

## Highlights of Major General Chemical Manufacturers' Financial Results for Fiscal Year Ended March 2020

The following is Japan Credit Rating Agency, Ltd. (JCR)'s perception of the current status and highlights for rating concerning the financial results for the fiscal year ended March 2020 (FY2019) and earnings forecasts for FY2020 of Japan's seven general chemical manufacturers (collectively, the "Companies"): ASAHI KASEI CORPORATION, Showa Denko K.K. (with January-December accounting period), SUMITOMO CHEMICAL COMPANY, LIMITED, TOSOH CORPORATION, Mitsui Chemicals, Inc., Mitsubishi Chemical Holdings Corporation and Ube Industries, Ltd.

### 1. Industry Trend and Impact of COVID-19 Pandemic

The business environment surrounding general chemical manufacturers is increasingly uncertain. Although impacts of the U.S.-China trade frictions and China's economic slowdown from the previous fiscal year still remained at the beginning of FY2019, the business trends had been stable in general with these negative factors. Production activities of the user industries and consumer spending rapidly deteriorated toward the end of the fiscal year due to the COVID-19 pandemic. Hence, the industry is also facing large adverse effects of the product demand.

For bulk chemicals, the average operation rate of domestic ethylene centers fell below 95% for the first time in four years since FY2015 to 94.2% (the average operation rate for FY2018: 96.1%). Due to weakened demand, downward trends of the market conditions of petrochemical products, basic chemical products, raw materials of synthetic fibers, etc. grew and profitability also deteriorated toward the end of the fiscal year. At present, supplies have become tightened due to recovery of economy in China and periodic maintenance of facilities in Asia, the market condition of petrochemical product is bottoming out. Nevertheless, it will highly likely take time to recover the economic activities at home and abroad to the previous state. Recovery of demand for and market conditions of each product will be moderate for the time being. For raw material prices, average price of naphtha per kiloliter for FY2019 was lower 40,000 yen. For January-March 2020 period, it was 44,800 yen but will most likely plunge to 20,000 yen level for April-June 2020 period due to a decline in crude oil prices.

Present business environment of specialty chemicals is also severe in general. Particularly, operations of the automakers, where large demand comes from, have been restricted due to the COVID-19 pandemic and the production volume at home and abroad dropped; thereby demand for wide range of products including high-performance materials for forming various shapes, synthetic rubber for tires, secondary lithium-ion batteries, etc. are on decrease. Demand for flat panel related products is also decreasing but the degree of decline is not as bad as what was estimated at the beginning of the COVID-19 pandemic due partly to effects of telecommuting and consumption arising from people staying home. Demand for semiconductor related products have been weakening since the second half of 2018. Recently a slight recovery is seen but it should be determined whether it is a real demand because there is a possibility that users may pileup inventories in view of an increase in 5<sup>th</sup> Generation related demand. On the other hand, although an impact of the COVID-19 pandemic to healthcare related products is limited, individual companies have own negative factors including an increase in development costs, expiration of patent of core drugs and others.

### 2. Financial Results

Combined EBITDA<sup>1</sup> of the Companies for FY2019 (Showa Denko: the fiscal year ended December 2019) was 1.4 trillion yen. Although it was a 12% decrease from that for previous fiscal year, the highest in the past, it was still at a historically high level (Chart 1). For FY2019, the deteriorated business condition of bulk chemicals was the significant negative factor but until before the outbreak of the COVID-19, it secured certain performance due partly to positive effects of the structural reforms in the previous fiscal year. Specialty chemicals also maintained solid full year result due to effects of growth strategies, etc. Since the industry is in the upstream of various supply chains, there is a time lag until trends of end users' demand is reflected to the production. Due partly to the characteristics just mentioned, impacts of COVID-19 pandemic to FY2019 results were relatively limited.

On an individual company basis, all the seven companies decreased the operating income (should be read as core operating income for SUMITOMO CHEMICAL and Mitsubishi Chemical HD). At the beginning of the fiscal year, the Companies projected almost the same business performance from the previous fiscal year in general but in the second quarter and beyond, they made downward revisions one after another. Among the Companies, Showa Denko, SUMITOMO CHEMICAL and Mitsubishi Chemical HD substantially decreased income, down more than 30% year-on-year. Easing supply-demand balance of graphite electrodes was the major factor causing the deteriorated business performance for Showa Denko. SUMITOMO CHEMICAL and Mitsubishi Chemical HD were affected by a decline in MMA and petrochemical product market conditions. Three companies out of the remaining four, TOSOH CORPORATION, Mitsui Chemicals and Ube Industries, decreased more than 20% of income year-on-year, and the last one, ASAHI KASEI, decreased 15% of income year-on-year. Due to difference in business portfolio and degree of contribution from stable income sources, the range of reductions slightly varied (Chart 2). An adverse impact of COVID-19 pandemic was 7.8 billion yen for Mitsubishi Chemical HD, which was assumed to be impacted the most (the value was core operating income- based and announced by the said company).

Combined interest-bearing debt of the Companies (excluding equity content of hybrid financing / this applies to the following) as of the end of FY2019 increased to 5.3 trillion yen from 4.6 trillion yen as of the end of FY2018. Major contributing factors were the large-scale healthcare related M&As carried out by ASAHI KASEI (acquired Veloxis Pharmaceuticals, Inc. in the U.S.), SUMITOMO CHEMICAL (SUMITOMO DAINIPPON PHARMA CO., LTD. acquired related assets of Roivant Sciences in the U.K.) and Mitsubishi Chemical HD (made Mitsubishi Tanabe Pharma Corporation as a wholly owned subsidiary). Meanwhile, the combined equity capital of the Companies (equity attributable to owners of the parent for SUMITOMO CHEMICAL and Mitsubishi Chemical HD) amounted to 5.5 trillion yen as of the end of FY2019 from 5.6 trillion yen as of the end of FY2018. This was due mainly to a decrease in capital surplus of Mitsubishi Chemical HD for making Mitsubishi Tanabe Pharma as its wholly owned subsidiary. The industry's equity capital has significantly expanded compared to that in previous time, immediate before (FY2007) and immediate after (FY2008) the Lehman's collapse, of around 3 trillion yen.

- 1: Since SUMITOMO CHEMICAL and Mitsubishi Chemical HD have adopted IFRS, Gross margin - Selling, general and administrative (SG&A) expenses + Depreciation expenses was used in the calculation.

### 3. Highlights for Rating

The four companies, ASAHI KASEI, Showa Denko, SUMITOMO CHEMICAL and TOSOH, have not been determined earnings forecast for FY2020 since they are unable to estimate the performance in a reasonable way. The three companies, Mitsui Chemicals, Mitsubishi Chemical HD and Ube Industries, disclosed the earnings forecast but the all project substantial decrease in earnings. In the bulk chemicals, in addition to slowed demand, a substantial negative effect relating to inventory valuations along with a decrease in raw material prices will likely be seen. The specialty chemicals will inevitably face a substantial decrease in demand for automobile related products. JCR considers that performances of packaging materials, sanitary materials and health care related products are expected to be stable but overall performances will likely be under the strong downward pressure. Mitsubishi Chemical HD and SUMITOMO CHEMICAL announced that they would be negatively affected worth 78.5 billion yen and between 15 and 35 billion yen respectively (both are core operating income-based) by the COVID-19 pandemic. Similarly, significant negative impacts are also expected for the five companies, which have not disclosed specific amounts.

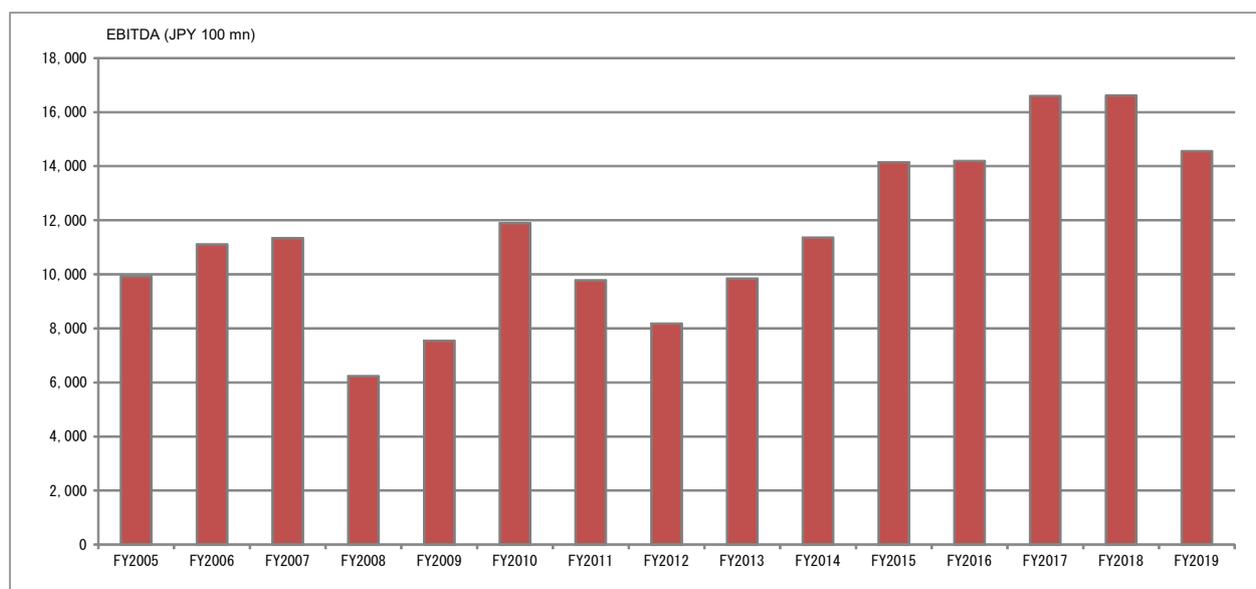
The key points in the business performance are degree of deterioration in the performance, timing of bottoming out, subsequent recovery pace, etc. The two companies, Mitsubishi Chemical HD and Ube Industries, have disclosed semiannual-based performance projections. Both project extremely low results for the first half, and expect recovery in the second half. JCR assumes that the remaining five companies also project the similar results as these two do in general. Due partly to an impact of inventory valuation, JCR assumes that the income for the first quarter will likely go substantially below the plan. JCR sees that the key point is whether the Companies can reverse back the performances in the second quarter though it is depending on the situation of the second and third wave of the COVID-19 pandemic. JCR considers that the subsequent recovery pace will be significantly influenced by the status of recovery of automobile production and a trend in personal consumption.

In recent years, companies in the industry are actively making growth investments; and interest-bearing debt is on increase as a whole industry. Other than the large-scale healthcare related M&As mentioned above, Showa Denko completed the acquisition procedure for Hitachi Chemical Company, Ltd. in April 2020. Since deterioration in business performance is expected for FY2020, whether the balance between growth investments/returns to shareholders and financial soundness are

appropriately maintained is drawing more attention than ever before. A case where a company increases in goodwill and in-process research and development expenses due to a large M&A, the performance trend and increased risk of impairment loss caused by advancement in the research and development project should be noted.

Mikiya Kubota, Takeshi Fujita

(Chart 1) Combined EBITDA of Seven General Chemical Manufacturers



\*1 EBITDA = Operating Income + Depreciation Expenses + Amortization Expenses

\*2 IFRS adopted by Mitsubishi Chemical HD from FY2016 and SUMITOMO CHEMICAL from FY2017

(Chart 2) Consolidated Business/Financial Performance of Seven General Chemical Manufacturers

(JPY 100 mn, times, %)

		Net Sales	Operating Income	Ordinary Income	Net Income	Interest-bearing Debt	Equity Capital	Total Assets	DER	Equity Ratio
ASAHI KASEI (3407)	FY2018	21,704	2,095	2,199	1,475	4,244	13,814	25,752	0.31	53.6%
	FY2019	21,516	1,772	1,840	1,039	7,038	13,593	27,979	0.52	48.6%
	FY2020F	N/A								
Showa Denko (4004)	FY2018	9,921	1,800	1,788	1,115	2,879	4,459	10,749	0.65	41.5%
	FY2019	9,064	1,207	1,192	730	2,985	4,993	10,763	0.60	46.4%
	FY2020F	N/A								
TOSOH (4042)	FY2018	8,614	1,057	1,130	781	1,010	5,408	8,781	0.19	61.6%
	FY2019	7,860	816	859	555	958	5,675	8,865	0.17	64.0%
	FY2020F	N/A								
Mitsui Chemicals (4183)	FY2018	14,829	934	1,029	761	4,820	5,519	15,010	0.87	36.8%
	FY2019	13,389	716	655	379	5,284	5,275	14,800	1.00	35.6%
Ube Industries (4208)	FY2018	7,301	445	478	324	1,856	3,295	7,402	0.56	44.5%
	FY2019	6,678	340	357	229	1,879	3,323	7,272	0.57	45.7%
	FY2020F	6,140	260	235	140	—	—	—	—	—

		Net Revenue	Core Operating Income	Operating Income	Net Income	Interest-bearing Debt	Equity Attrib. to Owners of the Parent	Total Assets	DER	Equity Attrib. to Owners of the Parent to Total Assets
SUMITOMO CHEMICAL (4005)	FY2018	23,185	2,042	1,829	1,179	8,395	9,987	31,716	0.84	31.5%
	FY2019	22,258	1,326	1,375	309	11,796	10,473	36,503	1.13	28.7%
	FY2020F	N/A								
Mitsui Chemicals (4183)	FY2019	13,495	724	656	321	—	—	—	—	—
	FY2020F	11,450	350	370	200	—	—	—	—	—
Mitsubishi Chemical HD (4188)	FY2018	38,403	3,141	2,947	1,695	22,467	13,779	55,725	1.63	24.7%
	FY2019	35,805	1,948	1,442	540	22,832	11,702	51,321	1.95	22.8%
	FY2020F	33,340	1,400	1,370	490	—	—	—	—	—

\*1 IFRS-based for Mitsubishi Chemical Holdings and SUMITOMO CHEMICAL. Mitsui Chemical has adopted IFRS since FY2020.

\*2 Core operating income is obtained by excluding non-recurring items from operating income under IFRS.

\*3 Net income is net income attributable to shareholders of the parent (JGAAP) or net income attributable to owners of the parent (IFRS).

\*4 Interest-bearing debt is the sum of borrowings, corporate bonds and CPs. Equity content of subordinated loans were considered for SUMITOMO CHEMICAL's interest-bearing debt and equity capital for FY2019.

(Source: Charts 1 and 2 were prepared by JCR based on financial materials of above companies)

<Reference>

Issuer: ASAHI KASEI CORPORATION

Long-term Issuer Rating: AA      Outlook: Stable

Issuer: Showa Denko K.K.

Long-term Issuer Rating: A      Outlook: Negative

Issuer: SUMITOMO CHEMICAL COMPANY, LIMITED

Long-term Issuer Rating: A+      Outlook: Stable

Issuer: TOSOH CORPORATION

Long-term Issuer Rating: A+      Outlook: Stable

Issuer: Mitsui Chemicals, Inc.

Long-term Issuer Rating: A+      Outlook: Stable

Issuer: Mitsubishi Chemical Holdings Corporation

Long-term Issuer Rating: A+      Outlook: Stable

Issuer: Ube Industries, Ltd.

Long-term Issuer Rating: A      Outlook: Stable

**Japan Credit Rating Agency, Ltd.**

Jiji Press Building, 5-15-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan  
Tel. +81 3 3544 7013, Fax. +81 3 3544 7026

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