

Q&A for FY2018 Results Briefing (Summary)  
Yaskawa Electric Corporation  
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[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: As per the fluctuation in quarterly orders on page 30 of the supplementary material, and for the period of December 2018 – February 2019, how is it like when dividing the fluctuation of each business by region?

A: •AC Servo

Japan: -27% YoY; -13% QoQ; the Americas: -43% YoY; -4% QoQ;

Europe: -14% YoY; -3% QoQ; China: -35% YoY; -8% QoQ;

Asia except China: -39% YoY; +3% QoQ.

•Drives

Japan: +6% YoY; -7% QoQ; the Americas: +15% YoY; -19% QoQ;

Europe: -16% YoY; -8% QoQ; China: -25% YoY; -26% QoQ;

Asia except China: -13% YoY; -10% QoQ.

•Robotics

Japan: -9% YoY; -8% QoQ; the Americas: +3% YoY; -8% QoQ;

Europe: +10% YoY; -26% QoQ; China: -31% YoY; -1% QoQ;

Asia except China: -9% YoY; +6% QoQ.

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

Q: What is the breakdown of the increase in added value +1.7 billion yen in the analysis on changes in operating income on page 19 of the supplementary material?

A: •Motion Control -0.2 billion yen (change in unrealized profit included +0.2 billion

yen)

- Robotics +1.9 billion yen (change in unrealized profit included -1.1 billion yen)
- System Engineering +0.5 billion yen (change in unrealized profit included +0.1 billion yen)
- Other -0.6 billion yen (change in unrealized profit included -0.0 billion yen)

Q: What is the sales ratio for AC servos in Q4 FY2018?

A: 32% in Japan, 19% in the Americas, 10% in Europe, 19% in China, and 19% in the rest of Asia.

Q: What is the breakdown comprising AC servos in motion control in Q4 FY2018?

A: 61%.

Q: What is the breakdown comprising AC servos in motion control in FY2019 (fiscal year ending February 2020)?

A: 59%.

Q: What is your expectation about the business environment for AC servos in FY2019?

A: For AC servos, stock adjustments at supply chains have been completed. Although we said we had hit bottom in September to October last year, Q4 had been bottom when viewed on a quarterly basis. We're seeing signs of recovery in the current March to April. This is due to improvements in financing at small and medium-sized enterprises with changes in the tide on the easing of monetary conditions and other measures being taken in China. Processing machinery-related orders, for example metal processing, are becoming strong. However, no moves are seen in semiconductor- or electronic parts-related items. We expect a recovery in these areas in the latter half of the year.

Q: What is the reason for losses in added value in the analysis on changes in operating income on page 12 between FY2017 and FY2018?

A: The -3.6 billion yen decrease in added value includes +2.8 billion yen in unrealized profit from inventory, and added value excluding unrealized profit were -6.4 billion yen. Impact from worsening levels of operations due to decreases in sales were -2.1 billion yen for motion control. Efforts to reduce inventory have had an impact of around -2.0 billion yen in motion control and around -3.0 billion yen in robotics. Inventory adjustments are underway in these areas, so improvements will be seen in the time to come.

Q: I would like to ask President Ogasawara what has been most improved since you assumed the role of president.

A: While targeting a 10% operating profit as our objective in our Vision 2025, we have focused on profit ratios during the medium-term “Dash 25” plan during the initial three years. Specifically, we have made efforts in the areas of price- and cost awareness and in assessing the markets that we set out to achieve. With an awareness of the presence of arguments both for and against, as a company that deals with Factory Automation as a business, we proceeded in shifting to China as China continued to become a center of global manufacturing.

One, we have realized high rates of profitability in China by setting up our manufacturing, sales, and development in China while leaving the core functions of our company in Japan.

The second point is that we have pushed forward the merging of robots and motion. Among major robotics manufacturers, only two companies, including our company, use their own electric products, while other manufacturers buy electric products from other companies. With such a status, we laid out the “i<sup>3</sup>-Mechatronics” concept based on the idea of merging robots with motion, and decided to specialize in cells rather than having the scope of our business encompass control for plants in general.

Third, we reorganized in AC drives, environmental energy, and system engineering—areas that do not have to do with FA—and went back to profitability.

Q: Added value (excluding unrealized profit) for motion control is planned at –400 million yen in the analysis for changes in operating income for FY2019 on page 19; please tell us the reason, breaking it down for AC servos and AC drives. Are you anticipating worsening conditions in competition over prices and the product mix?

A: The positive factors are that we’re up by 400 million yen on the effects of switching to  $\Sigma-7$  and up by 500 million yen from the effects of switching to the new AC drives series; up by 300 million yen on improved productivity due to Yaskawa Solution Factory. The negative factors are a worsening of the operation level due to a decrease in sales for AC servos and because plans are to not to increase stock in FY2019 while we did that in FY2018, and we’re looking at a 1.5 billion decrease from the combined impact.

Thus, the worsening status in prices and composition is not the reason. For AC servos and AC drives, prices are stable in China. Robot market is divided between those that are price-competitive and those where the prices are stable, depending on the end user.

Q: What type of outlook do you have for AC servos in China?

A: We hit bottom with orders in September 2018 and have made a slight recovery from that as a starting point, but there were decreases in February due to Chinese New Year. The image of March is that it's around 50% up compared to Q4 in the previous fiscal year. The view is that while there are no markets that lead significantly, we've gotten back on track to normalized speed. When end users in the supply chain step on the brakes for shipments, it ties in to moves that end up making the intermediate suppliers reduce inventory. Investment control related to smartphones has had an effect on orders received by our company to October, the issue of inventory was resolved in February, and we went back to normalized speed in March. Though we don't know yet, my view is that by around May, we'll be able to tell if these moves are "a normalization of inventory" or if they're "acceleration ahead of the next driving force."

Q: Forecasts for robots in FY2019 are for lower sales and increased profit. Please give us the breakdown of added value for robots in your analysis of changes in operating income.

A: Out of a 1.9 billion-yen increase in added value for robots, change in unrealized profit stands at -1.1 billion yen. When we exclude the impact of that, it's up by 3.0 billion yen. Compared to FY2018, in FY2019 we're looking at about a 1.3 billion-yen increase in impact from improvements in our level of operations for accumulating stock. Also, the effects of switching to new products will boost it by 600 million yen, our European plant operations that have gotten underway will have an effect of an increase of 200 million yen, inventory will be normalized, and we are also expecting around a nine hundred million yen increase from the impact of increases in the production of mass-production models that bring on high rates of profit.

Q: With regard to forecasts for performance in 2019, give us a breakdown for the corporate and for motion control and for robotics in the first half and second half.

A: Plans for company-wide sales are 48% in the first half and 52% in the second half, with the same structure for both motion control and robotics.

As for company-wide operating profit, plans are for 43% in the first half and 57% in the second half, with the same structure for robots. For motion control, it's 45% in the first half and 55% in the second half.

Q: In a difficult environment, it looks like you're focusing on reducing costs this period; do you have any measures for securing profit besides reducing costs should

the first half be worse than anticipated?

A: One way is to look at boosting added value in advance. The other is that it isn't a precondition for 5G and semiconductor-related investments to increase in our plans for the second half, and our plan is inclusive of business cycles. Our belief is that increases in 5G and semiconductor investments will lead to the enabling of some more in the way of expenditures.

Q: Will the establishment of Yaskawa Technology Center (tentative name) result in an increase in the number of people who work there? How will this investment contribute to performance?

A: We aren't planning to increase our number of staff; we'll bring in engineers who are scattered in our different bases. We have historically had an SBU (strategic business unit) system and the different divisions—AC servos, AC drives, robotics, and system engineering—have been conducting development, manufacturing, and sales individually. With the global trend for Industry 4.0 where things are being connected in the world, there had been a question as to whether it was all right to continue to conduct development and manufacturing by division as we have in the past.

Thus, we will make the production lines under the concept of Industry 4.0 at the technology center and deploy them at factories in each division.

We'll use as much of our in-house electric products as possible when we do that. We will also gather together the development sections of each division and boost development efficiency.

We will orient ourselves to open innovation and function as a development base for joint research with university laboratories and with alliance companies. We will make it an integral part of global development.

Q: As to preconditions for the FY2019 plan, you say that while China recovers, smartphones and semiconductors won't; what are the types of conditions that you expect in markets like the market for servos in advanced countries and the oil and gas market in the United States?

A: We see no major moves in smartphones until model changes take place to accommodate 5G. Until then, we anticipate cyclical investments for the purpose of stable production and for securing quality. Financing has improved in China after the National People's Congress, and investments have recovered. It's environmental issues that China is extending the most efforts for improvement, and AC drives for fans and blowers as well as for HVAC use are steadily increasing.

As for AC servos in advanced countries, SPE (semiconductor production equipment)

and packaging are integral in the United States. The status here is that US-China trade friction is making an impact. No markets have been found at present that are likely to significantly lead demand. As for oil and gas in the United States, the status is such that investment may be anticipated on the back of steady crude oil prices.

Q: Despite a forecast this period for a decrease in profit, you announced a deferral of annual dividends and buybacks of company shares. What is your ideas on shareholder returns in terms of free cash flow?

A: We decided on the share buybacks on this occasion because eight billion yen in net cash had been produced in our FY2016-2018 medium-term period, even when we included last year's buybacks. Since last year, we have been initiating measures for additional returns three-way: growth investment, returns to shareholders, and distribution to employees, and this year, we will initiate returns with shortened periods to payment with suppliers and with collaborating factories who are partners of our company, so that it will support them for facility investment and for sharing inventory. With this initiative, we anticipate cash flow impact of around -9 billion yen in FY2019.

Q: Is it possible to expect investment in 5G-compatible items by Chinese smartphone manufacturers this fiscal year? How much impact will investments in base stations have?

A: With regard to investment for base stations, servos are used for areas around their skirts, which includes machinery for making the substrates and metal processing machinery for making antennas as well as semiconductors. As for 5G-compatible smartphones, deals are not being received at all thus far, possibly due in part to the impact of US-China trade friction. It's also unclear as to when they will start to move. It's possible that rather than deals being received under the key words, 5G-compatible smartphones, investments made for the purpose of changing the shapes and casing may as a result turn out to be 5G.

Q: I believe that iPhones already have 5G-compatible frames such as double-sided glass; will these investments continue to be expectable?

A: Measures against noise will be necessary in line with increases in communication speeds with 5G, and it'll be necessary to use glass or ceramic casings for smartphones. Apple is taking the lead, but Chinese manufacturers will also start dealing with them. It is also necessary to see what the applications will be like to boost added value once communication speeds increase.

Q: A competitor company has launched a new AC servo product with high resolution. Will this bring on any changes to the superiority of Σ—7?

A: We monitor new products from competitor companies. The status of our position is that we are carefully considering the launch period for our new products. The direction that we're taking is to aim for high functionality of our devices rather than high resolution, and we're currently working on improving the data collection speeds of machines which are 5G-compatible by increasing CPU to increase communication speed. We will consider how we'll win markets with this in the time to come.

Q: Increases in revenue are planned for robotics from the second half; how do you see the trends in demand that exist as a backdrop?

A: 50% of our company's shipments of robots are for automobiles, and 50% are for general industry. As there are no robotics manufacturers that have newly entered the area of automobiles, it will be a competition between the key players. In reality, there are actually robotics manufacturers that have strengths with each auto manufacturer, and market share will not suddenly change. Those for automobiles are predictable to a certain extent, and we can expect stable growth there. The market for general industry is a market that is crowded with a diverse array of players. Particularly in China, where end users invest in labor-saving and IoT if they have the funds, people are being replaced by robots. I expect that we'll be seeing the effects of monetary easing in the time to come. While it isn't all that evident in Japan, the recovery in China will have an impact and investments will be coming back.

Q: We heard that capacity utilization at plants had been around 70% as of Q3 FY2018. Around what level has capacity utilization been following the continuation of reductions in inventory since then?

A: Around 70% for robots. For AC servos, the Shenyang plant is in full operation, due in part to the demand increase in China. It's around 70 to 80% in Japan.

Q: In boosting your capacity utilization, how do you see the level of orders during this current Q1 period?

A: Our capacity utilization mentioned earlier refers to the rates against facilities and manpower that we currently have, or the ratio against production capacity. In order to cope with increases in orders, we will boost our capacity utilization through methods such as increasing staff and using two-shift systems. Orders for motion

control in the current Q1 period are planned to exceed Q3 FY2018, and as to Ac servos, I believe that we'll be able to achieve levels close to Q2 FY2018 levels during Q1 and Q2.

Q: How is the competitiveness of Chinese robotics manufacturers in terms of performance and quality, and how will it be in the time to come?

A: Selection has begun among Chinese robotics manufacturers and we have started to get an idea of how many of them might survive. As to manufacturers that will survive, their technical capacities are increasing. At present, Chinese robotics manufacturers are dealing with applications involving simple work where they won't need to compete with manufacturers that have taken the lead, and my view is that for several years, the market will remain in a state where they will live separately. At present, none of our customers in auto or semiconductors use Chinese robots; however, in the trend of domestic production, auto manufacturers may some day begin to use Chinese robots. Our strategy as one of the few robotics manufacturers who produces their electric products in-house is to supply our electric goods to Chinese robotics manufacturers, and we will continue to aim to scale up the volume our products.