		(0.6)	(0.9)	0.4	16.8	23.0	30.7	8.6	35.9	29.1	2.7
	Zinc	3,261.0	3,260.0	3,239.5	3,555.0	3,201.0	3,106.5	2,882.0	3,319.0	2,097.5	2,888.5	3,407.2
	Change, %		0.0	0.7	(8.3)	1.9	5.0	13.2	(1.7)	55.5	12.9	(4.3)
	Lead	2,362.0	2,384.0	2,344.0	2,584.0	2,549.8	2,405.0	2,285.5	2,482.8	1,868.3	2,315.7	2,535.2
	Change, %		(0.9)	0.8	(8.6)	(7.4)	(1.8)	3.3	(4.9)	26.4	2.0	(6.8)
	Aluminum	13,900.0	13,870.0	13,940.0	14,215.0	14,380.0	16,420.0	13,755.0	15,020.0	12,373.5	14,556.6	14,379.1
	Change, %		0.2	(0.3)	(2.2)	(3.3)	(15.3)	1.1	(7.5)	12.3	(4.5)	(3.3)
	Cobalt	88,605.0	88,375.0	84,020.0	81,000.0	74,205.0	59,844.5	52,750.0	75,205.0	25,480.1	55,906.9	80,278.9
	Change, %		0.3	5.5	9.4	19.4	48.1	68.0	17.8	247.7	58.5	10.4
	HR Coil	822.0	822.0	820.0	751.0	635.0	620.0	625.0	662.0	519.3	620.1	736.1
	Change, %		0.0	0.2	9.5	29.4	32.6	31.5	24.2	58.3	32.6	11.7
	Scrap	414.0	420.0	374.3	380.0	360.0	347.0	335.0	367.0	275.7	344.7	383.3
	Change, %		(1.4)	10.6	8.9	15.0	19.3	23.6	12.8	50.2	20.1	8.0

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

에너지/Commodity/정유화학. 손지우 | 3773-8827, jwshon@sk.com
R.A. 유승우 | 3773-9180, yswbest@sk.com
SK증권

Refining Price Data

Daily Price		03/19	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	**WTI**	62.1	62.3	61.4	61.7	57.2	49.9	48.2	53.7	43.4	50.9	62.6
	Change, %		(0.4)	1.1	0.6	8.6	24.3	28.7	15.5	43.1	21.9	(0.9)
	Dubai	62.5	61.7	61.7	61.7	61.3	54.2	50.1	53.8	41.3	53.1	63.8
	Change, %		1.2	1.2	1.3	2.0	15.3	24.8	16.1	51.3	17.7	(2.0)
Crude Oil Product	**Gasoline(휘발유)**	76.6	75.8	75.4	74.9	74.9	71.2	62.8	69.8	56.3	68.0	77.3
	Change, %		1.0	1.6	2.4	2.3	7.7	22.0	9.7	36.2	12.7	(0.9)
	Kerosene(등유)	77.3	76.4	77.6	77.8	74.7	68.1	60.4	66.4	52.9	65.2	79.8
	Change, %		1.1	(0.4)	(0.7)	3.4	13.5	27.9	16.3	46.1	18.4	(3.2)
	Diesel(경유)	77.4	76.6	76.6	75.3	74.7	68.3	61.5	65.5	52.1	65.6	78.4
	Change, %		1.1	1.0	2.8	3.6	13.3	25.9	18.1	48.5	17.9	(1.3)
	Bunker-C	56.8	56.5	57.1	56.3	56.3	51.5	45.0	52.1	35.5	49.7	57.5
	Change, %		0.5	(0.6)	0.8	0.8	10.1	26.1	9.0	59.8	14.3	(1.4)
	Naphtha	62.5	62.2	61.6	60.8	64.1	55.2	49.9	53.5	42.6	53.7	63.2
	Change, %		0.5	1.4	2.7	(2.5)	13.3	25.2	16.9	46.7	16.2	(1.2)
Dubai Spread	**Gasoline(휘발유)**	14.2	14.1	13.7	13.2	13.7	17.0	12.7	16.0	14.9	14.9	13.5
	Change		0.0	0.4	1.0	0.5	(2.8)	1.4	(1.9)	(0.8)	(0.8)	0.6
	Kerosene(등유)	14.8	14.7	15.9	16.1	13.4	13.9	10.4	12.6	11.6	12.1	16.1
	Change		0.1	(1.1)	(1.4)	1.4	0.9	4.4	2.2	3.2	2.6	(1.3)
	Diesel(경유)	14.9	14.8	14.9	13.6	13.4	14.1	11.4	11.7	10.8	12.5	14.6
	Change		0.1	(0.0)	1.3	1.5	0.8	3.5	3.2	4.1	2.4	0.3
	Bunker-C	(5.7)	(5.2)	(4.6)	(5.4)	(5.0)	(2.7)	(5.0)	(1.8)	(5.8)	(3.4)	(6.2)
	Change		(0.5)	(1.1)	(0.3)	(0.8)	(3.1)	(0.7)	(4.0)	0.1	(2.3)	0.5
	Naphtha	(0.0)	0.4	(0.1)	(0.9)	2.8	1.0	(0.2)	(0.4)	1.3	0.6	(0.5)
	Change		(0.5)	0.1	0.9	(2.8)	(1.0)	0.1	0.4	(1.3)	(0.7)	0.5
Refining Margin	**Simple(단순)**	2.6	2.8	3.2	2.4	2.5	4.3	1.7	3.8	1.9	3.2	2.3
	Change		(0.2)	(0.6)	0.2	0.0	(1.7)	0.8	(1.2)	0.7	(0.6)	0.3
	Complex(복합)	8.1	8.2	8.3	7.5	7.8	9.4	6.5	8.3	7.0	8.0	7.8
	Change		(0.1)	(0.2)	0.7	0.4	(1.3)	1.6	(0.1)	1.2	0.2	0.4
	Complex(lagging)	11.2	10.1	6.0	2.1	9.0	14.1	2.6	18.0	8.5	8.9	7.9
	Change		1.1	5.2	9.2	2.2	(2.8)	8.7	(6.7)	2.7	2.3	3.3

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

SK Energy Daily

에너지/Commodity/정유화학, 손지우 l 3773-8827, jwshon@sk.com
R.A. 유승우 l 3773-9180, yswbest@sk.com
SK 증권

Petrochemical Price Data

Daily Price			03/19	03/16	03/15	03/14	03/13	03/12	03/09	03/08	03/07	03/06
Spot Price	**Naphtha**	CFR Japan	575.5	572.0	570.0	566.0	558.0	564.5	553.5	562.8	565.3	568.8
	Ethylene	CFR SE Asia	1,280.0	1,280.0	1,250.0	1,250.0	1,250.0	1,230.0	1,230.0	1,230.0	1,230.0	1,200.0
	Propylene	FOB Korea	1,025.0	1,025.0	1,010.0	1,010.0	1,015.0	1,015.0	1,025.0	1,030.0	1,030.0	1,030.0
	Butadiene	FOB Korea	1,430.0	1,430.0	1,430.0	1,430.0	1,430.0	1,390.0	1,390.0	1,390.0	1,390.0	1,390.0
	HDPE	CFR FE Asia	1,340.0	1,340.0	1,340.0	1,340.0	1,340.0	1,340.0	1,340.0	1,340.0	1,345.0	1,345.0
	LDPE	CFR FE Asia	1,225.0	1,225.0	1,225.0	1,225.0	1,225.0	1,225.0	1,230.0	1,230.0	1,230.0	1,240.0
	LLDPE	CFR FE Asia	1,205.0	1,205.0	1,205.0	1,205.0	1,205.0	1,205.0	1,210.0	1,210.0	1,210.0	1,210.0
	MEG	CFR China	911.0	865.0	880.0	917.0	910.0	895.0	895.0	935.0	951.0	983.0
	PP	CFR FE Asia	1,220.0	1,200.0	1,200.0	1,200.0	1,225.0	1,225.0	1,225.0	1,230.0	1,230.0	1,230.0
	PX	CFR China	933.0	929.0	932.0	932.5	935.5	935.3	934.3	942.0	944.3	955.3
	PTA	CFR China	770.0	770.0	775.0	775.0	780.0	785.0	785.0	793.0	793.0	795.0
	Benzene	FOB Korea	858.3	835.3	842.7	861.7	864.0	875.0	859.0	857.7	875.0	887.7
	Toluene	FOB Korea	677.0	677.0	677.0	677.0	682.0	686.0	685.0	685.0	695.0	703.0
	Xylene	FOB Korea	738.0	744.0	746.0	749.0	745.0	745.0	748.0	749.0	762.0	765.0
	SM	FOB Korea	1,276.0	1,259.0	1,284.0	1,326.0	1,326.0	1,326.0	1,326.0	1,311.0	1,336.0	1,371.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	**Naphtha**	CFR Japan	568.0	553.0	565.0	590.5	574.5	462.5	484.5	399.5	493.5	579.0
	Change, %			2.7	0.5	(3.8)	(1.1)	22.8	17.2	42.2	15.1	(1.9)
	Ethylene	CFR SE Asia	1,250.0	1,220.0	1,172.5	1,245.0	1,165.0	1,075.0	990.0	1,040.9	1,090.9	1,239.8
	Change, %			2.5	6.6	0.4	7.3	16.3	26.3	20.1	14.6	0.8
	Propylene	CFR SE Asia	980.0	995.0	1,015.0	890.0	810.0	865.0	815.0	705.7	823.6	1,057.3
	Change, %			(1.5)	(3.4)	10.1	21.0	13.3	20.2	38.9	19.0	(7.3)
	Butadiene	CFR SE Asia	1,390.0	1,390.0	1,350.0	1,125.0	965.0	2,000.0	2,100.0	1,116.8	1,481.1	1,313.6
	Change, %			0.0	3.0	23.6	44.0	(30.5)	(33.8)	24.5	(6.1)	5.8
	Benzene	CFR SE Asia	867.5	882.5	895.0	920.0	860.0	830.0	822.5	646.7	838.8	913.6
	Change, %			(1.7)	(3.1)	(5.7)	0.9	4.5	5.5	34.1	3.4	(5.0)
	Toluene	CFR SE Asia	720.0	720.0	750.0	735.0	715.0	690.0	690.0	630.5	689.5	746.8
	Change, %			0.0	(4.0)	(2.0)	0.7	4.3	4.3	14.2	4.4	(3.6)
	Xylene	CFR SE Asia	762.5	765.0	757.5	710.0	670.0	720.0	675.0	627.7	668.8	754.3
	Change, %			(0.3)	0.7	7.4	13.8	5.9	13.0	21.5	14.0	1.1
Spread	**Ethylene**	-Naphtha	682.0	667.0	607.5	654.5	590.5	612.5	505.5	641.4	597.4	660.8
	Change, %			2.2	12.3	4.2	15.5	11.3	34.9	6.3	14.2	3.2
	Propylene	-Naphtha	412.0	442.0	450.0	299.5	235.5	402.5	330.5	306.2	330.1	478.3
	Change, %			(6.8)	(8.4)	37.6	74.9	2.4	24.7	34.6	24.8	(13.9)
	Butadiene	-Naphtha	822.0	837.0	785.0	534.5	390.5	1,537.5	1,615.5	717.3	987.6	734.7
	Change, %			(1.8)	4.7	53.8	110.5	(46.5)	(49.1)	14.6	(16.8)	11.9
	Benzene	-Naphtha	299.5	329.5	330.0	329.5	285.5	367.5	338.0	247.2	345.3	334.7
	Change, %			(9.1)	(9.2)	(9.1)	4.9	(18.5)	(11.4)	21.2	(13.3)	(10.5)
	Toluene	-Naphtha	152.0	167.0	185.0	144.5	140.5	227.5	205.5	231.0	196.0	167.9
	Change, %			(9.0)	(17.8)	5.2	8.2	(33.2)	(26.0)	(34.2)	(22.4)	(9.5)
	Xylene	-Naphtha	194.5	212.0	192.5	119.5	95.5	257.5	190.5	228.2	175.3	175.4
	Change, %			(8.3)	1.0	62.8	103.7	(24.5)	2.1	(14.8)	10.9	10.9

자료 : Cischem, Platts, Bloomberg, SK증권
참고 : Spread는 Polymer와 Naphtha의 가격차이임

에너지/Commodity/정유화학, 손지우 I 3773-8827, jwshon@sk.com
R.A. 유승우 I 3773-9180, yswbest@sk.com

SK 증권

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	**HDPE**	CFR SE Asia	1,282.5	1,297.5	1,280.0	1,187.5	1,197.5	1,137.5	1,142.5	1,134.6	1,142.5	1,257.7
	Change, %			(1.2)	0.2	8.0	7.1	12.7	12.3	13.0	12.3	2.0
	MEG	CFR SE Asia	897.5	897.5	1,017.5	917.5	892.5	822.5	847.5	660.8	850.6	996.4
	Change, %			0.0	(11.8)	(2.2)	0.6	9.1	5.9	35.8	5.5	(9.9)
	PVC	CFR SE Asia	970.0	980.0	980.0	865.0	850.0	940.0	920.0	823.4	899.9	947.3
	Change, %			(1.0)	(1.0)	12.1	14.1	3.2	5.4	17.8	7.8	2.4
	PP	CFR SE Asia	1,297.5	1,307.5	1,275.0	1,157.5	1,147.5	1,107.5	1,032.5	978.4	1,099.6	1,257.4
	Change, %			(0.8)	1.8	12.1	13.1	17.2	25.7	32.6	18.0	3.2
	2-EH	CFR Korea	1,130.0	1,125.0	1,080.0	1,035.0	990.0	1,005.0	865.0	772.4	970.0	1,082.7
	Change, %			0.4	4.6	9.2	14.1	12.4	30.6	46.3	16.5	4.4
	ABS	CFR SE Asia	2,020.0	2,070.0	2,060.0	2,070.0	1,930.0	1,800.0	1,635.0	1,347.1	1,844.7	2,049.1
	Change, %			(2.4)	(1.9)	(2.4)	4.7	12.2	23.5	49.9	9.5	(1.4)
	SBR	CFR SE Asia	1,750.0	1,750.0	1,755.0	1,650.0	1,590.0	2,745.0	2,000.0	1,483.0	1,980.5	1,729.1
	Change, %			0.0	(0.3)	6.1	10.1	(36.2)	(12.5)	18.0	(11.6)	1.2
	SM	CFR SE Asia	1,337.5	1,397.5	1,437.5	1,332.5	1,280.0	1,290.0	1,205.0	1,064.6	1,253.8	1,404.1
	Change, %			(4.3)	(7.0)	0.4	4.5	3.7	11.0	25.6	6.7	(4.7)
	Caustic	FOB NEA	601.0	590.0	549.0	621.0	700.0	446.0	422.5	316.6	491.2	579.4
	Change, %			1.9	9.5	(3.2)	(14.1)	34.8	42.2	89.8	22.4	3.7
	PX	CFR SE Asia	940.0	945.0	957.5	895.0	892.5	865.0	855.0	790.4	844.4	953.4
	Change, %			(0.5)	(1.8)	5.0	5.3	8.7	9.9	18.9	11.3	(1.4)
	PO	CFR China	1,875.0	1,962.5	1,907.5	1,872.5	1,782.5	1,432.5	1,562.5	1,396.8	1,601.2	1,941.6
	Change, %			(4.5)	(1.7)	0.1	5.2	30.9	20.0	34.2	17.1	(3.4)
	Caprolactam	CFR SE Asia	2,180.0	2,150.0	2,060.0	2,060.0	2,040.0	2,300.0	1,850.0	1,344.9	1,936.4	2,073.6
	Change, %			1.4	5.8	5.8	6.9	(5.2)	17.8	62.1	12.6	5.1
	PTA	CFR SE Asia	790.0	810.0	777.5	727.5	707.5	667.5	642.5	613.7	667.8	772.7
	Change, %			(2.5)	1.6	8.6	11.7	18.4	23.0	28.7	18.3	2.2
Spread	**HDPE**		714.5	744.5	715.0	597.0	623.0	675.0	658.0	735.1	649.0	678.8
	Change, %			(4.0)	(0.1)	19.7	14.7	5.9	8.6	(2.8)	10.1	5.3
	MEG		329.5	344.5	452.5	327.0	318.0	360.0	363.0	261.3	357.1	417.4
	Change, %			(4.4)	(27.2)	0.8	3.6	(8.5)	(9.2)	26.1	(7.7)	(21.1)
	PVC		402.0	427.0	415.0	274.5	275.5	477.5	435.5	423.9	406.4	368.3
	Change, %			(5.9)	(3.1)	46.4	45.9	(15.8)	(7.7)	(5.2)	(1.1)	9.1
	PP		729.5	754.5	710.0	567.0	573.0	645.0	548.0	578.9	606.1	678.4
	Change, %			(3.3)	2.7	28.7	27.3	13.1	33.1	26.0	20.4	7.5
	2-EH		562.0	572.0	515.0	444.5	415.5	542.5	380.5	372.9	476.5	503.8
	Change, %			(1.7)	9.1	26.4	35.3	3.6	47.7	50.7	17.9	11.6
	ABS		1,452.0	1,517.0	1,495.0	1,479.5	1,355.5	1,337.5	1,150.5	947.6	1,351.2	1,470.1
	Change, %			(4.3)	(2.9)	(1.9)	7.1	8.6	26.2	53.2	7.5	(1.2)
	SBR	BD spread	360.0	360.0	405.0	525.0	625.0	745.0	(100.0)	366.2	499.4	415.5
	Change, %			0.0	(11.1)	(31.4)	(42.4)	(51.7)	(460.0)	(1.7)	(27.9)	(13.3)
	SM		769.5	844.5	872.5	742.0	705.5	827.5	720.5	665.1	760.3	825.1
	Change, %			(8.9)	(11.8)	3.7	9.1	(7.0)	6.8	15.7	1.2	(6.7)
	Caustic											
	Change, %											
	PX		372.0	392.0	392.5	304.5	318.0	402.5	370.5	390.9	351.0	374.5
	Change, %			(5.1)	(5.2)	22.2	17.0	(7.6)	0.4	(4.8)	6.0	(0.7)
	PO	propylene sprea	895.0	967.5	892.5	982.5	972.5	567.5	747.5	691.1	777.6	884.3
	Change, %			(7.5)	0.3	(8.9)	(8.0)	57.7	19.7	29.5	15.1	1.2
	Caprolactam	benzene spreac	1,312.5	1,267.5	1,165.0	1,140.0	1,180.0	1,470.0	1,027.5	698.2	1,097.6	1,160.0
	Change, %			3.6	12.7	15.1	11.2	(10.7)	27.7	88.0	19.6	13.1
	PTA	px spread	132.0	148.5	107.3	101.0	82.8	62.0	44.0	60.4	76.7	105.3
	Change, %			(11.1)	23.1	30.7	59.5	112.9	200.0	118.5	72.1	25.3

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

SK Energy Daily

에너지/Commodity/정유화학. 손지우 | 3773-8827, jwshon@sk.com
R.A. 유승우 | 3773-9180, yswbest@sk.com

SK증권

Global peers

	Currency	03/19	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER 18E	PER 19E	PBR 18E	PBR 19E	EV/EBITDA 18E	EV/EBITDA 19E
Petrochemical																
DowDuPont	USD	66.6	(2.1)	(6.7)	(7.5)	(6.8)	(5.0)	4.0	(6.5)	168,245	17.7	14.9	1.8	1.7	10.2	9.2
Eastman	USD	106.5	(1.2)	(3.9)	6.4	15.4	22.9	34.6	15.0	13,550	11.6	10.7	2.5	2.2	8.7	8.1
BASF	EUR	83.6	(1.2)	(1.8)	(3.8)	(11.4)	(4.1)	(6.3)	(8.8)	101,214	14.6	13.6	2.4	2.2	7.8	7.4
Akzo Nobel	EUR	79.3	(0.5)	(1.4)	0.5	6.6	0.9	5.4	8.6	22,073	17.0	15.8	3.0	2.8	9.3	8.8
Arkema	EUR	108.5	0.3	(0.5)	8.3	4.8	8.8	17.4	6.8	9,270	13.2	12.2	1.7	1.6	6.3	6.0
Lanxess	EUR	63.8	0.5	(7.5)	(5.2)	(1.6)	(3.0)	(1.6)	(3.8)	7,282	15.5	13.1	2.1	1.9	9.3	8.2
Sumitomo Chemical	JPY	612	(1.0)	(2.7)	(9.3)	(24.2)	(13.4)	(6.6)	(24.4)	11,911	10.1	10.5	1.3	1.2	7.4	8.0
Mitsubishi Chemical	JPY	1,020	(1.4)	(4.2)	(7.6)	(17.4)	(5.7)	17.5	(17.5)	16,544	9.2	8.7	1.3	1.2	6.3	6.1
Shin-Etsu Chemical	JPY	10,985	(1.5)	(2.2)	(4.5)	(6.9)	8.1	13.7	(4.1)	43,948	18.5	16.6	1.9	1.8	8.1	7.4
Asahi Kasei	JPY	1,410	0.2	0.5	3.6	(3.2)	0.8	29.2	(3.0)	18,109	14.4	13.6	1.5	1.4	7.4	7.0
JSR	JPY	2,466	(0.5)	(2.0)	4.0	10.2	14.0	26.5	11.2	4,455	14.5	13.4	1.2	1.1	7.7	7.2
Nitto Denko	JPY	8,308	(2.3)	(4.5)	(1.7)	(19.1)	(14.9)	(5.6)	(17.0)	15,450	15.7	14.6	2.1	1.9	7.3	7.0
SABIC	SAR	109.7	(0.2)	(0.9)	4.4	7.7	8.4	13.5	8.2	80,773	14.2	13.7	1.7	1.7	7.3	7.1
Yansab	SAR	70.1	(0.5)	0.3	6.3	20.9	19.3	22.9	18.9	8,861	13.7	13.9	2.2	1.9	9.0	8.9
Formosa Plastics	TWD	103.0	1.0	(0.5)	2.0	8.6	8.6	12.8	4.4	21,114	14.4	13.9	1.8	1.8	18.9	19.2
Formosa Fiber	TWD	109.5	(0.5)	1.9	3.8	11.2	16.4	16.2	6.3	20,511	13.7	13.4	1.7	1.7	11.6	11.5
Nan Ya Plastics	TWD	82.0	0.4	1.9	7.6	8.9	7.2	14.7	5.3	20,648	14.8	15.3	1.7	1.7	16.2	16.4
Sinopec Shanghai	CNY	6.00	0.5	(1.2)	3.6	(4.2)	(5.4)	(7.3)	(5.2)	9,462	12.0	12.6	2.2	2.0	6.8	7.3
Sinopec Yizheng(Fibe	CNY	2.27	(0.4)	(2.2)	0.0	(15.3)	(29.1)	(40.7)	(15.0)	5,394	50.4	66.3	5.3	5.0	13.9	10.3
Reliance	INR	896	(0.5)	(3.7)	(3.4)	(3.3)	6.8	37.7	(1.6)	93,404	14.4	12.9	1.7	1.5	9.4	8.7
Industries Qatar	QAR	106.5	2.4	4.1	(1.2)	9.8	21.0	(5.3)	9.8	16,144	14.5	13.9	1.6	1.5	46.4	27.2
PTT Chemical	THB	98.0	(2.5)	1.8	4.0	18.1	23.7	37.5	15.3	11,766	10.7	10.4	1.4	1.3	5.5	5.4
Petronas	MYR	8.2	0.0	0.9	0.6	8.8	10.7	9.7	5.8	15,624	16.1	15.5	2.0	1.9	9.2	8.9
LG화학	KRW	405,000	(2.1)	(1.3)	5.6	1.6	2.0	44.9	0.0	27,313	13.8	12.8	1.8	1.6	6.5	6.1
롯데케미칼	KRW	425,500	0.0	(0.7)	(5.3)	17.9	9.2	13.3	15.6	11,632	5.5	5.2	0.9	0.8	3.6	3.3
한화케미칼	KRW	30,450	(1.0)	(2.9)	(9.2)	2.2	(19.9)	22.3	(3.6)	5,050	5.7	5.5	0.8	0.7	6.7	6.5
금호석유	KRW	92,000	(2.0)	(1.6)	(3.2)	(4.3)	17.8	19.3	(7.5)	2,969	14.1	11.9	1.6	1.5	9.3	8.4
SKC	KRW	39,500	(0.9)	(2.2)	4.4	(7.3)	(8.8)	28.9	(16.0)	1,643	9.9	8.7	1.1	1.0	8.8	7.9
국도화학	KRW	62,200	0.3	2.3	7.2	(5.8)	14.5	29.6	(1.4)	359	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
효성	KRW	9,410	0.5	(4.3)	2.8	22.4	35.6	12.2	24.1	4,595	8.2	7.3	1.1	1.0	7.2	6.8
Average			**(0.5)**	**(1.5)**	**0.4**	**1.5**	**4.9**	**13.7**	**0.7**							
Refinery																
Valero	USD	92.9	(0.9)	0.3	(0.4)	5.5	27.8	34.9	1.1	40,608	14.1	13.4	2.0	2.0	6.9	6.9
Conoco Phillips	USD	53.6	(2.5)	(2.1)	(2.0)	1.7	12.7	17.2	(2.4)	66,136	34.0	25.9	2.2	2.2	7.2	6.7
Formosa Petrochemic	TWD	116.0	0.0	0.0	4.0	0.0	10.5	8.9	0.4	37,040	18.2	18.7	3.2	3.2	11.7	12.1
Andeavor	USD	98.7	(0.5)	(1.3)	2.6	(10.6)	(5.6)	15.6	(13.7)	17,904	12.9	11.4	1.8	1.7	7.3	7.1
Marathon Petroleum	USD	69.2	(0.7)	(0.1)	1.9	6.9	27.7	36.3	4.9	32,812	15.0	12.8	2.6	2.7	7.7	7.5
Devon Energy	USD	31.2	(2.5)	(5.1)	(8.6)	(19.5)	(7.7)	(23.1)	(24.7)	22,192	17.5	14.0	2.7	2.3	8.4	7.4
Hollyfrontier	USD	46.3	(0.5)	0.6	(0.3)	(2.8)	37.4	63.6	(9.7)	9,094	16.8	15.2	1.8	1.8	8.0	8.0
Phillips 66	USD	94.4	(1.5)	(0.6)	2.6	(4.8)	6.0	18.1	(6.7)	51,561	15.6	14.5	2.3	2.2	9.0	8.8
Murphy Oil	USD	25.0	(3.6)	(2.1)	(6.1)	(14.2)	(2.7)	(8.3)	(19.6)	5,548	162.4	113.2	1.2	1.1	4.9	4.5
JX Holdings	JPY	628.6	(0.4)	(4.1)	(5.9)	(8.8)	11.1	15.9	(13.5)	22,130	8.8	8.0	0.9	0.9	7.0	6.6
Idemitsu	JPY	3,930.0	(0.1)	(6.1)	(2.2)	(7.0)	36.7	2.3	(13.1)	8,360	7.9	7.5	1.0	0.9	6.8	6.8
Nesteoil	EUR	57.1	(0.4)	(3.4)	(1.9)	7.4	58.7	64.8	7.0	16,473	16.7	16.7	2.9	2.7	10.2	10.3
Ashland	USD	72.8	(2.6)	0.1	0.8	2.9	13.4	19.6	2.2	4,550	21.6	18.7	1.3	1.3	10.2	9.6
Fuchs Petrolub	EUR	47.6	0.3	(0.8)	5.1	6.0	(3.4)	8.9	7.7	7,127	22.1	20.9	4.1	3.7	13.0	12.3
SK이노베이션	KRW	211,000	1.2	(1.6)	7.4	4.2	11.3	28.3	3.2	17,975	7.9	7.7	0.9	0.9	4.9	4.8
S-Oil	KRW	120,000	0.4	(4.0)	0.0	(3.2)	(0.4)	24.0	2.6	12,400	9.3	8.1	1.8	1.6	7.6	6.6
GS	KRW	63,600	0.8	(4.9)	(0.6)	3.4	(2.8)	13.0	2.3	5,467	6.0	5.5	0.7	0.6	6.9	6.3
Average			**(0.8)**	**(2.1)**	**(0.2)**	**(1.9)**	**13.6**	**20.0**	**(4.2)**							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임
* 국내업체의 multiple은 Dataguidepro 기준임

에너지/Commodity/정유화학. 손지우 | 3773-8827, jwshon@sk.com
R.A. 유승우 | 3773-9180, yswbest@sk.com

Global peers

	Currency	03/19	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER 18E	PER 19E	PBR 18E	PBR 19E	EV/EBITDA 18E	EV/EBITDA 19E
E&P/Shale																
Exxon Mobil	USD	74	(1.3)	(1.4)	(3.1)	(10.1)	(7.6)	(9.6)	(11.3)	314,208	15.9	15.9	1.7	1.6	7.3	7.1
BP	GBP	460	(3.0)	(3.8)	(3.0)	(9.5)	0.8	(0.7)	(12.0)	128,628	14.2	13.4	1.3	1.2	5.1	4.9
Shell	EUR	2,176	(1.7)	(3.4)	(3.8)	(9.9)	2.1	2.5	(12.3)	256,312	12.9	11.9	1.3	1.3	5.7	5.4
Chevron	USD	114	(1.3)	(2.5)	1.6	(5.0)	(2.1)	5.8	(9.0)	217,559	18.4	18.1	1.5	1.5	6.5	6.3
Total	EUR	46	(3.3)	(0.8)	0.7	0.1	2.2	(2.5)	0.3	150,225	12.0	11.7	1.3	1.2	5.2	5.0
Sinopec	CNY	7	2.6	2.2	4.4	10.6	10.8	18.5	7.5	120,646	12.2	11.6	1.0	1.0	4.5	4.4
Petrochina	CNY	8	0.8	(1.0)	(0.6)	1.0	0.0	0.4	(1.5)	218,210	27.8	18.0	1.2	1.1	5.9	5.6
CNOOC	CNY	11	0.1	(1.5)	5.9	8.5	(1.4)	(13.7)	5.4	64,555	9.0	8.9	1.0	0.9	3.6	3.5
Gazprom	RUB	140	(0.8)	(1.0)	1.2	4.4	14.9	8.5	7.2	57,277	3.8	3.9	0.3	0.2	3.5	3.5
Rosneft	RUB	316	(1.0)	0.4	(2.5)	7.6	1.0	0.5	8.4	57,914	7.4	6.5	0.8	0.7	4.8	4.4
Anadarko	USD	57	(2.6)	(3.3)	(3.6)	15.4	30.3	(9.8)	6.3	30,362	40.4	37.3	2.4	2.3	6.2	5.7
Petrobras	BRL	21	(2.3)	(6.3)	4.4	38.2	38.2	59.0	30.0	86,841	10.0	8.1	0.8	0.8	5.3	4.9
Lukoil	USD	3,815	(1.5)	1.2	2.7	12.1	26.1	21.9	14.4	56,103	6.1	6.1	0.8	0.7	N/A	N/A
Kinder	USD	16	(2.5)	(3.3)	(6.2)	(10.7)	(18.2)	(24.8)	(11.5)	47,497	19.7	17.8	1.0	1.1	10.1	9.7
Statoil	NOK	176	(1.5)	(1.0)	0.1	3.7	14.9	17.7	0.4	75,705	15.3	14.5	1.8	1.7	3.4	3.3
BHP	AUD	29	0.2	1.1	(7.0)	2.7	11.1	17.7	(1.1)	113,615	16.1	16.6	2.0	1.9	6.1	6.1
PTT E&P	THB	117	(0.4)	0.9	3.6	17.7	27.3	29.4	16.5	14,827	13.2	12.6	1.2	1.1	3.8	3.6
Petronas gas	MYR	18	(0.8)	0.3	(4.3)	8.9	(2.4)	(9.7)	2.2	9,021	18.6	18.3	2.7	2.6	10.4	10.2
Chesapeake	USD	3	(1.6)	(3.2)	10.3	(16.6)	(25.5)	(43.1)	(24.0)	2,737	3.8	4.1	#N/A N/A	4.9	5.9	5.9
Noble Energy	USD	29	(2.1)	(6.8)	9.5	5.7	8.9	(15.0)	(1.2)	14,165	36.6	23.9	1.3	1.3	7.2	6.2
Average		**0**	**(1.2)**	**(1.7)**	**0.5**	**3.7**	**6.6**	**2.7**	**0.7**							
PV																
WACKER	EUR	131.8	(1.4)	(5.9)	(5.3)	(17.6)	15.4	32.2	(18.7)	8,488	18.8	16.0	2.0	1.9	6.6	6.3
GCL-Poly	HKD	1.1	(3.5)	(9.8)	(9.8)	(12.7)	0.9	2.8	(21.4)	2,608	6.7	6.0	0.6	0.6	6.4	5.8
SunPower	USD	7.5	3.6	2.6	(2.2)	(17.9)	(10.8)	7.0	(11.4)	1,045	#N/A N/A	97.0	4.4	3.8	12.9	8.8
Canadian Solar	USD	16.6	7.2	2.5	5.5	(4.7)	(0.7)	20.8	(1.5)	963	10.5	9.8	1.0	0.9	9.2	9.6
JA Solar	USD	6.9	0.9	(6.2)	(6.1)	(7.0)	(15.8)	36.6	(7.4)	329	13.1	11.0	1.5	1.5	3.9	3.6
Yingli	USD	1.7	1.2	(0.6)	3.7	(5.6)	(31.8)	(11.2)	(1.2)	30	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
First Solar	USD	71.3	2.0	1.7	8.2	3.1	45.8	123.9	5.5	7,445	43.5	21.3	1.4	1.3	12.9	7.7
한화큐셀	USD	8.1	(1.2)	2.3	0.6	9.9	2.0	11.1	15.7	676	36.9	26.2	#N/A N/A	#N/A N/A	8.4	7.7
OCI	KRW	148,500	0.3	(4.8)	(7.2)	13.4	33.8	75.5	9.2	3,301	0.0	13.7	0.0	1.0	0.0	6.5
웅진에너지	KRW	7,060	(1.3)	(3.9)	(7.7)	(18.9)	(23.3)	42.6	(14.1)	195	N/A	0.0	1.0	0.0	6.5	0.0
신성솔라에너지	KRW	1,800	0.3	(1.6)	(4.0)	(7.9)	(14.7)	(5.8)	(6.0)	290	N/A	1.0	0.0	6.5	0.0	8.4
Average			**0.7**	**(2.2)**	**(2.2)**	**(6.0)**	**0.1**	**30.5**	**(4.7)**							
Gas Company																
Towngas China	HKD	6.4	0.2	3.0	1.4	4.7	21.7	39.1	2.5	2,273	13.1	11.8	1.1	1.0	11.5	10.4
Kulun	HKD	7.3	1.1	(0.1)	3.0	(10.0)	(2.6)	3.6	(10.9)	7,462	9.7	8.6	1.1	1.0	5.4	5.1
Beijing Enterprise	HKD	43.6	0.3	(0.2)	(0.1)	(3.4)	1.5	1.4	(6.1)	7,008	7.6	6.8	0.8	0.7	13.2	12.9
ENN Energy	HKD	62.0	(1.0)	(1.4)	(2.7)	13.8	16.9	39.3	11.2	8,573	13.8	11.8	2.7	2.3	8.5	7.4
China Resources Gas	HKD	26.1	1.4	0.4	(1.5)	(6.8)	(3.5)	(7.1)	(7.9)	7,401	13.8	12.4	2.4	2.1	8.1	7.5
China Gas Holdings	HKD	25.3	0.0	5.9	4.3	13.7	15.3	100.8	17.1	16,028	17.3	14.6	4.2	3.5	13.4	11.6
Shenzen Gas	HKD	15.9	1.0	0.4	1.9	11.7	8.2	37.0	6.6	4,109	10.9	9.9	1.3	1.2	7.9	7.9
Shann Xi	CNY	7.3	(0.7)	(3.2)	1.8	(14.0)	(14.9)	(23.3)	(14.0)	1,275	13.8	15.6	1.4	1.2	#N/A N/A	#N/A N/A
Suntien	HKD	2.0	0.5	1.0	4.8	1.0	3.7	30.5	(4.8)	933	5.8	5.1	0.6	0.6	8.2	7.1
China Oil & Gas	HKD	0.7	3.0	(2.8)	(4.2)	4.5	30.2	13.1	(18.8)	513	10.6	9.2	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Average			**0.6**	**0.3**	**0.9**	**1.5**	**7.6**	**23.4**	**(2.5)**							
EV																
LG화학	KRW	405,000	(2.1)	(1.3)	5.6	1.6	2.0	44.9	0.0	26,646	14.1	13.1	1.7	1.6	6.5	6.0
삼성SDI	KRW	206,000	(4.4)	1.7	12.9	(1.4)	(7.6)	51.5	0.7	13,203	15.7	11.8	1.2	1.1	13.2	10.6
Panasonic	JPY	1648.5	(2.1)	(1.8)	(0.1)	(0.9)	(0.2)	31.2	(0.1)	38,189	15.6	13.5	2.1	1.9	6.0	5.6
GS Yuasa	JPY	571.0	(1.4)	(2.7)	(3.7)	3.6	(1.9)	7.1	1.8	2,230	16.3	14.6	1.3	1.2	7.0	6.5
NEC	JPY	3200.0	(0.8)	(1.4)	0.2	2.9	7.0	11.9	5.3	7,872	21.6	15.1	0.9	0.9	6.9	6.2
BYD Auto	CNY	64.3	0.0	(3.9)	6.2	3.1	12.2	29.8	(1.2)	27,034	27.5	22.0	2.9	2.6	13.0	11.4
Tesla Motors	USD	313.6	(2.4)	(9.2)	(6.5)	(5.3)	(16.4)	19.9	0.7	52,967	#N/A N/A	134.7	11.5	10.4	45.8	17.7
Kandi Technologies	USD	4.9	(2.0)	(7.6)	(15.7)	(29.7)	(8.5)	26.0	(28.7)	262	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Average			**(1.9)**	**(3.3)**	**(0.1)**	**(3.3)**	**(1.7)**	**27.8**	**(2.7)**							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임