

2Q 2017 Business Results & Outlook

July 19, 2017



Disclaimer

The business results for the second quarter of 2017 currently under audit review are presented here for investors' convenience. Hence, please be advised that some of their contents may be altered in the course of audit.

The business results are subject to the K-IFRS(Korea International Financial Reporting Standards).

Forecasts and projections contained in this material are based on current business environments and management's strategies, and they may differ from the actual results upon changes and unaccounted variables.

Table of Contents

2Q 2017 Business Results	1
Divisional Results & Outlook	3
Appendix	7
- Divisional Sales & Operating Profit	
- Borrowings & Cash Flow	
- CAPEX & R&D Expenses	
- Ethylene/PE Demand & Supply	
- Quarterly Price Trends	
- Monthly Price Trends	

(Unit: KRW bn)

Classification	'16.2Q	'17.1Q	'17.2Q	YoY	QoQ
Sales	5,219	6,487	6,382	22.3%	-1.6%
Operating Profit	613	797	727	18.7%	-8.8%
(%)	(11.7)	(12.3)	(11.4)		
EBITDA	946	1,151	1,074	13.6%	-6.7%
(%)	(18.1)	(17.8)	(16.8)		
Pre-tax Income	500	698	730	45.9%	4.5%
(%)	(9.6)	(10.8)	(11.4)		
Net Income	376	548	590	57.2%	7.7%
(%)	(7.2)	(8.4)	(9.2)		

* Business performances of Farm Hannong and Life Sciences have been included since '16.2Q and '17.1Q, respectively.

Financial Position

(Unit: KRW bn)

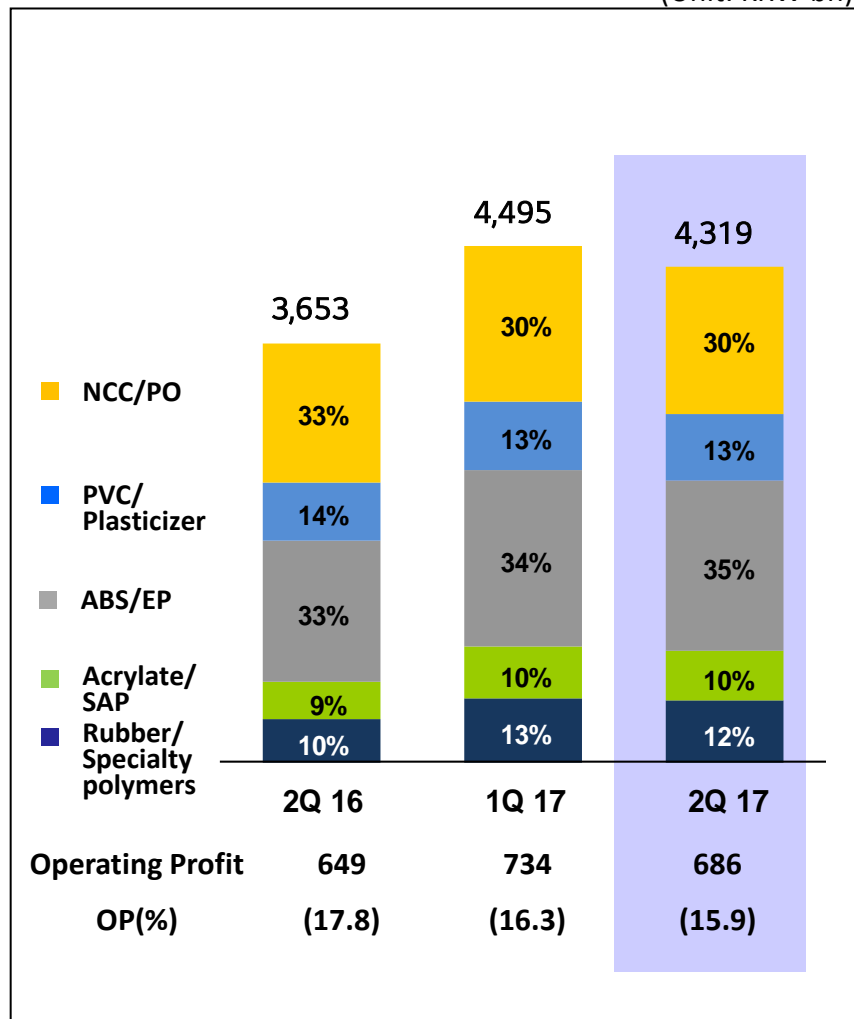
Classification	'16 (End)	'17.2Q (End)	Change
Asset	20,487	22,671	10.7%
Cash and equivalents	2,207	2,107	-4.5%
Liabilities	6,436	7,137	10.9%
Borrowings	2,891	3,323	15.0%
Shareholder's Equity	14,051	15,535	10.6%
Liabilities/ Equity	45.8	45.9	0.1%p

Financial Ratios

Classification	'16 (End)	'17.2Q (End)	Change
Borrowings / Equity (%)	20.6	21.4	0.8%p
Net borrowings/ Equity (%)	4.9	7.8	2.9%p
Interest Coverage Ratio (x)	25.9	28.3	2.4
ROE (%)	9.4	15.4	6.0%p
ROA (%)	6.6	10.6	4.0%p

Divisional Results

(Unit: KRW bn)



Analysis & Outlook

Analysis

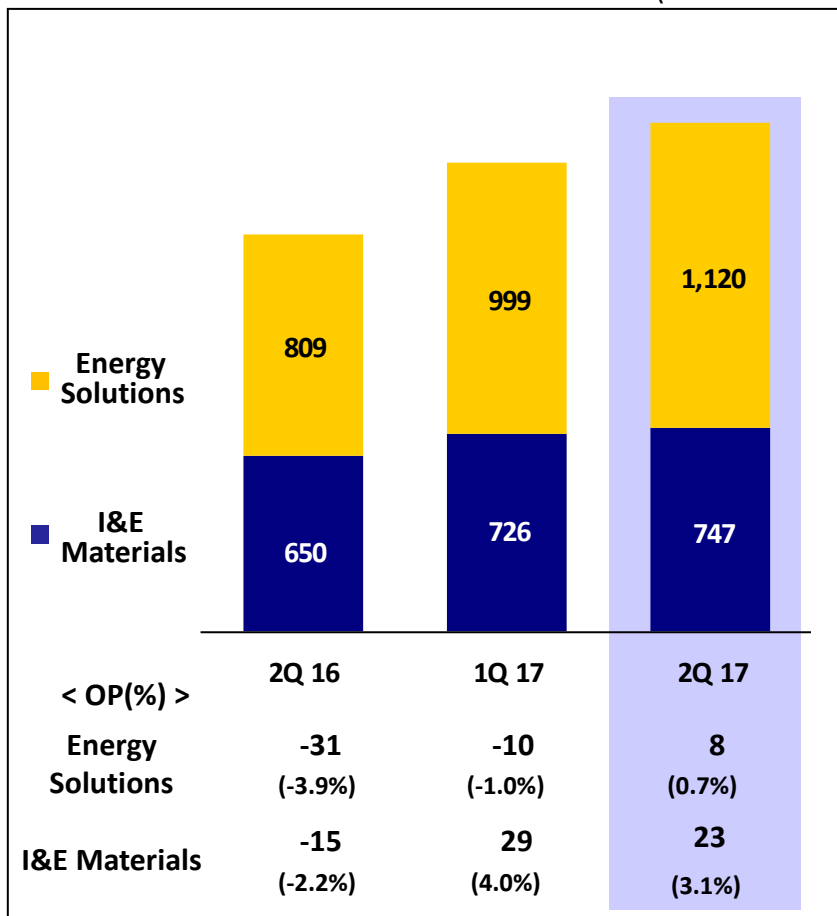
- Earnings recorded historical high in second quarter basis thanks to robust performance of downstream products including Synthetic rubber, ABS, PVC and others
- NCC/PO : Spread decreased due to improved supply and demand conditions and buyers' wait-and-see stance from weak oil prices
- PVC/Plasticizer : Strong performance continued due to maintenance of elevated PVC spread led by the Chinese coal industry restructuring and tight supply in caustic soda
- ABS/EP : Solid earnings continued on the back of favorable Chinese market conditions
- Acrylate/SAP : Profitability further grew thanks to the improved spread from shifting towards more lucrative customers
- Rubber/Specialty Polymers : Earnings increased led by higher synthetic rubber prices and entry into peak season for specialty polymers

Outlook

- Solid earnings will continue on the back of margin expansion of downstream products such as PVC and ABS/EP while profitability of upstream products will slightly decline due to mitigated upstream demand

Divisional Results

(Unit: KRW bn)



Analysis & Outlook

Analysis

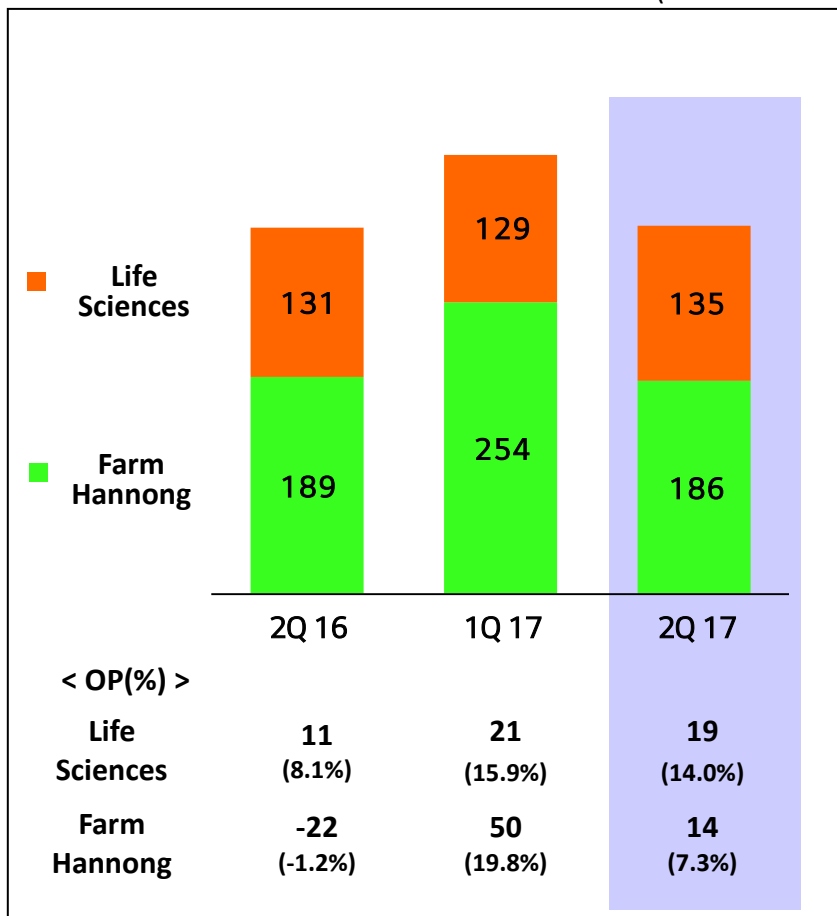
- Energy Solutions** : Despite the price increases of raw materials including cobalt, quarterly sales recorded historical high and the business broke out of the loss-making trend thanks to sales growth of EV and ESS, and demand increases in small size battery from major customers and new applications as well as improved productivity and cost savings
- I&E Materials** : Profit generation continued led by the favorable market condition of front industry, supply of display material for core customer's new OLED production line and sales volume increases in cathode material for ESS battery

Outlook

- Energy Solutions** : Growth will continue based on the launch of new EV models in 2H, peak season starting for ESS battery and sales growth of small size battery driven by increasing demand for new application and new model launch by IT core customers
- I&E Materials** : Profit will be maintained through growing sales in the peak season for LCD panel industry, product mix change to high value-centric structure and improvement of production efficiency

Divisional Results

(Unit: KRW bn)



Analysis & Outlook

Analysis

- **Life Sciences** : Solid profitability continued due to an increase in sales of major products including 'Zemiglo' and phasing out of low-margin products
- **Farm Hannong** : Profit increased YoY thanks to the cost savings and improvements in product mix toward high-value & differentiated products while earnings declined QoQ due to the seasonality

Outlook

- **Life Sciences** : Sales growth of major products including 'Zemiglo' will continue while profitability is expected to decline due to increase in R&D expenses
- **Farm Hannong** : Cost reduction and expansion of overseas sales will continue despite the earnings decline amid the weak season in 2H

CFO Highlight

(Unit: KRW bn)

Classification	2016					2017				
	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total
Sales	4,874	5,219	5,054	5,512	20,659	6,487	6,382			12,869
Operating Profit	458	612	460	462	1,992	797	727			1,524
(%)	9.4%	11.7%	9.1%	8.4%	9.6%	12.3%	11.4%			11.8%
EBITDA	778	949	796	804	3,327	1,151	1,074			2,226
(%)	16.0%	18.2%	15.8%	14.6%	16.0%	17.7%	16.8%			17.3%
Basic Materials & Chemicals	3,512	3,653	3,525	3,758	14,447	4,495	4,319			8,814
NCC / PO	1,156	1,221	1,131	1,161	4,669	1,362	1,291			2,653
PVC / Plasticizer	489	508	496	542	2,035	588	572			1,161
ABS	877	920	866	948	3,611	1,216	1,185			2,401
EP	298	299	304	308	1,210	332	307			639
Acrylate / SAP	345	331	357	391	1,424	435	427			862
Rubber / Specialty Polymer	347	374	370	408	1,499	563	537			1,100
Operating Profit	466	649	517	506	2,139	734	686			1,419
(%)	13.3%	17.8%	14.7%	13.5%	14.8%	16.3%	15.9%			16.1%
Energy Solutions	814	809	879	1,059	3,562	999	1,120			2,119
Operating Profit	0	-31	-14	-4	-49	-10	8			-3
(%)	0.0%	-3.9%	-1.6%	-0.3%	-1.4%	-1.0%	0.7%			-0.1%
I&E Materials	627	650	641	739	2,656	726	747			1,473
Operating Profit	-8	-15	-16	-16	-55	29	23			53
(%)	-1.3%	-2.2%	-2.5%	-2.2%	-2.1%	4.0%	3.1%			3.6%
Life Sciences	120	131	135	147	532	129	135			265
Operating Profit	17	11	10	9	47	21	19			40
(%)	14.3%	8.1%	7.5%	6.4%	8.9%	15.9%	14.0%			14.9%
Farm Hannong	242	189	87	50	568	254	186			440
Operating Profit	39	-2	-20	-31	-15	50	14			64
(%)	15.9%	-1.2%	-23.3%	-61.1%	-2.6%	19.8%	7.3%			14.6%
(Excluding One-off expenses)	49	20	-14	-25	29	50	14			64

* Business performances of Farm Hannong and Life Sciences have been included since 2Q16 and 1Q17, respectively.

Borrowings

(Unit : KRW bn)

Classification	'16 (End)	'17.2Q (End)
Total (Overseas Subsidiaries)	2,891 (1,892) 100%	3,323 (1,810) 100%
KRW Currency	521 18%	1,358 41%
C P	270	1,247
Others	252	111
Foreign Currency	2,369 82%	1,965 59%
Loan	1,921	1,877
Negotiation Borrowings	449	89
Short-term (Overseas Subsidiaries)	2,213 (1,284) 77%	1,454 (1,118) 44%
Long-term (Overseas Subsidiaries)	678 (607) 23%	1,869 (560) 56%

* The % is calculated to total borrowings.

Cash Flow

(Unit: KRW bn)

Classification	'16 (Acc.)	'17.2Q (Acc.)
Beginning Cash	2,694	2,207
Operating/Investing	524	442
Operating profit	1,992	1,524
Depreciation	1,335	702
Working Capital	-52	-719
Investing Activities	-1,993	-737
Others	-758	-327
Financing	-1,007	-533
Borrowings (Financed & reimbursed)	-661	-147
Dividends paid	-347	-386
Ending Cash	2,207	2,107

CAPEX

(Unit: KRW bn)

Classification		'15 (Acc.)	'16 (Acc.)	'17.2Q (Acc.)
Basic Materials & Chemicals	New / Expansion	328	103	80
	Maintenance	385	289	111
	Total	713	392	192
Energy Solutions	New / Expansion	265	365	210
	Maintenance	189	197	70
	Total	454	563	280
I & E Materials	New / Expansion	219	291	52
	Maintenance	141	95	38
	Total	360	385	89
Life Sciences	New / Expansion	60	124	53
	Maintenance	19	38	12
	Total	79	162	65
Common	New / Expansion	133	555	99
	Maintenance	63	82	47
	Total	196	637	146
Total	New / Expansion	945	1,314	493
	Maintenance	778	663	279
	Total	1,723	1,977	772

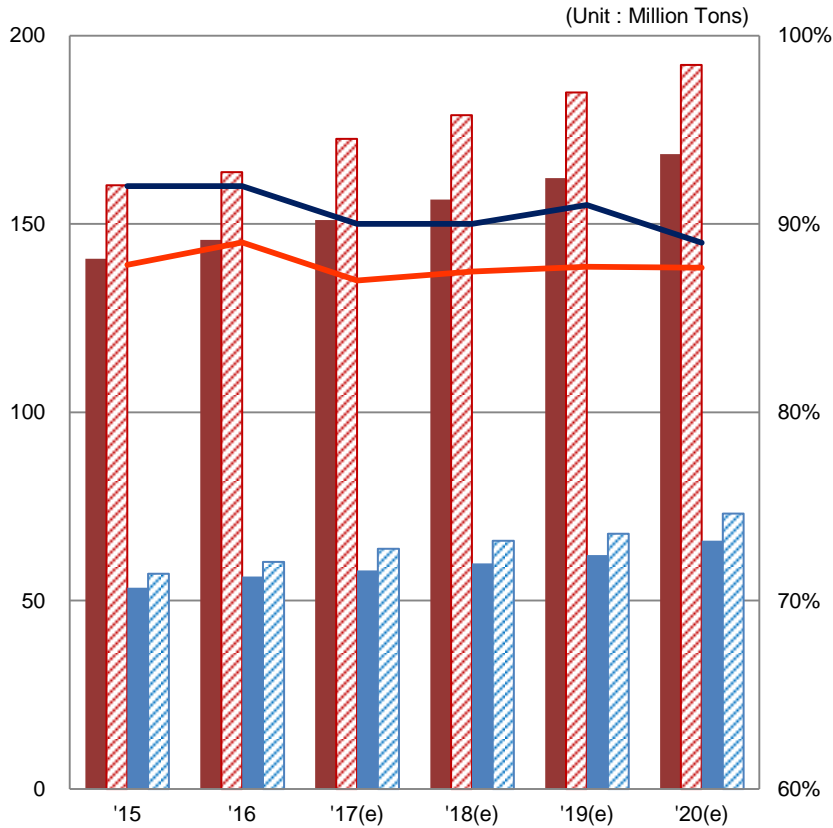
R&D expenses

(Unit: KRW bn)

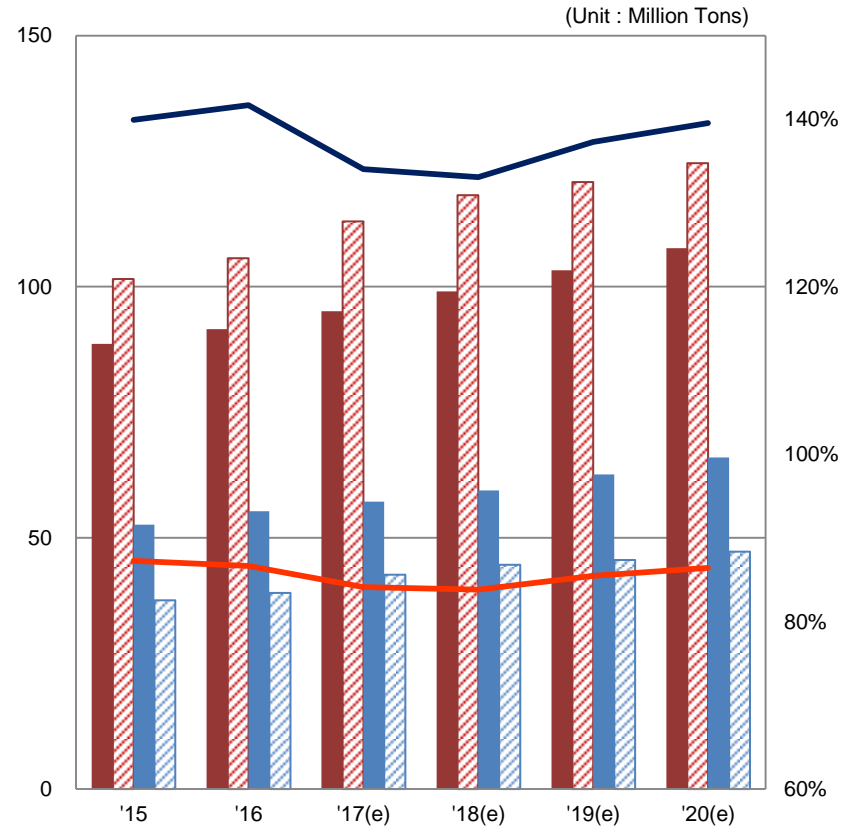
Classification	'15 (Acc.)	'16 (Acc.)	'17.2Q (Acc.)
Basic Materials & Chemicals (% of sales)	132 (0.9%)	150 (1.0%)	79 (0.9%)
Energy Solutions (% of sales)	229 (7.3%)	276 (7.7%)	153 (7.2%)
I & E Materials (% of sales)	146 (5.3%)	161 (6.1%)	91 (6.1%)
Life Sciences (% of sales)	79 (17.5%)	91 (17.1%)	44 (16.8%)
Common	49	91	71
Total (% of sales)	557 (2.8%)	678 (3.3%)	438 (3.4%)

- ① As of 2Q 2017, over 50% of Energy solutions R&D expenses were used for EV battery accumulatively
 ② Business performances of Life Sciences have been included since 1Q 2017

■ Demand (Global) ▨ Supply (Global) — Demand/Supply (Global,%) ■ Demand (Global) ▨ Supply (Global) — Demand/Supply (Global,%)
■ Demand (Asia) ▨ Supply (Asia) — Demand/Supply (Asia,%) ■ Demand (Asia) ▨ Supply (Asia) — Demand/Supply (Asia,%)



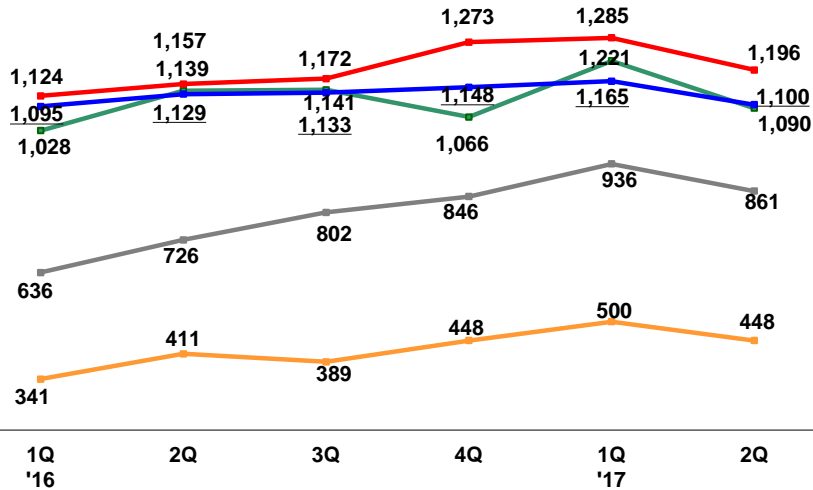
Ethylene



Polyethylene

(Source : IHS)

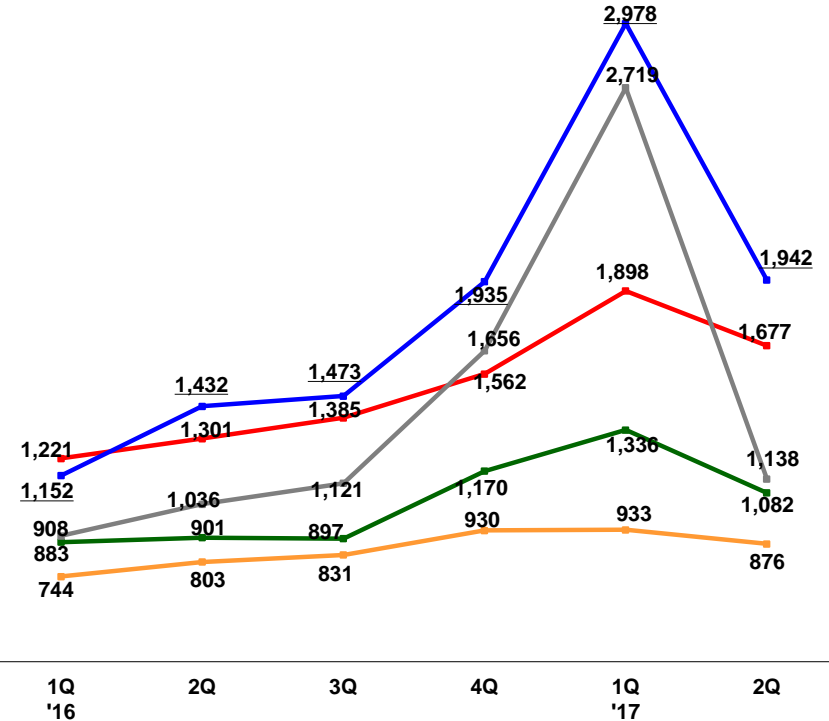
(Unit : USD/MT)



— Naphtha — Ethylene — Propylene — HDPE(Film) — LDPE

NCC/PO

(Unit : USD/MT)



— ABS — PVC — B.Acrylate — BD — BR

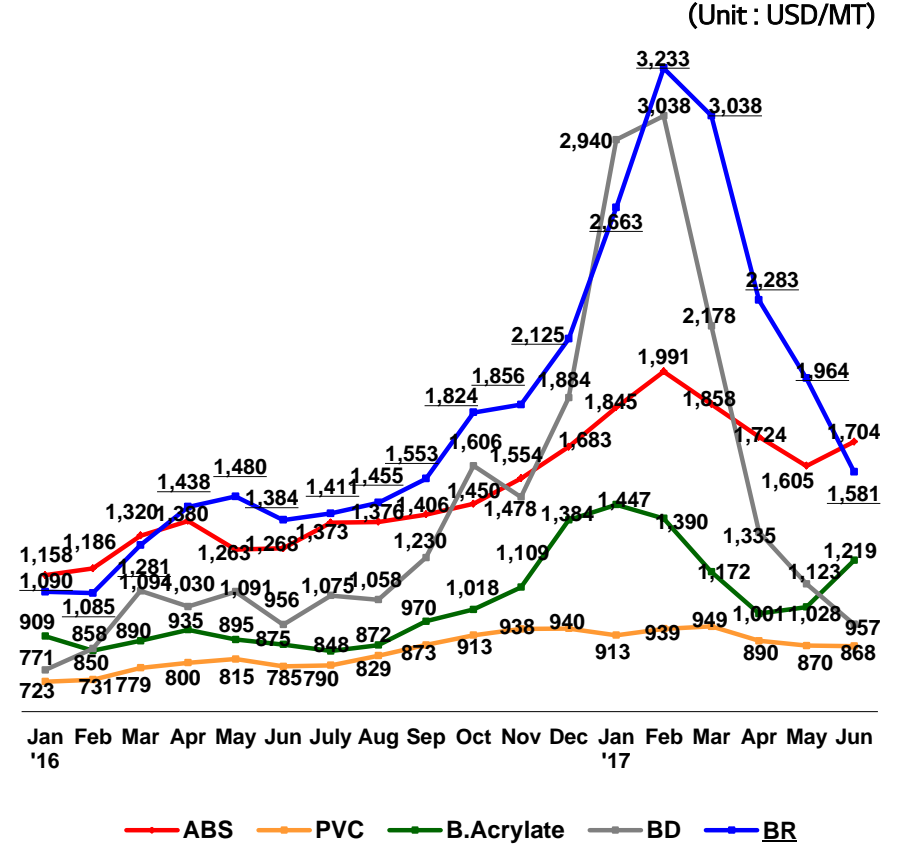
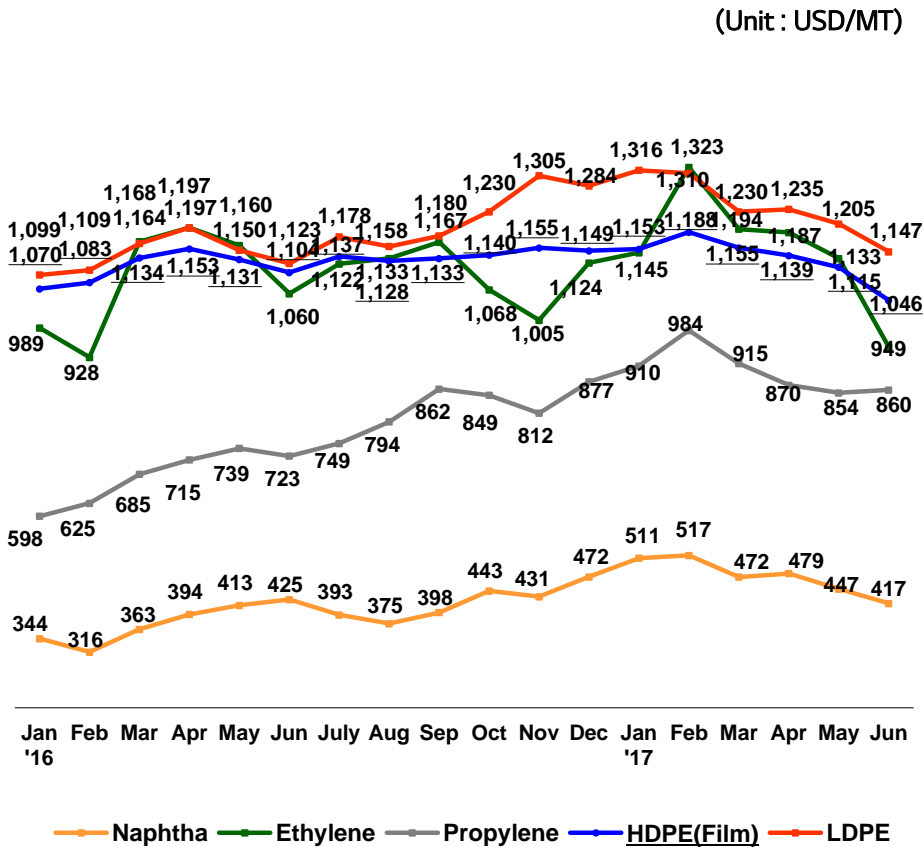
ABS/EP

PVC/
Plasticizer

Acrylate/
SAP

Rubber/
Specialty Polymers

• The prices are average price of CFR FE Asia for general grade in each product group.



NCC/PO

ABS/EP

PVC/
Plasticizer

Acrylate/
SAP

Rubber/
Specialty Polymers

• The prices are average price of CFR FE Asia for general grade in each product group.