

## Highlights of General Heavy Machinery Manufacturers' Financial Results for Fiscal Year Ended March 2021

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 2021 (FY2020) and earnings forecasts for FY2021 of Japan's six general heavy machinery manufacturers (collectively, the "Companies"): 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

General heavy machinery manufacturers operate in wide-ranging business domains, which can be roughly categorized into: aerospace; ship and ocean; and land. All these domains were affected by the COVID-19 pandemic in FY2020.

The business domain that was most hit by the pandemic probably is commercial aircraft-related in the aerospace sector. Entry restrictions by countries around the world in the wake of the pandemic led to a sharp downturn in passenger demand. While demand for domestic flights recovered toward the end of 2020, though slowly, it remained sluggish for international flights. As regards joint aircraft production for The Boeing Company amid these circumstances, the monthly production rate of MHI and KHI's flagship B777 (including B777X) and B787 models was reduced to 2 and 5, respectively; monthly production volume in early 2020 was 5 for B777 and 14 for B787. For aircraft engine-related businesses, demand is shrinking not only for new engines but also for spare parts that are highly linked to flight lengths of aircrafts.

Harsh business conditions for order intake continued also in the ship and ocean sector in FY2020, partly owing to the pandemic. According to The Shipbuilders' Association of Japan, the world total of newly placed shipbuilding orders decreased for two years in a row in 2020 to 33.36 million gross tonnage. Moreover, price competition was also intense partly because order backlogs of Chinese and Korean shipbuilders were at low levels. Consequently, ship prices remained low, and the situation where provisions for loss on construction works need to be made for new orders persisted. Meanwhile, ocean resource development-related businesses saw delays in investment decisions by oil companies because of the pandemic, etc. That said, given that crude oil prices are picking up, new development projects will make progress in the medium run.

The land sector can be roughly divided into mass-production businesses with shorter lead time and order-based businesses with longer lead time. The former include turbocharger for vehicles of MHI and IHI; power transmissions/control equipment and construction machinery of SHI; and robots and two-wheeled motor bikes of KHI. The latter include MHI's prime movers and construction of different types of plants. For mass-production businesses, the business environment deteriorated further as, when the economy was already slowing down due to the U.S.-China trade conflict, etc., the COVID crisis made it even worse. Yet, there are areas like foods, semiconductor and medical-related where demand is fairly strong, and demand for automotive products is picking up rapidly. For order-based businesses, on the other hand, orders were postponed, construction works were delayed and so forth.

### 2. Financial Results

Orders received in FY2020 decreased 17.1% over the year to 7,655.6 billion yen for the Companies combined. Individually, it showed a year-on-year fall for all of the Companies. Not only it fell in mass-production businesses with a decline in demand, order-based businesses saw delays in sales negotiations, etc. amid the COVID crisis.

For FY2020, net sales (revenue for MHI and IHI) of the Companies combined fell 8.6% over the year to 8,222.8 billion yen, and operating income (gross profit less SG&A expenses for MHI and IHI) of the Companies combined plunged by as much as 51.5% to 117.0 billion yen. Individually, net sales

dropped for four companies excluding Mitsui E&S and Hitachi Zosen. In mass-production businesses, while there were areas where firm results were achieved, including semiconductor-related, net sales declined in many areas, such as automotive-related. Moreover, MHI, KHI and IHI were affected by a fall in demand for commercial aircraft-related products. The loss shrank for Mitsui E&S thanks mainly to the elimination of the large loss posted in relation to specific overseas projects in FY2019. As for MHI, it attained a profit from business activities, which however is largely attributable to the elimination of large impairment losses reported in relation to the Mitsubishi SpaceJet business posted in FY2019 (this is not included in the aforementioned operating income).

As regards the financial structure of the Companies combined at the end of FY2020, equity ratio came to 26.1%, and DER stood at 0.82x, as opposed to 23.6% and 0.77x a year before (equity attributable to owners of parent for MHI and IHI's equity capital). Improvement of equity ratio was helped by growth in equity capital with the reporting of net income, reductions in total assets, etc., while DER worsened largely due to an increase in MHI's interest-bearing debt (interest-bearing debt includes corporate bonds, commercial paper and borrowings). On a separate note, MHI has reached a settlement with Hitachi, Ltd. on a dispute relating to South African projects and recovered indemnification assets for these projects in full, which previously were on the balance sheet.

### 3. Highlights for Rating

For the FY2021 forecast, four companies excluding SHI and Hitachi Zosen expect a higher or positive operating income (profit from business activities for MHI and operating profit for IHI); SHI and Hitachi Zosen project a lower income, but not with a sharp fall from FY2020. Business environment will likely be better than FY2020 when the COVID-19 pandemic had huge impacts. However, things will vary depending on business domains. Commercial aircraft-related businesses are most likely to take time to turn around. A sharp income growth is expected for MHI's Aircraft, Defense & Space segment in FY2021, but this includes the positive effects of SpaceJet cost minimization in the amount of 110 billion yen.

Previously, demand for commercial aircrafts was predicted to increase steadily with growth in passenger demand. However, passenger demand actually dropped to a much lower level amid the pandemic, deteriorating business conditions of airlines. Its recovery can be expected if vaccination rates go up in countries around the world, but the situation still remains unpredictable because of factors like the spread of variants. IATA (International Air Transport Association) predicts that passenger demand will not return to 2019 levels before 2024; given that business conditions of airlines are getting tougher, the timing and extent of full demand recovery remain uncertain. Under these circumstances, it will be vital to reconstruct the system for joint aircraft production in line with a drop in production rates, thereby cutting down on costs even further. As demand recovery is most likely to take time for aircraft engines, too, the Companies need to work on cost reductions by taking such measures as productivity improvement.

As for new shipbuilding, even when the harsh business environment persists, operating rates are required to be kept at certain levels. The Companies thus continue to face the challenge of making difficult business decisions. They are striving to be selective in accepting orders, reduce manufacturing costs by taking advantage of alliances and so forth, and JCR will closely look at the effectiveness of these measures. Meanwhile, in the ocean resource development business, which Mitsui E&S operates, FY2020 reported a loss because of delays in projects due to the COVID crisis, which however is expected to turn positive in FY2021. As this business is positioned as one of core areas for Mitsui E&S, future trends in business performance will be monitored.

In the land sector, trends in demand vary depending on business categories and geographical locations of customers and therefore must be examined for each product. For automotive products, recovery in demand may be delayed due to semiconductor shortage, but demand will probably be better than FY2020 when it plunged. For businesses with longer lead time, for which orders received declined in FY2020 due to delays in sales negotiations, etc., FY2021 results may be dragged down. JCR is also looking at profitability as of when orders of large projects were placed and progress in these projects. Even though there were no losses to be noted with regard to specific projects in FY2020, ongoing attention will be paid to profitability at the time of order intake and progress management.

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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)	FY2019	8,262	8,644	568	328
	FY2020	8,138	8,490	513	267
	FY2021 (F)	8,800	8,700	500	270
Mitsui E&S (7003)	FY2019	9,968	7,864	-620	-862
	FY2020	5,766	6,638	-122	1
	FY2021 (F)	4,500-6,500	6,700	50	30
Hitachi Zosen (7004)	FY2019	4,541	4,024	138	21
	FY2020	4,294	4,085	153	42
	FY2021 (F)	4,500	4,000	140	50
KHI (7012)	FY2019	15,135	16,413	620	186
	FY2020	14,024	14,884	-53	-193
	FY2021 (F)	14,800	15,000	300	170

  

		Orders Received	Revenue	Profit from Business Activities / Operating Profit	Gross Profit - SG&A Exp.	Profit Attributable to Owners of Parent
MHI (7011)	FY2019	41,686	40,413	-295	1,261	871
	FY2020	33,363	36,999	540	520	406
	FY2021 (F)	36,000	37,500	1,500	-	900
IHI (7013)	FY2019	12,800	12,631	478	444	82
	FY2020	10,970	11,129	279	157	130
	FY2021 (F)	11,600	11,800	700	-	350

  

		Orders Received	Net Sales	Operating Income	Net Income Attributable to Parent's Shareholders
Total	FY2019	92,392	89,993	2,413	627
	FY2020	76,556	82,228	1,170	655
	FY2021 (F)	80,200-82,200	83,700	-	1,770

Notes:

1. MHI and IHI adopt 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 expenses and other expenses. IHI's operating profit was calculated by adding other income to revenue less cost of sales, SG&A expenses and other expenses.
2. For the total net sales of the Companies, revenue was used for MHI and IHI.
3. For the total operating income of the Companies, gross profit less SG&A expenses was used for MHI and IHI.

(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-FY2019	4,644	1,246	46.7	0.27
	End-FY2020	4,906	1,244	47.6	0.25
Mitsui E&S	End-FY2019	643	1,739	7.7	2.70
	End-FY2020	675	1,645	8.8	2.44
Hitachi Zosen	End-FY2019	1,280	856	31.3	0.67
	End-FY2020	1,363	841	31.8	0.62
KHI	End-FY2019	4,556	5,650	23.3	1.24
	End-FY2020	4,653	5,827	23.7	1.25

  

		Equity Attributable to Owners of Parent	Interest-bearing Debt	Ratio of Equity Attributable to Owners of Parent	DER
MHI	End-FY2019	12,183	5,982	24.4	0.49
	End-FY2020	13,663	9,056	28.4	0.66
IHI	End-FY2019	2,801	4,633	15.0	1.65
	End-FY2020	3,007	4,631	16.4	1.54

  

		Equity Capital	Interest-bearing Debt	Equity Ratio	DER
Total	End-FY2019	26,109	20,110	23.6	0.77
	End-FY2020	28,269	23,245	26.1	0.82

Notes:

1. Interest-bearing debt includes corporate bonds, commercial paper and borrowings (excluding lease obligations, etc.).
  2. Figures of Hitachi Zosen shown above reflect the evaluation of equity content of subordinated loans.
  3. MHI and IHI adopt IFRS.
  4. Total equity capital of the Companies: equity capital under JGAAP; and equity attributable to owners of parent under IFRS
- (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: Negative

Issuer: IHI Corporation

Long-term Issuer Rating: A- Outlook: Stable

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