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Highlights of General Heavy Machinery 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 six general heavy machinery manufacturers: SUMITOMO HEAVY INDUSTRIES, LTD. ("SHI"), Mitsui E&S Holdings Co., Ltd. ("Mitsui E&S"), Hitachi Zosen Corporation ("Hitachi Zosen"), Mitsubishi Heavy Industries, Ltd. ("MHI"), Kawasaki Heavy Industries, Ltd. ("KHI"), and IHI Corporation ("IHI").

1. Industry Trend and Impact of COVID-19 Pandemic

Business environment surrounding general heavy machinery manufacturers is increasingly severe due to impacts of the COVID-19 pandemic. For the ship and ocean segment, the core business of new shipbuilding is in a harsh business environment. Order volume of new ship has not reached full scale recovery as it was gradually picking up after 2017 but was on decrease in 2019, etc. Before the environmental regulation, which will be implemented after 2020, customers took a wait-and-see approach in 2019 instead of placing orders. At the beginning of 2020, the shipping market deteriorated as cargo movements become stagnant due to impacts of the COVID-19 pandemic. For this reason, a sign of recovery for orders for new ship continues to be unseen. Ship prices remain low and it is in a situation where provisions for loss on construction work need to be made when orders are placed. On the other hand, orders for the ocean resource development-related segment, which was seen as a growth market, are also expected to deteriorate due partly to an impact of reviewing development plans by oil development companies caused by a decline in crude oil prices.

In the aerospace segment, dark clouds are looming over the commercial aircraft-related markets, which were steady until now. The Boeing Company indicated its direction to reduce production volume of B787 and B777/777X models, for which MHI and KHI jointly produce aircrafts. For B787 model, it announced in October 2019 that monthly production volume would be reduced from 14 to 12 in late 2020 with a reason of stagnant demand for the model from Chinese market, and in January 2020, it additionally indicated a further reduction to 10 in early 2021. Subsequently, it announced in April 2020 that it would reduce the monthly production volume to 10 within 2020 and to 7 by 2022 due to a sharp declined in the number of passengers caused by the COVID-19 pandemic. It also intends to reduce combined monthly production volume of B777/777X from 5 as of the end of March 2020 to 3 within 2021. While suspension of operations and a reduction in the number of flights are frequently seen in the world, an impact to demand for new engines for private airlines and after-sale markets will be expected to be bigger. The business environment surrounding SpaceJet, a small-sized jet aircraft model MHI intends to commence mass-production, has also deteriorated.

The business environment of the land segment is also increasingly harsh. The segment roughly divided into the mass-production business with shorter lead time and the order-based business with longer lead time. Turbocharger for vehicles of MHI and IHI, power transmissions & control equipment and construction machinery of SHI, robots and two-wheeled motor bikes of KHI fall under the mass-production business. On the other hand, order-based business includes MHI's prime movers and construction of various plants. For the mass-production business, demands have been weakened for many products since FY2019 due partly to the economic slowdown; and recovery of the demands may delay where impacts of the COVID-19 pandemic extends for a long period of time. On the other hand, the business environment of the order-based business may deteriorate as customers may restrain investments and other factors.

2. Financial Results

The total amount of orders the six companies received for FY2019 increased 4.2% year-on-year to 9333.1 billion yen. By company, Mitsui E&S and MHI increased the amounts of orders received. For Mitsui E&S, orders for FPSO (Floating Production, Storage and Offloading system) were favorable while MHI increased power related orders including GTCC (Gas Turbine Combined Cycle) and nuclear power plants. On the other hand, mass-production businesses were suffered overall by impacts of economic slowdown and others.

For FY2019, the total net sales (revenue was used for MHI) of the six companies increased 0.3% year-on-year to 9,122.6 billion yen and the total operating income (gross profit less SG&A expenses was used for MHI) of the six companies decreased 34.9% on year to 257.6 billion yen. The five companies excluding Hitachi Zosen decreased income or expanded deficit. The main factor causing this was a decrease in sales centering on the mass-production businesses. Mitsui E&S was largely affected by deteriorated profitability of overseas projects, and it incurred a large operating loss following to FY2018. MHI reported operating loss as it recorded impairment loss of the SpaceJet business (this is not included in the aforementioned operating income) and other factors.

The combined financial structure of the six companies as of the end of FY2019 deteriorated as equity ratio (MHI uses equity attributable to owners of parent) was 24.3% (27.2% a year earlier) and DER was 0.74x (0.61x a year earlier). This means that equity capital decreased and interest-bearing debt increased (interest-bearing debt includes corporate bonds, commercial papers and borrowings). By company, equity ratio and DER of the five companies excluding Hitachi Zosen deteriorated. Mitsui E&S substantially decreased its equity capital by incurring a net loss. Note that MHI's balance sheet as of the end of FY2019 showed indemnification assets for South African projects of 407.8 billion yen. MHI met an agreement with Hitachi, Ltd. and is scheduled to collect the entire amount by receiving shares of Mitsubishi Hitachi Power Systems held by Hitachi, Ltd.

3. Highlights for Rating

SHI, KHI and IHI undetermined the performance forecast for FY2020 as they are unable to calculate impacts of the COVID-19 pandemic in a reasonable way. On the other hand, the remaining three companies announced their forecasts after incorporating the impacts at a certain extent. A degree of impact given to their business performances will vary depending on the businesses in their portfolios. In any case, JCR assumes that the performances for FY2020 will be under the strong downward pressure.

One of the business areas that will be largely affected is the commercial aircraft related area. To date, demand for commercial aircrafts was seen to increase along with an increase in passenger demand. However, due to impacts of the COVID-19 pandemic, passenger demand considerably decreased, and business conditions of airlines deteriorated. At present, early recovery of the business environment will be unlikely. Under such circumstances, reviewing production systems and reducing fixed costs are urgent issues of the companies engage in joint production or engine production of commercial aircrafts. JCR sees a key point is that the companies can be able to find ways to early recovery of their performances while minimizing the negative impacts to their FY2020 performances. On the other hand, MHI delayed the delivery date of the first SpaceJet from mid-2020 to after FY2021 with a reason of delay in development. The development system of the business will likely be downsized substantially and subsequent moves of the business will attract attention. For the CRJ business acquired from Bombardier, MHI intends to record impairment losses of goodwill, etc. around between 50 billion yen and 70 billion yen allocating to the SpaceJet business for FY2020.

The performance of the ship and ocean segment will highly likely be weak. While the new shipbuilding may continuously face a harsh business environment, it is necessary to secure certain operating level. Therefore, each company is required to make difficult business decisions. In addition, a movement of restructuring in the industry is seen that Imabari Shipbuilding Co., Ltd., the top ranked company in the domestic shipbuilding industry, and JMU (Japan Marine United Corporation), the second ranked in the said industry, announced in March 2020 that both companies formed a capital and business alliance. While integration of large shipbuilding companies are being in progress also in China and Korea, JCR will pay attention to changes in the future competition environment. On the other hand, new orders are expected to deteriorate for the ocean resource development area, where Mitsui E&S handles. The business performance trend of Mitsui E&S will attract attention as the area is positioned as one of its core businesses.

In the land segment, downward pressure on the performances will likely become stronger centering on the mass-production business, whose sensitivity to the economic condition is relatively high. Particularly, demand for products for automobiles may possibly drop significantly due partly to suspension of operations of automobile factories all over the world due to impacts of the COVID-19 pandemic. In addition, JCR will continue to pay attention to profitability when orders of large project were placed and progress of the projects. In recent years, large-scale projects, which reported a large amount loss in the process of construction, were often found. Most recently, Mitsui E&S recorded a large amount of loss for FY2018 and FY2019 for the civil engineering work for a thermal power generation plant in Indonesia. JCR will follow the progress of the construction in the future.

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(Chart 1) Orders Received and Earnings

(JPY 100 mn)

		Orders Received	Net Sales	Operating Income	Net Income Attributable to Parent's Shareholders
SHI (6302)	FY2018	9,521	9,030	752	456
	FY2019	8,262	8,644	568	328
	FY2020 (F)	N/A	N/A	N/A	N/A
Mitsui E&S (7003)	FY2018	7,101	6,565	- 597	- 695
	FY2019	9,968	7,864	- 620	- 862
	FY2020 (F)	5,500-7,500	6,300	- 100	0
Hitachi Zosen (7004)	FY2018	4,550	3,781	73	54
	FY2019	4,541	4,024	138	21
	FY2020 (F)	4,100	4,000	110	40
KHI (7012)	FY2018	15,887	15,947	640	274
	FY2019	15,135	16,413	620	186
	FY2020 (F)	N/A	N/A	N/A	N/A
IHI (7013)	FY2018	13,992	14,834	824	398
	FY2019	13,739	13,865	607	128
	FY2020 (F)	N/A	N/A	N/A	N/A

		Orders Received	Revenue	Profit from Business Activities	Gross Profit - SG&A Exp.	Profit Attributable to Owners of Parent
MHI (7011)	FY2018	38,534	40,783	1,867	2,264	1,013
	FY2019	41,686	40,413	- 295	1,261	66
	FY2020 (F)	35,000	38,000	0	-	0

		Orders Received	Net Sales	Operating Income	Net Income Attributable to Parent's Shareholders
Total	FY2018	89,586	90,942	3,958	1,501
	FY2019	93,331	91,226	2,576	- 130

Note 1: MHI has adopted IFRS. MHI's *Profit from business activities* was calculated by adding *Share of profit of investments accounted for using the equity method* and *Other income* to *Revenue* less *Cost of sales, SG&A* and *Other expenses*.

Note 2: For the total Net Sales of the six companies, *Revenue* was used only for MHI.

Note 3: For the total Operating Income of the six companies, *Gross Profit* less *SG&A* was used only for MHI.

(Source: Prepared by JCR based on financial materials of above companies)

(Chart 2) Financial Structure

(JPY 100 mn, %, times)

		Equity Capital	Interest-bearing Debt	Equity Ratio	DER
SHI	End-FY2018	4,534	733	47.5	0.16
	End-FY2019	4,644	1,246	46.7	0.27
Mitsui E&S	End-FY2018	1,595	2,046	16.0	1.28
	End-FY2019	643	1,739	7.7	2.70
Hitachi Zosen	End-FY2018	1,294	1,148	30.2	0.89
	End-FY2019	1,280	856	31.3	0.67
KHI	End-FY2018	4,763	4,375	25.9	0.92
	End-FY2019	4,556	5,350	23.3	1.17
IHI	End-FY2018	3,491	3,375	21.0	0.97
	End-FY2019	3,263	4,608	18.7	1.41

		Equity Attributable to Owners of Parent	Interest-bearing Debt	Ratio of Equity Attributable to Owners of Parent	DER
MHI	End-FY2018	14,308	6,651	27.8	0.46
	End-FY2019	12,183	5,982	24.4	0.49

		Equity Capital	Interest-bearing Debt	Equity Ratio	DER
Total	End-FY2018	29,989	18,330	27.2	0.61
	End-FY2019	26,571	19,783	24.3	0.74

Note 1: Interest-bearing debt includes corporate bonds, commercial paper and borrowings (excluding lease obligations, etc.).
Note 2: Figures of Hitachi Zosen shown above reflect the equity content of subordination loans.
Note 3: MHI has adopted IFRS.
Note 4: The total equity capital of the six companies: JGAAP = Equity Capital / IFRS = Equity attributable to owners of parent
(Source: Prepared by JCR based on financial materials of above companies)

<Reference>

Issuer: SUMITOMO HEAVY INDUSTRIES, LTD.
Long-term Issuer Rating: A+ Outlook: Stable

Issuer: Mitsui E&S Holdings Co., Ltd.
Long-term Issuer Rating: BB+ Outlook: Stable

Issuer: Hitachi Zosen Corporation
Long-term Issuer Rating: BBB+ Outlook: Stable

Issuer: Mitsubishi Heavy Industries, Ltd.
Long-term Issuer Rating: AA- Outlook: Stable

Issuer: Kawasaki Heavy Industries, Ltd.
Long-term Issuer Rating: A Outlook: Stable

Issuer: IHI Corporation
Long-term Issuer Rating: A- Outlook: Positive

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