SK Energy Daily

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SK 증권

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1. News Summary (3 page)

News		Conclusion
WTI comment	증산 우려에 급락…WTI 2.7%↓	
Headline	[주간가격] 에틸렌, WoW $35/mt 상승해 CFR SEA $1,260/mt로 마감	SM 수요 강세로 에틸렌 가격이 아직 높게 형성되고 있음
News 1.	[주간가격] MEG, WoW $19/mt 상승해 CFR China $922/mt로 마감	아직 재고 레벨이 역사적 고점 수준으로 방향성은 하방으로 열려있음
News 2.	[주간가격] BD, WoW $45/mt 하락해 FOB Korea $1,680/mt로 마감	중국 SBR 공장들의 가동률이 올라올 때 까지 시황 약세 지속될 전망
News 3.	[주간가격] SBR, 플랫한 모습 보이며 CFR SEA $1,900/mt로 마감	SBR 공장 TA 시즌 진입으로 공급량이 부족해 가격 하방 닫혀있음
News 4.	[주간가격] PX, WoW $2.67/mt 상승해 FOB Korea $971.67/mt로 마감	이번 주 OPEC 회담에서의 석유 공급 방침이 방향성을 명백히 해줄 것

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	$/bbl	65.1	(2.7)	(1.0)	(9.0)	4.4	45.4
Dubai	$/bbl	74.3	0.0	(0.7)	(1.1)	20.4	62.0
Gasoline	$/bbl	85.1	0.0	(0.5)	(4.4)	12.2	46.1
Diesel	$/bbl	88.2	0.0	(0.4)	(2.3)	15.1	52.6
Complex margin	$/bbl	6.5	0.0	0.1	(1.4)	(1.7)	(1.1)
1M lagging	$/bbl	5.5	(1.5)	(3.3)	(8.5)	(4.6)	3.1
Petrochemical			%	%	%	%	%
Naphtha	$/t	654	1.3	1.8	(3.0)	15.5	56.4
Butadiene	$/t	1,680	(2.3)	(3.4)	2.4	17.5	94.2
HDPE	$/t	1,360	0.0	0.0	(0.7)	1.5	24.8
MEG	$/t	922	1.0	1.8	(0.9)	0.5	13.8
PX	$/t	972	0.7	0.1	(4.3)	4.2	24.1
SM	$/t	1,420	(0.8)	1.0	4.0	7.1	25.4
Commodity			%	%	%	%	%
Natural Gas	$/mmbtu	3.02	1.9	4.6	5.0	7.0	4.1
Natural rubber	$/t	1,350	0.0	(3.6)	(4.9)	(6.3)	(6.3)
Cotton	C/lbs	90.7	(2.9)	(4.4)	4.8	9.5	26.2

*참고: 정제마진의 변동률은 %가 아닌 $/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	06/11	$/t	1,215	(0.8)	5.2	(0.4)	42.1
Propylene	06/11	$/t	1,013	(0.2)	(0.2)	1.8	39.7
Benzene	06/11	$/t	855	0.3	(0.3)	(3.1)	12.1
Toluene	06/11	$/t	815	0.0	0.0	13.2	25.4
Xylene	06/11	$/t	840	(1.2)	4.0	9.8	34.4
PP	06/11	$/t	1,283	0.4	1.6	(1.9)	22.4
PVC	06/11	$/t	920	0.0	(2.1)	(6.1)	4.5
ABS	06/11	$/t	2,060	(1.0)	0.5	(0.5)	25.6
SBR	06/11	$/t	1,900	0.0	5.6	8.6	26.7
SM	06/11	$/t	1,525	1.0	8.3	9.1	34.4
BPA	06/11	$/t	1,878	8.1	(0.1)	(4.3)	31.5
Caustic	06/11	$/t	550	0.0	(8.0)	(6.8)	25.7
2-EH	06/11	$/t	1,100	(6.0)	(5.6)	(2.2)	17.0
Caprolactam	06/11	$/t	2,120	0.7	1.0	(1.4)	32.5
Solar				%	%	%	%
Polysilicon	06/13	$/kg	12.6	(3.6)	(17.1)	(15.4)	(9.8)
Module	06/13	$/W	0.28	(1.4)	(4.1)	(6.6)	(14.7)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	80.7	(1.5)	(3.5)	(1.4)	8.4	(1.9)
Shell	EUR	2,522	(3.3)	(3.3)	(6.3)	15.0	21.1
Petrochina	CNY	7.75	0.1	(2.0)	(3.1)	(2.5)	1.3
Gazprom	RUB	137.7	(1.2)	(3.7)	(7.7)	(0.4)	19.3
Petrobras	BRL	15.0	(0.9)	(1.8)	(44.1)	(29.8)	18.6
Refinery							
Phillips66	USD	114.3	(1.1)	(2.2)	(3.4)	21.0	44.5
Valero	USD	115.2	(1.4)	(3.8)	(0.6)	24.7	78.0
JX	JPY	764.0	2.7	7.0	6.1	21.2	57.4
Neste Oil	EUR	66.5	(0.7)	(6.2)	(2.5)	15.0	91.1

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	88.3	0.3	2.8	0.8	5.0	4.1
DowDuPont	USD	67.8	(0.9)	(2.5)	0.9	(0.2)	5.7
SABIC	SAR	126.6	0.0	(0.2)	8.0	14.9	27.9
Formosa Pla.	TWD	106.0	(0.5)	(2.3)	(4.1)	3.9	17.6
Shin-Etsu	JPY	10,430	(3.2)	(7.2)	(8.6)	(7.5)	4.8
Renewable							
Wacker	EUR	116.2	(0.3)	(2.1)	(23.5)	(10.2)	26.7
First Solar	USD	51.06	(4.9)	(3.1)	(30.5)	(25.7)	42.9
GCL-Poly	HKD	0.76	(3.8)	(5.0)	(20.0)	(35.6)	4.1
Tesla Motors	USD	358.2	0.1	12.8	26.0	10.0	(4.6)

4. Coverage Summary

	06/15	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	2,404	(0.8)	(1.9)	(2.3)	(3.6)	(2.6)	1.3				* 추정치는 12M fwd 기준임	
KOSPI화학	5,999	(0.4)	(1.3)	1.2	(2.2)	(0.1)	9.9				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	373,500	0.9	(0.5)	9.2	(9.7)	(4.2)	32.9	매수	450,000	20.5	12.93	1.72
롯데케미칼	365,500	0.7	(4.1)	(3.7)	(14.1)	1.2	6.4	매수	480,000	31.3	10.55	1.03
한화케미칼	24,400	(0.4)	(4.5)	(14.5)	(20.7)	(18.0)	(15.4)	매수	39,000	59.8	8.69	0.62
금호석유화학	104,500	(1.4)	5.2	(3.7)	11.3	12.0	37.3	매수	150,000	43.5	10.17	1.57
KCC	342,000	(0.6)	(2.4)	(5.5)	(3.1)	6.9	(14.8)	매수	450,000	31.6	12.52	0.53
OCI	109,500	(0.9)	(6.8)	(30.0)	(26.0)	(14.5)	19.2	매수	180,000	64.4	8.16	0.73
SKC	41,150	0.9	1.5	5.1	3.3	(3.5)	19.6	매수	50,000	21.5	11.29	1.02
SK이노베이션	214,500	0.7	2.1	6.2	2.9	4.1	34.1	매수	230,000	7.2	13.09	1.08
S-Oil	111,500	1.8	0.0	5.2	(6.7)	(7.9)	16.4	매수	140,000	25.6	13.51	1.75
GS	58,000	(1.9)	(1.0)	(6.0)	(8.1)	(3.0)	(15.7)	매수	80,000	37.9	5.45	0.73
SK가스	96,000	2.6	0.2	(1.3)	0.0	3.0	(25.3)	매수	130,000	35.4	8.43	0.63
포스코대우	23,150	(0.9)	(1.7)	(3.3)	9.7	28.6	(1.3)	매수	25,000	8.0	12.30	0.98
LG상사	26,450	0.2	(1.7)	(6.5)	(2.2)	(2.2)	(17.9)	매수	38,000	43.7	8.63	0.78
한국전력	35,000	1.3	2.8	(3.6)	9.2	(9.6)	(18.3)	매수	45,000	28.6	7.70	0.27
한국가스공사	64,000	5.4	0.2	7.4	36.0	54.2	29.3	매수	60,000	(6.3)	11.15	0.85

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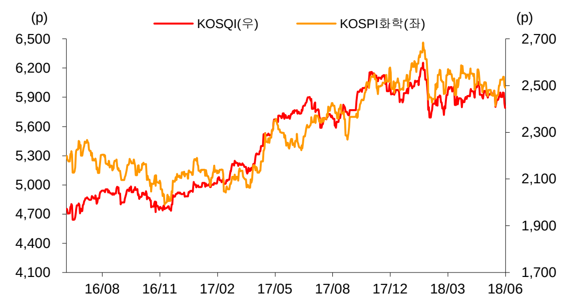
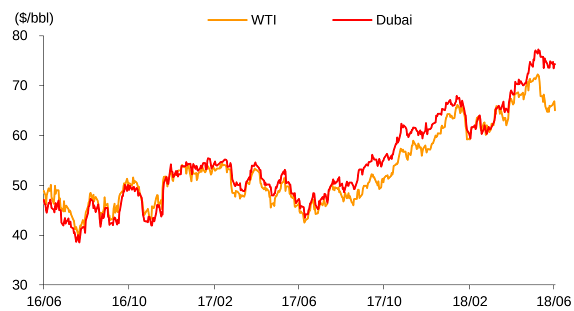
Key Chart

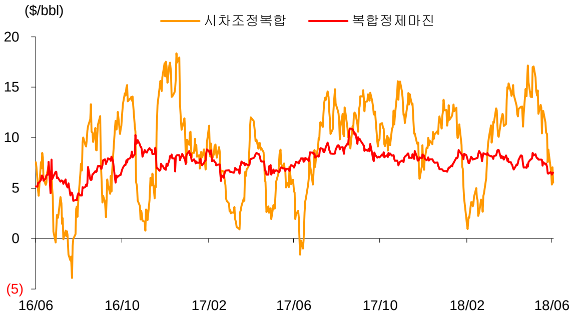
KOSPI/KOSPI화학



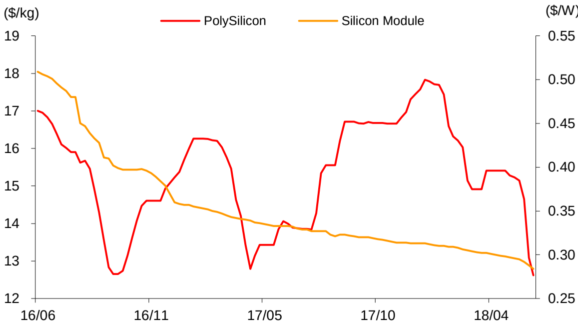
WTI/Dubai



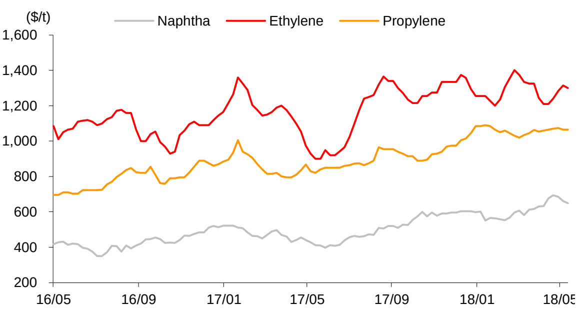
Complex & 1M lagging margin



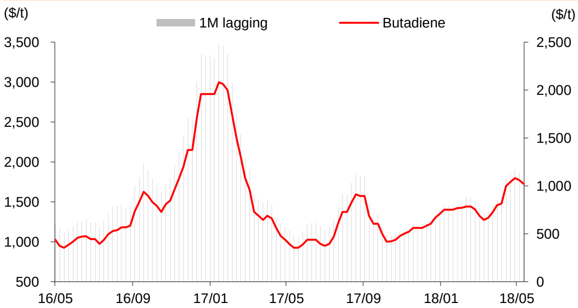
Polysilicon & Module prices



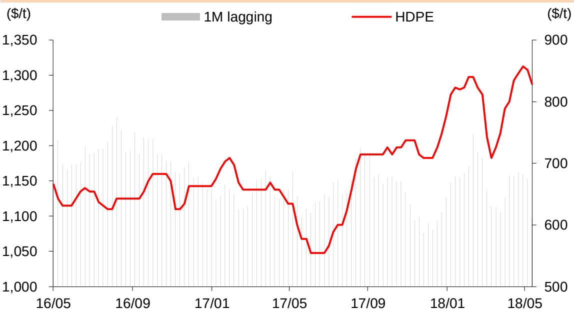
Naphtha/Ethylene/Propylene prices



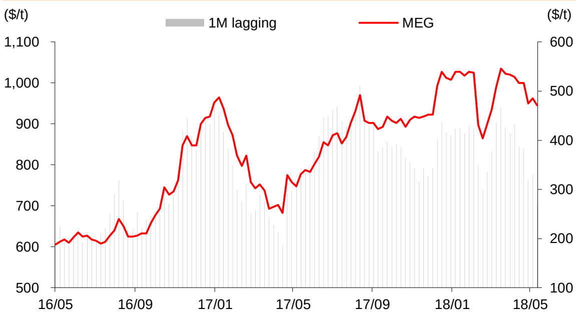
Butadiene price & 1M lagging naphtha spread



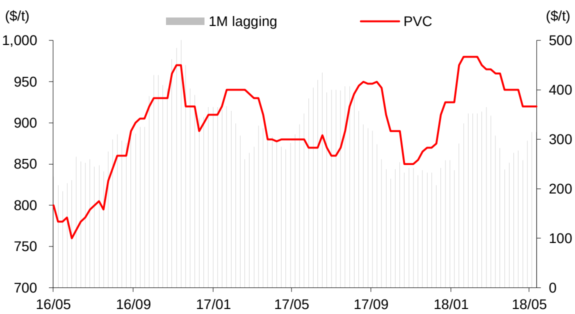
HDPE price & 1M lagging naphtha spread



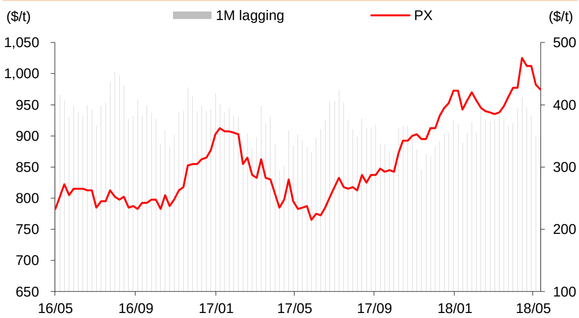
MEG price & 1M lagging naphtha spread



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

News Comment

Headline	(출처: Platts)
제목	[주간가격] 에틸렌, WoW $35/mt 상승해 CFR SEA $1,260/mt로 마감
결론	SM 수요 강세로 에틸렌 가격이 아직 높게 형성되고 있음
세부	
	1) 이번주도 중국 SM을 위한 에틸렌 스팟 수요가 강세를 보였음
	2) 6월 말 CFR China $1,335/mt와 7월 CFR China $1,375/mt의 2개 거래 발생
	3) CFR China SM 가격이 목요일 $11/mt 하락해 아시아 스티렌 시황 약세
	4) 그러나 마진은 $224/mt 수준으로 양호한 수준을 보이며 에틸렌 강세
	5) SM 수요 강세로 에틸렌 가격이 아직 높게 형성되고 있음

WTI Comment	(출처: 연합뉴스)
제목	증산 우려에 급락…WTI 2.7%↓
상승 요인	
하락 요인	사우디와 러시아가 기존 감산합의를 완화, 증산 가능성을 재차 거론

Issue 1	(출처: Platts)
제목	[주간가격] MEG, WoW $19/mt 상승해 CFR China $922/mt로 마감
결론	아직 재고 레벨이 역사적 고점 수준으로 방향성은 하방으로 열려있음
세부	
	1) 중국 재고량이 감소한 것이 가격 상승의 원인이 되었음
	2) 목요일 동중국항 재고는 80만톤 수준으로 WoW 11만톤 감소함
	3) 유럽과 미국 시장에서의 공급 부족이 중동 물량을 유럽으로 향하게 함
	4) 폴리에스터 가동률은 96-97% 수준을 유지해 지난주와 다를 바 없었음
	5) 아직 재고 레벨이 역사적 고점 수준으로 방향성은 하방으로 열려있음

Issue 2	(출처: Platts)
제목	[주간가격] BD, WoW $45/mt 하락해 FOB Korea $1,680/mt로 마감
결론	중국 SBR 공장들의 가동률이 올라올 때 까지 시황 약세 지속될 전망
세부	
	1) SBR 공장 가동률 감소 및 TA 시즌 진입으로 중국에서 수요가 감소함
	2) 일부 ABS 바이어들의 수요는 유지되어 buying interest가 소량 있었음
	3) 500-1,000톤 가량이 CFR $1,500/mt 수준을 보여 동북아에서 arbitrage가능
	4) 대한민국 공급자들은 FOB Korea $1,750/mt 미만 오퍼는 원치 않음
	5) 중국 SBR 공장들의 가동률이 올라올 때 까지 시황 약세 지속될 전망

Issue 3	(출처: Platts)
제목	[주간가격] SBR, 플랫한 모습 보이며 CFR SEA $1,900/mt로 마감
결론	SBR 공장 TA 시즌 진입으로 공급량이 부족해 가격 하방 닫혀있음
세부	
	1) 대부분의 바이어들이 6월 스팟 수요는 채웠고 관망세를 보이고 있음
	2) 이번주 원재료인 스티렌과 BD 가격이 하락하는 모습을 보였음
	3) 관계자, "6월 sales는 CFR SEA $1,900-1,950/mt로 거래 이미 마쳤음"
	4) 인도 시장에서는 다운스트림 수요 강세로 SBR이 높은 가격에 거래됨
	5) SBR 공장 TA 시즌 진입으로 공급량이 부족해 가격 하방 닫혀있음

Issue 4	(출처: Platts)
제목	[주간가격] PX, WoW $2.67/mt 상승해 FOB Korea $971.67/mt로 마감
결론	이번 주 OPEC 회담에서의 석유 공급 방침이 방향성을 명백히 해줄 것
세부	
	1) 업스트림과 다운스트림 시황에서의 긍정적 시그널로 상승 마감했음
	2) 지난 2주간의 유가 급락으로 시장에 불확실성이 커져있는 상황임
	3) 6월 22-23일 빈에서 열리는 OPEC 회담에서의 결과에 주목할 때임
	4) 7월 도착물 카고는 $994/mt에 거래되었음
	5) 이번 주 OPEC 회담에서의 석유 공급 방침이 방향성을 명백히 해줄 것

Issue 5	(출처: Platts)
제목	[주간가격] PTA, WoW $1/mt 상승해 CFR China $842/mt로 마감
결론	라마단 종료로 인도 수요 견조할 것으로 보여 역내 가격 강세 가능
세부	
	1) Zhejiang Yisheng이 지난주 오퍼인 $855/mt를 롤오버함
	2) 동북아에서 인도로의 오퍼는 CFR China에 $20-21/mt 프리미엄 붙음
	3) 인도의 PTA, PET 가격은 전주 대비 플랫한 모습을 보였음
	4) 한화의 force majeure가 지속되고 대만의 수요는 예상보다 견조한 모습
	5) 라마단 종료로 인도 수요 견조할 것으로 보여 역내 가격 강세 가능

Issue 6	(출처: PVinsights)
제목	[주간가격] 수요 약세와 강달러가 태양광 가격 하락 압박중
결론	지속되는 수요 약세로 전반적인 태양광 제품 가격의 하락세 보일 것
세부	
	1) 폴리실리콘 가격이 이번주에도 중국 수요 약세 전망으로 조정 받음
	2) Wacker가 미국 폴리실리콘 생산을 재개해 중국 역외 공급 과잉도 심화
	3) Multi-crystalline wafer도 수요 회복이 더딘 모습을 보이며 보합 마감
	4) 패널도 글로벌 수요가 식으며 이번주에도 하락세를 면치 못함
	5) 지속되는 수요 약세로 전반적인 태양광 제품 가격의 하락세 보일 것

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Commodity Price Data

Daily Price		Today	1D	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
F/X	**USD/EUR**	0.862	0.865	0.850	0.845	0.813	0.851	0.897	0.833	0.904	0.887	0.824
	Change, %		(0.3)	1.4	2.0	6.0	1.2	(4.0)	3.4	(4.7)	(2.8)	4.5
	USD/JPY	110.7	110.6	109.6	110.4	106.3	112.6	110.9	112.6	108.8	112.1	108.6
	Change, %		0.0	1.0	0.3	4.1	(1.7)	(0.2)	(1.7)	1.7	(1.3)	1.9
	USD/KRW	1,097.8	1,082.9	1,075.9	1,073.8	1,065.5	1,089.3	1,124.2	1,066.7	1,160.5	1,130.9	1,073.2
	Change, %		1.4	2.0	2.2	3.0	0.8	(2.3)	2.9	(5.4)	(2.9)	2.3
Agriculture	**Corn**	361.3	363.0	377.8	402.3	386.8	347.5	379.5	350.8	358.5	359.4	376.5
	Change, %		(0.5)	(4.4)	(10.2)	(6.6)	4.0	(4.8)	3.0	0.8	0.5	(4.0)
	Soybean	905.5	927.3	969.3	1,018.8	1,040.8	967.3	934.8	951.8	987.5	975.9	1,009.7
	Change, %		(2.3)	(6.6)	(11.1)	(13.0)	(6.4)	(3.1)	(4.9)	(8.3)	(7.2)	(10.3)
	Wheat	499.5	501.5	520.0	493.5	478.8	418.3	453.8	427.0	436.4	436.0	475.3
	Change, %		(0.4)	(3.9)	1.2	4.3	19.4	10.1	17.0	14.5	14.6	5.1
	Rice	12.4	12.3	11.2	12.5	12.4	11.7	11.5	11.7	10.3	11.1	12.2
	Change, %		0.4	10.6	(1.0)	(0.4)	5.6	7.7	5.8	19.5	11.7	1.0
	Oats	233.5	230.0	240.8	240.3	251.0	254.3	261.3	241.0	196.3	252.3	245.7
	Change, %		1.5	(3.0)	(2.8)	(7.0)	(8.2)	(10.6)	(3.1)	19.0	(7.4)	(5.0)
MYR/mt	**Palm Oil**	2,319.0	2,319.0	2,378.0	2,374.0	2,434.0	2,346.0	2,650.0	2,444.0	2,653.8	2,787.3	2,439.4
	Change, %		0.0	(2.5)	(2.3)	(4.7)	(1.2)	(12.5)	(5.1)	(12.6)	(16.8)	(4.9)
	Cocoa	2,552.0	2,450.0	2,393.0	2,670.0	2,536.0	1,877.0	2,026.0	1,892.0	2,854.0	2,005.2	2,387.6
	Change, %		4.2	6.6	(4.4)	0.6	36.0	26.0	34.9	(10.6)	27.3	6.9
	Cotton	90.7	93.4	94.9	83.8	83.5	75.9	71.9	78.6	65.6	73.5	83.5
	Change, %		(2.9)	(4.4)	8.3	8.6	19.5	26.2	15.4	38.3	23.4	8.7
	Sugar	12.0	12.2	12.3	11.5	12.7	13.7	13.5	15.2	18.2	15.8	12.7
	Change, %		(1.7)	(1.9)	4.3	(5.7)	(12.0)	(10.8)	(20.7)	(33.8)	(24.0)	(5.6)
	Coffee	115.2	115.7	117.3	112.9	117.7	117.0	125.8	126.2	136.1	133.0	119.5
	Change, %		(0.4)	(1.7)	2.0	(2.1)	(1.5)	(8.4)	(8.7)	(15.3)	(13.4)	(3.6)
Energy	**WTI**	65.1	66.9	65.7	71.3	61.2	57.3	44.5	60.4	43.4	51.0	65.1
	Change, %		(2.7)	(1.0)	(8.8)	6.3	13.5	46.3	7.7	50.0	27.7	(0.1)
	Brent	73.4	75.9	76.5	78.4	65.1	63.2	46.9	66.9	45.1	54.9	70.8
	Change, %		(3.3)	(3.9)	(6.4)	12.8	16.1	56.5	9.8	62.9	33.9	3.8
	Natural Gas	3.0	3.0	2.9	2.8	2.7	2.6	3.1	3.0	2.6	3.0	2.8
	Change, %		1.9	4.6	6.6	12.7	15.7	(1.1)	2.3	18.4	(0.0)	6.7
	Ethanol	1.4	1.4	1.4	1.5	1.5	1.3	1.6	1.3	1.5	1.5	1.4
	Change, %		0.3	(2.1)	(5.0)	(6.4)	12.3	(9.9)	7.3	(6.4)	(5.3)	(1.7)
	RBOB Gasoline	202.3	209.1	211.5	220.5	192.5	165.5	143.6	179.9	140.0	162.9	198.0
	Change, %		(3.2)	(4.4)	(8.2)	5.1	22.3	40.9	12.4	44.5	24.2	2.2
	Coal	115.0	115.5	113.9	104.3	97.9	100.0	80.8	100.8	65.5	88.2	102.5
	Change, %		(0.4)	1.0	10.3	17.5	15.0	42.3	14.1	75.7	30.4	12.2
Metal	**Gold**	1,279.6	1,302.3	1,299.4	1,290.5	1,316.3	1,255.5	1,253.9	1,302.6	1,248.5	1,258.6	1,322.1
	Change, %		(1.7)	(1.5)	(0.9)	(2.8)	1.9	2.0	(1.8)	2.5	1.7	(3.2)
	Silver	16.6	17.2	16.8	16.3	16.4	16.1	16.8	16.9	17.1	17.1	16.7
	Change, %		(3.5)	(1.4)	1.9	1.0	3.1	(1.1)	(2.3)	(3.2)	(3.0)	(0.6)
	Copper	7,020.0	7,177.0	7,312.0	6,808.0	6,920.0	6,886.0	5,661.0	7,247.0	4,872.0	6,199.4	6,959.5
	Change, %		(2.2)	(4.0)	3.1	1.4	1.9	24.0	(3.1)	44.1	13.2	0.9
	Nickel	1,030.2	1,032.2	1,043.1	985.4	884.5	739.1	573.4	809.1	646.4	680.2	905.9
	Change, %		(0.2)	(1.2)	4.5	16.5	39.4	79.7	27.3	59.4	51.4	13.7
	Zinc	3,080.0	3,187.0	3,202.0	3,062.0	3,235.0	3,205.0	2,505.0	3,319.0	2,097.5	2,888.5	3,269.5
	Change, %		(3.4)	(3.8)	0.6	(4.8)	(3.9)	23.0	(7.2)	46.8	6.6	(5.8)
	Lead	2,391.0	2,438.8	2,452.8	2,345.5	2,414.8	2,545.5	2,073.5	2,482.8	1,868.3	2,315.7	2,454.2
	Change, %		(2.0)	(2.5)	1.9	(1.0)	(6.1)	15.3	(3.7)	28.0	3.3	(2.6)
	Aluminum	14,350.0	14,530.0	14,760.0	14,570.0	13,795.0	14,165.0	13,415.0	15,020.0	12,373.5	14,556.6	14,402.1
	Change, %		(1.2)	(2.8)	(1.5)	4.0	1.3	7.0	(4.5)	16.0	(1.4)	(0.4)
	Cobalt	79,750.0	81,250.0	82,750.0	90,750.0	87,125.0	72,205.0	56,600.0	75,205.0	25,480.1	55,906.9	85,186.9
	Change, %		(1.8)	(3.6)	(12.1)	(8.5)	10.4	40.9	6.0	213.0	42.6	(6.4)
	HR Coil	904.0	904.0	909.0	875.0	817.0	640.0	589.0	662.0	519.3	620.1	808.9
	Change, %		0.0	(0.6)	3.3	10.6	41.3	53.5	36.6	74.1	45.8	11.8
	Scrap	403.0	408.0	397.0	395.0	425.0	360.0	350.0	367.0	275.7	344.7	388.1
	Change, %		(1.2)	1.5	2.0	(5.2)	11.9	15.1	9.8	46.2	16.9	3.8

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

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Refining Price Data

Daily Price		06/15	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	**WTI**	65.1	66.9	65.7	71.5	62.3	57.3	44.7	53.7	43.4	50.9	65.1
	Change, %		(2.7)	(1.0)	(9.0)	4.4	13.5	45.4	21.1	50.0	27.8	(0.1)
	Dubai	74.3	74.3	74.9	75.1	61.7	61.2	45.9	53.8	41.3	53.1	67.7
	Change, %		0.0	(0.7)	(1.1)	20.4	21.5	62.0	38.0	79.9	40.0	9.8
Crude Oil	**Gasoline(휘발유)**	85.1	85.1	85.5	89.0	75.8	75.3	58.2	69.8	56.3	68.0	81.0
Product	*Change, %*		0.0	(0.5)	(4.4)	12.2	13.0	46.1	21.8	51.2	25.1	5.1
	Kerosene(등유)	87.9	87.9	88.4	90.4	76.4	74.5	57.4	66.4	52.9	65.2	83.5
	Change, %		0.0	(0.6)	(2.7)	15.1	18.0	53.3	32.4	66.3	34.8	5.3
	Diesel(경유)	88.2	88.2	88.5	90.2	76.6	74.7	57.8	65.5	52.1	65.6	82.6
	Change, %		0.0	(0.4)	(2.3)	15.1	18.0	52.6	34.6	69.2	34.4	6.8
	Bunker-C	68.8	68.8	69.8	69.0	56.5	56.0	45.3	52.1	35.5	49.7	61.3
	Change, %		0.0	(1.4)	(0.2)	21.7	22.9	52.0	32.1	93.6	38.5	12.2
	Naphtha	71.8	71.8	71.4	75.5	62.2	64.7	44.9	53.5	42.6	53.7	67.0
	Change, %		0.0	0.6	(4.9)	15.5	11.0	60.0	34.4	68.7	33.7	7.2
Dubai	**Gasoline(휘발유)**	10.8	10.8	10.7	13.9	14.1	14.1	12.4	16.0	14.9	14.9	13.3
Spread	*Change*		0.0	0.1	(3.1)	(3.3)	(3.4)	(1.6)	(5.2)	(4.2)	(4.1)	(2.5)
	Kerosene(등유)	13.6	13.6	13.6	15.3	14.7	13.3	11.5	12.6	11.6	12.1	15.8
	Change		0.0	0.1	(1.6)	(1.0)	0.3	2.1	1.0	2.0	1.5	(2.2)
	Diesel(경유)	13.9	13.9	13.6	15.1	14.8	13.5	11.9	11.7	10.8	12.5	14.9
	Change		0.0	0.2	(1.2)	(1.0)	0.3	2.0	2.2	3.0	1.3	(1.0)
	Bunker-C	(5.5)	(5.5)	(5.1)	(6.1)	(5.2)	(5.2)	(0.6)	(1.8)	(5.8)	(3.4)	(6.4)
	Change		0.0	(0.4)	0.6	(0.3)	(0.3)	(4.9)	(3.8)	0.3	(2.1)	0.8
	Naphtha	(2.5)	(2.5)	(3.4)	0.4	0.4	3.5	(1.0)	(0.4)	1.3	0.6	(0.7)
	Change		0.0	1.0	(2.9)	(2.9)	(6.0)	(1.5)	(2.1)	(3.8)	(3.1)	(1.8)
Refining	**Simple(단순)**	1.5	1.5	1.5	2.1	2.8	2.5	4.0	3.8	1.9	3.2	2.1
Margin	*Change*		0.0	(0.1)	(0.7)	(1.3)	(1.1)	(2.6)	(2.3)	(0.5)	(1.7)	(0.6)
	Complex(복합)	6.5	6.5	6.4	8.0	8.2	7.9	7.6	8.3	7.0	8.0	7.7
	Change		0.0	0.1	(1.4)	(1.7)	(1.4)	(1.1)	(1.7)	(0.4)	(1.5)	(1.2)
	Complex(lagging)	5.5	7.1	8.8	14.0	10.1	7.9	2.4	18.0	8.5	8.9	10.3
	Change		(1.5)	(3.3)	(8.5)	(4.6)	(2.3)	3.1	(12.4)	(3.0)	(3.4)	(4.8)

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			06/14	06/13	06/12	06/11	06/08	06/07	06/06	06/05	06/04	06/01
Spot Price	**Naphtha**	CFR Japan	653.5	645.0	650.5	647.0	649.4	641.9	655.1	655.1	664.1	669.5
	Ethylene	CFR SE Asia	1,260.0	1,260.0	1,235.0	1,235.0	1,225.0	1,225.0	1,225.0	1,220.0	1,220.0	1,220.0
	Propylene	FOB Korea	1,070.0	1,070.0	1,070.0	1,070.0	1,075.0	1,075.0	1,075.0	1,075.0	1,080.0	1,080.0
	Butadiene	FOB Korea	1,680.0	1,720.0	1,720.0	1,720.0	1,725.0	1,740.0	1,740.0	1,740.0	1,740.0	1,740.0
	HDPE	CFR FE Asia	1,360.0	1,360.0	1,360.0	1,360.0	1,360.0	1,360.0	1,360.0	1,360.0	1,360.0	1,365.0
	LDPE	CFR FE Asia	1,190.0	1,190.0	1,190.0	1,190.0	1,200.0	1,200.0	1,200.0	1,200.0	1,200.0	1,205.0
	LLDPE	CFR FE Asia	1,165.0	1,165.0	1,165.0	1,165.0	1,170.0	1,175.0	1,175.0	1,175.0	1,180.0	1,180.0
	MEG	CFR China	922.0	913.0	915.0	900.0	903.0	906.0	900.0	899.0	920.0	920.0
	PP	CFR FE Asia	1,250.0	1,250.0	1,250.0	1,250.0	1,250.0	1,250.0	1,250.0	1,240.0	1,235.0	1,235.0
	PX	CFR China	971.7	965.3	969.0	967.0	969.0	971.0	968.0	969.5	973.0	973.3
	PTA	CFR China	842.0	841.0	843.0	841.0	841.0	840.0	840.0	840.0	840.0	837.0
	Benzene	FOB Korea	835.0	839.0	842.0	841.0	843.0	846.7	850.7	849.7	861.7	866.3
	Toluene	FOB Korea	779.0	780.0	780.0	780.0	781.0	778.0	776.0	774.0	776.0	776.0
	Xylene	FOB Korea	814.0	810.0	812.0	814.0	822.0	827.0	829.0	826.0	826.0	825.0
	SM	FOB Korea	1,420.0	1,431.0	1,447.0	1,413.0	1,408.0	1,406.0	1,393.0	1,389.0	1,469.0	1,454.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2016avg.	2017avg.	2018acc.
Spot Price	**Naphtha**	CFR Japan	649.5	662.0	676.0	553.0	550.5	411.5	484.5	399.5	493.5	609.3
	Change, %			*(1.9)*	*(3.9)*	*17.5*	*18.0*	*57.8*	*34.1*	*62.6*	*31.6*	*6.6*
	Ethylene	CFR SE Asia	1,215.0	1,225.0	1,155.0	1,220.0	1,210.0	855.0	990.0	1,040.9	1,090.9	1,230.0
	Change, %			*(0.8)*	*5.2*	*(0.4)*	*0.4*	*42.1*	*22.7*	*16.7*	*11.4*	*(1.2)*
	Propylene	CFR SE Asia	1,012.5	1,015.0	1,015.0	995.0	1,025.0	725.0	815.0	705.7	823.6	1,055.5
	Change, %			*(0.2)*	*(0.2)*	*1.8*	*(1.2)*	*39.7*	*24.2*	*43.5*	*22.9*	*(4.1)*
	Butadiene	CFR SE Asia	1,675.0	1,725.0	1,650.0	1,390.0	1,350.0	875.0	2,100.0	1,116.8	1,481.1	1,400.9
	Change, %			*(2.9)*	*1.5*	*20.5*	*24.1*	*91.4*	*(20.2)*	*50.0*	*13.1*	*19.6*
	Benzene	CFR SE Asia	855.0	852.5	857.5	882.5	910.0	762.5	822.5	646.7	838.8	878.7
	Change, %			*0.3*	*(0.3)*	*(3.1)*	*(6.0)*	*12.1*	*4.0*	*32.2*	*1.9*	*(2.7)*
	Toluene	CFR SE Asia	815.0	815.0	815.0	720.0	760.0	650.0	690.0	630.5	689.5	761.7
	Change, %			*0.0*	*0.0*	*13.2*	*7.2*	*25.4*	*18.1*	*29.3*	*18.2*	*7.0*
	Xylene	CFR SE Asia	840.0	850.0	807.5	765.0	760.0	625.0	675.0	627.7	668.8	774.2
	Change, %			*(1.2)*	*4.0*	*9.8*	*10.5*	*34.4*	*24.4*	*33.8*	*25.6*	*8.5*
Spread	**Ethylene**	-Naphtha	565.5	563.0	479.0	667.0	659.5	443.5	505.5	641.4	597.4	620.7
	Change, %			*0.4*	*18.1*	*(15.2)*	*(14.3)*	*27.5*	*11.9*	*(11.8)*	*(5.3)*	*(8.9)*
	Propylene	-Naphtha	363.0	353.0	339.0	442.0	474.5	313.5	330.5	306.2	330.1	446.3
	Change, %			*2.8*	*7.1*	*(17.9)*	*(23.5)*	*15.8*	*9.8*	*18.6*	*10.0*	*(18.7)*
	Butadiene	-Naphtha	1,025.5	1,063.0	974.0	837.0	799.5	463.5	1,615.5	717.3	987.6	791.6
	Change, %			*(3.5)*	*5.3*	*22.5*	*28.3*	*121.3*	*(36.5)*	*43.0*	*3.8*	*29.5*
	Benzene	-Naphtha	205.5	190.5	181.5	329.5	359.5	351.0	338.0	247.2	345.3	269.4
	Change, %			*7.9*	*13.2*	*(37.6)*	*(42.8)*	*(41.5)*	*(39.2)*	*(16.9)*	*(40.5)*	*(23.7)*
	Toluene	-Naphtha	165.5	153.0	139.0	167.0	209.5	238.5	205.5	231.0	196.0	152.5
	Change, %			*8.2*	*19.1*	*(0.9)*	*(21.0)*	*(30.6)*	*(19.5)*	*(28.4)*	*(15.6)*	*8.6*
	Xylene	-Naphtha	190.5	188.0	131.5	212.0	209.5	213.5	190.5	228.2	175.3	165.0
	Change, %			*1.3*	*44.9*	*(10.1)*	*(9.1)*	*(10.8)*	*0.0*	*(16.5)*	*8.7*	*15.5*

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

SK Energy Daily

에너지/Commodity/정유화학, 손지우 l 3773-8827, jwshon@sk.com
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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	1,287.5	1,307.5	1,292.5	1,297.5	1,282.5	1,087.5	1,142.5	1,134.6	1,142.5	1,258.0
	Change, %			(1.5)	(0.4)	(0.8)	0.4	18.4	12.7	13.5	12.7	2.3
	MEG	CFR SE Asia	945.0	962.5	1,000.0	897.5	1,027.5	777.5	847.5	660.8	850.6	987.1
	Change, %			(1.8)	(5.5)	5.3	(8.0)	21.5	11.5	43.0	11.1	(4.3)
	PVC	CFR SE Asia	920.0	920.0	940.0	980.0	970.0	880.0	920.0	823.4	899.9	943.9
	Change, %			0.0	(2.1)	(6.1)	(5.2)	4.5	0.0	11.7	2.2	(2.5)
	PP	CFR SE Asia	1,282.5	1,277.5	1,262.5	1,307.5	1,277.5	1,047.5	1,032.5	978.4	1,099.6	1,258.1
	Change, %			0.4	1.6	(1.9)	0.4	22.4	24.2	31.1	16.6	1.9
	2-EH	CFR Korea	1,100.0	1,170.0	1,165.0	1,125.0	1,100.0	940.0	865.0	772.4	970.0	1,120.0
	Change, %			(6.0)	(5.6)	(2.2)	0.0	17.0	27.2	42.4	13.4	(1.8)
	ABS	CFR SE Asia	2,060.0	2,080.0	2,050.0	2,070.0	2,060.0	1,640.0	1,635.0	1,347.1	1,844.7	2,033.5
	Change, %			(1.0)	0.5	(0.5)	0.0	25.6	26.0	52.9	11.7	1.3
	SBR	CFR SE Asia	1,900.0	1,900.0	1,800.0	1,750.0	1,755.0	1,500.0	2,000.0	1,483.0	1,980.5	1,750.0
	Change, %			0.0	5.6	8.6	8.3	26.7	(5.0)	28.1	(4.1)	8.6
	SM	CFR SE Asia	1,525.0	1,510.0	1,407.5	1,397.5	1,422.5	1,135.0	1,205.0	1,064.6	1,253.8	1,400.7
	Change, %			1.0	8.3	9.1	7.2	34.4	26.6	43.2	21.6	8.9
	Caustic	FOB NEA	550.0	550.0	598.0	590.0	549.0	437.5	422.5	316.6	491.2	588.1
	Change, %			0.0	(8.0)	(6.8)	0.2	25.7	30.2	73.7	12.0	(6.5)
	PX	CFR SE Asia	975.0	982.5	1,025.0	945.0	942.5	785.0	855.0	790.4	844.4	963.9
	Change, %			(0.8)	(4.9)	3.2	3.4	24.2	14.0	23.4	15.5	1.2
	PO	CFR China	1,877.5	1,737.5	1,880.0	1,962.5	1,892.5	1,427.5	1,562.5	1,396.8	1,601.2	1,896.5
	Change, %			8.1	(0.1)	(4.3)	(0.8)	31.5	20.2	34.4	17.3	(1.0)
	Caprolactam	CFR SE Asia	2,120.0	2,105.0	2,100.0	2,150.0	2,070.0	1,600.0	1,850.0	1,344.9	1,936.4	2,117.2
	Change, %			0.7	1.0	(1.4)	2.4	32.5	14.6	57.6	9.5	0.1
	PTA	CFR SE Asia	860.0	857.5	825.0	810.0	782.5	635.0	642.5	613.7	667.8	795.1
	Change, %			0.3	4.2	6.2	9.9	35.4	33.9	40.1	28.8	8.2
Spread	**HDPE**		638.0	645.5	616.5	744.5	732.0	676.0	658.0	735.1	649.0	648.8
	Change, %			(1.2)	3.5	(14.3)	(12.8)	(5.6)	(3.0)	(13.2)	(1.7)	(1.7)
	MEG		295.5	300.5	324.0	344.5	477.0	366.0	363.0	261.3	357.1	377.8
	Change, %			(1.7)	(8.8)	(14.2)	(38.1)	(19.3)	(18.6)	13.1	(17.2)	(21.8)
	PVC		270.5	258.0	264.0	427.0	419.5	468.5	435.5	423.9	406.4	334.6
	Change, %			4.8	2.5	(36.7)	(35.5)	(42.3)	(37.9)	(36.2)	(33.4)	(19.2)
	PP		633.0	615.5	586.5	754.5	727.0	636.0	548.0	578.9	606.1	648.8
	Change, %			2.8	7.9	(16.1)	(12.9)	(0.5)	15.5	9.3	4.4	(2.4)
	2-EH		450.5	508.0	489.0	572.0	549.5	528.5	380.5	372.9	476.5	510.7
	Change, %			(11.3)	(7.9)	(21.2)	(18.0)	(14.8)	18.4	20.8	(5.5)	(11.8)
	ABS		1,410.5	1,418.0	1,374.0	1,517.0	1,509.5	1,228.5	1,150.5	947.6	1,351.2	1,424.2
	Change, %			(0.5)	2.7	(7.0)	(6.6)	14.8	22.6	48.8	4.4	(1.0)
	SBR	BD spread	225.0	175.0	150.0	360.0	405.0	625.0	(100.0)	366.2	499.4	349.1
	Change, %			28.6	50.0	(37.5)	(44.4)	(64.0)	(325.0)	(38.6)	(54.9)	(35.6)
	SM		875.5	848.0	731.5	844.5	872.0	723.5	720.5	665.1	760.3	791.4
	Change, %			3.2	19.7	3.7	0.4	21.0	21.5	31.6	15.2	10.6
	Caustic											
	Change, %											
	PX		325.5	320.5	349.0	392.0	392.0	373.5	370.5	390.9	351.0	354.6
	Change, %			1.6	(6.7)	(17.0)	(17.0)	(12.9)	(12.1)	(16.7)	(7.3)	(8.2)
	PO	propylene sprea	865.0	722.5	865.0	967.5	867.5	702.5	747.5	691.1	777.6	841.0
	Change, %			19.7	0.0	(10.6)	(0.3)	23.1	15.7	25.2	11.2	2.9
	Caprolactam	benzene spread	1,265.0	1,252.5	1,242.5	1,267.5	1,160.0	837.5	1,027.5	698.2	1,097.6	1,238.5
	Change, %			1.0	1.8	(0.2)	9.1	51.0	23.1	81.2	15.2	2.1
	PTA	px spread	177.5	169.8	107.5	148.5	122.8	85.5	44.0	60.4	76.7	120.4
	Change, %			4.6	65.1	19.5	44.6	107.6	303.4	193.8	131.4	47.5

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

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Global peers

	Currency	06/15	1D	1W	1M	3M	6M	12M	YTD	MKT CAP	PER		PBR		EV/EBITDA	
										(mil USD)	18E	19E	18E	19E	18E	19E
Petrochemical																
DowDuPont	USD	67.8	(0.9)	(2.5)	0.9	(0.2)	(3.2)	5.7	(4.9)	168,245	17.7	14.9	1.8	1.7	10.2	9.2
Eastman	USD	108.9	0.9	(0.1)	1.3	1.8	20.7	32.3	17.6	13,550	11.6	10.7	2.5	2.2	8.7	8.1
BASF	EUR	88.3	0.3	2.8	0.8	5.0	(5.8)	4.1	(3.7)	101,214	14.6	13.6	2.4	2.2	7.8	7.4
Akzo Nobel	EUR	76.3	(0.1)	0.4	1.3	(5.4)	2.5	(1.3)	4.5	22,073	17.0	15.8	3.0	2.8	9.3	8.8
Arkema	EUR	103.6	(0.3)	0.2	(6.0)	(4.6)	(0.4)	9.1	2.0	9,270	13.2	12.2	1.7	1.6	6.3	6.0
Lanxess	EUR	71.2	(1.5)	2.9	3.2	10.8	10.1	5.4	7.4	7,282	15.5	13.1	2.1	1.9	9.3	8.2
Sumitomo Chemical	JPY	644	(0.6)	(2.4)	(1.4)	4.0	(17.0)	9.9	(20.5)	11,911	10.1	10.5	1.3	1.2	7.4	8.0
Mitsubishi Chemical	JPY	970	(1.2)	(2.8)	(4.1)	(7.3)	(19.6)	13.8	(21.5)	16,544	9.2	8.7	1.3	1.2	6.3	6.1
Shin-Etsu Chemical	JPY	10,430	(3.2)	(7.2)	(8.6)	(7.5)	(8.5)	4.8	(8.9)	43,948	18.5	16.6	1.9	1.8	8.1	7.4
Asahi Kasei	JPY	1,446	0.0	(4.7)	(1.5)	2.4	0.1	29.7	(0.5)	18,109	14.4	13.6	1.5	1.4	7.4	7.0
JSR	JPY	1,921	(1.8)	(5.3)	(9.6)	(22.8)	(12.9)	6.0	(13.4)	4,455	14.5	13.4	1.2	1.1	7.7	7.2
Nitto Denko	JPY	8,706	(0.0)	(3.1)	2.1	1.0	(14.0)	(2.0)	(13.0)	15,450	15.7	14.6	2.1	1.9	7.3	7.0
SABIC	SAR	126.6	0.0	(0.2)	8.0	14.9	25.5	27.9	24.8	80,773	14.2	13.7	1.7	1.7	7.3	7.1
Yansab	SAR	73.0	0.0	(0.5)	1.6	3.6	26.1	31.8	23.7	8,861	13.7	13.9	2.2	1.9	9.0	8.9
Formosa Plastics	TWD	106.0	(0.5)	(2.3)	(4.1)	3.9	13.6	17.6	7.4	21,114	14.4	13.9	1.8	1.8	18.9	19.2
Formosa Fiber	TWD	112.5	(0.9)	(3.0)	0.0	5.1	17.9	24.9	9.2	20,511	13.7	13.4	1.7	1.7	11.6	11.5
Nan Ya Plastics	TWD	84.6	0.5	(1.1)	(0.7)	5.4	13.3	17.0	8.6	20,648	14.8	15.3	1.7	1.7	16.2	16.4
Sinopec Shanghai	CNY	5.83	1.0	2.3	(1.0)	(2.5)	(6.9)	(10.2)	(7.9)	9,462	12.0	12.6	2.2	2.0	6.8	7.3
Sinopec Yizheng(Fibe	CNY	2.03	0.0	(1.0)	(1.5)	(11.7)	(25.6)	(41.5)	(24.0)	5,394	50.4	66.3	5.3	5.0	13.9	10.3
Reliance	INR	1,014	0.6	3.0	3.6	11.2	10.3	46.6	11.5	93,404	14.4	12.9	1.7	1.5	9.4	8.7
Industries Qatar	QAR	105.9	0.0	(2.7)	(5.4)	1.0	11.5	7.1	9.2	16,144	14.5	13.9	1.6	1.5	46.4	27.2
PTT Chemical	THB	83.5	(0.3)	(6.7)	(11.6)	(15.0)	0.0	19.7	(1.8)	11,766	10.7	10.4	1.4	1.3	5.5	5.4
Petronas	MYR	8.3	0.0	(0.6)	(3.0)	2.3	11.9	16.5	8.3	15,624	16.1	15.5	2.0	1.9	9.2	8.9
LG화학	KRW	373,500	0.9	(0.5)	7.2	(10.9)	(5.2)	35.1	(7.8)	27,313	13.8	12.8	1.8	1.6	6.5	6.1
롯데케미칼	KRW	365,500	0.7	(4.1)	(3.7)	(16.9)	0.4	9.9	(0.7)	11,632	5.5	5.2	0.9	0.8	3.6	3.3
한화케미칼	KRW	24,400	(0.4)	(4.5)	(17.3)	(20.3)	(18.5)	(14.4)	(22.8)	5,050	5.7	5.5	0.8	0.7	6.7	6.5
금호석유	KRW	104,500	(1.4)	5.2	(2.8)	10.0	11.9	38.6	5.0	2,969	14.1	11.9	1.6	1.5	9.3	8.4
SKC	KRW	41,150	0.9	1.5	3.3	2.1	(8.2)	22.7	(12.4)	1,643	9.9	8.7	1.1	1.0	8.8	7.9
국도화학	KRW	64,000	(1.5)	(3.2)	1.1	3.9	(3.8)	18.7	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	7,780	4.6	4.0	10.7	(17.4)	(2.8)	30.3	2.6	4,595	8.2	7.3	1.1	1.0	7.2	6.8
Average			**(0.1)**	**(1.2)**	**(1.2)**	**(1.8)**	**0.8**	**13.9**	**(0.7)**							
Refinery																
Valero	USD	115.2	(1.4)	(3.8)	(0.6)	24.7	30.6	78.0	25.3	40,608	14.1	13.4	2.0	2.0	6.9	6.9
Conoco Phillips	USD	65.4	(4.1)	(5.9)	(6.7)	21.0	25.3	44.0	19.1	66,136	34.0	25.9	2.2	2.2	7.2	6.7
Formosa Petrochemic	TWD	121.0	1.3	(2.4)	(1.2)	3.4	8.0	14.2	4.8	37,040	18.2	18.7	3.2	3.2	11.7	12.1
Andeavor	USD	136.0	(2.2)	(6.0)	(3.7)	39.9	21.9	48.3	18.9	17,904	12.9	11.4	1.8	1.7	7.3	7.1
Marathon Petroleum	USD	73.6	(2.2)	(6.9)	(4.8)	7.2	11.9	38.8	11.5	32,812	15.0	12.8	2.6	2.7	7.7	7.5
Devon Energy	USD	40.3	(3.5)	(4.5)	(2.5)	26.9	6.8	27.8	(2.8)	22,192	17.5	14.0	2.7	2.3	8.4	7.4
Hollyfrontier	USD	72.3	(0.9)	(6.3)	4.9	58.6	51.1	184.2	41.2	9,094	16.8	15.2	1.8	1.8	8.0	8.0
Phillips 66	USD	114.3	(1.1)	(2.2)	(3.4)	21.0	14.4	44.5	13.0	51,561	15.6	14.5	2.3	2.2	9.0	8.8
Murphy Oil	USD	32.8	(2.2)	(2.9)	6.2	29.7	17.3	34.7	5.5	5,548	162.4	113.2	1.2	1.1	4.9	4.5
JX Holdings	JPY	764.0	2.7	7.0	6.1	21.2	11.5	57.4	5.1	22,130	8.8	8.0	0.9	0.9	7.0	6.6
Idemitsu	JPY	3,780.0	1.7	2.0	(7.8)	(4.3)	(12.8)	18.9	(16.5)	8,360	7.9	7.5	1.0	0.9	6.8	6.8
Nesteoil	EUR	66.5	(0.7)	(6.2)	(2.5)	15.0	28.8	91.1	24.6	16,473	16.7	16.7	2.9	2.7	10.2	10.3
Ashland	USD	78.2	(1.1)	(2.2)	3.7	8.3	10.9	18.7	9.9	4,550	21.6	18.7	1.3	1.3	10.2	9.6
Fuchs Petrolub	EUR	45.6	(1.6)	1.1	0.8	(4.3)	5.1	(8.6)	3.1	7,127	22.1	20.9	4.1	3.7	13.0	12.3
SK이노베이션	KRW	214,500	0.7	2.1	5.1	2.1	5.4	37.1	4.9	17,975	7.9	7.7	0.9	0.9	4.9	4.8
S-Oil	KRW	111,500	1.8	0.0	5.2	(7.5)	(9.7)	18.4	(4.7)	12,400	9.3	8.1	1.8	1.6	7.6	6.6
GS	KRW	58,000	(1.9)	(1.0)	(5.1)	(9.1)	(6.0)	(13.6)	(6.8)	5,467	6.0	5.5	0.7	0.6	6.9	6.3
Average			**(0.9)**	**(2.2)**	**(0.4)**	**14.9**	**13.0**	**43.2**	**9.2**							

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

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Global peers

	Currency	06/15	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	81	(1.5)	(3.5)	(1.4)	8.4	(2.9)	(1.9)	(3.6)	341,501	16.6	15.5	1.8	1.7	7.3	6.9
BP	GBP	565	(3.5)	(3.2)	(2.1)	21.6	11.8	22.6	8.1	149,722	14.2	13.6	1.5	1.4	5.4	5.3
Shell	EUR	2,522	(3.3)	(3.3)	(6.3)	15.0	3.8	21.1	1.7	284,616	12.0	11.0	1.4	1.3	5.8	5.7
Chevron	USD	124	(2.0)	(1.9)	(4.4)	7.3	3.6	16.7	(0.9)	237,035	15.7	15.2	1.6	1.5	6.3	6.0
Total	EUR	52	(1.0)	(1.4)	(2.9)	11.6	12.6	17.7	13.7	161,596	11.8	11.2	1.3	1.2	5.6	5.2
Sinopec	CNY	6	0.5	(0.2)	(9.4)	1.1	9.4	9.6	5.9	119,960	10.4	9.9	1.0	1.0	3.9	3.8
Petrochina	CNY	8	0.1	(2.0)	(3.1)	(2.5)	(1.5)	1.3	(4.2)	211,616	23.9	20.1	1.2	1.1	5.5	5.4
CNOOC	CNY	10	(3.2)	(3.0)	(5.9)	(9.8)	(0.8)	(11.6)	(4.5)	73,601	8.9	9.1	1.2	1.1	3.8	3.8
Gazprom	RUB	138	(1.2)	(3.7)	(7.7)	(0.4)	1.6	19.3	5.5	51,652	3.2	3.5	0.2	0.2	2.7	2.7
Rosneft	RUB	383	0.4	0.6	(2.9)	22.0	27.9	27.1	31.5	64,344	7.6	7.0	0.9	0.9	4.6	4.4
Anadarko	USD	68	(3.6)	(4.1)	(1.7)	18.3	44.1	48.5	27.7	35,278	23.9	20.5	2.5	2.3	6.7	5.9
Petrobras	BRL	15	(0.9)	(1.8)	(44.1)	(29.8)	0.1	18.6	(7.0)	57,804	5.9	5.3	0.6	0.5	4.2	3.9
Lukoil	USD	4,055	(0.9)	(2.5)	(7.7)	6.7	18.6	49.5	21.6	54,861	5.6	5.8	0.8	0.7	N/A	N/A
Kinder	USD	17	(1.1)	(0.5)	2.0	2.8	(6.5)	(10.8)	(7.2)	47,497	19.5	17.4	1.1	1.1	10.4	10.1
Equinor ASA	NOK	216	(1.2)	(0.2)	(2.1)	21.6	27.6	50.5	23.4	88,558	14.4	13.9	2.0	1.9	3.5	3.4
BHP	AUD	34	0.5	(1.5)	0.0	16.3	21.1	45.8	13.5	127,143	15.7	17.6	2.1	2.1	6.3	6.6
PTT E&P	THB	134	(1.5)	(1.5)	(1.8)	15.5	41.8	52.7	34.0	16,282	13.7	13.0	1.4	1.3	4.1	3.8
Petronas gas	MYR	18	0.0	(2.0)	(0.2)	(2.8)	7.8	(7.8)	0.1	8,688	18.3	18.1	2.7	2.6	10.1	10.0
Chesapeake	USD	5	(1.9)	(3.5)	25.1	53.6	32.2	(7.2)	17.2	4,231	5.7	6.3	#N/A N/A	6.6	6.3	6.1
Noble Energy	USD	34	(2.1)	(0.6)	(4.2)	15.4	31.9	13.9	16.1	16,393	30.2	22.2	1.4	1.4	7.5	6.4
Average		**0**	**(1.4)**	**(2.0)**	**(4.0)**	**9.6**	**14.2**	**18.8**	**9.6**							
PV																
WACKER	EUR	116.2	(0.3)	(2.1)	(23.5)	(10.2)	(27.0)	26.7	(28.4)	7,030	16.8	15.0	1.8	1.7	5.9	5.6
GCL-Poly	HKD	0.8	(3.8)	(5.0)	(20.0)	(35.6)	(39.2)	4.1	(45.7)	1,800	6.5	5.7	0.5	0.4	6.5	5.9
SunPower	USD	7.6	(5.0)	8.1	(17.2)	8.4	(18.7)	0.4	(9.6)	1,073	#N/A N/A	#N/A N/A	1.8	1.8	18.0	11.3
Canadian Solar	USD	12.0	(4.1)	(3.2)	(28.8)	(24.1)	(31.2)	(5.5)	(29.1)	700	6.8	6.9	0.6	0.6	7.1	7.8
JA Solar	USD	6.9	(1.8)	(1.8)	(3.8)	(4.5)	(6.9)	11.6	(7.1)	330	#N/A N/A	#N/A N/A	1.6	1.7	4.9	6.7
Yingli	USD	1.6	3.2	(1.2)	(8.0)	(7.0)	(15.3)	(23.8)	(5.3)	29	#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	51.1	(4.9)	(3.1)	(30.5)	(25.7)	(26.0)	42.9	(24.4)	5,349	29.6	16.6	1.0	0.9	8.6	4.8
한화큐셀	USD	6.3	(1.7)	(4.1)	(15.9)	(21.9)	(14.7)	(4.6)	(10.8)	521	11.2	23.2	#N/A N/A	#N/A N/A	8.0	8.2
OCI	KRW	109,500	(0.9)	(6.8)	(31.8)	(26.0)	(12.7)	22.8	(19.5)	2,368	0.0	10.1	0.0	0.7	0.0	4.8
웅진에너지	KRW	5,300	1.7	(0.9)	(16.4)	(26.9)	(40.2)	(13.8)	(35.5)	143	N/A	0.0	0.7	0.0	4.8	0.0
신성솔라에너지	KRW	1,665	(0.9)	(1.8)	(4.9)	(8.3)	(20.5)	(11.7)	(13.1)	261	N/A	0.7	0.0	4.8	0.0	6.8
Average			**(1.7)**	**(2.0)**	**(18.2)**	**(16.5)**	**(22.9)**	**4.5**	**(20.8)**							
Gas Company																
Towngas China	HKD	7.2	(1.2)	(0.3)	(2.2)	12.6	15.8	49.9	15.3	2,554	14.1	12.6	1.2	1.1	12.0	10.9
Kulun	HKD	7.1	0.6	(3.1)	1.3	0.0	(1.4)	9.4	(13.0)	7,281	9.9	8.6	1.1	1.0	5.7	5.1
Beijing Enterprise	HKD	42.4	1.3	(1.1)	2.3	(0.8)	(1.1)	13.8	(8.7)	6,809	7.4	6.7	0.7	0.7	12.4	11.7
ENN Energy	HKD	76.2	0.0	(2.3)	1.6	22.5	41.4	81.6	36.7	10,534	16.7	14.1	3.3	2.8	9.9	8.7
China Resources Gas	HKD	30.5	(1.8)	1.0	8.6	18.3	9.1	27.9	7.4	8,627	16.2	14.6	2.7	2.4	8.9	8.1
China Gas Holdings	HKD	32.2	(3.2)	(4.5)	8.4	32.0	48.5	152.0	48.8	20,350	21.2	18.0	5.4	4.5	15.9	13.7
Shenzen Gas	HKD	17.2	0.8	2.3	(1.5)	10.1	26.4	25.7	15.9	4,471	11.4	9.8	1.4	1.3	6.2	5.4
Shann Xi	CNY	7.1	(0.3)	(11.6)	(7.2)	(3.7)	(16.1)	(19.8)	(16.2)	1,224	16.3	14.2	1.3	1.3	#N/A N/A	#N/A N/A
Suntien	HKD	2.5	(4.7)	(7.2)	(6.1)	23.6	25.5	79.6	18.8	1,164	6.2	5.5	0.8	0.7	8.4	7.2
China Oil & Gas	HKD	0.7	1.5	4.8	11.9	(4.3)	8.2	20.0	(22.4)	490	8.7	7.7	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Average			**(0.7)**	**(2.2)**	**1.7**	**11.0**	**15.6**	**44.0**	**8.3**							
EV																
LG화학	KRW	373,500	0.9	(0.5)	7.2	(10.9)	(5.2)	35.1	(7.8)	23,904	13.7	12.6	1.6	1.4	6.5	5.9
삼성SDI	KRW	235,500	3.7	4.4	20.2	9.8	12.7	54.9	15.2	14,682	22.3	16.1	1.4	1.3	15.7	12.2
Panasonic	JPY	1566.0	0.4	0.5	(3.9)	(7.3)	(6.1)	7.9	(5.1)	34,736	14.2	12.4	2.0	1.8	5.4	5.0
GS Yuasa	JPY	506.0	(1.0)	(2.9)	(10.3)	(13.7)	(7.3)	1.2	(9.8)	1,892	14.3	13.0	1.1	1.1	6.6	6.2
NEC	JPY	3125.0	1.6	2.1	2.3	(3.5)	(0.3)	9.3	2.8	7,360	23.1	13.4	0.9	0.9	7.4	5.7
BYD Auto	CNY	48.2	(1.8)	(3.9)	(9.2)	(25.5)	(23.2)	(6.8)	(25.9)	19,581	25.3	20.3	2.3	2.1	12.5	10.8
Tesla Motors	USD	358.2	0.1	12.8	26.0	10.0	4.3	(4.6)	15.0	60,815	#N/A N/A	157.0	11.8	10.2	66.1	21.0
Kandi Technologies	USD	5.0	0.0	17.6	(15.3)	(2.9)	(28.1)	25.0	(26.5)	255	#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			**0.5**	**3.8**	**2.1**	**(5.5)**	**(6.7)**	**15.2**	**(5.3)**							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임