

Q&A for FY2019 2Q Results Briefing (Summary)

Yaskawa Electric Corporation

(October 11, 2019 (Fri.))

[Speakers]

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(Note):

Motion Control: Motion Control Segment

AC Servo: AC Servo & Controller Business (Motion Control Segment)

Drives: Drives Business (Motion Control Segment)

Robotics: Robotics Segment

System Engineering: System Engineering Segment

Other: Other Segment

Q With regard to the graph of quarterly orders on P. 27, please tell us the regional and group-wide rate of change in each business in 2Q 2019.

A • AC Servo

Group-wide YoY -18%, QoQ -7%

Japan YoY -22%, QoQ +18%, Americas YoY +11%, QoQ +16%

Europe YoY -22%, QoQ -15%, China YoY -19%, QoQ -38%

Other Asian countries YoY -25%, QoQ + 2%,

•Drives

Group-wide YoY -14%, QoQ -7%

Japan YoY + 0%, QoQ +9%, Americas YoY -11%, QoQ -10%

Europe YoY -29%, QoQ -11%, China YoY -23%, QoQ -13%

Other Asian countries YoY -5%, QoQ +6%,

•Robotics

Group-wide YoY -22%, QoQ -7%

Japan YoY +1%, QoQ +10%, Americas YoY -17%, QoQ +22%

Europe YoY -29%, QoQ -9%, China YoY -37%, QoQ -29%

Other Asian countries YoY -22%, QoQ -18%,

\*YoY=year-on-year, QoQ=quarter-on-quarter

Q What are the effects of exchange rates on sales and operating income for the entire group and for each business in the first half of fiscal 2019 and the full-year forecast?

A • Impact on first half sales

Group-wide -5.4 billion yen, Motion control -2.4 billion yen, Robotics -2.6 billion yen  
System Engineering -0.3 billion Yen, Other -0.1 billion Yen

• Impact on first half operating income

Group-wide -1.3 billion yen, Motion control -0.7 billion yen, Robotics -0.6 billion yen  
System Engineering + 0.0 billion yen, Other + 0.0 billion yen

• Impact on full-year sales forecast

Group-wide -15.6 billion yen, Motion control -7.0 billion yen, Robotics -7.3 billion yen  
System Engineering -1.0 billion yen, Other -0.2 billion Yen

• Impact on full-year operating income forecast

Group-wide -4.1 billion yen, Motion control -2.1 billion yen, Robot -2.0 billion yen  
System engineering + 0.0 billion yen, Other – 0.0 billion yen

Q What is the sales ratio of AC Servo by region in the first half of fiscal 2019?

A 34% in Japan, 15% in the Americas, 11% in Europe, 27% in China, and 13% in other Asian countries

Q What is the ratio of AC Servo to Motion Control sales in the first half and full year of fiscal 2019?

A 56% for the first half and for the full year.

Q Please explain the reason for the decline in value added in the analysis of changes in operating income on P. 17 for the period from fiscal 2018 to 2019.

A The decrease in added value of -7.0 billion yen includes +0.8 billion yen in unrealized profit on inventory, and the increase in added value excluding unrealized profit is expected to be -7.8 billion yen. By segment, Motion Control is -4.9 billion yen, Robotics -2.1 billion yen, System Engineering +0.3 billion yen, and Other -1.0 billion yen. The negative impact of a drop in sales on the operations is -4.9 billion yen for Motion Control and -2.5 billion yen for Robotics. Impact of inventory change to operation on Motion Control is -0.3 billion yen, while on Robotics it is + 0.6 billion yen. In addition, effects of new products for Motion Control and Robotics are expected to be several hundred million yen each, and inventory loss and deterioration in model composition for Robotics are expected to have a combined effect of -0.5 billion yen.

Q What is your view on the revised full-year earnings forecast?

A: The forecast includes all possible risks such as recent orders and progress in inventory adjustments.

Q What is the current utilization rate?

A Assuming one shift in the first half of fiscal 2019, the overall utilization rate was slightly less than 80%. AC Servo is less than 80%. Drives is 100%. Robotics is about 60%.

Q What is the change in inventory from Q1 to Q2?

A Motion Control was reduced by about 3.0 billion yen, and Robotics was reduced by about 3.0 billion yen.

Q How will the profit rate of Robotics recover to 10% level to achieve the profit rate KPI stated in the mid-term plan?

A Structural deterioration is not necessarily observed. The balance between orders, production and sales and the product mix have an effect. There are areas where market prices are falling and areas where they are maintained, but we do not go into areas where they are falling. The marginal profit has not fallen, and if the volume returns, profitability will return to the 10% level.

To make further improvements, we will increase productivity by automating and robotizing production lines and accelerate sales of robots with increased added value.

To this end, we will take in resources from Yaskawa Engineering and strengthen value-added systems engineering.

Q What will happen to the cost of robot systems next fiscal year?

A We are working to reallocate resources across the group to realize the concept of i<sup>3</sup>-Mechatronics (I-CUBE Mechatronics). Under these circumstances, since a system centering on robots is constructed, resources are concentrated and costs are increasing. For the full year, the costs for Robotics will increase YoY by 1.6 billion yen. This is an upfront investment, but we will continue to add value through i<sup>3</sup>-Mechatronics and increase profitability without additional costs. The group-wide costs are reduced by cutting resources in non-core businesses.

Q Motion Control has achieved double-digit profit margins, but how do you plan to step up in the coming year?

A As our company maintains its competitive edge in China for AC Servo, the profit will recover if demand recovers. We will be targeting semiconductors in the U.S. and developing new markets in Japan.

Q Why is there a difference in visibility between the Robotics and AC Servo toward the Mid-term Plan target?

A Robotics and AC Servo have different customers.

As for AC Servo, the company has a competitive edge in China and Japan. Working with

the customers of the set manufacturer (machinery manufacturer), we make strong machines, and if the machine sell well, so do our products, so it is clear where we focus. On the other hand, about half of the market for Robotics is automobile-related, and its customers are divided into system integrators and end users. It is difficult to gain advantages and profits in all areas by product alone, and it is necessary to add additional value to the system, including its peripherals.

Q What will happen to the semiconductor and 5G?

A Based on the announcement of SEMI (International Semiconductor Equipment and Materials Association) at the time of the earnings announcement in April, we had an expectation that semiconductor industry would recover from the second half of the fiscal year. However, it has not recovered in reality and is now expected to rise in the first half of 2020. We believe the recovery is credible given the memory price and inventory situation. At present, the logic is moving first, and orders of our company are also moving. As for 5G, China is rapidly building base stations. Our company's AC servo is also used in the production of parts and assembly equipment. The relation between the spread of 5G and demand for semiconductors is controversial, but we believe that faster communication speeds with 5G will increase the amount of memory required for terminals.

Q On P. 28 of supplementary material of financial results, what is the reason why orders in Japan are increasing and looking different from other regions?

A As the inventory adjustment of semiconductor is over, the order is increasing.

Q Expenses for the full year of fiscal 2019 had been projected to increase by 0.4 billion yen at the beginning of the year, but it is now projected to decrease by 1.1 billion yen. You mentioned that you would reduce costs mainly in non-core businesses, but what are the specifics?

A The business environment is worse than expected at the beginning of the period. We will do what we need to do, such as building a sales and development system to realize i<sup>3</sup>-Mechatronics, and then reduce the rest. For next year, the company will improve profitability by establishing a system that does not require additional expenses even if the volume returns.

Q What is the order environment for Robotics in each country?

A As for the automobile-related business, compared to the first quarter, the second quarter is gradually recovering in Japan and the U.S., and the pace is getting better. The projects, which had been delayed and piling up, have begun to be contracted as orders. China and Europe have also made similar moves.

Semiconductor industry is expected to recover in the United States and China by next year.

In the general industry, while China is shifting production to other parts of Asia, there is also a movement to increase efficiency by robots, and new applications such as shoe and furniture manufacturing are emerging.

Q Orders for AC servo by region in the second quarter also increased QoQ in the U.S. and Asia. Is this also because the semiconductor inventory adjustment is over?

A The U.S. is also back after the semiconductor inventory adjustment. From now on, new investment will occur gradually. In Asia, new orders for semiconductors and electronic parts are coming in after inventory adjustments.

Q What is the sales ratio for Robotics of non-automobile related applications going forward?

A In the long run, the ratio of automobile-related sales will decline slightly, but will remain at 30 to 40%. Industrial robots were originally made for automobile production. It won't change dramatically over the next few years.

In the case of robots, it is based on the realization of what customers want to do, that is, capital investment projects. To this end, we will increase profits by absorbing the engineering division within the group, building our strengths in fields other than automobiles, and standardizing projects.

Q System engineering for robots seems to have low profit margins, but does strengthening system engineering skills lead to higher profit margins for robots?

A Our company does not manufacture the entire production line of the factory but cell production. It is not a system engineering of the whole line by robots, but a combination of robots and AC servos to add value on production cells. We increase profit not by engineering fee, but by selling products.

Q The Slovenian factory is still producing a small number of units, but can it make a profit?

A The plant in Slovenia will make a profit even on a monthly production basis of 100 units. The company is still profitable, including local procurement, lead time and personnel costs.

Q When the demand for AC servo rises rapidly, how much lead time do you need to respond?

A Yaskawa Solution Factory has achieved triple productivity. As the volume is small now, the profit contribution is small, but it can cope with double the current volume without any problem.

Q Is the company in a revenue structure that can generate 10% operating income?

A From FY 17 to FY 19, the marginal profit ratio did not change, but rather improved with

new products.

Expenses increased in fiscal 18 but have been restrained in fiscal 19.

In fiscal 19, the decrease in volume had a significant impact on the company's operating rate and inventory reduction, so the profit structure is not bad. Although the effects of new products are weak, if the utilization rate recovers, we will return to the original profit structure. The increase in Robotics costs can be recovered by future sales growth.

Q What are the risks and opportunities for next year and the year after next?

A If something happens in the financial sector, we do not know, but we do not think there is any further downside risk in the manufacturing sector. Trade friction between the United States and China is unlikely to worsen further. Manufacturing for domestic demand is accelerating in China. For example, production of solar panels for environmental protection is being automated.

Semiconductors will grow steadily for the servers and clouds. In addition, moves for China's domestic semiconductor production will begin next year.

In addition, although 5G is delayed due to trade friction between the United States and China, it is a technology that will be needed in the future and will certainly progress. As a result, the antenna, CPU, cooling and other peripheral devices of smartphones will change dramatically. The battery and earphones will remain the same, but the semiconductor inside will be different. We expect that new production lines are needed to produce 5G smartphones.

As the shift to electric vehicles does not accelerate as expected, hybrid vehicles may grow.

Q How is the progress of i<sup>3</sup>-Mechatronics?

A It is steadily spreading to customers. The projects are also progressing smoothly.

By combining products of our company and proposing solutions on a cell basis, we help our customers improve efficiency and increase profits.

The i<sup>3</sup>-Mechatronics is not a product per se, but what we sell are a combination of robots AC servos and AC drives.

Q Your competitors seem to be increasing robot production capacity. What do you think?

A Which robot to put in what business model is important, and I don't think it makes much sense to simply increase the production capacity of robot units. Production capacity is not directly linked to actual business.

Q How many Cobots do you have? How does cobot affect profitability?

A Cobots are necessary to some extent, but they don't need to be available in advance. We prepare lineup for the required applications. Cobots alone don't sell much. Profitability is equivalent to other products.