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

1. News Summary (3 page)

2016년 3월 8일

News		Conclusion
WTI comment	OPEC의 가격 상향의지 루머로 상승	
Headline	유럽 MEG 가격 전주대비 $45/t 상승, 9주래 최고치	성수기 진입 직전 아시아/유럽 모두 MEG 랠리 두각, 롯켐 수혜
News 1.	말레이지아 천연고무, $1,350/t으로 2015년 8월 이후 최고치	전 세계적으로 risky asset에 대한 매력 증대되는 상황으로 파악됨
News 2.	LG화학, 바이오분야 추가 M&A 타겟 물색	단기적인 이익보다는 중장기적인 성장동력 측면에서 크게 매력적임
News 3.	-	-
News 4.	-	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	$/bbl	37.9	5.5	12.3	22.7	1.0	(24.2)
Dubai	$/bbl	34.4	6.9	14.7	17.7	(6.8)	(39.2)
Gasoline	$/bbl	51.0	5.1	10.2	11.1	(5.4)	(32.3)
Diesel	$/bbl	44.9	5.2	11.9	16.8	(11.5)	(38.6)
Complex margin	$/bbl	7.0	(0.3)	(0.4)	(0.5)	(2.2)	(4.1)
1M lagging	$/bbl	16.5	3.2	3.9	12.4	13.6	(7.5)
Petrochemical			%	%	%	%	%
Naphtha	$/t	354	3.4	8.4	8.7	(18.8)	(35.2)
Butadiene	$/t	1,005	0.0	4.1	25.6	50.0	34.9
HDPE	$/t	1,115	0.0	0.0	4.2	6.7	(7.9)
MEG	$/t	740	6.0	9.5	21.3	34.5	(9.5)
PX	$/t	777	3.0	7.7	8.6	2.0	(9.9)
SM	$/t	1,128	1.6	10.4	20.3	26.2	(0.2)
Commodity			%	%	%	%	%
Natural Gas	$/mmbtu	1.69	1.4	(1.2)	(22.8)	(24.5)	(44.9)
Natural rubber	$/t	1,350	3.8	19.5	25.0	17.4	(2.2)
Cotton	C/lbs	57.4	0.5	1.6	(4.9)	(12.1)	(10.8)

*참고: 정제마진의 변동률은 %가 아닌 $/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	03/07	$/t	1,085	9.6	21.9	0.9	(1.8)
Propylene	03/07	$/t	655	3.1	0.8	6.5	(34.5)
Benzene	03/07	$/t	598	6.2	8.6	(3.2)	(9.8)
Toluene	03/07	$/t	620	5.1	6.0	(5.3)	(8.8)
Xylene	03/07	$/t	588	1.3	0.0	(13.0)	(13.0)
PP	03/07	$/t	895	1.7	6.5	1.1	(25.4)
PVC	03/07	$/t	755	1.3	4.1	5.6	(8.5)
ABS	03/07	$/t	1,215	5.2	8.5	8.7	(20.6)
SBR	03/07	$/t	1,250	1.6	4.6	13.1	0.8
SM	03/07	$/t	1,105	6.3	13.9	20.4	4.7
BPA	03/07	$/t	1,183	2.2	4.0	(18.2)	(40.7)
Caustic	03/07	$/t	285	(0.9)	(0.9)	(1.7)	2.7
2-EH	03/07	$/t	710	1.4	4.4	3.6	(33.3)
Caprolactam	03/07	$/t	1,150	0.0	3.6	(11.5)	(29.4)
Solar				%	%	%	%
Polysilicon	03/03	$/kg	13.7	2.3	5.6	0.8	(27.3)
Module	03/03	$/W	0.55	(0.7)	(0.9)	(2.0)	(8.1)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	84.5	2.6	5.4	5.5	10.0	(1.4)
Shell	EUR	1,674	(0.2)	1.6	9.1	10.2	(17.5)
Petrochina	CNY	7.78	(0.5)	6.9	7.6	(9.0)	(27.8)
Gazprom	RUB	150.2	2.7	6.2	11.7	11.6	(1.3)
Petrobras	BRL	7.4	2.1	43.4	62.3	2.5	(20.2)
Refinery							
Phillips66	USD	87.4	1.9	10.1	11.6	0.8	16.0
Valero	USD	63.3	(1.0)	5.3	10.7	(10.7)	7.7
JX	JPY	469.9	(2.0)	7.0	(3.0)	(9.2)	(4.0)
Neste Oil	EUR	29.1	0.9	0.7	5.1	8.9	25.8

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	63.3	0.4	6.0	7.3	(13.2)	(27.6)
Dow Chemical	USD	49.8	(1.1)	2.4	6.6	(4.4)	3.8
SABIC	SAR	76.4	(0.7)	5.1	14.8	(12.4)	(18.0)
Formosa Pla.	TWD	80.0	0.0	1.3	6.2	7.4	5.0
Shin-Etsu	JPY	6,089	0.6	7.5	4.4	(11.6)	(26.0)
Renewable							
Wacker	EUR	78.7	0.1	7.1	29.7	(1.7)	(29.2)
Yingli	USD	4.97	9.2	16.1	14.3	(21.1)	(78.6)
Tesla	USD	205.3	2.1	7.0	26.3	(11.2)	5.9
BYD	CNY	54.0	0.5	6.8	7.7	(13.1)	3.2

4. Coverage Summary

	03/07	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	1,958	0.1	2.2	2.1	0.5	3.8	(2.7)				* 추정치는 12M fwd 기준임	
KOSPI화학	5,209	(0.2)	1.1	(0.8)	0.6	15.6	20.0				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	299,500	0.5	(0.2)	(0.5)	(2.4)	35.2	28.5	매수	380,000	26.9	14.55	1.65
롯데케미칼	316,000	0.8	(1.1)	9.9	33.6	30.6	64.6	매수	290,000	(8.2)	14.28	1.32
한화케미칼	24,250	(0.6)	1.3	(2.0)	(6.2)	34.7	51.6	매수	30,000	23.7	8.57	0.69
금호석유화학	63,100	6.2	2.6	11.7	13.3	23.0	(25.1)	매수	70,000	10.9	17.18	1.29
KCC	419,500	(0.7)	(1.6)	(3.8)	(6.4)	11.9	(26.7)	매수	550,000	31.1	14.50	0.65
OCI	97,500	1.6	6.8	41.3	26.0	26.3	(23.8)	매수	85,000	(12.8)	23.20	0.97
SKC	31,150	(0.6)	0.2	4.2	(9.2)	(13.5)	(5.6)	매수	43,000	38.0	9.70	0.79
국도화학	62,700	1.1	4.7	11.2	8.1	(14.2)	22.9	매수	100,000	59.5	7.76	0.75
SK이노베이션	156,500	4.7	7.9	10.2	22.7	62.7	58.6	매수	150,000	(4.2)	12.37	0.97
S-Oil	85,500	1.5	8.2	1.8	12.4	47.9	25.7	매수	85,000	(0.6)	13.87	1.60
GS	54,600	0.7	3.0	4.8	9.7	22.1	24.0	매수	60,000	9.9	5.65	0.90
SK가스	72,300	(0.8)	0.1	(3.5)	(3.7)	(13.5)	(23.5)	매수	90,000	24.5	9.04	0.64
대우인터내셔널	21,750	5.3	14.2	32.6	25.7	9.0	(26.3)	매수	22,000	1.1	12.04	1.03
LG상사	37,400	2.5	12.7	13.9	8.2	48.7	1.9	매수	40,000	7.0	14.38	1.04

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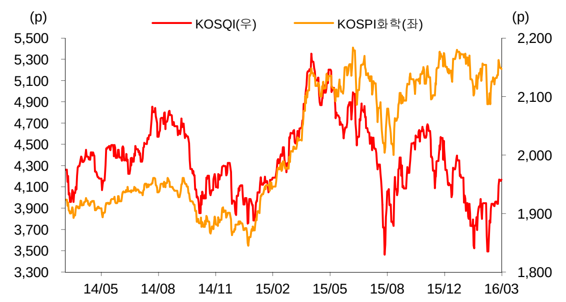
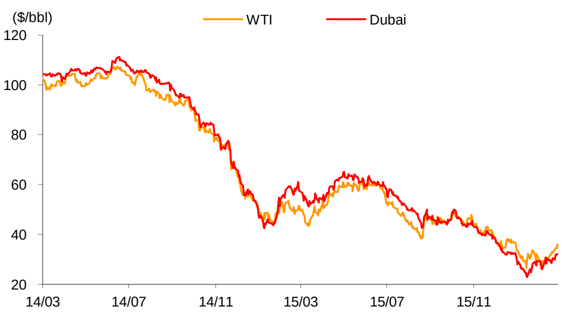
Analyst 손 지 우
T. 3773-8827
E. jwshon@sk.com

Key Chart

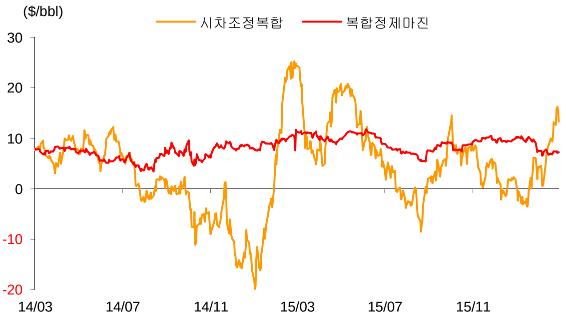
KOSPI/KOSPI화학



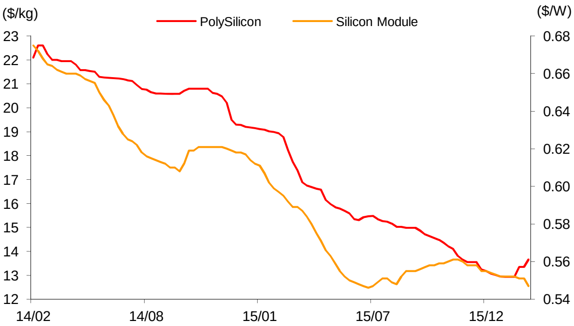
WTI/Dubai



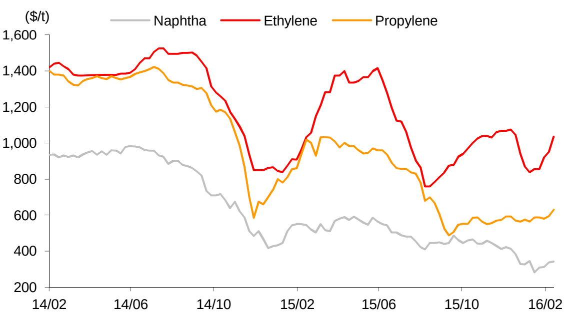
Complex & 1M lagging margin



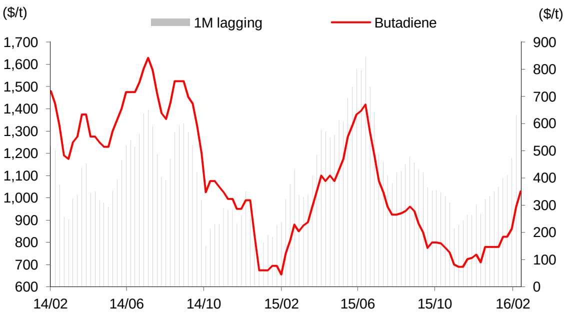
Polysilicon & Module prices



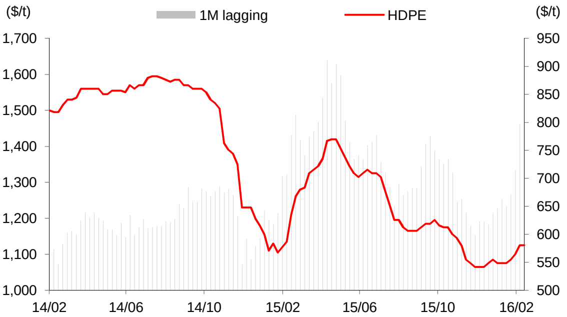
Naphtha/Ethylene/Propylene prices



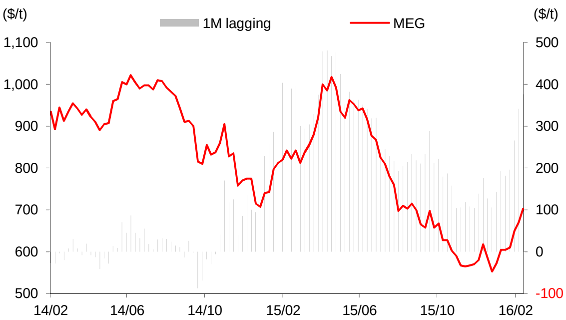
Butadiene price & 1M lagging naphtha spread



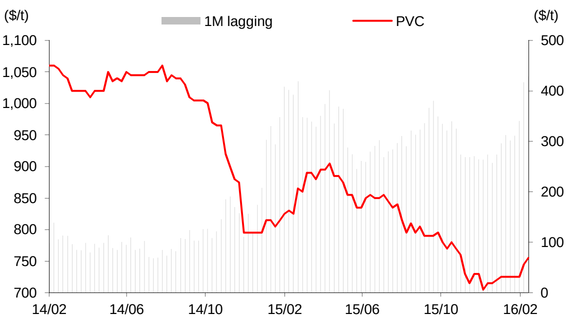
HDPE price & 1M lagging naphtha spread



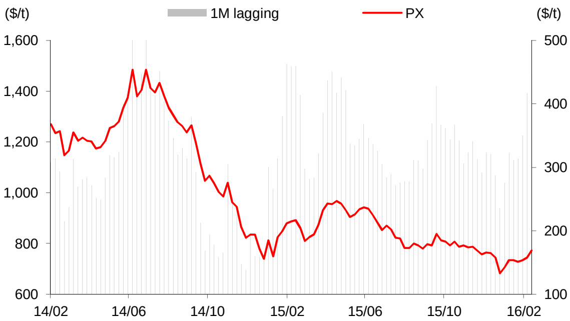
MEG price & 1M lagging naphtha spread



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	유럽 MEG 가격 전주대비 $45/t 상승, 9주래 최고치
결론	성수기 진입 직전 아시아/유럽 모두 MEG 랠리 두각, 롯켐 수혜
세부	
	1) 가격 $760/t, 아시아 가격 역시 Platts 기준 월요일 $700/t 돌파하였음
	2) 가장 큰 원인은 공급, "복합적 요인으로 생산과 수입 모두 차질"
	3) 아시아에서는 메이저업체 MEGlobal의 설비트러블 따른 불가항력이 원인
	4) 현재 유럽 3월 CP $780/t에 결정되었으나 공급자 너무 낮다고 판단 중
	5) 성수기 진입 직전 아시아/유럽 모두 MEG 랠리 두각, 롯켐 수혜

WTI Comment	(출처: 연합뉴스)
제목	OPEC의 가격 상향의지 루머로 상승
상승 요인	OPEC, 비OPEC과 생산량 동결 논의 준비 중이라는 소식 로이터, 주요 OPEC회원국 가격 $50/bbl에 맞추기 위한 논의 시작 보도
하락 요인	

Issue 1	(출처: 각종언론)
제목	말레이지아 천연고무, $1,350/t으로 2015년 8월 이후 최고치
결론	전 세계적으로 risky asset에 대한 매력 증대되는 상황으로 파악됨
세부	
	1) 전일대비 3.8% 상승, 주간상승률은 +1.95%에 이름
	2) 지난 2/5 천연고무 생산의 70%인 ITRC 회원국, 수출 20% 절감 발표
	3) 태국/인니/말련, 3/1~8/31 6개월간 수출물량 감축, 물량기준 61.5만톤임
	4) 다만 수출감축효과는 이전부터 fundamental을 변화시키지는 못했었음
	5) 전 세계적으로 risky asset에 대한 매력 증대되는 상황으로 파악됨

Issue 2	(출처: 각종언론)
제목	LG화학, 바이오분야 추가 M&A 타겟 물색
결론	단기적인 이익보다는 중장기적인 성장동력 측면에서 크게 매력적임
세부	
	1) LG화학, 바이오 분야 역량강화 위해 동부팜한농 이어 추가 M&A 물색
	2) 박진수 부회장, "중장기 미래변화방향은 에너지/물/바이오."
	3) "특히 바이오 분야에서 M&A 포함해 새로운 사업기회 적극 물색."
	4) LG화학은 그린바이오, 즉 생명공학을 농수산업에 응용한 개념임
	5) 단기적인 이익보다는 중장기적인 성장동력 측면에서 크게 매력적임

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

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

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

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

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**	0.908	0.909	0.920	0.896	0.923	0.895	0.922	0.921	0.753	0.754	0.901
	Change, %		(0.1)	(1.3)	1.3	(1.6)	1.4	(1.6)	(1.4)	(3.9)	13.7	0.7
	USD/JPY	113.5	113.7	112.7	116.9	123.4	119.3	120.8	120.6	97.7	105.9	121.1
	Change, %		(0.2)	0.7	(2.9)	(8.0)	(4.9)	(6.1)	(5.9)	21.5	13.8	(6.3)
	USD/KRW	1,201.4	1,203.4	1,236.7	1,197.5	1,168.1	1,204.0	1,098.8	1,172.6	1,094.6	1,053.0	1,131.2
	Change, %		(0.2)	(2.8)	0.3	2.9	(0.2)	9.3	2.5	50.3	3.3	6.2
Agriculture	**Corn**	355.0	354.5	353.5	365.8	368.5	349.5	379.3	358.8	579.2	415.6	376.8
	Change, %		0.1	0.4	(2.9)	(3.7)	1.6	(6.4)	(1.0)	(39.6)	(5.9)	(5.8)
	Soybean	873.5	870.5	853.0	867.5	882.3	877.3	979.3	871.3	1,407.0	1,245.5	945.4
	Change, %		0.3	2.4	0.7	(1.0)	(0.4)	(10.8)	0.3	(7.5)	(22.3)	(7.6)
	Wheat	457.8	454.8	445.0	466.8	470.3	457.8	485.8	470.0	684.3	588.0	508.1
	Change, %		0.7	2.9	(1.9)	(2.7)	0.0	(5.8)	(2.6)	(22.2)	(2.6)	(9.9)
	Rice	10.5	10.3	10.5	11.1	10.9	11.9	10.2	11.6	15.5	14.0	11.1
	Change, %		1.9	(0.4)	(6.0)	(3.9)	(11.8)	2.1	(9.6)	4.4	(25.9)	(5.4)
	Oats	176.3	170.3	169.3	197.0	259.8	223.3	295.3	217.3	367.5	373.1	250.2
	Change, %		3.5	4.1	(10.5)	(32.1)	(21.1)	(40.3)	(18.9)	1.9	(14.3)	(29.5)
MYR/mt	**Palm Oil**	2,495.0	2,464.0	2,479.0	2,497.0	2,254.0	1,955.0	2,312.0	2,398.0	2,405.0	2,415.1	2,190.3
	Change, %		1.3	0.6	(0.1)	10.7	27.6	7.9	4.0	13.3	(12.8)	13.9
	Cocoa	2,994.0	3,001.0	2,949.0	2,772.0	3,410.0	3,168.0	3,023.0	3,211.0	2,403.9	3,006.8	3,091.6
	Change, %		(0.2)	1.5	8.0	(12.2)	(5.5)	(1.0)	(6.8)	21.2	7.4	(3.2)
	Cotton	58.9	58.9	58.0	60.0	62.4	63.1	63.0	63.3	83.3	76.4	63.3
	Change, %		(0.0)	1.6	(1.8)	(5.6)	(6.6)	(6.4)	(6.9)	12.6	(28.8)	(6.9)
	Sugar	14.7	14.8	14.6	13.3	15.3	11.3	13.4	15.2	17.5	16.3	13.1
	Change, %		(1.1)	0.7	10.5	(4.2)	30.1	9.1	(3.8)	(15.9)	(11.5)	11.6
	Coffee	118.7	118.8	112.7	120.4	122.7	115.9	136.5	126.7	126.0	177.1	132.6
	Change, %		(0.1)	5.3	(1.5)	(3.3)	2.4	(13.1)	(6.4)	(23.0)	50.5	(10.6)
Energy	**WTI**	37.9	35.9	33.8	30.9	37.7	46.1	49.6	37.0	98.0	92.9	48.8
	Change, %		5.5	12.3	22.7	0.7	(17.7)	(23.6)	2.3	7.2	(45.9)	(22.4)
	Brent	40.8	38.7	36.0	34.1	40.7	47.6	59.7	37.3	108.7	99.5	53.7
	Change, %		5.4	13.5	19.8	0.2	(14.3)	(31.7)	9.5	(0.3)	(48.3)	(23.9)
	Natural Gas	1.7	1.7	1.7	2.1	2.1	2.7	2.8	2.3	3.7	4.3	2.6
	Change, %		1.4	(1.2)	(18.1)	(18.2)	(36.3)	(40.5)	(27.7)	26.2	(31.7)	(35.7)
	Ethanol	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.4	2.3	2.1	1.5
	Change, %		0.6	1.2	(2.9)	(4.9)	(4.1)	(4.5)	(0.4)	(12.7)	(14.9)	(7.6)
	RBOB Gasoline	139.3	133.2	105.0	99.3	120.9	141.8	188.2	126.7	285.0	262.6	163.6
	Change, %		4.5	32.7	40.3	15.2	(1.8)	(26.0)	9.9	(0.9)	(48.5)	(14.9)
	Coal	43.6	43.6	44.2	43.1	43.4	42.9	53.0	43.3	56.1	57.5	45.2
	Change, %		0.0	(1.3)	1.0	0.4	1.5	(17.7)	0.6	(1.0)	(15.5)	(3.6)
Metal	**Gold**	1,267.4	1,259.3	1,238.7	1,173.8	1,071.5	1,119.4	1,167.2	1,061.4	1,410.4	1,266.5	1,160.6
	Change, %		0.6	2.3	8.0	18.3	13.2	8.6	19.4	(28.0)	(1.3)	9.2
	Silver	15.6	15.5	14.9	15.0	14.2	14.5	15.9	13.8	23.8	19.1	15.7
	Change, %		0.7	5.0	4.2	9.8	7.9	(1.7)	13.2	(35.8)	(18.9)	(0.5)
	Platinum	999.4	979.1	934.2	912.0	855.6	988.2	1,162.5	891.1	1,485.7	1,384.6	1,055.7
	Change, %		2.1	7.0	9.6	16.8	1.1	(14.0)	12.1	(11.2)	(11.5)	(5.3)
	Palladium	578.5	555.3	494.6	502.2	554.0	580.2	819.0	563.0	725.9	803.4	691.9
	Change, %		4.2	17.0	15.2	4.4	(0.3)	(29.4)	2.8	1.7	11.4	(16.4)
	Copper	5,000.0	5,027.5	4,695.0	4,630.0	4,557.0	5,148.0	5,745.0	4,705.0	7,352.6	6,828.1	5,503.1
	Change, %		(0.5)	6.5	8.0	9.7	(2.9)	(13.0)	6.3	(7.2)	(14.4)	(9.1)
	Uranium	31.1	31.4	32.0	34.4	36.1	37.2	39.7	34.4	38.5	33.5	36.9
	Change, %		(1.1)	(3.0)	(9.7)	(14.0)	(16.5)	(21.7)	(9.7)	(20.9)	2.5	(15.8)
	HR Coil	407.0	405.0	402.0	400.0	366.0	449.0	500.0	391.0	630.4	653.2	461.5
	Change, %		0.5	1.2	1.8	11.2	(9.4)	(18.6)	4.1	3.1	(10.4)	(11.8)
	Scrap	250.0	250.0	250.0	250.0	161.0	250.0	255.0	250.0	396.9	401.3	252.9
	Change, %		0.0	0.0	0.0	55.3	0.0	(2.0)	0.0	(1.2)	(16.5)	(1.2)
	Zinc	1,810.5	1,857.0	1,764.0	1,677.0	1,531.0	1,772.0	2,020.0	1,609.0	1,940.3	2,165.0	1,941.9
	Change, %		(2.5)	2.6	8.0	18.3	2.2	(10.4)	12.5	(1.2)	6.0	(6.8)

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

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

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Refining Price Data

Daily Price		03/07	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Crude Oil	**WTI**	37.9	35.9	33.8	30.9	37.5	44.2	50.0	37.0	93.1	48.8	31.7
	Change, %		*5.5*	*12.3*	*22.7*	*1.0*	*(14.2)*	*(24.2)*	*2.3*	*(59.3)*	*(22.3)*	*19.6*
	Dubai	34.4	32.2	30.0	29.2	36.9	47.6	56.6	32.2	96.7	50.8	28.5
	Change, %		*6.9*	*14.7*	*17.7*	*(6.8)*	*(27.7)*	*(39.2)*	*6.8*	*(64.4)*	*(32.3)*	*20.8*
Crude Oil Product	**Gasoline(휘발유)**	51.0	48.6	46.3	46.0	53.9	66.2	75.4	54.8	110.9	69.5	48.0
	Change, %		*5.1*	*10.2*	*11.1*	*(5.4)*	*(22.9)*	*(32.3)*	*(6.9)*	*(54.0)*	*(26.6)*	*6.2*
	Kerosene(등유)	46.6	44.6	42.5	41.1	50.6	59.5	74.3	44.2	112.6	64.7	40.0
	Change, %		*4.6*	*9.6*	*13.5*	*(7.9)*	*(21.6)*	*(37.2)*	*5.5*	*(58.6)*	*(28.0)*	*16.4*
	Diesel(경유)	44.9	42.6	40.1	38.4	50.7	60.0	73.1	43.2	112.8	64.8	38.0
	Change, %		*5.2*	*11.9*	*16.8*	*(11.5)*	*(25.3)*	*(38.6)*	*3.7*	*(60.2)*	*(30.8)*	*17.9*
	Bunker-C	26.3	25.1	23.8	24.6	30.4	37.9	54.1	25.3	86.5	45.3	23.6
	Change, %		*5.1*	*10.6*	*7.2*	*(13.4)*	*(30.6)*	*(51.3)*	*4.1*	*(69.5)*	*(41.8)*	*11.5*
	Naphtha	37.3	36.5	34.8	34.5	45.7	45.8	59.5	43.5	94.3	52.6	35.6
	Change, %		*2.4*	*7.2*	*8.2*	*(18.3)*	*(18.5)*	*(37.3)*	*(14.1)*	*(60.4)*	*(29.1)*	*4.7*
Dubai Spread	**Gasoline(휘발유)**	16.7	16.4	16.3	16.7	17.0	18.6	18.8	22.6	14.2	18.7	19.6
	Change		*0.3*	*0.3*	*(0.1)*	*(0.4)*	*(2.0)*	*(2.1)*	*(6.0)*	*2.4*	*(2.1)*	*(2.9)*
	Kerosene(등유)	12.2	12.4	12.5	11.9	13.7	11.9	17.7	12.0	15.9	14.0	11.6
	Change		*(0.2)*	*(0.3)*	*0.4*	*(1.5)*	*0.3*	*(5.5)*	*0.2*	*(3.6)*	*(1.7)*	*0.7*
	Diesel(경유)	10.5	10.5	10.1	9.2	13.8	12.5	16.5	11.0	16.0	14.0	9.6
	Change		*0.0*	*0.4*	*1.3*	*(3.3)*	*(2.0)*	*(6.0)*	*(0.6)*	*(5.6)*	*(3.5)*	*0.9*
	Bunker-C	(8.1)	(7.1)	(6.2)	(4.7)	(6.5)	(9.6)	(2.5)	(6.9)	(10.3)	(5.5)	(4.9)
	Change		*(0.9)*	*(1.9)*	*(3.4)*	*(1.5)*	*1.6*	*(5.6)*	*(1.2)*	*2.2*	*(2.5)*	*(3.2)*
	Naphtha	2.9	4.3	4.8	5.3	8.8	(1.8)	3.0	11.3	(2.4)	1.8	7.2
	Change		*(1.4)*	*(1.9)*	*(2.3)*	*(5.8)*	*4.7*	*(0.0)*	*(8.3)*	*5.3*	*1.1*	*(4.2)*
Refining Margin	**Simple(단순)**	1.3	1.9	2.3	2.8	3.3	0.7	5.6	3.2	(0.1)	3.3	3.2
	Change		*(0.5)*	*(1.0)*	*(1.5)*	*(1.9)*	*0.6*	*(4.3)*	*(1.8)*	*1.4*	*(2.0)*	*(1.9)*
	Complex(복합)	7.0	7.3	7.4	7.5	9.2	7.4	11.1	9.7	7.1	9.3	8.5
	Change		*(0.3)*	*(0.4)*	*(0.5)*	*(2.2)*	*(0.4)*	*(4.1)*	*(2.7)*	*(0.1)*	*(2.3)*	*(1.5)*
	Complex(lagging)	16.5	13.3	12.7	4.1	3.0	2.5	24.1	2.3	2.2	6.5	4.4
	Change		*3.2*	*3.9*	*12.4*	*13.6*	*14.1*	*(7.5)*	*14.2*	*14.3*	*10.1*	*12.2*

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			03/07	03/04	03/03	03/02	03/01	02/29	02/26	02/25	02/24	02/23
Spot Price	**Naphtha**	CFR Japan	354.0	342.3	348.5	344.8	326.5	326.5	337.5	324.5	308.3	318.3
	Ethylene	CFR SE Asia	1,090.0	1,090.0	1,015.0	1,015.0	1,015.0	1,010.0	1,000.0	960.0	955.0	955.0
	Propylene	FOB Korea	615.0	615.0	615.0	610.0	610.0	605.0	600.0	595.0	591.0	591.0
	Butadiene	FOB Korea	1,005.0	1,005.0	1,005.0	965.0	965.0	965.0	930.0	900.0	900.0	890.0
	HDPE	CFR FE Asia	1,115.0	1,115.0	1,110.0	1,110.0	1,115.0	1,115.0	1,115.0	1,115.0	1,115.0	1,120.0
	LDPE	CFR FE Asia	1,130.0	1,130.0	1,125.0	1,125.0	1,125.0	1,135.0	1,125.0	1,125.0	1,125.0	1,140.0
	LLDPE	CFR FE Asia	1,105.0	1,105.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0
	MEG	CFR China	740.0	698.0	680.0	685.0	684.0	676.0	662.0	655.0	652.0	665.0
	PP	CFR FE Asia	900.0	880.0	890.0	870.0	860.0	860.0	860.0	855.0	850.0	840.0
	PX	CFR China	777.3	754.8	749.3	745.3	740.2	722.0	727.7	723.7	723.7	728.7
	PTA	CFR China	590.0	576.0	577.0	575.0	571.0	563.0	565.0	569.0	569.0	571.0
	Benzene	FOB Korea	651.0	622.0	619.0	600.0	580.0	562.0	559.0	556.0	551.0	551.0
	Toluene	FOB Korea	644.0	620.0	616.0	602.5	584.0	570.5	561.5	561.0	559.5	562.5
	Xylene	FOB Korea	636.0	615.5	615.5	610.5	610.5	589.5	589.5	589.5	581.0	581.0
	SM	FOB Korea	1,128.0	1,110.0	1,096.0	1,061.0	1,041.0	1,021.5	1,004.0	996.0	996.0	996.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	**Naphtha**	CFR Japan	343.5	338.0	283.5	446.5	465.5	544.5	413.5	865.9	493.0	338.5
	Change, %			*1.6*	*21.2*	*(23.1)*	*(26.2)*	*(36.9)*	*(16.9)*	*(60.3)*	*(30.3)*	*1.5*
	Ethylene	CFR SE Asia	1,085.0	990.0	890.0	1,075.0	1,065.0	1,105.0	1,090.0	1,401.1	1,103.7	980.0
	Change, %			*9.6*	*21.9*	*0.9*	*1.9*	*(1.8)*	*(0.5)*	*(22.6)*	*(1.7)*	*10.7*
	Propylene	CFR SE Asia	655.0	635.0	650.0	615.0	615.0	1,000.0	650.0	1,254.2	770.0	584.8
	Change, %			*3.1*	*0.8*	*6.5*	*6.5*	*(34.5)*	*0.8*	*(47.8)*	*(14.9)*	*12.0*
	Butadiene	CFR SE Asia	990.0	920.0	785.0	640.0	725.0	760.0	720.0	1,281.7	877.5	798.0
	Change, %			*7.6*	*26.1*	*54.7*	*36.6*	*30.3*	*37.5*	*(22.8)*	*12.8*	*24.1*
	Benzene	CFR SE Asia	597.5	562.5	550.0	617.5	620.0	662.5	580.0	1,243.1	690.0	559.3
	Change, %			*6.2*	*8.6*	*(3.2)*	*(3.6)*	*(9.8)*	*3.0*	*(51.9)*	*(13.4)*	*6.8*
	Toluene	CFR SE Asia	620.0	590.0	585.0	655.0	690.0	680.0	630.0	1,082.5	700.8	595.5
	Change, %			*5.1*	*6.0*	*(5.3)*	*(10.1)*	*(8.8)*	*(1.6)*	*(42.7)*	*(11.5)*	*4.1*
	Xylene	CFR SE Asia	587.5	580.0	587.5	675.0	695.0	675.0	625.0	1,055.7	699.3	593.5
	Change, %			*1.3*	*0.0*	*(13.0)*	*(15.5)*	*(13.0)*	*(6.0)*	*(44.4)*	*(16.0)*	*(1.0)*
Spread	**Ethylene**	-Naphtha	741.5	652.0	606.5	628.5	599.5	560.5	676.5	535.2	610.6	641.5
	Change, %			*13.7*	*22.3*	*18.0*	*23.7*	*32.3*	*9.6*	*38.5*	*21.4*	*15.6*
	Propylene	-Naphtha	311.5	297.0	366.5	168.5	149.5	455.5	236.5	388.3	277.0	246.3
	Change, %			*4.9*	*(15.0)*	*84.9*	*108.4*	*(31.6)*	*31.7*	*(19.8)*	*12.5*	*26.5*
	Butadiene	-Naphtha	646.5	582.0	501.5	193.5	259.5	215.5	306.5	415.9	384.5	459.5
	Change, %			*11.1*	*28.9*	*234.1*	*149.1*	*200.0*	*110.9*	*55.5*	*68.2*	*40.7*
	Benzene	-Naphtha	254.0	224.5	266.5	171.0	154.5	118.0	166.5	377.3	197.0	220.8
	Change, %			*13.1*	*(4.7)*	*48.5*	*64.4*	*115.3*	*52.6*	*(32.7)*	*28.9*	*15.1*
	Toluene	-Naphtha	276.5	252.0	301.5	208.5	224.5	135.5	216.5	216.6	207.8	257.0
	Change, %			*9.7*	*(8.3)*	*32.6*	*23.2*	*104.1*	*27.7*	*27.6*	*33.1*	*7.6*
	Xylene	-Naphtha	244.0	242.0	304.0	228.5	229.5	130.5	211.5	189.9	206.3	255.0
	Change, %			*0.8*	*(19.7)*	*6.8*	*6.3*	*87.0*	*15.4*	*28.5*	*18.3*	*(4.3)*

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	1,125.0	1,125.0	1,075.0	1,085.0	1,175.0	1,210.0	1,065.0	1,524.9	1,230.1	1,088.5
	Change, %			0.0	4.7	3.7	(4.3)	(7.0)	5.6	(26.2)	(8.5)	3.4
	MEG	CFR SE Asia	702.5	670.0	605.0	565.0	627.5	822.5	617.5	934.1	780.8	617.0
	Change, %			4.9	16.1	24.3	12.0	(14.6)	13.8	(24.8)	(10.0)	13.9
	PVC	CFR SE Asia	755.0	745.0	725.0	715.0	780.0	825.0	715.0	1,013.9	820.8	727.5
	Change, %			1.3	4.1	5.6	(3.2)	(8.5)	5.6	(25.5)	(8.0)	3.8
	PP	CFR SE Asia	895.0	880.0	840.0	885.0	975.0	1,200.0	835.0	1,503.0	1,109.8	846.5
	Change, %			1.7	6.5	1.1	(8.2)	(25.4)	7.2	(40.5)	(19.4)	5.7
	2-EH	CFR Korea	710.0	700.0	680.0	685.0	725.0	1,065.0	680.0	1,397.1	930.1	688.5
	Change, %			1.4	4.4	3.6	(2.1)	(33.3)	4.4	(49.2)	(23.7)	3.1
	ABS	CFR SE Asia	1,215.0	1,155.0	1,120.0	1,117.5	1,245.0	1,530.0	1,130.0	1,897.7	1,431.1	1,134.0
	Change, %			5.2	8.5	8.7	(2.4)	(20.6)	7.5	(36.0)	(15.1)	7.1
	SBR	CFR SE Asia	1,250.0	1,230.0	1,195.0	1,105.0	1,175.0	1,240.0	1,150.0		1,332.1	1,204.5
	Change, %			1.6	4.6	13.1	6.4	0.8	8.7		(6.2)	3.8
	SM	CFR SE Asia	1,105.0	1,040.0	970.0	917.5	947.5	1,055.0	910.0	1,547.1	1,100.7	973.0
	Change, %			6.3	13.9	20.4	16.6	4.7	21.4	(28.6)	0.4	13.6
	Caustic	FOB NEA	285.0	287.5	287.5	290.0	300.0	277.5	285.0	310.0	296.8	286.5
	Change, %			(0.9)	(0.9)	(1.7)	(5.0)	2.7	0.0	(8.1)	(4.0)	(0.5)
	PX	CFR SE Asia	772.5	745.0	735.0	787.5	807.5	892.5	762.5	1,228.5	842.9	734.5
	Change, %			3.7	5.1	(1.9)	(4.3)	(13.4)	1.3	(37.1)	(8.3)	5.2
	PO	CFR China	1,182.5	1,157.5	1,137.5	1,445.0	1,545.0	1,992.5	1,257.5	2,179.2	1,683.4	1,149.5
	Change, %			2.2	4.0	(18.2)	(23.5)	(40.7)	(6.0)	(45.7)	(29.8)	2.9
	Caprolactam	CFR SE Asia	1,150.0	1,150.0	1,110.0	1,300.0	1,360.0	1,630.0	1,260.0	2,233.4	1,581.5	1,188.0
	Change, %			0.0	3.6	(11.5)	(15.4)	(29.4)	(8.7)	(48.5)	(27.3)	(3.2)
	PTA	CFR SE Asia	585.0	580.0	580.0	620.0	625.0	662.5	585.0	911.7	648.0	575.3
	Change, %			0.9	0.9	(5.6)	(6.4)	(11.7)	0.0	(35.8)	(9.7)	1.7
Spread	HDPE		781.5	787.0	791.5	638.5	709.5	665.5	651.5	659.0	737.1	750.0
	Change, %			(0.7)	(1.3)	22.4	10.1	17.4	20.0	18.6	6.0	4.2
	MEG		359.0	332.0	321.5	118.5	162.0	278.0	204.0	68.2	287.8	278.5
	Change, %			8.1	11.7	203.0	121.6	29.1	76.0	426.1	24.7	28.9
	PVC		411.5	407.0	441.5	268.5	314.5	280.5	301.5	148.0	327.8	389.0
	Change, %			1.1	(6.8)	53.3	30.8	46.7	36.5	178.0	25.5	5.8
	PP		551.5	542.0	556.5	438.5	509.5	655.5	421.5	637.1	616.8	508.0
	Change, %			1.8	(0.9)	25.8	8.2	(15.9)	30.8	(13.4)	(10.6)	8.6
	2-EH		366.5	362.0	396.5	238.5	259.5	520.5	266.5	531.3	437.0	350.0
	Change, %			1.2	(7.6)	53.7	41.2	(29.6)	37.5	(31.0)	(16.1)	4.7
	ABS		871.5	817.0	836.5	671.0	779.5	985.5	716.5	1,031.9	938.1	795.5
	Change, %			6.7	4.2	29.9	11.8	(11.6)	21.6	(15.5)	(7.1)	9.6
	SBR	BD spread	260.0	310.0	410.0	465.0	450.0	480.0	430.0		454.7	406.5
	Change, %			(16.1)	(36.6)	(44.1)	(42.2)	(45.8)	(39.5)		(42.8)	(36.0)
	SM		761.5	702.0	686.5	471.0	482.0	510.5	496.5	681.2	607.7	634.5
	Change, %			8.5	10.9	61.7	58.0	49.2	53.4	11.8	25.3	20.0
	Caustic											
	Change, %											
	PX		429.0	407.0	451.5	341.0	342.0	348.0	349.0	362.6	349.9	396.0
	Change, %			5.4	(5.0)	25.8	25.4	23.3	22.9	18.3	22.6	8.3
	PO	propylene sprea	527.5	522.5	487.5	830.0	930.0	992.5	607.5	925.0	913.4	564.8
	Change, %			1.0	8.2	(36.4)	(43.3)	(46.9)	(13.2)	(43.0)	(42.2)	(6.6)
	Caprolactam	benzene spread	552.5	587.5	560.0	682.5	740.0	967.5	680.0	990.3	891.6	628.8
	Change, %			(6.0)	(1.3)	(19.0)	(25.3)	(42.9)	(18.8)	(44.2)	(38.0)	(12.1)
	PTA	px spread	44.3	58.5	65.5	68.8	59.8	37.8	51.3	51.8	58.0	61.1
	Change, %			(24.4)	(32.4)	(35.6)	(25.9)	17.2	(13.7)	(14.5)	(23.7)	(27.6)

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Analyst 손지우
T. 3773-8827
E. jwshon@sk.com

Global peers

	Currency	03/07	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	49.8	(1.1)	2.4	6.6	(4.4)	18.3	3.8	(3.3)	55,588	14.5	12.5	2.3	2.2	7.6	6.9
Du Pont	USD	64.7	2.4	6.3	9.9	(3.6)	33.1	(12.8)	(2.8)	56,406	21.4	18.5	6.1	5.0	11.8	10.5
Eastman	USD	70.4	1.0	9.7	16.6	(0.7)	1.2	(2.4)	4.3	10,405	10.0	9.1	2.3	2.0	7.8	7.4
BASF	EUR	63.3	0.4	6.0	7.3	(13.2)	(9.4)	(27.6)	(10.4)	64,113	14.1	12.6	1.9	1.8	7.2	6.7
Akzo Nobel	EUR	55.6	0.1	2.6	(0.3)	(13.4)	(6.2)	(19.5)	(9.8)	15,267	13.5	12.7	2.1	2.0	7.1	6.8
Arkema	EUR	62.3	(0.2)	10.5	16.7	(6.9)	2.6	(12.2)	(3.5)	5,117	12.6	10.6	1.3	1.2	5.5	5.1
Lanxess	EUR	41.2	(0.5)	7.4	12.2	(8.2)	(4.3)	(13.5)	(3.4)	4,159	15.3	12.6	1.5	1.4	5.4	5.0
Sumitomo Chemical	JPY	515	(0.6)	4.3	(5.5)	(29.0)	(9.3)	(14.2)	(26.5)	7,508	9.0	7.9	0.9	0.9	6.7	6.3
Mitsubishi Chemical	JPY	625	(0.5)	9.8	(2.7)	(21.4)	(1.6)	(10.4)	(19.3)	8,288	9.8	8.7	0.9	0.8	5.8	5.6
Shin-Etsu Chemical	JPY	6,089	0.6	7.5	4.4	(11.6)	(1.8)	(26.0)	(8.0)	23,169	17.2	15.9	1.2	1.2	6.0	5.5
Asahi Kasei	JPY	707	2.0	10.8	(2.7)	(14.2)	(19.5)	(43.2)	(14.1)	8,734	10.1	9.1	0.8	0.8	5.1	4.8
JSR	JPY	1,719	0.1	8.6	2.8	(10.3)	(3.2)	(20.6)	(9.5)	3,422	12.7	11.8	1.0	1.0	5.2	4.9
Nitto Denko	JPY	6,630	(1.0)	10.9	7.3	(23.8)	(11.1)	(14.4)	(25.6)	10,145	13.0	12.5	1.5	1.4	5.6	5.4
SABIC	SAR	76.4	(0.7)	5.1	14.8	(12.4)	(3.0)	(18.0)	(0.1)	61,128	15.3	12.9	1.3	1.3	7.3	6.6
Yansab	SAR	38.7	0.4	13.7	33.0	(10.2)	(10.3)	(21.3)	19.3	5,798	17.5	13.5	1.4	1.4	8.9	8.2
Formosa Plastics	TWD	80.0	0.0	1.3	6.2	7.4	17.0	5.0	3.9	15,635	16.7	15.7	1.6	1.5	25.1	24.1
Formosa Fiber	TWD	78.5	1.8	4.9	11.3	12.1	16.1	10.6	6.1	14,126	17.7	17.2	1.5	1.4	14.8	14.5
Nan Ya Plastics	TWD	67.0	1.5	5.0	13.9	10.2	17.5	(3.0)	9.8	16,314	15.7	15.1	1.5	1.5	15.5	14.2
Sinopec Shanghai	CNY	6.54	3.0	8.6	19.3	0.9	0.8	32.4	0.9	8,934	20.5	20.8	3.2	2.9	9.6	9.3
Sinopec Yizheng(Fibe	CNY	5.71	0.9	(3.5)	(9.7)	(33.8)	(9.2)	(18.5)	(30.0)	11,063	#N/A N/A	154.3	3.4	3.4	19.0	15.1
Reliance	INR	1,006	0.0	4.1	3.7	5.7	20.8	13.7	(0.9)	48,727	11.0	9.7	1.2	1.1	8.3	7.1
Industries Qatar	QAR	110.0	2.2	5.0	9.9	0.5	(13.9)	(24.9)	(1.0)	18,275	13.7	12.9	2.0	1.9	55.1	51.0
PTT Chemical	THB	59.0	5.8	9.8	11.3	15.7	5.8	5.8	18.0	7,432	10.9	9.9	1.1	1.0	5.7	5.3
Petronas	MYR	6.9	(1.9)	1.5	(1.9)	1.9	12.3	29.7	(5.8)	13,456	18.9	17.4	2.1	2.0	9.4	8.6
LG화학	KRW	299,500	0.5	(0.2)	(0.5)	(2.3)	36.4	28.5	(8.8)	16,547	0.0	14.8	0.0	1.6	0.0	6.1
롯데케미칼	KRW	316,000	0.8	(1.1)	9.9	33.6	30.6	64.6	29.8	9,029	0.0	9.0	0.0	1.3	0.0	4.8
한화케미칼	KRW	24,250	(0.6)	1.3	(2.0)	(6.7)	37.0	51.6	(10.8)	3,274	0.0	9.9	0.0	0.8	0.0	8.6
금호석유	KRW	63,100	6.2	2.6	11.7	10.1	21.8	(25.1)	21.1	1,603	0.0	14.9	0.0	1.2	0.0	9.8
SKC	KRW	31,150	(0.6)	0.2	4.2	(10.5)	(14.3)	(5.6)	(7.8)	956	0.0	8.9	0.0	0.7	0.0	7.2
국도화학	KRW	62,700	1.1	4.7	11.2	7.0	(11.3)	22.9	5.7	304	0.0	7.5	0.0	0.8	0.0	4.6
효성	KRW	3,000	2.0	5.4	12.1	11.7	19.8	(27.2)	14.9	3,747	0.0	8.5	0.0	1.2	0.0	6.7
Average			**0.8**	**5.3**	**7.5**	**(3.9)**	**5.2**	**(3.0)**	**(2.2)**							
Refinery																
Valero	USD	63.3	(1.0)	5.3	10.7	(10.7)	8.2	7.7	(10.6)	29,752	8.7	8.3	1.3	1.2	4.7	4.7
Conoco Phillips	USD	41.4	0.7	22.4	25.8	(15.5)	(12.3)	(34.1)	(11.3)	51,179	#N/A N/A	74.2	1.3	1.3	11.4	6.9
Formosa Petrochemi	TWD	89.2	1.8	5.7	10.9	18.6	23.5	32.0	13.2	26,088	20.0	19.2	3.1	2.9	13.3	13.2
Tesoro	USD	85.6	1.0	6.1	12.3	(22.5)	(6.9)	(1.4)	(18.7)	10,266	9.9	10.6	1.6	1.5	5.5	5.7
Marathon Petroleum	USD	36.9	(0.5)	7.6	14.1	(31.3)	(20.5)	(25.1)	(28.9)	19,507	8.5	7.9	1.4	1.2	6.0	5.6
Devon Energy	USD	24.2	3.8	22.9	(2.7)	(33.6)	(39.7)	(59.1)	(24.4)	12,344	#N/A N/A	30.3	1.4	1.4	12.1	7.6
Hollyfrontier	USD	35.8	2.7	5.9	15.5	(22.2)	(22.8)	(9.9)	(10.2)	6,325	11.5	9.2	1.2	1.1	5.9	5.4
Phillips 66	USD	87.4	1.9	10.1	11.6	0.8	13.2	16.0	6.9	46,105	13.4	11.6	1.9	1.7	7.8	6.9
Murphy Oil	USD	26.7	12.6	55.4	34.5	12.7	(6.8)	(45.1)	18.9	4,592	#N/A N/A	#N/A N/A	0.8	0.8	8.8	5.8
JX Holdings	JPY	469.9	(2.0)	7.0	(3.0)	(9.2)	6.4	(4.0)	(7.6)	10,326	8.8	8.0	0.7	0.7	10.2	9.8
Cosmo Oil	JPY	164.0	0.0	0.0	0.0	0.0	(4.1)	(5.7)	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	1,879.0	(0.5)	9.8	(1.5)	(11.0)	(1.2)	(13.3)	(3.0)	2,647	5.8	5.4	0.5	0.5	8.0	8.0
Tonengeneral	JPY	916.0	(1.8)	6.8	(8.9)	(22.5)	(21.0)	(20.9)	(10.4)	2,952	10.2	8.4	1.3	1.2	12.2	6.9
Nesteoil	EUR	29.1	0.9	0.7	5.1	8.9	27.8	25.8	5.4	0	10.9	12.1	2.1	1.9	7.0	7.5
Ashland	USD	100.6	(0.1)	5.5	8.2	(9.3)	(0.2)	(20.5)	(2.1)	6,359	14.1	12.7	2.5	2.2	8.4	8.1
Fuchs Petrolub	EUR	38.5	0.2	1.7	9.1	(14.3)	(0.2)	2.4	(11.6)	5,603	20.9	19.8	4.5	4.1	12.3	11.7
SK이노베이션	KRW	156,500	4.7	7.9	10.2	21.3	65.6	58.6	20.4	12,064	0.0	9.9	0.0	0.9	0.0	6.1
S-Oil	KRW	85,500	1.5	8.2	1.8	12.2	50.5	25.7	7.7	8,025	0.0	10.5	0.0	1.6	0.0	7.1
GS	KRW	54,600	0.7	3.0	4.8	9.0	22.6	24.0	7.7	4,229	0.0	7.6	0.0	0.7	0.0	7.0
Average			**1.4**	**10.1**	**8.4**	**(6.3)**	**4.3**	**(2.5)**	**(3.1)**							

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

SKS Energy Daily

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

Global peers

	Currency	03/07	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	84	2.6	5.4	5.5	10.0	16.6	(1.4)	8.4	350,742	33.2	19.8	2.1	2.1	11.0	8.2
BP	GBP	366	(0.6)	4.0	4.2	5.2	8.8	(18.2)	3.3	96,470	27.7	13.0	1.0	1.0	5.6	4.4
Shell	EUR	1,674	(0.2)	1.6	9.1	10.2	4.4	(17.5)	9.7	190,299	19.7	11.7	0.9	0.9	5.8	4.4
Chevron	USD	91	3.1	8.7	9.4	3.9	18.3	(12.4)	0.8	170,746	53.2	18.3	1.2	1.2	7.8	5.5
Total	EUR	43	0.3	3.5	10.0	(0.1)	7.1	(8.9)	3.7	115,782	15.9	11.5	1.2	1.1	7.0	5.4
Sinopec	CNY	5	0.2	8.0	8.3	(6.4)	(4.3)	(21.1)	(5.2)	85,135	17.8	11.4	0.9	0.8	5.6	4.6
Petrochina	CNY	8	(0.5)	6.9	7.6	(9.0)	(9.8)	(27.8)	(6.8)	208,158	55.2	25.6	1.2	1.2	8.0	6.8
CNOOC	CNY	13	(0.2)	9.5	4.7	(17.5)	(18.5)	(30.5)	(14.3)	7,514	54.1	28.1	1.3	1.3	12.8	10.9
Gazprom	RUB	150	2.7	6.2	11.7	11.6	6.0	(1.3)	10.3	49,852	3.2	2.9	0.3	0.2	3.3	2.9
Rosneft	RUB	301	(0.4)	4.7	6.9	23.4	22.2	14.2	18.9	44,739	8.1	5.3	0.8	0.7	3.9	3.2
Anadarko	USD	45	(0.4)	18.8	10.6	(16.0)	(34.0)	(44.8)	(7.2)	22,931	#N/A N/A	#N/A N/A	1.8	2.0	11.6	7.7
Petrobras	BRL	7	2.1	43.4	62.3	2.5	(13.4)	(20.2)	10.0	30,384	12.7	4.9	0.4	0.3	6.2	5.2
Lukoil	USD	2,840	2.3	5.7	9.5	17.8	16.1	1.4	21.1	33,712	8.7	5.7	0.4	0.3	N/A	N/A
Kinder	USD	19	1.5	3.9	20.0	14.4	(38.9)	(53.5)	25.9	47,497	26.9	22.8	1.1	1.1	11.1	10.4
Statoil	NOK	134	(0.2)	5.0	9.7	8.2	11.2	(8.6)	7.9	50,115	32.7	15.6	1.2	1.2	3.6	2.8
BHP	AUD	19	5.0	19.1	14.5	3.1	(23.3)	(39.2)	3.9	71,637	38.8	19.6	1.3	1.3	8.2	6.3
PTT E&P	THB	78	7.6	15.1	31.1	26.3	2.6	(31.6)	36.2	8,746	28.4	16.9	0.8	0.8	3.1	2.8
Petronas gas	MYR	23	0.8	2.1	0.0	(3.5)	5.4	(1.6)	(0.9)	10,932	24.1	23.7	3.8	3.6	13.8	13.5
Chesapeake	USD	5	3.0	100.4	70.9	22.5	(28.1)	(65.5)	16.2	3,478	#N/A N/A	20.4	1.8	2.0	14.5	9.8
Noble Energy	USD	33	0.9	10.9	11.8	1.7	6.4	(27.9)	(0.7)	14,027	#N/A N/A	#N/A N/A	1.5	1.6	10.3	9.3
Average		**0**	**1.5**	**14.1**	**15.9**	**5.4**	**(2.3)**	**(20.8)**	**7.1**							
PV																
WACKER	EUR	78.7	0.1	7.1	29.7	(1.7)	4.7	(29.2)	1.5	4,522	25.3	15.5	1.6	1.5	5.2	4.8
GCL-Poly	HKD	1.3	4.1	12.4	25.7	(11.1)	8.5	(40.2)	9.5	3,040	7.8	6.6	0.9	0.8	7.4	6.4
REC	NOK	107.5	0.0	0.0	0.0	0.0	0.0	6.4	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	1.9	6.7	(4.0)	(29.4)	(45.9)	(84.2)	(91.6)	(62.7)	701	#N/A N/A	#N/A N/A	0.2	0.1	24.6	15.6
Canadian Solar	USD	22.7	0.8	(0.2)	16.9	(5.9)	24.1	(32.3)	(21.5)	1,272	8.2	6.6	1.3	1.0	5.5	3.9
JA Solar	USD	9.2	0.2	2.9	6.9	1.1	15.0	0.1	(5.3)	464	5.5	5.4	0.4	0.4	3.4	3.0
Trina Solar	USD	10.6	1.4	2.4	11.5	0.9	25.0	(11.1)	(3.4)	981	7.6	6.4	0.7	0.6	5.8	5.0
Solar City	USD	24.2	8.0	31.3	(18.2)	(32.6)	(50.7)	(52.1)	(52.6)	2,369	#N/A N/A	#N/A N/A	2.6	2.4	#N/A N/A	#N/A N/A
Yingli	USD	5.0	9.2	16.1	14.3	(21.1)	(31.6)	(78.6)	9.7	90	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	9.2	9.1
First Solar	USD	69.2	(0.5)	(3.7)	6.3	16.6	47.4	14.1	4.8	7,040	16.5	18.6	1.2	1.1	10.3	9.1
한화솔라원	USD	17.5	0.3	1.1	6.1	(12.8)	41.5	50.7	(20.3)	#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	97,500	1.6	6.8	41.3	23.9	27.0	(23.8)	30.0	1,939	0.0	15.1	0.0	0.8	0.0	10.9
웅진에너지	KRW	1,745	4.5	2.3	7.7	1.2	19.9	(11.6)	0.9	117	N/A	0.0	0.8	0.0	10.9	0.0
신성솔라에너지	KRW	1,890	0.0	(0.8)	6.8	(1.3)	55.6	25.6	(6.4)	119	N/A	0.8	0.0	10.9	0.0	8.5
Average			**2.6**	**5.3**	**9.0**	**(6.3)**	**7.3**	**(19.5)**	**(8.3)**							
Gas Company																
Towngas China	HKD	4.4	(0.7)	10.9	16.4	(7.6)	(12.4)	(42.2)	(2.4)	1,506	8.5	8.1	0.8	0.7	10.3	9.6
Kulun	HKD	6.3	1.5	12.4	7.2	(8.0)	18.1	(15.9)	(9.4)	6,496	13.0	10.7	0.9	0.8	5.6	5.2
Beijing Enterprise	HKD	39.6	1.0	9.5	12.7	(17.0)	(7.9)	(35.8)	(15.7)	6,541	8.1	7.4	0.8	0.7	12.5	11.5
ENN Energy	HKD	39.9	(0.5)	12.2	16.2	(2.7)	1.3	(15.1)	(3.5)	5,562	12.5	11.1	2.2	1.9	8.2	7.3
China Resources Gas	HKD	22.2	(1.3)	9.1	11.5	0.9	7.5	4.2	(4.3)	6,343	14.3	12.6	2.4	2.1	9.0	8.1
China Gas Holdings	HKD	11.1	(0.5)	7.5	16.8	5.3	2.6	(15.3)	(0.4)	7,079	12.4	10.9	2.2	1.9	10.3	9.2
Shenzen Gas	HKD	12.5	1.5	6.1	2.3	(6.6)	25.1	18.4	(12.8)	3,057	11.0	9.7	1.1	1.0	8.8	8.0
Shann Xi	CNY	9.0	4.0	11.8	0.9	(28.6)	(24.1)	(35.5)	(28.3)	1,542	13.6	11.0	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Suntien	HKD	1.0	(2.0)	8.7	13.6	(20.0)	(19.4)	(43.5)	(19.4)	478	8.8	6.8	0.4	0.4	6.9	5.8
China Oil & Gas	HKD	0.5	2.2	5.7	(2.1)	(25.0)	(2.1)	(54.3)	(12.3)	349	7.6	6.8	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Average			**0.5**	**9.4**	**9.5**	**(10.9)**	**(1.1)**	**(23.5)**	**(10.8)**							
EV																
LG화학	KRW	299,500	0.5	(0.2)	(0.5)	(2.3)	36.4	28.5	(8.8)	16,547	14.0	12.3	1.5	1.4	6.3	5.7
삼성SDI	KRW	99,600	2.3	(0.3)	4.3	(15.9)	13.7	(28.9)	(12.6)	5,710	29.0	20.1	0.6	0.6	9.9	7.4
Panasonic	JPY	1020.0	0.4	6.9	8.4	(25.9)	(18.3)	(33.3)	(17.8)	22,033	10.9	9.8	1.1	1.0	3.4	3.2
GS Yuasa	JPY	488.0	(1.4)	5.9	6.6	4.5	18.4	(12.7)	8.0	1,777	13.5	11.9	1.1	1.1	6.5	6.0
NEC	JPY	270.0	0.7	(5.6)	(10.0)	(33.2)	(28.9)	(22.9)	(29.9)	6,193	9.2	8.2	0.8	0.7	5.6	5.4
BYD Auto	CNY	54.0	0.5	6.8	7.7	(13.1)	13.1	3.2	(16.2)	17,870	42.7	29.2	4.0	3.7	15.7	13.6
Tesla Motors	USD	205.3	2.1	7.0	26.3	(11.2)	(15.1)	5.9	(14.5)	27,110	171.4	67.6	22.2	16.9	36.6	23.2
Kandi Technologies	USD	7.3	2.4	4.9	0.8	(23.7)	18.9	(45.4)	(32.9)	343	#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			**0.9**	**3.2**	**5.4**	**(15.1)**	**4.8**	**(13.2)**	**(15.6)**							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임