

Financial Results for Third Quarter FY2018 (for the year ending March 31, 2019)

IHI

February 7, 2019

IHI Corporation

Table of Contents

1. Consolidated Results for Third Quarter FY2018

Summary of Financial Results.....	4
Financial Results by Segment.....	5
Non-operating Income / Expenses.....	9
Extraordinary Income / Losses.....	10
Balance Sheets.....	11
Supplementary Information.....	12

2. Forecasts of the Consolidated Results for FY2018

Summary of Forecasts for FY2018.....	16
Forecasts for FY2018 by Segment.....	17

3. Financial Results by Segment

Resources, Energy and Environment.....	21
Social Infrastructure and Offshore Facility.....	23
Industrial System and General-Purpose Machinery.....	25
Aero Engine, Space and Defense.....	27

<Appendices>	29
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1. Consolidated Results for Third Quarter FY2018



1. Consolidated Results for Third Quarter FY2018

Summary of Financial Results

Note: Average exchange rates for FY2018.3Q US\$ 1.00= ¥111.39

(In billion yen)

	FY2017.3Q	FY2018.3Q	Change
Orders received	977.5	934.5	▲ 43.0
Net sales	1,131.3	1,047.2	▲ 84.0
Operating profit	51.5	56.6	5.1
Ordinary profit	29.6	57.5	27.9
Profit before income taxes	28.2	61.2	32.9
Income taxes	▲ 14.9	▲ 23.1	▲ 8.1
Profit attributable to owners of parent	9.8	34.1	24.3

¥4.3 billion of income taxes for prior periods is included in FY2018.3Q.

In FY2017, the closing date of the fiscal year of certain overseas consolidated subsidiaries has been changed from December 31 to March 31. As a result, for the nine months ended December 31, 2017, those overseas consolidated subsidiaries have a 12-month accounting period. The effect of these changes was an increase of ¥57.9 billion in net sales and an increase of ¥1.4 billion in operating profit in FY2017.3Q.

1. Consolidated Results for Third Quarter FY2018

Financial Results by Segment

■ Orders received & Order backlog

(In billion yen)

	Orders received			Order backlog		
	FY2017.3Q	FY2018.3Q	Change	FY2017	FY2018.3Q	Change
Resources, Energy and Environment	265.1	216.7	▲ 48.4	648.5	570.1	▲ 78.4
Social Infrastructure and Offshore Facility	104.5	83.2	▲ 21.3	206.1	196.9	▲ 9.1
Industrial System and General-Purpose Machinery	352.6	351.2	▲ 1.3	161.0	198.4	37.4
Aero Engine, Space and Defense	235.8	254.9	19.0	533.0	476.6	▲ 56.3
Total Reportable Segment	958.2	906.1	▲ 52.0	1,548.7	1,442.2	▲ 106.4
Others	55.4	61.6	6.2	18.4	27.5	9.1
Adjustment	▲ 36.1	▲ 33.3	2.7	-	-	-
Total	977.5	934.5	▲ 43.0	1,567.1	1,469.7	▲ 97.3

Overseas orders received / order backlog	521.8	385.9	▲ 135.9	625.4	487.2	▲ 138.2
% of Overseas orders received / order backlog	53%	41%	▲ 12%	40%	33%	▲ 7%

1. Consolidated Results for Third Quarter FY2018

Financial Results by Segment

■ Net sales & Operating profit

(In billion yen)

	Net sales			Operating profit		
	FY2017.3Q	FY2018.3Q	Change	FY2017.3Q	FY2018.3Q	Change
Resources, Energy and Environment	351.8	271.6	▲ 80.2	▲ 10.7	4.0	14.7
Social Infrastructure and Offshore Facility	104.6	94.9	▲ 9.7	8.4	7.6	▲ 0.8
Industrial System and General-Purpose Machinery	331.4	314.1	▲ 17.3	10.9	13.2	2.3
Aero Engine, Space and Defense	326.5	349.3	22.7	46.7	35.8	▲ 10.8
Total Reportable Segment	1,114.6	1,030.0	▲ 84.6	55.4	60.8	5.4
Others	46.3	47.1	0.8	0.8	1.1	0.2
Adjustment	▲ 29.6	▲ 29.9	▲ 0.3	▲ 4.7	▲ 5.2	▲ 0.4
Total	1,131.3	1,047.2	▲ 84.0	51.5	56.6	5.1

Overseas sales	633.9	547.6	▲ 86.3
% of overseas sales	56%	52%	▲ 4%

Regarding the effect to each segment caused by changes of the closing date of the fiscal year of certain overseas consolidated subsidiaries in the previous fiscal year, please refer to segment information found in the consolidated financial report.

1. Consolidated Results for Third Quarter FY2018

Financial Results by Segment

- Analysis of change in operating profit from the previous period

(In billion yen)

	Change in net sales	Change in construction profitability	Change in foreign exchange rate	Change in SG&A	Impact of change of FY period	Total
Resources, Energy and Environment	▲ 1.0	12.7	0.1	2.8	0.1	14.7
Social Infrastructure and Offshore Facility		▲ 0.5	0.1	▲ 0.4		▲ 0.8
Industrial System and General-Purpose Machinery	2.3	2.1		▲ 0.5	▲ 1.6	2.3
Aero Engine, Space and Defense	▲ 14.5	4.8	▲ 0.6	▲ 0.5		▲ 10.8
Total Reportable Segment	▲ 13.2	19.1	▲ 0.4	1.4	▲ 1.5	5.4
Others	0.4	▲ 0.2		▲ 0.1	0.1	0.2
Adjustment		0.3		▲ 0.8		▲ 0.4
Total	▲ 12.8	19.2	▲ 0.4	0.5	▲ 1.4	5.1

There are cases that the aggregated amount of each segment or factor doesn't match to the total due to rounding off.

Status of Project underway in North America in the Process Plants Business (in the Third Quarter)

In terms of construction progress, installation of plant ancillary facilities is almost complete, and IHI E&C is moving forward with the transition to commissioning. In this context, additional expenses have been recorded in relation to the following matters.

- In the final phase of installation, the adjustment items on installation did not proceed as expected, and IHI E&C was unable to implement a smooth transition to commissioning (additional installation expenses incurred from delayed delivery increased)
- With regard to certain products ordered in from outside that had already been installed, it was discovered on site that there had been faults at the time of manufacturing, and these needed to be corrected (additional installation expenses incurred from delayed delivery increased)
- With commissioning of the No.1 Train moving forward, it was discovered that the amount of work required for commissioning on a per-train basis was larger than initially expected (factored in additional commissioning expenses up to the share for No.10 Train)

IHI E&C remains to cut back on receiving new large-scale orders and concentrating its resources into this project. Working toward making the handover of No.1 Train and plant ancillary facilities, which is scheduled for the end of FY2018, IHI and IHI E&C are focusing on a smooth transition from installation to commissioning as well as adjustment items on installation, and continue to implement progress management of projects.

1. Consolidated Results for Third Quarter FY2018

Non-operating Income / Expenses



(In billion yen)

	FY2017.3Q	FY2018.3Q	Change	Note
Net interest expenses (incl. dividend income)	▲ 0.3	▲ 0.6	▲ 0.3	
Share of profit of entities accounted for using equity method	▲ 11.0	6.7	17.8	
Foreign exchange gains / losses (▲)	▲ 0.1	0.1	0.2	
Others	▲ 10.3	▲ 5.3	5.0	FY2017.3Q: Payments for contract adjustments for civil aero engines ▲6.4 Expenses for delayed delivery ▲4.5
Non-operating Income / Expenses (▲)	▲ 21.9	0.9	22.8	

Change of the rate(US\$) FY2017.3Q +0.81yen (beginning 112.19yen→end 113.00yen)
 FY2018.3Q +4.76yen (beginning 106.24yen→end 111.00yen)

1. Consolidated Results for Third Quarter FY2018

Extraordinary Income / Losses

(In billion yen)

	FY2017.3Q	FY2018.3Q	Change	Note
Gain on sales of shares of subsidiaries and associates	—	4.2	4.2	Sale of equity interest in operating companies related to the Small power systems Business
Gain on transfer of business	1.5	1.1	▲ 0.4	FY2018.3Q: The Small power systems Business
Extraordinary Income	1.5	5.3	3.7	
Impairment loss	—	▲ 1.6	▲ 1.6	Impairment loss on fixed assets related to the Small power systems Business
Settlement-related expenses related to boiler facilities in customer's commercial operation	▲ 2.9	—	2.9	
Extraordinary Losses	▲ 2.9	▲ 1.6	1.3	
Extraordinary Income / Losses(▲)	▲ 1.3	3.7	5.0	

1. Consolidated Results for Third Quarter FY2018

Balance Sheets

(In billion yen)

	As of March 31, 2018	As of December 31, 2018	Change
Total assets (*1)	1,633.4	1,717.1	83.6
(Trade receivables)	(400.3)	(369.3)	(▲ 31.0)
(Inventories)	(428.5)	(495.5)	(67.0)
(Investment securities)	(99.2)	(120.9)	(21.6)
Total liabilities (*1)	1,283.2	1,340.6	57.4
(Trade payables)	(304.9)	(278.4)	(▲ 26.4)
(Advance received)	(177.8)	(161.4)	(▲ 16.3)
(Interest-bearing debt) (*2)	(322.2)	(439.1)	(116.8)
Total net assets	350.2	376.4	26.2
Shareholders' equity	313.2	337.6	24.3
Accumulated other comprehensive income	11.3	8.7	▲ 2.6
Non-controlling interests and others	25.6	30.1	4.5
Total liabilities and net assets (*1)	1,633.4	1,717.1	83.6
D/E ratio(times) (*3)	0.92	1.17	0.25
Equity ratio	19.9%	20.2%	0.3%

(*1) Balance Sheets as of March 31, 2018 is partly adjusted due to the application of the “Partial Amendments to Accounting Standard for Tax Effect Accounting”.

(*2) Interest-bearing debt includes the amount of lease obligations.
(as of March 31, 2018: ¥18.2 billion / as of December 31, 2018: ¥15.7 billion)

(*3) D/E ratio = Interest-bearing debt / net assets

(1) Cash Flows

(In billion yen)

	FY2017.3Q	FY2018.3Q	Change
Operating activities	35.3	▲ 66.0	▲ 101.3
Investing activities	▲ 24.3	▲ 61.6	▲ 37.3
Free cash flows	11.0	▲ 127.7	▲ 138.7
Financing activities	▲ 18.6	104.6	123.3

(2) R&D/CAPEX/Depreciation & Amortization

(In billion yen)

	FY2017.3Q	FY2018.3Q
R&D	24.2	23.7
CAPEX	38.9	49.0
Depreciation & Amortization	32.9	31.5

(3) Overseas Sales by Region

(In billion yen)

	FY2017.3Q	FY2018.3Q
Asia	118.0	112.0
China	82.3	90.8
North America	286.0	250.1
Central and South America	18.4	9.5
Europe	103.4	75.6
Others	25.6	9.3
Total	633.9	547.6
% of overseas sales	56%	52%

2. Forecasts of the Consolidated Results for FY2018

2. Forecasts of the Consolidated Results for FY2018

Summary of Forecasts for FY2018

<assumed exchange rate>

US\$ 1.00 = ¥105 (assumed in November , ¥105)

Euro 1.00 = ¥130 (assumed in November , ¥130)

(In billion yen)

	FY2018 Forecast		FY2017 Actual	Change
	In November	In February		Vs. Forecast in November
Orders received	1,500.0	1,450.0	1,505.0	▲ 50.0
Net sales	1,500.0	1,510.0	1,590.3	10.0
Operating profit	85.0	87.0	72.2	2.0
Ordinary profit	65.0	71.0	21.4	6.0
Profit attributable to owners of parent	32.0	42.0	8.2	10.0

※The forecasts in November were unchanged from those announced in May.

<For reference> **Sensitivity to foreign exchange rates by currency**

1 yen per US\$ corresponds to 0.2 billion yen, and per Euro, 0.0 billion yen in operating profit.

2. Forecasts of the Consolidated Results for FY2018

Forecasts for FY2018 by Segment

■ Orders received

(In billion yen)

	FY2018 Forecast (In November)	FY2018 Forecast (In February)	Change
Resources, Energy and Environment	380.0	310.0	▲ 70.0
Social Infrastructure and Offshore Facility	140.0	130.0	▲ 10.0
Industrial System and General-Purpose Machinery	470.0	480.0	10.0
Aero Engine, Space and Defense	490.0	500.0	10.0
Total Reportable Segment	1,480.0	1,420.0	▲ 60.0
Others	70.0	70.0	0.0
Adjustment	▲ 50.0	▲ 40.0	10.0
Total	1,500.0	1,450.0	▲ 50.0

2. Forecasts of the Consolidated Results for FY2018

Forecasts for FY2018 by Segment

■ Net sales & Operating profit

(In billion yen)

	FY2018 Forecast (In November)		FY2018 Forecast (In February)		Change	
	Net sales	Operating profit	Net sales	Operating profit	Net sales	Operating profit
Resources, Energy and Environment	390.0	20.0	370.0	9.0	▲ 20.0	▲ 11.0
Social Infrastructure and Offshore Facility	150.0	12.0	150.0	13.0	0.0	1.0
Industrial System and General-Purpose Machinery	440.0	22.0	450.0	22.0	10.0	0.0
Aero Engine, Space and Defense	500.0	44.0	510.0	46.0	10.0	2.0
Total Reportable Segment	1,480.0	98.0	1,480.0	90.0	0.0	▲ 8.0
Others	70.0	3.0	70.0	3.0	0.0	0.0
Adjustment	▲ 50.0	▲ 16.0	▲ 40.0	▲ 6.0	10.0	10.0
Total	1,500.0	85.0	1,510.0	87.0	10.0	2.0

2. Forecasts of the Consolidated Results for FY2018

Forecasts for FY2018 by Segment

- Analysis of change in operating profit of forecasts(in May vs in February) ^(*2)

(In billion yen)

	Change in net sales	Change in construction profitability	Change in foreign exchange rate	Change in SG&A	Total
Resources, Energy and Environment	▲ 3.0	▲ 8.0			▲ 11.0
Social Infrastructure and Offshore Facility		1.0			1.0
Industrial System and General-Purpose Machinery					0.0
Aero Engine, Space and Defense		▲ 3.0	5.0		2.0
Total Reportable Segment	▲ 3.0	▲ 10.0	5.0	0.0	▲ 8.0
Others					0.0
Adjustment		▲ 1.0 ^(*1) 11.0			10.0
Total	▲ 3.0	0.0	5.0	0.0	2.0

(*1)A buffer of negative ¥11.0 billion included in the previous forecasts to prepare for the risk of fluctuation in business was reversed in full amount.

(*2) The forecasts in November were unchanged from those announced in May.

3. Financial Results by Segment

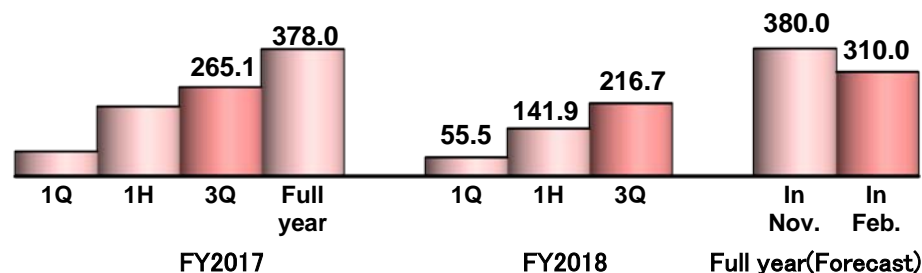
3. Financial Results by Segment

Resources, Energy and Environment

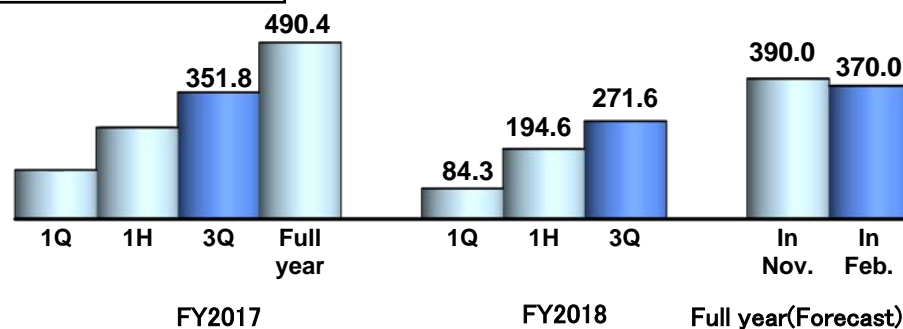
※The forecasts in November were unchanged from those announced in May.

(In billion yen, accumulated amount)

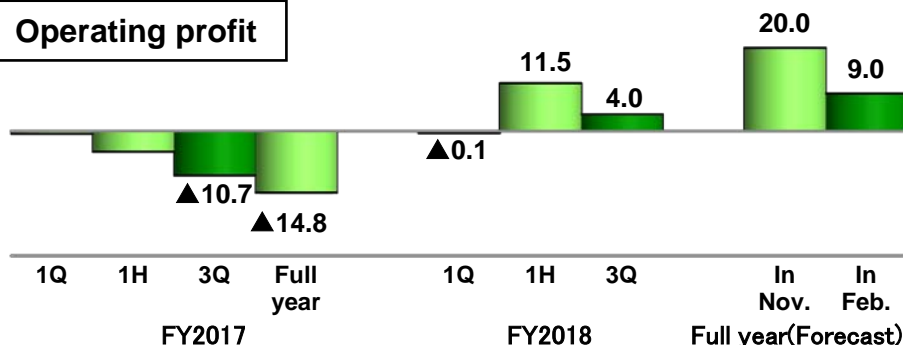
Orders received



Net sales



Operating profit



<Results by business segment>

【 Orders received 】

Orders received decreased owing to a reverse effect of receiving a large-scale overseas project in the Boilers Business in FY2017.

【 Net sales 】

Net sales decreased owing to a pull back from the progress of large-scale projects in the Process plants Business in FY2017, in addition to the effect of the financial reporting periods unification (hereinafter “FRPU”) in FY2017.

【 Operating profit 】

Operating profit increased mainly because the issue regarding deterioration of profitability in the Process plants Business in FY2017 is being brought under control on the whole and a decrease in selling, general and administrative expenses.

<FY2018 Forecast (vs. In November)>

Orders received are expected to decrease except for the Nuclear power Business.

Net sales and operating profit are expected to decrease mainly due to a decline in sales resulting from a decline in orders received of the Environmental Response Systems Business and the Power systems plants Business, as well as the deterioration of profitability in projects in North America in the Process plants Business.

3. Financial Results by Segment

Resources, Energy and Environment

(In billion yen)

	Orders received		Net sales							
	FY2017 Full year	FY2018 Full year (Forecast)	FY2017				FY2018			
			1Q	1H	3Q	Full year	1Q	1H	3Q	Full year (Forecast)
Boilers	130.4	98.0	25.4	70.0	99.8	148.1	27.0	69.7	94.5	120.0
Power systems plants	35.3	24.0	6.4	11.0	16.7	25.7	2.8	9.7	14.0	17.0
Power systems for land and marine use	58.4	60.0	14.5	28.5	40.9	58.6	11.7	26.3	38.8	60.0
Process plants	44.0	42.0	69.1	99.7	126.3	149.1	22.2	42.9	54.7	77.0
Nuclear power	21.9	30.0	5.2	10.3	16.9	33.8	5.0	12.0	16.7	35.0

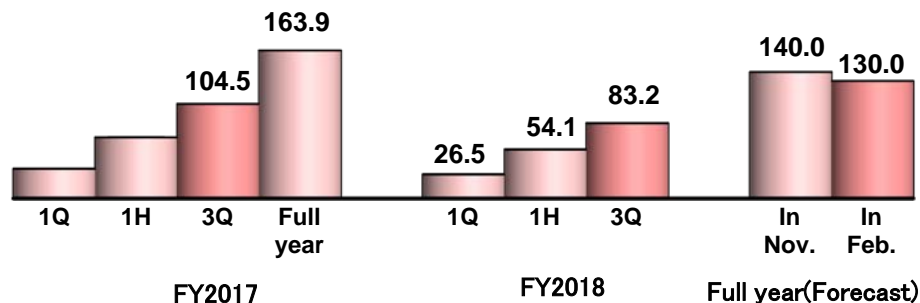
3. Financial Results by Segment

Social Infrastructure and Offshore Facility

※The forecasts in November were unchanged from those announced in May.

Orders received

(In billion yen, accumulated amount)



<Results by business segment>

【 Orders received 】

Orders received decreased owing to a reverse effect of receiving a large-scale overseas project in the Bridges/water gates Business in FY2017.

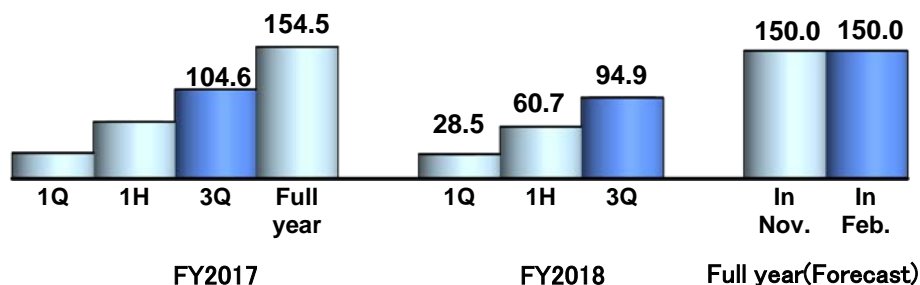
【 Net sales 】

Net sales decreased in the F-LNG/Offshore structures Business and the Shield systems Business, while increased in the Bridges/water gates Business.

【 Operating profit 】

Operating profit decreased in the F-LNG/Offshore structures Business and the Shield systems Business, while increased in the Bridges/water gates Business.

Net sales



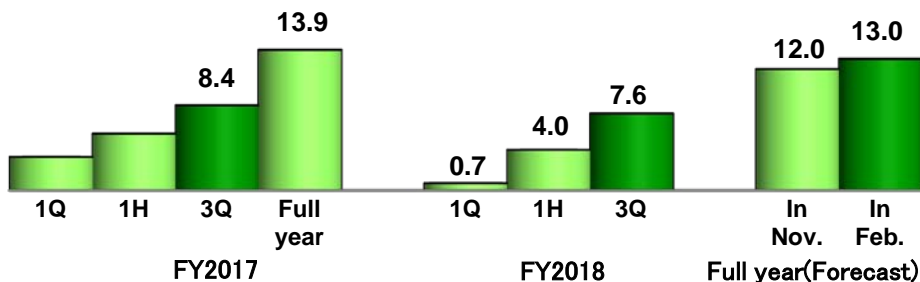
<FY2018 Forecast (vs. In November)>

Orders received are expected to decrease in the Bridges/water gates Business and the Shield systems Business.

The forecast of net sales remain unchanged due to a decrease in the Bridges/water gates Business, while an increase in the Transportation Systems Business and so on.

Operating profit is expected to slightly increase.

Operating Profit



3. Financial Results by Segment

Social Infrastructure and Offshore Facility

(In billion yen)

	Orders received		Net sales							
	FY2017 Full year	FY2018 Full year (Forecast)	FY2017				FY2018			
			1Q	1H	3Q	Full year	1Q	1H	3Q	Full year (Forecast)
Bridges/water gates	103.1	64.0	12.8	26.7	42.7	67.3	15.2	30.1	46.2	77.0
Shield systems	10.2	18.0	5.9	11.5	18.9	24.4	4.0	9.7	14.6	20.0
F-LNG	▲ 0.7	-	2.4	9.1	10.3	11.2	0.9	1.4	1.5	1.5
Urban development	16.2	17.0	4.2	8.9	12.5	16.9	3.7	7.9	11.9	16.5

For related information of “Urban development” in Toyosu, please refer to <Appendices> on page 35, 36.

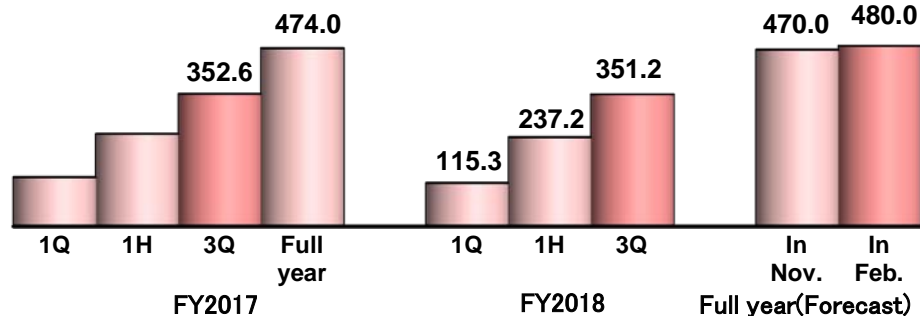
3. Financial Results by Segment

Industrial System and General-Purpose Machinery

※The forecasts in November were unchanged from those announced in May.

(In billion yen, accumulated amount)

Orders received



<Results by business segment>

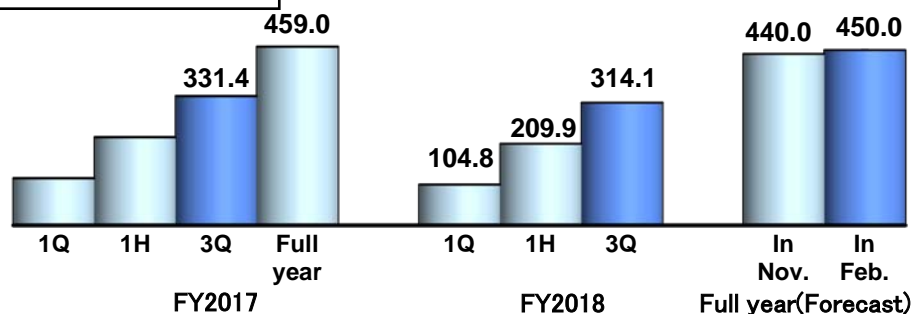
【 Orders received 】

Orders received decreased due to the effect of FRPU in FY2017. Without the effect, the orders received increased in the Transport machineries Business, the Logistics/industrial systems Business, the Vehicular turbochargers Business.

【 Net sales 】

Net sales decreased due to the effect of FRPU in FY2017. Without the effect, the net sales increased in the Thermal and surface treatment Business, the Vehicular turbochargers Business.

Net sales



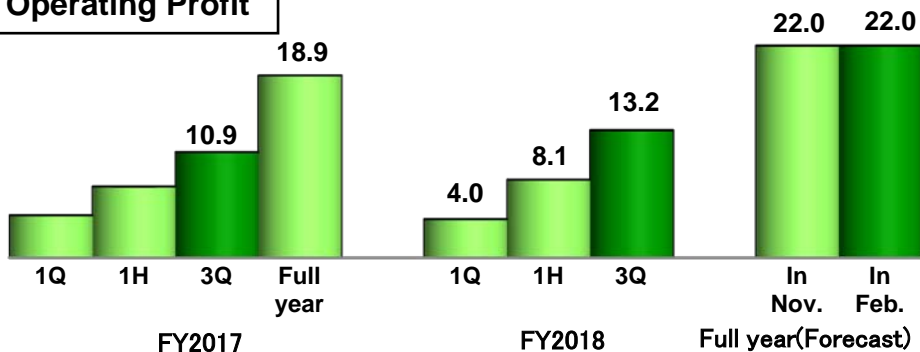
< Number of vehicular turbochargers delivered >

(1,000 Units)

	3Q	Full Year
FY2017	5,970	7,900
FY2018	5,140	7,200

※ The effect of FRPU of 920 thousand units is included in FY2017.

Operating Profit



【 Operating profit 】

Operating profit increased from the previous corresponding period, due to the above-mentioned increases in sales and the improvement of profitability in the Thermal and surface treatment Business, the Parking Business, despite the effect of FRPU in FY2017.

<FY2018 Forecast (vs. In November)>

Orders received and net sales are expected to increase in the Thermal and surface treatment Business, the Parking Business.

The forecast of operating profit remain unchanged.

3. Financial Results by Segment

Industrial System and General-Purpose Machinery

(In billion yen)

	Orders received		Net sales							
	FY2017 Full year	FY2018 Full year (Forecast)	FY2017				FY2018			
			1Q	1H	3Q	Full year	1Q	1H	3Q	Full year (Forecast)
Transport machineries	25.2	39.0	3.2	10.5	17.8	28.3	5.0	7.9	13.7	25.0
Parking	51.3	52.0	7.8	17.1	28.9	42.8	7.7	17.9	29.4	50.0
Thermal and surface treatment	50.3	44.0	13.2	23.0	32.6	43.8	11.1	21.0	31.1	42.0
Vehicular turbochargers	220.1	196.0	69.1	117.9	166.4	220.5	51.6	99.3	147.7	195.0
Rotating machineries	48.1	51.5	8.2	18.8	29.8	43.5	10.6	21.5	32.7	50.0

For details of “Vehicular turbochargers”, please refer to <Appendices> on page 34.

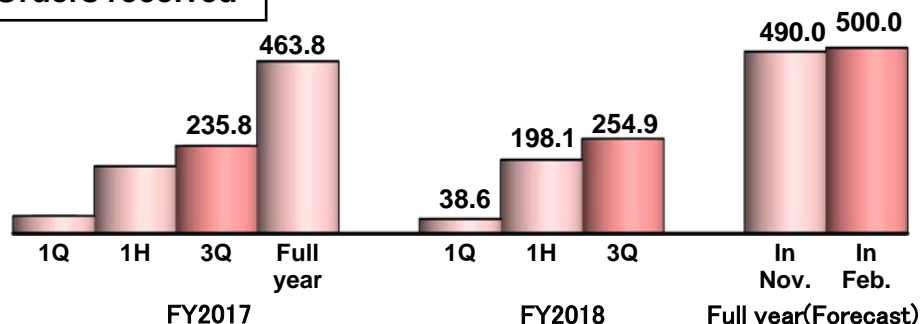
3. Financial Results by Segment

Aero Engine, Space and Defense

※The forecasts in November were unchanged from those announced in May.

Orders received

(In billion yen, accumulated amount)



<Results by business segment>

【 Orders received 】

Orders received increased from the previous corresponding period in the aero engines for Japan Ministry of Defense.

【 Net sales 】

Net sales increased in the Civil aero engines Business.

<Number of civil aero engines delivered>

(Units)

	3Q	Full Year
FY2017	983	1,206
FY2018	1,183	1,700

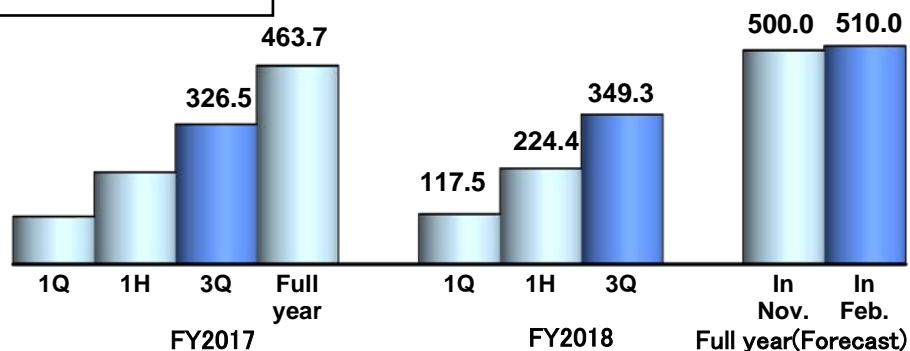
【 Operating profit 】

Operating profit decreased mainly due to the effect of sales increase in the new PW1100G engine, despite the decrease of the cost of dealing with defects in the Civil aero engines Business.

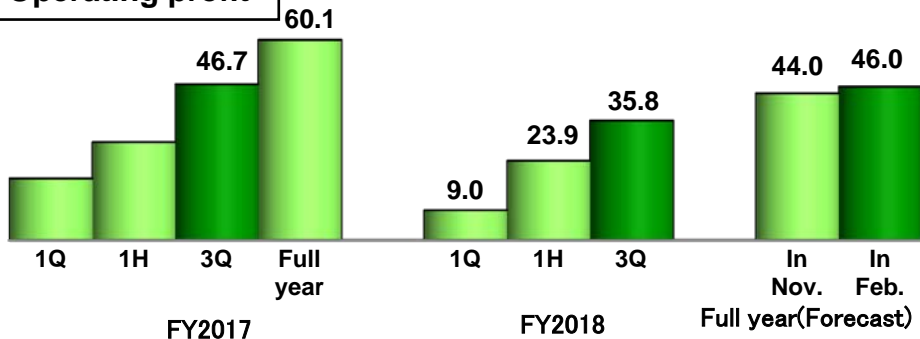
<FY2018 Forecast (vs. In November)>

Orders received are expected to increase in the Rocket Systems and Space Exploration Business.
 Net sales and operating profit are expected to increase, due to the positive turn in foreign exchange while the cost reduction in the PW1100G engine is delayed in the Civil aero engines Business.

Net sales



Operating profit



3. Financial Results by Segment

Aero Engine, Space and Defense

(In billion yen)

	Orders received		Net sales							
	FY2017 Full year	FY2018 Full year (Forecast)	FY2017				FY2018			
			1Q	1H	3Q	Full year	1Q	1H	3Q	Full year (Forecast)
Civil aero engines	319.1	324.0	69.7	141.3	216.6	281.0	73.1	152.5	243.2	335.0

For details of "Civil aero engines", please refer to <Appendices> on page 33.

<Appendices>

- Progress in large overseas projects
- Topics in the Third Quarter under review
- Aero engines
- Vehicular turbochargers
- Urban development

Elba Liquefaction Project



Expected Completion Image



As of end of December 2018

<Status>

As of the end of December 2018, installation works of MMLS #2~10 and mechanical, electrical, and process control works of BOP are ongoing. Progress of Engineering is 100%, Procurement is 97.5%, Construction is 84.0%, Commissioning is 37.2%, and Overall Project is 84.4%.

<Key milestones>

March 2016: Contract Award
 November 2016: FERC Approval for the commencement of construction
 February 2017: Delivery commencement of MMLS #1 module
 In 2018.4Q: Substantial Completion of MMLS #1 and BOP
 In 2019: Substantial Completion of all facilities

<Project Brief>

- Contract: Lump Sum Turnkey EPC Agreement for the Elba Island Natural Gas Liquefaction Facility and the Southern LNG Expansion Facility
- Job Site: Elba Island, Chatham County, Savannah, Georgia, USA
- Scope: Engineering, Procurement, Construction, and Commissioning of 2.5 MTPA Liquefaction facility

MMLS: Movable Modular Liquefaction System

This project has totally 10 MMLSs and 1 MMLS consists 79 modules.

Jimah East Power coal fired power plant



Expected Completion Image



As of end of December 2018

<Status>

As of end of December 2018, #1 commissioning activities started and erections of #2 pressure parts, piping and ESP are in progress. For boiler portion, 99% of engineering, 99% of procurement, 95% of erection and 65% of commissioning activities were completed. As total 97% was completed.

<Key Milestones>

Aug 2014: EPC Contract	Oct 2018: Initial Firing(#1)
Jan 2017: Boiler Erection Start(#1)	Apr 2019: Initial Firing(#2)
Jul 2017: Boiler Erection Start(#2)	Jun 2019: COD (#1)
Apr 2018: Hydro Test(#1)	Dec 2019: COD (#2)
Nov 2018: Hydro Test(#2)	

<Project Brief>

- Contract: Full turn key contract for ultra-supercritical boiler for Jimah East Power Sdn. Bhd. (IPP)
- Site: Jimah, Negeri Sembilan, Malaysia
- Scope: Engineering, Procurement, Construction and Commissioning of Ultra-supercritical boiler

IHI Receives Order for Conversion of Fuel-oil/Oil Boiler to Woody Biomass Fuel

IHI and its group company IHI Transport Machinery Co., Ltd. have received an order from Aoi Bioenergy Corporation (“Aoi Bioenergy”) to convert the fuel used by The Kansai Electric Power Company, Incorporated’s Unit 2 of Aoi Power Station to woody biomass fuel. This project is one of the initiatives for the woody biomass power generation business being promoted by Aoi Bioenergy, with operations scheduled to begin in January 2023.

In addition to focusing on reducing CO2 emissions in future through the development of more advanced biomass combustion technology, the IHI Group is working on resolving global environmental and energy problems by proactively expanding its businesses in the Resources, Energy and Environment Business Area, with initiatives including boosting the efficiency of power generation facilities, and developing CO2 capture technologies.



<Aoi Power Station>

Expansion of Solid Biomass Fuel Business Utilizing Palm Waste

IHI has established IHI SOLID BIOMASS MALAYSIA SDN. BHD. in Malaysia in order to fully expand the manufacturing, export and sale of solid biomass fuel derived from Palm EFB (Empty Fruit Bunch), known as EFB pellets.

Large quantities of EFB generated during the extraction of palm oil tend to be discarded and unused, resulting in soil contamination and methane gas release due to the high content of moisture, ash and salt making EFB vulnerable to rot. IHI has established a method to convert and mass-produce EFB into high-quality low-ash pellets, making effective use of EFB as solid biomass fuel.

The IHI Group aims to improve the sustainability of the palm industry, one of the major industries in Malaysia, along with contributing to the stable supply of solid biomass fuel, of which demand is expected to rise greatly, particularly in Japan.



<EFB Pellet prototype>

Establishment of the New Office Building for Akishima Office and the New Tsurugashima Plant to Enhance Operations in the Aero Engine, Space and Defense Business

On January 17, IHI conducted a completion ceremony for the new office building (“the new building”) that had been under construction on land adjacent to the Aero Engine, Space and Defense Business Area’s Akishima Office (Akishima-city, Tokyo). Relocation work will begin soon, with operations starting gradually from February 25 onwards. The new building has been designed with a layout that can be modified flexibly in accordance with changes in the phase of operations, allowing greater cooperation between different departments, and speeding up technology development, engine design, etc.

In addition to completing the new building, IHI is proceeding with the construction of a new maintenance plant for civil aero engines, for the purpose of dealing with growing demand for aero engine maintenance, in Tsurugashima-city, Saitama. This is expected to come online in 2019. By establishing these new facilities, IHI aims to expand the Aero Engine, Space and Defense business and enhance its international competitiveness by responding more quickly to customer needs, and achieving greater productivity.



< New Office Building for Akishima Office >



(©JAXA)

Launch of Epsilon-4

Japan Aerospace Exploration Agency (JAXA) Epsilon-4 was launched on January 18 and its seven satellites were all confirmed to have separated cleanly from the launch vehicle, beginning with the Rapid Innovative Payload Demonstration Satellite 1 (RAPIS-1), which was selected under the innovative satellite technology demonstration program. The IHI group company IHI AEROSPACE CO., LTD. was in charge of the development and manufacture of the launch vehicle system.

This is the fourth consecutive success since the launching of the Epsilon Rocket prototype began. In addition to the reliable results yielded by the rocket system-related technology development on which the IHI Group has worked, we believe that the addition of the capability to launch multiple satellites at the same time demonstrates that the IHI Group is capable of handling even higher volumes of launch demand.

The IHI Group will stimulate future technological development of rocket systems and relevant diligent study and work to advance Japanese space development.

(1) Net sales of civil aero engines

(In billion yen)

	Actual										Forecast		
	'12	'13	'14	'15	'16	FY2017				FY2018			
						1Q	1H	3Q	Full Year	1Q	1H	3Q	Full Year
Net sales	169.8	226.0	267.0	299.1	291.5	69.7	141.3	216.6	281.0	73.1	152.5	243.2	335.0

(2) Number of civil aero engines delivered

(Units)

	Actual (accumulated)										Main loading
	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18/3Q	
V2500	4,168	4,551	4,980	5,468	5,969	6,469	6,896	7,236	7,508	7,664	Airbus A319/320/321
GE90	1,071	1,223	1,399	1,589	1,806	2,039	2,257	2,457	2,617	2,693	Boeing B777
CF34	2,604	2,919	3,242	3,548	3,820	4,156	4,471	4,821	5,085	5,279	For regional jet (70 to 110 seats)
GEEx			118	259	468	751	1,035	1,295	1,542	1,748	Boeing B787/B747-8
PW1100G							16	148	398	904	Airbus A320Neo
Passport20									13	58	Bombardier Global7500
Total	7,843	8,693	9,739	10,864	12,063	13,415	14,675	15,957	17,163	18,346	

(Note) The number of civil aero engine delivered is the number handed over to the airframe maker, and differs from the number of factory shipments.

<Net sales by region>

(In billion yen)

	Actual													Forecast
	'12	'13	'14	'15	'16	FY2017				FY2018				
						1Q	1H	3Q	Full Year	1Q	1H	3Q	Full Year	
Japan	33.9	35.3	37.5	34.6	38.9	10.1	19.6	29.6	39.8	10.7	21.6	33.3	39.0	
Asia	24.8	29.8	27.5	21.6	15.8	2.8	5.7	8.7	11.7	2.6	5.4	12.3	15.0	
China	18.1	23.4	24.3	24.9	48.5	21.5	38.3	53.3	71.9	17.5	34.4	48.3	69.0	
North America	1.3	1.6	1.8	2.4	3.3	0.7	1.9	4.9	8.4	2.8	5.5	8.6	12.0	
Central and South America	0.0	0.0	0.7	3.4	6.1	1.1	2.8	5.1	7.4	2.1	4.2	5.8	8.0	
Europe	43.2	60.2	75.6	74.3	61.7	32.7	49.2	64.7	81.1	15.6	27.9	39.0	52.0	
Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total	121.6	150.7	167.7	161.6	174.6	69.1	117.9	166.4	220.5	51.6	99.3	147.7	195.0	

(1) Lease revenue in Toyosu

(In billion yen)

	Actual													Forecast
	'12	'13	'14	'15	'16	FY2017				FY2018				
						1Q	1H	3Q	Full Year	1Q	1H	3Q	Full Year	
Lease revenue	9.2	9.1	9.3	10.1	9.3	2.3	4.6	6.9	9.2	2.3	4.6	7.0	9.3	


(2) Lease revenue and expense in Toyosu (FY2018.3Q)

(In billion yen)

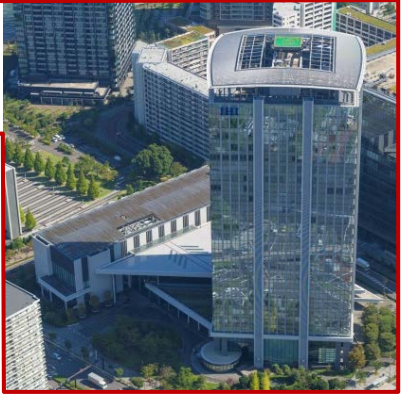
	Lease revenue	Lease expense		Lease income
		Depreciation	Others	
FY2018.3Q	7.0	2.8	1.8	2.2

Development Plan for Toyosu 1 to 3 chome Area

Kindergarten, Nursery school, Café, Marriage ceremonial hall.
 Site area : 19,492㎡
 Completed in March 2010 to February 2011




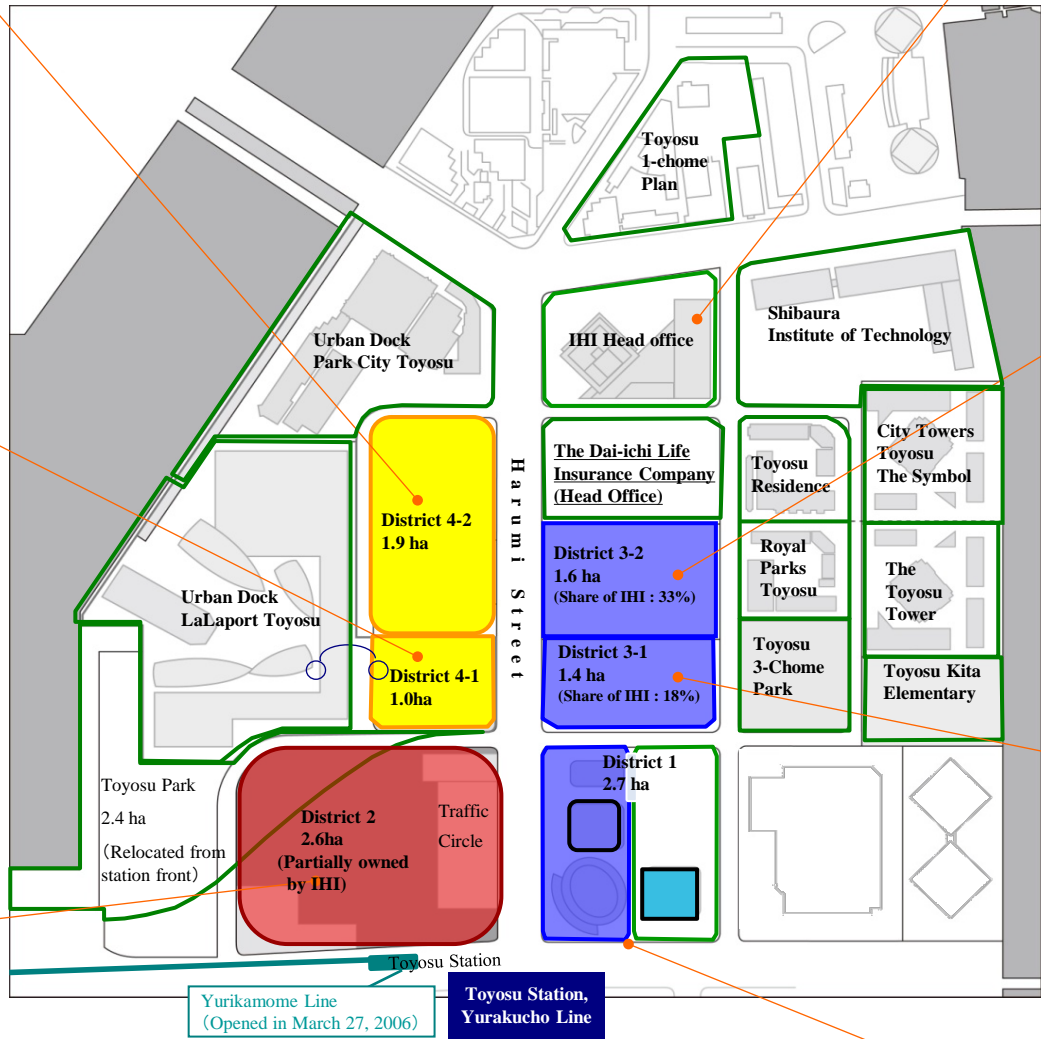
Toyosu IHI Building
 25 floors above ground, Approx. 125m high
 Gross floor area : 97,617㎡
 Completed in February 2006




Urban Dock LaLaport Toyosu ANNEX (Mitsui Fudosan Co., Ltd.)
 5 floors above ground, Approx. 25m high
 Store floor space : 24,721㎡
 Opened in October 2006



Toyosu Foresia (IHI & Mitsubishi Estate Company, Ltd.)
 16 floors above ground, Approx. 75m high,
 Gross floor area : 101,503㎡
 Completed in July 2014

Toyosu Front (IHI, Mitsubishi Estate Company, Ltd. and Mitsubishi UFJ Trust and Banking Corporation)
 15 floors above ground, Approx. 75m high
 Gross floor area : 106,861㎡
 Completed in August 2010




Complex building A•C. (IHI and Mitsui Fudosan)
 36 floors above ground, Approx. 178m high
 Gross floor area : 185,000㎡
 Scheduled for completion in April 2020



Toyosu Center Building
 37 floors above ground, Approx. 165m high
 Gross floor area : 100,069㎡
 Completed in October 1992

Toyosu Center Building Annex
 33 floors above ground, Approx. 150m high
 Gross floor area : 105,448㎡
 Completed in August 2006



Property of IHI	Approx. 5ha
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- Office Leasing
- Land Leasing
- Office Leasing (Leased land)
- Category 1 Urban Redevelopment Project ※1
- Sold, Donated, Exchanged

※1 One of the way to redevelop that was defined by Urban Renewal Act.



Forward-looking figures shown in this material with respect to IHI's performance outlooks and other matters are based on management's assumptions and beliefs in light of the information currently available to it, and therefore contain risks and uncertainties. Consequently, you should not place undue reliance on these performance outlooks in making judgments. IHI cautions you that actual results could differ materially from those discussed in these performance outlooks due to a number of important factors. These important factors include political environments in areas in which IHI operates, general economic conditions, and the yen exchange rate including its rate against the US dollar.