

Advantest Corporation
FY2022 1Q (Three months ended June 30, 2022) Financial Briefing
Q & A Summary

July 28, 2022

- Q: We hear in the industry that there have been quite a few cancellations by major semiconductor manufacturers, but you have not changed your outlook for the memory tester market. Are you not seeing cancellations in the test space?
- A: SoC customers have brought up the possibility of cancellations or postponing deliveries because they now expect fewer end products due to weak consumer application trends. However, our customers have yet to actually follow through with these cancellations or postponements. With the lead times for our products now very long, it takes a considerable amount of time to secure future tester slots. As such, our customers are hesitant to make cancellations. We have had no cancellation requests at all in the case of memory testers. We are working on a daily basis to improve our delivery lead times as we are currently unable to meet the delivery dates that our customers want. Therefore, even if we were to experience cancellations or postponements in 2H, we believe that any impact on our sales would be minimal because we would be able to respond by shipping to a different customer, for example.
- Q: What are your outlooks for the memory tester and SoC tester markets in 2023?
- A: While our visibility on the 2023 tester market remains limited, we do not expect a major slump. Because of how long our product lead times have gotten, we are currently in talks with customers about their needs nine to 12 months out. Based on those talks, inquiries about SoC testers for mobile applications seem a little weak, but that is more than offset by the strength of the business involving HPC applications using leading-edge processes. We expect that to drive demand for SoC testers. In terms of memory, there have been media reports regarding falling memory prices and customers postponing capital expenditure, but our conversations with customers indicate that their investment appetite is strong.
- Q: You are forecasting year-on-year sales growth for FY2023 in the range of -15% to +10%. What quantitative assumptions for your different product types underlie that outlook?
- A: Our sense at the moment is that the percentage of year-on-year growth in the 2023 SoC tester market will be approximately in the mid-teens. This outlook takes into account technological advances in leading-edge semiconductors and solid demand in the

automotive and industrial equipment spaces. At the same time, it also factors in a weakening in demand for consumer products. Given the likelihood in 2023 of increased demand for HBM (high bandwidth memory) and technological advances such as the transition to DDR5, we expect the memory tester market to see single-digit year-on-year growth.

Our outlook meanwhile also reflects downside risk from a slowdown in the global economy. It is on this basis that we forecast FY2023 year-on-year sales growth between -15% and +10%.

Q: You said that around 60% of the ¥40-billion increase to your FY2022 sales forecast owes to a boost from the weaker yen. What is behind the remaining 40%?

A: We expect efforts on the part of our manufacturing operations to yield results. Greater-than-expected progress on parts and materials procurement actually added around ¥10 billion to sales in 1Q.

Q: When releasing its most recent results, your US peer said that the business environment had changed substantially in the past few weeks. To what extent does the revised FY2023 sales range you presented today reflect the latest business environment?

A: Compared to the peer that you reference, we have a broader customer base, and to meet the needs of that broad customer base, our product portfolio is also quite broad. This is a strength of ours, and we believe that there has been quite a shift in market shares in 2022. This strength of ours may explain the difference in our market shares.

Secondly, please allow me to explain our thinking on the bottom end of our forecasted sales range for FY2023. The semiconductor tester market has been through repeated ups and downs over the past two decades. Excluding the exceptional period around the global financial crisis, the sharpest swing was the decline of roughly 15% seen in FY2013. We note also that the basis of our business is different than it was in the early 2000s, when we relied solely on memory testers. The SoC tester market is now relatively stable and substantial in scale, and since we are able to expect a quite a bit of market share there, our recurring income has been bolstered considerably. Even if the macroeconomy were to slow going forward, given that no decline has been greater than just over 2% in the past six years, we felt it sufficed to anticipate a year-on-year decline of up to around 15% for our sales.

Q: You say that you have visibility on fairly strong demand for memory testers in 2023. What sort of visibility do you have on 2024?

- A: We expect tester demand to be solid in 2024 given that chips using leading-edge 3nm processes are likely to get off the ground in a meaningful way in 2H 2023. Predicting where the macroeconomy is headed is extremely difficult at present, but it will be a year of technological change. In the memory tester market as well, further miniaturization is likely to result in higher chip counts per wafer, quality assurance requirements for high-end memory are likely to mount, and there is likely to be growth in both the number of test items and in test times. All of these are factors that contribute to greater demand for testers. As regards DRAM testing in particular, efforts have been made to increase parallelism in wafer testing, including by probe card vendors. However, such efforts are approaching their limits, and it has become difficult to increase efficiency per piece of equipment. We therefore expect the market's demand for DRAM testers to grow in 2024 as well.
- Q: I would like to ask about tester utilization. I believe that the areas where the momentum is weak are consumer applications and DDICs (display driver ICs), but I believe that those account for only around 15% of SoC testers. Meanwhile, I do not think tester utilization has fallen off very much in the case of mobile and other areas where the number of test processes is growing. Even if it were to drop off, I do not think there would be a sustained slump. What is your view?
- A: While we do not have access to precise figures for tester utilization, it is true that the utilization of testers for DDIC applications has declined. It is also true that demand for testers associated with smartphones has weakened somewhat due to the decline in smartphone production volumes. However, these slumps have been cancelled out by utilization for HPC applications, which has conversely been on the rise. In addition, utilization for testers used for automotive, industrial equipment, and memory applications is very high. We receive request for earlier deliveries from customers who are short on testers.
- Q: Customer tester procurement plans were originally premised on strong growth in HPC applications. As such, do you think we may see a correction in demand?
- A: Our current view of and our future outlook on HPC are both very strong. While we cannot rule out the possibility that our outlook might change should the external environment grow even more uncertain than it is now, we expect our HPC-related business to be very solid.
- Q: Since your main scenario calls for year-on-year sales growth in FY2023, I assume that you also expect your expenses to increase somewhat. However, that suggests the possibility that

absent sales growth, your profits could decline in FY2023. Could you tell us what you expect in terms of headcount additions and the like in FY2023?

A: We presented our earnings forecasts through FY2023 today in the context of updating MTP2. However, we see a need to view our business opportunities with a longer-term perspective. We are likely to encounter a variety of growth opportunities as semiconductors expand over the mid/long term into a \$1-trillion market. To capture such growth opportunities amidst a worldwide shortage in semiconductor engineers, we believe that continuing to invest in human capital is absolutely essential. Therefore, barring the rise of an economic crisis on par with that of the global financial crisis, we do not at present plan on significantly reducing our investments in human capital even if our FY2023 sales were to be down by 10% or 15% year-on-year. We intend to lay solid groundwork for our growth with a long-term perspective.

Q: Under your revised metrics, you are targeting ROE of 30-35%. Is 30% the minimum you will target? I believe that your ROE is currently above 35%. If a slump in the market or other factors make it seem that your FY2023 ROE could fall below 30%, would you make shareholder return moves or otherwise reduce your shareholders' equity in order to bolster your ROE?

A: The 30% in our 30-35% ROE range would represent an average over three years. We set this target based on the belief that that is the ROE we could achieve if our FY2023 sales were to come in at the low end of our forecasted range. We are not at present planning any capital moves to maintain our ROE in the event that our FY2023 sales were to decline by 30% or otherwise undershoot the low end of our target range. ROE is not the metric on which we place the greatest priority.

Q: There is much disheartening news these days, but I would like to ask about some encouraging news on the technology front. A slowdown is underway for SoCs, but companies are actively developing leading-edge semiconductors, including GAFAs and the EV players. New smartphones are slated for release, and DDR5 demand should also be getting off the ground going forward. What sort of technologies are you expecting to arise as we head toward the next cycle?

A: Establishing testing practices remains very difficult, but we have hopes for millimeter-wave devices, silicon photonic devices, and complex 3D semiconductors, among other technologies. The hyperscalers have begun R&D efforts in such domains, in addition to the major semiconductor manufacturers of South Korea, the US, and Taiwan. Moreover, automotive semiconductors are also growing more complex, and we expect to see many

semiconductors with high reliability requirements be released going forward, including those produced by the hyperscalers. In our view, being able to take part in new semiconductor testing as part of the semiconductor workflow with such global innovators represents our greatest business opportunity. Against that backdrop, we believe that having the R&D capabilities and personnel in place that enable us to support our excellent customers in the West, China, and elsewhere will enable us to expand our business opportunities.

Q: Do you think the next cycle will get underway in 2023 or 2024?

A: Many seem to feel that the global economy is going to bottom in 2023, but we have already begun to explore new technological advances with new and existing customers. We would not find it odd if the semiconductor market were to pick back up next year or the year after. However, it is difficult to predict what sort of impact global economic trends will have not only on Advantest, but also on our customers and their customers. That said, it is our belief that our test business will not experience a major slump.

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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