

A night-time photograph of a large industrial facility, likely a petrochemical plant. The scene is dominated by tall, illuminated distillation columns and a complex network of pipes and structural steel. In the foreground and middle ground, several large, spherical storage tanks are visible, some with labels like 'L.P.G. AT-804A' and 'BOST-GTANK'. The entire facility is brightly lit with artificial lights, creating a high-contrast scene against the dark blue night sky. The lighting produces a starburst effect on many of the light sources.

# INVESTOR RELATIONS 2017

*beyond*  
the best

KUMHO PETROCHEMICAL

Investor Relations 2017

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## 2017 Overview

### Sales & Operating Income

- ❖ Sales increased by 27.6% over the previous year to KRW 5,064.7bn.
- ❖ Operating income increased by 67.2% over the previous year to KRW 262.6bn.

#### Sales

(Unit: KRW bn)



#### Operating Income

(Unit: KRW bn)



(Unit: KRW bn)

	2017	2016	YoY	
			Amount	Rate of change
S a l e s	5,064.7	3,970.4	1,094.3	27.6%
[Synthetic Rubbers]	2,068.1	1,559.2	508.9	32.6%
[Synthetic Resins]	1,205.5	1,035.7	169.8	16.4%
[ O t h e r s ]	1,791.1	1,375.5	415.6	30.2%
P h e n o l Derivatives	1,180.9	859.5	321.4	37.4%
S p e c i a l t y Chemicals	134.7	122.4	12.3	10.0%
E n e r g y	171.4	141.5	29.9	21.1%
O t h e r s	304.1	252.1	52.0	20.6%
Operating Income	262.6	157.1	105.5	67.2%
[ % ]	5.2%	4.0%	1.2%p	-
Income before Income Taxes	289.7	112.9	176.8	156.6%
N e t I n c o m e	213.6	73.2	140.4	191.8%
Equity Income/Losses on Investments	89.1	27.6	61.5	222.8%

✓ Net Income is based on Controlling Interests.

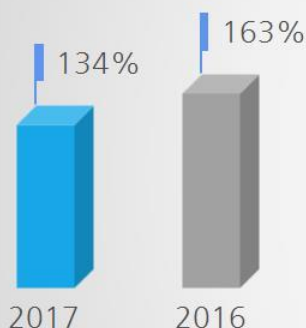


# 2017 Overview

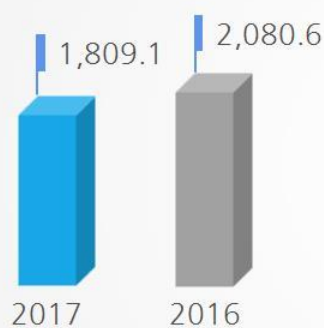
## Financial Structure

- ❖ Interest coverage ratio and total asset turnover ratio increased by reason of improved performance in major businesses.
- ❖ Financial structure improved through a decrease in debt with cash generated from operations.

Debt to Equity Ratio (%)



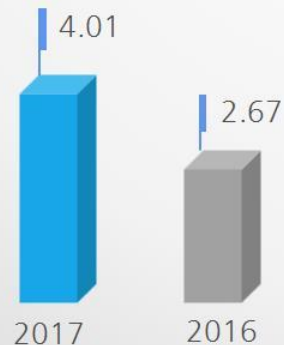
Borrowings (KRW bn)



Total Assets Turnover Ratio



Interest Coverage Ratio



(Unit: KRW bn)

	Unit	2017	2016	YoY	
				Amount	Rate of change
Assets	KRW bn	4,579.8	4,546.1	33.7	0.7%
Liabilities	KRW bn	2,623.0	2,818.2	-195.2	-6.9%
Shareholders' Equity	KRW bn	1,956.8	1,727.9	228.9	13.2%
Controlling Interests		1,842.7	1,619.7	223.0	13.8%
Non-controlling Interests		114.1	108.2	5.9	5.5%
Debt to Equity Ratio	%	134%	163%	-29%p	-
Borrowings	KRW bn	1,809.1	2,080.6	-271.5	-13.0%
Won-denominated		1,387.6	1,547.6	-160.0	-10.3%
Foreign currency-denominated		421.5	533.0	-111.5	-20.9%
Total Assets Turnover Ratio		1.11	0.91	0.20	22.0%
Interest Coverage Ratio		4.01	2.67	1.34	50.2%

# Business Review

## Synthetic Rubbers

40.8%  
of Total sales

Synthetic  
Rubbers

Synthetic  
Resins

Others



- ❖ Sales increased by 32.6% over the previous year to KRW 2,068.1bn.
- ❖ Profitability improved as a result of stable selling price in spite of weak BD price.

### • Weak raw material (BD) price

- Weak BD price resulted from new operations and the shutdown of a downstream maker.

#### ➤ BD Price changes by region

(Unit: USD/ton)

	1Q,'17	2Q,'17	3Q,'17	4Q,'17
Asia	2,712	1,128	1,225	1,105
N. America	2,355	1,481	895	980
Europe	2,127	1,371	883	901

※ Source: ICIS/PLATTS 2017

### • Improvement in profitability of synthetic rubber

- Sustained selling price and wide spread caused by supply reduction despite a drop in BD price.
- Improvement in profitability due to a favorable downstream market such as stable utilization rates of tire makers and the operation of new lines from downstream makers.

(Unit: USD/ton)

	1Q,'17	2Q,'17	3Q,'17	4Q,'17
SBR	2,531	1,723	1,525	1,544
BR	2,985	1,919	1,682	1,731

※ Source: ICIS 2017

## Business Review

### Synthetic Resins

23.8%  
of Total sales

Synthetic  
Rubbers

Synthetic  
Resins

Others

- ❖ Sales increased by 16.4% over the previous year to KRW 1,205.5bn.
- ❖ Slight reduction in profitability resulted from weak demand in the low season.

- **Strong steady trend of raw material (SM)**

- Maintained steady price due to low inventory and upward trend of raw material price even in the low season.

- SM Price changes

(Unit: USD/ton)

	1Q,'17	2Q,'17	3Q,'17	4Q,'17
SM	1,355	1,119	1,236	1,270

※ Source: ICIS 2017

- **A slight drop in profitability of synthetic resins**

- Slackening sales revenue caused by a decrease in sales volume in spite of strong selling price.
- Slight reduction in profitability resulted from weak demand in the low season.

(Unit: USD/ton)

	1Q,'17	2Q,'17	3Q,'17	4Q,'17
PS	1,420	1,250	1,354	1,413
ABS	1,865	1,674	1,893	1,964

※ Source: PLATTS 2017



## Business Review

### Others

35.4%

Of Total sales

Synthetic  
Rubbers

Synthetic  
Resins

Others

- ❖ Sales increased by 30.2 % over the previous year to KRW 1,791.1bn.
- ❖ Phenol derivatives: Enhanced profitability due to improvement in demand and an upward price trend of raw material.
- ❖ Energy: Increased sales revenue and profitability resulted from a hike in the electricity price (SMP).

#### • Phenol derivatives

- Strong benzene price resulted from an upward trend of oil price and favorable demand.
- Expansion of profitability due to an improvement in demand which caused a tight supply.

##### ➤ BZ Price changes

(Unit: USD/ton)

	1Q,'17	2Q,'17	3Q,'17	4Q,'17
BZ	925	769	759	835

※ Source: PLATTS 2017

#### • Energy

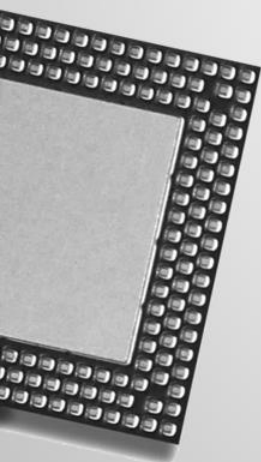
- Growth in sales volume caused by favorable utilization rates of demand-side.
- Improvement in profitability resulted from an upward trend of electricity price (SMP).

##### ➤ SMP Price changes

(Unit: KRW/KW)

	1Q,'17	2Q,'17	3Q,'17	4Q,'17
SMP	89	78	75	81

※ Source: Korea Power Exchange



## 2018 Outlook

BD

- Supply is forecasted to be stable due to new operations in the region; however, a tight supply is expected to be temporary after the 2nd quarter as naphtha crackers have plans to shut down the plants.
- BD price is expected to be gradual upward trend; however, it would be low and stabilized compared to the previous year.

Synthetic  
Rubbers

- More time could be required in the improvement of the over supplied balance while growth rate of tire production is anticipated to be around 3%.
- The price trend is expected to be in line with the movement of raw material price; however, it could be volatile depending on the amount of inventory in the region and currency fluctuations.

SM

- The supply-demand balance is likely to be volatile due to an additional supply in spite of steady demand.
- The price is predicted to be gradually stabilized after strong SM price during the 1st half of the year due to regular maintenance and a peak season in the downstream market.

Synthetic  
Resins

- Demand is expected to grow similar to the prior year because of a favorable market condition.
- Supply is anticipated to increase as a result of new supply additions and the price is predicted to be calm.



## Appendices

### Income Statement

(Unit: KRW bn)

	2017					2016	YoY	
	1Q	2Q	3Q	4Q	Total		Amount	Rate of change
Sales	1,408.2	1,239.1	1,205.1	1,212.3	5,064.7	3,970.4	1,094.3	27.6%
Operating Income	65.7	44.2	57.7	95.0	262.6	157.1	105.5	67.2%
<i>(Operating Margin)</i>	<i>4.7%</i>	<i>3.6%</i>	<i>4.8%</i>	<i>7.8%</i>	<i>5.2%</i>	<i>4.0%</i>	<i>1.2%p</i>	-
Net Interest Expense	-11.1	22.2	15.9	0.6	27.6	67.2	-39.6	-58.9%
Equity Income/Losses on Investments	18.4	21.4	37.7	11.6	89.1	27.6	61.5	222.8%
Income before Income Taxes	88.4	52.8	78.1	70.4	289.7	112.9	176.8	156.6%
<i>(Ordinary Income Margin)</i>	<i>6.3%</i>	<i>4.3%</i>	<i>6.5%</i>	<i>5.8%</i>	<i>5.7%</i>	<i>2.8%</i>	<i>2.9%p</i>	-
Net Income	69.0	36.7	56.5	51.4	213.6	73.2	140.4	191.8%
<i>(Net Income Margin)</i>	<i>4.9%</i>	<i>3.0%</i>	<i>4.7%</i>	<i>4.2%</i>	<i>4.2%</i>	<i>1.8%</i>	<i>2.4%p</i>	-

✓ Net Income is based on Controlling Interests.

## Appendices

### Balance Sheet

(Unit: KRW bn)

구분	2017	2016	YoY	
			Amount	Rate of change
Current Assets	1,332.7	1,255.3	77.4	6.2%
- Cash and Cash Equivalents	234.4	197.0	37.4	19.0%
Non-current Assets	3,247.1	3,290.8	-43.7	-1.3%
Total Assets	4,579.8	4,546.1	33.7	0.7%
Current Liabilities	1,913.9	2,145.6	-231.7	-10.8%
Non-current Liabilities	709.1	672.6	36.5	5.4%
■ Interest bearing Liabilities	1,809.1	2,080.6	-271.5	-13.0%
- Short-term Debts	1,226.0	1,521.1	-295.1	-19.4%
- Long-term Debts	583.1	559.5	23.6	4.2%
■ Non-interest bearing Liabilities	813.9	737.6	76.3	10.3%
Total Liabilities	2,623.0	2,818.2	-195.2	-6.9%
Common & Preferred Stock	167.5	167.5	-	-
Total Shareholders' Equity	1,956.8	1,727.9	228.9	13.2%
Net Debt to Asset Ratio	34.4%	41.4%	-7.0%p	-
Long-term Debts to Total Debts Ratio	32.2%	26.9%	5.3%p	-
Current Ratio	69.6%	58.5%	11.1%p	-
Debt to Equity Ratio	134.0%	163.1%	-29.1%p	-

## Appendices

### Production Capacity (KKPC)

	Product		Capa.	Unit	Note
Synthetic Rubbers	BR	SBR	384,000	MT/Y	
		HBR	290,000		
		LBR	45,000		
	S-SBR		63,000		
	NdBR		60,000		
	NBR		87,000		
	HSR		10,000		
	NB Latex		400,000		
	SB Latex		82,800		
	SBS		75,000		
	Total		1,496,800		
Synthetic Resins	PS		230,000	MT/Y	Completion of Expansion: 16,000MT/Y, 1H,'18
	ABS		250,000		
	SAN/Pwd.		145,000		
	EPS		80,000		
	PPG		141,000		
	Total		846,000		
Specialty Chemicals	Antioxidants		83,500	MT/Y	
Energy	Steam		1,710	T/H	
	Electricity		300	MWH	
BD	Ulsan		90,000	MT/Y	
	Yeosu		147,000		
	Total		237,000		

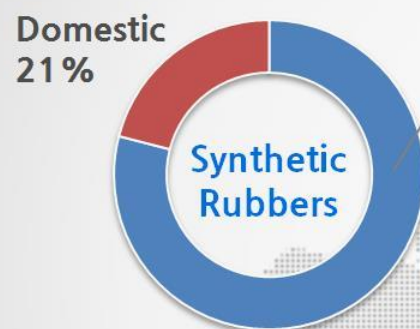


## Appendices

Production Capacity (Affiliates)		Product	Capa.	Unit	Note
	Kumho P&B Chemicals	Phenol	680,000	MT/Y	
		Acetone	420,000		
		MIBK	60,000		
		Cumene	900,000		
		BPA	450,000		
		Epoxy Resin	135,000		Completion of Expansion: 17,000MT/Y, 1H,'18
		Total	2,645,000		
	Kumho Mitsui Chemicals	MDI	350,000	MT/Y	Completion of Expansion: 100,000MT/Y, 2H,'17
		Aniline	2,000		
		Total	352,000		
	Kumho Polychem	EP(D)M	220,000	MT/Y	
		TPV/KEPA	12,000		Completion of Expansion: TPV 5,000MT/Y, 4Q,'17
		Total	232,000		

## Appendices

### Sales Breakdown & Export Share by Region



Export  
79%

49%

20%

14%

8%

8%

1%

S.E. Asia

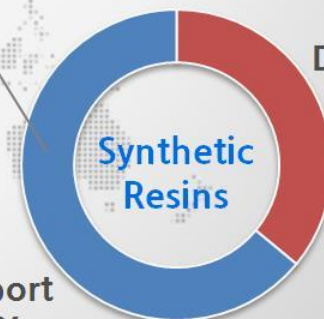
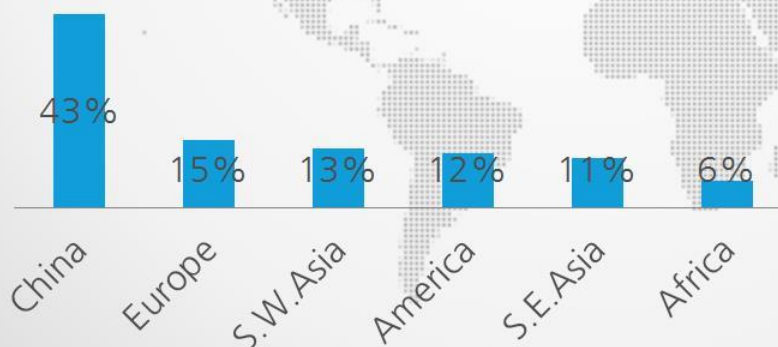
China

S.W. Asia

America

Europe

Others



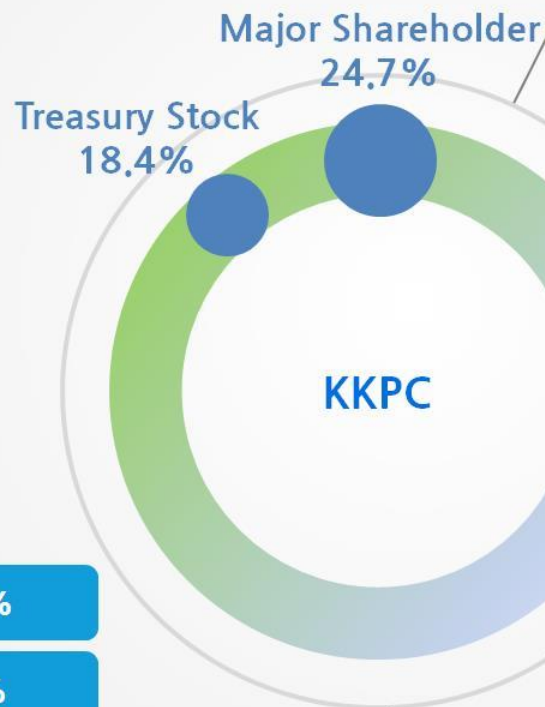
Domestic  
36%

Export  
64%

## Appendices

### Investment Shares & Asset available for sale

✓ As of 31<sup>st</sup> Dec 2017,  
based on common shares



### Investments in Affiliates

Kumho P&B Chemicals 78.2%

Kumho Mitsui Chemicals 50.0%

Kumho Polychem 50.0%

Kumho Terminal & Logistics 95.0%

Korea Energy Power Plant 96.1%

Asiana Airlines 12.0%

Daewoo E&C 3.4%

KDB Life Insurance 0.9%

Asset available for sale



Q & A