SK Energy Daily

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SK 증권

1. News Summary (3 page)

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News		Conclusion
WTI comment	상승세 지속…WTI, 74달러 돌파	
Headline	[주간가격] 에틸렌, 플랫한 모습 보이며 CFR SEA $1,260/mt로 마감	다운스트림 마진이 나빠 TA시즌이 끝나면 가격 하방 열릴 것
News 1.	[주간가격] MEG, WoW $25/mt 상승해 CFR China $905/mt로 마감	아직 재고 레벨이 역사적 고점 수준으로 방향성은 하방으로 열려있음
News 2.	[주간가격] BD, WoW $20/mt 하락해 FOB Korea $1,600/mt로 마감	저렴한 중국 내수 물량과 아시아 역내 TA 종료로 다운사이드 열려있음
News 3.	[주간가격] SBR, WoW $20/mt 하락해 CFR SEA $1,780/mt로 마감	원재료인 BD 가격 하락이 지속되어야 가동률 오르며 시황 회복할 것
News 4.	[주간가격] PX, WoW $42/mt 상승해 FOB Korea $973.67/mt로 마감	미국 포함 산유국의 증산기조는 유가를 꺾어 PX 가격도 하방 열릴 것

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	$/bbl	74.2	1.0	8.1	8.7	14.2	61.1
Dubai	$/bbl	75.9	0.9	5.7	3.2	16.1	63.2
Gasoline	$/bbl	84.0	0.7	4.1	(2.8)	4.3	40.9
Diesel	$/bbl	87.5	0.4	3.2	(1.2)	7.1	48.5
Complex margin	$/bbl	5.2	(0.2)	(0.7)	(2.6)	(3.6)	(2.8)
1M lagging	$/bbl	5.3	0.5	4.9	(5.2)	(4.8)	1.3
Petrochemical			%	%	%	%	%
Naphtha	$/t	659	1.0	5.7	(0.8)	8.7	60.0
Butadiene	$/t	1,600	0.6	(1.2)	(7.0)	15.9	73.9
HDPE	$/t	1,350	0.0	(0.4)	(1.5)	2.3	25.0
MEG	$/t	905	1.1	2.8	0.0	(2.7)	13.1
PX	$/t	974	0.8	4.5	(0.4)	5.1	26.2
SM	$/t	1,311	(0.4)	(2.8)	(5.6)	3.4	16.6
Commodity			%	%	%	%	%
Natural Gas	$/mmbtu	2.92	(0.5)	(0.7)	(1.7)	2.7	1.7
Natural rubber	$/t	1,340	(1.5)	0.8	(4.3)	(0.7)	(8.2)
Cotton	C/lbs	85.4	0.5	(0.1)	(8.5)	4.8	13.4

*참고: 정제마진의 변동률은 %가 아닌 $/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	06/25	$/t	1,260	0.0	7.2	(0.4)	44.0
Propylene	06/25	$/t	1,005	(1.0)	(2.7)	5.2	35.4
Benzene	06/25	$/t	805	(3.3)	(5.8)	(5.8)	6.3
Toluene	06/25	$/t	795	(2.5)	(3.6)	10.4	25.2
Xylene	06/25	$/t	825	(0.3)	(1.2)	8.2	34.7
PP	06/25	$/t	1,293	0.0	(0.4)	1.6	24.6
PVC	06/25	$/t	935	0.3	1.6	(3.1)	7.5
ABS	06/25	$/t	2,040	(1.0)	(1.9)	3.6	14.0
SBR	06/25	$/t	1,800	(5.3)	(4.8)	5.9	26.3
SM	06/25	$/t	1,375	(7.9)	(4.5)	6.8	22.2
BPA	06/25	$/t	1,788	0.0	2.9	1.7	22.6
Caustic	06/25	$/t	491	(8.9)	(12.3)	(22.2)	12.2
2-EH	06/25	$/t	1,110	(0.9)	(5.9)	(1.8)	19.4
Caprolactam	06/25	$/t	2,130	(0.9)	1.4	(3.2)	32.3
Solar				%	%	%	%
Polysilicon	06/27	$/kg	11.3	(4.9)	(22.9)	(24.3)	(18.6)
Module	06/27	$/W	0.27	(2.9)	(7.5)	(10.6)	(18.2)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	82.7	0.9	1.7	5.5	10.9	2.5
Shell	EUR	2,629	(0.7)	0.8	3.0	17.7	27.5
Petrochina	CNY	7.71	0.0	5.6	(4.2)	0.1	0.3
Gazprom	RUB	141.0	1.6	3.1	(2.0)	(1.3)	18.3
Petrobras	BRL	17.2	3.6	13.8	(10.9)	(19.7)	41.1
Refinery							
Phillips66	USD	112.3	0.5	0.3	(3.9)	17.1	37.2
Valero	USD	110.8	1.6	(1.3)	(7.2)	19.5	65.2
JX	JPY	770.2	(0.4)	4.0	12.3	20.8	56.7
Neste Oil	EUR	67.2	0.8	2.6	(0.1)	18.7	95.1

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	81.7	0.8	(1.8)	(4.0)	(0.9)	(0.2)
DowDuPont	USD	65.9	(0.3)	(1.6)	3.1	3.5	5.1
SABIC	SAR	126.2	0.0	0.2	2.6	8.4	23.3
Formosa Pla.	TWD	112.5	3.2	2.7	2.3	9.2	21.8
Shin-Etsu	JPY	9,873	(0.8)	(1.1)	(10.7)	(9.2)	(4.3)
Renewable							
Wacker	EUR	112.2	4.2	(1.1)	(22.9)	(15.9)	17.9
First Solar	USD	52.66	1.0	0.0	(23.9)	(25.8)	31.4
GCL-Poly	HKD	0.74	1.4	(2.6)	(14.9)	(23.7)	(8.6)
Tesla Motors	USD	343.0	(2.0)	2.8	20.9	28.9	(4.9)

4. Coverage Summary

	06/29	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	2,326	0.5	(1.3)	(3.4)	(4.9)	(5.7)	(2.4)				* 추정치는 12M fwd 기준임	
KOSPI화학	5,792	(0.3)	(1.0)	(0.3)	(5.0)	(4.6)	6.7				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	333,500	(0.1)	(2.8)	0.9	(13.5)	(17.7)	18.9	매수	450,000	34.9	11.54	1.54
롯데케미칼	348,000	3.1	0.0	(4.1)	(19.6)	(5.4)	5.6	매수	480,000	37.9	10.05	0.98
한화케미칼	21,850	0.0	(1.6)	(16.6)	(26.7)	(30.9)	(28.4)	매수	39,000	78.5	7.78	0.56
금호석유화학	116,500	(0.4)	4.0	15.3	20.9	17.1	58.3	매수	150,000	28.8	11.34	1.75
KCC	328,000	0.0	(0.5)	(4.4)	(5.1)	(13.9)	(22.6)	매수	450,000	37.2	12.01	0.51
OCI	103,000	(4.2)	(6.8)	(21.4)	(34.4)	(24.3)	12.9	매수	180,000	74.8	7.68	0.69
SKC	43,150	(1.6)	(5.3)	11.8	12.8	(8.2)	27.9	매수	50,000	15.9	11.84	1.07
SK이노베이션	202,000	0.2	0.0	1.5	(4.3)	(1.2)	27.8	매수	230,000	13.9	12.33	1.02
S-Oil	109,500	(2.7)	(0.5)	3.3	(8.8)	(6.4)	16.4	매수	140,000	27.9	13.27	1.72
GS	54,400	0.6	(0.5)	(5.6)	(12.4)	(12.5)	(20.4)	매수	80,000	47.1	5.11	0.69
SK가스	93,900	2.0	4.1	(3.1)	(2.2)	(0.3)	(24.0)	매수	130,000	38.4	8.25	0.62
포스코대우	21,400	1.4	4.1	(6.6)	(6.6)	17.9	(3.6)	매수	25,000	16.8	11.37	0.91
LG상사	24,150	1.3	0.6	(8.9)	(11.5)	(11.0)	(20.4)	매수	38,000	57.3	7.88	0.71
한국전력	32,000	(0.6)	(8.3)	(5.2)	(2.6)	(16.1)	(21.6)	매수	45,000	40.6	7.04	0.25
한국가스공사	64,200	2.4	4.1	6.6	32.5	50.9	22.3	매수	60,000	(6.5)	11.19	0.85

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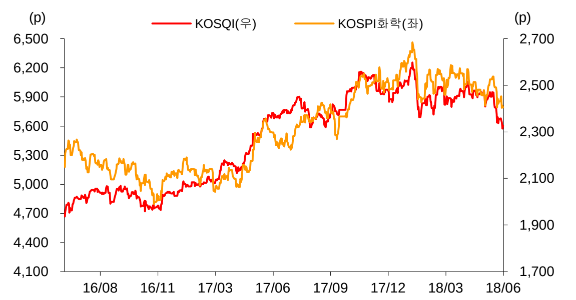
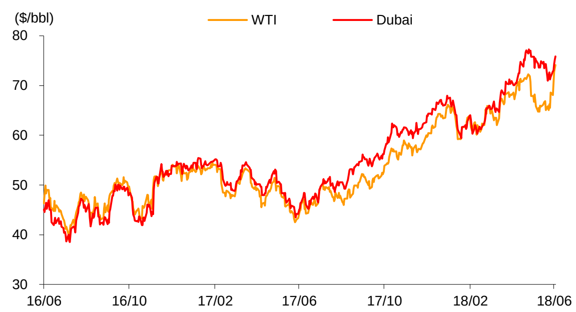
Key Chart

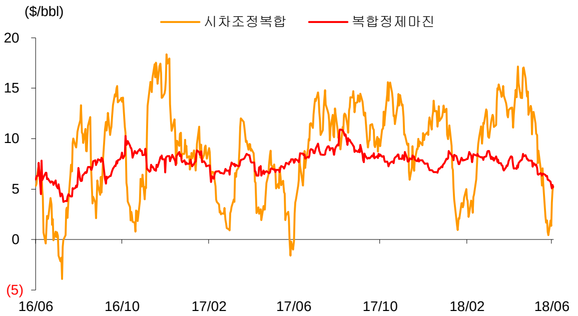
KOSPI/KOSPI화학



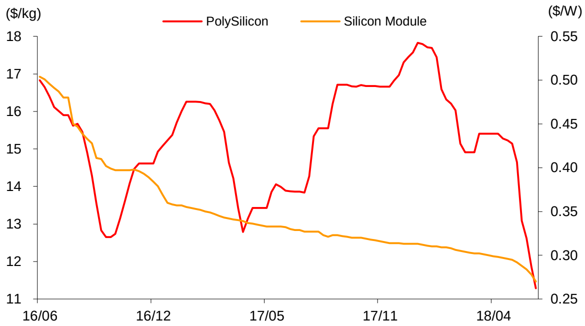
WTI/Dubai



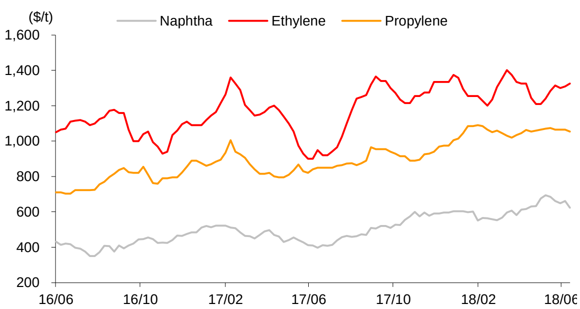
Complex & 1M lagging margin



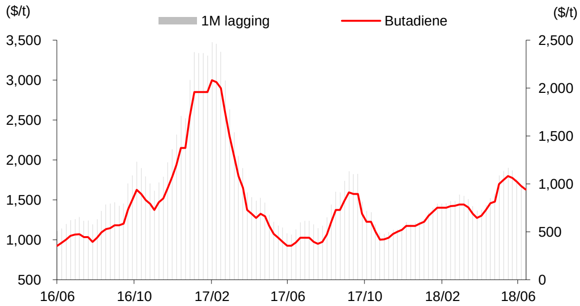
Polysilicon & Module prices



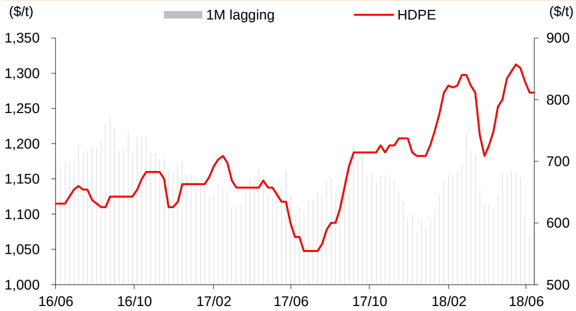
Naphtha/Ethylene/Propylene prices



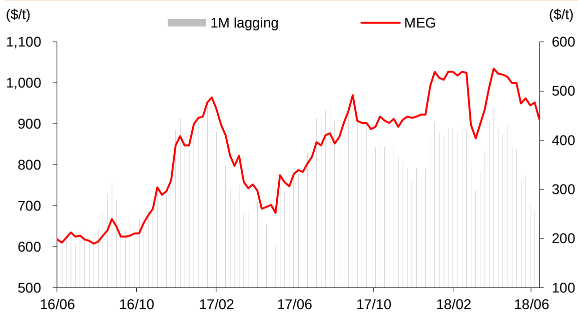
Butadiene price & 1M lagging naphtha spread



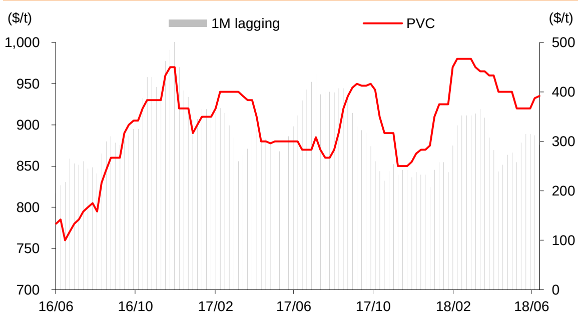
HDPE price & 1M lagging naphtha spread



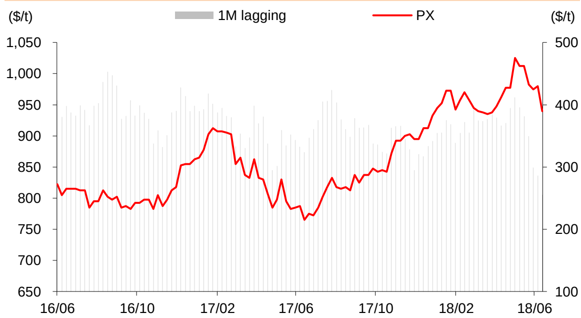
MEG price & 1M lagging naphtha spread



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, 플랫한 모습 보이며 CFR SEA $1,260/mt로 마감
결론	다운스트림 마진이 나빠 TA시즌이 끝나면 가격 하방 열릴 것
세부	
	1) 에틸렌 스팟 수요는 MEG나 PE의 역마진으로 점진적으로 약세 보임
	2) 이번주 아시아 MEG 마진은 -$80~90/mt 수준을 보였음
	3) PE와 에틸렌 스프레드는 -$25/mt 수준으로 BEP인 $160/mt보다 낮았음
	4) 정기보수 시즌으로 스팟 공급이 제한되며 에틸렌 시황은 플랫했음
	5) 다운스트림 마진이 나빠 TA시즌이 끝나면 가격 하방 열릴 것

WTI Comment	(출처: 연합뉴스)
제목	상승세 지속…WTI, 74달러 돌파
상승	미국 정부가 대(對)이란 제재 복원을 선언함
요인	11월 초까지 이란산 원유 수입을 전면 중단할 것을 관련국에게 요구
하락	
요인	

Issue 1	(출처: Platts)
제목	[주간가격] MEG, WoW $25/mt 상승해 CFR China $905/mt로 마감
결론	아직 재고 레벨이 역사적 고점 수준으로 방향성은 하방으로 열려있음
세부	
	1) 중국 내수 가격이 급등함에 따라 상승 마감함
	2) 중국 스팟 내수 가격은 Yuan 400/mt 올라 Yuan 7,160/mt 기록함
	3) 다운스트림 수요 강세와 유가 강세, 위안화 절하에 따라 상승함
	4) 폴리에스터 공장의 가동률은 여전히 90% 이상을 유지하고 있음
	5) 아직 재고 레벨이 역사적 고점 수준으로 방향성은 하방으로 열려있음

Issue 2	(출처: Platts)
제목	[주간가격] BD, WoW $20/mt 하락해 FOB Korea $1,600/mt로 마감
결론	저렴한 중국 내수 물량과 아시아 역내 TA 종료로 다운사이드 열려있음
세부	
	1) 중국 내 수요 부진으로 이번주도 지난주에 이어 하락 마감함
	2) 관계자, "아시아 BD는 아직 바닥을 찾아가고 있음"
	3) 중국 내수 가격이 CFR China보다 저렴해 엔드유저들이 내수 시장 선호
	4) 인도 공장들의 정기보수가 종료되어 아시아 역내 공급도 늘어나는 중
	5) 저렴한 중국 내수 물량과 아시아 역내 TA 종료로 다운사이드 열려있음

Issue 3	(출처: Platts)
제목	[주간가격] SBR, WoW $20/mt 하락해 CFR SEA $1,780/mt로 마감
결론	원재료인 BD 가격 하락이 지속되어야 가동률 오르며 시황 회복할 것
세부	
	1) 중국 내 SBR 공장들 가동률이 낮아 숏티지 대비한 스팟 수요는 있었음
	2) 중국 SBR 공장들은 BD 가격이 높아 역마진에 접어들자 가동률 낮췄음
	3) BD와 SBR이 모두 약세를 보여 바이어들이 관망세를 보이고 있음
	4) 태국 천연고무 가격도 약세를 보여 CFR SEA $1,400/mt 수준 기록함
	5) 원재료인 BD 가격 하락이 지속되어야 가동률 오르며 시황 회복할 것

Issue 4	(출처: Platts)
제목	[주간가격] PX, WoW $42/mt 상승해 FOB Korea $973.67/mt로 마감
결론	미국 포함 산유국의 증산기조는 유가를 꺾어 PX 가격도 하방이 열릴 것
세부	
	1) 원유 가격과 납사 가격이 오르며 PX도 이번주 큰 폭의 상승을 기록함
	2) 이번주 8월 카고는 $985/mt에 거래되었고 9월 카고는 $992/mt에 거래됨
	3) 한화GC 대산 PTA 공장은 27일 재가동 시작해 가동률 100%까지 올림
	4) 7월 PX ACP는 유가 방향성에 대한 논의가 지속되며 조정에 실패함
	5) 미국 포함 산유국의 증산기조는 유가를 꺾어 PX 가격도 하방이 열릴 것

Issue 5	(출처: Platts)
제목	[주간가격] PTA, WoW $15/mt 상승해 CFR China $845/mt로 마감
결론	유가 방향성에 따라 PX 가격 하방이 열려 PTA도 우상향은 어려워 보임
세부	
	1) 중국 내수 가격 급등과 원재료인 PX 가격 상승으로 상승 마감함
	2) 중국 내수 가격은 WoW Yuan 200/mt 상승해 Yuan 5,920으로 마감함
	3) 7월 TA 시즌과 위안화 절하가 최근의 급상승의 큰 이유로 판단됨
	4) 중국 Hanbang PetChem, 인도 MCC PTA는 정기보수에 진입함
	5) 유가 방향성에 따라 PX 가격 하방이 열려 PTA도 우상향은 어려워 보임

Issue 6	(출처: PVinsights)
제목	[주간가격] 태양광 제품, 위안화 약세로 가격에 악영향 미쳐
결론	지속되는 수요 약세로 전반적인 태양광 제품 가격의 하락세 보일 것
세부	
	1) 폴리실리콘 가격은 수요 약세와 위안화 약세 영향으로 가격 재차 하락
	2) Mono-crystalline wafer 급락으로 multi-crystalline도 공급자가 가격 낮춤
	3) Cell은 공급자들이 주문을 제한적으로 받으며 가격이 조금 지지됨
	4) 패널도 바이어들이 펀더멘털과 환율에 주목하며 하락세를 면치 못함
	5) 지속되는 수요 약세로 전반적인 태양광 제품 가격의 하락세 보일 것

Commodity Price Data

Daily Price		Today	1D	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
F/X	**USD/EUR**	0.856	0.864	0.858	0.867	0.813	0.833	0.874	0.833	0.904	0.887	0.827
	Change, %		(1.0)	(0.3)	(1.2)	5.3	2.7	(2.1)	2.7	(5.3)	(3.5)	3.5
	USD/JPY	110.8	110.5	110.0	108.8	106.4	112.7	112.2	112.6	108.8	112.1	108.7
	Change, %		0.2	0.7	1.8	4.1	(1.7)	(1.3)	(1.7)	1.8	(1.2)	1.9
	USD/KRW	1,114.7	1,123.9	1,107.5	1,076.7	1,065.9	1,067.4	1,141.3	1,066.7	1,160.5	1,130.9	1,076.1
	Change, %		(0.8)	0.6	3.5	4.6	4.4	(2.3)	4.5	(4.0)	(1.4)	3.6
Agriculture	**Corn**	350.3	345.0	357.3	400.0	387.8	350.8	359.8	350.8	358.5	359.4	374.7
	Change, %		1.5	(2.0)	(12.4)	(9.7)	(0.1)	(2.6)	(0.1)	(2.3)	(2.5)	(6.5)
	Soybean	858.5	861.3	894.5	1,030.5	1,044.8	951.8	915.5	951.8	987.5	975.9	1,000.2
	Change, %		(0.3)	(4.0)	(16.7)	(17.8)	(9.8)	(6.2)	(9.8)	(13.1)	(12.0)	(14.2)
	Wheat	497.5	479.5	491.3	536.5	451.0	427.0	480.3	427.0	436.4	436.0	476.1
	Change, %		3.8	1.3	(7.3)	10.3	16.5	3.6	16.5	14.0	14.1	4.5
	Rice	11.6	11.4	12.6	11.5	12.4	11.7	11.6	11.7	10.3	11.1	12.2
	Change, %		1.7	(7.9)	1.3	(6.0)	(0.6)	0.2	(0.6)	12.3	5.0	(5.1)
	Oats	250.5	243.0	244.5	244.0	225.0	241.0	265.5	241.0	196.3	252.3	245.6
	Change, %		3.1	2.5	2.7	11.3	3.9	(5.6)	3.9	27.6	(0.7)	2.0
MYR/mt	**Palm Oil**	2,298.0	2,325.0	2,283.0	2,414.0	2,378.0	2,444.0	2,617.0	2,444.0	2,653.8	2,787.3	2,428.5
	Change, %		(1.2)	0.7	(4.8)	(3.4)	(6.0)	(12.2)	(6.0)	(13.4)	(17.6)	(5.4)
	Cocoa	2,476.0	2,418.0	2,484.0	2,497.0	2,556.0	1,892.0	1,822.0	1,892.0	2,854.0	2,005.2	2,392.9
	Change, %		2.4	(0.3)	(0.8)	(3.1)	30.9	35.9	30.9	(13.2)	23.5	3.5
	Cotton	85.4	84.9	85.4	93.2	81.5	78.6	74.0	78.6	65.6	73.5	83.6
	Change, %		0.5	(0.1)	(8.4)	4.8	8.6	15.4	8.6	30.2	16.1	2.2
	Sugar	11.9	11.9	12.1	12.5	12.4	15.2	13.3	15.2	18.2	15.8	12.7
	Change, %		(0.2)	(1.6)	(4.8)	(4.0)	(21.8)	(10.8)	(21.8)	(34.7)	(25.0)	(6.5)
	Coffee	111.5	112.2	113.9	120.3	118.2	126.2	124.8	126.2	136.1	133.0	119.1
	Change, %		(0.6)	(2.1)	(7.3)	(5.6)	(11.6)	(10.6)	(11.6)	(18.0)	(16.2)	(6.4)
Energy	**WTI**	74.2	73.5	68.6	66.7	64.9	60.4	44.9	60.4	43.4	51.0	65.5
	Change, %		1.0	8.1	11.1	14.2	22.7	65.0	22.7	70.9	45.5	13.3
	Brent	79.4	77.9	75.6	75.4	70.3	66.9	47.4	66.9	45.1	54.9	71.2
	Change, %		2.0	5.1	5.4	13.0	18.8	67.5	18.8	76.2	44.8	11.6
	Natural Gas	2.9	2.9	2.9	2.9	2.7	3.0	3.0	3.0	2.6	3.0	2.8
	Change, %		(0.5)	(0.7)	1.7	7.0	(1.0)	(3.9)	(1.0)	14.6	(3.2)	3.0
	Ethanol	1.4	1.4	1.4	1.5	1.5	1.3	1.5	1.3	1.5	1.5	1.4
	Change, %		0.6	0.5	(4.2)	(2.0)	8.0	(3.4)	8.0	(5.9)	(4.8)	(1.0)
	RBOB Gasoline	217.9	213.3	207.1	214.4	201.8	179.9	148.6	179.9	140.0	162.9	198.8
	Change, %		2.2	5.2	1.6	8.0	21.1	46.7	21.1	55.7	33.8	9.6
	Coal	114.4	114.4	114.1	106.9	96.4	100.8	81.0	100.8	65.5	88.2	103.3
	Change, %		0.0	0.3	7.1	18.7	13.5	41.3	13.5	74.8	29.7	10.7
Metal	**Gold**	1,253.2	1,248.3	1,269.4	1,298.9	1,325.5	1,303.1	1,245.5	1,302.6	1,248.5	1,258.6	1,317.8
	Change, %		0.4	(1.3)	(3.5)	(5.5)	(3.8)	0.6	(3.8)	0.4	(0.4)	(4.9)
	Silver	16.1	16.0	16.5	16.4	16.4	16.9	16.6	16.9	17.1	17.1	16.6
	Change, %		0.7	(2.1)	(1.5)	(1.6)	(4.9)	(3.1)	(4.9)	(5.8)	(5.6)	(3.2)
	Copper	6,626.0	6,623.0	6,789.0	6,860.0	6,714.0	7,247.0	5,940.0	7,247.0	4,872.0	6,199.4	6,942.5
	Change, %		0.0	(2.4)	(3.4)	(1.3)	(8.6)	11.5	(8.6)	36.0	6.9	(4.6)
	Nickel	1,022.5	1,011.8	1,038.8	1,004.8	841.4	782.9	598.1	809.1	646.4	680.2	914.0
	Change, %		1.1	(1.6)	1.8	21.5	30.6	71.0	26.4	58.2	50.3	11.9
	Zinc	2,854.0	2,897.0	2,917.0	3,089.0	3,274.0	3,319.0	2,755.5	3,319.0	2,097.5	2,888.5	3,243.1
	Change, %		(1.5)	(2.2)	(7.6)	(12.8)	(14.0)	3.6	(14.0)	36.1	(1.2)	(12.0)
	Lead	2,411.8	2,400.3	2,418.0	2,444.5	2,399.0	2,482.8	2,307.3	2,482.8	1,868.3	2,315.7	2,451.3
	Change, %		0.5	(0.3)	(1.3)	0.5	(2.9)	4.5	(2.9)	29.1	4.1	(1.6)
	Aluminum	14,065.0	14,125.0	14,140.0	14,695.0	13,765.0	15,020.0	13,900.0	15,020.0	12,373.5	14,556.6	14,381.3
	Change, %		(0.4)	(0.5)	(4.3)	2.2	(6.4)	1.2	(6.4)	13.7	(3.4)	(2.2)
	Cobalt	77,550.0	77,250.0	79,150.0	90,500.0	93,550.0	75,205.0	59,796.0	75,205.0	25,480.1	55,906.9	84,720.8
	Change, %		0.4	(2.0)	(14.3)	(17.1)	3.1	29.7	3.1	204.4	38.7	(8.5)
	HR Coil	910.0	911.0	902.0	881.0	859.0	662.0	629.0	662.0	519.3	620.1	815.8
	Change, %		(0.1)	0.9	3.3	5.9	37.5	44.7	37.5	75.2	46.8	11.6
	Scrap	400.0	400.0	400.0	397.0	400.0	367.0	350.0	367.0	275.7	344.7	389.0
	Change, %		0.0	0.0	0.8	0.0	9.0	14.3	9.0	45.1	16.0	2.8

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

SK Energy Daily

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Refining Price Data

Daily Price		06/29	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	**WTI**	74.2	73.5	68.6	68.2	64.9	60.4	46.0	53.7	43.4	50.9	65.4
	Change, %		*1.0*	*8.1*	*8.7*	*14.2*	*22.7*	*61.1*	*38.0*	*71.0*	*45.7*	*13.3*
	Dubai	75.9	75.2	71.8	73.5	65.3	64.3	46.5	53.8	41.3	53.1	68.1
	Change, %		*0.9*	*5.7*	*3.2*	*16.1*	*17.9*	*63.2*	*40.9*	*83.7*	*42.9*	*11.4*
Crude Oil Product	**Gasoline(휘발유)**	84.0	83.4	80.6	86.3	80.5	76.4	59.6	69.8	56.3	68.0	81.0
	Change, %		*0.7*	*4.1*	*(2.8)*	*4.3*	*9.8*	*40.9*	*20.2*	*49.2*	*23.4*	*3.6*
	Kerosene(등유)	88.3	87.7	84.9	88.7	81.9	79.4	57.9	66.4	52.9	65.2	83.7
	Change, %		*0.8*	*4.1*	*(0.4)*	*7.8*	*11.2*	*52.5*	*33.0*	*67.0*	*35.4*	*5.5*
	Diesel(경유)	87.5	87.1	84.7	88.6	81.7	78.7	58.9	65.5	52.1	65.6	82.8
	Change, %		*0.4*	*3.2*	*(1.2)*	*7.1*	*11.2*	*48.5*	*33.6*	*67.9*	*33.4*	*5.7*
	Bunker-C	72.1	71.8	67.7	68.2	58.0	58.1	46.0	52.1	35.5	49.7	61.9
	Change, %		*0.5*	*6.5*	*5.8*	*24.2*	*24.1*	*56.8*	*38.5*	*102.9*	*45.2*	*16.4*
	Naphtha	72.3	71.5	68.3	73.3	66.6	67.6	44.4	53.5	42.6	53.7	67.2
	Change, %		*1.1*	*5.9*	*(1.4)*	*8.5*	*7.0*	*63.0*	*35.3*	*69.8*	*34.5*	*7.6*
Dubai Spread	**Gasoline(휘발유)**	8.1	8.2	8.9	12.8	15.2	12.1	13.1	16.0	14.9	14.9	12.9
	Change		*(0.1)*	*(0.8)*	*(4.7)*	*(7.1)*	*(4.0)*	*(5.0)*	*(7.9)*	*(6.9)*	*(6.8)*	*(4.8)*
	Kerosene(등유)	12.5	12.5	13.1	15.2	16.6	15.1	11.4	12.6	11.6	12.1	15.6
	Change		*(0.0)*	*(0.6)*	*(2.7)*	*(4.2)*	*(2.6)*	*1.0*	*(0.1)*	*0.9*	*0.3*	*(3.2)*
	Diesel(경유)	11.6	11.9	13.0	15.0	16.4	14.4	12.4	11.7	10.8	12.5	14.7
	Change		*(0.3)*	*(1.3)*	*(3.4)*	*(4.7)*	*(2.7)*	*(0.8)*	*(0.1)*	*0.8*	*(0.9)*	*(3.1)*
	Bunker-C	(3.8)	(3.4)	(4.1)	(5.4)	(7.3)	(6.3)	(0.5)	(1.8)	(5.8)	(3.4)	(6.2)
	Change		*(0.3)*	*0.3*	*1.6*	*3.5*	*2.5*	*(3.3)*	*(2.0)*	*2.0*	*(0.3)*	*2.4*
	Naphtha	(3.6)	(3.7)	(3.5)	(0.2)	1.3	3.3	(2.1)	(0.4)	1.3	0.6	(0.9)
	Change		*0.1*	*(0.1)*	*(3.3)*	*(4.9)*	*(6.8)*	*(1.4)*	*(3.2)*	*(4.8)*	*(4.2)*	*(2.7)*
Refining Margin	**Simple(단순)**	1.2	1.5	1.7	2.4	2.5	2.1	4.2	3.8	1.9	3.2	2.1
	Change		*(0.2)*	*(0.4)*	*(1.1)*	*(1.3)*	*(0.9)*	*(3.0)*	*(2.6)*	*(0.7)*	*(1.9)*	*(0.9)*
	Complex(복합)	5.2	5.4	5.9	7.8	8.8	7.5	8.0	8.3	7.0	8.0	7.5
	Change		*(0.2)*	*(0.7)*	*(2.6)*	*(3.6)*	*(2.3)*	*(2.8)*	*(3.1)*	*(1.8)*	*(2.8)*	*(2.3)*
	Complex(lagging)	5.3	4.8	0.4	10.4	10.1	10.3	4.0	18.0	8.5	8.9	9.7
	Change		*0.5*	*4.9*	*(5.2)*	*(4.8)*	*(5.1)*	*1.3*	*(12.7)*	*(3.2)*	*(3.7)*	*(4.4)*

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

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Petrochemical Price Data

Daily Price			06/29	06/28	06/27	06/26	06/25	06/22	06/21	06/20	06/19	06/18
Spot Price	**Naphtha**	CFR Japan	658.8	652.4	642.8	632.8	632.0	623.5	619.5	634.0	632.0	625.5
	Ethylene	CFR SE Asia	1,260.0	1,260.0	1,260.0	1,260.0	1,260.0	1,260.0	1,260.0	1,260.0	1,260.0	1,260.0
	Propylene	FOB Korea	1,055.0	1,050.0	1,050.0	1,050.0	1,050.0	1,060.0	1,060.0	1,070.0	1,070.0	1,070.0
	Butadiene	FOB Korea	1,600.0	1,590.0	1,590.0	1,590.0	1,620.0	1,620.0	1,640.0	1,640.0	1,670.0	1,680.0
	HDPE	CFR FE Asia	1,350.0	1,350.0	1,350.0	1,350.0	1,355.0	1,355.0	1,355.0	1,355.0	1,355.0	1,360.0
	LDPE	CFR FE Asia	1,175.0	1,175.0	1,175.0	1,175.0	1,190.0	1,190.0	1,190.0	1,190.0	1,190.0	1,190.0
	LLDPE	CFR FE Asia	1,150.0	1,150.0	1,150.0	1,150.0	1,160.0	1,160.0	1,160.0	1,165.0	1,165.0	1,165.0
	MEG	CFR China	905.0	895.0	895.0	893.0	885.0	880.0	882.0	880.0	885.0	922.0
	PP	CFR FE Asia	1,240.0	1,240.0	1,240.0	1,245.0	1,245.0	1,245.0	1,245.0	1,245.0	1,245.0	1,250.0
	PX	CFR China	973.7	965.7	964.7	942.7	936.2	931.7	927.7	937.7	935.3	944.3
	PTA	CFR China	845.0	845.0	835.0	830.0	830.0	830.0	830.0	830.0	839.0	842.0
	Benzene	FOB Korea	813.7	817.7	814.7	808.0	811.0	800.0	800.7	807.7	806.7	812.7
	Toluene	FOB Korea	746.0	744.0	736.0	728.0	725.0	725.0	732.0	734.0	752.0	769.0
	Xylene	FOB Korea	831.5	819.5	819.5	792.5	787.5	783.5	778.5	783.5	785.5	793.5
	SM	FOB Korea	1,311.0	1,316.5	1,332.0	1,347.0	1,362.0	1,349.0	1,342.0	1,339.0	1,342.0	1,394.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	**Naphtha**	CFR Japan	623.5	661.5	684.5	596.0	563.5	397.5	484.5	399.5	493.5	611.9
	Change, %			(5.7)	(8.9)	4.6	10.6	56.9	28.7	56.1	26.3	1.9
	Ethylene	CFR SE Asia	1,260.0	1,260.0	1,175.0	1,265.0	1,165.0	875.0	990.0	1,040.9	1,090.9	1,232.4
	Change, %			0.0	7.2	(0.4)	8.2	44.0	27.3	21.0	15.5	2.2
	Propylene	CFR SE Asia	1,005.0	1,015.0	1,032.5	955.0	1,005.0	742.5	815.0	705.7	823.6	1,055.9
	Change, %			(1.0)	(2.7)	5.2	0.0	35.4	23.3	42.4	22.0	(4.8)
	Butadiene	CFR SE Asia	1,580.0	1,625.0	1,750.0	1,355.0	1,370.0	915.0	2,100.0	1,116.8	1,481.1	1,417.0
	Change, %			(2.8)	(9.7)	16.6	15.3	72.7	(24.8)	41.5	6.7	11.5
	Benzene	CFR SE Asia	805.0	832.5	855.0	855.0	925.0	757.5	822.5	646.7	838.8	873.9
	Change, %			(3.3)	(5.8)	(5.8)	(13.0)	6.3	(2.1)	24.5	(4.0)	(7.9)
	Toluene	CFR SE Asia	795.0	815.0	825.0	720.0	750.0	635.0	690.0	630.5	689.5	765.2
	Change, %			(2.5)	(3.6)	10.4	6.0	25.2	15.2	26.1	15.3	3.9
	Xylene	CFR SE Asia	825.0	827.5	835.0	762.5	760.0	612.5	675.0	627.7	668.8	778.4
	Change, %			(0.3)	(1.2)	8.2	8.6	34.7	22.2	31.4	23.4	6.0
Spread	**Ethylene**	-Naphtha	636.5	598.5	490.5	669.0	601.5	477.5	505.5	641.4	597.4	620.5
	Change, %			6.3	29.8	(4.9)	5.8	33.3	25.9	(0.8)	6.5	2.6
	Propylene	-Naphtha	381.5	353.5	348.0	359.0	441.5	345.0	330.5	306.2	330.1	444.0
	Change, %			7.9	9.6	6.3	(13.6)	10.6	15.4	24.6	15.6	(14.1)
	Butadiene	-Naphtha	956.5	963.5	1,065.5	759.0	806.5	517.5	1,615.5	717.3	987.6	805.1
	Change, %			(0.7)	(10.2)	26.0	18.6	84.8	(40.8)	33.3	(3.1)	18.8
	Benzene	-Naphtha	181.5	171.0	170.5	259.0	361.5	360.0	338.0	247.2	345.3	262.0
	Change, %			6.1	6.5	(29.9)	(49.8)	(49.6)	(46.3)	(26.6)	(47.4)	(30.7)
	Toluene	-Naphtha	171.5	153.5	140.5	124.0	186.5	237.5	205.5	231.0	196.0	153.3
	Change, %			11.7	22.1	38.3	(8.0)	(27.8)	(16.5)	(25.8)	(12.5)	11.9
	Xylene	-Naphtha	201.5	166.0	150.5	166.5	196.5	215.0	190.5	228.2	175.3	166.5
	Change, %			21.4	33.9	21.0	2.5	(6.3)	5.8	(11.7)	14.9	21.1

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

SK Energy Daily

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Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	HDPE	CFR SE Asia	1,272.5	1,272.5	1,312.5	1,272.5	1,282.5	1,067.5	1,142.5	1,134.6	1,142.5	1,259.2
	Change, %			0.0	(3.0)	0.0	(0.8)	19.2	11.4	12.2	11.4	1.1
	MEG	CFR SE Asia	912.5	952.5	950.0	900.0	1,027.5	782.5	847.5	660.8	850.6	982.7
	Change, %			(4.2)	(3.9)	1.4	(11.2)	16.6	7.7	38.1	7.3	(7.1)
	PVC	CFR SE Asia	935.0	932.5	920.0	965.0	980.0	870.0	920.0	823.4	899.9	943.1
	Change, %			0.3	1.6	(3.1)	(4.6)	7.5	1.6	13.6	3.9	(0.9)
	PP	CFR SE Asia	1,292.5	1,292.5	1,297.5	1,272.5	1,278.5	1,037.5	1,032.5	978.4	1,099.6	1,260.8
	Change, %			0.0	(0.4)	1.6	1.1	24.6	25.2	32.1	17.5	2.5
	2-EH	CFR Korea	1,110.0	1,120.0	1,180.0	1,130.0	1,080.0	930.0	865.0	772.4	970.0	1,119.6
	Change, %			(0.9)	(5.9)	(1.8)	2.8	19.4	28.3	43.7	14.4	(0.9)
	ABS	CFR SE Asia	2,040.0	2,060.0	2,080.0	1,970.0	2,060.0	1,790.0	1,635.0	1,347.1	1,844.7	2,034.8
	Change, %			(1.0)	(1.9)	3.6	(1.0)	14.0	24.8	51.4	10.6	0.3
	SBR	CFR SE Asia	1,800.0	1,900.0	1,890.0	1,700.0	1,800.0	1,425.0	2,000.0	1,483.0	1,980.5	1,752.0
	Change, %			(5.3)	(4.8)	5.9	0.0	26.3	(10.0)	21.4	(9.1)	2.7
	SM	CFR SE Asia	1,375.0	1,492.5	1,440.0	1,287.5	1,442.5	1,125.0	1,205.0	1,064.6	1,253.8	1,403.3
	Change, %			(7.9)	(4.5)	6.8	(4.7)	22.2	14.1	29.2	9.7	(2.0)
	Caustic	FOB NEA	491.0	539.0	560.0	631.0	571.0	437.5	422.5	316.6	491.2	582.2
	Change, %			(8.9)	(12.3)	(22.2)	(14.0)	12.2	16.2	55.1	(0.0)	(15.7)
	PX	CFR SE Asia	940.0	980.0	1,012.5	937.5	970.0	765.0	855.0	790.4	844.4	963.6
	Change, %			(4.1)	(7.2)	0.3	(3.1)	22.9	9.9	18.9	11.3	(2.4)
	PO	CFR China	1,787.5	1,787.5	1,737.5	1,757.5	1,955.0	1,457.5	1,562.5	1,396.8	1,601.2	1,887.8
	Change, %			0.0	2.9	1.7	(8.6)	22.6	14.4	28.0	11.6	(5.3)
	Caprolactam	CFR SE Asia	2,130.0	2,150.0	2,100.0	2,200.0	2,060.0	1,610.0	1,850.0	1,344.9	1,936.4	2,119.0
	Change, %			(0.9)	1.4	(3.2)	3.4	32.3	15.1	58.4	10.0	0.5
	PTA	CFR SE Asia	845.0	857.5	850.0	785.0	790.0	625.0	642.5	613.7	667.8	799.6
	Change, %			(1.5)	(0.6)	7.6	7.0	35.2	31.5	37.7	26.5	5.7
Spread	HDPE		649.0	611.0	628.0	676.5	719.0	670.0	658.0	735.1	649.0	647.3
	Change, %			6.2	3.3	(4.1)	(9.7)	(3.1)	(1.4)	(11.7)	(0.0)	0.3
	MEG		289.0	291.0	265.5	304.0	464.0	385.0	363.0	261.3	357.1	370.8
	Change, %			(0.7)	8.9	(4.9)	(37.7)	(24.9)	(20.4)	10.6	(19.1)	(22.1)
	PVC		311.5	271.0	235.5	369.0	416.5	472.5	435.5	423.9	406.4	331.2
	Change, %			14.9	32.3	(15.6)	(25.2)	(34.1)	(28.5)	(26.5)	(23.4)	(5.9)
	PP		669.0	631.0	613.0	676.5	715.0	640.0	548.0	578.9	606.1	648.9
	Change, %			6.0	9.1	(1.1)	(6.4)	4.5	22.1	15.6	10.4	3.1
	2-EH		486.5	458.5	495.5	534.0	516.5	532.5	380.5	372.9	476.5	507.7
	Change, %			6.1	(1.8)	(8.9)	(5.8)	(8.6)	27.9	30.5	2.1	(4.2)
	ABS		1,416.5	1,398.5	1,395.5	1,374.0	1,496.5	1,392.5	1,150.5	947.6	1,351.2	1,422.9
	Change, %			1.3	1.5	3.1	(5.3)	1.7	23.1	49.5	4.8	(0.4)
	SBR	BD spread	220.0	275.0	140.0	345.0	430.0	510.0	(100.0)	366.2	499.4	335.0
	Change, %			(20.0)	57.1	(36.2)	(48.8)	(56.9)	(320.0)	(39.9)	(55.9)	(34.3)
	SM		751.5	831.0	755.5	691.5	879.0	727.5	720.5	665.1	760.3	791.4
	Change, %			(9.6)	(0.5)	8.7	(14.5)	3.3	4.3	13.0	(1.2)	(5.0)
	Caustic											
	Change, %											
	PX		316.5	318.5	328.0	341.5	406.5	367.5	370.5	390.9	351.0	351.7
	Change, %			(0.6)	(3.5)	(7.3)	(22.1)	(13.9)	(14.6)	(19.0)	(9.8)	(10.0)
	PO	propylene sprea	782.5	772.5	705.0	802.5	950.0	715.0	747.5	691.1	777.6	831.9
	Change, %			1.3	11.0	(2.5)	(17.6)	9.4	4.7	13.2	0.6	(5.9)
	Caprolactam	benzene spread	1,325.0	1,317.5	1,245.0	1,345.0	1,135.0	852.5	1,027.5	698.2	1,097.6	1,245.1
	Change, %			0.6	6.4	(1.5)	16.7	55.4	29.0	89.8	20.7	6.4
	PTA	px spread	187.0	171.5	141.3	128.8	111.0	89.5	44.0	60.4	76.7	125.1
	Change, %			9.0	32.4	45.2	68.5	108.9	325.0	209.5	143.8	49.5

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	06/29	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	65.9	(0.3)	(1.6)	3.1	3.5	(7.4)	5.1	(7.4)	168,245	17.7	14.9	1.8	1.7	10.2	9.2
Eastman	USD	100.0	0.3	(2.1)	(4.1)	(5.3)	7.9	19.9	7.9	13,550	11.6	10.7	2.5	2.2	8.7	8.1
BASF	EUR	81.7	0.8	(1.8)	(4.0)	(0.9)	(10.9)	(0.2)	(10.9)	101,214	14.6	13.6	2.4	2.2	7.8	7.4
Akzo Nobel	EUR	73.3	(0.2)	(2.0)	(3.6)	(4.5)	0.4	(4.2)	0.4	22,073	17.0	15.8	3.0	2.8	9.3	8.8
Arkema	EUR	101.4	1.6	(0.5)	(3.6)	(4.3)	(0.1)	9.3	(0.1)	9,270	13.2	12.2	1.7	1.6	6.3	6.0
Lanxess	EUR	66.8	2.0	(2.7)	(1.7)	7.4	0.8	0.1	0.8	7,282	15.5	13.1	2.1	1.9	9.3	8.2
Sumitomo Chemical	JPY	628	0.8	2.6	(5.0)	3.3	(22.5)	0.2	(22.5)	11,911	10.1	10.5	1.3	1.2	7.4	8.0
Mitsubishi Chemical	JPY	927	2.0	3.4	(7.9)	(9.1)	(25.0)	(0.5)	(25.0)	16,544	9.2	8.7	1.3	1.2	6.3	6.1
Shin-Etsu Chemical	JPY	9,873	(0.8)	(1.1)	(10.7)	(9.2)	(13.8)	(4.3)	(13.8)	43,948	18.5	16.6	1.9	1.8	8.1	7.4
Asahi Kasei	JPY	1,408	(0.0)	1.0	(4.2)	0.7	(3.1)	15.4	(3.1)	18,109	14.4	13.6	1.5	1.4	7.4	7.0
JSR	JPY	1,886	1.0	3.7	(10.7)	(20.2)	(15.0)	(3.1)	(15.0)	4,455	14.5	13.4	1.2	1.1	7.7	7.2
Nitto Denko	JPY	8,383	0.6	1.2	(4.4)	6.0	(16.3)	(10.5)	(16.3)	15,450	15.7	14.6	2.1	1.9	7.3	7.0
SABIC	SAR	126.2	0.0	0.2	2.6	8.4	23.9	23.3	24.4	80,773	14.2	13.7	1.7	1.7	7.3	7.1
Yansab	SAR	74.5	0.0	2.8	2.5	2.0	28.0	33.5	26.3	8,861	13.7	13.9	2.2	1.9	9.0	8.9
Formosa Plastics	TWD	112.5	3.2	2.7	2.3	9.2	14.0	21.8	14.0	21,114	14.4	13.9	1.8	1.8	18.9	19.2
Formosa Fiber	TWD	121.5	3.4	3.4	3.4	11.5	18.0	27.8	18.0	20,511	13.7	13.4	1.7	1.7	11.6	11.5
Nan Ya Plastics	TWD	87.2	3.2	3.1	1.4	6.6	11.9	15.6	11.9	20,648	14.8	15.3	1.7	1.7	16.2	16.4
Sinopec Shanghai	CNY	5.69	0.7	(0.2)	(2.6)	(5.5)	(10.1)	(13.7)	(10.1)	9,462	12.0	12.6	2.2	2.0	6.8	7.3
Sinopec Yizheng(Fibe	CNY	1.92	1.1	3.2	(10.3)	(9.9)	(28.1)	(42.5)	(28.1)	5,394	50.4	66.3	5.3	5.0	13.9	10.3
Reliance	INR	972	2.9	(4.0)	6.0	10.2	5.6	39.6	6.9	93,404	14.4	12.9	1.7	1.5	9.4	8.7
Industries Qatar	QAR	107.0	0.0	0.1	(1.2)	1.8	9.2	12.0	10.3	16,144	14.5	13.9	1.6	1.5	46.4	27.2
PTT Chemical	THB	73.0	(4.3)	(10.2)	(17.0)	(23.0)	(14.1)	6.6	(14.1)	11,766	10.7	10.4	1.4	1.3	5.5	5.4
Petronas	MYR	8.4	0.1	0.1	1.2	3.2	9.2	18.1	9.2	15,624	16.1	15.5	2.0	1.9	9.2	8.9
LG화학	KRW	333,500	(0.1)	(2.8)	(2.9)	(13.6)	(17.7)	18.3	(17.7)	27,313	13.8	12.8	1.8	1.6	6.5	6.1
롯데케미칼	KRW	348,000	3.1	0.0	(6.7)	(19.6)	(5.4)	5.3	(5.4)	11,632	5.5	5.2	0.9	0.8	3.6	3.3
한화케미칼	KRW	21,850	0.0	(1.6)	(19.2)	(26.1)	(30.9)	(27.3)	(30.9)	5,050	5.7	5.5	0.8	0.7	6.7	6.5
금호석유	KRW	116,500	(0.4)	4.0	11.5	20.4	17.1	55.7	17.1	2,969	14.1	11.9	1.6	1.5	9.3	8.4
SKC	KRW	43,150	(1.6)	(5.3)	8.6	13.0	(8.2)	29.0	(8.2)	1,643	9.9	8.7	1.1	1.0	8.8	7.9
국도화학	KRW	61,500	0.5	(2.7)	(2.8)	2.8	(2.5)	19.0	(2.5)	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	6,500	1.2	(3.6)	(3.6)	(33.1)	(14.2)	15.7	(14.2)	4,595	8.2	7.3	1.1	1.0	7.2	6.8
Average			**0.7**	**(0.3)**	**(2.8)**	**(2.5)**	**(3.3)**	**9.5**	**(3.3)**							
Refinery																
Valero	USD	110.8	1.6	(1.3)	(7.2)	19.5	20.6	65.2	20.6	40,608	14.1	13.4	2.0	2.0	6.9	6.9
Conoco Phillips	USD	69.6	1.8	2.7	6.0	17.4	26.8	57.9	26.8	66,136	34.0	25.9	2.2	2.2	7.2	6.7
Formosa Petrochemic	TWD	122.5	1.2	2.1	1.7	3.4	6.1	16.7	6.1	37,040	18.2	18.7	3.2	3.2	11.7	12.1
Andeavor	USD	131.2	0.7	(2.9)	(8.0)	30.4	14.7	40.7	14.7	17,904	12.9	11.4	1.8	1.7	7.3	7.1
Marathon Petroleum	USD	70.2	1.0	(3.4)	(9.6)	(4.0)	6.3	35.4	6.3	32,812	15.0	12.8	2.6	2.7	7.7	7.5
Devon Energy	USD	44.0	0.9	1.6	7.5	38.3	6.2	38.2	6.2	22,192	17.5	14.0	2.7	2.3	8.4	7.4
Hollyfrontier	USD	68.4	2.2	(3.9)	(8.6)	40.1	33.6	144.4	33.6	9,094	16.8	15.2	1.8	1.8	8.0	8.0
Phillips 66	USD	112.3	0.5	0.3	(3.9)	17.1	11.0	37.2	11.0	51,561	15.6	14.5	2.3	2.2	9.0	8.8
Murphy Oil	USD	33.8	0.2	(1.3)	14.4	30.7	8.8	31.7	8.8	5,548	162.4	113.2	1.2	1.1	4.9	4.5
JX Holdings	JPY	770.2	(0.4)	4.0	12.3	20.8	5.9	56.7	5.9	22,130	8.8	8.0	0.9	0.9	7.0	6.6
Idemitsu	JPY	3,950.0	(2.2)	10.5	6.3	(1.3)	(12.7)	22.5	(12.7)	8,360	7.9	7.5	1.0	0.9	6.8	6.8
Nesteoil	EUR	67.2	0.8	2.6	(0.1)	18.7	26.0	95.1	26.0	16,473	16.7	16.7	2.9	2.7	10.2	10.3
Ashland	USD	78.2	0.1	(0.4)	0.4	12.0	9.8	18.5	9.8	4,550	21.6	18.7	1.3	1.3	10.2	9.6
Fuchs Petrolub	EUR	42.2	1.1	(2.0)	(7.4)	(4.2)	(4.5)	(11.9)	(4.5)	7,127	22.1	20.9	4.1	3.7	13.0	12.3
SK이노베이션	KRW	202,000	0.2	0.0	(1.2)	(3.8)	(1.2)	28.3	(1.2)	17,975	7.9	7.7	0.9	0.9	4.9	4.8
S-Oil	KRW	109,500	(2.7)	(0.5)	0.9	(8.4)	(6.4)	17.9	(6.4)	12,400	9.3	8.1	1.8	1.6	7.6	6.6
GS	KRW	54,400	0.6	(0.5)	(8.1)	(11.7)	(12.5)	(20.0)	(12.5)	5,467	6.0	5.5	0.7	0.6	6.9	6.3
Average			**0.4**	**0.4**	**(0.3)**	**12.6**	**8.1**	**39.7**	**8.1**							

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

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SK 증권

Global peers

	Currency	06/29	1D	1W	1M	3M	6M	12M	YTD	MKT CAP	PER		PBR		EV/EBITDA	
										(mil USD)	18E	19E	18E	19E	18E	19E
E&P/Shale																
Exxon Mobil	USD	83	0.9	1.7	5.5	10.9	(1.1)	2.5	(1.1)	350,265	16.9	15.6	1.8	1.7	7.5	7.2
BP	GBP	578	(0.7)	0.3	3.4	20.7	10.6	28.5	10.6	152,469	14.4	13.6	1.5	1.4	5.4	5.3
Shell	EUR	2,629	(0.7)	0.8	3.0	17.7	6.0	27.5	6.0	293,557	12.4	11.3	1.4	1.4	5.9	5.7
Chevron	USD	126	0.6	1.1	4.2	10.9	1.0	21.4	1.0	241,603	16.1	15.4	1.6	1.6	6.4	6.2
Total	EUR	52	0.1	(0.5)	2.4	13.2	13.4	18.9	13.4	162,431	11.8	11.1	1.3	1.2	5.5	5.2
Sinopec	CNY	6	0.6	3.5	(6.6)	(2.0)	5.9	9.6	5.9	116,420	10.4	9.9	1.0	1.0	3.8	3.8
Petrochina	CNY	8	0.0	5.6	(4.2)	0.1	(4.7)	0.3	(4.7)	204,526	25.0	21.2	1.2	1.1	5.5	5.5
CNOOC	CNY	10	1.4	3.7	(9.1)	(16.0)	(9.7)	(12.3)	(9.7)	77,047	9.6	9.7	1.3	1.2	4.1	4.1
Gazprom	RUB	141	1.6	3.1	(2.0)	(1.3)	8.1	18.3	8.1	53,208	3.1	3.2	0.2	0.2	2.6	2.6
Rosneft	RUB	396	(0.1)	1.4	3.4	25.2	35.9	19.0	35.9	66,920	7.6	6.5	0.9	0.8	4.5	4.4
Anadarko	USD	73	(0.4)	(1.2)	8.8	21.3	36.6	61.9	36.6	37,730	25.3	21.6	3.6	3.2	7.0	6.2
Petrobras	BRL	17	3.6	13.8	(10.9)	(19.7)	6.8	41.1	6.8	62,337	6.7	5.8	0.7	0.6	4.2	4.0
Lukoil	USD	4,350	2.8	5.5	3.0	9.0	30.5	51.4	30.5	58,162	5.6	5.8	0.8	0.7	N/A	N/A
Kinder	USD	18	1.1	1.6	10.2	17.3	(2.2)	(7.2)	(2.2)	47,497	20.6	18.2	1.1	1.2	10.7	10.4
Equinor ASA	NOK	216	0.7	1.0	4.2	17.2	23.5	54.8	23.5	88,577	14.2	13.5	2.0	1.8	3.5	3.4
BHP	AUD	34	0.3	4.3	5.0	20.2	14.7	44.4	14.7	128,067	15.5	17.2	2.2	2.1	6.3	6.6
PTT E&P	THB	141	3.3	8.5	7.3	22.7	40.5	62.0	40.5	16,882	13.9	13.2	1.4	1.3	4.2	3.9
Petronas gas	MYR	17	(1.3)	(0.3)	(2.8)	(2.9)	(1.0)	(7.5)	(1.0)	8,491	18.1	17.9	2.6	2.5	10.0	9.9
Chesapeake	USD	5	1.2	3.8	22.4	73.5	32.3	5.6	32.3	4,778	6.4	7.2	#N/A N/A	6.8	6.5	6.3
Noble Energy	USD	35	0.5	(2.2)	(0.1)	16.4	21.1	23.1	21.1	17,091	30.7	22.7	1.5	1.5	7.7	6.5
Average		**0**	**0.8**	**2.8**	**2.3**	**12.7**	**13.4**	**23.2**	**13.4**							
PV																
WACKER	EUR	112.2	4.2	(1.1)	(22.9)	(15.9)	(30.9)	17.9	(30.9)	6,830	16.3	14.5	1.7	1.6	5.7	5.4
GCL-Poly	HKD	0.7	1.4	(2.6)	(14.9)	(23.7)	(47.1)	(8.6)	(47.1)	1,754	6.6	5.8	0.5	0.4	6.4	5.9
SunPower	USD	7.7	(0.9)	(6.8)	(13.1)	(3.9)	(9.0)	(19.2)	(9.0)	1,080	#N/A N/A	#N/A N/A	1.4	1.4	19.3	11.5
Canadian Solar	USD	12.2	(0.6)	(2.0)	(27.7)	(24.8)	(27.4)	(23.5)	(27.4)	717	8.1	8.2	0.7	0.7	7.7	8.3
JA Solar	USD	6.8	0.3	(0.3)	(5.3)	3.8	(8.7)	6.9	(8.7)	324	#N/A N/A	#N/A N/A	1.6	1.8	4.8	6.8
Yingli	USD	1.4	(6.5)	(8.6)	(16.7)	(14.9)	(15.4)	(37.3)	(15.4)	26	#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	52.7	1.0	0.0	(23.9)	(25.8)	(22.0)	31.4	(22.0)	5,517	30.9	17.1	1.0	0.9	9.2	5.0
한화큐셀	USD	6.5	(8.5)	7.0	(10.7)	(14.8)	(8.0)	(12.8)	(8.0)	538	11.5	23.9	#N/A N/A	#N/A N/A	8.1	8.3
OCI	KRW	103,000	(4.2)	(6.8)	(26.4)	(34.8)	(24.3)	12.8	(24.3)	2,206	0.0	10.0	0.0	0.7	0.0	4.6
웅진에너지	KRW	3,540	(3.3)	(9.9)	(33.7)	(46.9)	(56.9)	(50.1)	(56.9)	94	N/A	0.0	0.7	0.0	4.6	0.0
신성솔라에너지	KRW	1,440	(1.4)	(5.9)	(18.2)	(16.8)	(24.8)	(35.7)	(24.8)	224	N/A	0.7	0.0	4.6	0.0	6.8
Average			**(1.7)**	**(3.4)**	**(19.4)**	**(19.9)**	**(25.0)**	**(10.7)**	**(25.0)**							
Gas Company																
Towngas China	HKD	7.6	2.8	2.1	0.5	11.4	21.2	49.2	21.2	2,685	14.8	13.2	1.3	1.2	12.4	11.3
Kulun	HKD	6.9	0.4	(0.7)	(5.2)	1.5	(15.6)	4.2	(15.6)	7,068	9.8	8.5	1.1	1.0	5.7	5.1
Beijing Enterprise	HKD	38.2	0.4	(5.9)	(8.6)	(6.8)	(17.7)	0.8	(17.7)	6,144	6.7	6.0	0.7	0.6	11.8	11.2
ENN Energy	HKD	77.2	9.5	(4.8)	1.1	10.1	38.4	63.6	38.4	10,670	17.2	14.4	3.5	3.0	10.1	8.9
China Resources Gas	HKD	34.0	11.1	6.1	18.1	24.8	19.9	25.9	19.9	9,637	18.0	16.2	3.0	2.6	9.8	8.9
China Gas Holdings	HKD	31.6	4.6	(3.2)	(0.3)	10.5	46.1	97.7	46.1	19,979	20.5	17.2	4.8	4.0	15.6	13.2
Shenzen Gas	HKD	16.2	3.8	(0.2)	(6.0)	(5.5)	9.1	12.0	9.1	4,365	9.9	8.6	1.3	1.2	6.1	5.3
Shann Xi	CNY	7.0	2.5	1.9	(14.3)	1.0	(17.1)	(20.6)	(17.1)	1,175	16.1	14.1	1.3	1.2	#N/A N/A	#N/A N/A
Suntien	HKD	2.3	5.1	(1.7)	(14.1)	2.7	9.2	61.4	9.2	1,070	5.9	5.2	0.7	0.7	8.3	7.1
China Oil & Gas	HKD	0.6	3.4	(7.6)	3.4	(3.2)	(28.2)	13.0	(28.2)	453	8.0	7.1	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Average			**4.4**	**(1.4)**	**(2.5)**	**4.6**	**6.5**	**30.7**	**6.5**							
EV																
LG화학	KRW	333,500	(0.1)	(2.8)	(2.9)	(13.6)	(17.7)	18.3	(17.7)	21,146	12.4	11.3	1.4	1.3	5.8	5.3
삼성SDI	KRW	214,000	(2.7)	(5.7)	1.2	12.0	4.6	27.4	4.6	13,218	20.1	14.6	1.2	1.1	14.0	10.9
Panasonic	JPY	1493.5	1.0	(0.8)	(1.3)	(0.7)	(9.5)	(3.7)	(9.5)	33,071	13.6	12.0	1.9	1.7	5.0	4.6
GS Yuasa	JPY	505.0	2.0	1.4	(2.5)	(11.6)	(10.0)	2.9	(10.0)	1,885	14.6	13.4	1.1	1.1	6.7	6.3
NEC	JPY	3040.0	1.3	(1.5)	0.7	2.7	0.0	3.4	0.0	7,148	23.0	12.9	0.9	0.8	7.3	5.6
BYD Auto	CNY	47.7	3.6	1.8	(10.9)	(14.8)	(26.7)	(5.2)	(26.7)	18,596	27.9	20.9	2.2	2.1	12.4	10.6
Tesla Motors	USD	343.0	(2.0)	2.8	20.9	28.9	10.1	(4.9)	10.1	58,231	#N/A N/A	157.2	11.4	10.6	65.7	22.4
Kandi Technologies	USD	4.3	0.0	(6.6)	(22.7)	(12.4)	(37.5)	0.0	(37.5)	217	#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			**0.4**	**(1.4)**	**(2.2)**	**(1.2)**	**(10.8)**	**4.7**	**(10.8)**							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임