

# Market Outlook

Despite challenging market trends, such as the collapse of the global oil price due to over-supply and the slowing of Chinese economy, SK innovation has successfully reformed its business through a global partnering strategy with international chemical corporates, such as SABIC, Repsol and SINOPEC. We have also competitively positioned ourselves for further growth by bolstering our market leadership and share in the domestic energy market, expanding battery production lines and enhancing our North America's E&P business. In 2015, we turned our business around, recording stellar consolidated sales of 48.3565 trillion KRW and a business profit of 1.9796 trillion KRW and creating a solid foundation to further increase corporate value.

## E&P Business



### Oil Price Trends

After reaching its peak at \$115/barrel in June 2014, the Brent oil price continuously plummeted to hit a low of \$26/barrel in January 2016. The supply of oil continues to exceed demand as the non-OECD member countries produced more oil and gas with unconventional methods and the OECD members maintained production levels to retain their market share. In addition, political unrest in Northern Africa and the Middle East, stemming from civil war and Islamic militant groups, are further fueling the volatility of the oil and gas industry.

### Major Industry Trends

The North America's oil production surge led by unconventional energy sources, including oil sand and shale gas, as well as changes in the industry have triggered the current low oil price. The subdued oil price trend has negatively affected the profitability of high-cost projects, such as development of deep-water oil fields, LNG and polar oil fields. Many companies are scaling down or suspending their investments in these areas and focusing on profitability of their asset portfolio.

## Petroleum Business



### Petroleum Products Consumption Trend

Although the US economy gradually recovered in 2015, market conditions remained challenging due to prolonged low oil prices from the oversupply and the slowdown of Chinese economy. Nevertheless, demand for gasoline, diesel and jet fuel increased due to an increase in the number of registered cars and demand for air travel. Furthermore, lower oil prices drove up demands for intermediate crude and heating kerosene, leading to a 5.9% accumulated increase for domestic petroleum products.

## Petrochemical Business



### Trends in the Basic Chemical Business

When the Chinese government implemented economic stimulus measures in 2009, it seemed that the petrochem market condition would recover. However, detrimental factors such as financial crisis in the Euro Zone and delays in the global economic recovery have caused prolonged market volatility. Production and consumption growth of unconventional low-cost feedstocks, such as shale gas and coal, is also expected to act as a major market variable.

### Trends in the Chemical Material Industry

The chemical material industry provides raw materials to the automobiles, electronics, construc-

## Domestic Demand in 2015 by Oil Type

(unit: MB/D)

Category	Gasoline	Kerosene	Diesel	Intermediate Crude	Aircraft Fuel	LPG	Asphalt	Total
2015	210	44	428	105	94	245	28	<b>1,154</b>
Year-on-Year	4.2%	5.2%	7.9%	15.3%	7.5%	(0.3%)	9.7%	<b>5.9%</b>

## Accumulated Consumption by Oil Type

(unit: 1,000 Barrel)

Category	Gasoline	Kerosene	Diesel	Bunker Fuel	Naphtha	LPG	Others	Overall
2014	73,475	15,414	144,755	31,094	396,979	89,674	70,701	<b>822,092</b>
2015	76,570	16,230	156,354	35,903	411,598	89,295	69,111	<b>855,061</b>
Changes	4.21%	5.29%	8.01%	15.47%	3.68%	-0.42%	-2.25%	<b>4.01%</b>

\*based on 2015 annual report

## Lubricant Business



tion, pharmaceutical, and apparel industries, rendering it sensitive to business fluctuations. China's demand, which has been burgeoning as rapidly as its economy, has fueled growth in the chemical material industry. China has become more self-sufficient, which, however, has caused competition in the market to intensify. As such, many chemical companies are expanding into other emerging markets, such as South America, South east Asia and India.

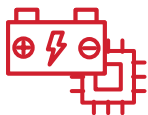
### Domestic and International Competitor Trends

With four domestic refineries with refining and enhancement facilities producing lubricant base oils, supply exceeds demand, and the majority of these products are being exported to the Americas, Europe and other Asian countries. As other major oil companies including Shell, ExxonMobil, BP, Chevron and Total dominate the finished lubricants markets, Korean companies face an increasingly uphill battle to expand into and compete in new markets.

### Domestic and International Market Trends

Demand has varied depending on the type and quality of lubricant base oils and lubricant products. Demand as well as market share for API Group I base oil with comparatively inferior performance is slowing down, while demand for premium base oils, such as API Group II (high quality mineral oil) and API Group III (synthetic mineral oil) is growing rapidly due to environmental regulations.

## Battery and I/E Material Business



### Trends in Mid to Large Sized Battery Industry

The mid to large-size battery industry produces and sells large capacity lithium-ion batteries used in electric vehicles (EVs) and Energy Storage Systems (ESS<sup>(1)</sup>). With stricter environmental regulations around the world and the growing importance of energy security<sup>(2)</sup>, interest in ESS - which can stabilize the output of eco-friendly EVs and renewable energy sources like solar and wind - is increasing, leading to expectations that this market is poised to expand and grow rapidly.

### Trends in the Information & Electronics Material Industry

Our I/E material business is comprised of circuit materials including Lithium-ion Battery Separator (LiBS) and Flexible Cooper Clad Laminate (FCCL). As the key component that splits the positive and negative terminals within a lithium-ion battery and provides a corridor for ion, the LiBS market is steadily growing along with the battery market. FCCL is an important material for flexible circuit board technology and its demand rises as IT devices become smaller and more high-tech. Recent oversupply has intensified competition amongst manufacturers, but the situation is forecasted to improve as the market continues to grow.

(1) **ESS:** Energy Storage System temporarily captures mass produced electricity to be used later when needed.

(2) **Energy Security:** A concept explaining the importance of a stable and rational supply of energy as it is interlinked with safety and all economic activity.