

Highlights of Major General Chemical Manufacturers' Financial Results for Fiscal Year Ended March 2019

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 2019 (FY2018) and earnings forecasts for FY2019 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

The business environment surrounding general chemical manufacturers had recently been good until changing its course in FY2017. It remained favorable in the first half despite a rise in raw material prices, but the slowdown in China's economy accelerated due to the U.S.-China trade conflict in the second half. Moreover, partly because the smartphone market weakened as a result of this, demand for semiconductors, which had been robust in recent years, softened.

In terms of bulk chemicals, domestic ethylene centers operated in almost full capacity in FY2018 as did in FY2016 and FY2017, at an annual average rate of 96.1%. Even though the concentration of regular maintenance works on these centers in FY2018 adversely affected production, domestic demand for petrochemical products remained solid throughout the year, and facilities operated at a high rate. That said, the historically favorable environment for Asia's petrochemical industry ever since 2015 started showing signs of decline. Since the fall of 2018, uncertainties about future economy have grown larger worldwide, while, as previously predicted, an increasing number of shale gas-derived polyethylene products have been flowing into Asia from the U.S., softening the ethylene market. Market prices of upstream products, such as raw materials of synthetic fibers and urethane, have also been on the decline due to concerns about the future of consumption. However, because these moves vary among the products, and also helped by robust demand, the market has not been deteriorating to the extent of collapsing.

Business conditions for specialty chemicals in FY2018 were mixed. Of the major demand sectors, automobiles saw some fluctuations, such as a sales decline in China in 2018 for the first time in 28 years, but the U.S. market remained mostly favorable. Thanks in part to recovery in demand for large cars, high-performance materials for interior/exterior parts remained firm. In addition, sales of secondary lithium-ion batteries grew with market expansion for hybrid cars and electric vehicles. On the other hand, a slowdown in smartphone sales had a negative impact on semiconductor-related products and parts and materials for liquid crystal and organic EL panels. Moreover, business conditions grew tougher for the healthcare business centering on pharmaceuticals due to the government's stricter policy of curbing medical costs. In fact, some companies were unable to develop forecasts for the patent fee income from their flagship drugs.

2. Financial Results

EBITDA¹ of the Companies combined for FY2018 (through December 2018 for Showa Denko) was 1.6 trillion yen, renewing the record high for the fourth straight year (Chart 1). Although the business environment changed drastically during the year, business results remained favorable until the mid-year. Despite the deterioration of terms of trade on the whole because of the rise in raw material prices, growth in demand for high-performance materials, secondary lithium-ion batteries, etc. for automobiles mainly pushed up the earnings. Naphtha prices fell sharply toward the fourth quarter, lowering the market prices of bulk chemicals. That said, the fact that the structural reforms undertaken in the previous year helped mitigate the risk of business downturn caused by such factors supported the overall results.

Looking at the operating income of individual companies (core operating income for SUMITOMO CHEMICAL and Mitsubishi Chemical HD), it reached a new high for ASAHI KASEI and Showa Denko for the second consecutive year. ASAHI KASEI achieved income growth thanks to generally solid

performance of acrylonitrile, housing, critical care and other businesses as earnings sources. For Showa Denko, profitability of graphite electrodes rose sharply thanks to better supply-demand conditions and business acquisition, making the income soar by more than 100 billion yen from the previous year. The income dropped for the other five companies, however; in fact, four companies reported a double-digit decline. As major negative factors besides the deterioration of the business environment as a common factor, Mitsubishi Chemical HD started arbitration proceedings concerning the royalty revenues from a flagship drug in the health care business, while SUMITOMO CHEMICAL saw a drop in the shipment of agrochemicals due to heavy floods devastating North America in January through March of 2019. Even though a high profit level was maintained on the whole, differences among the Companies were distinctive (Chart 2).

Interest-bearing debt of the Companies combined as of March 31, 2019 came to 4.6 trillion yen, increasing from 3.8 trillion yen a year before. Contributing factors include the large-scale acquisition of European industrial gas businesses by subsidiary TAIYO NIPPON SAN SO CORPORATION for Mitsubishi Chemical HD and the acquisition of the leading U.S. manufacturer of automotive interior materials for ASAHI KASEI. Meanwhile, the equity capital of the Companies combined (equity attributable to owners of the parent for SUMITOMO CHEMICAL and Mitsubishi Chemical HD) as of the same date amounted to 5.6 trillion yen, expanding from 5.2 trillion yen a year before. This is more than double the 2.7 trillion yen reported at the end of FY2008, immediately after the collapse of Lehman Brothers. Looking at the financial structure of individual companies, net DER rose to 1.3 from 0.9 for Mitsubishi Chemical HD but improved or remained at a decent level for the other companies.

- 1: Gross margin - Selling, general and administrative (SG&A) expenses + Depreciation expenses for SUMITOMO CHEMICAL and Mitsubishi Chemical HD, which adopt the International Financial Reporting Standards (IFRS).

3. Highlights for Rating

Given the Companies' initial forecasts, EBITDA² of the Companies combined for FY2019 (through December 2019 for Showa Denko) is expected to be over 1.7 billion yen. Looking at individual companies, while Showa Denko, SUMITOMO CHEMICAL, Mitsui Chemicals and Ube Industries expect a higher income, ASAHI KASEI, Mitsubishi Chemical HD and TOSOH anticipate a slight fall. Although these forecasts are based on different factors, they all incorporate the negative impact of the weakening market for bulk chemicals overseas, as well as steady growth for high-performance materials. The Companies also assume that information and electronics products will start picking up in the second half. As regards Mitsubishi Chemical HD, the royalty revenues from the flagship drug were not recognized initially, thus significantly pushing down the overall forecasts.

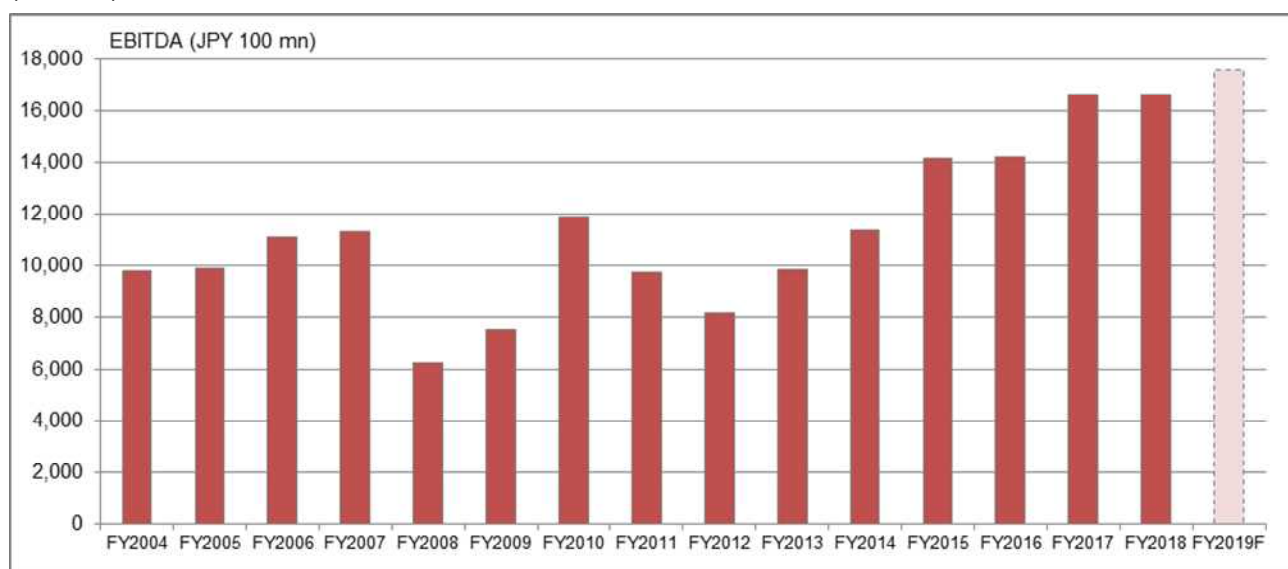
Whether the good performance can be maintained is the utmost focus for FY2019. Currently, the U.S.-China trade dispute is intensifying. Although the U.S. tariffs on Chinese products are expected to have only a small impact, complexity of supply chains for chemical products suggests a high probability of indirect impact. Moreover, the Companies assume somewhat varying naphtha prices, ranging from 43,000 yen/kl to 48,000 yen/kl, for FY2019 (49,400 yen/kl for FY2018). In the event that crude oil prices go up due to a cut in oil production by the producing countries and the worsening situation in the Middle East, terms of trade may deteriorate. Meanwhile, foreign exchange rates have been stable but may become unstable depending on trade policies of each country and trends in global economy. Because of the uncertain future business environment on the whole, it is difficult to predict the future direction of the industry's performance.

The Companies are activating investment for future growth and thus expect higher R&D expenses for FY2019 than FY2018. Their capital expenditures for 2019 are projected at 876.3 billion yen in total, growing by nearly 20% from 741.7 billion yen for FY2018 (Chart 3). Looking at individual companies, five companies other than SUMITOMO CHEMICAL and TOSOH expect greater spending; in particular, the year-on-year increase is more than 50% for Showa Denko and Mitsui Chemicals. SUMITOMO CHEMICAL, as it stands now, plans to spend around 120 billion yen for the Phase II Project of Rabigh Refining and Petrochemical Company. These growth investments are expected to add to the interest-bearing debt for some companies, including SUMITOMO CHEMICAL, toward the end of FY2019. Moreover, large M&A deals, which were not disclosed at the beginning of the year, may be carried out. JCR will pay particular attention to whether the Companies can maintain the virtuous cycle of reinforcing the financial base through growth investments and boosting investment capacity to evaluate their financial management for the near future.

- 2: JCR's estimate on Gross margin - SG&A expenses + Depreciation expenses for SUMITOMO CHEMICAL and Mitsubishi Chemical HD

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)	FY2017	20,422	1,984	2,125	1,702	3,011	12,873	23,071	0.23	55.8%
	FY2018	21,704	2,095	2,199	1,475	4,244	13,814	25,752	0.31	53.6%
	FY2019F	22,680	2,050	2,140	1,475	—	—	—	—	—
Showa Denko (4004)	FY2017	7,803	777	638	374	3,287	3,704	10,269	0.89	36.1%
	FY2018	9,921	1,800	1,788	1,115	2,879	4,459	10,757	0.65	41.5%
	FY2019F	11,000	1,900	1,850	1,200	—	—	—	—	—
TOSOH (4042)	FY2017	8,228	1,305	1,322	887	1,078	4,908	8,457	0.22	58.0%
	FY2018	8,614	1,057	1,130	781	1,010	5,408	8,781	0.19	61.6%
	FY2019F	8,600	950	1,000	670	—	—	—	—	—
Mitsui Chemicals (4183)	FY2017	13,285	1,034	1,102	715	4,605	5,115	14,313	0.90	35.7%
	FY2018	14,829	934	1,029	761	4,820	5,519	15,010	0.87	36.8%
	FY2019F	15,400	1,050	1,100	760	—	—	—	—	—
Ube Industries (4208)	FY2017	6,955	502	507	316	1,939	3,153	7,424	0.61	42.5%
	FY2018	7,301	445	478	324	1,856	3,295	7,402	0.56	44.5%
	FY2019F	7,600	470	470	310	—	—	—	—	—

		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)	FY2017	21,905	2,626	2,509	1,337	8,421	9,271	30,686	0.91	30.2%
	FY2018	23,185	2,042	1,829	1,179	8,395	9,987	31,716	0.84	31.5%
	FY2019F	24,400	2,050	1,900	1,000	—	—	—	—	—
Mitsubishi Chemical HD (4188)	FY2017	37,244	3,804	3,557	2,117	16,061	12,857	47,014	1.25	27.3%
	FY2018	39,234	3,171	2,979	1,695	22,467	13,779	55,725	1.63	24.7%
	FY2019F	40,800	3,000	3,000	1,680	—	—	—	—	—

*1 IFRS-based for Mitsubishi Chemical Holdings and SUMITOMO CHEMICAL

*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 CP. Equity content of subordinated loans is considered for Showa Denko's interest-bearing debt and equity capital for the year through December 2017.

(Chart 3) R&D Expenses and Capital Expenditures of Seven General Chemical Manufacturers

(JPY 100 mn)

	R&D Expenses		Capital Expenditures	
	FY2018	FY2019F	FY2018	FY2019F
ASAHI KASEI (3407)	901	980	1,362	1,480
Showa Denko (4004)	197	226	417	643
SUMITOMO CHEMICAL (4005)	1,635	1,750	1,637	1,530
TOSOH (4042)	166	180	648	580
Mitsui Chemicals (4183)	358	380	619	1,050
Mitsubishi Chemical HD (4188)	1,438	1,510	2,317	2,980
Ube Industries (4208)	121	140	417	500
Total	4,816	5,166	7,417	8,763

*For Showa Denko, actual results for the year through December 2018 and forecasts for the year through December 2019.

(Source: Charts 1 through 3 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: Positive

Issuer: SUMITOMO CHEMICAL COMPANY, LIMITED

Long-term Issuer Rating: A+ Outlook: Positive

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

Information herein has been obtained by JCR from the issuers and other sources believed to be accurate and reliable. However, because of the possibility of human or mechanical error as well as other factors, JCR makes no representation or warranty, express or implied, as to accuracy, results, adequacy, timeliness, completeness or merchantability, or fitness for any particular purpose, with respect to any such information, and is not responsible for any errors or omissions, or for results obtained from the use of such information. Under no circumstances will JCR be liable for any special, indirect, incidental or consequential damages of any kind caused by the use of any such information, including but not limited to, lost opportunity or lost money, whether in contract, tort, strict liability or otherwise, and whether such damages are foreseeable or unforeseeable. JCR's ratings and credit assessments are statements of JCR's current and comprehensive opinion regarding redemption possibility, etc. of financial obligations assumed by the issuers or financial products, and not statements of opinion regarding any risk other than credit risk, such as market liquidity risk or price fluctuation risk. JCR's ratings and credit assessments are statements of opinion, and not statements of fact as to credit risk decisions or recommendations regarding decisions to purchase, sell or hold any securities such as individual bonds or commercial paper. The ratings and credit assessments may be changed, suspended or withdrawn as a result of changes in or unavailability of information as well as other factors. JCR retains all rights pertaining to this document, including JCR's rating data. Any reproduction, adaptation, alteration, etc. of this document, including such rating data, is prohibited, whether or not wholly or partly, without prior consent of JCR.

JCR is registered as a "Nationally Recognized Statistical Rating Organization" with the U.S. Securities and Exchange Commission with respect to the following four classes. (1) Financial institutions, brokers and dealers, (2) Insurance Companies, (3) Corporate Issuers, (4) Issuers of government securities, municipal securities and foreign government securities.

JCR publishes its press releases regarding the rating actions both in Japanese and in English on the same day. In case that it takes time to translate rating rationale, JCR may publicize the summary version, which will be replaced by the full translated version within three business days. (Regarding Structured Finance products, JCR only publicize the summary version in English.)

Copyright © Japan Credit Rating Agency, Ltd. All rights reserved.