MANAGEMENT'S DISCUSSION AND ANALYSIS

Analysis of Operating Results

Overview of FY ended March 2016

In the year under review, among JSR Group's main customer industries, automobile tire production and automobile production rose slightly above the previous year's level globally; domestic tire production was sluggish; demand for semiconductor production stagnated; the flat panel display (FPD) market slowed down rapidly due to a major production adjustment toward the latter half of the year; and the yen strengthened at the end of the year.

Amid these circumstances, the Petrochemicals Business of JSR Group saw significant growth in sales of Solution Styrene-Butadiene Rubber (SSBR) for fuel-efficient tires in the Elastomers Business, while other elastomers sales were largely impacted by sluggish domestic tire production, its main customer industry. In addition, the supply-demand balance failed to improve in East Asia due to excessive supply of elastomers coupled with stagnant growth in demand, which resulted in continued weakness of the elastomer products market. Thus, net sales of the Petrochemicals Business as a whole decreased from the previous year. Although operating income of the plastics Business increased on the back of improved profitability, it failed to offset the decline in operating income of the Elastomers Business, which led to a drop in operating income of the entire Petrochemicals Business from the previous year. The Fine Chemicals and Other Products Business saw a substantial increase in net sales from the previous year's level due to a significant rise in sales in the life sciences area of the strategic businesses field, despite a plunge in sales of the fine chemicals business from the previous year's level due to the weakness of the semiconductor market and the impact of a rapid slowdown of the FPD market in the latter half of the year. Operating income of the Fine Chemicals and Other Products Business fell below the previous year's level, as it was significantly affected by the drop in sales of the Fine Chemicals business. Ordinary income fell short of the previous year's level due to the impact of the drop in operating income and the increase in exchange losses in dollar denominated borrowings by a Thailand group company owing to the weakness of the baht, despite an increase in earnings of affiliates in the Petrochemicals Business. Profit attributable to owners of parent fell below the previous year's level due to extraordinary losses recorded at a Group company that manufactures and sells Lithium Ion Capacitor.

Financial results for FY ended March 2016 consist of net sales of ¥386,709 million (down 4.3% year on year), operating income of ¥34,408 million (down 9.6%), and profit attributable to owners of parent of ¥24,068 million (down 19.6%).

Review of Operations

Elastomers Business Segment

The production of automobile tires, one of the segment's main customer industries, increased from the previous year in North America, China, and Europe, while it fell below the previous year's level in Japan.

Under these conditions, with regard to the sales of synthetic rubbers, the sales volume of SSBR rose substantially on the back of the full-scale operation of SSBR at JSR BST Elastomer Co., Ltd. (JBE), a joint venture company in Thailand. However, the total sales volume of elastomers decreased from the previous year due in part to the drop in domestic production of automobile tires. Net sales fell below the previous year's level due to a decline in product prices on the back of a drop in raw material prices, as well as a decrease in sales volume. In addition, operating income dropped from the previous year due to a failure of improvement in margins (the difference between the selling price and major raw material prices), owing to the continued weakness of synthetic rubber prices on the back of excessive supply, as well as a drop in sales volume.

As a result, the Elastomers Business segment had net sales of ¥179,253 million (down 9.9% year on year) and operating income of ¥7,492 million (down 30.2%).

Plastics Business Segment

The production of automobiles, one of the segment's main customer industries, increased from the previous year in North America, China,

Segment Sales/Operating Income (¥ millions)

Years ended March 31	2012	2013	2014	2015	2016
Elastomers Business	¥180,835	¥195,797	¥203,478	¥198,958	**¥179,253**
Operating income	19,358	17,923	17,330	10,736	**7,492**
Plastics Business	51,236	51,759	57,764	55,161	**52,207**
Operating income	2,138	2,962	3,919	2,842	**5,114**
Fine Chemicals and Other Products Business	117,876	123,931	133,067	149,954	**155,250**
Operating income	14,468	14,321	14,813	24,490	**21,803**
Net Sales	349,947	371,487	394,309	404,073	**386,709**
Operating income	¥ 35,964	¥ 35,206	¥ 36,062	¥ 38,068	**¥34,409**

and Europe, while it fell below the previous year's level in Japan.

Under these conditions, the sales volume of plastics products rose from the previous year due to an increase in sales of automobiles both in Japan and abroad, despite a year-on-year fall in automobile production in Japan, as well as robust sales for industrial material applications, mainly in miscellaneous goods. Net sales declined from the previous year as the increase in sales volume was not sufficient to make up for a fall in product prices owing to the drop in raw material costs. Operating income saw a year-on-year rise due to a recovery in profitability and an increase in sales volume.

As a result, the Plastics Business segment had net sales of ¥52,207 million (down 5.4% year on year) and operating income of ¥5,114 million yen (up 80.0%).

Fine Chemicals and Other Products Business Segment

Net sales rose from the previous year, but operating income fell below that of the previous year in the Fine Chemicals and Other Products Business segment as a whole.

In the semiconductor materials business, sales dropped from the previous year due to sluggish growth of semiconductor demand as demand for smartphones weakened, in addition to sluggish demand for materials, since FY ended March 2016 coincided with the transition of the cutting-edge generation from 20nm to the next generation 14–16nm. In the display materials business, sales decreased from the previous year on the back of a rapid slowdown in demand for materials used in larger-size TVs and multi-functional mobile terminals in the latter half of the year, in addition to a notable drop in unit selling prices due to intensified competition in the materials market. In strategic businesses, sales in the life sciences area rose substantially owing to the effect of the two newly consolidated group companies.

As a result, the Fine Chemicals and Other Products Business segment had net sales of ¥155,250 million (up 3.5% year on year) and operating income of ¥21,803 million (down 11.0%).

Business Outlook for FY ending March 2017

JSR Group's FY ending March 2017 outlook for its main customer industries is as follows. The Company forecasts that the production of automobile tires and automobiles in Japan will remain unchanged from the previous year, but will grow globally. In particular, China and ASEAN are expected to see an increase, while Europe and North America are also expected to see a rise. Demand in the semiconductor market is likely to recover from the previous year's negative growth on the back of an expected increase in new demand for cutting-edge semiconductor chips such as for the use of big data. The outlook of the FPD market is unclear, although production of small- and medium-size panels for multi-functional mobile terminals is expected to recover, and the Chinese market is likely to continue growing.

In the Elastomers Business, although demand is expected to expand on a global basis compared to the previous year, substantial improvement in relative profitability cannot be expected, since excessive supply of synthetic rubber and butadiene is likely to continue especially in East Asia, while cheap naphtha prices are expected to continue. Under such circumstances, demand for SSBR is expected to grow steadily due to the growth of the fuel-efficient tire market. The Company will strive to expand sales globally by commencing commercial operation of the newly launched second phase facilities of our new plant in Thailand by the second half of the year, in addition to the first phase facilities, which have begun full-scale operation.

In the Fine Chemicals and Other Products Business, we will endeavor to increase sales of various semiconductor materials such as cutting-edge lithography materials, in which we have a large market share, packaging materials and CMP materials, amid the expected full-scale mass production of the 14–16nm generations, a cutting-edge process. JSR will also strive to increase sales of display materials by starting operation of the production facilities of JSR Micro (Changshu) Co., Ltd., a joint venture manufacturing company in China where growth is particularly expected, in addition to existing efforts.

The exchange rate is expected to be a strain on earnings as we forecast a stronger yen compared to the previous year. For the year ending March 31, 2017, JSR forecasts consolidated net sales of ¥395,000 million (up 2.1% year-on-year), operating income of ¥35,000 million (up 1.7%), and profit attributable to owners of parent of ¥24,500 million (up 1.8%). These forecasts assume an exchange rate of ¥110 per U.S. dollar and a naphtha price of ¥40,000 per kiloliter.

Analysis of Financial Position

Total assets at the fiscal year ended on March 31, 2016, amounted to ¥516,360 million, down ¥18,232 million from a year earlier.

Current assets totaled ¥300,532 million, down ¥18,864 million, due to a decrease in securities and notes and accounts receivable-trade, despite an increase in cash and deposits.

Non-current assets totaled ¥215,827 million, up ¥631 million, due to an increase in long-term loans receivable and an increase in goodwill as we made an equity method affiliate a subsidiary.

Total liabilities amounted to ¥154,006 million, down ¥15,912 million from a year earlier, due to a decrease in notes and accounts payable—trade.

Total net assets amounted to ¥362,354 million, down ¥2,320 million from a year earlier.

Analysis of Cash Flows

Cash and cash equivalents as of March 31, 2016 stood at ¥89,395 million, up ¥11,488 million from a year earlier.

Net cash provided by operating activities amounted to ¥48,128 million, down ¥3,352 million from the previous year. The main factors included profit before income taxes of ¥27,367 million, depreciation and amortization of ¥18,508 million, a decrease in notes and accounts payable of ¥17,160 million, and income taxes paid of ¥10,210 million.

Net cash used in investing activities totaled ¥19,038 million, down 35,798 million from the previous year. The main factors were ¥27,052 million in the purchase of non-current assets, ¥7,998 million in proceeds from a decrease in time deposits, ¥6,025 million in the purchase of shares of subsidiaries and associates, and ¥5,266 million in payments of loans receivable.

Net cash used in financing activities was ¥16,260 million, up ¥3,901 million from the previous year. The main factors were ¥10,242 million in cash dividends paid, ¥8,998 million in the purchase of treasury stock, and ¥7,373 million in proceeds from long-term loans payable.

Profit Appropriation

With respect to profit appropriation, the Company regards business growth over the long term as its top priority. To generate sustainable long-term growth, the Company strives to increase its competitiveness by developing new businesses through the reinforcement of research and development activities.

The Company will appropriate profits by taking into account business performance and medium- to long-term demand for funds, while paying continuous, stable cash dividends based on consideration of a balance between appropriating profits and retaining earnings necessary for future business advancement.

Carefully considering the stock market environment, the Company will responsively and adaptively purchase treasury shares to complement dividend payments as a measure to return profits to shareholders. JSR allocates retained earnings to a variety of investments linked to future growth businesses, contributing to the enhancement of corporate value. During the period of the mid-term business plan JSR20i6 (“JSR twenty-sixteen”), the Company will strive to raise the ratio of return to shareholders including both share buybacks and cash dividends, of 50% or greater.

In accordance with this policy, we have decided to pay a year-end dividend of ¥25 per share, the same amount as the interim dividend. Including the interim dividend already paid, the total annual dividend for FY ened March 2016 will be ¥50 per share. With regard to the dividend for the next fiscal year (FY ending March 2017), JSR plans to pay ¥50 per year, consisting of an interim dividend of ¥25 and a year-end dividend of ¥25.

Risk Information

JSR Group is exposed to the following risks that may impact on operating results, financial position, cash flows and other aspects of performance. Forward-looking statements in this discussion are based on JSR’s judgments as of March 31, 2016. Risks at JSR include, but are not limited to, the following items:

(1) Changes in Demand due to Economic Trends

In the major industries where JSR Group’s products are sold, such as automobiles and electronics, demand is influenced by the economic climate in a country or region. An economic slowdown could reduce demand in an industry and adversely affect JSR Group’s operating results.

(2) Fluctuation in Prices for Crude Oil, Naphtha and Other Major Raw Materials

Higher prices for crude oil and naphtha, or changes in the markets for JSR’s major raw materials, could raise prices of raw materials and adversely affect JSR Group’s operating results, especially in the petrochemical products sector of elastomers, emulsions and plastics.

(3) Fluctuation in Exchange Rates

As JSR Group undertakes product exports in foreign currencies and imports goods such as raw materials, the Company takes measures to reduce risks such as entering into forward exchange contracts; however, fluctuation in exchange rates could give rise to adverse outcomes. In addition, operating results of consolidated subsidiaries and equity-method affiliates located overseas are converted into Japanese yen amounts for the purposes of preparing the consolidated financial statements. However, due to the yen’s appreciation, JSR Group’s business results could be adversely affected.

(4) Procurement of Raw Materials

JSR Group works to ensure a stable supply of raw materials by procuring materials from a number of sources. However, an interruption to the supply of raw materials due to an accident, bankruptcy or quality problem at a supplier could adversely affect production activities and JSR Group's operating results.

(5) Development of New Products

Rapid technological progress is constantly taking place in the electronics industry, which is the primary source of demand for semiconductor manufacturing materials, FPD materials and optical materials, the major products of JSR Group's fine chemicals and other products business. JSR is constantly working on developing state-of-the-art materials in line with this progress. However, unforeseen changes in the industry or market could prevent the timely development of new products and adversely affect JSR Group's operating results.

(6) R&D Involving Next-Stage Growth Businesses

JSR Group makes substantial investments in R&D to create next-stage growth businesses. However, there is no guarantee that these R&D activities will always yield worthwhile results. Depending on R&D results, there could be an adverse effect on JSR Group's operating results.

(7) Protection of Intellectual Property

Protection of intellectual property is extremely important for JSR Group's business activities. JSR has established a system for protecting its intellectual property and takes various actions as required. However, a dispute about intellectual property with another company or an infringement on JSR's intellectual property by another company could adversely affect JSR Group's operating results.

(8) Product Quality Assurance and Product Liability

JSR Group has a product quality assurance system and product liability insurance. However, damage or injury caused by a product manufactured by JSR Group could adversely affect JSR Group's operating results.

(9) Natural Disasters and Accidents

To minimize the negative effect on its business activities of any disruption to manufacturing activities, all JSR Group manufacturing facilities have established countermeasures based on the identification of all potential sources of a crisis and conducts periodic inspections of facilities. The Group also works constantly on safety measures with regard to earthquakes and other natural disasters. However, a major natural disaster or accident that damages a production facility or disrupts manufacturing could adversely affect JSR Group's operating results.

JSR's main production facility, the Yokkaichi Plant, houses private power generation equipment, and the Kashima Plant is able to access electric power from shared power generation facilities when necessary. In the event that electric power shortages become severe due to natural disasters and the like, however, JSR Group's operating results could be affected.

(10) Environmental Issues

Positioning environmental protection as an important element of its operations, JSR Group complies with all laws and regulations concerning the environment. The Group also takes actions aimed at reducing its environmental impact, lowering and eliminating waste materials, and cutting energy and resource consumption. The Group has taken many actions to prevent the external release of all types of chemicals.

However, in the event that a spill occurs or that environmental regulations become stricter, the Group's business activities could be restricted, the Group may have to pay compensation and other expenses, or the Group may have to make substantial capital expenditures. Any of these events could adversely affect JSR Group's operating results.

(11) Overseas Operations

JSR Group is aggressively expanding operations on a global scale, conducting manufacturing, sales and other activities in countries and regions in the North America, Europe, Asia and other parts of the world. Overseas operations are exposed to a number of risks that include, but are not limited to, an unfavorable political environment or economic trends; labor disputes and other problems due to differences in labor laws and other working conditions; difficulty in recruiting and retaining employees; an adverse impact on business activities due to an inadequate social infrastructure; and the impact of wars, terrorism and other social instability. Any of these events could adversely affect JSR Group's operating results.

(12) Laws and Regulations

In the countries where it operates, JSR Group is subject to various laws and regulations involving business and investment permits, export and import activities, trade, labor relations, intellectual property, taxes, foreign exchange and other items. The Group has established a clear compliance policy in order to ensure strict observance of laws and regulations as well as ethical standards. In the event that a law or regulation is violated, or a law or regulation becomes stricter or is significantly altered, there could be limitations to the Group's business activities or additional compliance costs. Any of these events could adversely affect JSR Group's operating results.

(13) Litigation

In conjunction with its business activities in Japan and overseas, JSR Group may be sued or be involved in other litigation concerning a dispute with a supplier, customer or other external party. The outcome of significant litigation could adversely affect JSR Group's operating results.