Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

1. News Summary (3 page)

2016년 1월 25일

News		Conclusion
WTI comment	국제유가 급반등, 30달러 선 회복	
Headline	[주간가격] 에틸렌 소폭 하락세 지속 반면 프로필렌 반등	중국 춘절 임박하며 전체적 거래량 감소, 가격에 큰 의미는 없음
News 1.	[주간가격] polyester 계열 유가와 동반하여 반등 성공	중국 춘절 임박하며 전체적 거래량 감소, 가격에 큰 의미는 없음
News 2.	[주간가격] 합성고무 계열 소폭 반등	중국 춘절 임박하며 전체적 거래량 감소, 가격에 큰 의미는 없음
News 3.	미주 지역 에틸렌 수출과 PE 가격 인하 지속 중	북미 지역의 에틸렌 arbitrage와 PE가격 인하는 아시아에도 영향 가능
News 4.	미국산 원유 40년 만에 첫 원유수출 성공, 유럽에 유조선 도착	원유 이외에 각종 제품의 활발한 수출 이뤄질 것으로 판단함

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	$/bbl	32.2	9.0	9.4	(14.2)	(27.8)	(30.5)
Dubai	$/bbl	23.9	4.6	(8.9)	(25.0)	(45.6)	(46.5)
Gasoline	$/bbl	49.0	3.8	(1.3)	(8.2)	(20.5)	(13.2)
Diesel	$/bbl	32.0	4.3	(10.3)	(24.8)	(44.5)	(47.8)
Complex margin	$/bbl	10.3	0.3	0.6	1.0	1.6	1.3
1M lagging	$/bbl	(0.5)	2.9	2.0	0.1	(7.6)	6.4
Petrochemical			%	%	%	%	%
Naphtha	$/t	327	6.3	(0.6)	(20.4)	(26.4)	(24.0)
Butadiene	$/t	750	2.7	2.7	5.6	(2.0)	13.6
HDPE	$/t	1,095	2.8	1.9	4.3	(6.8)	(2.7)
MEG	$/t	568	1.2	3.3	(0.9)	(13.1)	(22.5)
PX	$/t	689	2.8	3.2	(7.4)	(11.3)	(11.6)
SM	$/t	858	0.1	(4.5)	(2.4)	(8.3)	(2.9)
Commodity			%	%	%	%	%
Natural Gas	$/mmbtu	2.14	0.0	1.9	2.9	(19.2)	(38.3)
Natural rubber	$/t	1,120	1.8	5.7	(4.3)	(8.9)	(18.8)
Cotton	C/lbs	62.5	0.6	1.7	(1.9)	(0.2)	(0.2)

*참고: 정제마진의 변동률은 %가 아닌 $/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	01/18	$/t	1,000	(8.7)	(9.1)	8.1	8.1
Propylene	01/18	$/t	660	5.6	1.5	34.7	(7.0)
Benzene	01/18	$/t	545	(6.4)	(4.0)	(11.7)	(5.2)
Toluene	01/18	$/t	585	(7.1)	(6.4)	(17.0)	1.7
Xylene	01/18	$/t	610	(4.7)	(6.9)	(9.6)	8.4
PP	01/18	$/t	835	0.6	0.0	(16.1)	(16.5)
PVC	01/18	$/t	720	0.7	(1.4)	(9.4)	(9.4)
ABS	01/18	$/t	1,100	(2.7)	1.9	(11.6)	(27.4)
SBR	01/18	$/t	1,195	(0.4)	10.1	(6.6)	(15.5)
SM	01/18	$/t	935	(2.1)	3.9	(5.3)	8.1
BPA	01/18	$/t	1,110	(7.9)	(19.1)	(30.9)	(36.8)
Caustic	01/18	$/t	285	0.0	0.0	(8.8)	9.6
2-EH	01/18	$/t	685	0.0	0.7	(12.7)	(26.7)
Caprolactam	01/18	$/t	1,250	0.0	(2.7)	(8.1)	(28.4)
Solar				%	%	%	%
Polysilicon	01/20	$/kg	12.9	(0.5)	(2.3)	(10.6)	(32.4)
Module	01/20	$/W	0.55	(0.2)	(0.5)	(1.3)	(9.8)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	76.6	3.3	(1.3)	(1.4)	(7.6)	(17.6)
Shell	EUR	1,387	5.4	2.7	(6.7)	(22.4)	(36.3)
Petrochina	CNY	7.33	1.0	(0.1)	(14.0)	(16.9)	(42.0)
Gazprom	RUB	132.4	3.6	5.8	(0.6)	(4.9)	(12.6)
Petrobras	BRL	4.4	(2.0)	(14.7)	(35.1)	(45.0)	(57.0)
Refinery							
Phillips66	USD	80.0	5.2	2.0	(2.0)	(3.1)	18.9
Valero	USD	67.9	7.0	2.2	(5.1)	12.4	41.4
JX	JPY	428.2	5.8	(1.2)	(13.8)	(11.4)	(4.2)
Neste Oil	EUR	28.0	2.2	8.5	4.1	25.6	28.5

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	63.4	3.1	3.1	(8.5)	(14.8)	(16.6)
Dow Chemical	USD	43.2	2.9	0.6	(16.1)	(13.4)	(4.7)
SABIC	SAR	61.8	0.0	(8.2)	(28.1)	(27.3)	(21.9)
Formosa Pla.	TWD	74.4	0.7	(1.5)	1.9	(0.9)	(2.4)
Shin-Etsu	JPY	5,931	6.0	(3.5)	(10.2)	(12.9)	(23.6)
Renewable							
Wacker	EUR	67.8	2.2	3.0	(10.8)	(9.1)	(24.3)
Yingli	USD	4.55	12.6	30.0	(17.3)	(37.3)	(76.5)
Tesla	USD	202.6	1.3	(1.2)	(11.9)	(4.3)	0.5
BYD	CNY	55.2	(1.5)	(5.0)	(12.2)	(10.2)	38.6

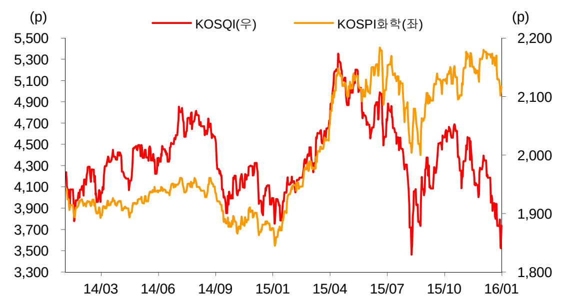
4. Coverage Summary

	01/22	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	1,879	2.1	0.0	(6.0)	(7.9)	(9.0)	(2.2)				* 추정치는 12M fwd 기준임	
KOSPI화학	5,044	1.3	(1.3)	(6.4)	(2.3)	(3.0)	33.2				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	303,500	(0.7)	(2.7)	(10.6)	2.2	12.0	64.5	매수	380,000	25.2	13.52	1.66
롯데케미칼	248,000	(1.8)	(0.2)	1.8	(9.2)	(8.8)	63.7	매수	290,000	16.9	11.03	1.03
한화케미칼	24,850	1.8	(1.2)	(10.1)	13.2	21.2	120.9	매수	30,000	20.7	8.78	0.71
금호석유화학	48,600	0.6	(8.1)	(11.2)	(21.1)	(31.3)	(43.8)	매수	70,000	44.0	10.75	0.99
KCC	405,000	3.7	1.5	(5.3)	(10.3)	(21.2)	(25.0)	매수	550,000	35.8	12.59	0.63
OCI	61,600	1.8	(7.2)	(21.8)	(24.9)	(40.2)	(15.3)	매수	85,000	38.0	14.66	0.61
SKC	30,250	1.9	(4.4)	(9.7)	(20.8)	(23.1)	7.5	매수	43,000	42.1	9.14	0.73
국도화학	56,000	0.9	0.4	(9.4)	(25.3)	(23.1)	32.4	매수	100,000	78.6	6.93	0.67
SK이노베이션	137,000	3.4	3.4	0.7	16.1	35.6	53.9	매수	140,000	2.2	7.49	0.73
S-Oil	80,000	1.7	1.1	(0.9)	16.4	34.2	46.0	매수	85,000	6.3	12.98	1.49
GS	48,800	2.0	1.7	(5.6)	(3.9)	3.6	24.0	매수	60,000	23.0	6.30	0.80
SK가스	62,800	1.3	(3.7)	(14.0)	(26.7)	(29.0)	(28.2)	매수	90,000	43.3	6.93	0.56
대우인터내셔널	13,650	11.9	(1.1)	(21.1)	(33.3)	(34.4)	(51.0)	매수	22,000	61.2	7.56	0.65
LG상사	27,800	2.6	(2.1)	(17.0)	(22.8)	(17.9)	(16.4)	매수	40,000	43.9	8.95	0.72

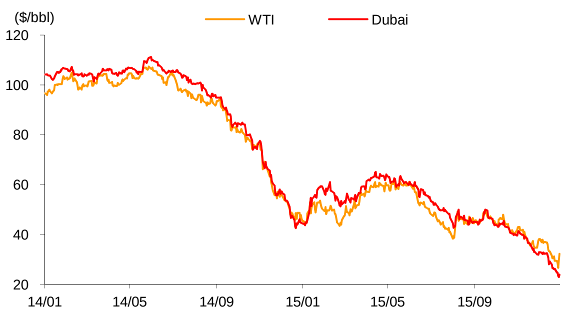
Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

Key Chart

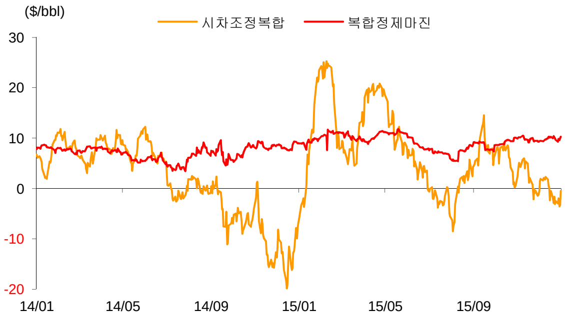
KOSPI/KOSPI화학



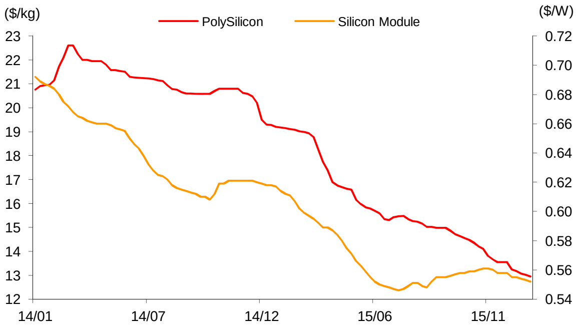
WTI/Dubai



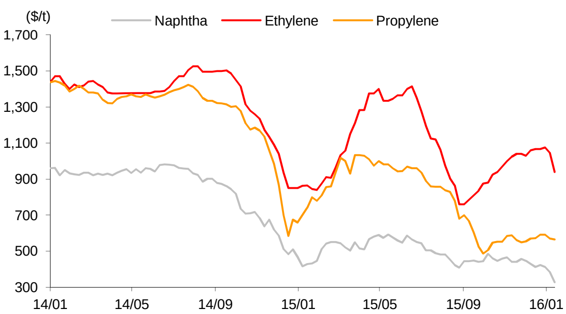
Complex & 1M lagging margin



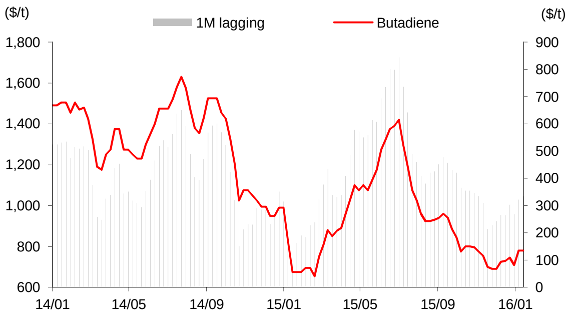
Polysilicon & Module prices



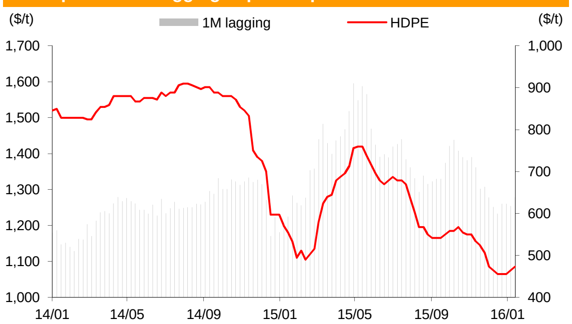
Naphtha/Ethylene/Propylene prices



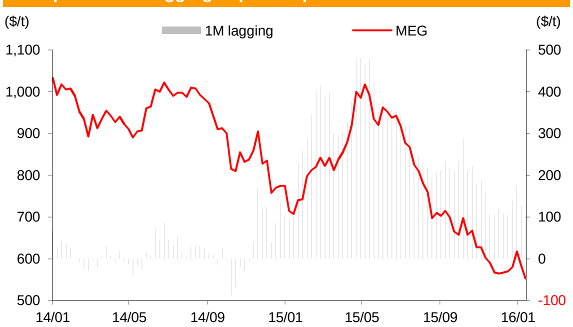
Butadiene price & 1M lagging naphtha spread



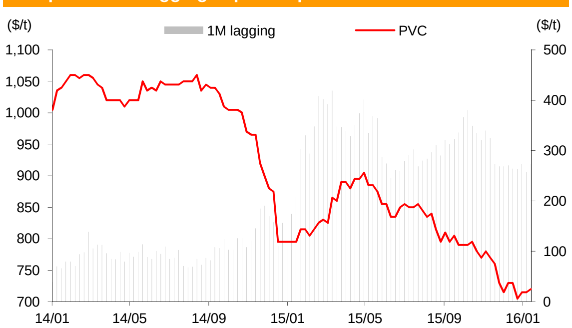
HDPE price & 1M lagging naphtha spread



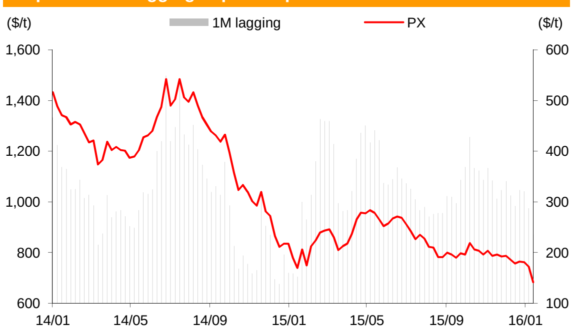
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

News Comment

Headline	(출처: Platts)
제목	[주간가격] 에틸렌 소폭 하락세 지속 반면 프로필렌 반등
결론	중국 춘절 임박하며 전체적 거래량 감소, 가격에 큰 의미는 없음
세부	
	1) Ethylene $970/t(WoW -$35/t), Propylene $560/t(WoW +$14/t)
	2) 중국 춘절 연휴 앞두고 buyer들 움직임 없음, 이전 약세/이후 회복 예상
	3) 인도네시아 Chandra Asri, 전주 일시 가동중지 이후 금주 개자공 성공
	4) 일본 Mitsui는 기술적 결함으로 인해 전주 금요일 가동중지 되었음
	5) 중국 춘절 임박하며 전체적 거래량 감소, 가격에 큰 의미는 없음

WTI Comment	(출처: 연합뉴스)
제목	국제유가 급반등, 30달러 선 회복
상승	미국 동부와 유럽 일부지역 폭설과 한파 특보, 난방유 수요증가 기대
요인	미국 전주 원유 rig 5개 감소
하락	
요인	

Issue 1	(출처: Platts)
제목	[주간가격] polyester 계열 유가와 동반하여 반등 성공
결론	중국 춘절 임박하며 전체적 거래량 감소, 가격에 큰 의미는 없음
세부	
	1) MEG $568/t(WoW +$18/t), PX $689/t(+$21.7/t), PTA $540/t(WoW -$6/t)
	2) 중국 MEG 재고 WoW +3.7만톤(72만톤) 불구 유가 급반등으로 상승
	3) 아시아 최대 MEG 설비 MEGlobal, No.2 65만톤/년 트러블로 공급 축소
	4) 한편 S-Oil PX No.2 96만톤/년 설비 화재사고 발생했지만 곧 재가동 예정
	5) 중국 춘절 임박하며 전체적 거래량 감소, 가격에 큰 의미는 없음

Issue 2	(출처: Platts)
제목	[주간가격] 합성고무 계열 소폭 반등
결론	중국 춘절 임박하며 전체적 거래량 감소, 가격에 큰 의미는 없음
세부	
	1) 부타디엔 $750/t(WoW +$20/t), SBR $1,210/t(WoW +$15/t)
	2) 인도네시아와 일본의 설비트러블 영향으로 소폭 가격 상승
	3) 또한 유가의 급반등도 가격 상승에 영향을 줬음
	4) 다만 전반적인 합성고무계열의 수요는 여전히 약세 상황임
	5) 중국 춘절 임박하며 전체적 거래량 감소, 가격에 큰 의미는 없음

Issue 3	(출처: Platts)
제목	미주 지역 에틸렌 수출과 PE 가격 인하 지속 중
결론	북미 지역의 에틸렌 arbitrage와 PE가격 인하는 아시아에도 영향 가능
세부	
	1) 아르헨티나 에틸렌 물량, 아시아 arbitrage 1분기부터 시작될 듯
	2) 현지에 있는 Dow Chemical 에탄크래커 생산능력은 76.5만톤/년임
	3) 또한 북미 Nova Chemical은 Formosa와 같이 북미 PE 가격 약 $70/t 인하
	4) 글로벌 PE 가격 하락세에 동반해야 하고 수요 또한 약해지는 상황임
	5) 북미 지역의 에틸렌 arbitrage와 PE가격 인하는 아시아에도 영향 가능

Issue 4	(출처: 각종언론)
제목	미국산 원유 40년 만에 첫 원유수출 성공, 유럽에 유조선 도착
결론	원유 이외에 각종 제품의 활발한 수출 이뤄질 것으로 판단함
세부	
	1) 미국산 경질 원유 실은 유조선 테오 T, 프랑스 마르세유 도착
	2) 텍사스를 출발해 대서양 거쳐 3주 만에 프랑스에 도달했음
	3) 세계 1위 네덜란드 원유거래업체 Vitol이 고객, 정유공장으로 투입
	4) PBF에너지 CEO 톰 오말리, "미국 원유수출로 유럽업체들 가장 먼저 이익"
	5) 원유 이외에 각종 제품의 활발한 수출 이뤄질 것으로 판단함

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

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

Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

Commodity Price Data

Daily Price		Today	1D	1W	1M	3M	6M	12M	YTD	2013avg.	2014avg.	2015acc.
F/X	USD/EUR	0.926	0.920	0.916	0.913	0.900	0.915	0.880	0.921	0.753	0.754	0.901
	Change, %		0.7	1.1	1.5	2.9	1.2	5.2	0.5	(3.9)	13.7	2.7
	USD/JPY	118.8	117.7	117.0	121.1	120.7	124.0	118.5	120.6	97.7	105.9	121.1
	Change, %		0.9	1.5	(1.9)	(1.6)	(4.2)	0.2	(1.5)	21.5	13.8	(1.9)
	USD/KRW	1,200.2	1,213.8	1,213.2	1,173.2	1,138.5	1,153.5	1,085.0	1,172.6	1,094.6	1,053.0	1,131.2
	Change, %		(1.1)	(1.1)	2.3	5.4	4.0	10.6	2.4	50.3	3.3	6.1
Agriculture	Corn	370.3	367.0	363.3	366.3	378.3	402.8	383.8	358.8	579.2	415.6	376.8
	Change, %		0.9	1.9	1.1	(2.1)	(8.1)	(3.5)	3.2	(39.6)	(5.9)	(1.8)
	Soybean	876.5	878.5	879.0	885.3	898.8	1,020.8	976.8	871.3	1,407.0	1,245.5	945.4
	Change, %		(0.2)	(0.3)	(1.0)	(2.5)	(14.1)	(10.3)	0.6	(7.5)	(22.3)	(7.3)
	Wheat	475.5	475.0	473.8	471.8	490.8	516.8	533.8	470.0	684.3	588.0	508.1
	Change, %		0.1	0.4	0.8	(3.1)	(8.0)	(10.9)	1.2	(22.2)	(2.6)	(6.4)
	Rice	11.0	11.0	10.7	10.8	12.1	11.1	11.2	11.6	15.5	14.0	11.1
	Change, %		(0.2)	2.8	1.2	(9.7)	(1.4)	(1.8)	(5.2)	4.4	(25.9)	(0.9)
	Oats	205.5	203.8	198.8	225.0	225.0	236.3	291.0	217.3	367.5	373.1	250.2
	Change, %		0.9	3.4	(8.7)	(8.7)	(13.0)	(29.4)	(5.4)	1.9	(14.3)	(17.9)
MYR/mt	Palm Oil	2,382.0	2,349.0	2,200.0	2,290.0	2,296.0	2,205.0	2,272.0	2,398.0	2,405.0	2,415.1	2,190.3
	Change, %		1.4	8.3	4.0	3.7	8.0	4.8	(0.7)	13.3	(12.8)	8.8
	Cocoa	2,872.0	2,855.0	2,905.0	3,197.0	3,140.0	3,277.0	2,801.0	3,211.0	2,403.9	3,006.8	3,091.6
	Change, %		0.6	(1.1)	(10.2)	(8.5)	(12.4)	2.5	(10.6)	21.2	7.4	(7.1)
	Cotton	62.5	62.1	61.4	63.2	62.5	65.6	57.8	63.3	83.3	76.4	63.3
	Change, %		0.6	1.7	(1.1)	(0.1)	(4.9)	8.1	(1.3)	12.6	(28.8)	(1.3)
	Sugar	14.4	14.5	14.9	15.0	14.6	11.4	15.9	15.2	17.5	16.3	13.1
	Change, %		(0.2)	(3.4)	(4.1)	(1.2)	26.7	(9.4)	(5.4)	(15.9)	(11.5)	9.7
	Coffee	116.0	114.4	114.9	119.2	119.9	125.1	160.0	126.7	126.0	177.1	132.6
	Change, %		1.4	1.0	(2.6)	(3.2)	(7.2)	(27.5)	(8.4)	(23.0)	50.5	(12.5)
Energy	WTI	32.2	29.5	29.4	36.1	45.4	49.2	46.3	37.0	98.0	92.9	48.8
	Change, %		9.0	9.4	(10.9)	(29.1)	(34.6)	(30.5)	(13.1)	7.2	(45.9)	(34.1)
	Brent	32.2	29.3	28.9	36.1	48.1	56.1	48.5	37.3	108.7	99.5	53.7
	Change, %		10.0	11.2	(10.9)	(33.1)	(42.7)	(33.7)	(13.7)	(0.3)	(48.3)	(40.0)
	Natural Gas	2.1	2.1	2.1	1.9	2.4	2.9	2.8	2.3	3.7	4.3	2.6
	Change, %		0.0	1.9	13.3	(10.4)	(26.2)	(24.6)	(8.5)	26.2	(31.7)	(18.6)
	Ethanol	1.4	1.4	1.4	1.4	1.6	1.5	1.4	1.4	2.3	2.1	1.5
	Change, %		2.4	3.2	2.4	(10.6)	(9.1)	0.0	(0.5)	(12.7)	(14.9)	(7.7)
	RBOB Gasoline	108.4	103.1	102.1	117.5	130.7	186.8	133.1	126.7	285.0	262.6	163.6
	Change, %		5.1	6.1	(7.8)	(17.1)	(42.0)	(18.6)	(14.5)	(0.9)	(48.5)	(33.8)
	Coal	43.0	43.2	43.2	43.0	41.8	43.1	45.3	43.3	56.1	57.5	45.2
	Change, %		(0.5)	(0.5)	(0.1)	2.8	(0.3)	(5.1)	(0.8)	(1.0)	(15.5)	(4.9)
Metal	Gold	1,098.0	1,101.2	1,088.9	1,072.5	1,166.1	1,094.3	1,302.1	1,061.4	1,410.4	1,266.5	1,160.6
	Change, %		(0.3)	0.8	2.4	(5.8)	0.3	(15.7)	3.4	(28.0)	(1.3)	(5.4)
	Silver	14.0	14.1	13.9	14.3	15.9	14.8	18.3	13.8	23.8	19.1	15.7
	Change, %		(0.5)	0.7	(1.7)	(11.6)	(5.3)	(23.5)	1.5	(35.8)	(18.9)	(10.8)
	Platinum	831.1	818.3	829.0	871.3	1,010.5	981.0	1,285.8	891.1	1,485.7	1,384.6	1,055.7
	Change, %		1.6	0.3	(4.6)	(17.8)	(15.3)	(35.4)	(6.7)	(11.2)	(11.5)	(21.3)
	Palladium	497.2	500.0	494.5	555.5	686.4	627.3	776.6	563.0	725.9	803.4	691.9
	Change, %		(0.6)	0.5	(10.5)	(27.6)	(20.7)	(36.0)	(11.7)	1.7	11.4	(28.1)
	Copper	4,443.0	4,430.0	4,331.0	4,665.5	5,232.5	5,361.0	5,665.0	4,705.0	7,352.6	6,828.1	5,503.1
	Change, %		0.3	2.6	(4.8)	(15.1)	(17.1)	(21.6)	(5.6)	(7.2)	(14.4)	(19.3)
	Uranium	34.8	34.8	34.8	33.8	37.0	36.4	36.8	34.4	38.5	33.5	36.9
	Change, %		0.0	0.0	3.0	(6.1)	(4.5)	(5.4)	1.0	(20.9)	2.5	(5.7)
	HR Coil	391.0	391.0	395.0	364.0	411.0	465.0	583.0	391.0	630.4	653.2	461.5
	Change, %		0.0	(1.0)	7.4	(4.9)	(15.9)	(32.9)	0.0	3.1	(10.4)	(15.3)
	Scrap	250.0	250.0	250.0	250.0	190.0	265.0	344.0	250.0	396.9	401.3	252.9
	Change, %		0.0	0.0	0.0	31.6	(5.7)	(27.3)	0.0	(1.2)	(16.5)	(1.2)
	Zinc	1,510.0	1,507.0	1,476.0	1,517.0	1,750.0	2,000.0	2,141.0	1,609.0	1,940.3	2,165.0	1,941.9
	Change, %		0.2	2.3	(0.5)	(13.7)	(24.5)	(29.5)	(6.2)	(1.2)	6.0	(22.2)

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

Refining Price Data

Daily Price		01/22	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Crude Oil	**WTI**	32.2	29.5	29.4	37.5	44.6	47.4	46.3	37.0	93.1	48.8	31.8
	Change, %		*9.0*	*9.4*	*(14.2)*	*(27.8)*	*(32.1)*	*(30.5)*	*(13.1)*	*(65.4)*	*(34.0)*	*1.1*
	Dubai	23.9	22.8	26.2	31.8	43.9	52.9	44.7	32.2	96.7	50.8	27.3
	Change, %		*4.6*	*(8.9)*	*(25.0)*	*(45.6)*	*(54.8)*	*(46.5)*	*(25.8)*	*(75.3)*	*(53.0)*	*(12.6)*
Crude Oil	**Gasoline(휘발유)**	49.0	47.2	49.6	53.3	61.6	74.5	56.4	54.8	110.9	69.5	51.1
Product	*Change, %*		*3.8*	*(1.3)*	*(8.2)*	*(20.5)*	*(34.3)*	*(13.2)*	*(10.7)*	*(55.9)*	*(29.6)*	*(4.2)*
	Kerosene(등유)	33.7	32.4	37.1	43.9	57.6	64.1	62.1	44.2	112.6	64.7	38.3
	Change, %		*4.2*	*(9.2)*	*(23.2)*	*(41.5)*	*(47.4)*	*(45.7)*	*(23.7)*	*(70.0)*	*(47.9)*	*(11.9)*
	Diesel(경유)	32.0	30.7	35.7	42.6	57.7	62.4	61.3	43.2	112.8	64.8	37.0
	Change, %		*4.3*	*(10.3)*	*(24.8)*	*(44.5)*	*(48.7)*	*(47.8)*	*(25.9)*	*(71.6)*	*(50.6)*	*(13.4)*
	Bunker-C	21.9	21.0	21.6	25.0	36.6	46.9	41.5	25.3	86.5	45.3	22.7
	Change, %		*4.3*	*1.6*	*(12.2)*	*(40.1)*	*(53.2)*	*(47.1)*	*(13.3)*	*(74.6)*	*(51.5)*	*(3.3)*
	Naphtha	34.5	33.1	35.7	43.0	46.7	51.4	44.2	43.5	94.3	52.6	38.5
	Change, %		*4.2*	*(3.5)*	*(19.8)*	*(26.2)*	*(33.0)*	*(21.9)*	*(20.7)*	*(63.5)*	*(34.5)*	*(10.5)*
Dubai	**Gasoline(휘발유)**	25.1	24.4	23.4	21.5	17.7	21.7	11.8	22.6	14.2	18.7	23.8
Spread	*Change*		*0.7*	*1.7*	*3.6*	*7.4*	*3.4*	*13.3*	*2.5*	*10.9*	*6.3*	*1.3*
	Kerosene(등유)	9.9	9.5	10.9	12.1	13.7	11.3	17.4	12.0	15.9	14.0	11.0
	Change		*0.3*	*(1.1)*	*(2.3)*	*(3.9)*	*(1.4)*	*(7.6)*	*(2.2)*	*(6.0)*	*(4.1)*	*(1.1)*
	Diesel(경유)	8.1	7.9	9.5	10.8	13.8	9.5	16.7	11.0	16.0	14.0	9.7
	Change		*0.3*	*(1.3)*	*(2.6)*	*(5.6)*	*(1.4)*	*(8.5)*	*(2.9)*	*(7.9)*	*(5.8)*	*(1.5)*
	Bunker-C	(2.0)	(1.8)	(4.6)	(6.8)	(7.3)	(6.0)	(3.2)	(6.9)	(10.3)	(5.5)	(4.6)
	Change		*(0.1)*	*2.7*	*4.9*	*5.3*	*4.1*	*1.3*	*5.0*	*8.3*	*3.6*	*2.7*
	Naphtha	10.6	10.3	9.5	11.2	2.8	(1.5)	(0.5)	11.3	(2.4)	1.8	11.2
	Change		*0.3*	*1.1*	*(0.6)*	*7.8*	*12.1*	*11.1*	*(0.7)*	*13.0*	*8.8*	*(0.6)*
Refining	**Simple(단순)**	5.0	4.9	3.9	3.0	2.5	1.9	4.6	3.2	(0.1)	3.3	4.0
Margin	*Change*		*0.1*	*1.1*	*2.0*	*2.5*	*3.1*	*0.4*	*1.8*	*5.1*	*1.7*	*1.0*
	Complex(복합)	10.3	10.0	9.7	9.3	8.7	7.9	9.0	9.7	7.1	9.3	10.0
	Change		*0.3*	*0.6*	*1.0*	*1.6*	*2.4*	*1.3*	*0.6*	*3.2*	*1.0*	*0.3*
	Complex(lagging)	(0.5)	(3.4)	(2.4)	(0.5)	7.1	0.3	(6.8)	2.3	2.2	6.5	(1.4)
	Change		*2.9*	*2.0*	*0.1*	*(7.6)*	*(0.7)*	*6.4*	*(2.8)*	*(2.7)*	*(6.9)*	*0.9*

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

Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

Petrochemical Price Data

Daily Price			01/22	01/21	01/20	01/19	01/18	01/15	01/14	01/13	01/12	01/11
Spot Price	**Naphtha**	CFR Japan	326.6	307.4	318.5	324.8	311.9	328.5	329.5	343.9	343.5	361.4
	Ethylene	CFR SE Asia	970.0	985.0	985.0	1,000.0	1,005.0	1,005.0	1,005.0	1,085.0	1,085.0	1,085.0
	Propylene	FOB Korea	560.0	555.0	555.0	547.0	546.0	546.0	551.0	555.0	555.0	555.0
	Butadiene	FOB Korea	750.0	730.0	730.0	730.0	730.0	730.0	730.0	730.0	730.0	730.0
	HDPE	CFR FE Asia	1,095.0	1,065.0	1,060.0	1,060.0	1,070.0	1,075.0	1,075.0	1,075.0	1,075.0	1,075.0
	LDPE	CFR FE Asia	1,120.0	1,120.0	1,100.0	1,080.0	1,085.0	1,095.0	1,095.0	1,095.0	1,095.0	1,120.0
	LLDPE	CFR FE Asia	1,080.0	1,050.0	1,065.0	1,060.0	1,065.0	1,070.0	1,070.0	1,060.0	1,065.0	1,080.0
	MEG	CFR China	568.0	561.0	564.0	570.0	543.0	550.0	555.0	546.0	568.0	576.0
	PP	CFR FE Asia	805.0	805.0	805.0	810.0	805.0	805.0	805.0	805.0	805.0	780.0
	PX	CFR China	689.0	670.0	666.2	676.0	660.2	667.3	680.7	693.0	690.7	709.7
	PTA	CFR China	540.0	538.0	540.0	545.0	542.0	546.0	551.0	550.0	555.0	562.0
	Benzene	FOB Korea	542.0	528.0	528.0	531.0	526.0	542.0	541.0	537.0	539.0	554.0
	Toluene	FOB Korea	534.5	524.0	527.5	541.5	524.0	535.0	549.0	548.5	544.0	562.0
	Xylene	FOB Korea	553.0	547.0	550.0	553.0	537.0	559.0	559.0	565.0	572.0	595.0
	SM	FOB Korea	857.5	856.5	871.5	871.5	885.5	898.0	896.0	896.0	896.0	911.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	**Naphtha**	CFR Japan	328.0	384.5	412.5	461.5	448.5	428.0	413.5	865.9	493.0	375.3
	Change, %			*(14.7)*	*(20.5)*	*(28.9)*	*(26.9)*	*(23.4)*	*(20.7)*	*(62.1)*	*(33.5)*	*(12.6)*
	Ethylene	CFR SE Asia	1,000.0	1,095.0	1,100.0	925.0	840.0	925.0	1,090.0	1,401.1	1,103.7	1,061.7
	Change, %			*(8.7)*	*(9.1)*	*8.1*	*19.0*	*8.1*	*(8.3)*	*(28.6)*	*(9.4)*	*(5.8)*
	Propylene	CFR SE Asia	660.0	625.0	650.0	490.0	570.0	710.0	650.0	1,254.2	770.0	575.8
	Change, %			*5.6*	*1.5*	*34.7*	*15.8*	*(7.0)*	*1.5*	*(47.4)*	*(14.3)*	*14.6*
	Butadiene	CFR SE Asia	740.0	740.0	680.0	750.0	890.0	625.0	720.0	1,281.7	877.5	733.3
	Change, %			*0.0*	*8.8*	*(1.3)*	*(16.9)*	*18.4*	*2.8*	*(42.3)*	*(15.7)*	*0.9*
	Benzene	CFR SE Asia	545.0	582.5	567.5	617.5	580.0	575.0	580.0	1,243.1	690.0	569.2
	Change, %			*(6.4)*	*(4.0)*	*(11.7)*	*(6.0)*	*(5.2)*	*(6.0)*	*(56.2)*	*(21.0)*	*(4.2)*
	Toluene	CFR SE Asia	585.0	630.0	625.0	705.0	650.0	575.0	630.0	1,082.5	700.8	615.0
	Change, %			*(7.1)*	*(6.4)*	*(17.0)*	*(10.0)*	*1.7*	*(7.1)*	*(46.0)*	*(16.5)*	*(4.9)*
	Xylene	CFR SE Asia	610.0	640.0	655.0	675.0	660.0	562.5	625.0	1,055.7	699.3	625.0
	Change, %			*(4.7)*	*(6.9)*	*(9.6)*	*(7.6)*	*8.4*	*(2.4)*	*(42.2)*	*(12.8)*	*(2.4)*
Spread	**Ethylene**	-Naphtha	672.0	710.5	687.5	463.5	391.5	497.0	676.5	535.2	610.6	686.3
	Change, %			*(5.4)*	*(2.3)*	*45.0*	*71.6*	*35.2*	*(0.7)*	*25.6*	*10.0*	*(2.1)*
	Propylene	-Naphtha	332.0	240.5	237.5	28.5	121.5	282.0	236.5	388.3	277.0	200.5
	Change, %			*38.0*	*39.8*	*1,064.9*	*173.3*	*17.7*	*40.4*	*(14.5)*	*19.9*	*65.6*
	Butadiene	-Naphtha	412.0	355.5	267.5	288.5	441.5	197.0	306.5	415.9	384.5	358.0
	Change, %			*15.9*	*54.0*	*42.8*	*(6.7)*	*109.1*	*34.4*	*(0.9)*	*7.2*	*15.1*
	Benzene	-Naphtha	217.0	198.0	155.0	156.0	131.5	147.0	166.5	377.3	197.0	193.8
	Change, %			*9.6*	*40.0*	*39.1*	*65.0*	*47.6*	*30.3*	*(42.5)*	*10.2*	*12.0*
	Toluene	-Naphtha	257.0	245.5	212.5	243.5	201.5	147.0	216.5	216.6	207.8	239.7
	Change, %			*4.7*	*20.9*	*5.5*	*27.5*	*74.8*	*18.7*	*18.6*	*23.7*	*7.2*
	Xylene	-Naphtha	282.0	255.5	242.5	213.5	211.5	134.5	211.5	189.9	206.3	249.7
	Change, %			*10.4*	*16.3*	*32.1*	*33.3*	*109.7*	*33.3*	*48.5*	*36.7*	*13.0*

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

Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	**HDPE**	CFR SE Asia	1,085.0	1,075.0	1,065.0	1,195.0	1,165.0	1,180.0	1,065.0	1,524.9	1,230.1	1,075.0
	Change, %			*0.9*	*1.9*	*(9.2)*	*(6.9)*	*(8.1)*	*1.9*	*(28.8)*	*(11.8)*	*0.9*
	MEG	CFR SE Asia	552.5	585.0	570.0	657.5	700.0	707.5	617.5	934.1	780.8	585.0
	Change, %			*(5.6)*	*(3.1)*	*(16.0)*	*(21.1)*	*(21.9)*	*(10.5)*	*(40.9)*	*(29.2)*	*(5.6)*
	PVC	CFR SE Asia	720.0	715.0	730.0	795.0	805.0	795.0	715.0	1,013.9	820.8	716.7
	Change, %			*0.7*	*(1.4)*	*(9.4)*	*(10.6)*	*(9.4)*	*0.7*	*(29.0)*	*(12.3)*	*0.5*
	PP	CFR SE Asia	835.0	830.0	835.0	995.0	1,015.0	1,000.0	835.0	1,503.0	1,109.8	833.3
	Change, %			*0.6*	*0.0*	*(16.1)*	*(17.7)*	*(16.5)*	*0.0*	*(44.4)*	*(24.8)*	*0.2*
	2-EH	CFR Korea	685.0	685.0	680.0	785.0	845.0	935.0	680.0	1,397.1	930.1	683.3
	Change, %			*0.0*	*0.7*	*(12.7)*	*(18.9)*	*(26.7)*	*0.7*	*(51.0)*	*(26.3)*	*0.2*
	ABS	CFR SE Asia	1,100.0	1,130.0	1,080.0	1,245.0	1,255.0	1,515.0	1,130.0	1,897.7	1,431.1	1,120.0
	Change, %			*(2.7)*	*1.9*	*(11.6)*	*(12.4)*	*(27.4)*	*(2.7)*	*(42.0)*	*(23.1)*	*(1.8)*
	SBR	CFR SE Asia	1,195.0	1,200.0	1,085.0	1,280.0	1,275.0	1,415.0	1,150.0		1,332.1	1,188.8
	Change, %			*(0.4)*	*10.1*	*(6.6)*	*(6.3)*	*(15.5)*	*3.9*		*(10.3)*	*0.5*
	SM	CFR SE Asia	935.0	955.0	900.0	987.5	930.0	865.0	910.0	1,547.1	1,100.7	933.3
	Change, %			*(2.1)*	*3.9*	*(5.3)*	*0.5*	*8.1*	*2.7*	*(39.6)*	*(15.1)*	*0.2*
	Caustic	FOB NEA	285.0	285.0	285.0	312.5	315.0	260.0	285.0	310.0	296.8	285.0
	Change, %			*0.0*	*0.0*	*(8.8)*	*(9.5)*	*9.6*	*0.0*	*(8.1)*	*(4.0)*	*0.0*
	PX	CFR SE Asia	682.5	745.0	757.5	812.5	780.0	740.0	762.5	1,228.5	842.9	730.0
	Change, %			*(8.4)*	*(9.9)*	*(16.0)*	*(12.5)*	*(7.8)*	*(10.5)*	*(44.4)*	*(19.0)*	*(6.5)*
	PO	CFR China	1,110.0	1,205.0	1,372.5	1,607.5	1,502.5	1,755.0	1,257.5	2,179.2	1,683.4	1,190.8
	Change, %			*(7.9)*	*(19.1)*	*(30.9)*	*(26.1)*	*(36.8)*	*(11.7)*	*(49.1)*	*(34.1)*	*(6.8)*
	Caprolactam	CFR SE Asia	1,250.0	1,250.0	1,285.0	1,360.0	1,360.0	1,745.0	1,260.0	2,233.4	1,581.5	1,253.3
	Change, %			*0.0*	*(2.7)*	*(8.1)*	*(8.1)*	*(28.4)*	*(0.8)*	*(44.0)*	*(21.0)*	*(0.3)*
	PTA	CFR SE Asia	562.5	582.5	587.5	617.5	585.0	585.0	585.0	911.7	648.0	576.7
	Change, %			*(3.4)*	*(4.3)*	*(8.9)*	*(3.8)*	*(3.8)*	*(3.8)*	*(38.3)*	*(13.2)*	*(2.5)*
Spread	**HDPE**		757.0	690.5	652.5	733.5	716.5	752.0	651.5	659.0	737.1	699.7
	Change, %			*9.6*	*16.0*	*3.2*	*5.7*	*0.7*	*16.2*	*14.9*	*2.7*	*8.2*
	MEG		224.5	200.5	157.5	196.0	251.5	279.5	204.0	68.2	287.8	209.7
	Change, %			*12.0*	*42.5*	*14.5*	*(10.7)*	*(19.7)*	*10.0*	*229.0*	*(22.0)*	*7.1*
	PVC		392.0	330.5	317.5	333.5	356.5	367.0	301.5	148.0	327.8	341.3
	Change, %			*18.6*	*23.5*	*17.5*	*10.0*	*6.8*	*30.0*	*164.8*	*19.6*	*14.8*
	PP		507.0	445.5	422.5	533.5	566.5	572.0	421.5	637.1	616.8	458.0
	Change, %			*13.8*	*20.0*	*(5.0)*	*(10.5)*	*(11.4)*	*20.3*	*(20.4)*	*(17.8)*	*10.7*
	2-EH		357.0	300.5	267.5	323.5	396.5	507.0	266.5	531.3	437.0	308.0
	Change, %			*18.8*	*33.5*	*10.4*	*(10.0)*	*(29.6)*	*34.0*	*(32.8)*	*(18.3)*	*15.9*
	ABS		772.0	745.5	667.5	783.5	806.5	1,087.0	716.5	1,031.9	938.1	744.7
	Change, %			*3.6*	*15.7*	*(1.5)*	*(4.3)*	*(29.0)*	*7.7*	*(25.2)*	*(17.7)*	*3.7*
	SBR	BD spread	455.0	460.0	405.0	530.0	385.0	790.0	430.0		454.7	455.4
	Change, %			*(1.1)*	*12.3*	*(14.2)*	*18.2*	*(42.4)*	*5.8*		*0.1*	*(0.1)*
	SM		607.0	570.5	487.5	526.0	481.5	437.0	496.5	681.2	607.7	558.0
	Change, %			*6.4*	*24.5*	*15.4*	*26.1*	*38.9*	*22.3*	*(10.9)*	*(0.1)*	*8.8*
	Caustic											
	Change, %											
	PX		354.5	360.5	345.0	351.0	331.5	312.0	349.0	362.6	349.9	354.7
	Change, %			*(1.7)*	*2.8*	*1.0*	*6.9*	*13.6*	*1.6*	*(2.2)*	*1.3*	*(0.0)*
	PO	propylene sprea	450.0	580.0	722.5	1,117.5	932.5	1,045.0	607.5	925.0	913.4	615.0
	Change, %			*(22.4)*	*(37.7)*	*(59.7)*	*(51.7)*	*(56.9)*	*(25.9)*	*(51.4)*	*(50.7)*	*(26.8)*
	Caprolactam	benzene sprea	705.0	667.5	717.5	742.5	780.0	1,170.0	680.0	990.3	891.6	684.2
	Change, %			*5.6*	*(1.7)*	*(5.1)*	*(9.6)*	*(39.7)*	*3.7*	*(28.8)*	*(20.9)*	*3.0*
	PTA	px spread	84.8	61.0	57.3	48.8	39.0	67.0	51.3	51.8	58.0	65.7
	Change, %			*38.9*	*48.0*	*73.8*	*117.3*	*26.5*	*65.4*	*63.7*	*46.1*	*29.1*

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

Global peers

	Currency	01/22	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER 15	PER 16E	PBR 15	PBR 16E	EV/EBITDA 15	EV/EBITDA 16E
Petrochemical																
Dow Chemical	USD	43.2	2.9	0.6	(16.1)	(13.4)	(13.6)	(4.7)	(16.0)	50,075	12.8	12.1	2.2	2.1	7.2	7.2
Du Pont	USD	54.7	2.2	1.2	(15.3)	(7.5)	(7.1)	(23.3)	(17.8)	47,975	19.3	16.8	4.5	4.5	10.4	10.2
Eastman	USD	62.6	2.1	1.3	(7.3)	(12.4)	(17.4)	(13.7)	(7.3)	9,297	8.5	8.1	2.2	1.9	7.0	6.9
BASF	EUR	63.4	3.1	3.1	(8.5)	(14.8)	(23.4)	(16.6)	(10.4)	62,954	12.3	11.9	1.9	1.8	6.6	6.6
Akzo Nobel	EUR	58.6	1.0	2.1	(4.1)	(9.3)	(14.7)	(5.8)	(5.1)	15,763	14.6	13.7	2.4	2.2	7.9	7.5
Arkema	EUR	56.9	2.4	2.7	(10.0)	(14.5)	(17.0)	(6.9)	(12.0)	4,580	12.3	11.0	1.1	1.1	5.6	5.2
Lanxess	EUR	38.6	4.4	7.1	(8.6)	(20.5)	(27.9)	2.3	(9.5)	3,822	16.6	12.9	1.5	1.3	5.3	4.9
Sumitomo Chemical	JPY	574	7.5	0.2	(14.7)	(13.2)	(20.4)	26.0	(18.1)	8,017	10.9	9.4	1.1	1.0	7.0	6.8
Mitsubishi Chemical	JPY	656	5.5	(2.8)	(14.0)	(9.6)	(19.7)	13.8	(15.2)	8,341	13.6	9.9	0.9	0.9	6.2	6.0
Shin-Etsu Chemical	JPY	5,931	6.0	(3.5)	(10.2)	(12.9)	(19.1)	(23.6)	(10.4)	21,624	17.2	16.1	1.2	1.2	5.8	5.4
Asahi Kasei	JPY	730	4.8	(4.3)	(6.3)	(0.7)	(22.0)	(34.5)	(11.3)	8,643	10.9	9.7	0.9	0.8	5.1	5.0
JSR	JPY	1,675	5.3	(1.5)	(10.5)	(9.9)	(21.0)	(11.9)	(11.8)	3,195	12.8	11.7	1.0	1.0	5.2	4.8
Nitto Denko	JPY	7,378	8.2	3.9	(14.9)	(4.2)	(26.3)	2.8	(17.2)	10,817	13.5	12.9	1.8	1.6	6.2	5.9
SABIC	SAR	61.8	0.0	(8.2)	(28.1)	(27.3)	(38.2)	(21.9)	(19.3)	49,371	9.7	12.4	1.1	1.1	5.3	6.3
Yansab	SAR	27.5	0.0	6.0	(31.4)	(38.2)	(47.3)	(36.8)	(15.2)	4,120	14.0	11.4	1.0	1.0	6.3	6.1
Formosa Plastics	TWD	74.4	0.7	(1.5)	1.9	(0.9)	4.3	(2.4)	(3.4)	14,133	15.9	15.7	1.6	1.5	23.3	23.4
Formosa Fiber	TWD	68.8	1.5	(3.1)	(1.0)	(7.5)	(6.4)	(0.3)	(7.0)	12,034	16.4	15.9	1.4	1.3	12.9	13.3
Nan Ya Plastics	TWD	55.3	0.7	(2.5)	(5.6)	(15.4)	(17.1)	(15.7)	(9.3)	13,088	12.1	13.0	1.3	1.3	12.5	12.8
Sinopec Shanghai	CNY	5.51	4.0	3.8	(18.9)	(22.0)	(33.9)	32.8	(15.0)	7,476	20.8	17.9	3.0	2.7	8.9	8.1
Sinopec Yizheng(Fibe	CNY	6.20	2.8	2.0	(28.0)	(37.2)	(36.0)	9.7	(24.0)	11,813	#N/A N/A	#N/A N/A	3.7	3.8	26.8	20.1
Reliance	INR	1,004	2.0	(6.4)	1.7	5.1	(4.4)	13.6	(1.1)	48,129	11.7	10.9	1.3	1.2	9.4	8.2
Industries Qatar	QAR	88.6	0.0	(10.4)	(14.9)	(27.9)	(33.4)	(38.9)	(20.3)	14,719	10.5	10.5	1.6	1.6	42.4	43.8
PTT Chemical	THB	49.3	3.7	7.7	2.1	(17.2)	(26.2)	(9.2)	(1.5)	6,099	7.4	7.2	0.8	0.8	5.5	5.3
Petronas	MYR	6.9	(0.1)	(1.4)	(2.4)	7.6	4.9	30.4	(5.1)	12,923	19.8	18.1	2.3	2.2	10.0	9.0
LG화학	KRW	303,500	(0.7)	(2.7)	(8.9)	4.5	10.6	57.3	(7.6)	16,784	18.0	14.2	1.7	1.6	6.7	6.0
롯데케미칼	KRW	248,000	(1.8)	(0.2)	2.9	(3.1)	(12.4)	57.5	1.8	7,093	8.1	7.8	1.1	1.0	4.0	3.7
한화케미칼	KRW	24,850	1.8	(1.2)	(10.3)	15.6	17.2	107.9	(8.6)	3,358	16.4	10.5	0.9	0.8	10.3	8.5
금호석유	KRW	48,600	0.6	(8.1)	(9.2)	(21.4)	(32.0)	(43.8)	(6.7)	1,236	11.6	10.0	1.0	0.9	8.8	7.4
SKC	KRW	30,250	1.9	(4.4)	(8.5)	(18.6)	(22.4)	7.3	(10.5)	929	3.7	7.9	0.8	0.7	7.2	7.0
국도화학	KRW	56,000	0.9	0.4	(5.2)	(22.0)	(24.2)	29.9	(5.6)	272	5.9	6.7	0.8	0.7	4.0	3.7
효성	KRW	2,455	11.1	3.2	(9.9)	(12.5)	(23.2)	(34.4)	(5.9)	3,326	9.3	7.2	1.2	1.1	7.0	6.1
Average			**2.7**	**(0.6)**	**(10.1)**	**(12.3)**	**(18.4)**	**1.5**	**(10.5)**							
Refinery																
Valero	USD	67.9	7.0	2.2	(5.1)	12.4	1.8	41.4	(4.0)	32,675	7.2	8.3	1.5	1.3	3.8	4.4
Conoco Phillips	USD	37.7	2.1	(4.3)	(18.6)	(31.0)	(32.5)	(42.3)	(19.3)	46,509	#N/A N/A	#N/A N/A	1.0	1.1	7.9	7.4
Formosa Petrochemi	TWD	79.8	1.1	1.3	2.7	0.1	5.7	18.8	1.3	22,685	18.4	18.4	2.8	2.8	12.2	12.2
Tesoro	USD	90.7	6.4	(2.1)	(11.9)	(10.6)	(9.1)	18.5	(13.9)	10,923	6.0	9.1	1.9	1.6	4.0	5.1
Marathon Petroleum	USD	42.8	8.1	3.4	(17.0)	(10.1)	(25.0)	2.0	(17.4)	22,827	6.7	7.5	1.7	1.5	3.9	4.0
Devon Energy	USD	25.6	6.0	4.7	(14.1)	(42.7)	(49.9)	(58.2)	(19.9)	10,534	9.8	#N/A N/A	0.8	0.9	4.9	7.7
Hollyfrontier	USD	36.2	9.4	6.4	(12.3)	(22.1)	(23.4)	9.7	(9.4)	6,612	6.8	8.2	1.1	1.1	3.7	4.3
Phillips 66	USD	80.0	5.2	2.0	(2.0)	(3.1)	(2.2)	18.9	(2.2)	42,691	9.9	10.7	1.8	1.6	5.9	6.3
Murphy Oil	USD	17.6	2.0	2.5	(21.2)	(37.3)	(49.2)	(63.4)	(21.6)	3,026	#N/A N/A	#N/A N/A	0.5	0.5	3.7	4.9
JX Holdings	JPY	428.2	5.8	(1.2)	(13.8)	(11.4)	(17.1)	(4.2)	(15.8)	9,016	#N/A N/A	7.4	0.6	0.5	15.3	9.8
Cosmo Oil	JPY	164.0	0.0	0.0	0.0	0.0	(15.5)	2.5	0.0	1,151	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Idemitsu	JPY	1,697.0	6.2	(1.7)	(11.2)	(14.5)	(29.0)	(14.1)	(12.4)	2,291	17.2	5.7	0.4	0.4	12.7	8.6
Tonengeneral	JPY	938.0	5.4	(3.7)	(12.8)	(25.0)	(22.0)	(9.0)	(8.2)	4,473	70.9	9.6	1.4	1.3	11.5	9.2
Nesteoil	EUR	28.0	2.2	8.5	4.1	25.6	11.5	28.5	1.4	0	11.4	11.2	2.3	2.0	7.9	7.2
Ashland	USD	97.7	0.8	0.6	(5.5)	(8.5)	(16.5)	(18.2)	(4.9)	6,178	14.1	13.0	2.1	2.2	7.8	7.6
Fuchs Petrolub	EUR	37.3	2.8	(2.2)	(12.6)	(15.0)	(6.0)	6.6	(14.1)	5,300	20.9	19.1	5.0	4.3	12.2	11.1
SK이노베이션	KRW	137,000	3.4	3.4	1.9	26.3	26.3	47.8	5.4	10,571	11.8	9.4	0.8	0.7	6.8	6.2
S-Oil	KRW	80,000	1.7	1.1	(1.5)	19.2	30.5	42.6	0.8	7,516	12.9	10.1	1.7	1.5	8.2	7.1
GS	KRW	48,800	2.0	1.7	(6.2)	1.1	1.8	22.5	(3.7)	3,784	8.7	7.0	0.7	0.7	7.5	6.9
Average			**4.1**	**1.2**	**(8.3)**	**(7.7)**	**(11.6)**	**2.7**	**(8.3)**							

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

Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

Global peers

	Currency	01/22	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER 15	PER 16E	PBR 15	PBR 16E	EV/EBITDA 15	EV/EBITDA 16E
E&P/Shale																
Exxon Mobil	USD	77	3.3	(1.3)	(1.4)	(7.6)	(6.4)	(17.6)	(1.8)	318,756	19.3	23.2	1.8	1.8	8.1	8.3
BP	GBP	353	3.1	4.3	2.2	(9.2)	(13.3)	(17.7)	(0.4)	92,674	13.7	17.4	0.9	0.9	5.3	5.0
Shell	EUR	1,387	5.4	2.7	(6.7)	(22.4)	(22.4)	(36.3)	(9.1)	127,550	10.9	12.5	0.7	0.7	3.9	3.9
Chevron	USD	84	3.1	(0.2)	(7.5)	(8.8)	(10.7)	(23.3)	(7.1)	157,225	24.0	29.3	1.0	1.0	6.2	6.0
Total	EUR	39	4.4	4.3	(3.8)	(13.5)	(12.0)	(12.9)	(4.9)	104,177	9.7	12.8	1.0	1.0	5.2	5.6
Sinopec	CNY	4	1.4	0.2	(11.5)	(12.4)	(36.1)	(32.1)	(9.9)	78,534	14.9	12.1	0.8	0.8	5.3	4.9
Petrochina	CNY	7	1.0	(0.1)	(14.0)	(16.9)	(46.2)	(42.0)	(12.2)	192,582	28.0	34.4	1.1	1.1	6.8	7.2
CNOOC	CNY	13	0.5	(0.4)	(21.9)	(24.4)	(37.3)	(34.5)	(17.8)	6,938	32.1	36.0	1.3	1.2	11.0	11.0
Gazprom	RUB	132	3.6	5.8	(0.6)	(4.9)	(6.0)	(12.6)	(2.7)	39,928	2.6	2.5	0.2	0.2	2.5	2.8
Rosneft	RUB	250	5.4	7.9	0.9	(1.2)	10.3	3.6	(1.1)	33,806	5.9	5.7	0.7	0.7	3.0	3.2
Anadarko	USD	35	5.8	10.8	(26.9)	(51.4)	(51.2)	(56.5)	(27.0)	18,029	#N/A N/A	#N/A N/A	1.2	1.3	7.5	8.4
Petrobras	BRL	4	(2.0)	(14.7)	(35.1)	(45.0)	(57.4)	(57.0)	(34.2)	17,244	7.3	4.7	0.2	0.2	5.8	5.5
Lukoil	USD	2,341	5.8	11.6	0.6	0.3	(5.0)	(17.0)	(0.2)	25,474	5.1	4.4	0.2	0.2	N/A	N/A
Kinder	USD	15	10.5	18.0	0.1	(48.4)	(56.6)	(63.5)	2.8	47,497	19.9	19.6	0.8	0.8	10.0	9.6
Statoil	NOK	110	8.4	6.3	(7.4)	(23.1)	(20.0)	(20.2)	(11.2)	40,041	16.1	17.3	0.9	0.9	2.4	2.5
BHP	AUD	15	7.5	1.3	(9.3)	(36.7)	(41.9)	(43.4)	(14.6)	53,918	46.4	27.1	0.9	1.0	6.8	6.0
PTT E&P	THB	48	12.9	9.0	(18.2)	(33.7)	(47.6)	(55.9)	(15.7)	5,317	8.0	11.9	0.5	0.5	1.5	1.6
Petronas gas	MYR	21	0.9	(1.2)	(2.8)	(9.2)	(2.7)	(4.1)	(6.6)	9,821	23.0	22.4	3.7	3.5	13.2	12.8
Chesapeake	USD	4	(1.1)	(1.4)	(11.8)	(55.0)	(61.2)	(82.1)	(22.0)	2,334	#N/A N/A	#N/A N/A	0.9	1.2	6.3	10.6
Noble Energy	USD	29	2.3	5.1	(10.3)	(20.4)	(21.3)	(37.9)	(11.8)	12,426	423.7	#N/A N/A	1.0	1.1	8.4	8.2
Average		**0**	**4.1**	**3.4**	**(9.3)**	**(22.2)**	**(27.2)**	**(33.1)**	**(10.4)**							
PV																
WACKER	EUR	67.8	2.2	3.0	(10.8)	(9.1)	(24.2)	(24.3)	(12.5)	3,823	19.8	17.5	1.4	1.4	4.7	4.5
GCL-Poly	HKD	1.0	2.1	(11.0)	(17.1)	(39.0)	(40.3)	(39.6)	(16.4)	2,314	7.4	5.8	0.7	0.7	7.8	6.7
REC	NOK	0.4	0.0	0.0	0.0	0.0	0.9	5.4	0.0	519	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
SunEdison	USD	2.7	3.5	(3.3)	(50.1)	(66.0)	(90.4)	(86.2)	(47.9)	840	#N/A N/A	#N/A N/A	0.2	0.2	#N/A N/A	24.2
Canadian Solar	USD	20.0	4.9	6.2	(28.5)	(5.0)	(22.8)	5.0	(31.1)	1,117	7.6	7.2	1.3	1.1	8.0	5.8
JA Solar	USD	9.0	1.8	12.6	(8.2)	3.8	20.3	17.8	(7.1)	455	6.3	6.0	0.5	0.4	3.8	3.4
Trina Solar	USD	9.5	4.6	6.9	(14.0)	(12.2)	0.5	13.1	(13.9)	875	10.6	6.6	0.7	0.7	6.9	5.1
Solar City	USD	32.0	0.8	(9.0)	(37.6)	(17.6)	(42.1)	(33.9)	(37.2)	3,127	#N/A N/A	#N/A N/A	3.4	3.6	#N/A N/A	#N/A N/A
Yingli	USD	4.6	12.6	30.0	(17.3)	(37.3)	(51.3)	(76.5)	0.4	83	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	9.4	9.1
First Solar	USD	66.4	5.1	8.3	2.2	33.2	56.3	58.6	0.7	6,705	14.2	15.4	1.2	1.1	6.8	8.8
한화솔라원	USD	17.5	4.1	11.6	(33.4)	0.9	20.0	80.0	(20.4)	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
OCI	KRW	61,600	1.8	(7.2)	(22.0)	(24.7)	(50.7)	(17.6)	(17.9)	1,226	7.1	13.2	0.5	0.5	11.7	9.2
웅진에너지	KRW	1,545	1.6	(7.5)	(18.3)	(10.4)	(16.0)	3.7	(10.7)	95	N/A	0.5	0.5	11.7	9.2	9.3
신성솔라에너지	KRW	1,650	2.5	(7.0)	(26.3)	22.2	19.6	44.7	(18.3)	104	N/A	0.5	11.7	9.2	9.3	7.2
Average			**3.4**	**2.4**	**(20.1)**	**(11.5)**	**(15.7)**	**(3.6)**	**(16.6)**							
Gas Company																
Towngas China	HKD	3.6	3.2	(5.3)	(20.2)	(36.2)	(49.4)	(47.6)	(20.2)	1,228	7.4	6.7	0.7	0.6	9.8	8.5
Kulun	HKD	5.3	3.3	(2.4)	(16.6)	(16.7)	(24.7)	(34.0)	(22.8)	5,522	10.8	9.7	0.8	0.7	5.3	4.9
Beijing Enterprise	HKD	38.0	(1.0)	(6.3)	(15.8)	(25.3)	(33.9)	(37.7)	(19.1)	6,256	8.6	7.7	0.8	0.7	13.4	12.4
ENN Energy	HKD	33.4	4.5	(3.0)	(16.0)	(28.2)	(30.6)	(30.1)	(19.2)	4,640	11.9	10.2	2.1	1.8	8.1	7.1
China Resources Gas	HKD	18.9	3.5	(3.4)	(14.4)	(16.6)	(16.6)	(0.8)	(18.4)	5,389	14.0	12.0	2.3	2.0	8.8	7.7
China Gas Holdings	HKD	9.5	0.0	(5.9)	(8.3)	(27.4)	(26.7)	(23.2)	(15.5)	6,021	12.5	10.3	2.2	1.8	10.5	8.9
Shenzen Gas	HKD	12.5	1.3	0.6	(9.6)	0.5	(9.8)	14.7	(13.0)	3,042	11.1	11.0	1.2	1.1	8.0	8.9
Shann Xi	CNY	9.9	(0.7)	(6.3)	(23.3)	(21.1)	(41.0)	(15.0)	(21.8)	1,665	17.0	14.2	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Suntien	HKD	1.0	4.2	(8.3)	(13.0)	(34.6)	(36.3)	(45.1)	(19.4)	477	7.6	6.2	0.4	0.4	7.4	5.9
China Oil & Gas	HKD	0.5	5.8	(5.2)	(15.7)	(14.2)	(33.1)	(50.4)	(14.2)	340	9.6	6.9	0.6	0.6	6.0	5.0
Average			**2.4**	**(4.5)**	**(15.3)**	**(22.0)**	**(30.2)**	**(26.9)**	**(18.3)**							
EV																
LG화학	KRW	303,500	(0.7)	(2.7)	(8.9)	4.5	10.6	57.3	(7.6)	16,784	16.8	13.5	1.6	1.5	6.8	6.2
삼성SDI	KRW	102,000	1.5	(6.8)	(14.6)	(10.5)	2.0	(12.1)	(10.5)	5,853	23.1	10.8	0.6	0.6	10.8	10.2
Panasonic	JPY	1111.0	5.1	1.9	(7.9)	(16.2)	(29.2)	(16.2)	(10.4)	22,995	13.1	10.9	1.3	1.2	3.8	3.6
GS Yuasa	JPY	407.0	6.3	(1.7)	(8.9)	(22.0)	(16.9)	(23.5)	(10.0)	1,420	12.8	10.9	1.0	0.9	6.3	5.6
NEC	JPY	364.0	3.4	0.3	(4.7)	(10.3)	(3.4)	2.2	(5.5)	8,000	13.2	11.0	1.1	1.0	6.3	6.0
BYD Auto	CNY	55.2	(1.5)	(5.0)	(12.2)	(10.2)	(0.7)	38.6	(14.3)	17,266	58.8	48.1	4.7	4.2	19.1	16.0
Tesla Motors	USD	202.6	1.3	(1.2)	(11.9)	(4.3)	(24.4)	0.5	(15.6)	26,524	#N/A N/A	119.1	23.1	19.7	95.4	31.7
Kandi Technologies	USD	8.4	4.9	0.5	(25.5)	(3.3)	10.6	(33.8)	(22.8)	395	#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			**2.5**	**(1.9)**	**(11.8)**	**(9.1)**	**(6.4)**	**1.6**	**(12.1)**							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임