Advantest Corporation FY2018 (Period ended March 31, 2019) Information Meeting Q&A Summary

April 25, 2019

- Q: Trends in the semiconductor industry are changing rapidly. Are there any near-term signs of recovery?
- A: In SoC, orders for products for 7nm node semiconductors started coming in FY2018 3Q, and will continue to increase. In memory, there seem to be some positive signs for front-end process equipment, but there is no indication of improvement in the back-end, including test processes. However, volume production of NAND flash memory is progressing smoothly in China, and we also benefit from that. If they can ramp up their next step of launching a 64-layer device, we will see "plus alpha" orders. In addition, in DRAM, because the ramp-up time of LPDDR5 and DDR5 has been pulled in, we are seeing traction in high-speed testers, including for GDDR6.
- Q: In FY2018 4Q, gross margin declined compared to the previous quarter. What was the impact of inventory valuation losses on this decline?
- A: We recorded an inventory valuation loss of approximately 2 billion yen in 4Q. Because the valuation loss was concentrated in a single quarter, it had an increased impact on gross margin in 4Q.
- Q: I would like to confirm your gross profit margin assumption in your FY2019 forecast.
- A: We expect it will decrease about two points from FY2018. This forecast factors in changes in our product mix and the risk of intensified competition.
- Q: You significantly increased your share in 2018, but what is your outlook for 2019?
- A: We want to retain the share gains in memory and SoC that we achieved in 2018.
- Q: You forecast that orders will recover in the second half of FY2019, but could you confirm the timing of the recovery of orders for memory and SoC?
- A: Memory will recover to some extent in June September of this year, based on front-end process investment trends. As for SoC, 5G baseband production at the 7nm node, using EUV, is expected to ramp up in October of this year, and we expect SoC orders to recover in line with that timing.
- Q: A major foundry foresees that their utilization rates will recover in April June. However, you

currently forecast that the recovery timing of SoC testers will lag the foundry's recovery timing? A: We think so.

- Q: Regarding 5G, chipmakers and your main competitor say that they see some demand increase related to 5G base stations, but what is your sense of this? And what about your share of the 5G market?
- A: We have the business of the major FPGA manufacturers. The major manufacturers of RF devices for base stations, transceivers, and baseband chips use both our and our main competitor's products. Based on this, we have a share target of more than half the total 5G-related market.
- Q: Your operating profit margin for FY2019 is expected to decrease by 9.9 points, but R&D and depreciation costs are expected to be virtually unchanged, while gross profit margin will decline by 2 points. Where is the remaining 7.9 point decline coming from?
- A: The biggest factor is labor costs. The decline is due to the fact that we added approximately 200 employees in FY2018, the impact of which will be fully felt in FY2019, and we also plan to add another 200 employees in FY2019.
- Q: Will FY2020 results recover to the level of FY2018, or not?
- A: Our mid-term business plan targets a three-year average of 250 billion yen in annual sales. We posted 282.5 billion yen in FY2018 and expect to post 230 billion yen in FY2019, so we will achieve our target if sales reach 250 billion yen in FY2020. The market is expected to recover by then, but we cannot make solid predictions. In fact, our initial sales forecast for FY2018 was 230 billion yen, exactly the same as the forecast for FY2019 that we issued today. We feel that an inflection point is definitely coming in 2020, but we cannot be sure how big it will be at this stage.
- Q: What is the status of MRAM tester development, and will these testers contribute to revenue?
- A: We are working on this topic in an industry-academic collaboration, and we know that we can measure MRAM with our testers. It may require a specialized interface, but we do not think that the development of a whole new product is necessary. If demand for MRAM test arises, we can cover it.
- Q: How far ahead can you predict demand for testers?
- A: For sales, we can make solid predictions three months ahead. Although orders are not clearly visible three months ahead, we can formulate predictions to some extent up to six months in advance, based on customer negotiations and our track record of converting negotiations to

orders. Of course, our discussions with customers for R&D cover a much longer timeframe.

- Q: Your gross profit margin will decrease by two points in fiscal 2019, but if SoC tester sales are relatively strong, might this not boost gross profit margin?
- A: One point is that we cover diverse SoC semiconductor test categories. In addition, we expect gross profit margin on SoC testers to decrease in future as customer supply chains change.
- Q: In the conservative scenario of your mid-term management plan, you posit an operating profit margin of 15% for 230 billion yen in sales, for a total operating profit of 34.5 billion yen. On the other hand, in FY2019, you expect to post an operating profit of 30 billion yen on sales of 230 billion yen. If margins tend to deteriorate, would you consider additional cost reduction measures?
- A: We experienced a vibrant tester market in 2018, and we shifted to a more aggressive stance toward the future compared to when we formulated our mid-term plan. In order to further capture the growth opportunities coming in 2020 and thereafter, we believe this fiscal year is the right time to invest.
- Q: How much revenue do you foresee in FY2019 from the newly acquired Astronics system-level test business?
- A: We expect 55 to 60 million dollars in sales. This is based on business with their existing customers, but we also want to market to our customers to expand sales further. The gross profit margin of these products is similar to that of our existing products.
- Q: 5G-related tester demand is illustrated in slide 23 of your presentation materials, but will this demand appear in the order of base stations, smartphones, and then data centers, as shown in the diagrams, or will it all appear at once?
- A: The 5G smartphones coming out this year can use both 4G and 5G networks, and if these are widely adopted it will generate tester demand, but the key point is how fast 5G base stations are built. We are watching this closely.

Note

This document is prepared for those who were unable to attend the information meeting and is intended only for reference purposes. The original content has been revised and edited by Advantest for ease of understanding.

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