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1. News Summary (3 page)

2016년 3월 17일

News		Conclusion
WTI comment	IEA의 유가바닥 전망에 상승	
Headline	북미 Dow Chemical, 4월 PE 가격 전월대비 $110/t 상향	당분간 글로벌 PE 가격의 강세기조는 이어질 수 있을 것으로 판단함
News 1.	[주간가격] 폴리실리콘 상승/모듈 하락세 지속 중	현재 태양광 수요 약세 상황, 폴리실리콘 가격상승도 큰 의미부여 어려움
News 2.	-	-
News 3.	-	-
News 4.	-	-

2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	$/bbl	38.5	5.8	0.4	30.6	10.0	(11.5)
Dubai	$/bbl	34.8	0.4	(0.7)	19.1	5.9	(32.6)
Gasoline	$/bbl	52.4	0.6	(0.2)	14.1	(4.8)	(26.1)
Diesel	$/bbl	45.7	0.3	(0.3)	16.8	5.3	(32.4)
Complex margin	$/bbl	7.4	0.1	0.2	(0.4)	(2.0)	(3.7)
1M lagging	$/bbl	12.7	(1.8)	(2.5)	7.3	13.5	4.7
Petrochemical			%	%	%	%	%
Naphtha	$/t	365	(0.1)	3.3	8.2	(12.9)	(27.5)
Butadiene	$/t	1,080	0.0	7.5	34.2	54.3	28.6
HDPE	$/t	1,130	0.0	0.0	4.6	8.1	(8.9)
MEG	$/t	680	1.0	(7.5)	6.6	18.9	(16.5)
PX	$/t	762	0.3	(1.5)	4.6	2.5	(6.2)
SM	$/t	1,092	(0.2)	(2.0)	15.4	25.5	(1.1)
Commodity			%	%	%	%	%
Natural Gas	$/mmbtu	1.87	0.9	6.6	(7.1)	(9.2)	(40.0)
Natural rubber	$/t	1,220	1.7	(5.4)	10.9	8.0	(12.2)
Cotton	C/lbs	58.3	0.1	3.1	(2.1)	(8.9)	(8.1)

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	03/14	$/t	1,125	3.7	25.7	3.2	(2.2)
Propylene	03/14	$/t	665	1.5	1.5	2.3	(32.3)
Benzene	03/14	$/t	658	10.0	22.9	9.1	(12.9)
Toluene	03/14	$/t	655	5.6	12.9	4.0	(7.1)
Xylene	03/14	$/t	620	5.5	6.9	(8.1)	(11.4)
PP	03/14	$/t	925	3.4	9.5	5.7	(27.7)
PVC	03/14	$/t	755	0.0	4.1	3.4	(12.7)
ABS	03/14	$/t	1,265	4.1	11.9	17.4	(18.6)
SBR	03/14	$/t	1,395	11.6	16.7	27.4	3.3
SM	03/14	$/t	1,145	3.6	17.4	21.2	(1.9)
BPA	03/14	$/t	1,255	6.1	7.7	(8.6)	(37.0)
Caustic	03/14	$/t	285	0.0	(0.9)	0.9	1.8
2-EH	03/14	$/t	755	6.3	10.2	13.5	(29.1)
Caprolactam	03/14	$/t	1,180	2.6	6.3	(8.2)	(28.7)
Solar				%	%	%	%
Polysilicon	03/16	$/kg	13.9	0.9	4.3	2.7	(21.5)
Module	03/16	$/W	0.54	(0.6)	(1.8)	(3.0)	(8.1)

*참고: 정제마진의 변동률은 %가 아닌 $/bbl임

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	82.9	0.1	0.6	2.0	4.7	(2.2)
Shell	EUR	1,704	2.8	0.8	8.7	16.5	(12.0)
Petrochina	CNY	7.89	1.3	1.2	7.3	(6.7)	(29.6)
Gazprom	RUB	144.8	1.6	(1.8)	6.6	7.6	3.6
Petrobras	BRL	7.2	9.4	(4.9)	62.8	(0.8)	(14.5)
Refinery							
Phillips66	USD	87.6	1.1	1.7	11.9	5.4	14.8
Valero	USD	65.9	1.5	1.8	15.0	(6.1)	10.5
JX	JPY	451.7	(1.0)	(1.1)	(0.5)	(10.6)	(5.2)
Neste Oil	EUR	29.7	(1.0)	0.8	10.6	9.2	21.8

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	65.4	0.2	1.8	11.6	(8.3)	(29.0)
Dow Chemical	USD	50.7	0.9	3.3	8.2	(0.1)	7.7
SABIC	SAR	75.9	2.2	(1.4)	11.7	(10.1)	(16.5)
Formosa Pla.	TWD	77.9	(0.8)	(0.6)	2.0	9.6	6.0
Shin-Etsu	JPY	5,996	(0.3)	0.7	4.7	(10.9)	(25.7)
Renewable							
Wacker	EUR	75.8	(1.0)	0.0	23.5	0.6	(33.9)
Yingli	USD	4.65	5.0	(0.4)	6.7	(23.8)	(78.0)
Tesla	USD	221.9	1.6	6.3	43.0	(5.4)	13.4
BYD	CNY	53.0	(2.6)	1.9	1.8	(15.7)	3.6

4. Coverage Summary

	03/16	1D	1W	1M	3M	6M	12M	투자의견	TP	%	P/E	P/B
KOSPI	1,975	0.3	1.1	6.1	(0.2)	1.9	(0.6)				* 추정치는 12M fwd 기준임	
KOSPI화학	5,327	1.1	3.2	8.9	0.4	12.1	24.8				* 모든 coverage 업체의 실적은 연결기준임	
LG화학	307,000	1.7	3.7	9.3	(7.9)	31.5	39.2	매수	380,000	23.8	14.91	1.69
롯데케미칼	309,500	(3.3)	(0.2)	14.4	33.7	14.6	61.2	매수	290,000	(6.3)	13.99	1.30
한화케미칼	24,050	0.0	(1.0)	1.7	(13.8)	26.6	67.0	매수	30,000	24.7	8.50	0.69
금호석유화학	58,000	(3.5)	(6.0)	4.5	10.1	6.0	(27.9)	매수	70,000	20.7	15.79	1.19
KCC	409,000	0.0	(2.0)	(3.7)	(4.9)	(1.9)	(23.3)	매수	550,000	34.5	14.14	0.64
OCI	91,600	0.0	(2.1)	36.1	14.8	14.6	(15.2)	매수	85,000	(7.2)	21.80	0.91
SKC	29,750	(1.5)	(7.8)	1.5	(11.3)	(22.6)	(3.6)	매수	43,000	44.5	9.26	0.76
국도화학	60,700	(2.9)	(2.7)	15.6	6.9	(10.9)	23.6	매수	100,000	64.7	7.51	0.73
SK이노베이션	155,500	(1.6)	3.3	19.6	15.2	58.8	74.1	매수	150,000	(3.5)	12.29	0.97
S-Oil	84,600	(0.1)	1.1	14.0	9.2	38.2	43.6	매수	85,000	0.5	13.73	1.58
GS	52,200	(1.7)	(1.5)	4.5	1.8	12.3	26.5	매수	60,000	14.9	5.40	0.87
SK가스	78,900	(0.1)	5.2	7.8	9.7	(5.8)	(11.3)	매수	90,000	14.1	9.87	0.70
대우인터내셔널	21,200	(5.1)	3.7	14.0	25.1	(2.8)	(21.5)	매수	22,000	3.8	11.74	1.00
LG상사	33,550	(4.6)	(6.0)	(1.5)	(4.7)	11.5	(11.6)	매수	40,000	19.2	12.90	0.93

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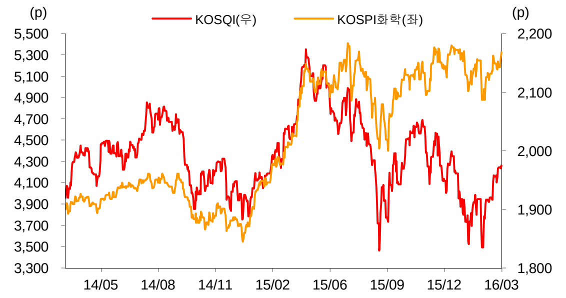
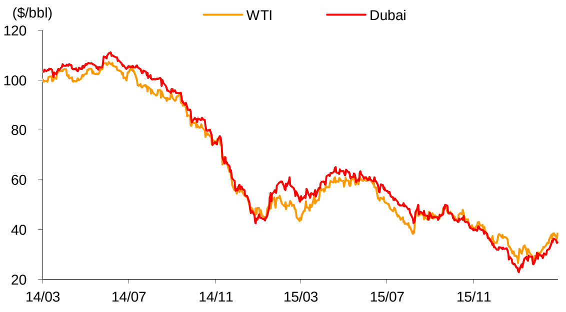
Key Chart

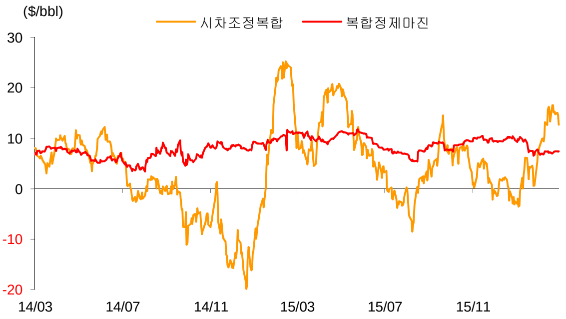
KOSPI/KOSPI화학



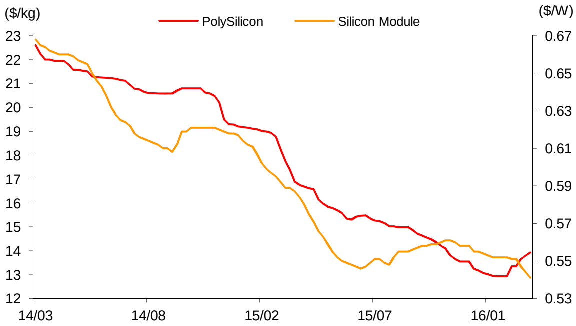
WTI/Dubai



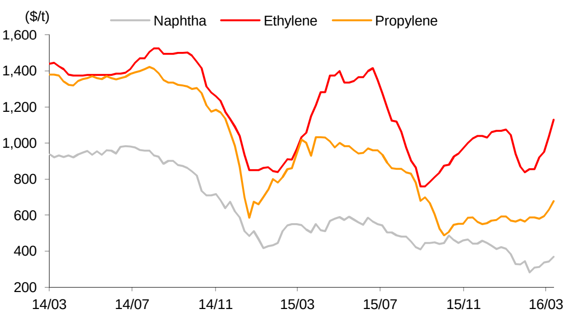
Complex & 1M lagging margin



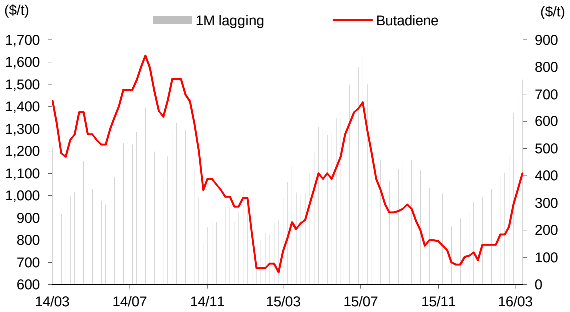
Polysilicon & Module prices



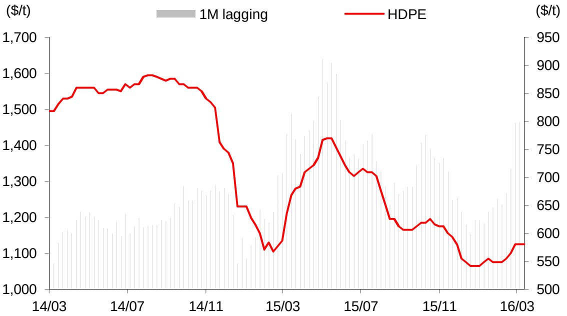
Naphtha/Ethylene/Propylene prices



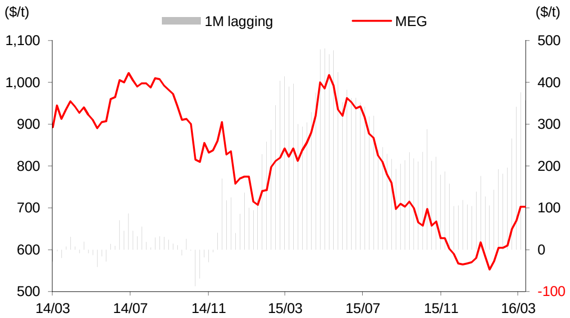
Butadiene price & 1M lagging naphtha spread



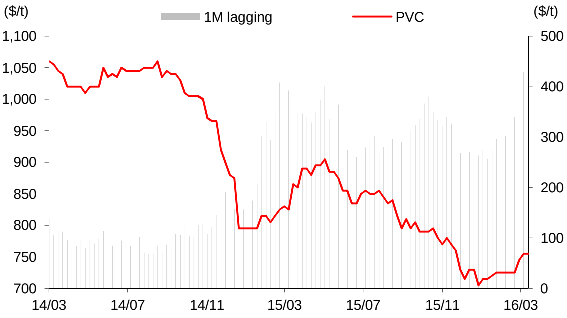
HDPE price & 1M lagging naphtha spread



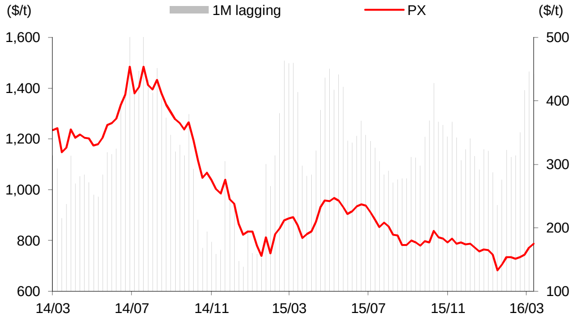
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

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News Comment

Headline	(출처: Platts)
제목	북미 Dow Chemical, 4월 PE 가격 전월대비 $110/t 상향
결론	당분간 글로벌 PE 가격의 강세기조는 이어질 수 있을 것으로 판단함
세부	
	1) 이미 같은 북미권역의 ExxonMobil이 전월대비 $90/t 상향하였음
	2) Dow 브라질 역시 전월대비 내수가격 약 $110/t 유사규모로 인상결정
	3) 사우디, UAE, 쿠웨이트 등 중동국가들도 $50/t 내외 상향조정했음
	4) 원재료 에틸렌 가격 강세와 정기보수 물량 때문인 것으로 추정됨
	5) 당분간 글로벌 PE 가격의 강세기조는 이어질 수 있을 것으로 판단함

WTI Comment	(출처: 연합뉴스)
제목	IEA의 유가바닥 전망에 상승
상승 요인	OPEC 12개 회원국과 비OPEC 3개국, 4월 17일 카타르 회동 미국 원유재고 130만bbl 증대, 예측치 340만bbl 하회 연준 기준금리 재동결, 올 해 금리인상도 2차례에 그칠 것으로 기대
하락 요인	

Issue 1	(출처: PVinsights)
제목	[주간가격] 폴리실리콘 상승/모듈 하락세 지속 중
결론	현재 태양광 수요 약세 상황, 폴리실리콘 가격상승도 큰 의미부여 어려움
세부	
	1) 폴리실리콘 $13.9/kg (WoW +0.9%), 모듈 $0.54/w (WoW -0.6%)
	2) 폴리: 메이저 가격상향으로 상승세, 다만 추가인상에 대해 수요자 부담
	3) 모듈: 중국 중심 글로벌 수요약세 지속, 일본 보조금 모멘텀도 소멸 중
	4) 중국 모듈 업체들은 M/S 확보 위해 여전히 북미/유럽 내 가격 공세 중
	5) 현재 태양광 수요 약세 상황, 폴리실리콘 가격상승도 큰 의미부여 어려움

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

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

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Commodity Price Data

Daily Price		Today	1D	1W	1M	3M	6M	12M	YTD	2013avg.	2014avg.	2015acc.
F/X	**USD/EUR**	0.891	0.900	0.909	0.897	0.916	0.886	0.946	0.921	0.753	0.754	0.901
	Change, %		(1.0)	(2.0)	(0.7)	(2.8)	0.6	(5.8)	(3.3)	(3.9)	13.7	(1.2)
	USD/JPY	112.6	113.2	113.4	114.1	122.2	120.6	121.3	120.6	97.7	105.9	121.1
	Change, %		(0.5)	(0.7)	(1.3)	(7.9)	(6.6)	(7.2)	(6.6)	21.5	13.8	(7.0)
	USD/KRW	1,193.2	1,187.6	1,216.2	1,216.5	1,176.2	1,176.0	1,131.7	1,172.6	1,094.6	1,053.0	1,131.2
	Change, %		0.5	(1.9)	(1.9)	1.4	1.5	5.4	1.8	50.3	3.3	5.5
Agriculture	**Corn**	368.3	368.5	359.0	363.0	369.8	386.0	379.0	358.8	579.2	415.6	376.8
	Change, %		(0.1)	2.6	1.4	(0.4)	(4.6)	(2.8)	2.6	(39.6)	(5.9)	(2.3)
	Soybean	894.5	892.0	880.0	879.8	862.5	887.3	969.3	871.3	1,407.0	1,245.5	945.4
	Change, %		0.3	1.6	1.7	3.7	0.8	(7.7)	2.7	(7.5)	(22.3)	(5.4)
	Wheat	470.8	477.3	463.8	464.3	483.5	488.3	514.0	470.0	684.3	588.0	508.1
	Change, %		(1.4)	1.5	1.4	(2.6)	(3.6)	(8.4)	0.2	(22.2)	(2.6)	(7.4)
	Rice	10.5	10.4	10.1	10.8	11.0	12.9	10.5	11.6	15.5	14.0	11.1
	Change, %		1.1	3.4	(3.3)	(4.3)	(18.5)	(0.4)	(9.3)	4.4	(25.9)	(5.2)
	Oats	195.5	196.0	176.0	199.3	223.0	233.8	278.0	217.3	367.5	373.1	250.2
	Change, %		(0.3)	11.1	(1.9)	(12.3)	(16.4)	(29.7)	(10.0)	1.9	(14.3)	(21.9)
MYR/mt	**Palm Oil**	2,590.0	2,540.0	2,518.0	2,526.0	2,224.0	2,050.0	2,209.0	2,398.0	2,405.0	2,415.1	2,190.3
	Change, %		2.0	2.9	2.5	16.5	26.3	17.2	8.0	13.3	(12.8)	18.3
	Cocoa	3,040.0	2,999.0	3,006.0	2,793.0	3,291.0	3,267.0	2,869.0	3,211.0	2,403.9	3,006.8	3,091.6
	Change, %		1.4	1.1	8.8	(7.6)	(6.9)	6.0	(5.3)	21.2	7.4	(1.7)
	Cotton	58.3	58.2	56.6	59.9	63.3	62.4	60.5	63.3	83.3	76.4	63.3
	Change, %		0.1	3.1	(2.6)	(7.8)	(6.5)	(3.6)	(7.8)	12.6	(28.8)	(7.8)
	Sugar	15.5	15.3	14.6	13.2	14.6	11.5	12.9	15.2	17.5	16.3	13.1
	Change, %		1.0	5.7	17.0	6.0	34.9	19.9	1.5	(15.9)	(11.5)	17.7
	Coffee	127.4	124.1	120.9	114.9	118.1	113.8	134.9	126.7	126.0	177.1	132.6
	Change, %		2.7	5.4	10.9	7.9	12.0	(5.6)	0.6	(23.0)	50.5	(4.0)
Energy	**WTI**	38.5	36.3	38.3	29.0	35.5	47.2	43.9	37.0	98.0	92.9	48.8
	Change, %		5.8	0.4	32.4	8.3	(18.4)	(12.4)	3.8	7.2	(45.9)	(21.3)
	Brent	40.3	38.7	41.1	32.2	37.2	49.8	53.4	37.3	108.7	99.5	53.7
	Change, %		4.1	(1.8)	25.3	8.4	(18.9)	(24.5)	8.2	(0.3)	(48.3)	(24.9)
	Natural Gas	1.9	1.9	1.8	1.9	1.8	2.7	2.7	2.3	3.7	4.3	2.6
	Change, %		0.9	6.6	(1.8)	4.4	(29.8)	(31.2)	(20.1)	26.2	(31.7)	(28.9)
	Ethanol	1.4	1.4	1.4	1.4	1.4	1.5	1.4	1.4	2.3	2.1	1.5
	Change, %		0.1	2.4	3.8	2.7	(5.7)	(0.4)	2.4	(12.7)	(14.9)	(5.1)
	RBOB Gasoline	141.8	140.8	147.1	97.1	123.3	138.2	172.9	126.7	285.0	262.6	163.6
	Change, %		0.7	(3.5)	46.1	15.0	2.6	(18.0)	11.9	(0.9)	(48.5)	(13.3)
	Coal	43.5	43.5	43.6	43.2	43.1	42.5	53.1	43.3	56.1	57.5	45.2
	Change, %		0.0	(0.3)	0.7	1.0	2.3	(18.1)	0.3	(1.0)	(15.5)	(3.8)
Metal	**Gold**	1,262.5	1,232.3	1,253.2	1,200.4	1,072.3	1,119.5	1,154.9	1,061.4	1,410.4	1,266.5	1,160.6
	Change, %		2.5	0.7	5.2	17.7	12.8	9.3	18.9	(28.0)	(1.3)	8.8
	Silver	15.6	15.3	15.3	15.2	14.2	14.9	15.7	13.8	23.8	19.1	15.7
	Change, %		2.1	2.0	2.4	10.0	4.5	(0.4)	12.9	(35.8)	(18.9)	(0.8)
	Platinum	977.0	957.6	979.3	930.4	873.7	972.8	1,107.8	891.1	1,485.7	1,384.6	1,055.7
	Change, %		2.0	(0.2)	5.0	11.8	0.4	(11.8)	9.6	(11.2)	(11.5)	(7.5)
	Palladium	582.1	568.2	566.4	508.6	571.2	611.9	779.3	563.0	725.9	803.4	691.9
	Change, %		2.5	2.8	14.5	1.9	(4.9)	(25.3)	3.4	1.7	11.4	(15.9)
	Copper	4,935.0	4,949.0	4,935.0	4,557.0	4,609.0	5,379.0	5,847.5	4,705.0	7,352.6	6,828.1	5,503.1
	Change, %		(0.3)	0.0	8.3	7.1	(8.3)	(15.6)	4.9	(7.2)	(14.4)	(10.3)
	Uranium	29.5	29.2	29.7	34.0	35.3	37.3	39.5	34.4	38.5	33.5	36.9
	Change, %		1.2	(0.7)	(13.2)	(16.3)	(20.8)	(25.3)	(14.2)	(20.9)	2.5	(20.0)
	HR Coil	415.0	415.0	407.0	398.0	364.0	450.0	495.0	391.0	630.4	653.2	461.5
	Change, %		0.0	2.0	4.3	14.0	(7.8)	(16.2)	6.1	3.1	(10.4)	(10.1)
	Scrap	405.0	405.0	250.0	250.0	250.0	245.0	255.0	250.0	396.9	401.3	252.9
	Change, %		0.0	62.0	62.0	62.0	65.3	58.8	62.0	(1.2)	(16.5)	60.1
	Zinc	1,749.0	1,742.0	1,797.0	1,660.0	1,520.0	1,751.0	2,005.0	1,609.0	1,940.3	2,165.0	1,941.9
	Change, %		0.4	(2.7)	5.4	15.1	(0.1)	(12.8)	8.7	(1.2)	6.0	(9.9)

자료: Bloomberg
참고) NYMEX, ICE, LME 중 대표지수를 사용

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Refining Price Data

Daily Price		03/16	1D	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Crude Oil	**WTI**	38.5	36.3	38.3	29.4	35.0	46.9	43.5	37.0	93.1	48.8	32.5
	Change, %		*5.8*	*0.4*	*30.6*	*10.0*	*(18.0)*	*(11.5)*	*3.8*	*(58.7)*	*(21.2)*	*18.5*
	Dubai	34.8	34.7	35.0	29.2	32.9	46.8	51.6	32.2	96.7	50.8	29.4
	Change, %		*0.4*	*(0.7)*	*19.1*	*5.9*	*(25.6)*	*(32.6)*	*8.1*	*(64.0)*	*(31.5)*	*18.4*
Crude Oil Product	**Gasoline(휘발유)**	52.4	52.1	52.5	46.0	55.1	66.3	70.9	54.8	110.9	69.5	48.7
	Change, %		*0.6*	*(0.2)*	*14.1*	*(4.8)*	*(20.9)*	*(26.1)*	*(4.3)*	*(52.7)*	*(24.6)*	*7.7*
	Kerosene(등유)	47.2	47.0	47.3	41.8	45.4	60.2	66.6	44.2	112.6	64.7	41.1
	Change, %		*0.3*	*(0.3)*	*12.9*	*3.8*	*(21.7)*	*(29.2)*	*6.7*	*(58.1)*	*(27.2)*	*14.8*
	Diesel(경유)	45.7	45.5	45.8	39.1	43.4	60.6	67.5	43.2	112.8	64.8	39.1
	Change, %		*0.3*	*(0.3)*	*16.8*	*5.3*	*(24.7)*	*(32.4)*	*5.6*	*(59.5)*	*(29.5)*	*16.7*
	Bunker-C	26.8	26.7	26.8	24.5	26.5	37.8	49.5	25.3	86.5	45.3	24.1
	Change, %		*0.5*	*(0.2)*	*9.4*	*1.0*	*(29.2)*	*(45.9)*	*5.9*	*(69.0)*	*(40.8)*	*11.2*
	Naphtha	37.7	37.1	36.9	35.1	43.3	48.3	56.0	43.5	94.3	52.6	35.9
	Change, %		*1.6*	*2.2*	*7.5*	*(13.0)*	*(22.0)*	*(32.6)*	*(13.2)*	*(60.0)*	*(28.3)*	*5.0*
Dubai Spread	**Gasoline(휘발유)**	17.6	17.5	17.5	16.7	22.2	19.5	19.3	22.6	14.2	18.7	19.3
	Change		*0.1*	*0.1*	*0.9*	*(4.6)*	*(1.9)*	*(1.7)*	*(5.0)*	*3.4*	*(1.1)*	*(1.7)*
	Kerosene(등유)	12.4	12.3	12.3	12.6	12.6	13.5	15.0	12.0	15.9	14.0	11.7
	Change		*0.0*	*0.1*	*(0.2)*	*(0.2)*	*(1.1)*	*(2.6)*	*0.3*	*(3.5)*	*(1.6)*	*0.7*
	Diesel(경유)	10.9	10.9	10.8	9.9	10.5	13.8	15.9	11.0	16.0	14.0	9.7
	Change		*(0.0)*	*0.1*	*1.0*	*0.4*	*(3.0)*	*(5.0)*	*(0.2)*	*(5.2)*	*(3.1)*	*1.1*
	Bunker-C	(8.0)	(8.0)	(8.2)	(4.7)	(6.4)	(8.9)	(2.1)	(6.9)	(10.3)	(5.5)	(5.3)
	Change		*(0.0)*	*0.2*	*(3.3)*	*(1.7)*	*0.9*	*(5.9)*	*(1.1)*	*2.2*	*(2.5)*	*(2.7)*
	Naphtha	2.9	2.4	1.9	5.9	10.5	1.6	4.4	11.3	(2.4)	1.8	6.5
	Change		*0.5*	*1.1*	*(2.9)*	*(7.6)*	*1.4*	*(1.4)*	*(8.4)*	*5.3*	*1.1*	*(3.6)*
Refining Margin	**Simple(단순)**	1.5	1.5	1.4	3.0	3.2	1.8	5.6	3.2	(0.1)	3.3	3.0
	Change		*0.0*	*0.2*	*(1.5)*	*(1.7)*	*(0.3)*	*(4.1)*	*(1.6)*	*1.6*	*(1.8)*	*(1.4)*
	Complex(복합)	7.4	7.4	7.2	7.8	9.5	8.7	11.1	9.7	7.1	9.3	8.3
	Change		*0.1*	*0.2*	*(0.4)*	*(2.0)*	*(1.2)*	*(3.7)*	*(2.3)*	*0.3*	*(1.9)*	*(0.9)*
	Complex(lagging)	12.7	14.5	15.2	5.4	(0.8)	5.7	8.0	2.3	2.2	6.5	5.7
	Change		*(1.8)*	*(2.5)*	*7.3*	*13.5*	*7.0*	*4.7*	*10.4*	*10.5*	*6.2*	*7.0*

자료 : Petronet, SK증권
참고 1) Crude Oil 가격은 현물(spot) 기준으로 선물(future) 가격과 다를 수 있음
참고 2) Gasoline은 95RON, 경유는 L/P 0.5%, Bunker-C는 380cst/4.0% 기준임

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Petrochemical Price Data

Daily Price			03/16	03/15	03/14	03/11	03/10	03/09	03/08	03/07	03/04	03/03
Spot Price	**Naphtha**	CFR Japan	364.6	365.1	366.0	370.5	372.0	353.0	357.5	354.0	342.3	348.5
	Ethylene	CFR SE Asia	1,160.0	1,150.0	1,130.0	1,130.0	1,090.0	1,090.0	1,090.0	1,090.0	1,090.0	1,015.0
	Propylene	FOB Korea	675.0	680.0	670.0	670.0	630.0	620.0	620.0	615.0	615.0	615.0
	Butadiene	FOB Korea	1,080.0	1,080.0	1,080.0	1,080.0	1,005.0	1,005.0	1,005.0	1,005.0	1,005.0	1,005.0
	HDPE	CFR FE Asia	1,130.0	1,130.0	1,130.0	1,130.0	1,130.0	1,130.0	1,120.0	1,115.0	1,115.0	1,110.0
	LDPE	CFR FE Asia	1,165.0	1,165.0	1,165.0	1,160.0	1,160.0	1,160.0	1,160.0	1,130.0	1,130.0	1,125.0
	LLDPE	CFR FE Asia	1,110.0	1,110.0	1,110.0	1,110.0	1,110.0	1,110.0	1,110.0	1,105.0	1,105.0	1,100.0
	MEG	CFR China	680.0	673.0	682.0	700.0	715.0	735.0	738.0	740.0	698.0	680.0
	PP	CFR FE Asia	930.0	920.0	920.0	905.0	910.0	905.0	910.0	900.0	880.0	890.0
	PX	CFR China	762.0	760.0	771.0	771.5	769.0	773.3	778.5	777.3	754.8	749.3
	PTA	CFR China	594.0	595.0	598.0	598.0	595.0	595.0	590.0	590.0	576.0	577.0
	Benzene	FOB Korea	613.5	608.0	631.0	637.0	644.0	655.0	673.0	651.0	622.0	619.0
	Toluene	FOB Korea	607.5	596.0	616.0	624.0	614.0	615.0	645.0	644.0	620.0	616.0
	Xylene	FOB Korea	631.0	632.0	632.0	632.0	629.0	629.0	646.0	636.0	615.5	615.5
	SM	FOB Korea	1,091.5	1,094.0	1,094.0	1,094.0	1,101.0	1,114.0	1,116.0	1,128.0	1,110.0	1,096.0

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spot Price	**Naphtha**	CFR Japan	370.0	343.5	309.0	429.0	441.5	521.0	413.5	865.9	493.0	341.4
	Change, %			*7.7*	*19.7*	*(13.8)*	*(16.2)*	*(29.0)*	*(10.5)*	*(57.3)*	*(25.0)*	*8.4*
	Ethylene	CFR SE Asia	1,125.0	1,085.0	895.0	1,090.0	1,065.0	1,150.0	1,090.0	1,401.1	1,103.7	993.2
	Change, %			*3.7*	*25.7*	*3.2*	*5.6*	*(2.2)*	*3.2*	*(19.7)*	*1.9*	*13.3*
	Propylene	CFR SE Asia	665.0	655.0	655.0	650.0	650.0	982.5	650.0	1,254.2	770.0	593.2
	Change, %			*1.5*	*1.5*	*2.3*	*2.3*	*(32.3)*	*2.3*	*(47.0)*	*(13.6)*	*12.1*
	Butadiene	CFR SE Asia	1,015.0	990.0	785.0	675.0	705.0	830.0	720.0	1,281.7	877.5	817.7
	Change, %			*2.5*	*29.3*	*50.4*	*44.0*	*22.3*	*41.0*	*(20.8)*	*15.7*	*24.1*
	Benzene	CFR SE Asia	657.5	597.5	535.0	602.5	640.0	755.0	580.0	1,243.1	690.0	568.2
	Change, %			*10.0*	*22.9*	*9.1*	*2.7*	*(12.9)*	*13.4*	*(47.1)*	*(4.7)*	*15.7*
	Toluene	CFR SE Asia	655.0	620.0	580.0	630.0	690.0	705.0	630.0	1,082.5	700.8	600.9
	Change, %			*5.6*	*12.9*	*4.0*	*(5.1)*	*(7.1)*	*4.0*	*(39.5)*	*(6.5)*	*9.0*
	Xylene	CFR SE Asia	620.0	587.5	580.0	675.0	702.5	700.0	625.0	1,055.7	699.3	595.9
	Change, %			*5.5*	*6.9*	*(8.1)*	*(11.7)*	*(11.4)*	*(0.8)*	*(41.3)*	*(11.3)*	*4.0*
Spread	**Ethylene**	-Naphtha	755.0	741.5	586.0	661.0	623.5	629.0	676.5	535.2	610.6	651.8
	Change, %			*1.8*	*28.8*	*14.2*	*21.1*	*20.0*	*11.6*	*41.1*	*23.6*	*15.8*
	Propylene	-Naphtha	295.0	311.5	346.0	221.0	208.5	461.5	236.5	388.3	277.0	251.8
	Change, %			*(5.3)*	*(14.7)*	*33.5*	*41.5*	*(36.1)*	*24.7*	*(24.0)*	*6.5*	*17.1*
	Butadiene	-Naphtha	645.0	646.5	476.0	246.0	263.5	309.0	306.5	415.9	384.5	476.4
	Change, %			*(0.2)*	*35.5*	*162.2*	*144.8*	*108.7*	*110.4*	*55.1*	*67.8*	*35.4*
	Benzene	-Naphtha	287.5	254.0	226.0	173.5	198.5	234.0	166.5	377.3	197.0	226.8
	Change, %			*13.2*	*27.2*	*65.7*	*44.8*	*22.9*	*72.7*	*(23.8)*	*46.0*	*26.8*
	Toluene	-Naphtha	285.0	276.5	271.0	201.0	248.5	184.0	216.5	216.6	207.8	259.5
	Change, %			*3.1*	*5.2*	*41.8*	*14.7*	*54.9*	*31.6*	*31.6*	*37.2*	*9.8*
	Xylene	-Naphtha	250.0	244.0	271.0	246.0	261.0	179.0	211.5	189.9	206.3	254.5
	Change, %			*2.5*	*(7.7)*	*1.6*	*(4.2)*	*39.7*	*18.2*	*31.7*	*21.2*	*(1.8)*

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

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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	1,085.0	1,075.0	1,155.0	1,260.0	1,065.0	1,524.9	1,230.1	1,091.8
	Change, %			0.0	3.7	4.7	(2.6)	(10.7)	5.6	(26.2)	(8.5)	3.0
	MEG	CFR SE Asia	702.5	702.5	610.0	567.5	602.5	842.5	617.5	934.1	780.8	624.8
	Change, %			0.0	15.2	23.8	16.6	(16.6)	13.8	(24.8)	(10.0)	12.4
	PVC	CFR SE Asia	755.0	755.0	725.0	730.0	770.0	865.0	715.0	1,013.9	820.8	730.0
	Change, %			0.0	4.1	3.4	(1.9)	(12.7)	5.6	(25.5)	(8.0)	3.4
	PP	CFR SE Asia	925.0	895.0	845.0	875.0	935.0	1,280.0	835.0	1,503.0	1,109.8	853.6
	Change, %			3.4	9.5	5.7	(1.1)	(27.7)	10.8	(38.5)	(16.6)	8.4
	2-EH	CFR Korea	755.0	710.0	685.0	665.0	715.0	1,065.0	680.0	1,397.1	930.1	694.5
	Change, %			6.3	10.2	13.5	5.6	(29.1)	11.0	(46.0)	(18.8)	8.7
	ABS	CFR SE Asia	1,265.0	1,215.0	1,130.0	1,077.5	1,212.5	1,555.0	1,130.0	1,897.7	1,431.1	1,145.9
	Change, %			4.1	11.9	17.4	4.3	(18.6)	11.9	(33.3)	(11.6)	10.4
	SBR	CFR SE Asia	1,395.0	1,250.0	1,195.0	1,095.0	1,160.0	1,350.0	1,150.0		1,332.1	1,221.8
	Change, %			11.6	16.7	27.4	20.3	3.3	21.3		4.7	14.2
	SM	CFR SE Asia	1,145.0	1,105.0	975.0	945.0	962.5	1,167.5	910.0	1,547.1	1,100.7	988.6
	Change, %			3.6	17.4	21.2	19.0	(1.9)	25.8	(26.0)	4.0	15.8
	Caustic	FOB NEA	285.0	285.0	287.5	282.5	300.0	280.0	285.0	310.0	296.8	286.4
	Change, %			0.0	(0.9)	0.9	(5.0)	1.8	0.0	(8.1)	(4.0)	(0.5)
	PX	CFR SE Asia	787.5	772.5	727.5	772.5	787.5	860.0	762.5	1,228.5	842.9	739.3
	Change, %			1.9	8.2	1.9	0.0	(8.4)	3.3	(35.9)	(6.6)	6.5
	PO	CFR China	1,255.0	1,182.5	1,165.0	1,372.5	1,480.0	1,992.5	1,257.5	2,179.2	1,683.4	1,159.1
	Change, %			6.1	7.7	(8.6)	(15.2)	(37.0)	(0.2)	(42.4)	(25.4)	8.3
	Caprolactam	CFR SE Asia	1,180.0	1,150.0	1,110.0	1,285.0	1,360.0	1,655.0	1,260.0	2,233.4	1,581.5	1,187.3
	Change, %			2.6	6.3	(8.2)	(13.2)	(28.7)	(6.3)	(47.2)	(25.4)	(0.6)
	PTA	CFR SE Asia	615.0	585.0	577.5	597.5	622.5	660.0	585.0	911.7	648.0	578.9
	Change, %			5.1	6.5	2.9	(1.2)	(6.8)	5.1	(32.5)	(5.1)	6.2

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2014avg.	2015avg.	2016acc.
Spread	**HDPE**		755.0	781.5	776.0	646.0	713.5	739.0	651.5	659.0	737.1	750.5
	Change, %			(3.4)	(2.7)	16.9	5.8	2.2	15.9	14.6	2.4	0.6
	MEG		332.5	359.0	301.0	138.5	161.0	321.5	204.0	68.2	287.8	283.4
	Change, %			(7.4)	10.5	140.1	106.5	3.4	63.0	387.3	15.5	17.3
	PVC		385.0	411.5	416.0	301.0	328.5	344.0	301.5	148.0	327.8	388.6
	Change, %			(6.4)	(7.5)	27.9	17.2	11.9	27.7	160.1	17.4	(0.9)
	PP		555.0	551.5	536.0	446.0	493.5	759.0	421.5	637.1	616.8	512.3
	Change, %			0.6	3.5	24.4	12.5	(26.9)	31.7	(12.9)	(10.0)	8.3
	2-EH		385.0	366.5	376.0	236.0	273.5	544.0	266.5	531.3	437.0	353.2
	Change, %			5.0	2.4	63.1	40.8	(29.2)	44.5	(27.5)	(11.9)	9.0
	ABS		895.0	871.5	821.0	648.5	771.0	1,034.0	716.5	1,031.9	938.1	804.5
	Change, %			2.7	9.0	38.0	16.1	(13.4)	24.9	(13.3)	(4.6)	11.2
	SBR	BD spread	380.0	260.0	410.0	420.0	455.0	520.0	430.0		454.7	404.1
	Change, %			46.2	(7.3)	(9.5)	(16.5)	(26.9)	(11.6)		(16.4)	(6.0)
	SM		775.0	761.5	666.0	516.0	521.0	646.5	496.5	681.2	607.7	647.3
	Change, %			1.8	16.4	50.2	48.8	19.9	56.1	13.8	27.5	19.7
	Caustic											
	Change, %											
	PX		417.5	429.0	418.5	343.5	346.0	339.0	349.0	362.6	349.9	398.0
	Change, %			(2.7)	(0.2)	21.5	20.7	23.2	19.6	15.1	19.3	4.9
	PO	propylene sprea	590.0	527.5	510.0	722.5	830.0	1,010.0	607.5	925.0	913.4	565.9
	Change, %			11.8	15.7	(18.3)	(28.9)	(41.6)	(2.9)	(36.2)	(35.4)	4.3
	Caprolactam	benzene spread	522.5	552.5	575.0	682.5	720.0	900.0	680.0	990.3	891.6	619.1
	Change, %			(5.4)	(9.1)	(23.4)	(27.4)	(41.9)	(23.2)	(47.2)	(41.4)	(15.6)
	PTA	px spread	63.8	44.3	68.3	56.8	71.3	58.0	51.3	51.8	58.0	61.3
	Change, %			44.1	(6.6)	12.3	(10.5)	9.9	24.4	23.2	9.9	3.9

자료 : Cischem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

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Global peers

	Currency	03/16	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	50.7	0.9	3.3	8.2	(0.1)	12.6	7.7	(1.6)	56,068	14.6	12.9	2.4	2.3	7.7	7.1
Du Pont	USD	63.2	0.5	(0.5)	7.3	(4.6)	30.5	(13.7)	(5.2)	54,768	20.9	18.0	5.9	4.9	11.5	10.2
Eastman	USD	71.3	2.2	1.3	14.3	4.0	(0.1)	3.0	5.6	10,311	10.2	9.2	2.3	2.0	7.8	7.5
BASF	EUR	65.4	0.2	1.8	11.6	(8.3)	(7.7)	(29.0)	(7.5)	66,680	14.7	13.1	1.9	1.9	7.4	6.9
Akzo Nobel	EUR	57.5	0.7	2.4	10.3	(7.0)	(3.8)	(18.5)	(6.8)	15,790	13.8	13.1	2.2	2.0	7.3	7.0
Arkema	EUR	63.6	0.2	2.2	26.3	0.2	1.3	(13.0)	(1.5)	5,255	12.9	10.9	1.3	1.2	5.6	5.2
Lanxess	EUR	42.0	1.5	3.1	20.9	(2.3)	(6.9)	(17.0)	(1.6)	4,209	15.7	12.9	1.5	1.4	5.5	5.1
Sumitomo Chemical	JPY	511	(0.6)	3.4	3.9	(25.1)	(18.8)	(14.0)	(27.1)	7,529	9.1	8.0	0.9	0.9	6.8	6.4
Mitsubishi Chemical	JPY	606	(1.4)	1.0	(0.3)	(21.9)	(12.1)	(17.8)	(21.7)	8,191	9.6	8.5	0.8	0.8	5.8	5.5
Shin-Etsu Chemical	JPY	5,996	(0.3)	0.7	4.7	(10.9)	(7.7)	(25.7)	(9.4)	22,989	16.9	15.6	1.2	1.1	5.9	5.4
Asahi Kasei	JPY	693	(0.5)	5.2	(2.8)	(10.8)	(24.5)	(43.5)	(15.8)	8,635	10.0	9.0	0.8	0.8	5.0	4.8
JSR	JPY	1,744	(2.1)	1.5	10.5	(8.3)	(2.6)	(16.4)	(8.2)	3,563	12.9	12.0	1.0	1.0	5.3	5.0
Nitto Denko	JPY	7,134	0.9	7.0	24.4	(18.6)	(7.2)	(7.3)	(20.0)	10,873	14.0	13.4	1.6	1.5	6.2	5.9
SABIC	SAR	75.9	2.2	(1.4)	11.7	(10.1)	(2.0)	(16.5)	(0.8)	59,427	15.9	13.5	1.3	1.3	7.5	6.6
Yansab	SAR	37.5	5.2	(2.6)	27.7	(6.2)	(13.2)	(21.8)	15.8	5,352	16.9	13.4	1.4	1.3	8.6	8.0
Formosa Plastics	TWD	77.9	(0.8)	(0.6)	2.0	9.6	10.7	6.0	1.2	15,212	16.3	15.3	1.6	1.5	24.5	23.5
Formosa Fiber	TWD	77.3	0.5	(1.2)	8.0	12.8	12.4	11.9	4.5	13,721	17.4	16.9	1.5	1.4	14.6	14.3
Nan Ya Plastics	TWD	65.7	1.4	(1.2)	9.5	14.5	11.5	(1.5)	7.7	15,645	15.5	14.8	1.5	1.4	15.2	13.9
Sinopec Shanghai	CNY	6.48	(0.6)	4.3	14.3	(6.5)	(5.0)	27.3	0.0	9,000	19.9	20.4	3.2	2.8	9.2	9.0
Sinopec Yizheng(Fibe	CNY	4.77	(2.1)	(5.4)	(27.6)	(45.6)	(37.2)	(34.9)	(41.5)	9,482	#N/A N/A	128.9	2.9	2.8	16.4	13.0
Reliance	INR	1,022	0.1	(1.9)	9.8	4.4	17.1	21.3	0.6	49,084	11.1	9.8	1.2	1.1	8.4	7.2
Industries Qatar	QAR	106.1	1.0	(3.4)	1.8	6.2	(17.6)	(23.7)	(4.5)	17,444	13.9	12.8	1.9	1.9	53.5	49.8
PTT Chemical	THB	59.0	0.9	0.9	10.8	12.9	3.5	11.3	18.0	7,429	10.3	9.3	1.0	1.0	5.4	5.0
Petronas	MYR	6.8	(0.3)	0.3	(6.0)	(2.2)	12.5	33.9	(7.2)	13,044	18.8	17.2	2.1	2.0	9.3	8.5
LG화학	KRW	307,000	1.7	3.7	4.6	(4.2)	22.3	39.2	(6.5)	16,733	0.0	15.2	0.0	1.6	0.0	6.2
롯데케미칼	KRW	309,500	(3.3)	(0.2)	8.4	32.0	11.5	61.2	27.1	9,170	0.0	8.6	0.0	1.2	0.0	4.6
한화케미칼	KRW	24,050	0.0	(1.0)	(0.4)	(10.6)	19.7	67.0	(11.6)	3,314	0.0	9.9	0.0	0.8	0.0	8.8
금호석유	KRW	58,000	(3.5)	(6.0)	1.8	8.6	0.0	(27.9)	11.3	1,531	0.0	14.5	0.0	1.1	0.0	9.5
SKC	KRW	29,750	(1.5)	(7.8)	1.0	(12.2)	(21.2)	(3.6)	(12.0)	929	0.0	8.5	0.0	0.7	0.0	7.0
국도화학	KRW	60,700	(2.9)	(2.7)	13.9	6.3	(11.5)	23.6	2.4	304	0.0	7.2	0.0	0.8	0.0	4.4
효성	KRW	2,900	(2.7)	(3.2)	14.2	10.1	5.5	(24.1)	11.1	3,993	0.0	9.2	0.0	1.3	0.0	6.9
Average			**(0.1)**	**0.1**	**7.9**	**(3.0)**	**(0.9)**	**(1.8)**	**(3.4)**							
Refinery																
Valero	USD	65.9	1.5	1.8	15.0	(6.1)	9.4	10.5	(6.7)	30,547	9.1	8.8	1.4	1.2	4.8	4.9
Conoco Phillips	USD	41.9	5.1	7.2	27.8	(15.2)	(15.4)	(32.9)	(10.3)	49,238	#N/A N/A	69.8	1.3	1.4	11.8	6.7
Formosa Petrochemi	TWD	88.0	0.8	(0.2)	9.3	14.3	17.3	31.0	11.7	25,316	19.6	19.0	3.0	2.9	12.4	12.4
Tesoro	USD	87.9	1.5	(0.7)	24.8	(16.1)	(5.3)	0.1	(16.6)	10,383	10.3	11.0	1.7	1.5	5.6	5.8
Marathon Petroleum	USD	38.4	4.8	3.6	18.0	(22.8)	(17.7)	(21.7)	(25.9)	19,385	9.0	8.6	1.5	1.3	6.3	6.0
Devon Energy	USD	26.2	8.8	14.3	23.3	(14.2)	(36.1)	(55.4)	(18.1)	12,621	#N/A N/A	39.2	1.7	1.7	13.0	8.2
Hollyfrontier	USD	35.6	1.1	(2.7)	15.4	(15.5)	(21.4)	(11.0)	(10.7)	6,219	11.6	9.4	1.2	1.1	5.9	5.5
Phillips 66	USD	87.6	1.1	1.7	11.9	5.4	10.6	14.8	7.1	45,678	13.6	11.7	1.9	1.7	7.8	6.9
Murphy Oil	USD	24.4	3.7	6.4	45.5	9.5	(12.7)	(48.6)	8.9	4,053	#N/A N/A	#N/A N/A	0.8	0.8	8.4	5.7
JX Holdings	JPY	451.7	(1.0)	(1.1)	(0.5)	(10.6)	0.0	(5.2)	(11.2)	10,073	8.4	7.7	0.7	0.6	10.1	9.7
Cosmo Oil	JPY	164.0	0.0	0.0	0.0	0.0	(5.2)	(0.6)	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	1,892.0	0.2	3.6	2.2	(4.1)	(1.9)	(9.3)	(2.4)	2,674	5.8	5.5	0.5	0.5	8.0	8.0
Tonengeneral	JPY	952.0	0.3	6.8	(2.6)	(16.0)	(19.3)	(14.2)	(6.8)	3,073	10.6	8.7	1.4	1.3	12.5	7.0
Nesteoil	EUR	29.7	(1.0)	0.8	10.6	9.2	25.2	21.8	7.5	0	11.2	12.2	2.1	2.0	7.1	7.6
Ashland	USD	104.8	2.7	6.4	9.7	0.4	(2.0)	(17.4)	2.0	6,451	14.7	13.2	2.6	2.3	8.7	8.4
Fuchs Petrolub	EUR	39.7	0.7	3.7	12.8	(8.5)	0.1	2.8	(8.8)	5,672	21.5	20.4	4.7	4.2	12.4	11.8
SK이노베이션	KRW	155,500	(1.6)	3.3	13.5	16.9	54.7	74.1	19.6	12,215	0.0	9.8	0.0	0.9	0.0	6.0
S-Oil	KRW	84,600	(0.1)	1.1	9.3	10.7	32.4	43.6	6.5	7,973	0.0	10.4	0.0	1.6	0.0	7.0
GS	KRW	52,200	(1.7)	(1.5)	3.4	2.8	7.1	26.5	3.0	4,125	0.0	7.2	0.0	0.7	0.0	7.2
Average			**1.4**	**2.9**	**13.1**	**(3.2)**	**1.0**	**0.5**	**(2.7)**							

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

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Global peers

	Currency	03/16	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	83	0.1	0.6	2.0	4.7	11.5	(2.2)	6.3	343,931	34.3	19.5	2.0	2.0	11.0	8.1
BP	GBP	350	2.4	(1.7)	3.8	2.9	1.2	(16.2)	(1.1)	89,497	26.7	12.5	1.0	1.0	5.4	4.3
Shell	EUR	1,704	2.8	0.8	8.7	16.5	2.7	(12.0)	11.6	186,815	20.7	12.0	0.9	0.9	5.9	4.5
Chevron	USD	95	1.2	2.8	12.5	2.1	20.7	(7.5)	6.0	177,525	65.5	19.5	1.2	1.2	8.3	5.8
Total	EUR	42	0.9	(0.5)	8.0	(0.5)	(0.6)	(6.0)	1.5	113,142	16.0	11.5	1.2	1.1	7.0	5.4
Sinopec	CNY	5	1.7	0.9	6.1	(6.2)	(6.4)	(25.0)	(5.6)	83,266	17.3	11.4	0.8	0.8	5.4	4.6
Petrochina	CNY	8	1.3	1.2	7.3	(6.7)	(9.9)	(29.6)	(5.5)	208,187	58.4	25.8	1.2	1.2	8.0	6.8
CNOOC	CNY	13	0.9	(2.3)	(2.3)	(20.3)	(23.9)	(35.0)	(17.5)	7,220	50.8	26.8	1.3	1.2	12.7	10.8
Gazprom	RUB	145	1.6	(1.8)	6.6	7.6	1.3	3.6	6.4	47,484	3.1	2.8	0.3	0.2	3.3	2.9
Rosneft	RUB	301	0.2	1.8	8.6	20.5	19.8	27.3	19.0	44,830	8.2	5.5	0.8	0.7	3.9	3.3
Anadarko	USD	49	3.6	15.1	24.6	2.2	(29.5)	(39.6)	0.3	23,907	#N/A N/A	#N/A N/A	1.9	2.2	12.2	8.0
Petrobras	BRL	7	9.4	(4.9)	62.8	(0.8)	(11.2)	(14.5)	7.9	27,552	12.8	4.8	0.4	0.3	6.2	5.2
Lukoil	USD	2,703	2.1	(1.5)	10.3	11.9	9.2	1.4	15.2	31,917	8.2	5.4	0.3	0.3	N/A	N/A
Kinder	USD	19	4.5	5.0	20.9	18.5	(38.4)	(53.5)	26.6	47,497	26.9	22.9	1.1	1.1	11.1	10.4
Statoil	NOK	131	2.2	(0.8)	11.8	3.0	5.9	(1.2)	5.7	47,645	32.7	15.3	1.2	1.2	3.6	2.8
BHP	AUD	17	(1.5)	(5.5)	1.7	(1.7)	(29.6)	(38.6)	(5.5)	63,837	35.7	18.1	1.2	1.2	7.6	6.1
PTT E&P	THB	72	3.6	(7.1)	18.4	21.9	0.0	(29.9)	26.2	7,884	27.1	16.0	0.7	0.7	2.9	2.6
Petronas gas	MYR	22	0.1	(2.6)	(3.2)	(2.6)	1.0	(3.4)	(4.3)	10,341	23.4	22.9	3.6	3.5	13.4	13.0
Chesapeake	USD	4	5.0	(5.2)	136.0	12.6	(51.2)	(68.6)	(2.4)	2,780	#N/A N/A	16.1	1.8	2.0	14.6	9.7
Noble Energy	USD	34	4.0	5.4	18.0	4.2	1.6	(25.9)	2.6	14,087	#N/A N/A	#N/A N/A	1.5	1.6	10.7	9.6
Average		**0**	**2.3**	**(0.0)**	**18.1**	**4.5**	**(6.3)**	**(18.8)**	**4.7**							
PV																
WACKER	EUR	75.8	(1.0)	0.0	23.5	0.6	2.1	(33.9)	(2.2)	4,439	24.9	15.1	1.5	1.4	5.1	4.6
GCL-Poly	HKD	1.2	0.0	(0.8)	18.1	0.9	(12.6)	(37.2)	6.9	2,970	7.9	6.7	0.9	0.8	7.4	6.4
REC	NOK	107.5	0.0	0.0	0.0	0.0	0.0	7.0	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	2.1	0.0	8.3	28.4	(66.5)	(81.9)	(91.4)	(59.1)	767	#N/A N/A	#N/A N/A	0.2	0.1	19.4	11.1
Canadian Solar	USD	20.1	1.8	(7.6)	4.3	(26.3)	2.0	(36.4)	(30.6)	1,106	8.9	6.4	1.1	1.0	5.3	3.7
JA Solar	USD	8.9	(0.4)	(2.7)	0.0	(8.2)	11.1	0.1	(8.2)	451	5.3	5.0	0.4	0.4	2.7	2.3
Trina Solar	USD	10.6	0.0	0.7	11.4	(3.8)	10.6	(4.5)	(3.6)	979	7.6	6.4	0.7	0.6	5.8	5.0
Solar City	USD	26.8	(2.0)	2.3	45.9	(50.1)	(44.4)	(43.6)	(47.5)	2,680	#N/A N/A	#N/A N/A	2.8	2.7	#N/A N/A	#N/A N/A
Yingli	USD	4.7	5.0	(0.4)	6.7	(23.8)	(13.9)	(78.0)	2.6	81	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	9.2	9.0
First Solar	USD	72.1	1.8	5.2	14.3	9.8	50.9	19.7	9.2	7,203	16.8	18.6	1.3	1.2	10.6	9.0
한화솔라원	USD	16.7	3.7	(0.5)	7.1	(35.2)	29.8	51.5	(24.1)	#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	91,600	0.0	(2.1)	27.9	20.1	8.4	(15.2)	22.1	1,827	0.0	14.2	0.0	0.7	0.0	10.6
웅진에너지	KRW	1,655	(2.4)	(2.6)	(3.5)	(5.7)	12.6	(6.0)	(4.3)	114	N/A	0.0	0.7	0.0	10.6	0.0
신성솔라에너지	KRW	1,700	(6.1)	(10.8)	(10.1)	(10.3)	38.2	18.9	(15.8)	114	N/A	0.7	0.0	10.6	0.0	9.2
Average			**0.0**	**(0.8)**	**12.4**	**(14.2)**	**0.9**	**(17.8)**	**(11.0)**							
Gas Company																
Towngas China	HKD	4.4	2.6	0.2	19.2	(0.5)	(13.6)	(39.2)	(2.2)	1,473	8.5	8.1	0.8	0.7	10.3	9.6
Kulun	HKD	6.3	(1.9)	1.5	5.7	(3.8)	7.7	(12.7)	(9.3)	6,636	13.1	10.7	0.9	0.8	5.6	5.2
Beijing Enterprise	HKD	40.2	(2.7)	1.4	17.7	(12.7)	(17.8)	(29.3)	(14.5)	6,819	8.1	7.5	0.8	0.7	12.4	11.4
ENN Energy	HKD	38.0	(0.9)	(1.9)	8.0	(3.1)	(4.5)	(15.2)	(8.2)	5,343	11.9	10.6	2.1	1.8	7.9	7.0
China Resources Gas	HKD	21.6	0.0	(0.5)	8.8	(0.5)	3.9	5.1	(6.9)	6,176	13.9	12.2	2.3	2.0	8.8	7.9
China Gas Holdings	HKD	11.0	1.7	2.2	8.1	5.4	(2.8)	(10.3)	(1.8)	6,868	12.2	10.8	2.2	1.9	10.2	9.1
Shenzen Gas	HKD	12.4	(0.8)	1.5	2.0	(7.6)	13.8	17.2	(13.7)	3,054	11.0	9.8	1.1	1.0	8.9	8.1
Shann Xi	CNY	8.6	(1.6)	(2.2)	(8.1)	(31.3)	(26.7)	(40.8)	(31.9)	1,490	12.9	10.5	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Suntien	HKD	0.9	(2.2)	(6.2)	8.3	(22.9)	(32.1)	(43.1)	(26.6)	445	8.1	6.2	0.4	0.3	6.8	5.7
China Oil & Gas	HKD	0.4	0.0	(2.2)	(7.4)	(22.3)	(14.7)	(51.7)	(17.9)	327	7.1	6.4	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
Average			**(0.6)**	**(0.6)**	**6.2**	**(9.9)**	**(8.7)**	**(22.0)**	**(13.3)**							
EV																
LG화학	KRW	307,000	1.7	3.7	4.6	(4.2)	22.3	39.2	(6.5)	16,733	14.3	12.6	1.6	1.4	6.2	5.7
삼성SDI	KRW	98,300	0.1	(1.6)	2.9	(23.8)	9.3	(25.5)	(13.8)	5,646	15.9	20.0	0.6	0.6	9.9	7.4
Panasonic	JPY	996.1	(0.1)	1.2	11.5	(21.3)	(26.0)	(34.8)	(19.7)	21,633	10.8	9.5	1.1	1.0	3.3	3.1
GS Yuasa	JPY	477.0	(1.4)	0.6	6.2	7.0	4.1	(17.5)	5.5	1,771	13.2	11.7	1.1	1.0	6.4	5.9
NEC	JPY	278.0	(1.1)	3.3	0.7	(28.7)	(28.0)	(23.4)	(27.8)	6,476	10.0	8.9	0.8	0.7	5.9	5.7
BYD Auto	CNY	53.0	(2.6)	1.9	1.8	(15.7)	2.2	3.6	(17.7)	17,999	42.1	28.2	3.9	3.6	15.3	13.2
Tesla Motors	USD	221.9	1.6	6.3	43.0	(5.4)	(15.4)	13.4	(7.5)	28,833	189.8	73.5	24.1	18.3	38.5	25.3
Kandi Technologies	USD	8.3	(2.9)	15.1	15.7	(19.7)	31.9	(42.8)	(23.8)	402	#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			**(0.6)**	**3.8**	**10.8**	**(14.0)**	**0.1**	**(11.0)**	**(13.9)**							

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임