

1. News Summary (3 page)

2017년 11월 10일

News	
WTI comment	감산 기대 속 상승...WTI 0.6%↑
Headline	시진핑, 트럼프에 312조 원 선물 안겨...최대 사업은 시노펙
News 1.	현대미포조선, 현대중공업으로부터 4430억원 규모 부동산 취득
News 2.	-
News 3.	-
News 4.	-

Conclusion	
	중국의 원유와 가스 수입처 다변화 효과가 있으나 물량은 많지 않을 것
	현대중공업 재무구조 개선 효과를 누리기 위한 행보로 판단됨
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2. Prices Summary (4~7 page)

Daily	Unit	Price	1D	1W	1M	3M	12M
Refinery			%	%	%	%	%
WTI	\$/bbl	57.2	0.6	4.8	13.0	17.7	28.0
Dubai	\$/bbl	61.6	(0.3)	5.2	12.1	19.4	41.1
Gasoline	\$/bbl	76.8	0.2	4.5	10.5	13.1	31.7
Diesel	\$/bbl	72.6	(0.2)	3.1	7.0	12.6	28.3
Complex margin	\$/bbl	7.4	0.2	(0.5)	(0.6)	(1.0)	(1.3)
1M lagging	\$/bbl	15.3	1.5	4.0	5.4	0.5	12.8
Petrochemical			%	%	%	%	%
Naphtha	\$/t	593	(0.1)	3.4	16.5	26.6	41.4
Butadiene	\$/t	945	0.0	0.0	(24.1)	3.8	(31.8)
HDPE	\$/t	1,250	0.0	0.8	7.3	11.6	6.8
MEG	\$/t	913	0.0	1.7	4.9	4.9	27.5
PX	\$/t	881	(0.2)	3.0	6.1	8.2	14.1
SM	\$/t	1,256	(0.6)	7.4	6.7	11.7	13.7
Commodity			%	%	%	%	%
Natural Gas	\$/mmbtu	3.20	0.8	9.0	1.8	(0.3)	2.7
Natural rubber	\$/t	1,420	0.0	2.2	1.4	(7.8)	(8.4)
Cotton	C/lbs	68.3	(0.5)	(1.1)	0.7	(1.4)	(1.3)

*참고: 정제마진의 변동률은 %가 아닌 \$/bbl임

Weekly	Update	Unit	Price	1W	1M	3M	12M
Petrochemical				%	%	%	%
Ethylene	11/06	\$/t	1,130	(3.8)	(10.0)	15.9	13.6
Propylene	11/06	\$/t	808	1.6	(3.3)	5.9	17.5
Benzene	11/06	\$/t	810	0.9	0.6	9.1	23.7
Toluene	11/06	\$/t	690	(0.7)	(1.4)	8.7	4.5
Xylene	11/06	\$/t	655	0.4	(0.4)	5.2	0.8
PP	11/06	\$/t	1,148	(1.7)	(1.7)	7.0	11.4
PVC	11/06	\$/t	890	(2.2)	(6.1)	3.5	(4.3)
ABS	11/06	\$/t	1,920	(1.5)	(6.8)	5.5	31.5
SBR	11/06	\$/t	1,700	(2.9)	(6.6)	14.1	(10.5)
SM	11/06	\$/t	1,210	(0.6)	(10.4)	3.2	14.4
BPA	11/06	\$/t	1,685	0.0	8.0	9.4	14.2
Caustic	11/06	\$/t	598	8.7	23.6	29.3	63.8
2-EH	11/06	\$/t	1,000	0.0	1.0	3.1	26.6
Caprolactam	11/06	\$/t	2,170	4.8	18.6	25.4	52.3
Solar				%	%	%	%
Polysilicon	11/08	\$/kg	16.7	(0.1)	(0.2)	7.1	15.1
Module	11/08	\$/W	0.32	(0.3)	(1.3)	(3.4)	(20.6)

3. Global Peers Summary (8~9 page)

	Unit	Price	1D	1W	1M	3M	12M
E&P			%	%	%	%	%
ExxonMobil	USD	84.0	0.6	0.5	2.4	4.7	(2.6)
Shell	EUR	2,456	(0.2)	0.9	6.9	11.0	18.5
Petrochina	CNY	8.52	0.2	1.5	6.8	4.9	17.0
Gazprom	RUB	131.5	(0.6)	4.6	5.4	10.8	(9.7)
Petrobras	BRL	16.7	(1.4)	(1.1)	5.2	23.7	0.4
Refinery			%	%	%	%	%
Phillips66	USD	94.4	(0.1)	1.0	1.2	11.8	14.5
Valero	USD	81.3	(0.5)	(0.4)	5.4	21.4	31.0
JX	JPY	615.4	(2.4)	1.3	7.9	21.1	58.9
Neste Oil	EUR	48.5	(0.6)	(0.0)	24.4	40.0	33.7

	Unit	Price	1D	1W	1M	3M	12M
Petrochemical			%	%	%	%	%
BASF	EUR	94.9	(1.6)	(0.9)	5.5	17.5	18.6
DowDuPont	USD	70.2	(0.8)	(2.5)	(2.0)	10.6	30.4
SABIC	SAR	99.7	0.4	0.3	(1.0)	1.8	15.9
Formosa Pla.	TWD	92.1	(0.2)	0.7	0.1	(0.8)	9.4
Shin-Etsu	JPY	12,345	(1.4)	1.9	22.2	29.6	65.5
Renewable			%	%	%	%	%
Wacker	EUR	134.8	(2.3)	(2.2)	17.0	30.8	70.4
First Solar	USD	60.54	(2.0)	4.6	29.1	27.6	88.6
GCL-Poly	HKD	1.38	(1.4)	4.5	26.6	50.0	35.3
Tesla Motors	USD	303.0	(0.5)	1.2	(11.6)	(16.7)	59.4

4. Coverage Summary

	11/09	1D	1W	1M	3M	6M	12M
KOSPI	2,551	(0.1)	0.2	4.8	10.0	12.4	27.3
KOSPI확화	6,140	0.1	1.0	7.1	8.9	14.2	20.5
LG확화	414,000	1.2	(1.4)	5.3	21.9	48.9	64.0
롯데케미칼	368,500	0.0	(2.1)	(4.0)	(2.5)	6.7	22.0
한화케미칼	31,150	(0.6)	(5.2)	(5.6)	(7.6)	19.8	11.3
금호석유화학	74,000	0.4	(2.0)	3.6	1.4	(1.7)	9.3
KCC	407,500	(1.0)	5.4	7.5	2.6	17.3	2.4
OCI	123,000	(0.4)	1.7	26.7	37.4	51.9	21.2
SKC	40,150	1.3	2.0	(1.4)	8.1	39.2	46.3
SK이노베이션	217,500	0.5	6.4	6.4	26.5	28.3	40.8
S-Oil	127,500	0.4	0.8	(1.2)	10.4	25.0	52.9
GS	67,800	1.5	3.2	(0.1)	(6.6)	15.5	26.3
SK가스	97,700	2.1	6.8	0.9	(14.7)	(19.6)	(0.4)
포스코대우	20,350	(1.9)	6.0	6.0	(11.1)	(13.6)	(18.1)
LG상사	31,000	(1.0)	6.0	13.3	5.4	(4.9)	9.5
한국전력	38,250	(0.6)	(0.3)	0.4	(12.8)	(11.4)	(17.3)
한국가스공사	42,700	0.0	3.9	2.8	(12.4)	(6.5)	(7.2)

투자의견	TP	%	P/E	P/B
			* 추정치는 12M fwd 기준임	
			* 모든 coverage 업체의 실적은 연결기준임	
매수	400,000	(3.4)	13.11	2.16
매수	410,000	11.3	5.79	1.27
매수	39,000	25.2	5.26	0.87
매수	100,000	35.1	12.54	1.37
매수	450,000	10.4	22.62	0.59
매수	120,000	(2.4)	15.62	0.94
매수	45,000	12.1	11.09	1.09
매수	210,000	(3.4)	8.78	1.16
매수	140,000	9.8	13.79	2.41
매수	80,000	18.0	6.43	1.00
매수	130,000	33.1	7.38	0.72
매수	25,000	22.9	11.40	0.88
매수	38,000	22.6	11.29	1.00
매수	55,000	43.8	7.33	0.31
매수	60,000	40.5	8.72	0.55

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

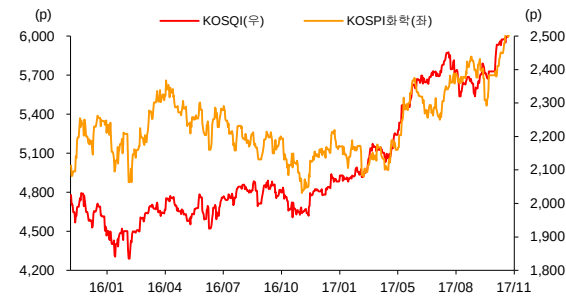
* 본 보고서에 언급된 종목의 경우 당사 조사분석담당자는 본인의 담당종목을 보유하고 있지 않습니다.

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

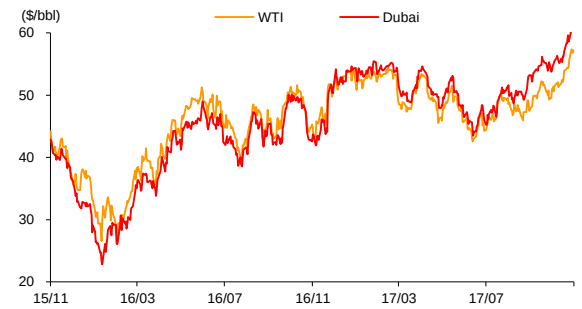
* 당사는 본 보고서의 발간시점에 해당종목을 1% 이상 보유하고 있지 않습니다.

Key Chart

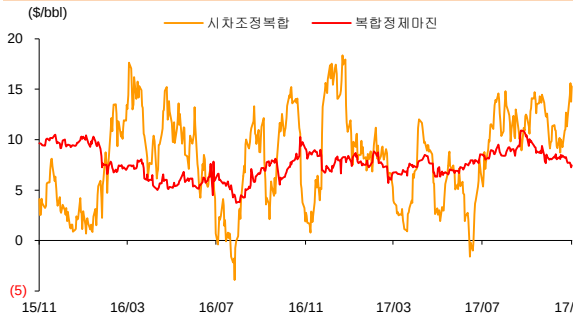
KOSPI/KOSPI화학



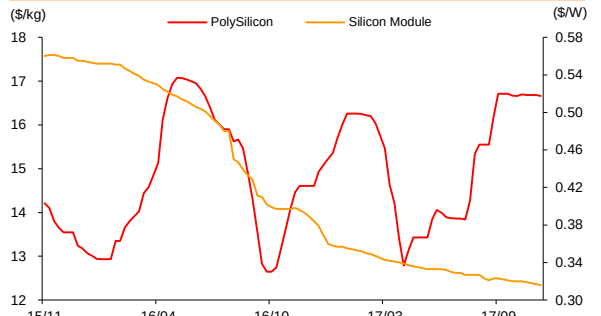
WTI/Dubai



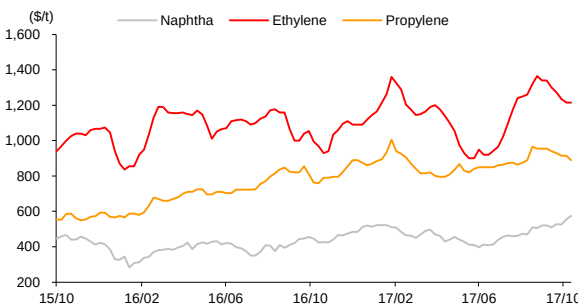
Complex & 1M lagging margin



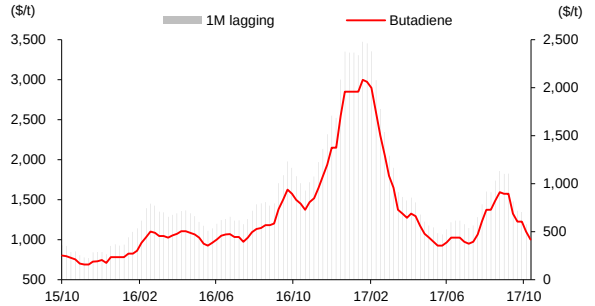
Polysilicon & Module prices



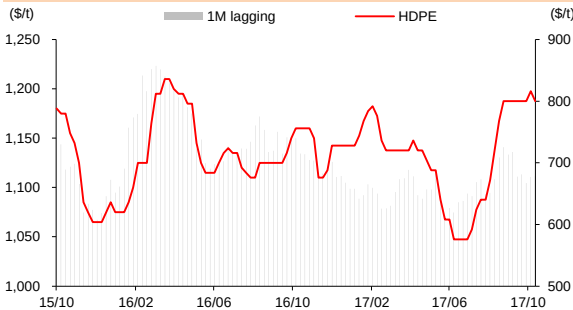
Naphtha/Ethylene/Propylene prices



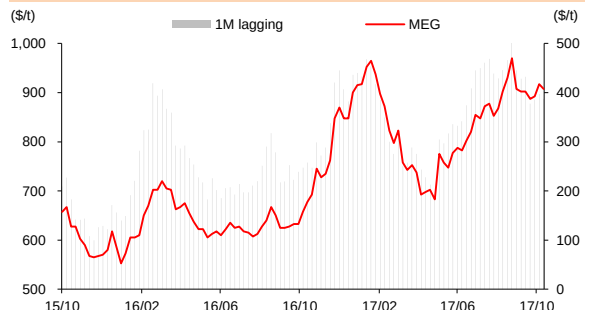
Butadiene price & 1M lagging naphtha spread



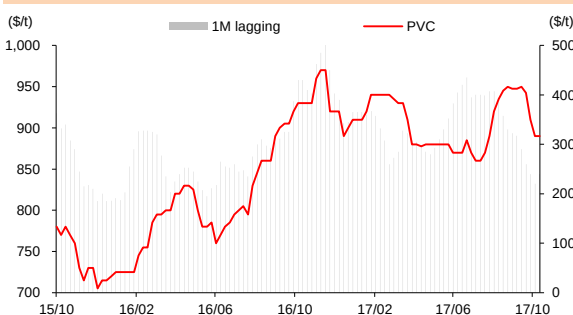
HDPE price & 1M lagging naphtha spread



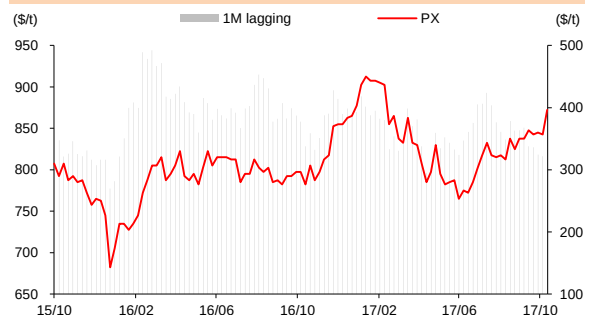
MEG price & 1M lagging naphtha spread



PVC price & 1M lagging naphtha spread



PX price & 1M lagging naphtha spread



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

News Comment

Headline	(출처: 에너지경제)
제목	시진핑, 트럼프에 312조 원 선물 안겨...최대 사업은 시노펙
결론	중국의 원유와 가스 수입처 다변화 효과가 있으나 물량은 많지 않을 것
세부	1) 시노펙은 송유관 건설과 알래스카에서 천연가스전을 미국과 공동 개발 2) 텍사스 퍼미안분지의 셰일 오일을 걸프만으로 보내기 위한 송유관 건설 3) 최대 200만배럴을 적재할 수 있는 VLCC를 위한 항만 터미널 건설 4) 블룸버그, "시노펙 투자건으로만 연간 100억\$의 무역 적자를 줄일 것" 5) 중국의 원유와 가스 수입처 다변화 효과가 있으나 물량은 많지 않을 것

Issue 1	(출처: 머니투데이)
제목	현대미포조선, 현대중공업으로부터 4430억원 규모 부동산 취득
결론	현대중공업 재무구조 개선 효과를 누리기 위한 행보로 판단됨
세부	1) 현대미포조선은 하이투자증권 주식 4500억원 규모 전량 처분 공시 2) 현대중공업으로부터 울산공장 해양플랜트 부지, 건물 등 취득 결정 3) 관계자, "현재 해양플랜트 잔여 일감은 1기뿐이어서 유휴 부지가 많음" 4) 관계자, "미포가 임대해 쓰는 장생포 부지를 내년 3월에 반납해야 한다" 5) 현대중공업 재무구조 개선 효과를 누리기 위한 행보로 판단됨

Issue 3
제목
결론
세부
1)
2)
3)
4)
5)

Issue 5
제목
결론
세부
1)
2)
3)
4)
5)

WTI Comment	(출처: 연합뉴스)
제목	감산 기대 속 상승...WTI 0.6%↑
상승	감산 합의가 연장될 수 있다는 전망
요인	중동의 정치적 불안정도 유가 강세에 일조
하락	
요인	

Issue 2
제목
결론
세부
1)
2)
3)
4)
5)

Issue 4
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	2015avg.	2016avg.	2017acc.
F/X	USD/EUR	0.859	0.863	0.858	0.852	0.850	0.920	0.917	0.951	0.901	0.904	0.893
	Change, %		(0.4)	0.2	0.8	1.0	(6.6)	(6.3)	(9.6)	(4.7)	(5.0)	(3.8)
	USD/JPY	113.5	113.9	114.1	112.7	110.1	114.0	105.7	117.0	121.1	108.8	112.1
	Change, %		(0.4)	(0.5)	0.7	3.1	(0.4)	7.4	(3.0)	(6.3)	4.3	1.3
	USD/KRW	1,115.5	1,115.5	1,114.3	1,142.3	1,135.2	1,139.2	1,149.3	1,205.8	1,131.2	1,160.5	1,137.7
	Change, %		0.0	0.1	(2.3)	(1.7)	(2.1)	(2.9)	(7.5)	(1.4)	(3.9)	(2.0)
Agriculture	Corn	341.5	348.3	350.5	349.5	372.3	358.3	340.8	352.0	376.8	358.5	361.8
	Change, %		(1.9)	(2.6)	(2.3)	(8.3)	(4.7)	0.2	(3.0)	(9.4)	(4.7)	(5.6)
	Soybean	975.3	988.0	989.0	966.8	963.0	965.3	982.0	996.5	945.4	987.5	975.7
	Change, %		(1.3)	(1.4)	0.9	1.3	1.0	(0.7)	(2.1)	3.2	(1.2)	(0.0)
	Wheat	429.0	426.8	426.0	436.0	459.5	421.8	406.8	408.0	508.1	436.4	439.3
	Change, %		0.5	0.7	(1.6)	(6.6)	1.7	5.5	5.1	(15.6)	(1.7)	(2.3)
	Rice	11.2	11.1	11.2	11.8	12.3	9.6	9.5	9.4	11.1	10.3	10.9
	Change, %		0.3	0.2	(5.6)	(9.2)	15.9	18.0	19.5	1.1	8.0	2.5
	Oats	273.0	269.5	264.5	248.3	270.5	250.0	222.5	228.5	250.2	196.3	253.1
	Change, %		1.3	3.2	10.0	0.9	9.2	22.7	19.5	9.1	39.1	7.9
MYR/mt	Palm Oil	2,747.0	2,772.0	2,798.0	2,739.0	2,628.0	2,850.0	2,857.0	3,218.0	2,190.3	2,653.8	2,835.3
	Change, %		(0.9)	(1.8)	0.3	4.5	(3.6)	(3.9)	(14.6)	25.4	3.5	(3.1)
	Cocoa	2,198.0	2,216.0	2,052.0	2,008.0	2,002.0	1,990.0	2,474.0	2,126.0	3,091.6	2,854.0	2,007.9
	Change, %		(0.8)	7.1	9.5	9.8	10.5	(11.2)	3.4	(28.9)	(23.0)	9.5
	Cotton	68.3	68.6	69.1	69.6	71.8	77.4	68.3	70.7	63.3	65.6	73.4
	Change, %		(0.5)	(1.1)	(1.9)	(4.9)	(11.8)	0.0	(3.3)	7.9	4.1	(7.0)
	Sugar	14.9	14.8	14.2	14.0	13.6	15.4	22.1	19.5	13.1	18.2	16.0
	Change, %		0.3	4.6	6.3	9.1	(3.6)	(32.7)	(23.7)	13.2	(18.0)	(6.9)
	Coffee	126.4	125.8	126.4	131.0	142.7	132.8	170.1	137.1	132.6	136.1	134.5
	Change, %		0.5	0.0	(3.5)	(11.4)	(4.8)	(25.7)	(7.8)	(4.7)	(7.1)	(6.0)
Energy	WTI	57.2	56.8	54.5	49.6	49.6	45.9	45.3	53.7	48.8	43.4	49.9
	Change, %		0.6	4.8	15.3	15.4	24.6	26.3	6.4	17.1	31.8	14.6
	Brent	63.9	63.5	60.6	55.8	52.7	48.7	46.4	56.8	53.7	45.1	53.4
	Change, %		0.7	5.5	14.6	21.3	31.2	37.9	12.5	19.1	41.8	19.7
	Natural Gas	3.2	3.2	2.9	2.8	2.9	3.2	2.7	3.7	2.6	2.6	3.0
	Change, %		0.8	9.0	13.0	11.0	(0.8)	19.0	(14.1)	21.7	25.4	5.1
	Ethanol	1.4	1.4	1.4	1.4	1.6	1.5	1.5	1.6	1.5	1.5	1.5
	Change, %		(0.4)	1.4	1.8	(9.5)	(0.8)	(5.1)	(10.3)	(4.6)	(4.9)	(5.4)
	RBOB Gasoline	182.0	182.1	177.0	155.9	162.0	149.0	135.7	166.5	163.6	140.0	161.1
	Change, %		(0.1)	2.8	16.7	12.3	22.2	34.1	9.3	11.2	30.0	13.0
	Coal	97.7	98.0	100.2	96.7	95.2	73.9	111.4	88.4	59.0	65.5	86.6
	Change, %		(0.3)	(2.5)	1.1	2.6	32.3	(12.3)	10.5	65.7	49.2	12.8
Metal	Gold	1,285.1	1,281.4	1,276.1	1,283.9	1,277.3	1,221.4	1,278.0	1,152.3	1,160.6	1,248.5	1,256.0
	Change, %		0.3	0.7	0.1	0.6	5.2	0.6	11.5	10.7	2.9	2.3
	Silver	17.0	17.0	17.1	17.0	17.0	16.2	18.5	15.9	15.7	17.1	17.2
	Change, %		(0.3)	(0.7)	0.2	0.3	5.0	(8.1)	6.8	8.1	(0.7)	(1.0)
	Copper	6,808.0	6,855.0	6,929.0	6,666.0	6,455.0	5,512.0	5,413.0	5,535.5	5,503.1	4,872.0	6,088.4
	Change, %		(0.7)	(1.7)	2.1	5.5	23.5	25.8	23.0	23.7	39.7	11.8
	Nickel	799.2	822.3	808.6	718.4	686.7	597.0	771.4	682.0	759.5	646.4	668.8
	Change, %		(2.8)	(1.2)	11.2	16.4	33.9	3.6	17.2	5.2	23.6	19.5
	Zinc	3,176.0	3,192.0	3,258.0	3,233.0	2,931.5	2,612.0	2,490.0	2,576.0	1,941.9	2,097.5	2,837.7
	Change, %		(0.5)	(2.5)	(1.8)	8.3	21.6	27.6	23.3	63.6	51.4	11.9
	Lead	2,511.8	2,505.0	2,441.8	2,498.5	2,331.3	2,168.8	2,129.5	2,003.5	1,791.2	1,868.3	2,287.5
	Change, %		0.3	2.9	0.5	7.7	15.8	18.0	25.4	40.2	34.4	9.8
	Aluminum	15,370.0	15,705.0	16,045.0	16,420.0	15,870.0	13,670.0	14,320.0	12,765.0	12,184.0	12,373.5	14,538.8
	Change, %		(2.1)	(4.2)	(6.4)	(3.2)	12.4	7.3	20.4	26.1	24.2	5.7
	Cobalt	61,250.0	60,040.0	61,370.0	59,290.5	57,200.0	54,550.0	29,000.0	32,734.0	28,444.4	25,480.1	53,817.6
	Change, %		2.0	(0.2)	3.3	7.1	12.3	111.2	87.1	115.3	140.4	13.8
	HR Coil	610.0	610.0	612.0	600.0	619.0	610.0	492.0	633.0	461.5	519.3	618.7
	Change, %		0.0	(0.3)	1.7	(1.5)	0.0	24.0	(3.6)	32.2	17.5	(1.4)
	Scrap	325.0	325.0	330.0	335.0	365.0	360.0	235.0	302.0	252.9	275.7	343.4
	Change, %		0.0	(1.5)	(3.0)	(11.0)	(9.7)	38.3	7.6	28.5	17.9	(5.4)

자료: Bloomberg

참고) NYMEX, ICE, LME 중 대표지수를 사용

Refining Price Data

Daily Price		11/09	1D	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Crude Oil	WTI	57.2	56.8	54.5	50.6	48.6	47.8	44.7	53.7	48.8	43.4	49.8
	Change, %		0.6	4.8	13.0	17.7	19.5	28.0	6.4	17.2	31.8	14.7
	Dubai	61.6	61.8	58.6	55.0	51.6	49.6	43.7	53.8	50.8	41.3	51.8
	Change, %		(0.3)	5.2	12.1	19.4	24.1	41.1	14.5	21.3	49.2	19.0
Crude Oil	Gasoline(휘발유)	76.8	76.7	73.5	69.5	67.9	64.3	58.3	69.8	69.5	56.3	66.8
Product	Change, %		0.2	4.5	10.5	13.1	19.4	31.7	10.0	10.5	36.5	15.0
	Kerosene(등유)	74.4	74.5	71.0	67.2	64.0	59.5	56.1	66.4	64.7	52.9	63.6
	Change, %		(0.1)	4.7	10.8	16.3	25.1	32.5	12.0	14.9	40.7	16.9
	Diesel(경유)	72.6	72.8	70.5	67.9	64.5	60.7	56.6	65.5	64.8	52.1	64.1
	Change, %		(0.2)	3.1	7.0	12.6	19.6	28.3	10.9	12.1	39.4	13.2
	Bunker-C	57.4	57.3	55.2	51.3	48.3	46.8	42.2	52.1	45.3	35.5	48.5
	Change, %		0.2	4.1	11.9	18.9	22.8	36.2	10.3	26.9	61.7	18.4
	Naphtha	64.8	64.9	62.1	56.9	50.9	48.4	46.4	53.5	52.6	42.6	51.9
	Change, %		(0.1)	4.4	13.9	27.3	33.8	39.6	21.2	23.1	52.1	24.7
Dubai	Gasoline(휘발유)	15.2	14.9	14.9	14.5	16.3	14.7	14.6	16.0	18.7	14.9	15.0
Spread	Change		0.3	0.3	0.7	(1.1)	0.5	0.6	(0.8)	(3.5)	0.3	0.2
	Kerosene(등유)	12.8	12.7	12.5	12.2	12.4	9.9	12.5	12.6	14.0	11.6	11.9
	Change		0.1	0.3	0.6	0.4	3.0	0.3	0.2	(1.2)	1.2	0.9
	Diesel(경유)	11.0	11.0	11.9	12.9	12.9	11.1	13.0	11.7	14.0	10.8	12.4
	Change		0.1	(0.9)	(1.9)	(1.9)	(0.1)	(1.9)	(0.7)	(3.0)	0.2	(1.4)
	Bunker-C	(4.2)	(4.5)	(3.4)	(3.7)	(3.3)	(2.9)	(1.5)	(1.8)	(5.5)	(5.8)	(3.3)
	Change		0.3	(0.8)	(0.5)	(0.9)	(1.3)	(2.7)	(2.4)	1.4	1.6	(0.9)
	Naphtha	3.2	3.1	3.5	1.9	(0.7)	(1.2)	2.7	(0.4)	1.8	1.3	0.2
	Change		0.1	(0.3)	1.3	3.9	4.4	0.5	3.6	1.4	1.9	3.0
Refining	Simple(단순)	2.5	2.2	3.1	3.1	3.5	2.8	4.5	3.8	3.3	1.9	3.2
Margin	Change		0.2	(0.6)	(0.7)	(1.0)	(0.3)	(2.0)	(1.4)	(0.8)	0.5	(0.7)
	Complex(복합)	7.4	7.2	7.9	8.1	8.4	7.3	8.8	8.3	9.3	7.0	8.0
	Change		0.2	(0.5)	(0.6)	(1.0)	0.1	(1.3)	(0.8)	(1.8)	0.5	(0.5)
	Complex(lagging)	15.3	13.8	11.3	9.8	14.8	3.0	2.4	18.0	7.3	8.5	8.5
	Change		1.5	4.0	5.4	0.5	12.3	12.8	(2.7)	8.0	6.8	6.8

자료 : Petronet, SK증권

참고 1) Crude Oil 가격은 현물(spot) 기준으로 선물(future) 가격과 다를 수 있음

참고 2) Gasoline은 95RON, 경유는 L/P 0.5%, Bunker-C는 380cst/4.0% 기준임

Petrochemical Price Data

Daily Price			11/09	11/08	11/07	11/06	11/03	11/02	11/01	10/31	10/30	10/27
Spot Price	Naphtha	CFR Japan	592.9	593.4	587.4	588.1	580.0	573.1	567.0	564.5	557.5	554.0
	Ethylene	CFR SE Asia	1,160.0	1,160.0	1,140.0	1,140.0	1,140.0	1,140.0	1,140.0	1,140.0	1,140.0	1,140.0
	Propylene	FOB Korea	894.0	899.0	903.0	918.0	918.0	918.0	923.0	925.0	940.0	943.0
	Butadiene	FOB Korea	945.0	945.0	945.0	945.0	945.0	945.0	945.0	950.0	950.0	950.0
	HDPE	CFR FE Asia	1,250.0	1,250.0	1,250.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0
	LDPE	CFR FE Asia	1,250.0	1,250.0	1,250.0	1,240.0	1,240.0	1,240.0	1,240.0	1,240.0	1,250.0	1,250.0
	LLDPE	CFR FE Asia	1,190.0	1,190.0	1,180.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	1,170.0	1,180.0
	MEG	CFR China	913.0	913.0	915.0	910.0	900.0	898.0	898.0	898.0	904.0	903.0
	PP	CFR FE Asia	1,120.0	1,120.0	1,120.0	1,120.0	1,130.0	1,130.0	1,120.0	1,115.0	1,115.0	1,125.0
	PX	CFR China	881.0	883.0	887.0	877.0	864.3	855.3	854.7	840.7	839.3	831.3
	PTA	CFR China	685.0	685.0	685.0	665.0	660.0	660.0	655.0	653.0	653.0	650.0
	Benzene	FOB Korea	836.0	872.0	856.0	828.0	815.0	811.0	812.0	794.0	795.0	791.0
	Toluene	FOB Korea	684.0	691.0	695.0	682.0	676.0	676.0	678.0	668.0	672.0	664.5
	Xylene	FOB Korea	697.0	705.0	708.0	689.0	677.0	677.0	671.0	664.0	661.0	660.0
	SM	FOB Korea	1,256.0	1,263.0	1,228.0	1,189.0	1,168.0	1,169.0	1,161.0	1,159.5	1,165.5	1,169.5

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Spot Price	Naphtha	CFR Japan	554.5	526.5	520.5	456.5	411.5	446.5	484.5	493.0	399.5	475.2
	Change, %			5.3	6.5	21.5	34.8	24.2	14.4	12.5	38.8	16.7
	Ethylene	CFR SE Asia	1,130.0	1,175.0	1,255.0	975.0	875.0	995.0	990.0	1,103.7	1,040.9	1,068.1
	Change, %			(3.8)	(10.0)	15.9	29.1	13.6	14.1	2.4	8.6	5.8
	Propylene	CFR SE Asia	807.5	795.0	835.0	762.5	742.5	687.5	815.0	770.0	705.7	876.6
	Change, %			1.6	(3.3)	5.9	8.8	17.5	(0.9)	4.9	14.4	(7.9)
	Butadiene	CFR SE Asia	1,050.0	1,175.0	1,525.0	900.0	975.0	1,450.0	2,100.0	877.5	1,116.8	1,567.5
	Change, %			(10.6)	(31.1)	16.7	7.7	(27.6)	(50.0)	19.7	(6.0)	(33.0)
	Benzene	CFR SE Asia	810.0	802.5	805.0	742.5	760.0	655.0	822.5	690.0	646.7	831.0
	Change, %			0.9	0.6	9.1	6.6	23.7	(1.5)	17.4	25.3	(2.5)
	Toluene	CFR SE Asia	690.0	695.0	700.0	635.0	630.0	660.0	690.0	700.8	630.5	684.0
	Change, %			(0.7)	(1.4)	8.7	9.5	4.5	0.0	(1.5)	9.4	0.9
	Xylene	CFR SE Asia	655.0	652.5	657.5	622.5	610.0	650.0	675.0	699.3	627.7	664.0
	Change, %			0.4	(0.4)	5.2	7.4	0.8	(3.0)	(6.3)	4.3	(1.4)
Spread	Ethylene	-Naphtha	575.5	648.5	734.5	518.5	463.5	548.5	505.5	610.6	641.4	592.9
	Change, %			(11.3)	(21.6)	11.0	24.2	4.9	13.8	(5.8)	(10.3)	(2.9)
	Propylene	-Naphtha	253.0	268.5	314.5	306.0	331.0	241.0	330.5	277.0	306.2	401.4
	Change, %			(5.8)	(19.6)	(17.3)	(23.6)	5.0	(23.4)	(8.7)	(17.4)	(37.0)
	Butadiene	-Naphtha	495.5	648.5	1,004.5	443.5	563.5	1,003.5	1,615.5	384.5	717.3	1,092.3
	Change, %			(23.6)	(50.7)	11.7	(12.1)	(50.6)	(69.3)	28.9	(30.9)	(54.6)
	Benzene	-Naphtha	255.5	276.0	284.5	286.0	348.5	208.5	338.0	197.0	247.2	355.8
	Change, %			(7.4)	(10.2)	(10.7)	(26.7)	22.5	(24.4)	29.7	3.4	(28.2)
	Toluene	-Naphtha	135.5	168.5	179.5	178.5	218.5	213.5	205.5	207.8	231.0	208.8
	Change, %			(19.6)	(24.5)	(24.1)	(38.0)	(36.5)	(34.1)	(34.8)	(41.3)	(35.1)
	Xylene	-Naphtha	100.5	126.0	137.0	166.0	198.5	203.5	190.5	206.3	228.2	188.8
	Change, %			(20.2)	(26.6)	(39.5)	(49.4)	(50.6)	(47.2)	(51.3)	(56.0)	(46.8)

자료 : Ciscem, Platts, Bloomberg, SK증권

참고 : Spread는 Polymer와 Naphtha의 가격차이임

Weekly Price			Last Week	1W	1M	3M	6M	12M	YTD	2015avg.	2016avg.	2017acc.
Spot Price	HDPE	CFR SE Asia	1,197.5	1,187.5	1,187.5	1,057.5	1,047.5	1,160.0	1,142.5	1,230.1	1,134.6	1,131.4
	Change, %			0.8	0.8	13.2	14.3	3.2	4.8	(2.7)	5.5	5.8
	MEG	CFR SE Asia	907.5	917.5	902.5	872.5	802.5	677.5	847.5	780.8	660.8	839.9
	Change, %			(1.1)	0.6	4.0	13.1	33.9	7.1	16.2	37.3	8.1
	PVC	CFR SE Asia	890.0	910.0	947.5	860.0	870.0	930.0	920.0	820.8	823.4	906.0
	Change, %			(2.2)	(6.1)	3.5	2.3	(4.3)	(3.3)	8.4	8.1	(1.8)
	PP	CFR SE Asia	1,147.5	1,167.5	1,167.5	1,072.5	1,037.5	1,030.0	1,032.5	1,109.8	978.4	1,088.8
	Change, %			(1.7)	(1.7)	7.0	10.6	11.4	11.1	3.4	17.3	5.4
	2-EH	CFR Korea	1,000.0	1,000.0	990.0	970.0	920.0	790.0	865.0	930.1	772.4	959.4
	Change, %			0.0	1.0	3.1	8.7	26.6	15.6	7.5	29.5	4.2
	ABS	CFR SE Asia	1,920.0	1,950.0	2,060.0	1,820.0	1,790.0	1,460.0	1,635.0	1,431.1	1,347.1	1,816.7
	Change, %			(1.5)	(6.8)	5.5	7.3	31.5	17.4	34.2	42.5	5.7
	SBR	CFR SE Asia	1,700.0	1,750.0	1,820.0	1,490.0	1,450.0	1,900.0	2,000.0	1,332.1	1,483.0	2,047.2
	Change, %			(2.9)	(6.6)	14.1	17.2	(10.5)	(15.0)	27.6	14.6	(17.0)
	SM	CFR SE Asia	1,210.0	1,217.5	1,350.0	1,172.5	1,152.5	1,057.5	1,205.0	1,100.7	1,064.6	1,243.9
	Change, %			(0.6)	(10.4)	3.2	5.0	14.4	0.4	9.9	13.7	(2.7)
	Caustic	FOB NEA	598.0	550.0	484.0	462.5	447.5	365.0	422.5	296.8	316.6	455.8
	Change, %			8.7	23.6	29.3	33.6	63.8	41.5	101.5	88.9	31.2
	PX	CFR SE Asia	842.5	845.0	837.5	817.5	775.0	797.5	855.0	842.9	790.4	834.3
	Change, %			(0.3)	0.6	3.1	8.7	5.6	(1.5)	(0.0)	6.6	1.0
	PO	CFR China	1,685.0	1,685.0	1,560.0	1,540.0	1,485.0	1,475.0	1,562.5	1,683.4	1,396.8	1,558.6
	Change, %			0.0	8.0	9.4	13.5	14.2	7.8	0.1	20.6	8.1
	Caprolactam	CFR SE Asia	2,170.0	2,070.0	1,830.0	1,730.0	1,610.0	1,425.0	1,850.0	1,581.5	1,344.9	1,906.9
	Change, %			4.8	18.6	25.4	34.8	52.3	17.3	37.2	61.4	13.8
	PTA	CFR SE Asia	667.5	667.5	667.5	667.5	630.0	617.5	642.5	648.0	613.7	659.5
	Change, %			0.0	0.0	0.0	6.0	8.1	3.9	3.0	8.8	1.2
Spread	HDPE		643.0	661.0	667.0	601.0	636.0	713.5	658.0	737.1	735.1	656.2
	Change, %			(2.7)	(3.6)	7.0	1.1	(9.9)	(2.3)	(12.8)	(12.5)	(2.0)
	MEG		353.0	391.0	382.0	416.0	391.0	231.0	363.0	287.8	261.3	364.7
	Change, %			(9.7)	(7.6)	(15.1)	(9.7)	52.8	(2.8)	22.7	35.1	(3.2)
	PVC		335.5	383.5	427.0	403.5	458.5	483.5	435.5	327.8	423.9	430.8
	Change, %			(12.5)	(21.4)	(16.9)	(26.8)	(30.6)	(23.0)	2.3	(20.9)	(22.1)
	PP		593.0	641.0	647.0	616.0	626.0	583.5	548.0	616.8	578.9	613.5
	Change, %			(7.5)	(8.3)	(3.7)	(5.3)	1.6	8.2	(3.9)	2.4	(3.3)
	2-EH		445.5	473.5	469.5	513.5	508.5	343.5	380.5	437.0	372.9	484.2
	Change, %			(5.9)	(5.1)	(13.2)	(12.4)	29.7	17.1	1.9	19.5	(8.0)
	ABS		1,365.5	1,423.5	1,539.5	1,363.5	1,378.5	1,013.5	1,150.5	938.1	947.6	1,341.5
	Change, %			(4.1)	(11.3)	0.1	(0.9)	34.7	18.7	45.6	44.1	1.8
	SBR	BD spread	650.0	575.0	295.0	590.0	475.0	450.0	(100.0)	454.7	366.2	479.7
	Change, %			13.0	120.3	10.2	36.8	44.4	(750.0)	43.0	77.5	35.5
	SM		655.5	691.0	829.5	716.0	741.0	611.0	720.5	607.7	665.1	768.7
	Change, %			(5.1)	(21.0)	(8.4)	(11.5)	7.3	(9.0)	7.9	(1.4)	(14.7)
	Caustic											
	Change, %											
	PX		288.0	318.5	317.0	361.0	363.5	351.0	370.5	349.9	390.9	359.1
	Change, %			(9.6)	(9.1)	(20.2)	(20.8)	(17.9)	(22.3)	(17.7)	(26.3)	(19.8)
	PO	propylene spread	877.5	890.0	725.0	777.5	742.5	787.5	747.5	913.4	691.1	682.0
	Change, %			(1.4)	21.0	12.9	18.2	11.4	17.4	(3.9)	27.0	28.7
	Caprolactam	benzene spread	1,360.0	1,267.5	1,025.0	987.5	850.0	770.0	1,027.5	891.6	698.2	1,076.0
	Change, %			7.3	32.7	37.7	60.0	76.6	32.4	52.5	94.8	26.4
	PTA	px spread	77.8	76.0	81.3	95.3	87.5	59.3	44.0	58.0	60.4	75.5
	Change, %			2.3	(4.3)	(18.4)	(11.1)	31.2	76.7	34.0	28.7	3.0

자료 : Ciscchem, Platts, SK증권

참고 : Spread는 Naphtha spread로 일괄적용

Global peers

	Currency	11/09	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA		
											17E	18E	17E	18E	17E	18E	
Petrochemical																	
DowDuPont	USD	70.2	(0.8)	(2.5)	(2.0)	10.6	13.6	30.4	22.7	164,338	20.7	17.2	1.6	1.8	11.5	10.0	
Eastman	USD	90.0	(0.7)	(1.3)	0.4	6.8	14.8	21.8	19.6	12,933	12.7	11.1	2.6	2.4	9.2	8.5	
BASF	EUR	94.9	(1.6)	(0.9)	5.5	17.5	5.5	18.6	7.5	101,501	15.5	15.5	2.5	2.4	8.3	8.1	
Akzo Nobel	EUR	78.6	(0.9)	1.9	0.2	3.0	2.0	33.0	32.3	23,037	19.2	18.3	3.3	3.2	10.3	9.9	
Arkema	EUR	106.5	(2.8)	(2.5)	3.0	12.1	9.1	23.6	14.5	9,397	15.4	14.1	2.0	1.9	6.9	6.6	
Lanxess	EUR	67.7	(2.6)	(2.6)	2.0	1.5	0.4	18.8	8.6	7,212	17.9	15.5	2.3	2.2	7.6	8.6	
Sumitomo Chemical	JPY	847	(0.4)	3.3	21.7	34.9	31.3	88.6	52.3	12,387	11.5	11.1	1.5	1.4	8.0	7.7	
Mitsubishi Chemical	JPY	1,214	(0.2)	0.8	9.7	30.0	34.5	91.7	60.1	16,147	9.9	9.8	1.4	1.3	6.8	6.6	
Shin-Etsu Chemical	JPY	12,345	(1.4)	1.9	22.2	29.6	24.7	65.5	36.2	47,123	24.1	21.2	2.3	2.1	10.8	9.4	
Asahi Kasei	JPY	1,498	(0.7)	7.0	8.0	18.0	35.6	65.6	46.9	18,555	16.1	15.8	1.7	1.6	8.0	7.7	
JSR	JPY	2,277	1.1	2.9	9.4	20.0	14.4	56.5	23.5	4,548	16.0	15.4	1.3	1.2	8.7	8.1	
Nitto Denko	JPY	11,435	0.4	1.2	20.7	16.6	24.4	67.1	27.5	17,552	21.7	19.9	2.6	2.4	9.8	9.1	
SABIC	SAR	99.7	0.4	0.3	(1.0)	1.8	2.7	15.9	9.0	79,773	14.8	13.9	1.8	1.7	7.5	7.2	
Yansab	SAR	56.4	0.3	1.1	(0.1)	2.6	4.2	20.5	3.6	8,465	14.1	13.3	2.3	2.3	9.0	8.7	
Formosa Plastics	TWD	92.1	(0.2)	0.7	0.1	(0.8)	4.1	9.4	3.3	19,413	13.5	14.1	1.8	1.7	19.4	19.1	
Formosa Fiber	TWD	93.2	0.2	1.6	1.4	0.5	4.5	(0.2)	(3.2)	18,088	11.9	12.7	1.6	1.6	10.7	10.8	
Nan Ya Plastics	TWD	74.7	(0.4)	(0.4)	1.8	(2.0)	6.1	16.0	4.9	19,617	14.3	14.7	1.7	1.7	14.6	15.0	
Sinopec Shanghai	CNY	6.51	(0.9)	1.2	3.5	(6.9)	2.5	12.0	1.1	9,247	12.6	12.1	2.5	2.2	6.8	6.9	
Sinopec Yizheng(Fiber)	CNY	3.07	(0.6)	4.1	(2.5)	(5.2)	(4.7)	(21.1)	(25.1)	5,938	#N/A	N/A	56.9	5.9	28.7	15.0	
Reliance	INR	901	1.4	(4.9)	8.4	12.6	35.4	79.3	66.4	89,909	16.8	13.9	1.9	1.7	11.6	9.7	
Industries Qatar	QAR	94.2	0.2	(1.6)	0.2	0.7	(7.5)	(8.6)	(19.8)	14,840	16.0	13.7	1.6	1.6	53.7	50.4	
PTT Chemical	THB	80.0	(0.3)	3.2	(2.7)	10.7	8.8	35.0	27.0	10,861	10.4	10.6	1.4	1.3	5.5	5.3	
Petronas	MYR	7.4	(0.9)	1.2	1.0	5.6	3.4	7.1	6.0	14,121	15.6	15.7	2.0	1.9	8.8	8.8	
LG화학	KRW	414,000	1.2	(1.4)	5.6	24.5	47.9	71.1	58.6	26,080	15.4	14.6	2.0	1.8	6.8	6.4	
롯데케미칼	KRW	368,500	0.0	(2.1)	(2.5)	(3.0)	4.8	26.6	(0.1)	11,271	5.5	5.4	1.1	0.9	3.7	3.3	
한화케미칼	KRW	31,150	(0.6)	(5.2)	(4.0)	(7.0)	22.2	26.6	26.1	4,581	5.0	5.5	0.8	0.7	6.6	6.5	
금호석유	KRW	74,000	0.4	(2.0)	2.6	0.3	(1.9)	12.1	(9.8)	2,012	12.9	12.0	1.3	1.2	9.6	8.5	
SKC	KRW	40,150	1.3	2.0	(2.7)	6.9	39.2	47.3	21.7	1,345	10.5	9.5	1.0	0.9	9.3	8.0	
국도화학	KRW	58,300	(0.9)	(2.5)	5.6	3.6	21.1	7.8	6.2	302	0.0	0.0	0.0	0.0	0.0	0.0	
효성	KRW	7,610	(1.6)	(3.5)	14.4	20.4	2.7	49.2	11.9	4,215	8.2	7.1	1.2	1.0	6.8	6.0	
Average			(0.4)	0.0	4.3	8.9	13.5	32.9	18.0								
Refinery																	
Valero	USD	81.3	(0.5)	(0.4)	5.4	21.4	22.0	31.0	19.0	35,567	16.6	13.1	1.8	1.7	7.1	6.2	
Conoco Phillips	USD	53.5	0.0	2.0	9.4	17.3	15.7	17.1	6.8	63,996	119.2	37.0	2.1	2.2	9.3	7.4	
Formosa Petrochemical	TWD	105.0	(1.4)	(0.5)	(2.3)	0.0	2.9	0.5	(6.3)	33,120	14.6	17.8	3.1	3.1	9.6	11.3	
Andeavor	USD	107.0	(3.7)	(2.5)	0.3	12.2	28.2	28.5	22.4	16,788	15.1	13.0	1.6	1.6	7.8	6.3	
Marathon Petroleum	USD	61.7	(2.5)	(0.8)	9.8	16.4	19.8	41.5	22.5	30,115	16.7	15.2	2.5	2.4	8.3	7.5	
Devon Energy	USD	40.8	1.4	5.1	13.7	27.2	7.7	(6.4)	(10.6)	21,446	23.1	18.6	3.0	2.6	9.6	8.6	
Hollyfrontier	USD	42.2	(0.3)	4.8	16.6	45.0	51.9	60.9	28.8	7,481	20.2	16.3	1.5	1.5	8.6	7.4	
Phillips 66	USD	94.4	(0.1)	1.0	1.2	11.8	18.6	14.5	9.3	47,846	20.9	15.3	2.1	2.1	10.6	8.8	
Murphy Oil	USD	29.8	2.6	7.1	14.3	14.0	11.9	6.5	(4.3)	5,143	#N/A	N/A	256.9	1.1	1.2	5.4	5.0
JX Holdings	JPY	615.4	(2.4)	1.3	7.9	21.1	19.8	58.9	24.4	18,630	9.7	9.0	0.9	0.8	8.0	7.4	
Idemitsu	JPY	3,445.0	(1.3)	0.6	8.7	31.8	(10.9)	53.5	11.0	6,330	7.8	7.8	0.9	0.8	8.9	8.5	
Nesteoil	EUR	48.5	(0.6)	(0.0)	24.4	40.0	28.6	33.7	32.9	14,478	15.6	15.6	2.9	2.7	9.0	9.5	
Ashland	USD	65.1	(0.2)	(5.3)	(2.1)	6.1	8.0	22.2	21.7	4,061	16.2	19.2	1.2	1.2	7.6	9.4	
Fuchs Petrolub	EUR	46.7	(2.1)	(3.7)	(6.0)	(2.2)	(3.0)	22.2	17.1	7,099	24.6	23.1	4.8	4.3	14.1	13.3	
SK이노베이션	KRW	217,500	0.5	6.4	9.3	24.6	26.5	42.6	48.5	17,947	8.6	8.2	1.1	1.0	5.3	4.8	
S-Oil	KRW	127,500	0.4	0.8	0.0	9.4	25.0	54.4	50.5	12,809	12.5	9.5	2.2	2.0	9.6	7.0	
GS	KRW	67,800	1.5	3.2	3.4	(9.6)	14.7	26.0	25.3	5,622	6.5	6.1	0.8	0.7	7.2	6.9	
Average			(0.5)	1.1	6.7	16.8	16.9	29.9	18.8								

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임

* 국내업체의 multiple은 Dataguidepro 기준임

Global peers

	Currency	11/09	1D	1W	1M	3M	6M	12M	YTD	MKT CAP (mil USD)	PER		PBR		EV/EBITDA		
											17E	18E	17E	18E	17E	18E	
E&P/Shale																	
Exxon Mobil	USD	84	0.6	0.5	2.4	4.7	2.0	(2.6)	(7.0)	355,790	23.7	21.0	2.0	2.0	10.1	9.1	
BP	GBP	515	(1.8)	(0.7)	5.8	9.8	12.9	12.3	1.0	133,989	23.2	17.6	1.4	1.4	6.6	5.9	
Shell	EUR	2,456	(0.2)	0.9	6.9	11.0	17.4	18.5	9.5	269,276	17.8	16.0	1.4	1.3	7.0	6.4	
Chevron	USD	117	0.5	1.7	(0.4)	5.7	11.6	8.9	(0.4)	222,683	29.4	23.5	1.5	1.5	8.3	7.2	
Total	EUR	49	(0.7)	0.2	6.6	11.8	1.5	11.7	(0.3)	142,813	13.8	13.3	1.3	1.2	6.4	5.7	
Sinopec	CNY	6	0.2	1.8	6.1	3.5	9.1	26.4	15.2	108,809	14.4	13.3	1.0	1.0	4.6	4.5	
Petrochina	CNY	9	0.2	1.5	6.8	4.9	13.8	17.0	7.2	222,843	53.9	32.4	1.3	1.3	6.8	6.4	
CNOOC	CNY	12	(0.3)	3.2	4.0	4.8	10.4	(1.6)	(7.1)	63,655	13.8	12.0	1.1	1.0	4.3	4.1	
Gazprom	RUB	132	(0.6)	4.6	5.4	10.8	(2.2)	(9.7)	(14.9)	52,438	4.6	4.1	0.3	0.2	3.8	3.5	
Rosneft	RUB	337	1.2	5.8	5.6	8.9	7.8	(3.1)	(16.4)	60,144	10.6	7.5	0.9	0.8	5.3	4.4	
Anadarko	USD	51	0.5	4.1	5.2	16.6	0.1	(16.0)	(26.3)	28,124	#N/A	N/A	#N/A	N/A	7.8	6.9	
Petrobras	BRL	17	(1.4)	(1.1)	5.2	23.7	18.2	0.4	12.4	68,707	14.8	10.3	0.7	0.7	5.7	5.2	
Lukoil	USD	3,368	1.0	6.9	10.3	14.6	19.8	10.1	(2.3)	48,210	7.2	6.6	0.8	0.7	N/A	N/A	
Kinder	USD	18	(0.5)	0.6	(5.9)	(9.3)	(10.0)	(16.0)	(13.5)	47,497	27.8	25.6	1.1	1.1	11.1	10.7	
Statoil	NOK	170	(0.6)	2.6	6.9	14.4	12.9	24.6	7.2	68,911	16.9	18.2	1.8	1.7	3.6	3.6	
BHP	AUD	29	0.5	4.7	7.8	9.2	23.6	26.9	14.2	110,269	15.7	18.1	1.9	1.9	6.2	6.6	
PTT E&P	THB	94	(1.1)	6.6	4.8	8.1	(0.8)	15.1	(2.9)	11,215	14.7	13.0	0.9	0.9	3.5	3.2	
Petronas gas	MYR	18	3.8	(1.1)	(2.1)	(5.8)	(4.3)	(19.5)	(16.9)	8,354	19.8	18.5	2.8	2.7	11.3	10.4	
Chesapeake	USD	4	3.5	12.3	(1.9)	(5.9)	(23.9)	(28.8)	(41.5)	3,735	5.9	5.7	#N/A	N/A	7.6	6.6	
Noble Energy	USD	28	0.1	2.2	1.4	12.5	(8.5)	(24.3)	(25.2)	13,844	#N/A	N/A	1,016.1	1.4	1.5	8.3	7.6
Average		0	0.2	2.9	4.0	7.7	5.6	2.5	(5.4)								
PV																	
WACKER	EUR	134.8	(2.3)	(2.2)	17.0	30.8	34.8	70.4	36.4	8,183	25.7	22.9	2.2	2.1	7.5	7.1	
GCL-Poly	HKD	1.4	(1.4)	4.5	26.6	50.0	46.8	35.3	48.4	3,289	10.0	9.6	1.0	0.9	6.7	6.2	
SunPower	USD	8.6	(1.8)	3.8	23.2	(8.3)	20.4	35.9	29.5	1,195	#N/A	N/A	#N/A	N/A	18.6	12.3	
Canadian Solar	USD	16.8	(10.8)	(8.9)	5.6	(2.1)	22.6	46.2	38.3	977	11.0	6.7	1.0	0.9	9.7	8.4	
JA Solar	USD	8.0	(0.6)	3.1	13.4	27.4	7.4	43.2	67.0	378	7.7	15.0	1.9	1.8	3.4	3.3	
Yingli	USD	2.2	1.9	0.5	(4.3)	0.9	(9.0)	(38.2)	(14.6)	40	#N/A	N/A	#N/A	N/A	#N/A	N/A	
First Solar	USD	60.5	(2.0)	4.6	29.1	27.6	69.2	88.6	88.7	6,322	24.3	51.7	1.0	1.2	11.3	12.3	
한화큐셀	USD	9.1	1.0	11.0	14.1	7.0	33.3	(10.4)	10.9	753	100.6	50.3	#N/A	N/A	7.8	8.2	
OCI	KRW	123,000	(0.4)	1.7	20.0	33.7	52.0	44.2	56.3	2,618	14.0	15.2	0.9	0.8	7.6	6.4	
웅진에너지	KRW	7,920	2.5	0.3	4.9	(4.3)	53.2	61.3	67.3	177	N/A	0.9	0.8	7.6	6.4	8.2	
신성솔라에너지	KRW	1,745	0.9	1.2	(3.1)	(20.7)	(3.1)	(26.1)	(21.0)	269	N/A	0.8	7.6	6.4	8.2	7.1	
Average			(1.2)	1.8	13.3	12.9	29.8	31.9	37.0								
Gas Company																	
Towngas China	HKD	6.5	(0.3)	(1.4)	18.2	18.0	35.4	57.4	59.3	2,307	15.0	13.6	1.2	1.1	13.3	12.2	
Kulun	HKD	7.3	0.4	0.7	(2.3)	(5.4)	4.9	25.9	25.0	7,504	11.6	10.5	1.3	1.2	5.8	5.6	
Beijing Enterprise	HKD	46.5	2.2	(0.6)	5.4	14.1	26.0	30.8	26.9	7,524	8.9	8.2	0.9	0.9	16.0	14.8	
ENN Energy	HKD	58.3	0.1	1.7	1.0	9.0	35.0	63.1	82.8	8,092	15.6	13.7	3.0	2.6	9.4	8.5	
China Resources Gas	HKD	28.8	(0.5)	2.1	5.9	(1.2)	11.6	18.0	32.1	8,212	16.4	14.7	3.1	2.7	9.7	8.8	
China Gas Holdings	HKD	24.8	4.7	5.5	1.2	27.1	99.6	111.5	135.3	15,767	21.3	18.0	4.9	4.1	16.6	14.2	
Shenzen Gas	HKD	14.7	(0.5)	(0.9)	(6.0)	3.5	13.4	23.3	30.1	3,822	12.0	11.5	1.4	1.3	9.0	8.4	
Shann Xi	CNY	8.3	0.0	1.6	(1.0)	(5.2)	(2.2)	(16.1)	(13.1)	1,395	17.6	15.8	1.7	1.6	#N/A	N/A	
Suntien	HKD	2.1	0.5	1.9	5.4	27.5	31.5	104.8	113.0	1,015	8.0	6.9	0.8	0.7	10.1	8.6	
China Oil & Gas	HKD	0.5	0.0	1.9	(1.8)	0.0	(6.9)	(3.6)	(11.5)	403	9.3	8.1	0.9	0.8	6.2	5.6	
Average			0.6	1.2	2.6	8.7	24.8	41.5	48.0								
EV																	
LG화학	KRW	414,000	1.2	(1.4)	5.6	24.5	47.9	71.1	58.6	26,080	14.4	13.9	2.0	1.8	6.9	6.7	
삼성SDI	KRW	221,500	0.2	(1.6)	11.6	29.9	56.0	136.9	103.2	13,592	22.5	13.9	1.4	1.2	24.3	15.3	
Panasonic	JPY	1761.0	(0.1)	2.8	8.4	18.5	28.9	85.2	48.0	38,161	23.1	17.6	2.4	2.2	7.5	6.5	
GS Yuasa	JPY	576.0	(0.7)	1.2	(2.7)	5.1	6.9	36.8	18.5	2,104	17.5	15.8	1.4	1.3	7.8	7.2	
NEC	JPY	3060.0	0.8	1.0	(0.2)	1.0	6.3	11.7	(1.3)	7,041	17.3	16.9	0.9	0.9	7.2	6.6	
BYD Auto	CNY	68.0	0.9	7.4	(5.7)	38.4	38.8	23.4	36.9	27,168	39.1	27.3	3.4	3.0	16.5	13.3	
Tesla Motors	USD	303.0	(0.5)	1.2	(11.6)	(16.7)	(5.7)	59.4	41.8	50,923	#N/A	N/A	#N/A	N/A	128.8	30.3	
Kandi Technologies	USD	6.9	(6.1)	4.5	(23.8)	81.6	53.3	76.9	40.8	331	#N/A	N/A	#N/A	N/A	#N/A	N/A	
Average			(0.5)	1.9	(2.3)	22.8	29.0	62.7	43.3								

* Bloomberg 기준 / valuation multiple 또한 Bloomberg consensus 기준임