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Highlights of General Heavy Machinery 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 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

Business environment surrounding general heavy machinery manufacturers for land, sea, and air use in FY2018 is outlined on a segment-by-segment basis as follows. For the ship and ocean segment, new ship orders are recovering albeit slowly after the bottom in 2016, while projects on hand are slightly more than 70% of that at the recent peak at the end of 2015. Also, ship prices remain low and therefore provisions for loss on construction work need to be made in some cases. The ocean resource development-related segment is considered a growth market. Associated with crude oil prices seeing some recovery, the business environment for the segment is improving, as exemplified by many projects for offshore oil exploration having been planned.

In the aerospace segment, demand for commercial aircrafts has been growing along with an increase in the number of air passengers. That said, joint production items for engines for commercial aircrafts and those for Boeing general heavy machinery manufacturers make are affected by the shift to new models. Mass-production of engines for commercial aircrafts has just placed a heavy cost burden on the manufacturers, and currently increased unit sales of new engines are adding downward pressure on profits. Meanwhile, the manufacturers still need time to launch joint production items for Boeing 777X, while reducing the production of those for Boeing 777. For small-sized jet aircraft MRJ, of which MHI is endeavoring to commence mass-production, test flights are made to obtain a type certificate in preparation for the first delivery in the middle of 2020.

The land segment saw mixed landscape of the business environment. While demand for construction equipment is relatively solid, thermal power generation and nuclear power generation-related businesses faced headwinds from demand shift to renewable energy. The coal-fired thermal power related business, in particular, is suffering great setbacks. Large-scale gas-fired power business is also seeing sluggish demand, weighed down by emerging trends toward diversification of power sources. In addition, economy is increasingly uncertain due to impacts of the U.S.-China trade friction, etc. Particular attention should be paid to future trends of demand for quick delivery and mass-produced machinery products, which are sensitive to business cycle.

2. Financial Results

The total amount of orders the six companies received in FY2018 decreased 4.8% year on year to 8,955.8 billion yen. All the companies but SHI and Hitachi Zosen saw declines in orders. SHI achieved a robust growth in orders for machines for mass-production, whereas Hitachi Zosen received orders driven by large projects such as overseas waste power generation plant and domestic water treatment facilities. By contrast, MHI and KHI saw declines in orders for joint production items for commercial aircrafts and other products. IHI and Mitsui E&S suffered a reactive decline after large orders were received in FY2017. Looking ahead, the orders are expected to increase in FY2019, totaling from 9,580 billion to 9,780 billion yen for the six companies.

For FY2018, the total net sales of the six companies decreased 0.3% to 9,094.2 billion yen and the total operating income of the six companies increased 6.3% to 395.8 billion yen, on a year on year basis. (For MHI, *revenue* is used instead of *net sales* and operating income is calculated from *gross profit* less *selling, general and administrative expenses (SG&A)*.) P/L in the segments of energy, ship and ocean segments, etc. increased due, for instance, to promoted cost reduction measures, while sales of machines for mass-production fared well. The income growth was also attributed by the mitigation of impacts from particular projects of Hitachi Zosen and IHI. Mitsui E&S reported operating loss for the second consecutive year as a result of loss in overseas projects.

As for the combined financial metrics of the six companies at end-March, 2019, the shareholders' equity ratio is 27.2% (unchanged from 27.2% a year earlier) and the debt-equity ratio (DER) is 0.61 times (0.66 a year earlier). (For MHI, metrics by the retroactive application of IFRS are used also at end-March 2018. Its MRJ-related assets and net assets were reduced as is. Equity attributable to owners of parent represents shareholders' equity.) While shareholders' equity increased, interest-bearing debts decreased. (The interest-bearing debts for the calculation include corporate bonds, commercial paper and borrowings.) By company, Mitsui E&S saw its shareholders' equity ratio and DER deteriorate due partly to substantially diminished equity associated with net loss. The other five companies' financial metrics were by and large maintained almost on a par with the year-ago level. All in all, shareholders' equity increased, though some companies increased interest-bearing debts due to an increase in working fund, proactive investment activities, etc. MHI increased "Indemnification asset for South African project" under arbitration with Hitachi, Ltd. from 445.9 billion yen at end-March 2018 to 546.0 billion yen at end-March 2019 (MHI claims against Hitachi to pay approximately 774.3 billion yen).

3. Highlights for Rating

For FY2019, the net sales (revenue for MHI) of the five companies other than IHI are projected to increase and the total operating income of the four companies other than SHI and IHI are expected to increase or turn profitable. SHI and IHI expect declines in income but are planning to maintain high levels of operating income. The companies' forecasts on a segment-by-segment basis provide the outlook for business conditions that will be mostly firm. Factors being expected to contribute to an increase in income also include the mitigation of impacts from deteriorated profitability of particular projects.

The general heavy machinery manufacturing industry has been strengthening risk control and project management, recently showing movement to withdraw from fields where the manufacturers' knowledge or know-how is insufficient. That said, the issue of project management is still highlighted, as exemplified by losses in overseas coal-fired thermal power plant construction by Mitsui E&S, waste power generation plant in Europe for Hitachi Zosen, railway vehicles in the United States for KHI, and process plants in North America for IHI. For some of the aforementioned projects, construction works are underway. Certain attention should be paid to additional losses in such projects as well as any losses that can be caused in other projects.

In the ship and ocean segment, new vessel building-related business is still in a tough situation. Though the environment for orders shows some sign of improvement, it will take time to improve business in full scale in light of fierce competition with manufacturers in China and Korea. Mitsui E&S announced its intention to reduce the commercial shipbuilding business in its Chiba plant and to promote cooperation or alliance with other companies for shipbuilding. Every company is implementing measures centering on collaboration and alliance in new vessel building-related business, which continues to suffer severe conditions. JCR will keep monitoring the effectiveness of their measures.

The aerospace segment is expected to be still affected negatively by the shift of commercial aircrafts to new models. For IHI, factors for a decline in income include an increase in the number of new engine units to be delivered, which is yet unprofitable immediately after mass production. KHI expects a slight decrease in income due to the impact of lower profitability of joint production items for commercial aircrafts. Joint production items for Boeing are in a demand drop-off period due to the shift to new models. JCR will watch closely whether commercial aircraft-related business can get back on a growth trajectory by maintaining earnings capacity through cost reduction on a continuing basis, etc.

Lastly, problems with compliance occurred in some companies, as exemplified by inappropriate testing of products. Causes of the problems are divided largely into the three: lack of employees' awareness of compliance, insufficient commitment of the management to workers on site, and lack of a system or mechanism to prevent non-compliance. The cases having occurred in FY2018 are likely to have only limited impact on business results, since there were no problems with the quality of products. However, non-compliance in the production and testing procedures can have a significant impact on the manufacturers' businesses. JCR will continue to pay attention to the companies' preventive measures and the effectiveness thereof.

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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)	FY2017	8,639	7,910	699	346
	FY2018	9,521	9,030	752	456
	FY2019 (F)	9,300	9,050	720	460
Mitsui E&S (7003)	FY2017	11,606	7,032	-52	-101
	FY2018	7,101	6,565	-597	-695
	FY2019 (F)	8,000–10,000	8,400	120	30
Hitachi Zosen (7004)	FY2017	4,004	3,764	59	21
	FY2018	4,550	3,781	73	54
	FY2019 (F)	4,000	3,800	120	50
KHI (7012)	FY2017	16,080	15,742	559	289
	FY2018	15,859	15,947	640	274
	FY2019 (F)	17,000	17,000	720	380
IHI (7013)	FY2017	15,050	15,903	722	82
	FY2018	13,992	14,834	824	398
	FY2019 (F)	14,500	14,000	800	350

		Orders Received	Revenue	Profit from Business Activities	Gross Profit - SG&A Exp.	Profit Attributable to Owners of Parent
MHI (7011)	FY2017	38,687	40,856	581	1,735	-73
	FY2018	38,534	40,783	1,867	2,264	1,013
	FY2019 (F)	43,000	43,000	2,200	-	1,100

		Orders Received	Net Sales	Operating Income	Net Income Attributable to Parent's Shareholders
Total	FY2017	94,067	91,209	3,723	565
	FY2018	89,558	90,942	3,958	1,501
	FY2019 (F)	95,800–97,800	95,250	-	2,370

Note 1: MHI has been adopting IFRS since FY2018. The figures for FY2017 of MHI shown above are based on IFRS to compare with those for FY2018.
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: The total Net Sales the six companies include *Revenue* only from MHI.
Note 3: The total Operating Income of the six companies include *Gross Profit* less *SG&A* only from 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-FY2017	4,310	641	48.1	0.15
	End-FY2018	4,534	733	47.5	0.16
Mitsui E&S	End-FY2017	2,391	2,552	23.2	1.07
	End-FY2018	1,595	2,046	16.0	1.28
Hitachi Zosen	End-FY2017	1,268	959	32.4	0.76
	End-FY2018	1,294	1,148	30.2	0.89
KHI	End-FY2017	4,660	4,446	26.1	0.95
	End-FY2018	4,763	4,375	25.9	0.92
IHI	End-FY2017	3,246	3,040	19.9	0.94
	End-FY2018	3,491	3,375	21.0	0.97

		Equity Attributable to Owners of Parent	Interest-bearing Debt	Ratio of Equity Attributable to Owners of Parent	DER
MHI	End-FY2017	13,955	8,131	26.6	0.58
	End-FY2018	14,308	6,651	27.8	0.46

		Equity Capital	Interest-bearing Debt	Equity Ratio	DER
Total	End-FY2017	29,832	19,773	27.2	0.66
	End-FY2018	29,989	18,330	27.2	0.61

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 been adopting IFRS since FY2018. The figures for end-FY2017 of MHI shown above are based on IFRS to compare with those for FY2018.

Note 4: The total equity capital of the six companies include Equity Capital under Japanese GAAP 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: BBB- Outlook: Negative

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: Stable

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