

4Q 2016 Business Results & Outlook

January 26, 2017



Disclaimer

The business results for the fourth quarter of 2016 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.

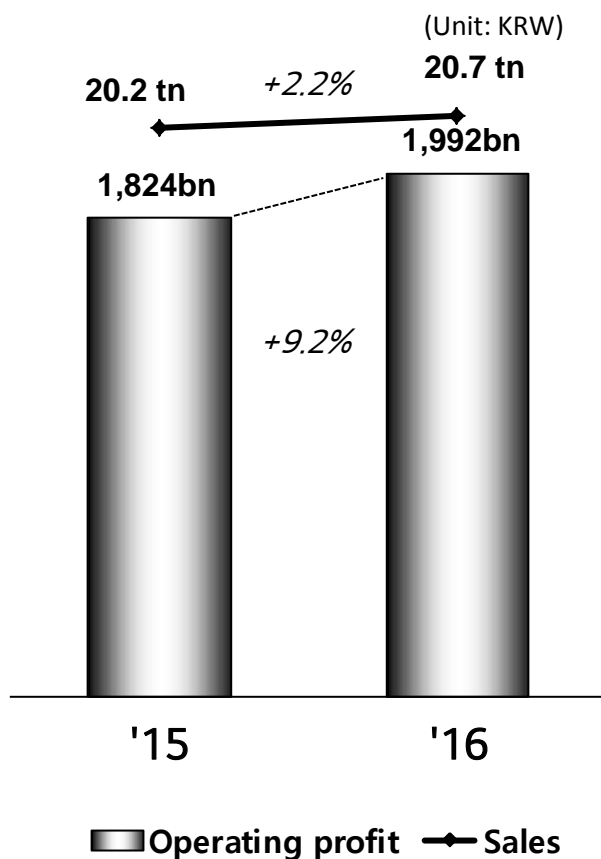
The business results are subject to the K-IFRS(Korea International Financial Reporting Standards).

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.

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Yearly Business Results



Classification	Sales (KRW tn)			Operating Profit (KRW bn)		
	'15	'16	change (%)	'15	'16	change (%)
Total	20.2	20.7	+2.2%	1,824 (9.0)	1,992 (9.6)	+9.2%
Basic Materials & Chemicals	14.6	14.4	-1.3%	1,677 (11.5)	2,139 (14.8)	+27.5%
Energy Solutions	3.2	3.6	+13.1%	0.5 (0.0)	-49 (-1.4)	Turn to Red
I&E Materials	2.8	2.7	-3.9%	146 (5.3)	-55 (-2.1)	Turn to Red

(Unit: KRW bn)

Classification	'15.4Q	'16.3Q	'16.4Q	YoY	QoQ
Sales	5,041	5,054	5,512	9.3%	9.0%
Operating Profit	352	460	462	31.2%	0.4%
(%)	(7.0)	(9.1)	(8.4)		
EBITDA	678	796	804	18.7%	1.0%
(%)	(13.4)	(15.8)	(14.6)		
Pre-tax Income	293	379	358	22.3%	-5.4%
(%)	(5.8)	(7.5)	(6.5)		
Net Income	207	297	270	30.4%	-9.2%
(%)	(4.1)	(5.9)	(4.9)		

* Business performances of Farm Hannong have been included since 2Q, 2016

Financial Status

(Unit: KRW bn)

Classification	'15 (End)	'16 (End)	Change
Asset	18,579	20,487	10.3%
Cash and equivalents	2,694	2,207	-18.1%
Liabilities	5,475	6,436	17.6%
Borrowings	2,659	2,891	8.7%
Shareholder's Equity	13,104	14,051	7.2%
Liabilities/Equity	41.8	45.8	*4.0%p

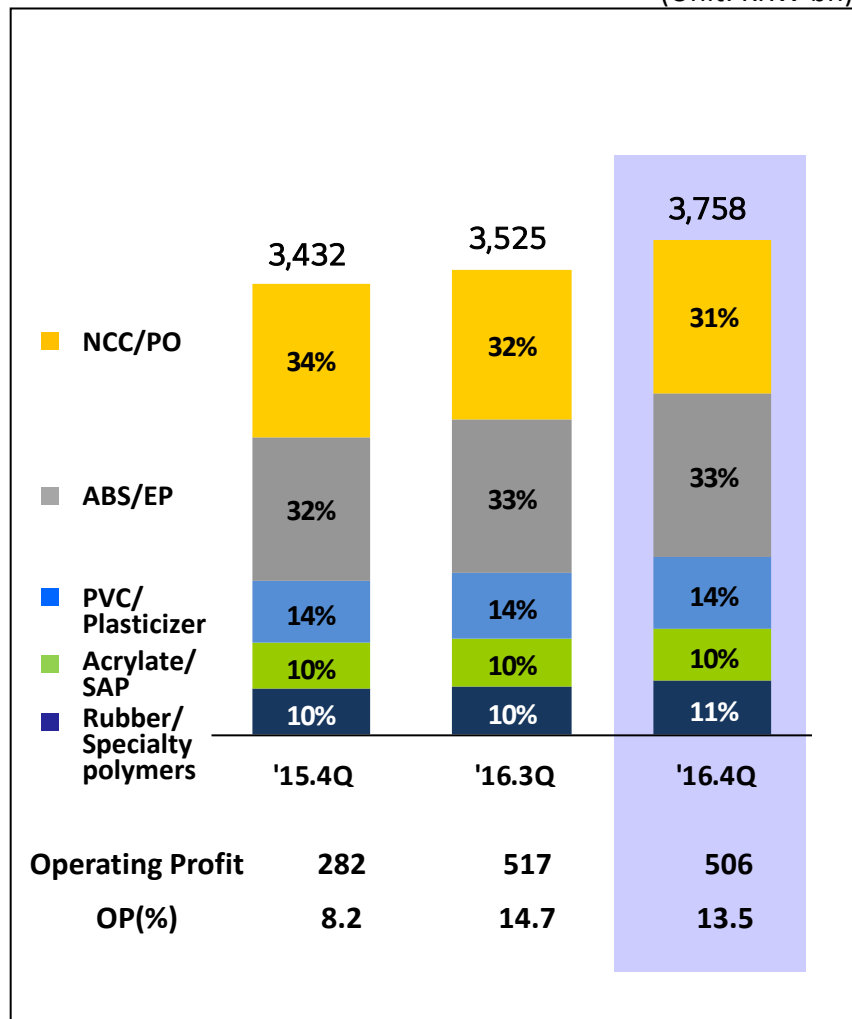
Financial Ratios

Classification	'15 (End)	'16 (End)	Change
Borrowings / Equity (%)	20.3	20.6	0.3%p
Net borrowings/ Equity (%)	-0.3	4.9	5.2%p
Interest Coverage Ratio (x)	31.4	25.9	- 5.5
ROE (%)	9.1	9.4	0.3%p
ROA (%)	6.3	6.6	0.3%p

* Liabilities/Equity ratio excluding Farm Hannong is 41.2%
4.6%p of incremental Liabilities/Equity ratio is the impact from Farm Hannong acquisition

Business results

(Unit: KRW bn)



Analysis

Analysis

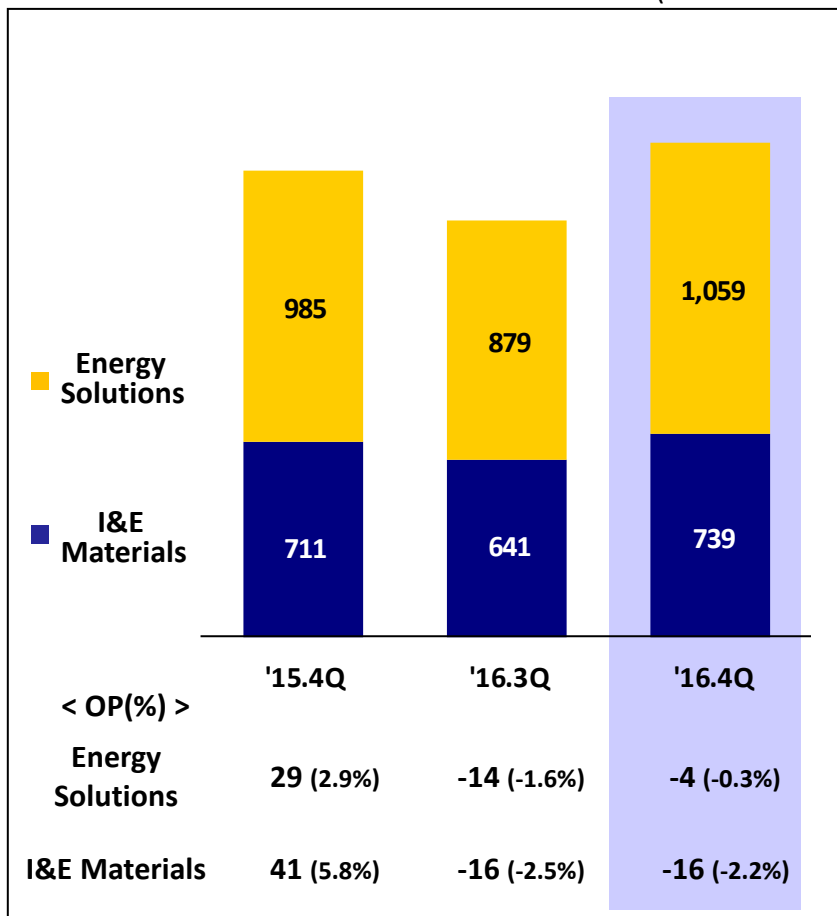
- Firm earnings maintained on the back of customer demand increase due to rise in oil prices and PVC margin expansion driven by coal price rise in China
 - NCC/PO : Profitability maintained by demand increase due to rise in oil prices while product spreads squeezed slightly by the completion of regional T/A
 - ABS/EP : Solid results were generated based on production increase in Automotive industry and pre-stocking demand ahead of Lunar New Year in China
 - PVC/Plasticizer : Earnings improved significantly by PVC price rise due to increased coal price in China and solid demand in India
 - Acrylate/SAP : Profitability declined by intense price competition to secure the supply contract
 - Rubber/Specialty Polymers : Synthetic rubber price rose due to the spike in BD/natural rubber prices and automobile sales growth in China while profitability of specialty polymers dropped by weak seasonality

Outlook

- Both pre-stocking demand ahead of Lunar New Year and tight supply situation will likely drive strong 1Q results. In addition, decent earnings are expected in 2017 thanks to improved profitability based on premium products such as ABS/EP and eco-friendly synthetic rubber despite possible margin decrease in upstream products by mitigated supply tightness

Business results

(Unit: KRW bn)



Analysis

Analysis

- **Energy Solutions** : Quarterly sales exceeded 1tn won and profitability improved on the back of sales increase in small size battery for new application, accelerating sales of 2nd generation EVs and huge volume growth in ESS battery
- **I&E Materials** : Despite sales growth based on front industry turnaround, profitability maintained due to new product development related expenses

Outlook

- **Energy Solutions** : Weak seasonality will have impact on 1Q results, full year profitability will be improved in 2017 thanks to recovery in small size battery and volume growth of large size battery for new EV models and ESS
- **I&E Materials** : Decrease of loss in 1Q and improved performance in 2017 are expected based on cost cut activities for existing businesses, increase in the proportion of large size products and productivity improvement in glass substrates. In addition, development of new growth base including RO filter/ functional film businesses will continue

2017 Business Plan

Business Plan

(Unit: KRW bn)

Classification	'16	'17 Plan	Change
Sales	20,659	22,820	+10.5%
Basic Materials & Chemicals	14,447	15,000	+3.8%
Energy Solutions	3,562	4,260	+19.6%
I&E Materials	2,656	2,850	+7.3%
Life Sciences ¹⁾	532	590	+10.8%
Farm Hannong ²⁾	568	610	+7.5%
Operating Profits	1,992	N/A	N/A
CAPEX	1,977	2,760	+39.6%

1) Life Sciences is included only in 2017 Sales and CAPEX plans

2) Business performances of Farm Hannong have been included since 2Q, 2016

Business Strategy

□ Basic Materials & Chemicals

- Advance business structure based on value-added business and secure competitive feed stocks
- Restructure marginal business preemptively (conversion of manufacturing line from PS to ABS and others)

□ Energy Solutions

- Small size battery: Expedite the change in business structure with new market expansion of cylindrical type and profit improvement of pouch type
- Automotive battery : Maintain a top-tier position of EV contracts and strengthen the global business capability
- ESS : Implement aggressive marketing to strengthen leading position

□ I&E Materials

- Improve the profitability of existing businesses such as polarizer and glass substrates
- Establish growth foundation for nurturing business such as RO filter/ functional film

□ Life Sciences

- Enhance market position of core growth products (diabetes/filler) and establish a growth strategy to maximize the synergy of merger

□ Farm Hannong

- Strengthen differentiated product portfolio of crop protection material/ seed and secure the cost competitiveness of fertilizer

CFO Highlight

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(Unit: KRW bn)

Classification	2015					2016				
	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total
Sales	4,915	5,073	5,178	5,041	20,207	4,874	5,219	5,054	5,512	20,659
Operating Profit	362	563	546	352	1,824	458	612	460	462	1,992
(%)	7.4%	11.1%	10.6%	7.0%	9.0%	9.4%	11.7%	9.1%	8.4%	9.6%
EBITDA	669	871	862	678	3,080	778	949	796	804	3,327
(%)	13.6%	17.2%	16.7%	13.4%	15.2%	16.0%	18.2%	15.8%	14.6%	16.0%
Basic Materials & Chemicals	3,608	3,801	3,792	3,432	14,633	3,512	3,653	3,525	3,758	14,447
NCC / PO	1,134	1,219	1,278	1,167	4,799	1,156	1,221	1,131	1,161	4,669
ABS	920	976	896	817	3,610	877	920	866	948	3,611
EP	289	290	305	275	1,159	298	299	304	308	1,210
PVC / Plasticizer	514	536	499	482	2,032	489	508	496	542	2,035
Acrylate / SAP	400	404	406	344	1,553	345	331	357	391	1,424
Rubber / Specialty Polymer	350	376	407	347	1,480	347	374	370	408	1,499
Operating Profit	321	589	484	282	1,677	466	649	517	506	2,139
(%)	8.9%	15.5%	12.8%	8.2%	11.5%	13.3%	17.8%	14.7%	13.5%	14.8%
Energy Solutions	707	690	769	985	3,150	814	809	879	1,059	3,562
Operating Profit	4	-42	10	29	1	0	-31	-14	-4	-49
(%)	0.6%	-6.1%	1.3%	2.9%	0.0%	0.0%	-3.9%	-1.6%	-0.3%	-1.4%
I&E Materials	676	668	710	711	2,764	627	650	641	739	2,656
Operating Profit	37	17	52	41	146	-8	-15	-16	-16	-55
(%)	5.4%	2.5%	7.3%	5.8%	5.3%	-1.3%	-2.2%	-2.5%	-2.2%	-2.1%
Farm Hannong	250	218	93	67	628	242	189	87	50	568
Operating Profit	47	25	-10	-40	22	39	-2	-20	-31	-15
(%)	18.7%	11.6%	-11.0%	-59.4%	3.5%	15.9%	-1.2%	-23.3%	-61.1%	-2.6%
(Excluding One-off expenses)	47	25	-10	-40	22	49	20	-14	-25	29

※ Business performances of Farm Hannong have been included since 2Q, 2016

(Reference)

(Unit: KRW bn)

Life Sciences	2015					2016				
	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total
Sales	84	104	127	136	451	120	131	135	147	532
Operating Profit	-4	3	19	7	25	17	11	10	9	47
(%)	-4.9%	3.3%	14.9%	5.1%	5.6%	14.3%	8.1%	7.5%	6.4%	8.9%

※ Business performances of Life Sciences will be included in 1Q, 2017

Borrowings

(Unit : KRW bn)

Classification	'15 (End)	'16 (End)
Total (Overseas Subsidiaries)	2,659 (1,292) 100%	2,891 (1,892) 100%
KRW Currency	339 13%	521 18%
C P	300	270
Others	39	252
Foreign Currency	2,320 87%	2,369 82%
Loan	1,287	1,921
Negotiation Borrowings	1,033	449
Short-term (Overseas Subsidiaries)	2,151 (1,018) 81%	2,213 (1,284) 77%
Long-term (Overseas Subsidiaries)	508 (274) 19%	678 (607) 23%

* The % is calculated to total borrowings.

Cash Flow

(Unit: KRW bn)

Classification	'15 (Acc.)	'16 (Acc.)
Beginning Cash	1,769	2,694
Operating/Investing	1,683	524
Net Income	1,824	1,992
Depreciation	1,256	1,335
Working Capital	210	-52
Investing Activities	-1,490	-1,993
Others	-117	-758
Financing	-758	-1,007
Borrowings (Financed & reimbursed)	-275	-606
Dividends paid	-309	-347
Ending Cash	2,694	2,207

CAPEX

(Unit: KRW bn)

Classification		'14 (Acc.)	'15 (Acc.)	'16 (Acc.)
Basic Materials & Chemicals	New / Expansion	395	328	103
	Maintenance	351	385	289
	Total	746	713	392
Energy Solutions	New / Expansion	152	265	365
	Maintenance	138	189	197
	Total	290	454	563
I & E Materials	New / Expansion	285	219	291
	Maintenance	122	141	95
	Total	407	360	385
Common Expenses	New / Expansion	88	133	555
	Maintenance	51	63	82
	Total	139	196	637
Total	New / Expansion	920	945	1,314
	Maintenance	661	778	663
	Total	1,582	1,723	1,977

R&D expenses

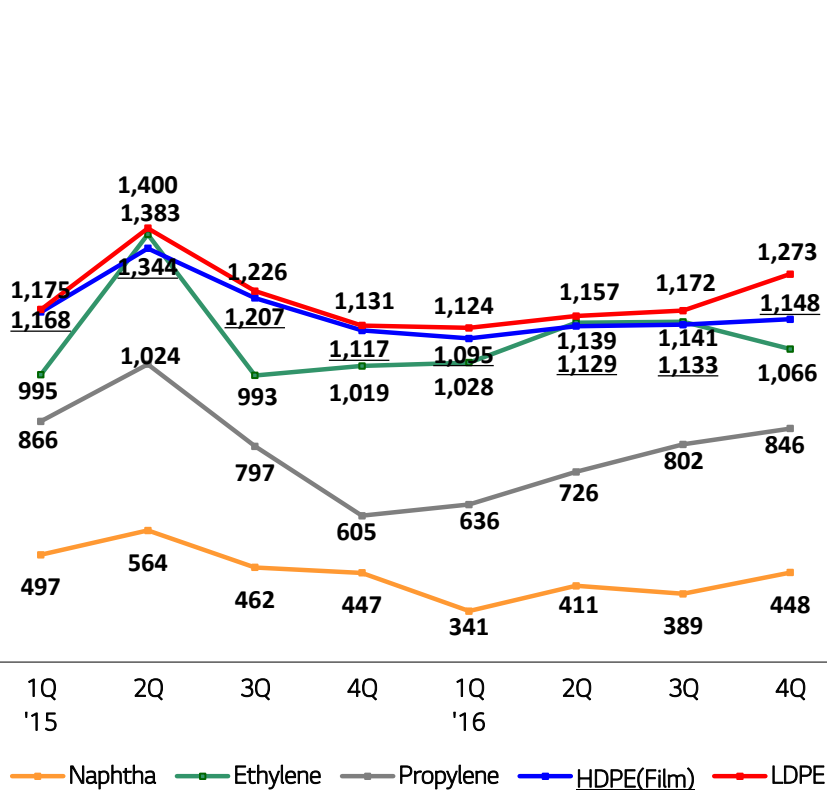
(Unit: KRW bn)

Classification	'14 (Acc.)	'15 (Acc.)	'16 (Acc.)
Basic Materials & Chemicals (% of sales)	111 (0.6%)	132 (0.9%)	150 (1.0%)
Energy Solutions (% of sales)	210 (7.4%)	244 (7.7%)	276 (7.7%)
I & E Materials (% of sales)	130 (4.6%)	146 (5.3%)	161 (6.1%)
Common Expenses	62	72	80
Total (% of sales)	514 (2.3%)	594 (2.9%)	667 (3.2%)

* All R&D costs are expensed in the respective period

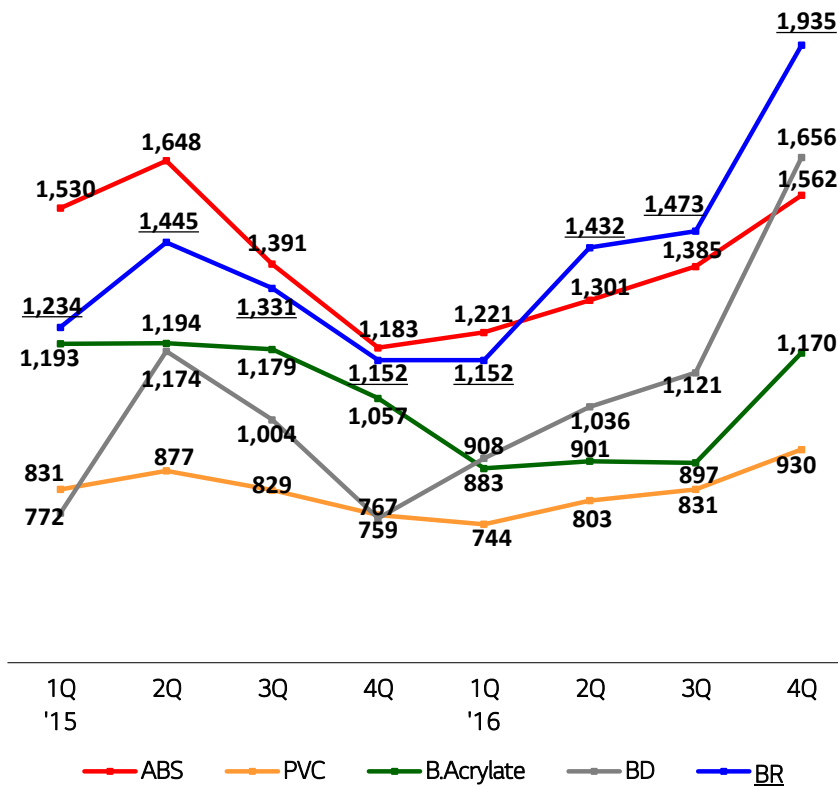
** As of 4Q 2016, more than 50% of Energy solutions R&D expenses were used for EV battery accumulatively

(Unit:USD/MT)



NCC/PO

(Unit:USD/MT)



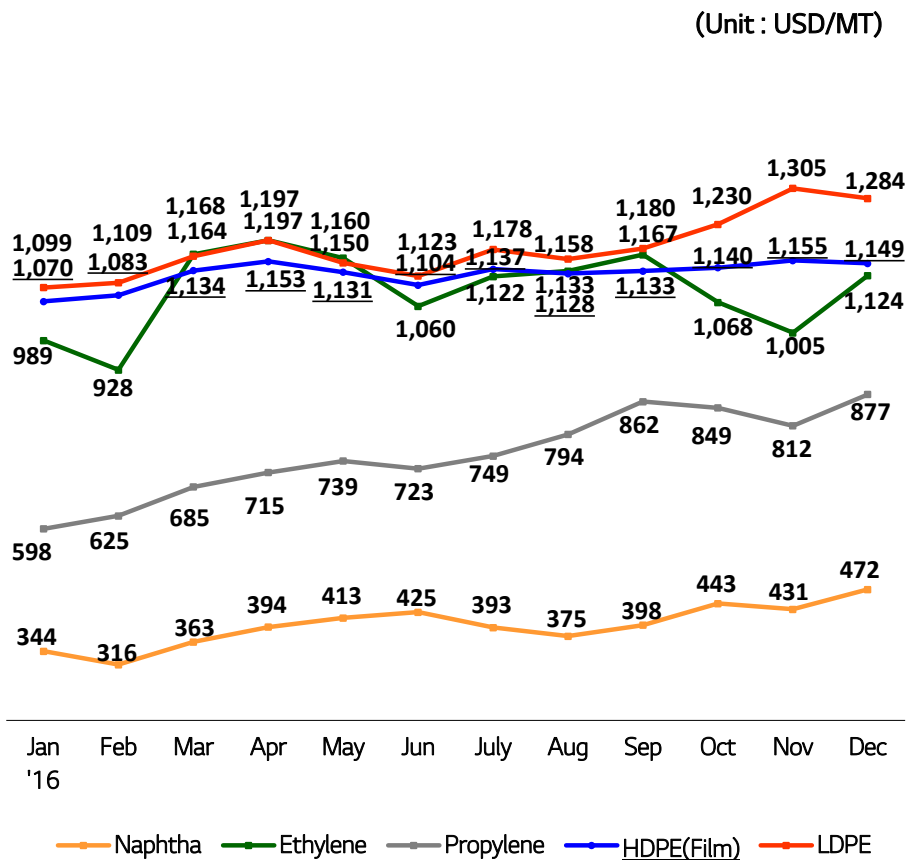
ABS/EP

**PVC/
Plasticizer**

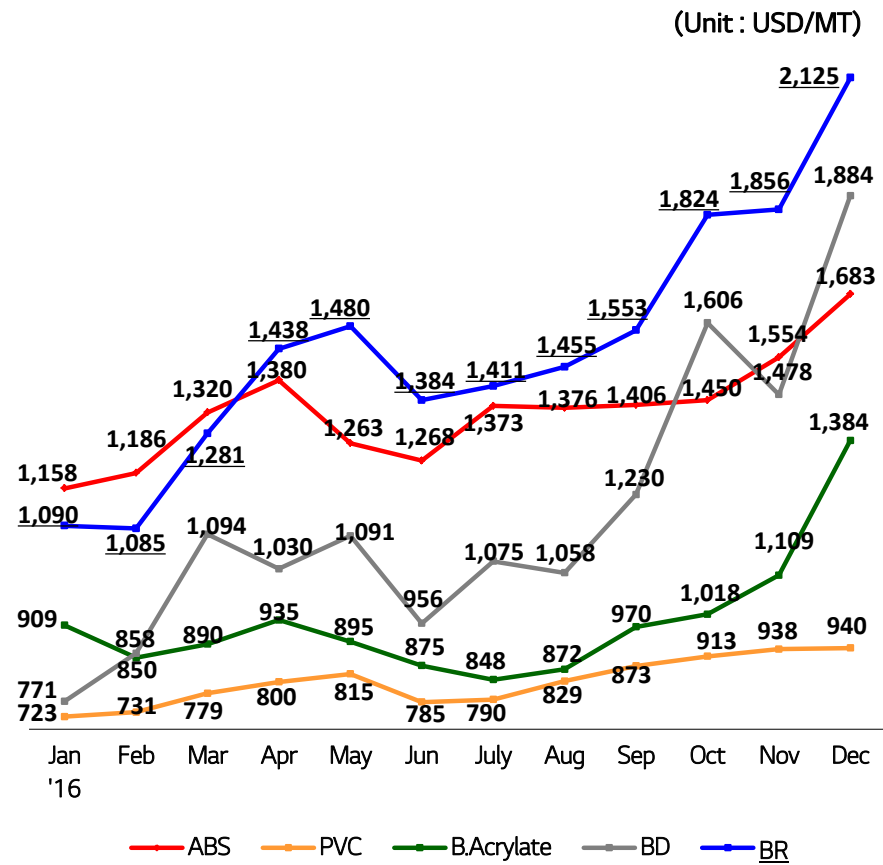
**Acrylate/
SAP**

**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/
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