Advantest Corporation FY2019 1Q (Three months ended June 30, 2019) Information Meeting Q&A Summary

July 24, 2019

- Q: Regarding the outlook for memory testers, investments have been postponed in Japan and South Korea, but major investment is planned in China. Even given the totality of that, is the outlook for memory tester demand still weak?
- A: There has been a slowdown for memory testers versus our outlook as of April. Demand for front-end applications has especially dropped. However, we remain successful at winning business for back-end applications, where we are strong, especially for testers for high-speed memory.
 - As regards our market outlook, we see risk of demand for NAND testers being 20-30% lower than we had initially anticipated. In China, there tends to be investment separate from actual demand, so we want to continue to win business in China.
- Q: OSATs with facilities in China are moving them elsewhere at an increasing rate. How much are you likely to benefit in terms of tester demand as a result?
- A: We do not expect interregional supply chain relocation initiatives to have significant impact on overall tester demand, nor have we received any specific inquiries as of yet.
- Q: Regarding 1Q SoC tester orders, you say that it was primarily those for smartphones that were above your expectations, but how significant was the overshoot strictly in terms of smartphone-related orders? Also, in terms of monetary value, what percentage of 5G-driven smartphone-related orders was for engineering purposes and what percentage was for mass production?
- A: 1Q SoC tester orders were roughly 15 billion yen above our initial plan. We believe a considerable portion of that was related to smartphones. 1Q saw major movements in smartphone-related industries and significant 5G-related investment took place, but we believe the 5G mass production phase is still in the offing.
- Q: 1Q SoC tester orders were up versus last year. What share of the SoC tester market do you expect to have in 2019? Also, I believe that at the outset of the year, you set a somewhat conservative gross margin assumption with more intense competition in mind. What is your outlook now?

- A: We anticipate that we will be able to maintain or improve upon our 2018 SoC tester market share figure in 2019. With regards to the gross margin, as of April we saw risk of more intense competition. To date, however, we have not seen major impact on the gross margin.
- Q: Brisk SoC tester business is likely to result in a better product mix, but you nonetheless have maintained your profit guidance rather than revising it upward. Why is that? Is it because you have concerns about higher costs going forward?
- A: We intend to engage in development investment and capital expenditure in line with our initial plan. In addition, there are no major changes to our expense outlook. That said, given latent risks in terms of fiercer price competition, exchange rates, etc., we have maintained our guidance, which may be conservative.
- Q: In April you said that you expected memory tester orders to pick up in FY2019 3Q. Are you saying that you now do not expect that to happen until 4Q?
- A: It may be even later, but at present, we believe the timing of the recovery will be three months later than what we had anticipated as of April. Conditions are shifting on a daily basis, making the way forward to difficult to read in some respects, but as of now, we expect orders to pick up in FY2019 4Q.
- Q: Was SoC tester demand greater than expected in part because of a demand rush promoted by the addition of a major mobile phone manufacturer to the Entity List?
- A: Rather than a demand rush, we believe it was engineering needs for 5G semiconductors that contributed to greater-than-expected demand. The major mobile phone manufacturer was placed on the Entity List in May of this year, so we do not believe it had a major impact on 1Q orders or sales. Moreover, our impression is that 1Q demand was abundant on the whole rather than limited to that related to the major mobile phone manufacturer. That said, we do not look for this level of orders to continue for the full year. They may drop slightly in 2Q.
- Q: When you say that you look for memory tester demand to pick up in 4Q, are you looking for that to be related to NAND flash memory or to DRAM? Also, are you expecting the recovery to be driven by smartphones or data centers?
- A: We think the recovery will start with demand for testers for high-end DRAM. In the smartphone and HPC (high-performance computing) spaces, we look for growth in demand for applications such as DDR5, LPDDR5, and HBM2 in 4Q or thereafter. As regards NAND flash memory, we still do not have visibility on when there is likely to be a robust restart to

- server-related investment, so we expect DRAM tester demand to recover first, followed by demand for NAND flash memory testers.
- Q: Why did the gross margin improve in 1Q?
- A: A better product mix was the greatest contributor. It also owed in part to milder impact from inventory valuation losses in 1Q than in 4Q.
- Q: Was the 15 billion yen overshoot in SoC tester orders the result of demand you had anticipated for 2Q arising in 1Q instead?
- A: Some of it was the result of demand shifting to 1Q, but our outlook for 2Q demand is not much changed from our initial plan. We look for an overshoot for the first half of the fiscal year on par with the 15 billion overshoot seen in 1Q.
- Q: Could 5G-related demand growth account for the entirety of the 15 billion yen overshoot in SoC tester orders? Also, you stated earlier that 5G semiconductors are still in the engineering phase and not yet in mass production. Historically, your earnings have tended to grow significantly in semiconductor mass production phases. Is the present cycle different from historic cycles in that demand is growing even in the engineering phase?
- A: 5G-related tester demand growth cannot account for the entirety of the overshoot in SoC tester orders. Demand is growing elsewhere as well, including for HPC-related testers. Such growth also contributed to the 15 billion yen overshoot. Furthermore, 5G application processors and baseband processors applying advanced nodes have yet to enter the mass production phase, but technological advancements have made semiconductor manufacturing more challenging. As such, even the number of testers required for engineering purposes is greater than in the past.
- Q: Did you see any sudden surge in LTE-related demand?
- A: We do not have the impression that we have directly seen anything of that nature. Increased competition between mobile phone manufacturers or chip manufacturers may have contributed to the rise in semiconductor tester demand to some extent, but we do not see that as a sudden demand surge.
- Q: You said at your April results briefing that you expect the spread of 5G to bolster the tester market by 200-400 million dollars. Has that view changed in light of recent 4G- and 5G-related demand trends?

A: There is no major change in our view of how 5G is likely to impact the tester market. That said, our impression is that demand is materializing slightly earlier than anticipated, taking the form of the tester demand seen in 1Q. In addition, given that demand is this strong when 5G-related devices are only in the production sample stage and have not gone into mass production at all, we believe that we can likely expect even greater demand when mass production expands in 2020 and beyond.

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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