

# Management's Discussion and Analysis

## 1. Results of Operations

### 1) Net Sales & Operating Income

- (1) In fiscal 2019, MGC Group posted consolidated net sales of ¥613,344 million, a year-on-year decrease of 5.5%, and consolidated operating income of ¥34,260 million, a year-on-year decrease of 17.2%.
- (2) Group operating income also fell year on year, despite an increase in the sales volume of optical resin polymer and that of BT materials for semiconductor packaging, due to drops in market prices for such products as polycarbonates, purified isophthalic acid and methanol.

### 2) Non-Operating Revenue

The Group posted non-operating revenue of ¥19,162 million, a year-on-year decrease of 48.4%. This was primarily due to the decrease in equity in earnings of affiliates.

Non-operating expenses were ¥19,079 million, a year-on-year increase of 101.1%. This was primarily due to the increase in Loss on tax purpose reduction entry of non-current assets.

As a result, net income attributable to owners of the parent was ¥21,158 million, a year-on-year decrease of 61.5%.

### 3) Dividend

The year-end dividend payout for FY2019 was ¥35 per share. Since the interim dividend payout was ¥35, the annual dividend for FY2019 is ¥70 per share.

## 2. Segment Information

### 1) Natural Gas Chemicals

- (1) Net sales in the natural gas chemicals segment were ¥157,158 million, a year-on-year decrease of 13.0%, and segment loss was ¥5,711 million.
- (2) The methanol business saw decreases in both net sales and earnings due to a decrease in market prices compared with the previous year.

Methanol and ammonia-based chemicals posted a decrease in earnings compared with the previous fiscal year due to lower market prices of MMA and neopentyl glycol.

Despite higher crude oil sales volume, results for crude oil and other energy sources remained virtually unchanged from the previous fiscal year, reflecting such factors as plunges in crude oil prices.

### 2) Aromatics Chemicals

- (1) Net sales in the aromatics chemicals segment were ¥200,174 million, a year-on-year decrease of 5.2%, and segment income was ¥10,470 million, a year-on-year decrease of 25.0%.

- (2) Specialty aromatic chemical products posted a decrease in earnings from the previous fiscal year as demand for meta-xylenediamine became weaker in the fourth quarter, despite growing sales volume of aromatic aldehydes.

General-purpose aromatic chemical products suffered decreases in net sales and earnings compared with the previous fiscal year. Negative factors included lower sales prices of purified isophthalic acid and meta-xylene.

Foamed plastics suffered a year-on-year decline in earnings, primarily due to weak demand and a rise in fixed costs associated with the construction of production systems to meet new demand.

### 3) Specialty Chemicals

- (1) Net sales in the specialty chemicals segment were ¥200,396 million, a year-on-year decrease of 2.1%, and segment income was ¥22,329 million, a year-on-year decrease of 20.8%.
- (2) Inorganic chemicals posted lower earnings compared with the previous year, despite growth in the sales volume of chemicals for use in semiconductor manufacturing. This was primarily due to higher fixed costs in connection with the launch of a new production facility for super-pure hydrogen peroxide in North America, deterioration in the profitability of hydrogen peroxide and a decline in the sales volume of chemicals for use in liquid crystal display production.

Earnings from the engineering plastics business stayed virtually unchanged from the previous fiscal year. While market prices for polycarbonates declined significantly from the previous year, optical polymer sales volumes increased due to the growing use of multiple camera lenses in smartphones and the execution of measures to enhance production capacity.

### 4) Information & Advanced Materials

- (1) Net sales in the information & advanced materials segment were ¥54,716 million, a year-on-year increase of 5.3%, and segment income was ¥5,846 million, a year-on-year increase of 30.5%.
- (2) Electronic materials saw increases in net sales and earnings. This was mainly attributable to overall recovery of demand in contrast with stagnation in the latter half of the previous fiscal year, the performance of products used in smartphones and memory devices that have been supported by growth in demand from the third quarter onward, and higher sales volumes of BT materials for semiconductor packaging, the core product category for electronic materials.

Oxygen absorbers such as AGELESS™ posted a decrease in earnings compared with the previous year. This was due mainly to a downturn in showings of

those sold in Japan for use in confectionary packages, reflecting the impact of natural disasters and the novel coronavirus pandemic.

### 5) Other

Net sales in the other business segment were ¥898 million, a year-on-year increase of 30.8%, and segment income was ¥8 million, a year-on-year decrease of 98.1%.

## 3. Financial Position

- (1) As of March 31, 2020, total consolidated assets were ¥771.7 billion, ¥32.3 billion lower than at the end of the previous fiscal year.
- (2) Current assets decreased by ¥20.1 billion to ¥358.6 billion. The main causes were decreases in cash and deposits and trade notes and accounts receivable.
- (3) Noncurrent assets decreased by ¥12.1 billion to ¥413.0 billion primarily due to a decrease in investment securities.
- (4) Total liabilities decreased by ¥27.1 billion to ¥223.5 billion. Current liabilities decreased by ¥24.8 billion primarily due to decreases in short-term loans payable. Noncurrent liabilities decreased by ¥2.3 billion primarily as a result of decreases in bonds payable.
- (5) Net assets decreased by ¥5.1 billion to ¥548.1 billion. This was attributable primarily to a decrease in valuation difference on available-for-sale securities.
- (6) As a result, as of March 31, 2020, the shareholders' equity ratio was 63.8%, compared to 62.6% on March 31, 2019. Net assets per share at the end of the fiscal year were ¥2,368.11, compared to ¥2,354.25 at the end of the previous fiscal year.

## 4. Cash Flow

As of March 31, 2020, total cash and cash equivalents were ¥70.0 billion, ¥10.3 billion lower than at the end of the previous fiscal year.

### 1) Operating Activity Cash Flow

Net cash provided by operating activities increased by ¥10.1 billion from the previous year to ¥74.2 billion. This was primarily due to progress in the collection of accounts receivable.

### 2) Investing Activity Cash Flow

Net cash outflow from investing activities was ¥33.9 billion, a decrease of ¥8.8 billion from the previous year. This was primarily due to increases in proceeds from sale of investments in securities.

### 3) Financing Activity Cash Flow

Net cash outflow from financing activity was ¥49.5 billion, an increase of ¥18.1 billion from the previous year. This was primarily due to increases in purchase of treasury stock.

## 5. Capital Expenditure

MGC Group (including MGC and consolidated subsidiaries) capital expenditures for the consolidated fiscal year were ¥42,389 million.

By segment, capital expenditure of ¥7,294 million, ¥15,022 million, ¥14,677 million, ¥2,635 million, and ¥2,760 million were made in natural gas chemicals, aromatic chemicals, specialty chemicals, information and advanced materials, and other business segments and company-wide assets, respectively.

## 6. Research and Development

Fiscal 2019 was the second year of MGC Advance2020, the new medium-term management plan positioned to realize the goals of "Vision 2021." During the past year, pursuing the guidepost of "Creating value to share with society," research and development initiatives were vigorously advanced with the purpose of "Strengthening the earning power of existing businesses with a focus on the core businesses" and "Creating and developing new businesses." Under a stance geared to manifest maximum synergy between the various Company R&D departments, the Advanced Business Development Division positioned as the Corporate R&D sector and the Research & Development Division comprising the Corporate support sector, steady progress was made in cultivating strengthened earning power for existing business and the forging of new business. The Advanced Business Development Division moved through participation in investment partnerships, venture business cooperation and investment, joint research with public research institutions and other research and development endeavors channeled through collaboration outside the company to carry on initiatives in new business domains. Energetic steps were also taken to promote commercialization of in-house developed medical packaging materials, complex hydride solid electrolyte and other products, and we will work toward commercialization of allergy diagnostic agents and other products through open innovation. Shipment of factory-grown produce began in Shirakawa City, Fukushima Prefecture, providing safe and reassuring produce to the public.

There are a total of 917 MGC Group research and development personnel, including those in affiliate research and development divisions, making up around 10% of the total workforce. Expenditures on research totaled ¥19,696

million.

Research and development costs by segment were as follows:

Natural Gas Chemicals Company:	¥3,621 million
Aromatic Chemicals Company:	¥5,617 million
Specialty Chemicals Company:	¥5,850 million
Information and Advanced Materials Company:	¥4,606 million

## 7. Business Risks

MGC Group perceives "risk" as potential events or hazards whose occurrence could cause harm to people and property, result in loss of opportunities, harm our reputation, and so on, ultimately leading to economic losses for the company, and we have established systems to manage risk during normal and emergency times. Specifically, we established the Basic Rules on Internal Control & Risk Management, formulated policies in risk management and responses, and established the Internal Control & Risk Management Committee as a decision-making body under the direct authority of the president and chaired by the officer responsible for internal control and risk management. The committee makes decisions on policies, implementation, and planning relating to risk management systems and so on and risk management in business and operations as well as guidance, instruction, and supervision of related matters, and the formulation of business continuity plans. The committee also reports periodically on the status of risk management to the Board of Directors.

The main risks believed to present a possibility of affecting the Group's business performance, share price, or financial status are listed below. These are all risks determined by the Group to be liable to occur, although degree and timing of occurrence and the specific impacts and so on are difficult to estimate as of the date of submission this securities report (June 25, 2020) (however, the stated risks are not necessarily exhaustive of all possible risks).

Immediate concerns include impacts from the COVID-19 novel coronavirus. The major part of the Group's business is not directly affected by the spread of COVID-19 or the measures to prevent its spread, but our products are used by a wide range of customers as raw materials, material products, and pharmaceuticals, and there are concerns that the economic stagnation in Japan and overseas caused by COVID-19 will have an adverse impact on the Group's operating results and financial condition.

Moreover, it is possible that the status of the spread of COVID-19 will have an impact on procurement of raw materials and the manufacture and distribution of products. As discussed below, depending on the raw materials or product, the Group procures goods from multiple suppliers and performs manufacturing and other processing at multiple

sites including overseas sites, but the effects of COVID-19 are global, and there are concerns regarding an adverse impact on the Group's results and financial status according to the circumstances regarding the spread of COVID-19.

MGC established a Crisis Response Headquarters to address COVID-19 at an early stage, recommended working from home and took measures to maintain employee motivation while placing the highest priority on ensuring the safety of stakeholders including employees, their families, and customers. MGC was able to maintain production and distribution and continued business in order to fulfill our supply responsibilities.

In any case, it is not possible as of the day of submission of this securities report to forecast the timing when COVID-19 will be controlled or the extent of its impact, and if it becomes necessary to revise our forecasts of results, we will promptly make an announcement.

### 1) Risks Relating to Business Characteristics

#### Details of Risks

MGC Group's primary business is manufacturing, and many of the Group's products are raw materials, material products, or pharmaceuticals used in customers' business, and therefore, our business is susceptible to impact from the economic conditions in the countries and regions where products are sold. In particular, market-sensitive commodities such as methanol, methanol derivatives, general-purpose aromatic chemicals, and polycarbonate resin are generally prone to declines in sales volume and selling prices during times of economic downturn, which adversely affects MGC Group's operating results and financial condition.

Competition among specialty products and high-value-added products is mainly on the basis of categories including price, quality, function, delivery time, and customer service, and a rise in the level of competition in these areas due to the emergence of products with alternative functions or other reasons could have an adverse impact on MGC Group's operating results and financial condition. For example, electronic material products, for which the electronics industry is the primary customer segment, typically have a short product life and are constantly exposed to competition in technological innovation. Therefore, sales could decline if existing products become obsolete or if new product development is delayed. In addition, some Group products are sold only to specific customers, and the suspension of use of those products by a customer could result in a decline in sales.

MGC Group purchases raw materials including mixed xylene and electric power from outside suppliers. It is possible that the inability to procure necessary raw materials and so on could impede the Group's manufacturing activities. Also, if prices were to increase

suddenly, there could be an adverse impact on the Group's operating results and financial condition.

#### **Main Actions**

MGC Group conducts basic and applied research to develop new products and manufacturing processes and to improve and enhance existing products and manufacturing processes and works to develop new markets and business fields. R&D and other divisions engage in close exchanges in information with customers and take risk mitigation measures such as entering into long-term supply agreements. When purchasing raw materials and other commodities, the Group enters into procurement and long-term purchase agreements with multiple suppliers to mitigate risks.

### **2) Risks Relating to Business and Other Investment**

#### **Details of Risks**

MGC Group engages in capital investment and invests in R&D to achieve business growth and bolster competitiveness and focuses its efforts on reinforcing existing business and creating new business closely aligned with future market needs. Moreover, the Group undertakes business investment in Japan and overseas such as establishing new companies including joint ventures and making equity investments as well as acquiring existing companies, with these activities to be continued going forward.

When these investments fail to yield earnings commensurate with the amounts involved, losses are incurred from revaluation of securities held, or other setbacks occur, losses including impairment of fixed assets, losses from securities revaluation, and equity method losses may occur, which could have adverse effects on the Group's operating results and financial condition.

#### **Main Actions**

MGC Group established and operates an internal screening system for investments. Depending on the content of the screening, the Group also checks business conditions and other factors as necessary and makes efforts so that related divisions adopt countermeasures.

### **3) Risks Relating to Natural Disaster and Accidents**

#### **Details of Risks**

MGC Group has multiple manufacturing bases in Japan and other countries. The facilities at these bases are subject to damage from the impact of earthquakes, windstorms, floods or other natural disasters, war, terrorism, riots, strikes, disabling of communication infrastructure, spread of infectious diseases, problems with facilities, human error,

and other unforeseen circumstances, which may result in suspension of production activities. MGC Group routinely handles hazardous chemical substances, and the possibility of explosions, fires, toxic gas leaks or other accidents, damage to production facilities or harm to employees, damage to areas surrounding production facilities or harm to customers, environmental pollution, and other damage cannot be entirely excluded. Many of MGC Group's manufacturing bases have multiple production facilities that share electricity, water supply, steam, and other utilities. Consequently, if such facilities are shut down, the production activities of an entire base could be suspended. If these types of circumstances were to occur, there could be adverse effects on the Group's operating results and financial condition.

#### **Main Actions**

MGC Group makes ongoing improvements based on an environmental safety management system, reinforces risk management, and conducts comprehensive safety education to ensure maintenance and stable operation of production facilities while doing everything possible to construct safety and disaster prevention systems as well as formulating business continuity plans and establishing redundancy in manufacturing bases including overseas bases. In addition, the Group maintains various types of insurance coverage including fire insurance, profit insurance, oil pollution insurance, and liability insurance.

### **4) Risks Relating to Overseas Business**

#### **Details of Risks**

MGC Group has established subsidiaries and conducts manufacturing and sales in Asia, North America, South America, the Middle East and other regions. Depending on the circumstances in each country, the risks relating to natural disaster, war, disabling of infrastructure, spread of infectious disease, or other unforeseeable circumstances as described above could lead to political instability or social or economic turmoil, causing difficulties for business activities as well as remittance of dividends and the like. Other risks that could have an adverse effect on MGC Group's operating results and financial condition include problems due to differences in legal systems, the possibility of restrictions on investments and nationalization or expropriation of assets by foreign governments, and personnel or labor issues.

#### **Main Actions**

MGC Group collects information for officers and employees dispatched to local sites, joint venture partners, relevant authorities, and other sources so that it can respond as effectively and promptly as possible.

### 5) Risks Relating to Joint Ventures

#### Details of Risks

MGC Group is involved in a number of manufacturing joint ventures not only in Japan but also overseas including Saudi Arabia, Venezuela, Thailand, China, South Korea, and Trinidad and Tobago to procure and sell methanol, engineering plastics, and a variety of other products. These joint ventures are not under the control of the Group, and consequently, there is no guarantee that the joint venture partners will make decisions that are best for MGC Group or the joint ventures. In the event that circumstances preventing the maintenance of a joint venture occur, there could be an adverse effect on the Group's operating results and financial condition.

#### Main Actions

MGC Group maintains and reinforces good communications with the joint venture partners developed until now, works to establish shared targets and objectives and maintain relationships, and strives to maintain Group profit through joint venture agreement and other business agreements.

### 6) Risks Relating to Product Quality

#### Details of Risks

As stated earlier, many MGC Group products are used by a wide range of customers as raw materials, material products, and pharmaceuticals, and the Group ships products that conform to specifications agreed upon with customers. However, in the event that a product with a quality defect is shipped, the need will emerge for MGC Group to compensate customers who used the defective product, users of final products, or others not only for direct damages but also for opportunity loss, and MGC may lose social credibility. MGC Group's operating results and financial condition could be adversely affected.

#### Main Actions

Most MGC Group manufacturing bases perform manufacturing in accordance with globally-recognized quality control standards and maintain liability insurance coverage including product liability insurance to address any risks that should occur. In addition, the Group enters into agreements with customers as necessary to clarify the scope of the Group's liability.

### 7) Risks Relating to Exchange Rate Fluctuations

#### Details of Risks

Exports, imports, and other transactions conducted in foreign currencies, are subject to exchange rate changes,

which could have a negative impact on the Group's business results and financial situation such as decreased sales or increased losses.

Financial balance data that is valued in local currencies for MGC Group overseas subsidiaries are translated into yen when creating the Group's consolidated balance sheet. Depending on the exchange rate at the time, MGC Group's business results and financial situation could be adversely affected.

#### Main Actions

MGC Group engages in risk hedging to a certain degree by conducting foreign exchange futures transactions in accordance with internal rules in order to mitigate the risk of exchange rate fluctuations with respect to receivables and liabilities denominated in foreign currencies.

### 8) Risks Relating to Capital Procurement and Interest Rate Fluctuations

#### Details of Risks

When procuring necessary funds, MGC Group secures loans and other financing from financial institutions to a certain degree, but if the financial environment suddenly changes, it may be difficult to procure funds, and if interest rates increase, the amount of interest payments also rises, which may adversely affect MGC Group's operating results and financial condition.

#### Main Actions

MGC Group strives to maintain a certain level of financial health based on indicators such as the debt/equity ratio and shareholders' equity ratio. The Group also maintains an appropriate balance of fixed and variable interest rates and work to maintain sound and good relationships with financial institutions and others.

### 9) Risks Relating to Compliance and Environment Issues

#### Details of Risks

MGC Group handles hazardous chemical substances including toxic and deleterious substances, hazardous materials, and high-pressure gas as part of its business and is subject to various legal restrictions, both in Japan and overseas, at each stage, including manufacturing, storage, distribution, and sale. In addition, with rising environmental awareness worldwide regarding issues including climate change and marine plastic, regulations as well as societal demands concerning chemical substances and waste materials including greenhouse gases are becoming increasingly stringent.

In addition to these environmental issues, the Group's operating results and financial condition could be adversely affected by criminal, civil, and administrative liability, remediation costs, social sanction, and loss of credibility due to the failure of MGC Group to comply with legal regulations and social norms.

#### **Main Actions**

MGC Group has positioned proactive and dynamic responses to environmental problems and reinforcement of compliance as a top management priority (materiality). In addition to the existing specialized divisions that respond to environmental regulations and issues, the Group created a new task force team. The Group also takes various measures to enhance compliance awareness by officers and employees, created various systems including an internal whistleblowing system, and strives to strictly comply with laws and regulations.

### **10) Risks Relating to Litigation**

#### **Details of Risks**

If lawsuits or other legal proceedings are filed against MGC Group related to its domestic and overseas businesses and the outcomes of such proceedings are unfavorable, the result could be an adverse effect on the Group's operating results and financial condition. For example, the Group applies for and obtains patents to protect its intellectual property rights and strives to prevent infringement of the rights of third parties in Japan and other countries, but if litigation were initiated with a third party in relation to intellectual property rights and MGC's assertions were not recognized, there could be an adverse impact on the Group's operating results or growth.

#### **Main Actions**

MGC Group complies with laws and regulations applicable to its business and cooperates with attorneys and other professionals to clarify rights and duties by executing appropriate agreements, investigate the rights of third parties, and take other actions to prevent the occurrence of disputes.