

1. News Summary (3 page)

2016년 4월 25일

News	Conclusion
WTI comment	공급과잉 해소 기대감에 상승
Headline	[주간가격] 에틸렌 하락 반면 프로필렌 상승
News 1.	[주간가격] polyester 계열 2주 연속 강보합권
News 2.	[주간가격] 부타디엔 가격상승 반면 합성고무 여전히 보합권
News 3.	-
News 4.	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	43.7	1.3	8.3	9.9	35.8	(24.3)
Dubai	\$/bbl	41.0	(1.7)	4.2	10.4	71.7	(30.0)
Gasoline	\$/bbl	55.6	0.3	2.2	(0.5)	13.5	(27.8)
Diesel	\$/bbl	51.2	(1.0)	6.5	5.4	59.7	(30.1)
Complex margin	\$/bbl	5.7	0.5	0.4	(2.3)	(4.6)	(4.0)
1M lagging	\$/bbl	11.0	0.4	0.7	(8.0)	11.5	(2.3)
Petrochemical			%	%	%	%	%
Naphtha	\$/t	401	(1.8)	2.0	3.5	22.6	(26.3)
Butadiene	\$/t	1,050	5.0	5.0	0.0	40.0	1.9
HDPE	\$/t	1,155	0.0	(2.9)	0.4	5.5	(15.4)
MEG	\$/t	670	(1.5)	0.8	(3.3)	18.0	(33.7)
PX	\$/t	787	(1.1)	1.7	(0.1)	14.3	(15.6)
SM	\$/t	1,074	0.0	1.7	(3.5)	25.2	(23.0)
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	2.14	3.5	12.5	13.7	(6.5)	(27.4)
Natural rubber	\$/t	1,560	0.6	4.0	21.9	39.3	12.2
Cotton	C/lbs	63.7	(0.5)	6.1	10.6	0.6	(3.2)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	04/18	\$/t	1,145	(1.3)	(0.4)	14.5	(17.6)
Propylene	04/18	\$/t	743	(1.0)	13.4	12.5	(25.0)
Benzene	04/18	\$/t	650	2.8	4.0	19.3	(22.6)
Toluene	04/18	\$/t	655	0.0	0.8	12.0	(16.6)
Xylene	04/18	\$/t	650	0.4	2.4	6.6	(13.3)
PP	04/18	\$/t	1,065	(0.5)	8.1	27.5	(16.5)
PVC	04/18	\$/t	800	0.0	1.9	11.1	(10.6)
ABS	04/18	\$/t	1,335	(0.7)	3.1	21.4	(18.1)
SBR	04/18	\$/t	1,445	(0.3)	0.0	20.9	4.7
SM	04/18	\$/t	1,103	(1.3)	(3.7)	17.9	(20.5)
BPA	04/18	\$/t	1,293	3.2	(4.6)	16.4	(32.3)
Caustic	04/18	\$/t	290	1.8	1.8	1.8	(3.3)
2-EH	04/18	\$/t	820	0.9	7.9	19.7	(21.9)
Caprolactam	04/18	\$/t	1,320	0.8	9.1	5.6	(24.1)
Solar				%	%	%	%
Polysilicon	04/20	\$/kg	14.9	1.9	6.7	14.1	(11.0)
Module	04/20	\$/W	0.53	(0.4)	(1.8)	(4.0)	(8.4)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	87.5	0.9	3.0	4.1	14.3	0.1
Shell	EUR	1,814	(1.0)	0.0	6.6	30.8	(12.4)
Petrochina	CNY	7.58	0.1	(2.2)	(2.7)	3.4	(42.7)
Gazprom	RUB	161.2	(0.4)	8.9	7.7	21.8	6.9
Petrobras	BRL	9.8	2.8	0.6	20.2	121.1	(25.7)
Refinery							
Phillips66	USD	88.0	0.7	3.7	(2.4)	9.9	8.7
Valero	USD	61.2	1.0	2.9	(7.3)	(9.8)	3.2
JX	JPY	481.4	(0.1)	5.8	4.8	12.4	(5.6)
Neste Oil	EUR	29.3	1.1	0.1	(3.4)	4.6	14.9

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	70.9	0.0	4.2	5.8	11.8	(22.6)
Dow Chemical	USD	52.6	1.2	0.5	2.7	21.7	5.2
SABIC	SAR	79.3	0.0	3.6	1.2	28.5	(17.5)
Formosa Pla.	TWD	81.0	1.0	(1.2)	1.8	8.9	3.1
Shin-Etsu	JPY	6,299	0.2	2.8	4.8	6.2	(18.9)
Renewable							
Wacker	EUR	80.2	0.6	3.0	5.4	18.3	(28.8)
Yingli	USD	5.11	(1.0)	0.2	6.7	12.3	(72.7)
Tesla	USD	253.8	2.2	(0.3)	8.3	25.3	15.6
BYD	CNY	61.9	(0.4)	6.3	7.3	12.2	8.1

4. Coverage Summary

	04/22	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	2,015	(0.3)	0.0	1.0	7.2	(0.4)	(6.0)				* 추정치는 12M fwd 기준임	
KOSPI화학	5,566	(0.7)	(0.4)	3.7	10.4	9.8	7.7				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	308,000	(2.5)	(8.1)	(0.6)	1.5	6.0	8.5	매수	400,000	29.9	13.57	1.62
롯데케미칼	312,500	(1.4)	(4.4)	(2.5)	26.0	22.1	16.6	매수	390,000	24.8	10.56	1.21
한화케미칼	25,950	(1.3)	0.0	11.4	4.4	20.7	43.8	매수	30,000	15.6	10.25	0.84
금호석유화학	72,700	(2.8)	7.1	17.6	49.6	17.6	(15.9)	매수	70,000	(3.7)	14.34	1.44
KCC	425,000	0.2	1.4	1.9	4.9	(3.6)	(21.9)	매수	550,000	29.4	15.12	0.65
OCI	108,000	(0.5)	8.4	14.6	75.3	32.0	(3.6)	매수	100,000	(7.4)	20.29	0.94
SKC	30,100	0.2	0.0	(3.1)	(0.5)	(19.0)	(26.0)	매수	43,000	42.9	9.37	0.76
국도화학	67,500	(0.7)	(1.7)	8.0	20.5	(6.0)	22.5	매수	100,000	48.1	7.68	0.78
SK이노베이션	159,000	(2.2)	(4.2)	(0.9)	16.1	46.5	38.9	매수	180,000	13.2	11.90	0.97
S-Oil	89,100	(1.1)	(2.2)	(2.3)	11.4	32.8	16.5	매수	100,000	12.2	12.56	1.55
GS	56,500	(1.9)	(2.2)	2.7	15.8	17.1	20.7	매수	65,000	15.0	8.09	0.94
SK가스	82,900	(1.0)	1.1	8.5	32.0	(2.7)	(11.4)	매수	100,000	20.6	11.76	0.72
대우인터내셔널	23,500	(3.1)	(2.7)	4.4	72.2	11.4	(21.4)	매수	27,000	14.9	10.87	1.04
LG상사	36,900	(0.4)	(1.1)	1.5	32.7	3.9	(3.5)	매수	40,000	8.4	10.89	0.95

* 작성자(손지우)는 본 조사분석자료에 게재된 내용들이 본인의 의견을 정확하게 반영하고 있으며, 외부의 부당한 압력이나 간섭없이 신의성실하게 작성되었음을 확인합니다.

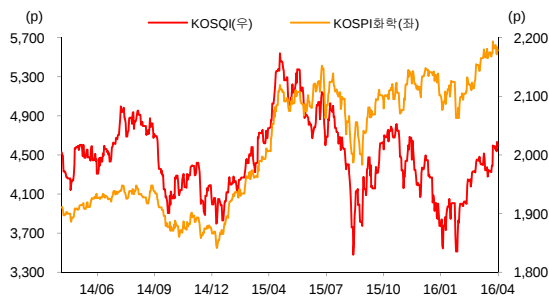
* 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.

* 본 보고서는 기관투자가 또는 제 3자에게 사전 제공된 사실이 없습니다.

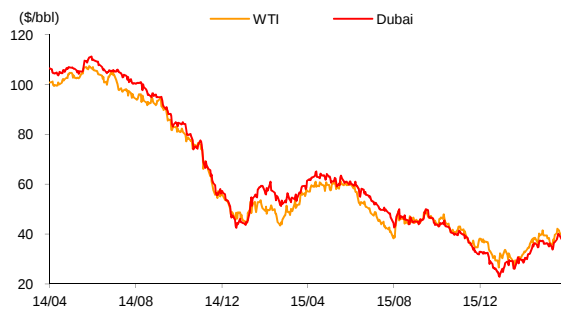
* 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

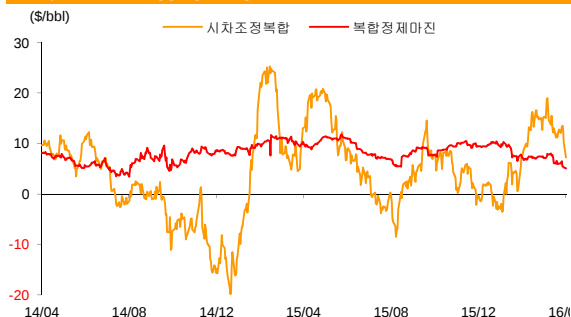
KOSPI/KOSPI화학



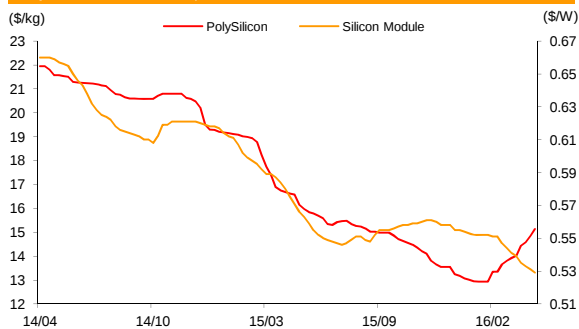
WTI/Dubai



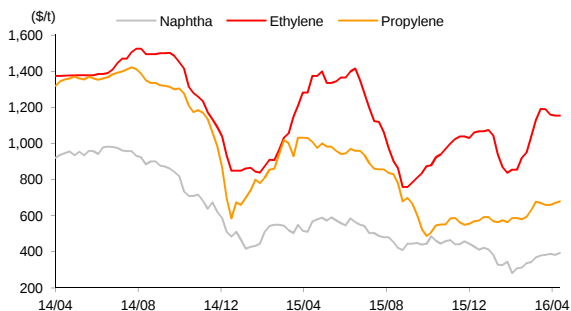
Complex & 1M lagging margin



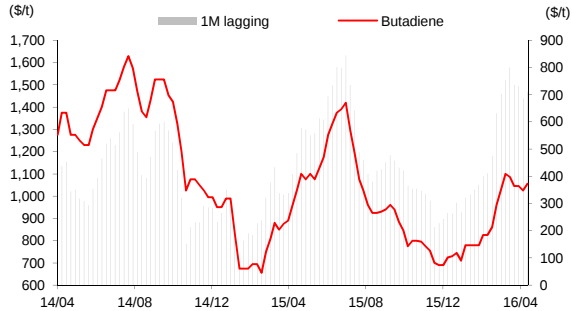
Polysilicon & Module prices



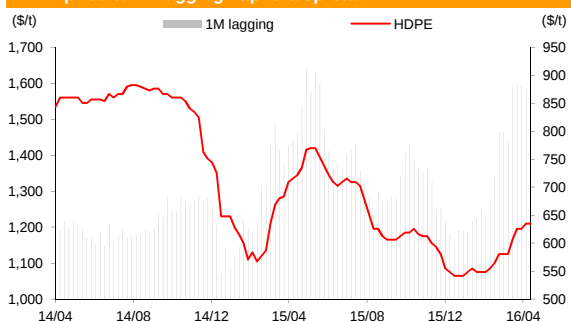
Naphtha/Ethylene/Propylene prices



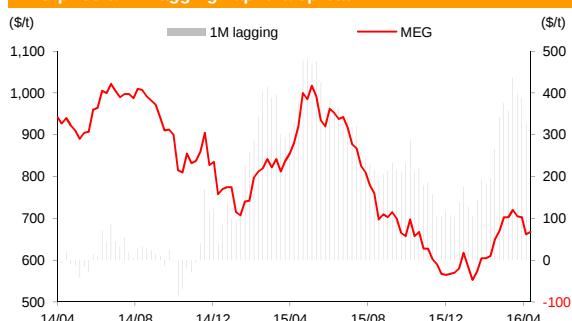
Butadiene price & 1M lagging naphtha spread



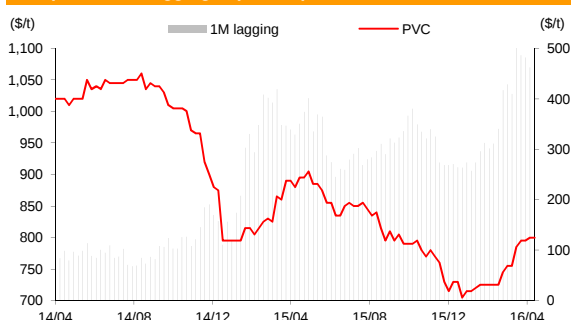
HDPE price & 1M lagging naphtha spread



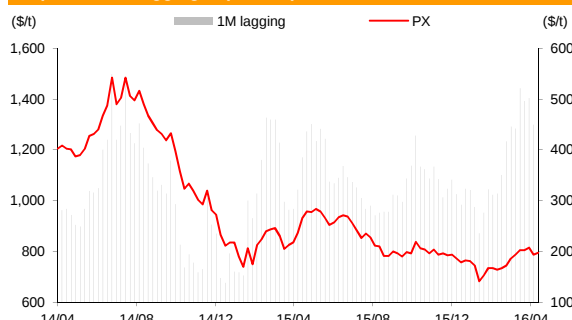
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

News Comment

Headline	(출처: Platts)
제목 [주간가격] 에틸렌 하락 반면 프로필렌 상승	
결론 정기보수/설비트러블로 공급 타이트하지만 수요 역시 약세인 상황임	
세부	
1) Ethylene \$1,145/t(WoW -\$25/t), Propylene \$700/t(WoW +\$25/t)	
2) 에틸렌은 PE와 SM spread가 축소되면서 구매수요 약세	
3) PVC 계열 구매자들도 시장둔화 전망으로 재고확보 주춤	
4) 프로필렌은 효성의 울산 PDH 설비 가동중지로 가격 상승. 약 1개월 예상	
5) 정기보수/설비트러블로 공급 타이트하지만 수요 역시 약세인 상황임	

WTI Comment	(출처: 연합뉴스)
제목 공급과잉 해소 기대감에 상승	
상승 미국 원유rig 감소세 5주 연속 지속	
요인	
하락	
요인	

Issue 1	(출처: Platts)
제목 [주간가격] polyester 계열 2주 연속 강보합권	
결론 전반적인 보합권 지속, 원재료상승/공급타이트와 수요약세가 대립 중	
세부	
1) MEG \$670/t(WoW +\$5/t), PX \$787.3/t(+\$13/t), PTA \$620/t(WoW +\$2/t)	
2) 중국 polyester 가동률 여전히 80%, Sinopec은 중국 4월 MEG 가격 인하	
3) 그럼에도 불구하고 유가상승 반영하여 전반적 가격은 강보합	
4) 한편 Sinopec은 4월 PX 가격에 대해서는 MEG와 달리 전월대비 인상	
5) 전반적인 보합권 지속, 원재료상승/공급타이트와 수요약세가 대립 중	

Issue 2	(출처: Platts)
제목 [주간가격] 부타디엔 가격상승 반면 합성고무 여전히 보합권	
결론 천연고무 가격상승에도 불구하고 공급과잉으로 합성고무 가격 약세	
세부	
1) 부타디엔 \$1,050/t(WoW +\$50/t), SBR \$1,450/t(WoW +\$5/t)	
2) 정기보수 시즌에 맞춰 구매 지속 중, 태국/한국 BD 가격인상 시도 중	
3) 천연고무 가격의 강세도 부타디엔 가격인상의 요인이었음	
4) 그러나 중국 타이어 수요약세는 지속되면서 합성고무 가격은 강보합	
5) 천연고무 가격상승에도 불구하고 공급과잉으로 합성고무 가격 약세	

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)

Commodity Price Data

Daily Price		Today	1D	1W	1M	3M	6M	12M	YTD	2013avg.	2014avg.	2015acc.
F/X	USD/EUR	0.891	0.886	0.886	0.892	0.926	0.900	0.932	0.921	0.753	0.754	0.901
	Change, %		0.6	0.5	(0.1)	(3.8)	(1.0)	(4.5)	(3.3)	(3.9)	13.7	(1.2)
	USD/JPY	111.8	109.5	108.8	112.4	118.8	120.7	119.9	120.6	97.7	105.9	121.1
	Change, %		2.1	2.8	(0.5)	(5.9)	(7.4)	(6.8)	(7.3)	21.5	13.8	(7.7)
	USD/KRW	1,143.2	1,133.1	1,146.2	1,154.2	1,200.2	1,138.5	1,079.6	1,172.6	1,094.6	1,053.0	1,131.2
	Change, %		0.9	(0.3)	(0.9)	(4.7)	0.4	5.9	(2.5)	50.3	3.3	1.1
Agriculture	Corn	371.8	384.5	378.5	370.0	370.3	378.3	372.5	358.8	579.2	415.6	376.8
	Change, %		(3.3)	(1.8)	0.5	0.4	(1.7)	(0.2)	3.6	(39.6)	(5.9)	(1.4)
	Soybean	987.0	1,018.8	956.0	910.3	876.5	898.8	970.5	871.3	1,407.0	1,245.5	945.4
	Change, %		(3.1)	3.2	8.4	12.6	9.8	1.7	13.3	(7.5)	(22.3)	4.4
	Wheat	467.0	495.8	459.8	466.8	475.5	490.8	498.8	470.0	684.3	588.0	508.1
	Change, %		(5.8)	1.6	0.1	(1.8)	(4.8)	(6.4)	(0.6)	(22.2)	(2.6)	(8.1)
	Rice	10.5	10.7	10.3	10.4	11.0	12.1	10.2	11.6	15.5	14.0	11.1
MYR/mt	Change, %		(1.6)	1.7	0.8	(4.3)	(13.6)	3.3	(9.3)	4.4	(25.9)	(5.1)
	Oats	197.5	201.3	189.5	190.3	205.5	225.0	258.8	217.3	367.5	373.1	250.2
	Change, %		(1.9)	4.2	3.8	(3.9)	(12.2)	(23.7)	(9.1)	1.9	(14.3)	(21.1)
	Palm Oil	2,677.0	2,712.0	2,638.0	2,652.0	2,382.0	2,296.0	2,179.0	2,398.0	2,405.0	2,415.1	2,190.3
	Change, %		(1.3)	1.5	0.9	12.4	16.6	22.9	11.6	13.3	(12.8)	22.2
	Cocoa	3,137.0	3,061.0	2,941.0	3,035.0	2,872.0	3,140.0	2,772.0	3,211.0	2,403.9	3,006.8	3,091.6
	Change, %		2.5	6.7	3.4	9.2	(0.1)	13.2	(2.3)	21.2	7.4	1.5
	Cotton	63.1	63.5	60.0	58.4	62.5	62.5	62.5	63.3	83.3	76.4	63.3
	Change, %		(0.6)	5.1	8.1	1.0	0.9	0.9	(0.3)	12.6	(28.8)	(0.3)
	Sugar	15.3	15.6	15.0	16.6	14.4	14.6	12.7	15.2	17.5	16.3	13.1
	Change, %		(2.1)	1.5	(8.0)	5.8	4.5	20.5	0.1	(15.9)	(11.5)	16.1
	Coffee	122.8	123.6	123.0	134.7	116.0	119.9	142.4	126.7	126.0	177.1	132.6
	Change, %		(0.6)	(0.2)	(8.8)	5.8	2.4	(13.8)	(3.1)	(23.0)	50.5	(7.5)
Energy	WTI	43.7	43.2	40.4	41.5	32.2	45.4	56.2	37.0	98.0	92.9	48.8
	Change, %		1.3	8.3	5.5	35.8	(3.6)	(22.1)	18.1	7.2	(45.9)	(10.5)
	Brent	45.1	44.5	43.1	41.8	32.2	48.1	62.7	37.3	108.7	99.5	53.7
	Change, %		1.3	4.7	7.9	40.2	(6.2)	(28.1)	21.0	(0.3)	(48.3)	(16.0)
	Natural Gas	2.1	2.1	1.9	1.9	2.1	2.4	2.6	2.3	3.7	4.3	2.6
	Change, %		3.5	12.5	14.9	0.0	(10.3)	(17.9)	(8.4)	26.2	(31.7)	(18.6)
	Ethanol	1.5	1.6	1.5	1.4	1.4	1.6	1.6	1.4	2.3	2.1	1.5
	Change, %		(2.4)	(1.7)	9.7	9.1	(2.5)	(6.4)	8.6	(12.7)	(14.9)	0.7
Metal	RBOB Gasoline	153.1	151.6	146.1	149.7	108.4	130.7	192.5	126.7	285.0	262.6	163.6
	Change, %		1.0	4.8	2.3	41.3	17.2	(20.5)	20.8	(0.9)	(48.5)	(6.4)
	Coal	43.6	43.6	43.6	43.5	43.0	41.8	48.9	43.3	56.1	57.5	45.2
	Change, %		0.0	0.0	0.4	1.5	4.3	(10.8)	0.7	(1.0)	(15.5)	(3.5)
	Gold	1,232.5	1,248.1	1,234.2	1,248.3	1,098.0	1,166.1	1,187.3	1,061.4	1,410.4	1,266.5	1,160.6
	Change, %		(1.2)	(0.1)	(1.3)	12.3	5.7	3.8	16.1	(28.0)	(1.3)	6.2
	Silver	17.0	17.0	16.2	15.9	14.0	15.9	15.8	13.8	23.8	19.1	15.7
	Change, %		(0.1)	4.6	6.9	21.1	7.1	7.4	22.9	(35.8)	(18.9)	8.0
	Platinum	1,010.0	1,025.3	985.0	995.2	831.1	1,010.5	1,129.5	891.1	1,485.7	1,384.6	1,055.7
	Change, %		(1.5)	2.5	1.5	21.5	(0.0)	(10.6)	13.3	(11.2)	(11.5)	(4.3)
	Palladium	602.6	605.1	568.5	604.7	497.2	686.4	756.3	563.0	725.9	803.4	691.9
	Change, %		(0.4)	6.0	(0.3)	21.2	(12.2)	(20.3)	7.0	1.7	11.4	(12.9)
	Copper	5,031.0	4,997.0	4,807.5	5,065.0	4,443.0	5,232.5	5,911.0	4,705.0	7,352.6	6,828.1	5,503.1
	Change, %		0.7	4.6	(0.7)	13.2	(3.9)	(14.9)	6.9	(7.2)	(14.4)	(8.6)
	Uranium	28.0	26.8	25.9	29.7	34.8	37.0	38.9	34.4	38.5	33.5	36.9
	Change, %		4.7	8.1	(5.7)	(19.4)	(24.3)	(28.0)	(18.6)	(20.9)	2.5	(24.0)
	HR Coil	487.0	488.0	479.0	415.0	391.0	411.0	452.0	391.0	630.4	653.2	461.5
	Change, %		(0.2)	1.7	17.3	24.6	18.5	7.7	24.6	3.1	(10.4)	5.5
	Scrap	410.0	410.0	410.0	405.0	250.0	190.0	250.0	250.0	396.9	401.3	252.9
	Change, %		0.0	0.0	1.2	64.0	115.8	64.0	64.0	(1.2)	(16.5)	62.1
	Zinc	1,909.0	1,916.0	1,872.0	1,872.0	1,510.0	1,750.0	2,235.0	1,609.0	1,940.3	2,165.0	1,941.9
	Change, %		(0.4)	2.0	2.0	26.4	9.1	(14.6)	18.6	(1.2)	6.0	(1.7)

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		04/22	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Crude Oil	WTI	43.7	43.2	40.4	39.8	32.2	44.0	57.7	37.0	93.1	48.8	34.9
	Change, %		1.3	8.3	9.9	35.8	(0.6)	(24.3)	18.1	(53.0)	(10.3)	25.3
	Dubai	41.0	41.7	39.4	37.1	23.9	43.5	58.6	32.2	96.7	50.8	32.0
	Change, %		(1.7)	4.2	10.4	71.7	(5.7)	(30.0)	27.4	(57.6)	(19.3)	28.0
Crude Oil	Gasoline(휘발유)	55.6	55.4	54.4	55.9	49.0	61.0	76.9	54.8	110.9	69.5	50.5
Product	Change, %		0.3	2.2	(0.5)	13.5	(9.0)	(27.8)	1.4	(49.9)	(20.1)	10.1
	Kerosene(등유)	51.6	51.9	49.5	50.3	33.7	57.1	73.1	44.2	112.6	64.7	43.6
	Change, %		(0.5)	4.2	2.5	53.0	(9.6)	(29.4)	16.7	(54.2)	(20.3)	18.2
	Diesel(경유)	51.2	51.7	48.0	48.5	32.0	57.2	73.1	43.2	112.8	64.8	41.7
	Change, %		(1.0)	6.5	5.4	59.7	(10.5)	(30.1)	18.3	(54.6)	(21.0)	22.6
	Bunker-C	30.9	31.2	29.3	28.7	21.9	36.3	54.5	25.3	86.5	45.3	25.5
	Change, %		(0.9)	5.5	7.6	40.9	(14.9)	(43.3)	22.1	(64.3)	(31.7)	21.1
	Naphtha	43.2	43.2	42.4	41.8	34.5	46.7	60.8	43.5	94.3	52.6	37.7
	Change, %		0.1	2.0	3.5	25.4	(7.3)	(28.9)	(0.5)	(54.2)	(17.8)	14.6
Dubai	Gasoline(휘발유)	14.6	13.7	15.0	18.7	25.1	17.6	18.3	22.6	14.2	18.7	18.4
Spread	Change		0.8	(0.4)	(4.2)	(10.5)	(3.0)	(3.8)	(8.1)	0.3	(4.2)	(3.9)
	Kerosene(등유)	10.6	10.2	10.2	13.2	9.9	13.6	14.5	12.0	15.9	14.0	11.6
	Change		0.4	0.4	(2.6)	0.7	(3.0)	(3.9)	(1.4)	(5.3)	(3.4)	(1.0)
	Diesel(경유)	10.1	10.0	8.7	11.4	8.1	13.7	14.5	11.0	16.0	14.0	9.7
	Change		0.2	1.5	(1.2)	2.0	(3.6)	(4.4)	(0.9)	(5.9)	(3.8)	0.5
	Bunker-C	(10.1)	(10.5)	(10.1)	(8.4)	(2.0)	(7.2)	(4.1)	(6.9)	(10.3)	(5.5)	(6.5)
	Change		0.4	(0.0)	(1.7)	(8.2)	(2.9)	(6.0)	(3.2)	0.1	(4.6)	(3.6)
	Naphtha	2.2	1.5	3.0	4.6	10.6	3.2	2.2	11.3	(2.4)	1.8	5.7
	Change		0.8	(0.8)	(2.4)	(8.4)	(0.9)	0.0	(9.0)	4.6	0.4	(3.5)
Refining	Simple(단순)	(0.3)	(0.8)	(0.6)	1.7	5.0	2.5	3.9	3.2	(0.1)	3.3	2.2
Margin	Change		0.4	0.3	(2.1)	(5.3)	(2.9)	(4.2)	(3.5)	(0.2)	(3.6)	(2.5)
	Complex(복합)	5.7	5.2	5.3	8.0	10.3	8.7	9.7	9.7	7.1	9.3	7.7
	Change		0.5	0.4	(2.3)	(4.6)	(3.0)	(4.0)	(4.0)	(1.4)	(3.6)	(2.0)
	Complex(lagging)	11.0	10.5	10.3	19.0	(0.5)	8.3	13.3	2.3	2.2	6.5	8.1
	Change		0.4	0.7	(8.0)	11.5	2.7	(2.3)	8.7	8.7	4.5	2.9

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

Petrochemical Price Data

Daily Price			04/22	04/21	04/20	04/19	04/18	04/15	04/14	04/13	04/12	04/11
Spot Price	Naphtha	CFR Japan	400.5	408.0	395.8	395.0	386.9	392.6	399.9	402.0	399.3	394.8
	Ethylene	CFR SE Asia	1,145.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	1,160.0	1,160.0	1,160.0	1,160.0
	Propylene	FOB Korea	700.0	685.0	675.0	675.0	675.0	675.0	675.0	675.0	675.0	675.0
	Butadiene	FOB Korea	1,050.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
	HDPE	CFR FE Asia	1,155.0	1,155.0	1,125.0	1,155.0	1,155.0	1,190.0	1,190.0	1,190.0	1,160.0	1,160.0
	LDPE	CFR FE Asia	1,175.0	1,175.0	1,175.0	1,195.0	1,195.0	1,205.0	1,205.0	1,205.0	1,180.0	1,180.0
	LLDPE	CFR FE Asia	1,130.0	1,130.0	1,120.0	1,130.0	1,155.0	1,155.0	1,170.0	1,170.0	1,160.0	1,160.0
	MEG	CFR China	670.0	680.0	654.0	657.0	656.0	665.0	661.0	657.0	648.0	650.0
	PP	CFR FE Asia	975.0	970.0	980.0	980.0	985.0	995.0	995.0	1,010.0	1,000.0	1,010.0
	PX	CFR China	787.3	796.3	774.3	768.8	756.0	774.3	782.3	781.3	775.3	772.3
	PTA	CFR China	620.0	620.0	612.0	610.0	610.0	618.0	617.0	617.0	612.0	611.0
	Benzene	FOB Korea	650.0	620.0	632.0	628.0	621.0	640.0	641.0	650.0	648.0	640.0
	Toluene	FOB Korea	623.0	623.0	607.5	599.5	587.5	602.0	597.0	603.0	603.0	606.0
	Xylene	FOB Korea	672.0	672.0	651.0	645.0	645.0	651.0	651.0	672.0	656.0	656.0
	SM	FOB Korea	1,074.0	1,074.0	1,046.0	1,030.5	1,025.0	1,056.0	1,065.0	1,062.0	1,081.0	1,081.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	Naphtha	CFR Japan	395.0	383.5	381.0	328.0	412.5	567.5	413.5	865.9	493.0	355.4
	Change, %			3.0	3.7	20.4	(4.2)	(30.4)	(4.5)	(54.4)	(19.9)	11.2
	Ethylene	CFR SE Asia	1,145.0	1,160.0	1,150.0	1,000.0	1,100.0	1,390.0	1,090.0	1,401.1	1,103.7	1,042.5
	Change, %			(1.3)	(0.4)	14.5	4.1	(17.6)	5.0	(18.3)	3.7	9.8
	Propylene	CFR SE Asia	742.5	750.0	655.0	660.0	650.0	990.0	650.0	1,254.2	770.0	616.6
	Change, %			(1.0)	13.4	12.5	14.2	(25.0)	14.2	(40.8)	(3.6)	20.4
	Butadiene	CFR SE Asia	1,015.0	985.0	1,045.0	740.0	680.0	980.0	720.0	1,281.7	877.5	878.1
	Change, %			3.0	(2.9)	37.2	49.3	3.6	41.0	(20.8)	15.7	15.6
	Benzene	CFR SE Asia	650.0	632.5	625.0	545.0	567.5	840.0	580.0	1,243.1	690.0	588.8
	Change, %			2.8	4.0	19.3	14.5	(22.6)	12.1	(47.7)	(5.8)	10.4
	Toluene	CFR SE Asia	655.0	655.0	650.0	585.0	625.0	785.0	630.0	1,082.5	700.8	617.8
	Change, %			0.0	0.8	12.0	4.8	(16.6)	4.0	(39.5)	(6.5)	6.0
	Xylene	CFR SE Asia	650.0	647.5	635.0	610.0	655.0	750.0	625.0	1,055.7	699.3	610.5
	Change, %			0.4	2.4	6.6	(0.8)	(13.3)	4.0	(38.4)	(7.0)	6.5
Spread	Ethylene	-Naphtha	750.0	776.5	769.0	672.0	687.5	822.5	676.5	535.2	610.6	687.1
	Change, %			(3.4)	(2.5)	11.6	9.1	(8.8)	10.9	40.1	22.8	9.2
	Propylene	-Naphtha	347.5	366.5	274.0	332.0	237.5	422.5	236.5	388.3	277.0	261.2
	Change, %			(5.2)	26.8	4.7	46.3	(17.8)	46.9	(10.5)	25.5	33.0
	Butadiene	-Naphtha	620.0	601.5	664.0	412.0	267.5	412.5	306.5	415.9	384.5	522.8
	Change, %			3.1	(6.6)	50.5	131.8	50.3	102.3	49.1	61.3	18.6
	Benzene	-Naphtha	255.0	249.0	244.0	217.0	155.0	272.5	166.5	377.3	197.0	233.4
	Change, %			2.4	4.5	17.5	64.5	(6.4)	53.2	(32.4)	29.5	9.3
	Toluene	-Naphtha	260.0	271.5	269.0	257.0	212.5	217.5	216.5	216.6	207.8	262.4
	Change, %			(4.2)	(3.3)	1.2	22.4	19.5	20.1	20.0	25.1	(0.9)
	Xylene	-Naphtha	255.0	264.0	254.0	282.0	242.5	182.5	211.5	189.9	206.3	255.1
	Change, %			(3.4)	0.4	(9.6)	5.2	39.7	20.6	34.3	23.6	(0.0)

자료 : Ciscem, Platts, Bloomberg, SK증권

참고 : Spread는 Polymer와 Naphtha의 가격차임

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	HDPE	CFR SE Asia	1,210.0	1,210.0	1,165.0	1,085.0	1,065.0	1,345.0	1,065.0	1,524.9	1,230.1	1,124.1
	Change, %			0.0	3.9	11.5	13.6	(10.0)	13.6	(20.6)	(1.6)	7.6
	MEG	CFR SE Asia	667.5	662.5	720.0	552.5	570.0	920.0	617.5	934.1	780.8	645.6
	Change, %			0.8	(7.3)	20.8	17.1	(27.4)	8.1	(28.5)	(14.5)	3.4
	PVC	CFR SE Asia	800.0	800.0	785.0	720.0	730.0	895.0	715.0	1,013.9	820.8	750.3
	Change, %			0.0	1.9	11.1	9.6	(10.6)	11.9	(21.1)	(2.5)	6.6
	PP	CFR SE Asia	1,065.0	1,070.0	985.0	835.0	835.0	1,275.0	835.0	1,503.0	1,109.8	912.5
	Change, %			(0.5)	8.1	27.5	27.5	(16.5)	27.5	(29.1)	(4.0)	16.7
	2-EH	CFR Korea	820.0	812.5	760.0	685.0	680.0	1,050.0	680.0	1,397.1	930.1	728.4
	Change, %			0.9	7.9	19.7	20.6	(21.9)	20.6	(41.3)	(11.8)	12.6
	ABS	CFR SE Asia	1,335.0	1,345.0	1,295.0	1,100.0	1,080.0	1,630.0	1,130.0	1,897.7	1,431.1	1,204.4
	Change, %			(0.7)	3.1	21.4	23.6	(18.1)	18.1	(29.7)	(6.7)	10.8
	SBR	CFR SE Asia	1,445.0	1,450.0	1,445.0	1,195.0	1,085.0	1,380.0	1,150.0		1,332.1	1,291.9
	Change, %			(0.3)	0.0	20.9	33.2	4.7	25.7		8.5	11.9
	SM	CFR SE Asia	1,102.5	1,117.5	1,145.0	935.0	900.0	1,387.5	910.0	1,547.1	1,100.7	1,032.8
	Change, %			(1.3)	(3.7)	17.9	22.5	(20.5)	21.2	(28.7)	0.2	6.7
	Caustic	FOB NEA	290.0	285.0	285.0	285.0	285.0	300.0	285.0	310.0	296.8	285.9
	Change, %			1.8	1.8	1.8	1.8	(3.3)	1.8	(6.5)	(2.3)	1.4
	PX	CFR SE Asia	795.0	787.5	805.0	682.5	757.5	930.0	762.5	1,228.5	842.9	758.8
	Change, %			1.0	(1.2)	16.5	5.0	(14.5)	4.3	(35.3)	(5.7)	4.8
	PO	CFR China	1,292.5	1,252.5	1,355.0	1,110.0	1,372.5	1,910.0	1,257.5	2,179.2	1,683.4	1,209.7
	Change, %			3.2	(4.6)	16.4	(5.8)	(32.3)	2.8	(40.7)	(23.2)	6.8
	Caprolactam	CFR SE Asia	1,320.0	1,310.0	1,210.0	1,250.0	1,285.0	1,740.0	1,260.0	2,233.4	1,581.5	1,215.0
	Change, %			0.8	9.1	5.6	2.7	(24.1)	4.8	(40.9)	(16.5)	8.6
	PTA	CFR SE Asia	625.0	622.5	610.0	562.5	587.5	735.0	585.0	911.7	648.0	591.1
	Change, %			0.4	2.5	11.1	6.4	(15.0)	6.8	(31.4)	(3.6)	5.7
Spread	HDPE		815.0	826.5	784.0	757.0	652.5	777.5	651.5	659.0	737.1	768.7
	Change, %			(1.4)	4.0	7.7	24.9	4.8	25.1	23.7	10.6	6.0
	MEG		272.5	279.0	339.0	224.5	157.5	352.5	204.0	68.2	287.8	290.3
	Change, %			(2.3)	(19.6)	21.4	73.0	(22.7)	33.6	299.4	(5.3)	(6.1)
	PVC		405.0	416.5	404.0	392.0	317.5	327.5	301.5	148.0	327.8	394.9
	Change, %			(2.8)	0.2	3.3	27.6	23.7	34.3	173.6	23.6	2.5
	PP		670.0	686.5	604.0	507.0	422.5	707.5	421.5	637.1	616.8	557.1
	Change, %			(2.4)	10.9	32.1	58.6	(5.3)	59.0	5.2	8.6	20.3
	2-EH		425.0	429.0	379.0	357.0	267.5	482.5	266.5	531.3	437.0	373.1
	Change, %			(0.9)	12.1	19.0	58.9	(11.9)	59.5	(20.0)	(2.8)	13.9
	ABS		940.0	961.5	914.0	772.0	667.5	1,062.5	716.5	1,031.9	938.1	849.0
	Change, %			(2.2)	2.8	21.8	40.8	(11.5)	31.2	(8.9)	0.2	10.7
	SBR	BD spread	430.0	465.0	400.0	455.0	405.0	400.0	430.0		454.7	413.8
	Change, %			(7.5)	7.5	(5.5)	6.2	7.5	0.0		(5.4)	3.9
	SM		707.5	734.0	764.0	607.0	487.5	820.0	496.5	681.2	607.7	677.4
	Change, %			(3.6)	(7.4)	16.6	45.1	(13.7)	42.5	3.9	16.4	4.4
	Caustic											
	Change, %											
	PX		400.0	404.0	424.0	354.5	345.0	362.5	349.0	362.6	349.9	403.4
	Change, %			(1.0)	(5.7)	12.8	15.9	10.3	14.6	10.3	14.3	(0.8)
	PO	propylene spread	550.0	502.5	700.0	450.0	722.5	920.0	607.5	925.0	913.4	593.1
	Change, %			9.5	(21.4)	22.2	(23.9)	(40.2)	(9.5)	(40.5)	(39.8)	(7.3)
	Caprolactam	benzene spread	670.0	677.5	585.0	705.0	717.5	900.0	680.0	990.3	891.6	626.3
	Change, %			(1.1)	14.5	(5.0)	(6.6)	(25.6)	(1.5)	(32.3)	(24.9)	7.0
	PTA	px spread	68.5	71.3	46.5	84.8	57.3	84.0	51.3	51.8	58.0	60.0
	Change, %			(3.9)	47.3	(19.2)	19.7	(18.5)	33.7	32.4	18.1	14.2

자료 : Ciscem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	04/22	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA			
											15	16E	15	16E	15	16E		
Petrochemical																		
Dow Chemical	USD	52.6	1.2	0.5	2.7	21.7	5.4	5.2	2.2	59,019	15.4	13.2	2.5	2.4	8.0	7.3		
Du Pont	USD	66.0	1.4	1.1	3.2	20.5	11.5	(2.8)	(0.9)	57,602	21.8	18.8	6.2	5.1	11.8	10.5		
Eastman	USD	76.5	0.6	2.5	4.9	22.3	7.2	0.6	13.4	11,323	10.9	9.9	2.4	2.1	8.2	7.8		
BASF	EUR	70.9	0.0	4.2	5.8	11.8	(4.8)	(22.6)	0.2	73,046	16.2	14.4	2.1	2.0	8.0	7.4		
Akzo Nobel	EUR	63.5	(1.7)	4.4	7.8	8.4	(1.7)	(13.0)	2.9	17,738	15.2	14.5	2.3	2.2	8.3	7.9		
Arkema	EUR	70.7	(0.5)	1.2	9.1	24.4	6.3	(3.0)	9.5	5,913	14.7	12.3	1.4	1.3	6.1	5.6		
Lanxess	EUR	45.7	0.3	3.6	8.1	18.4	(5.8)	(7.9)	7.1	4,696	20.9	16.6	1.7	1.6	6.0	5.5		
Sumitomo Chemical	JPY	529	0.8	6.0	1.9	(7.8)	(20.0)	(19.4)	(24.5)	7,844	9.6	8.4	1.0	0.9	7.3	6.8		
Mitsubishi Chemical	JPY	601	1.3	5.9	(1.9)	(8.5)	(17.2)	(19.4)	(22.4)	8,103	9.9	8.7	0.8	0.8	5.8	5.6		
Shin-Etsu Chemical	JPY	6,299	0.2	2.8	4.8	6.2	(7.5)	(18.9)	(4.8)	24,378	17.9	16.6	1.3	1.2	6.3	5.9		
Asahi Kasei	JPY	806	(0.5)	9.5	11.1	10.4	9.6	(28.9)	(2.1)	10,124	11.9	10.7	0.9	0.9	5.8	5.5		
JSR	JPY	1,655	0.7	6.6	(1.7)	(1.2)	(11.0)	(24.6)	(12.8)	3,351	12.8	11.7	1.0	0.9	5.3	4.9		
Nitto Denko	JPY	6,403	1.1	1.4	(7.6)	(13.2)	(16.9)	(19.0)	(28.2)	9,965	13.5	13.0	1.5	1.4	5.8	5.5		
SABIC	SAR	79.3	0.0	3.6	1.2	28.5	(6.5)	(17.5)	3.7	63,467	16.7	14.1	1.4	1.4	7.8	6.8		
Yansab	SAR	40.8	0.0	(1.8)	2.7	48.5	(8.3)	(16.2)	25.9	6,123	17.3	15.1	1.5	1.5	8.8	8.3		
Formosa Plastics	TWD	81.0	1.0	(1.2)	1.8	8.9	7.9	3.1	5.2	15,923	16.7	15.4	1.7	1.6	24.9	22.5		
Formosa Fiber	TWD	84.1	(0.5)	(0.8)	6.6	22.2	13.0	10.5	13.6	15,222	17.6	17.1	1.6	1.6	14.2	13.8		
Nan Ya Plastics	TWD	65.0	1.6	(2.0)	(3.0)	17.5	(0.6)	(13.7)	6.6	15,919	14.9	14.7	1.5	1.4	15.2	14.5		
Sinopec Shanghai	CNY	6.92	0.4	(7.0)	0.1	25.6	(2.0)	1.6	6.8	9,466	19.3	19.9	3.3	3.0	9.5	9.8		
Sinopec Yizheng(Fiber)	CNY	4.58	(0.7)	(11.1)	(11.2)	(26.1)	(53.6)	(47.7)	(43.9)	8,956	#N/A	N/A	458.0	2.7	2.6	17.5	14.7	
Reliance	INR	1,039	(0.2)	(2.5)	(0.8)	3.5	8.8	18.1	2.3	50,477	11.4	9.9	1.2	1.1	9.0	7.6		
Industries Qatar	QAR	106.8	0.0	0.6	(2.4)	20.5	(13.1)	(25.1)	(3.9)	17,744	14.4	13.3	1.9	1.9	54.8	52.6		
PTT Chemical	THB	63.8	1.2	8.1	7.6	29.4	7.1	2.8	27.5	8,104	11.6	10.4	1.1	1.1	5.7	5.3		
Petronas	MYR	6.7	(0.4)	(0.7)	0.0	(2.9)	4.5	10.7	(7.8)	13,696	18.7	17.2	2.0	1.9	9.3	8.5		
LG화학	KRW	308,000	(2.5)	(8.1)	(1.8)	1.5	6.0	8.5	(6.2)	17,758	0.0	15.3	0.0	1.6	0.0	6.0		
롯데케미칼	KRW	312,500	(1.4)	(4.4)	(2.3)	26.0	22.1	16.6	28.3	9,319	0.0	8.0	0.0	1.2	0.0	4.3		
한화케미칼	KRW	25,950	(1.3)	0.0	10.9	4.4	20.7	43.8	(4.6)	3,721	0.0	10.5	0.0	0.9	0.0	9.0		
금호석유	KRW	72,700	(2.8)	7.1	19.2	49.6	17.6	(15.9)	39.5	1,927	0.0	18.2	0.0	1.4	0.0	11.0		
SKC	KRW	30,100	0.2	0.0	(2.7)	(0.5)	(19.0)	(26.0)	(10.9)	966	0.0	8.6	0.0	0.7	0.0	7.5		
국도화학	KRW	67,500	(0.7)	(1.7)	7.5	20.5	(6.0)	22.5	13.8	341	0.0	7.8	0.0	0.9	0.0	5.0		
효성	KRW	4,675	0.1	16.9	56.4	90.4	66.7	1.0	79.1	4,079	0.0	7.9	0.0	1.3	0.0	7.1		
Average			(0.0)	1.4	4.4	15.5	0.7	(6.3)	3.7									
Refinery																		
Valero	USD	61.2	1.0	2.9	(7.3)	(9.8)	1.5	3.2	(13.4)	28,769	9.7	8.4	1.3	1.2	5.0	4.6		
Conoco Phillips	USD	47.6	3.0	9.0	13.6	26.4	(12.8)	(29.8)	2.0	58,971	#N/A	N/A	131.2	1.6	1.6	14.5	7.7	
Formosa Petrochemical	TWD	90.6	(0.5)	(3.6)	(4.1)	13.5	13.7	18.3	15.0	26,651	18.8	18.2	3.1	3.0	12.1	12.0		
Tesoro	USD	86.2	2.6	6.5	(5.9)	(5.0)	(15.1)	(3.7)	(18.2)	10,335	11.4	11.3	1.7	1.5	6.1	5.9		
Marathon Petroleum	USD	41.5	1.8	9.4	7.5	(3.2)	(13.0)	(18.8)	(20.0)	21,942	10.8	9.5	1.6	1.4	6.8	6.2		
Devon Energy	USD	35.2	3.7	12.1	25.7	37.3	(21.3)	(46.5)	10.0	18,441	#N/A	N/A	64.9	2.4	2.4	17.0	10.2	
Hollyfrontier	USD	36.2	0.5	6.2	(5.6)	0.2	(21.9)	(6.4)	(9.2)	6,396	12.9	9.8	1.2	1.2	6.5	5.7		
Phillips 66	USD	88.0	0.7	3.7	(2.4)	9.9	6.5	8.7	7.6	46,297	15.0	12.0	1.9	1.7	8.6	7.2		
Murphy Oil	USD	33.7	6.4	18.1	29.8	91.4	20.0	(31.7)	49.9	5,796	#N/A	N/A	#N/A	N/A	1.2	1.2	9.4	6.4
JX Holdings	JPY	481.4	(0.1)	5.8	4.8	12.4	(0.4)	(5.6)	(5.3)	10,760	8.9	8.1	0.7	0.7	10.2	9.8		
Cosmo Oil	JPY	164.0	0.0	0.0	0.0	0.0	0.0	(8.4)	0.0	1,151	#N/A	N/A	#N/A	N/A	#N/A	N/A	#N/A	N/A
Idemitsu	JPY	2,367.0	0.6	16.1	20.8	39.5	19.2	0.3	22.1	3,392	6.9	6.3	0.6	0.6	7.1	6.8		
Tonengeneral	JPY	1,049.0	0.3	3.1	7.5	11.8	(16.1)	(7.1)	2.6	3,439	11.7	9.6	1.5	1.4	13.2	7.5		
Nesteoil	EUR	29.3	1.1	0.1	(3.4)	4.6	31.4	14.9	6.1	0	11.1	12.0	2.1	1.9	7.0	7.4		
Ashland	USD	115.8	1.5	2.6	6.8	18.6	8.5	(8.8)	12.8	7,324	16.2	14.6	2.9	2.6	9.3	9.0		
Fuchs Petrolub	EUR	39.5	0.1	1.2	(2.6)	5.7	(10.1)	(1.1)	(9.2)	5,747	21.8	20.8	4.5	4.0	12.5	12.0		
SK이노베이션	KRW	159,000	(2.2)	(4.2)	(2.5)	16.1	46.5	38.9	22.3	12,791	0.0	8.8	0.0	0.9	0.0	5.4		
S-Oil	KRW	89,100	(1.1)	(2.2)	(1.8)	11.4	32.8	16.5	12.2	8,727	0.0	8.4	0.0	1.6	0.0	5.9		
GS	KRW	56,500	(1.9)	(2.2)	6.2	15.8	17.1	20.7	11.4	4,567	0.0	7.5	0.0	0.8	0.0	7.8		
Average			0.9	4.5	4.6	15.6	4.6	(2.4)	5.2									

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	04/22	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA	
											15	16E	15	16E	15	16E
E&P/Shale																
Exxon Mobil	USD	88	0.9	3.0	4.1	14.3	5.6	0.1	12.3	363,271	37.1	20.9	2.2	2.1	11.2	8.2
BP	GBP	368	(0.1)	3.5	2.1	4.4	(5.2)	(23.2)	4.0	98,806	30.8	14.5	1.1	1.1	6.1	4.7
Shell	EUR	1,814	(1.0)	0.0	6.6	30.8	1.5	(12.4)	18.9	209,987	23.7	13.6	1.0	1.0	6.2	4.6
Chevron	USD	102	0.6	4.9	6.8	22.1	11.3	(6.8)	13.4	192,258	81.3	21.9	1.3	1.3	9.0	6.1
Total	EUR	44	0.4	3.0	5.9	11.6	(3.4)	(9.5)	6.2	121,917	17.4	12.2	1.2	1.2	7.3	5.6
Sinopec	CNY	5	0.0	(2.2)	5.2	9.6	(3.9)	(34.2)	(1.2)	89,815	19.2	12.9	0.9	0.8	5.7	4.9
Petrochina	CNY	8	0.1	(2.2)	(2.7)	3.4	(14.1)	(42.7)	(9.2)	203,933	56.6	22.8	1.2	1.1	7.9	6.7
CNOOC	CNY	13	0.0	(5.3)	(5.1)	(0.6)	(24.9)	(54.6)	(18.4)	7,333	57.3	29.7	1.3	1.3	13.0	11.1
Gazprom	RUB	161	(0.4)	8.9	7.7	21.8	15.8	6.9	18.5	57,146	4.2	4.0	0.3	0.3	3.9	3.7
Rosneft	RUB	322	(0.3)	4.0	1.3	28.6	27.1	27.6	27.2	51,119	9.1	6.0	1.0	0.9	4.7	4.1
Anadarko	USD	53	5.0	7.4	9.5	48.1	(28.0)	(43.5)	8.2	27,115	#N/A	#N/A	2.1	2.3	13.4	8.6
Petrobras	BRL	10	2.8	0.6	20.2	121.1	21.6	(25.7)	45.5	42,068	50.8	6.7	0.5	0.5	6.9	5.5
Lukoil	USD	2,890	0.0	2.4	5.5	23.5	23.8	9.5	23.2	36,919	9.0	6.1	0.4	0.4	N/A	N/A
Kinder	USD	18	(0.2)	(0.2)	(2.1)	18.1	(39.1)	(58.9)	21.4	47,497	26.8	22.6	1.1	1.1	11.4	10.6
Statoil	NOK	139	0.0	6.0	3.2	26.0	(3.1)	(8.9)	12.0	53,585	46.1	17.9	1.3	1.3	4.0	3.1
BHP	AUD	20	(3.3)	5.6	13.7	33.4	(15.5)	(28.0)	14.0	80,335	42.6	23.2	1.5	1.4	9.0	7.2
PTT E&P	THB	74	(1.3)	6.1	7.6	53.4	1.7	(37.3)	29.3	8,373	27.6	15.8	0.7	0.7	3.0	2.7
Petronas gas	MYR	22	(0.4)	(0.4)	0.7	3.8	(5.7)	(3.9)	(3.1)	11,123	23.7	23.2	3.7	3.5	13.6	13.2
Chesapeake	USD	7	5.8	8.6	35.9	86.6	(16.0)	(54.5)	45.6	4,458	#N/A	#N/A	3.5	2.7	17.3	11.0
Noble Energy	USD	36	2.4	12.1	6.8	24.1	(1.2)	(29.6)	9.4	15,627	#N/A	#N/A	1.6	1.7	11.6	9.7
Average		0	0.6	3.3	6.6	29.2	(2.6)	(21.5)	13.9							
PV																
WACKER	EUR	80.2	0.6	3.0	5.4	18.3	7.5	(28.8)	3.5	4,694	33.1	18.1	1.6	1.5	5.5	5.0
GCL-Poly	HKD	1.2	(0.8)	(4.0)	(7.6)	24.7	(29.0)	(50.6)	4.3	2,899	7.7	6.9	0.9	0.8	6.3	5.4
REC	NOK	107.5	0.0	0.0	0.0	0.0	0.0	4.9	0.0	519	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
SunEdison	USD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.0	0.0	#N/A	#N/A
Canadian Solar	USD	19.0	0.4	5.7	(4.0)	(4.6)	(9.4)	(47.5)	(34.3)	1,094	10.2	7.0	1.1	0.9	5.7	4.5
JA Solar	USD	8.8	1.0	(1.0)	(0.9)	(2.2)	1.5	(15.0)	(9.2)	445	5.5	5.0	0.4	0.4	2.8	2.3
Trina Solar	USD	9.9	0.1	1.5	(6.5)	4.2	(8.5)	(21.2)	(10.3)	914	7.1	6.3	0.7	0.6	6.1	5.3
Solar City	USD	33.3	(1.6)	14.8	34.6	4.1	(14.3)	(43.6)	(34.7)	3,278	#N/A	#N/A	14.6	#N/A	#N/A	#N/A
Yingli	USD	5.1	(1.0)	0.2	6.7	12.3	(29.5)	(72.7)	12.8	93	#N/A	#N/A	#N/A	#N/A	9.1	8.9
First Solar	USD	61.5	(0.6)	3.3	(13.7)	(7.4)	23.4	(3.7)	(6.7)	6,290	14.3	17.7	1.1	1.0	8.1	8.4
한화솔라원	USD	13.5	0.0	(4.3)	(17.4)	(22.7)	(22.0)	(38.6)	(38.5)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
OCI	KRW	108,000	(0.5)	8.4	13.2	75.3	32.0	(3.6)	44.0	2,241	0.0	12.1	0.0	0.8	0.0	10.2
웅진에너지	KRW	1,255	0.0	(3.5)	(27.5)	(18.8)	(27.2)	(24.9)	(27.5)	118	N/A	0.0	0.8	0.0	10.2	0.0
신성솔라에너지	KRW	1,625	(1.5)	(2.4)	(1.8)	7.2	30.9	30.9	(12.4)	142	N/A	0.8	0.0	10.2	0.0	7.9
Average			#####	#####	#####	#####	#####	#####	#####							
Gas Company																
Towngas China	HKD	4.3	(2.1)	(3.6)	5.7	19.5	(23.8)	(48.9)	(4.7)	1,474	8.8	8.7	0.8	0.8	10.7	10.0
Kulun	HKD	6.9	0.0	2.8	4.7	29.5	7.8	(25.5)	0.0	7,181	14.1	11.1	1.0	1.0	5.7	5.2
Beijing Enterprise	HKD	41.4	(2.8)	(3.8)	0.0	8.8	(18.7)	(40.8)	(11.9)	6,838	8.3	7.8	0.8	0.8	13.3	11.9
ENN Energy	HKD	41.5	0.0	(11.3)	6.0	24.3	(10.8)	(25.4)	0.4	5,792	12.9	11.4	2.3	2.0	8.3	7.5
China Resources Gas	HKD	22.6	(0.2)	(5.6)	2.0	19.4	(0.4)	(12.8)	(2.6)	6,465	14.5	13.0	2.5	2.2	9.1	8.2
China Gas Holdings	HKD	11.4	0.9	(9.3)	0.7	20.2	(12.7)	(19.2)	1.6	7,191	12.6	11.1	2.3	2.0	10.4	9.2
Shenzen Gas	HKD	12.8	(0.5)	0.6	3.7	2.9	3.4	(14.3)	(10.5)	3,143	11.7	10.7	1.2	1.1	7.6	7.0
Shann Xi	CNY	9.8	0.4	(7.7)	5.4	(0.1)	(21.2)	(41.8)	(21.9)	1,682	15.6	13.3	#N/A	#N/A	#N/A	#N/A
Suntien	HKD	0.9	(1.2)	(1.2)	(9.6)	(15.0)	(44.4)	(59.3)	(31.5)	407	8.8	6.7	0.3	0.3	8.7	7.2
China Oil & Gas	HKD	0.5	(1.8)	(3.6)	18.7	18.7	1.9	(43.5)	1.9	406	10.8	9.8	#N/A	#N/A	#N/A	#N/A
Average			(0.7)	(4.3)	3.7	12.8	(11.9)	(33.1)	(7.9)							
EV																
LG화학	KRW	308,000	(2.5)	(8.1)	(1.8)	1.5	6.0	8.5	(6.2)	17,758	14.3	12.7	1.6	1.4	6.2	5.7
삼성SDI	KRW	111,000	3.7	4.2	5.2	8.8	(2.6)	(16.2)	(2.6)	6,641	9.6	24.8	0.7	0.6	11.0	8.2
Panasonic	JPY	1044.5	1.1	4.7	2.7	(6.0)	(21.2)	(37.5)	(15.8)	22,949	12.2	10.8	1.1	1.0	3.6	3.4
GS Yuasa	JPY	456.0	(2.8)	(9.7)	(4.8)	12.0	(12.6)	(20.3)	0.9	1,689	12.4	11.0	1.1	1.0	6.1	5.7
NEC	JPY	283.0	0.7	0.4	(1.0)	(22.3)	(30.3)	(27.6)	(26.5)	6,602	10.2	9.1	0.8	0.8	6.2	5.9
BYD Auto	CNY	61.9	(0.4)	6.3	7.3	12.2	0.7	8.1	(3.9)	20,064	44.2	31.0	4.3	3.9	14.3	12.1
Tesla Motors	USD	253.8	2.2	(0.3)	8.3	25.3	19.9	15.6	5.7	33,976	224.2	85.8	27.0	20.9	45.5	30.3
Kandi Technologies	USD	7.7	2.8	(2.0)	0.0	(8.9)	(11.9)	(37.2)	(29.6)	361	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Average			0.6	(0.6)	2.0	2.8	(6.5)	(13.3)	(9.8)							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임