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1. News Summary (3 page)

2018년 8월 13일

News		Conclusion
WTI comment	사흘만에 상승…WTI 1.2%↑	
Headline	[주간가격] 에틸렌, WoW $25/mt 상승해 CFR SEA $1,260/mt로 마감	동남아시아 PE 역마진은 가동률을 낮춰 에틸렌 가격 하락 압력 받을 것
News 1.	[주간가격] MEG, WoW $21/mt 하락해 CFR China $909/mt로 마감	위안화 약세분이 MEG 공급 증대로 중국 내수 가격 상승 상쇄할 전망
News 2.	[주간가격] BD, WoW $40/mt 상승해 FOB Korea $1,740/mt로 마감	유럽 deepsea 카고와 중동 9월 도착 물량들이 수급 완화시켜줄 전망
News 3.	[주간가격] SBR, WoW $60/mt 상승해 CFR SEA $1,830/mt로 마감	정기보수 종료와 SBR-BD 역마진이 가격 혼조세를 지속시킬 전망
News 4.	[주간가격] PX, WoW $10/mt 상승해 FOB Korea $1,110.67/mt로 마감	추가적으로 PX에 대해서도 관세 부과 여부가 나올 때까지 관망세 전망

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	$/bbl	67.6	1.2	(1.3)	(3.9)	(4.3)	38.5
Dubai	$/bbl	70.6	(3.7)	(1.9)	(5.6)	(5.3)	41.5
Gasoline	$/bbl	83.2	(3.3)	0.2	(1.3)	(4.7)	24.0
Diesel	$/bbl	85.3	(2.7)	(0.1)	(2.0)	(4.7)	35.5
Complex margin	$/bbl	8.3	0.2	0.8	2.2	0.8	(0.5)
1M lagging	$/bbl	2.9	(3.8)	(1.8)	(3.1)	(12.6)	(10.5)
Petrochemical			%	%	%	%	%
Naphtha	$/t	636	(4.1)	(4.3)	(6.6)	(3.1)	34.5
Butadiene	$/t	1,740	0.9	2.4	8.1	18.4	91.2
HDPE	$/t	1,310	0.0	0.4	(2.2)	(3.7)	17.0
MEG	$/t	909	(3.3)	(2.3)	2.0	(5.3)	4.7
PX	$/t	1,111	0.4	0.9	11.6	10.4	35.2
SM	$/t	1,431	(0.2)	(0.6)	5.8	4.3	23.9
Commodity			%	%	%	%	%
Natural Gas	$/mmbtu	2.94	(0.4)	3.2	8.1	4.4	1.5
Natural rubber	$/t	1,330	0.8	2.3	3.1	(5.0)	(10.1)
Cotton	C/lbs	85.9	(1.6)	(3.2)	(3.4)	1.5	24.0

*참고: 정제마진의 변동률은 %가 아닌 $/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	08/06	$/t	1,243	0.8	(3.7)	5.1	20.6
Propylene	08/06	$/t	1,020	2.5	5.7	0.2	32.5
Benzene	08/06	$/t	873	2.9	6.4	4.5	16.3
Toluene	08/06	$/t	810	1.3	1.9	4.5	24.6
Xylene	08/06	$/t	825	0.3	1.2	6.8	30.4
PP	08/06	$/t	1,223	(0.8)	(3.2)	(1.6)	12.4
PVC	08/06	$/t	945	0.0	1.1	0.5	9.9
ABS	08/06	$/t	1,945	0.3	(0.8)	(3.2)	5.1
SBR	08/06	$/t	1,760	0.0	(0.6)	0.6	18.1
SM	08/06	$/t	1,465	5.0	7.1	4.3	27.4
BPA	08/06	$/t	1,778	(0.3)	2.4	(11.5)	15.2
Caustic	08/06	$/t	369	2.2	(22.3)	(38.3)	(21.1)
2-EH	08/06	$/t	1,105	0.9	0.5	(3.5)	15.1
Caprolactam	08/06	$/t	2,155	0.0	0.7	(0.7)	22.4
Solar				%	%	%	%
Polysilicon	08/08	$/kg	11.3	3.4	1.3	(26.2)	(27.5)
Module	08/08	$/W	0.25	(0.4)	(3.1)	(14.5)	(22.3)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	79.4	(1.1)	(1.0)	(5.1)	(2.8)	0.6
Shell	EUR	2,531	(1.2)	(0.5)	(6.1)	(3.9)	17.0
Petrochina	CNY	8.03	(0.4)	5.5	3.5	0.4	(0.7)
Gazprom	RUB	144.8	(0.3)	1.7	(1.7)	(1.1)	22.7
Petrobras	BRL	19.6	(3.7)	(7.2)	10.4	(23.9)	48.5
Refinery							
Phillips66	USD	122.6	0.3	0.8	8.3	3.9	46.6
Valero	USD	115.4	0.2	(0.0)	6.2	0.8	74.3
JX	JPY	802.7	0.8	(1.3)	0.6	11.6	55.4
Neste Oil	EUR	74.9	0.5	5.6	11.0	12.3	113.9

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	78.9	(2.1)	(1.9)	(5.0)	(9.4)	(0.6)
DowDuPont	USD	67.7	(1.9)	1.4	(0.1)	1.2	7.3
SABIC	SAR	126.8	0.0	(1.4)	(0.2)	10.4	29.1
Formosa Pla.	TWD	110.5	(0.9)	(0.9)	(1.3)	4.2	19.3
Shin-Etsu	JPY	10,840	(2.5)	(2.8)	4.4	(3.8)	13.6
Renewable							
Wacker	EUR	124.3	(2.7)	0.1	4.5	(18.7)	22.6
First Solar	USD	52.79	(3.0)	(0.1)	(4.4)	(27.7)	12.9
GCL-Poly	HKD	0.59	(3.3)	(10.6)	(14.5)	(37.9)	(33.0)
Tesla Motors	USD	355.5	0.9	2.1	10.2	16.5	0.0

4. Coverage Summary

	08/10	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	2,283	(0.9)	(0.2)	0.1	(7.9)	(5.2)	(3.6)				* 추정치는 12M fwd 기준임	
KOSPI화학	5,652	(1.0)	(1.7)	1.5	(6.6)	(4.7)	0.0				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	375,000	(2.6)	(4.1)	15.0	8.7	0.3	12.8	매수	400,000	6.7	14.82	1.67
롯데케미칼	344,500	0.4	4.1	2.8	(11.0)	(13.7)	(9.3)	매수	400,000	16.1	10.70	0.97
한화케미칼	21,250	0.0	(2.3)	3.7	(27.0)	(34.8)	(36.6)	매수	30,000	41.2	9.55	0.52
금호석유화학	103,000	(1.9)	(6.8)	(7.2)	(5.9)	14.4	39.6	매수	150,000	45.6	9.60	1.33
KCC	336,500	(1.6)	(1.0)	6.7	(10.3)	(11.8)	(18.2)	매수	400,000	18.9	29.17	0.52
OCI	107,500	(1.4)	7.0	10.3	(32.2)	(30.0)	16.8	매수	140,000	30.2	8.17	0.78
SKC	45,250	1.6	4.1	4.5	13.8	20.3	20.5	매수	50,000	10.5	12.34	1.07
SK이노베이션	192,000	1.3	1.6	0.8	(6.3)	1.6	10.0	매수	230,000	19.8	11.29	0.96
S-Oil	117,000	(0.4)	1.3	10.4	10.4	0.9	0.4	매수	140,000	19.7	13.35	1.95
GS	53,700	2.3	1.3	5.1	(13.0)	(15.6)	(28.4)	매수	80,000	49.0	4.98	0.60
SK가스	84,800	0.7	(0.8)	(5.7)	(6.7)	(11.2)	(26.9)	매수	130,000	53.3	8.01	0.57
포스코대우	18,300	0.5	(1.9)	(13.7)	(21.0)	(16.8)	(22.1)	매수	25,000	36.6	9.60	0.71
LG상사	23,450	0.2	(1.7)	3.1	(9.8)	(15.8)	(19.7)	매수	38,000	62.0	8.68	0.66
한국전력	31,550	1.1	(0.9)	1.8	(11.7)	(9.3)	(28.5)	매수	45,000	42.6	7.64	0.25
한국가스공사	55,100	1.1	(4.2)	(8.2)	(2.3)	18.1	9.3	매수	75,000	36.1	8.55	0.71

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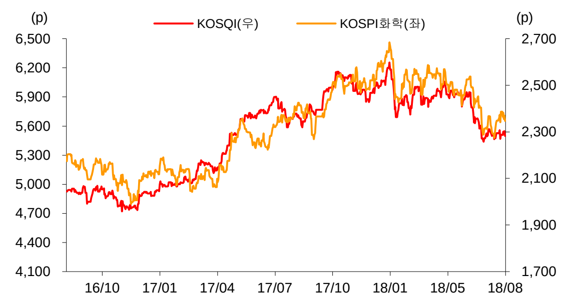
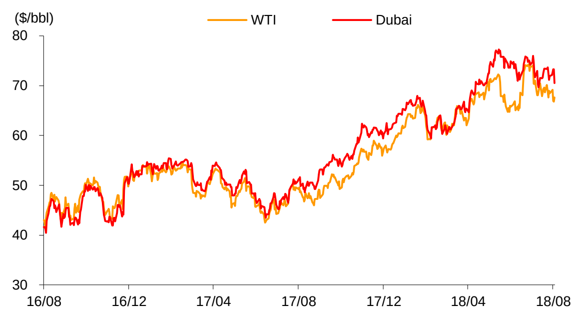
Key Chart

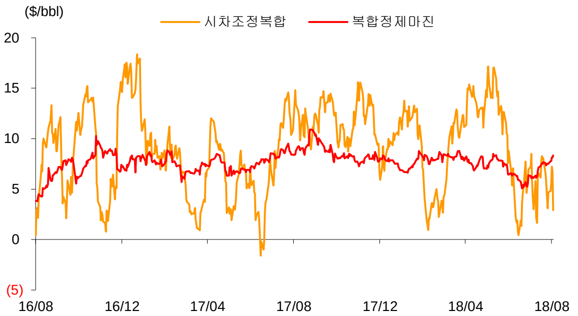
KOSPI/KOSPI화학



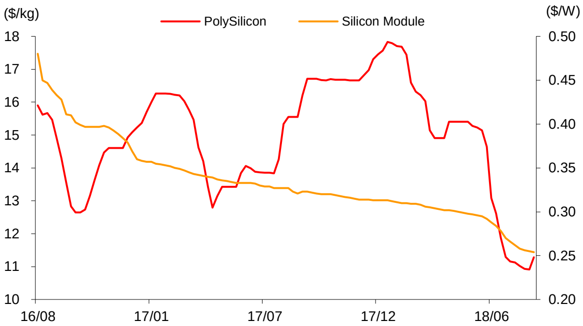
WTI/Dubai



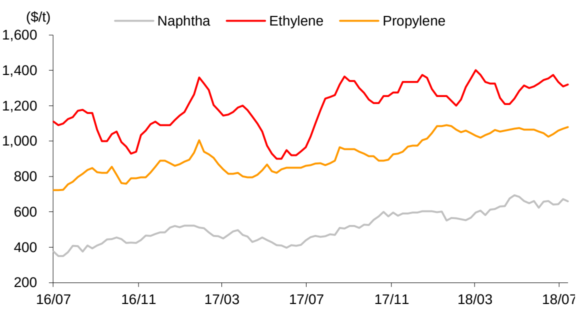
Complex & 1M lagging margin



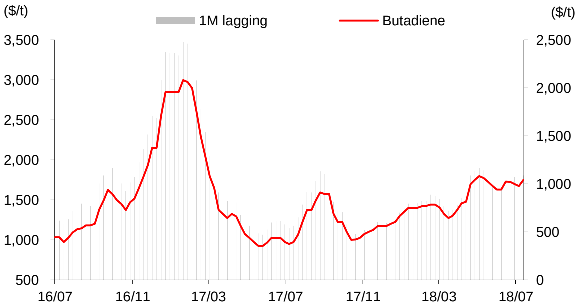
Polysilicon & Module prices



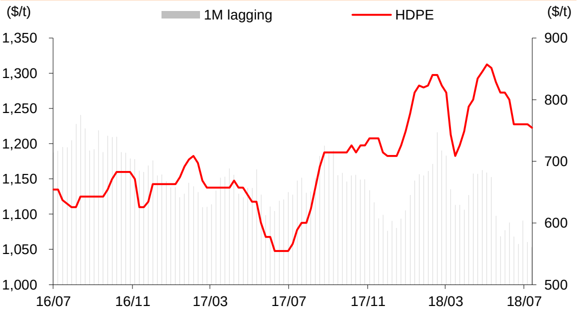
Naphtha/Ethylene/Propylene prices



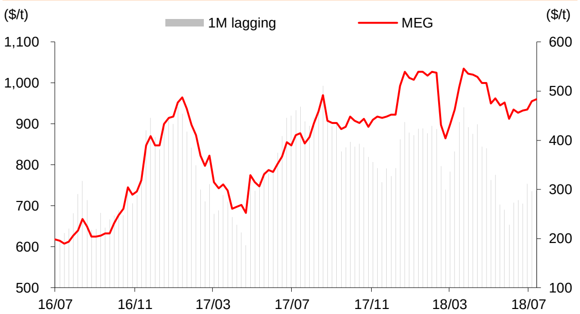
Butadiene price & 1M lagging naphtha spread



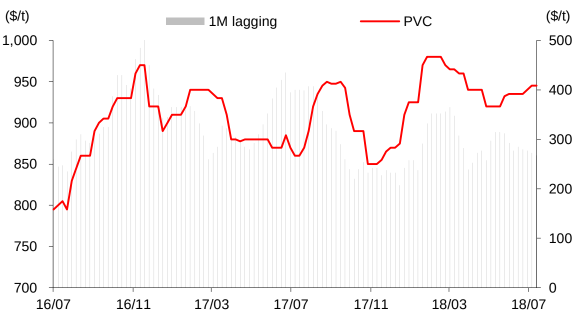
HDPE price & 1M lagging naphtha spread



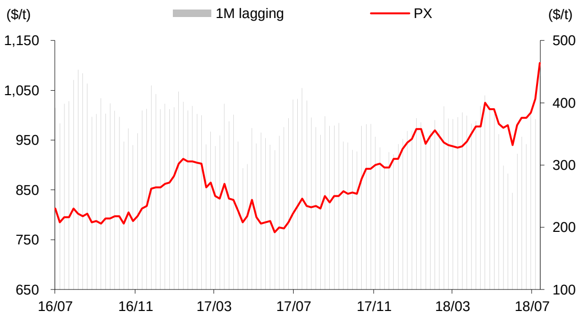
MEG price & 1M lagging naphtha spread



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

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News Comment

Headline **(출처: Platts)**

제목 [주간가격] 에틸렌, WoW $25/mt 상승해 CFR SEA $1,260/mt로 마감

결론 동남아시아 PE 역마진은 가동률을 낮춰 에틸렌 가격 하락 압력 받을 것

세부

1) 아시아 역내 크래커 가동률이 낮아 센티먼트가 견조한 모습을 보였음
2) 하반기에 대한민국은 26.6만톤, 동남아시아는 31.1만톤이 TA 진입 예정
3) SM 마진이 $200/mt 이상으로 견조해 에틸렌 스팟 수요도 양호했음
4) 그러나 동남아시아 PE 마진은 -$90/mt 수준을 보여 BEP를 크게 하회함
5) 동남아시아 PE 역마진은 가동률을 낮춰 에틸렌 가격 하락 압력 받을 것

WTI Comment **(출처: 연합뉴스)**

제목 사흘만에 상승…WTI 1.2%↑

상승 요인 11월 초로 예정된 미국의 이란 원유제재 복원 우려

하락 요인 미중 무역전쟁이 다시 격화될 조짐을 보임

Issue 1 **(출처: Platts)**

제목 [주간가격] MEG, WoW $21/mt 하락해 CFR China $909/mt로 마감

결론 위안화 약세분이 MEG 공급 증대로 중국 내수 가격 상승 상쇄할 전망

세부

1) 8월 중국 MEG 가동률은 정기보수가 끝나고 84% 수준까지 상승했음
2) 관계자, "다음 주에는 수입 카고들이 추가적으로 유입될 전망"
3) 트레이더, "위안화가 강세를 보일 것이라는 예측에 내수 가격이 급락"
4) 중국 내수 가격은 수요일 대비 Yuan 340/mt 빠진 Yuan 7,530/mt에 마감
5) 위안화 약세분이 MEG 공급 증대로 중국 내수 가격 상승 상쇄할 전망

Issue 2 **(출처: Platts)**

제목 [주간가격] BD, WoW $40/mt 상승해 FOB Korea $1,740/mt로 마감

결론 유럽 deepsea 카고와 중동 9월 도착 물량들이 수급 완화시켜줄 전망

세부

1) 수급이 타이트해지며 이번 주 BD 센티먼트는 호조세를 보였음
2) 대한민국 BD 공장들이 정기보수 돌입 예정으로 스팟 공급 타이트해짐
3) 유럽 deepsea 카고와 중동 9월 도착 물량들이 수급 완화시켜줄 전망
4) 8월 23일부터 미국 BD는 25% 관세 부과의 대상이 됨
5) 유럽 deepsea 카고와 중동 9월 도착 물량들이 수급 완화시켜줄 전망

Issue 3 **(출처: Platts)**

제목 [주간가격] SBR, WoW $60/mt 상승해 CFR SEA $1,830/mt로 마감

결론 정기보수 종료와 SBR-BD 역마진이 가격 혼조세를 지속시킬 전망

세부

1) 대만과 중국 SBR 공장들이 7월 말부터 8월 중순까지 정기보수 진행중
2) 원재료인 BD가 강세를 보인 것도 이번 주 SBR 가격 강세의 원인임
3) SBR-BD 마진은 동북아시아 BD 가격 강세로 역마진을 시현함
4) 따라서 일부 바이어들은 가격 방향성이 명확해질 때까지 관망세 보임
5) 정기보수 종료와 SBR-BD 역마진이 가격 혼조세를 지속시킬 전망

Issue 4 **(출처: Platts)**

제목 [주간가격] PX, WoW $10/mt 상승해 FOB Korea $1,110.67/mt로 마감

결론 추가적으로 PX에 대해서도 관세 부과 여부가 나올 때까지 관망세 전망

세부

1) Mitsui Chem은 Siam Mitsui PTA 지분 일부를 PTT Global에 매각키로 함
2) Mitsui Chem의 파트너인 Siam Cement는 지분 전량을 매각하기로 함
3) Mitsui Chem은 Thai PET Resin 지문 일부도 매각하기로 함
4) 미국산 제품 관세 부과 품목 333개에서 PX는 포함되지 않았음
5) 추가적으로 PX에 대해서도 관세 부과 여부가 나올 때까지 관망세 전망

Issue 5 **(출처: Platts)**

제목 [주간가격] PTA, WoW $43/mt 상승해 CFR China $913/mt로 마감

결론 정기보수 종료때까지 공급 부족, PX 강세가 겹쳐 가격 상승 압력 전망

세부

1) 공급이 타이트한 가운데 원재료 가격 상승으로 이번 주 PTA는 강세
2) 폴리에스터 수요는 8~9월 성수기 효과로 강세를 보였음
3) Zhejiang Yisheng과 Hengli PetChem의 440만톤 규모 정기보수가 변수
4) PTA 재고는 연초 200만톤 수준에서 70만톤까지 하락해 있음
5) 정기보수 종료때까지 공급 부족, PX 강세가 겹쳐 가격 상승 압력 전망

Issue 6 **(출처: PVinsights)**

제목 [주간가격] 태양광 제품, 낮은 가격이 mono-crystalline 수요를 자극함

결론 공급 과잉이 일부 해소되며 제품별로 소폭의 상승세가 전망됨

세부

1) Mono grade 폴리실리콘 수요가 강세를 보이며 폴리실리콘 가경 상승
2) Multi-crystalline wafer 가격은 폴리실리콘 강세, 공급 축소로 소폭 상승
3) Multi-crystalline cell은 wafer가 강세였지만 자체 수요 약세로 하락함
4) 모듈 가격은 공급 과잉 우려 속 수요까지 약세를 보여 하락했음
5) 공급 과잉이 일부 해소되며 제품별로 소폭의 상승세가 전망됨

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Commodity Price Data

Daily Price		Today	1D	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
F/X	**USD/EUR**	0.876	0.868	0.865	0.852	0.839	0.816	0.850	0.833	0.904	0.887	0.833
	Change, %		*1.0*	*1.4*	*2.9*	*4.4*	*7.4*	*3.1*	*5.2*	*(3.1)*	*(1.2)*	*5.2*
	USD/JPY	110.8	111.1	111.3	111.0	109.4	108.8	109.2	112.6	108.8	112.1	109.2
	Change, %		*(0.2)*	*(0.4)*	*(0.2)*	*1.3*	*1.9*	*1.5*	*(1.6)*	*1.9*	*(1.2)*	*1.5*
	USD/KRW	1,129.0	1,116.9	1,127.7	1,116.4	1,073.0	1,092.1	1,141.8	1,066.7	1,160.5	1,130.9	1,085.0
	Change, %		*1.1*	*0.1*	*1.1*	*5.2*	*3.4*	*(1.1)*	*5.8*	*(2.7)*	*(0.2)*	*4.1*
Agriculture	**Corn**	357.8	369.3	369.8	339.8	394.8	362.0	357.3	350.8	358.5	359.4	370.9
	Change, %		*(3.1)*	*(3.2)*	*5.3*	*(9.4)*	*(1.2)*	*0.1*	*2.0*	*(0.2)*	*(0.4)*	*(3.5)*
	Soybean	846.0	887.8	886.3	852.3	1,013.3	983.0	930.8	951.8	987.5	975.9	973.5
	Change, %		*(4.7)*	*(4.5)*	*(0.7)*	*(16.5)*	*(13.9)*	*(9.1)*	*(11.1)*	*(14.3)*	*(13.3)*	*(13.1)*
	Wheat	546.8	564.5	556.3	489.5	507.8	449.0	440.5	427.0	436.4	436.0	484.8
	Change, %		*(3.1)*	*(1.7)*	*11.7*	*7.7*	*21.8*	*24.1*	*28.0*	*25.3*	*25.4*	*12.8*
	Rice	10.6	10.7	11.5	11.8	12.4	12.3	12.3	11.7	10.3	11.1	12.1
	Change, %		*(1.8)*	*(8.2)*	*(10.7)*	*(14.6)*	*(14.4)*	*(13.9)*	*(9.7)*	*2.0*	*(4.6)*	*(13.1)*
	Oats	256.8	261.5	249.8	256.0	232.0	266.5	266.0	241.0	196.3	252.3	245.7
	Change, %		*(1.8)*	*2.8*	*0.3*	*10.7*	*(3.7)*	*(3.5)*	*6.5*	*30.8*	*1.8*	*4.5*
MYR/mt	**Palm Oil**	2,206.0	2,214.0	2,170.0	2,210.0	2,359.0	2,495.0	2,663.0	2,444.0	2,653.8	2,787.3	2,381.9
	Change, %		*(0.4)*	*1.7*	*(0.2)*	*(6.5)*	*(11.6)*	*(17.2)*	*(9.7)*	*(16.9)*	*(20.9)*	*(7.4)*
	Cocoa	2,086.0	2,081.0	2,046.0	2,501.0	2,758.0	2,031.0	1,967.0	1,892.0	2,854.0	2,005.2	2,373.6
	Change, %		*0.2*	*2.0*	*(16.6)*	*(24.4)*	*2.7*	*6.0*	*10.3*	*(26.9)*	*4.0*	*(12.1)*
	Cotton	85.9	87.3	88.7	87.5	84.6	76.7	69.3	78.6	65.6	73.5	84.3
	Change, %		*(1.6)*	*(3.2)*	*(1.9)*	*1.5*	*12.0*	*24.0*	*9.2*	*30.9*	*16.8*	*1.8*
	Sugar	10.5	10.8	10.9	11.4	11.3	13.7	13.2	15.2	18.2	15.8	12.4
	Change, %		*(2.8)*	*(2.9)*	*(7.6)*	*(6.5)*	*(22.9)*	*(20.4)*	*(30.5)*	*(41.9)*	*(33.4)*	*(14.8)*
	Coffee	107.0	107.7	107.8	112.0	116.3	121.9	138.5	126.2	136.1	133.0	117.2
	Change, %		*(0.6)*	*(0.7)*	*(4.4)*	*(8.0)*	*(12.2)*	*(22.7)*	*(15.2)*	*(21.4)*	*(19.5)*	*(8.7)*
Energy	**WTI**	67.6	66.8	68.5	74.1	71.4	59.2	48.6	60.4	43.4	51.0	66.3
	Change, %		*1.2*	*(1.3)*	*(8.7)*	*(5.2)*	*14.2*	*39.2*	*11.9*	*55.9*	*32.7*	*2.0*
	Brent	72.8	72.1	73.2	78.9	77.5	62.8	51.9	66.9	45.1	54.9	71.8
	Change, %		*1.0*	*(0.5)*	*(7.7)*	*(6.0)*	*16.0*	*40.3*	*8.9*	*61.5*	*32.7*	*1.4*
	Natural Gas	2.9	3.0	2.9	2.8	2.8	2.6	3.0	3.0	2.6	3.0	2.8
	Change, %		*(0.4)*	*3.2*	*5.6*	*4.6*	*13.9*	*(1.4)*	*(0.3)*	*15.3*	*(2.6)*	*3.8*
	Ethanol	1.3	1.4	1.4	1.4	1.5	1.4	1.6	1.3	1.5	1.5	1.4
	Change, %		*(1.5)*	*(5.7)*	*(5.3)*	*(7.9)*	*(3.8)*	*(13.0)*	*2.2*	*(10.9)*	*(9.9)*	*(6.0)*
	RBOB Gasoline	203.9	200.0	206.6	216.0	218.9	170.0	160.3	179.9	140.0	162.9	200.7
	Change, %		*2.0*	*(1.3)*	*(5.6)*	*(6.8)*	*19.9*	*27.2*	*13.3*	*45.7*	*25.2*	*1.6*
	Coal	116.7	116.3	117.5	117.5	101.5	101.2	95.9	100.8	65.5	88.2	106.0
	Change, %		*0.3*	*(0.7)*	*(0.7)*	*14.9*	*15.3*	*21.7*	*15.7*	*78.2*	*32.3*	*10.0*
Metal	**Gold**	1,211.7	1,212.5	1,213.7	1,255.5	1,321.6	1,316.2	1,286.3	1,302.6	1,248.5	1,258.6	1,301.4
	Change, %		*(0.1)*	*(0.2)*	*(3.5)*	*(8.3)*	*(7.9)*	*(5.8)*	*(7.0)*	*(2.9)*	*(3.7)*	*(6.9)*
	Silver	15.3	15.4	15.4	16.1	16.7	16.4	17.1	16.9	17.1	17.1	16.5
	Change, %		*(0.8)*	*(0.6)*	*(4.6)*	*(8.4)*	*(6.4)*	*(10.6)*	*(9.6)*	*(10.5)*	*(10.3)*	*(6.9)*
	Copper	6,190.0	6,225.0	6,206.0	6,332.5	6,917.0	6,755.0	6,423.0	7,247.0	4,872.0	6,199.4	6,810.7
	Change, %		*(0.6)*	*(0.3)*	*(2.3)*	*(10.5)*	*(8.4)*	*(3.6)*	*(14.6)*	*27.1*	*(0.2)*	*(9.1)*
	Nickel	952.5	952.1	926.2	971.0	929.4	834.0	697.2	809.1	646.4	680.2	920.1
	Change, %		*0.0*	*2.8*	*(1.9)*	*2.5*	*14.2*	*36.6*	*17.7*	*47.4*	*40.0*	*3.5*
	Zinc	2,547.0	2,614.5	2,631.0	2,630.0	3,087.0	3,385.0	2,938.0	3,319.0	2,097.5	2,888.5	3,124.5
	Change, %		*(2.6)*	*(3.2)*	*(3.2)*	*(17.5)*	*(24.8)*	*(13.3)*	*(23.3)*	*21.4*	*(11.8)*	*(18.5)*
	Lead	2,083.5	2,092.5	2,109.3	2,306.3	2,294.5	2,538.0	2,346.0	2,482.8	1,868.3	2,315.7	2,400.3
	Change, %		*(0.4)*	*(1.2)*	*(9.7)*	*(9.2)*	*(17.9)*	*(11.2)*	*(16.1)*	*11.5*	*(10.0)*	*(13.2)*
	Aluminum	14,520.0	14,605.0	14,325.0	14,030.0	14,515.0	14,105.0	15,970.0	15,020.0	12,373.5	14,556.6	14,338.5
	Change, %		*(0.6)*	*1.4*	*3.5*	*0.0*	*2.9*	*(9.1)*	*(3.3)*	*17.3*	*(0.3)*	*1.3*
	Cobalt	61,650.0	61,750.0	64,284.0	69,750.0	89,000.0	81,292.0	57,200.0	75,205.0	25,480.1	55,906.9	81,638.0
	Change, %		*(0.2)*	*(4.1)*	*(11.6)*	*(30.7)*	*(24.2)*	*7.8*	*(18.0)*	*142.0*	*10.3*	*(24.5)*
	HR Coil	901.0	898.0	894.0	912.0	878.0	742.0	621.0	662.0	519.3	620.1	832.6
	Change, %		*0.3*	*0.8*	*(1.2)*	*2.6*	*21.4*	*45.1*	*36.1*	*73.5*	*45.3*	*8.2*
	Scrap	392.0	392.0	392.0	402.0	384.0	372.0	374.0	367.0	275.7	344.7	389.8
	Change, %		*0.0*	*0.0*	*(2.5)*	*2.1*	*5.4*	*4.8*	*6.8*	*42.2*	*13.7*	*0.6*

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

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Refining Price Data

Daily Price		08/10	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	**WTI**	67.6	66.8	68.5	70.4	70.7	59.2	48.8	53.7	43.4	50.9	66.3
	Change, %		*1.2*	*(1.3)*	*(3.9)*	*(4.3)*	*14.2*	*38.5*	*25.9*	*56.0*	*32.9*	*2.0*
	Dubai	70.6	73.3	71.9	74.8	74.5	61.1	49.9	53.8	41.3	53.1	69.0
	Change, %		*(3.7)*	*(1.9)*	*(5.6)*	*(5.3)*	*15.4*	*41.5*	*31.1*	*70.8*	*32.9*	*2.3*
Crude Oil	**Gasoline(휘발유)**	83.2	86.0	83.0	84.2	87.2	76.3	67.0	69.8	56.3	68.0	81.5
Product	*Change, %*		*(3.3)*	*0.2*	*(1.3)*	*(4.7)*	*9.0*	*24.0*	*19.1*	*47.8*	*22.3*	*2.1*
	Kerosene(등유)	85.4	88.1	86.4	89.4	89.8	77.8	62.2	66.4	52.9	65.2	84.4
	Change, %		*(3.1)*	*(1.1)*	*(4.5)*	*(4.9)*	*9.7*	*37.2*	*28.5*	*61.5*	*30.9*	*1.2*
	Diesel(경유)	85.3	87.7	85.4	87.0	89.5	76.1	62.9	65.5	52.1	65.6	83.3
	Change, %		*(2.7)*	*(0.1)*	*(2.0)*	*(4.7)*	*12.1*	*35.5*	*30.2*	*63.7*	*30.0*	*2.4*
	Bunker-C	68.7	70.9	69.8	71.3	68.0	55.3	46.7	52.1	35.5	49.7	63.5
	Change, %		*(3.2)*	*(1.6)*	*(3.8)*	*1.0*	*24.3*	*47.0*	*31.9*	*93.3*	*38.3*	*8.1*
	Naphtha	69.2	72.4	72.8	73.0	74.8	59.6	49.1	53.5	42.6	53.7	68.1
	Change, %		*(4.4)*	*(4.9)*	*(5.2)*	*(7.5)*	*16.1*	*40.9*	*29.5*	*62.5*	*28.8*	*1.6*
Dubai	**Gasoline(휘발유)**	12.6	12.7	11.1	9.5	12.8	15.1	17.2	16.0	14.9	14.9	12.5
Spread	*Change*		*(0.1)*	*1.5*	*3.1*	*(0.1)*	*(2.5)*	*(4.6)*	*(3.4)*	*(2.3)*	*(2.3)*	*0.1*
	Kerosene(등유)	14.8	14.8	14.5	14.7	15.3	16.7	12.4	12.6	11.6	12.1	15.4
	Change		*0.0*	*0.4*	*0.2*	*(0.5)*	*(1.9)*	*2.5*	*2.2*	*3.3*	*2.7*	*(0.5)*
	Diesel(경유)	14.8	14.4	13.5	12.3	15.0	15.0	13.1	11.7	10.8	12.5	14.3
	Change		*0.4*	*1.3*	*2.5*	*(0.3)*	*(0.2)*	*1.7*	*3.1*	*4.0*	*2.2*	*0.4*
	Bunker-C	(1.9)	(2.4)	(2.2)	(3.4)	(6.5)	(5.9)	(3.2)	(1.8)	(5.8)	(3.4)	(5.5)
	Change		*0.5*	*0.3*	*1.5*	*4.6*	*4.0*	*1.3*	*(0.1)*	*3.9*	*1.5*	*3.6*
	Naphtha	(1.3)	(0.9)	0.8	(1.8)	0.4	(1.5)	(0.7)	(0.4)	1.3	0.6	(0.9)
	Change		*(0.4)*	*(2.2)*	*0.4*	*(1.7)*	*0.2*	*(0.6)*	*(0.9)*	*(2.6)*	*(2.0)*	*(0.5)*
Refining	**Simple(단순)**	3.9	3.5	3.3	2.0	1.9	2.8	3.7	3.8	1.9	3.2	2.2
Margin	*Change*		*0.3*	*0.6*	*1.8*	*2.0*	*1.1*	*0.1*	*0.0*	*1.9*	*0.7*	*1.7*
	Complex(복합)	8.3	8.1	7.5	6.1	7.6	8.4	8.8	8.3	7.0	8.0	7.4
	Change		*0.2*	*0.8*	*2.2*	*0.8*	*(0.0)*	*(0.5)*	*0.1*	*1.4*	*0.4*	*0.9*
	Complex(lagging)	2.9	6.7	4.7	6.0	15.5	4.0	13.4	18.0	8.5	8.9	9.0
	Change		*(3.8)*	*(1.8)*	*(3.1)*	*(12.6)*	*(1.1)*	*(10.5)*	*(15.1)*	*(5.6)*	*(6.0)*	*(6.1)*

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

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Petrochemical Price Data

Daily Price			08/10	08/09	08/08	08/07	08/06	08/03	08/02	08/01	07/31	07/30
Spot Price	**Naphtha**	CFR Japan	635.6	662.5	664.8	662.5	664.0	664.0	659.5	669.3	673.3	673.8
	Ethylene	CFR SE Asia	1,260.0	1,260.0	1,260.0	1,255.0	1,235.0	1,235.0	1,235.0	1,235.0	1,235.0	1,235.0
	Propylene	FOB Korea	1,075.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0	1,070.0
	Butadiene	FOB Korea	1,740.0	1,725.0	1,725.0	1,725.0	1,715.0	1,700.0	1,675.0	1,675.0	1,670.0	1,670.0
	HDPE	CFR FE Asia	1,310.0	1,310.0	1,310.0	1,310.0	1,310.0	1,305.0	1,305.0	1,305.0	1,305.0	1,310.0
	LDPE	CFR FE Asia	1,150.0	1,150.0	1,150.0	1,150.0	1,140.0	1,140.0	1,140.0	1,140.0	1,140.0	1,140.0
	LLDPE	CFR FE Asia	1,120.0	1,120.0	1,120.0	1,120.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0
	MEG	CFR China	909.0	940.0	940.0	940.0	950.0	930.0	935.0	932.0	932.0	951.0
	PP	CFR FE Asia	1,230.0	1,220.0	1,220.0	1,220.0	1,200.0	1,200.0	1,200.0	1,200.0	1,200.0	1,205.0
	PX	CFR China	1,110.7	1,106.7	1,106.7	1,102.7	1,109.7	1,100.7	1,080.7	1,075.0	1,064.3	1,053.3
	PTA	CFR China	913.0	910.0	910.0	905.0	905.0	870.0	870.0	870.0	868.0	870.0
	Benzene	FOB Korea	874.7	874.0	874.0	868.3	877.0	876.0	869.7	873.7	877.3	865.7
	Toluene	FOB Korea	797.0	805.0	805.0	798.0	805.0	800.0	791.0	785.0	785.0	773.0
	Xylene	FOB Korea	895.0	895.0	895.0	895.0	899.0	883.0	869.0	866.0	872.5	869.5
	SM	FOB Korea	1,431.0	1,434.0	1,434.0	1,432.0	1,455.0	1,440.0	1,430.0	1,392.0	1,378.5	1,378.5

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	**Naphtha**	CFR Japan	659.0	672.0	662.0	633.0	582.5	464.0	484.5	399.5	493.5	620.5
	Change, %			(1.9)	(0.5)	4.1	13.1	42.0	36.0	65.0	33.5	6.2
	Ethylene	CFR SE Asia	1,242.5	1,232.5	1,290.0	1,182.5	1,275.0	1,030.0	990.0	1,040.9	1,090.9	1,238.4
	Change, %			0.8	(3.7)	5.1	(2.5)	20.6	25.5	19.4	13.9	0.3
	Propylene	CFR SE Asia	1,020.0	995.0	965.0	1,017.5	957.5	770.0	815.0	705.7	823.6	1,055.4
	Change, %			2.5	5.7	0.2	6.5	32.5	25.2	44.5	23.9	(3.4)
	Butadiene	CFR SE Asia	1,700.0	1,625.0	1,680.0	1,430.0	1,225.0	925.0	2,100.0	1,116.8	1,481.1	1,462.4
	Change, %			4.6	1.2	18.9	38.8	83.8	(19.0)	52.2	14.8	16.2
	Benzene	CFR SE Asia	872.5	847.5	820.0	835.0	840.0	750.0	822.5	646.7	838.8	866.3
	Change, %			2.9	6.4	4.5	3.9	16.3	6.1	34.9	4.0	0.7
	Toluene	CFR SE Asia	810.0	800.0	795.0	775.0	735.0	650.0	690.0	630.5	689.5	771.1
	Change, %			1.3	1.9	4.5	10.2	24.6	17.4	28.5	17.5	5.0
	Xylene	CFR SE Asia	825.0	822.5	815.0	772.5	757.5	632.5	675.0	627.7	668.8	786.0
	Change, %			0.3	1.2	6.8	8.9	30.4	22.2	31.4	23.4	5.0
Spread	**Ethylene**	-Naphtha	583.5	560.5	628.0	549.5	692.5	566.0	505.5	641.4	597.4	617.9
	Change, %			4.1	(7.1)	6.2	(15.7)	3.1	15.4	(9.0)	(2.3)	(5.6)
	Propylene	-Naphtha	361.0	323.0	303.0	384.5	375.0	306.0	330.5	306.2	330.1	434.9
	Change, %			11.8	19.1	(6.1)	(3.7)	18.0	9.2	17.9	9.4	(17.0)
	Butadiene	-Naphtha	1,041.0	953.0	1,018.0	797.0	642.5	461.0	1,615.5	717.3	987.6	841.9
	Change, %			9.2	2.3	30.6	62.0	125.8	(35.6)	45.1	5.4	23.6
	Benzene	-Naphtha	213.5	175.5	158.0	202.0	257.5	286.0	338.0	247.2	345.3	245.8
	Change, %			21.7	35.1	5.7	(17.1)	(25.3)	(36.8)	(13.6)	(38.2)	(13.1)
	Toluene	-Naphtha	151.0	128.0	133.0	142.0	152.5	186.0	205.5	231.0	196.0	150.6
	Change, %			18.0	13.5	6.3	(1.0)	(18.8)	(26.5)	(34.6)	(23.0)	0.2
	Xylene	-Naphtha	166.0	150.5	153.0	139.5	175.0	168.5	190.5	228.2	175.3	165.5
	Change, %			10.3	8.5	19.0	(5.1)	(1.5)	(12.9)	(27.3)	(5.3)	0.3

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

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SK 증권

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	**HDPE**	CFR SE Asia	1,222.5	1,227.5	1,227.5	1,262.5	1,182.5	1,077.5	1,142.5	1,134.6	1,142.5	1,254.0
	Change, %			(0.4)	(0.4)	(3.2)	3.4	13.5	7.0	7.7	7.0	(2.5)
	MEG	CFR SE Asia	960.0	955.0	927.5	1,015.0	990.0	877.5	847.5	660.8	850.6	974.6
	Change, %			0.5	3.5	(5.4)	(3.0)	9.4	13.3	45.3	12.9	(1.5)
	PVC	CFR SE Asia	945.0	945.0	935.0	940.0	960.0	860.0	920.0	823.4	899.9	942.3
	Change, %			0.0	1.1	0.5	(1.6)	9.9	2.7	14.8	5.0	0.3
	PP	CFR SE Asia	1,222.5	1,232.5	1,262.5	1,242.5	1,217.5	1,087.5	1,032.5	978.4	1,099.6	1,258.6
	Change, %			(0.8)	(3.2)	(1.6)	0.4	12.4	18.4	24.9	11.2	(2.9)
	2-EH	CFR Korea	1,105.0	1,095.0	1,100.0	1,145.0	1,130.0	960.0	865.0	772.4	970.0	1,115.5
	Change, %			0.9	0.5	(3.5)	(2.2)	15.1	27.7	43.1	13.9	(0.9)
	ABS	CFR SE Asia	1,945.0	1,940.0	1,960.0	2,010.0	1,980.0	1,850.0	1,635.0	1,347.1	1,844.7	2,018.2
	Change, %			0.3	(0.8)	(3.2)	(1.8)	5.1	19.0	44.4	5.4	(3.6)
	SBR	CFR SE Asia	1,760.0	1,760.0	1,770.0	1,750.0	1,650.0	1,490.0	2,000.0	1,483.0	1,980.5	1,754.2
	Change, %			0.0	(0.6)	0.6	6.7	18.1	(12.0)	18.7	(11.1)	0.3
	SM	CFR SE Asia	1,465.0	1,395.0	1,367.5	1,405.0	1,360.0	1,150.0	1,205.0	1,064.6	1,253.8	1,402.3
	Change, %			5.0	7.1	4.3	7.7	27.4	21.6	37.6	16.8	4.5
	Caustic	FOB NEA	369.0	361.0	475.0	598.0	626.0	467.5	422.5	316.6	491.2	550.5
	Change, %			2.2	(22.3)	(38.3)	(41.1)	(21.1)	(12.7)	16.6	(24.9)	(33.0)
	PX	CFR SE Asia	1,105.0	1,032.5	995.0	977.5	937.5	832.5	855.0	790.4	844.4	974.3
	Change, %			7.0	11.1	13.0	17.9	32.7	29.2	39.8	30.9	13.4
	PO	CFR China	1,777.5	1,782.5	1,735.0	2,007.5	1,787.5	1,542.5	1,562.5	1,396.8	1,601.2	1,866.6
	Change, %			(0.3)	2.4	(11.5)	(0.6)	15.2	13.8	27.3	11.0	(4.8)
	Caprolactam	CFR SE Asia	2,155.0	2,155.0	2,140.0	2,170.0	2,220.0	1,760.0	1,850.0	1,344.9	1,936.4	2,124.4
	Change, %			0.0	0.7	(0.7)	(2.9)	22.4	16.5	60.2	11.3	1.4
	PTA	CFR SE Asia	882.5	862.5	865.0	820.0	777.5	657.5	642.5	613.7	667.8	811.9
	Change, %			2.3	2.0	7.6	13.5	34.2	37.4	43.8	32.1	8.7
Spread	**HDPE**		563.5	555.5	565.5	629.5	600.0	613.5	658.0	735.1	649.0	633.5
	Change, %			1.4	(0.4)	(10.5)	(6.1)	(8.1)	(14.4)	(23.3)	(13.2)	(11.1)
	MEG		301.0	283.0	265.5	382.0	407.5	413.5	363.0	261.3	357.1	354.1
	Change, %			6.4	13.4	(21.2)	(26.1)	(27.2)	(17.1)	15.2	(15.7)	(15.0)
	PVC		286.0	273.0	273.0	307.0	377.5	396.0	435.5	423.9	406.4	321.8
	Change, %			4.8	4.8	(6.8)	(24.2)	(27.8)	(34.3)	(32.5)	(29.6)	(11.1)
	PP		563.5	560.5	600.5	609.5	635.0	623.5	548.0	578.9	606.1	638.1
	Change, %			0.5	(6.2)	(7.5)	(11.3)	(9.6)	2.8	(2.7)	(7.0)	(11.7)
	2-EH		446.0	423.0	438.0	512.0	547.5	496.0	380.5	372.9	476.5	495.0
	Change, %			5.4	1.8	(12.9)	(18.5)	(10.1)	17.2	19.6	(6.4)	(9.9)
	ABS		1,286.0	1,268.0	1,298.0	1,377.0	1,397.5	1,386.0	1,150.5	947.6	1,351.2	1,397.7
	Change, %			1.4	(0.9)	(6.6)	(8.0)	(7.2)	11.8	35.7	(4.8)	(8.0)
	SBR	BD spread	60.0	135.0	90.0	320.0	425.0	565.0	(100.0)	366.2	499.4	291.8
	Change, %			(55.6)	(33.3)	(81.3)	(85.9)	(89.4)	(160.0)	(83.6)	(88.0)	(79.4)
	SM		806.0	723.0	705.5	772.0	777.5	686.0	720.5	665.1	760.3	781.8
	Change, %			11.5	14.2	4.4	3.7	17.5	11.9	21.2	6.0	3.1
	Caustic											
	Change, %											
	PX		446.0	360.5	333.0	344.5	355.0	368.5	370.5	390.9	351.0	353.8
	Change, %			23.7	33.9	29.5	25.6	21.0	20.4	14.1	27.1	26.1
	PO	propylene sprea	757.5	787.5	770.0	990.0	830.0	772.5	747.5	691.1	777.6	811.2
	Change, %			(3.8)	(1.6)	(23.5)	(8.7)	(1.9)	1.3	9.6	(2.6)	(6.6)
	Caprolactam	benzene spread	1,282.5	1,307.5	1,320.0	1,335.0	1,380.0	1,010.0	1,027.5	698.2	1,097.6	1,258.1
	Change, %			(1.9)	(2.8)	(3.9)	(7.1)	27.0	24.8	83.7	16.8	1.9
	PTA	px spread	109.0	139.8	168.5	135.8	121.3	74.8	44.0	60.4	76.7	129.9
	Change, %			(22.0)	(35.3)	(19.7)	(10.1)	45.8	147.7	80.4	42.1	(16.1)

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

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Global peers

	Currency	08/10	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	67.7	(1.9)	1.4	(0.1)	1.2	(2.5)	7.3	(4.9)	168,245	17.7	14.9	1.8	1.7	10.2	9.2
Eastman	USD	99.9	(1.8)	(2.1)	(2.0)	(7.3)	5.3	20.0	7.8	13,550	11.6	10.7	2.5	2.2	8.7	8.1
BASF	EUR	78.9	(2.1)	(1.9)	(5.0)	(9.4)	(7.7)	(0.6)	(14.0)	101,214	14.6	13.6	2.4	2.2	7.8	7.4
Akzo Nobel	EUR	81.1	(0.8)	1.0	8.9	7.3	7.0	7.4	11.1	22,073	17.0	15.8	3.0	2.8	9.3	8.8
Arkema	EUR	105.5	(1.2)	(2.9)	1.3	(2.9)	8.9	12.3	3.9	9,270	13.2	12.2	1.7	1.6	6.3	6.0
Lanxess	EUR	69.1	(2.4)	2.6	0.9	1.1	4.6	7.1	4.2	7,282	15.5	13.1	2.1	1.9	9.3	8.2
Sumitomo Chemical	JPY	630	(1.6)	(2.8)	0.2	(2.2)	(4.5)	0.5	(22.2)	11,911	10.1	10.5	1.3	1.2	7.4	8.0
Mitsubishi Chemical	JPY	984	(1.5)	(0.8)	3.7	(5.3)	(7.4)	5.6	(20.4)	16,544	9.2	8.7	1.3	1.2	6.3	6.1
Shin-Etsu Chemical	JPY	10,840	(2.5)	(2.8)	4.4	(3.8)	(3.4)	13.6	(5.3)	43,948	18.5	16.6	1.9	1.8	8.1	7.4
Asahi Kasei	JPY	1,568	(1.2)	0.2	10.7	3.2	19.6	22.0	7.8	18,109	14.4	13.6	1.5	1.4	7.4	7.0
JSR	JPY	2,144	(0.9)	1.9	10.1	2.9	(11.8)	11.9	(3.3)	4,455	14.5	13.4	1.2	1.1	7.7	7.2
Nitto Denko	JPY	8,434	(2.0)	(1.2)	4.3	0.6	(0.2)	(14.0)	(15.7)	15,450	15.7	14.6	2.1	1.9	7.3	7.0
SABIC	SAR	126.8	0.0	(1.4)	(0.2)	10.4	21.8	29.1	25.0	80,773	14.2	13.7	1.7	1.7	7.3	7.1
Yansab	SAR	74.0	0.0	(0.5)	(3.9)	3.7	16.5	34.9	25.4	8,861	13.7	13.9	2.2	1.9	9.0	8.9
Formosa Plastics	TWD	110.5	(0.9)	(0.9)	(1.3)	4.2	13.0	19.3	12.0	21,114	14.4	13.9	1.8	1.8	18.9	19.2
Formosa Fiber	TWD	119.0	(0.4)	0.4	3.9	7.7	12.8	30.1	15.5	20,511	13.7	13.4	1.7	1.7	11.6	11.5
Nan Ya Plastics	TWD	84.6	0.0	1.0	2.3	1.0	11.3	12.2	8.6	20,648	14.8	15.3	1.7	1.7	16.2	16.4
Sinopec Shanghai	CNY	5.36	(0.7)	2.3	(2.9)	(9.8)	(12.0)	(22.7)	(15.3)	9,462	12.0	12.6	2.2	2.0	6.8	7.3
Sinopec Yizheng(Fibe	CNY	1.96	0.0	4.3	4.3	(6.7)	(11.3)	(38.8)	(26.6)	5,394	50.4	66.3	5.3	5.0	13.9	10.3
Reliance	INR	1,204	(1.1)	2.3	17.4	22.7	34.1	52.0	32.4	93,404	14.4	12.9	1.7	1.5	9.4	8.7
Industries Qatar	QAR	124.0	0.0	(0.8)	7.9	12.5	20.0	32.8	27.8	16,144	14.5	13.9	1.6	1.5	46.4	27.2
PTT Chemical	THB	82.0	(2.1)	(3.0)	5.1	(11.8)	(10.6)	13.9	(3.5)	11,766	10.7	10.4	1.4	1.3	5.5	5.4
Petronas	MYR	9.2	0.1	2.0	7.8	9.4	15.1	31.0	19.6	15,624	16.1	15.5	2.0	1.9	9.2	8.9
LG화학	KRW	375,000	(2.6)	(4.1)	15.2	10.3	2.5	11.1	(7.4)	27,313	13.8	12.8	1.8	1.6	6.5	6.1
롯데케미칼	KRW	344,500	0.4	4.1	0.9	(10.1)	(17.7)	(8.9)	(6.4)	11,632	5.5	5.2	0.9	0.8	3.6	3.3
한화케미칼	KRW	21,250	0.0	(2.3)	0.7	(26.7)	(34.3)	(36.7)	(32.8)	5,050	5.7	5.5	0.8	0.7	6.7	6.5
금호석유	KRW	103,000	(1.9)	(6.8)	(9.6)	(5.9)	13.8	37.9	3.5	2,969	14.1	11.9	1.6	1.5	9.3	8.4
SKC	KRW	45,250	1.6	4.1	6.2	14.8	24.0	19.2	(3.7)	1,643	9.9	8.7	1.1	1.0	8.8	7.9
국도화학	KRW	58,400	(0.5)	(0.5)	1.6	(9.0)	(0.2)	5.0	(7.4)	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	6,330	0.0	0.8	2.4	(12.7)	(28.8)	2.8	(16.5)	4,595	8.2	7.3	1.1	1.0	7.2	6.8
Average			**(0.9)**	**(0.2)**	**3.2**	**(0.4)**	**2.6**	**10.6**	**(0.0)**							
Refinery																
Valero	USD	115.4	0.2	(0.0)	6.2	0.8	30.8	74.3	25.5	40,608	14.1	13.4	2.0	2.0	6.9	6.9
Conoco Phillips	USD	71.9	0.3	0.9	0.3	3.7	38.3	60.0	31.1	66,136	34.0	25.9	2.2	2.2	7.2	6.7
Formosa Petrochemic	TWD	120.5	0.4	(0.4)	2.1	(2.0)	3.9	16.4	4.3	37,040	18.2	18.7	3.2	3.2	11.7	12.1
Andeavor	USD	150.2	0.2	2.1	10.7	6.8	54.4	60.1	31.4	17,904	12.9	11.4	1.8	1.7	7.3	7.1
Marathon Petroleum	USD	80.9	0.2	2.3	12.6	4.4	26.8	55.0	22.7	32,812	15.0	12.8	2.6	2.7	7.7	7.5
Devon Energy	USD	42.8	1.8	(0.5)	(6.1)	4.8	23.5	34.9	3.5	22,192	17.5	14.0	2.7	2.3	8.4	7.4
Hollyfrontier	USD	69.0	1.0	2.0	0.1	2.3	55.1	142.8	34.8	9,094	16.8	15.2	1.8	1.8	8.0	8.0
Phillips 66	USD	122.6	0.3	0.8	8.3	3.9	32.4	46.6	21.2	51,561	15.6	14.5	2.3	2.2	9.0	8.8
Murphy Oil	USD	31.1	3.0	(6.1)	(9.2)	2.1	17.9	21.0	0.0	5,548	162.4	113.2	1.2	1.1	4.9	4.5
JX Holdings	JPY	802.7	0.8	(1.3)	0.6	11.6	22.3	55.4	10.4	22,130	8.8	8.0	0.9	0.9	7.0	6.6
Idemitsu	JPY	5,220.0	2.2	4.0	21.7	28.6	36.1	97.8	15.4	8,360	7.9	7.5	1.0	0.9	6.8	6.8
Nesteoil	EUR	74.9	0.5	5.6	11.0	12.3	29.6	113.9	40.4	16,473	16.7	16.7	2.9	2.7	10.2	10.3
Ashland	USD	85.5	(0.8)	0.6	5.7	14.5	22.5	39.9	20.0	4,550	21.6	18.7	1.3	1.3	10.2	9.6
Fuchs Petrolub	EUR	49.4	(0.4)	0.4	13.9	8.7	13.4	5.0	11.5	7,127	22.1	20.9	4.1	3.7	13.0	12.3
SK이노베이션	KRW	192,000	1.3	1.6	0.0	(5.4)	3.8	11.6	(6.1)	17,975	7.9	7.7	0.9	0.9	4.9	4.8
S-Oil	KRW	117,000	(0.4)	1.3	8.8	10.4	3.1	(0.8)	0.0	12,400	9.3	8.1	1.8	1.6	7.6	6.6
GS	KRW	53,700	2.3	1.3	4.5	(13.1)	(15.2)	(26.1)	(13.7)	5,467	6.0	5.5	0.7	0.6	6.9	6.3
Average			**0.8**	**0.9**	**5.4**	**5.5**	**23.4**	**47.5**	**14.8**							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

SK Energy Daily

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SK 증권

Global peers

	Currency	08/10	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	79	(1.1)	(1.0)	(5.1)	(2.8)	4.8	0.6	(5.0)	336,249	17.0	14.8	1.7	1.7	7.7	6.9
BP	GBP	556	(1.5)	(0.8)	(5.7)	(1.4)	18.3	21.5	6.4	141,629	12.9	11.7	1.4	1.3	5.0	4.7
Shell	EUR	2,531	(1.2)	(0.5)	(6.1)	(3.9)	12.9	17.0	2.1	270,749	11.9	10.2	1.3	1.3	5.6	5.2
Chevron	USD	123	0.7	(0.6)	(3.3)	(4.3)	8.7	12.0	(1.5)	236,338	15.8	14.6	1.5	1.5	6.5	6.0
Total	EUR	54	(2.4)	(1.5)	(1.2)	2.4	20.7	23.9	17.2	163,988	11.6	10.4	1.3	1.2	5.6	5.1
Sinopec	CNY	7	(1.2)	0.8	1.8	(8.8)	3.9	9.2	8.2	116,399	10.2	9.9	1.0	1.0	3.9	3.8
Petrochina	CNY	8	(0.4)	5.5	3.5	0.4	1.0	(0.7)	(0.7)	205,530	24.6	20.4	1.2	1.2	5.5	5.4
CNOOC	CNY	10	3.3	14.8	9.0	(5.4)	(1.7)	(8.3)	(2.2)	72,577	9.0	8.7	1.2	1.2	3.9	3.8
Gazprom	RUB	145	(0.3)	1.7	(1.7)	(1.1)	6.8	22.7	11.0	50,631	3.2	3.2	0.2	0.3	2.6	2.5
Rosneft	RUB	433	0.2	5.3	4.9	9.5	33.5	42.0	48.6	67,820	8.1	6.7	1.0	0.9	4.7	4.4
Anadarko	USD	67	1.2	(2.1)	(11.5)	(2.3)	19.0	52.9	24.6	34,217	22.6	16.8	2.8	2.4	6.5	5.6
Petrobras	BRL	20	(3.7)	(7.2)	10.4	(23.9)	4.4	48.5	21.7	71,228	6.7	5.8	0.8	0.7	4.6	4.3
Lukoil	USD	4,577	(0.5)	1.7	5.1	8.1	26.5	57.7	37.3	57,634	5.7	6.0	0.8	0.8	N/A	N/A
Kinder	USD	18	1.3	3.1	(0.3)	10.1	5.4	(6.3)	0.6	47,497	22.7	18.5	1.2	1.2	10.7	10.5
Equinor ASA	NOK	215	(0.5)	(0.4)	(4.6)	0.2	24.5	45.2	22.7	85,771	13.2	12.1	2.0	1.8	3.4	3.2
BHP	AUD	34	(0.7)	1.0	(1.5)	3.0	15.8	29.3	14.0	124,704	14.3	15.9	2.2	2.1	6.2	6.5
PTT E&P	THB	139	(2.1)	(1.4)	0.0	2.6	23.7	61.0	38.5	16,515	13.3	12.3	1.4	1.3	4.3	4.0
Petronas gas	MYR	19	0.1	(0.4)	7.6	7.0	8.7	1.2	8.7	9,203	20.0	19.8	2.9	2.8	10.9	10.8
Chesapeake	USD	5	0.6	4.5	(13.7)	39.1	63.5	12.6	17.7	4,251	5.9	5.9	#N/A N/A	6.0	6.6	6.4
Noble Energy	USD	31	(0.2)	(7.0)	(17.9)	(13.2)	19.1	22.7	4.9	14,774	27.6	21.5	1.4	1.3	7.1	6.1
Average		**0**	**(0.4)**	**0.8**	**(1.5)**	**0.8**	**16.0**	**23.2**	**13.7**							
PV																
WACKER	EUR	124.3	(2.7)	0.1	4.5	(18.7)	(10.6)	22.6	(23.4)	7,388	17.8	16.1	1.9	1.8	6.6	6.4
GCL-Poly	HKD	0.6	(3.3)	(10.6)	(14.5)	(37.9)	(49.1)	(33.0)	(57.9)	1,380	5.3	4.7	0.4	0.4	6.4	5.8
SunPower	USD	7.2	(1.9)	(1.6)	(10.0)	(20.3)	4.8	(19.9)	(14.8)	1,012	#N/A N/A	#N/A N/A	7.1	7.7	17.0	10.4
Canadian Solar	USD	14.3	(1.2)	4.1	8.0	(14.6)	(4.1)	(13.7)	(15.3)	837	9.0	9.3	0.8	0.8	8.0	8.7
JA Solar	USD	7.5	0.0	0.0	0.9	4.0	0.5	23.0	0.4	356	#N/A N/A	#N/A N/A	1.8	2.0	4.9	7.1
Yingli	USD	0.3	(21.4)	(12.0)	(26.7)	(81.9)	(77.8)	(85.7)	(80.5)	6	#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	52.8	(3.0)	(0.1)	(4.4)	(27.7)	(13.8)	12.9	(21.8)	5,533	32.4	17.1	1.0	1.0	8.0	4.1
한화큐셀	USD	8.3	0.1	0.4	41.2	19.6	17.6	4.9	18.2	691	14.8	30.7	#N/A N/A	#N/A N/A	8.8	9.1
OCI	KRW	107,500	(1.4)	7.0	12.2	(33.0)	(30.0)	18.8	(21.0)	2,265	0.0	12.1	0.0	0.7	0.0	5.2
웅진에너지	KRW	3,235	(4.9)	0.5	(12.1)	(49.6)	(55.1)	(60.1)	(60.6)	85	N/A	0.0	0.7	0.0	5.2	0.0
신성솔라에너지	KRW	1,400	(1.1)	2.9	0.7	(18.8)	(22.4)	(36.4)	(26.9)	214	N/A	0.7	0.0	5.2	0.0	2.3
Average			**(3.7)**	**(0.9)**	**(0.0)**	**(25.4)**	**(21.8)**	**(15.1)**	**(27.6)**							
Gas Company																
Towngas China	HKD	7.8	(1.4)	2.0	2.5	5.8	30.3	43.7	24.0	2,789	15.0	13.3	1.3	1.2	12.7	11.4
Kulun	HKD	7.7	1.7	9.7	10.5	11.3	8.3	0.8	(5.8)	7,888	11.2	9.7	1.2	1.2	6.0	5.5
Beijing Enterprise	HKD	37.2	(0.1)	0.7	(3.4)	(7.2)	(11.1)	(7.2)	(19.8)	5,981	6.5	5.9	0.6	0.6	11.7	11.1
ENN Energy	HKD	77.1	(1.3)	(1.2)	(3.8)	2.5	27.6	46.0	38.3	10,661	17.6	14.8	3.6	3.1	10.3	9.0
China Resources Gas	HKD	35.6	(1.0)	(1.7)	5.8	25.8	42.2	24.5	25.4	10,072	18.3	16.3	3.2	2.7	10.0	9.0
China Gas Holdings	HKD	30.4	(1.8)	(1.5)	(4.6)	4.1	33.6	59.7	40.7	19,644	19.6	16.5	4.5	3.8	15.2	12.9
Shenzen Gas	HKD	14.1	(0.7)	0.9	(6.9)	(20.1)	(4.4)	1.0	(5.5)	3,778	8.2	7.1	1.1	1.0	5.2	4.5
Shann Xi	CNY	7.9	(0.8)	4.7	10.6	3.4	12.8	(8.3)	(5.9)	1,288	18.3	16.0	1.5	1.4	#N/A N/A	#N/A N/A
Suntien	HKD	2.3	(2.5)	0.0	1.7	(13.0)	36.0	41.8	13.0	1,108	6.2	5.5	0.8	0.7	8.4	7.3
China Oil & Gas	HKD	0.7	0.0	3.2	6.6	10.2	(4.4)	20.4	(23.5)	484	#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			**(0.8)**	**1.7**	**1.9**	**2.3**	**17.1**	**22.2**	**8.1**							
EV																
LG화학	KRW	375,000	(2.6)	(4.1)	15.2	10.3	2.5	11.1	(7.4)	23,391	14.3	12.9	1.6	1.5	6.6	5.9
삼성SDI	KRW	213,500	(6.6)	(7.6)	(6.6)	12.1	25.6	24.9	4.4	12,973	20.3	14.4	1.2	1.1	12.7	10.1
Panasonic	JPY	1422.5	(1.0)	(3.2)	1.3	(8.9)	(10.3)	(3.6)	(13.8)	31,516	12.9	11.4	1.8	1.6	5.1	4.7
GS Yuasa	JPY	502.0	(5.8)	(5.8)	(0.2)	(10.4)	(12.4)	(9.1)	(10.5)	1,875	15.1	14.0	1.1	1.1	6.9	6.3
NEC	JPY	3015.0	(1.0)	0.0	0.6	(1.5)	(3.1)	0.8	(0.8)	7,093	23.7	13.0	0.9	0.8	7.1	5.4
BYD Auto	CNY	41.7	6.2	8.8	(10.6)	(19.6)	(26.4)	(14.4)	(35.9)	16,256	25.3	18.9	2.0	1.8	11.8	10.1
Tesla Motors	USD	355.5	0.9	2.1	10.2	16.5	14.5	0.0	14.2	60,644	#N/A N/A	120.3	11.0	10.1	58.7	22.1
Kandi Technologies	USD	4.2	9.1	2.4	(2.3)	(32.3)	(15.2)	13.5	(38.2)	216	#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			**(0.1)**	**(0.9)**	**1.0**	**(4.2)**	**(3.1)**	**2.9**	**(11.0)**							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임