

Advantest Corporation
FY2019 3Q (Three months ended December 31, 2019) Financial Briefing
Q&A Summary

January 29, 2020

Q: Your system level test (SLT) systems are garnering positive feedback from the industry and look poised for growth. How much growth do you expect going forward?

A: We look for a sustained increase in demand for high-end SoC SLT systems as semiconductor process nodes advance. In addition, the need to ensure reliability for automotive applications will drive demand for more sophisticated testing. We see these as the growth areas for SLT systems. Our expectation is for the size of business to reach at least 10 billion yen per year in the future.

Q: Could you share your outlook for the businesses you did not touch on in today's presentation such as testers for display driver ICs (DDIs), burn-in testers, and probe cards?

A: Our DDI-related business was extremely brisk in FY18, but that has resulted in a sharp drop-off in demand in FY19. Based on current utilization rates for our installed base, we do not expect to see the sort of strong demand in FY20 that we saw in FY18. That said, TDDI and CoF continue to see greater usage, so we expect the annual size of this business to remain at the 10-billion-yen level. In the burn-in test space we are going after the growth in demand for DRAM core testing and burn-in demand. We have already released products to enable us to capture such demand and plan to expand our sales of them.

We are upbeat about our CD-SEM systems for photomasks given the business opportunities we are obtaining as a result of growth in demand related to EUV lithography at foundries. However, because of the size of the market, we do not expect them to be a major contributor to our business. In probe cards, we are a latecomer and have therefore adopted a strategy of focusing first on winning customers who are likely to be successful, establishing a track record with them, and then expanding our approach to other customers.

Q: You mentioned wanting to strive to beat FY18's record profits in FY20. What market share outlook for CY20 is that premised on? Also, how certain are you that you will be able to set a new profit record?

A: We do not expect to see sharp growth in our market share, which is currently in excess of 50%. The SoC tester market is prone to fluctuate depending on the scale of investment at individual customers, so we see maintaining our current market share as of utmost

importance. The same applies to memory testers, where our goal is to maintain our current market share in excess of 50%. Some people are suggesting that we will be unlikely to reach the level of our FY18 earnings due to shrinkage in the market versus CY18, but we believe that our SLT business and the socket business we recently acquired will enable us to offset lower tester sales. As such, we think we could beat FY18 earnings.

Q: A competitor of yours has announced design wins for DRAM I/F testing. Do you believe that you will nonetheless be able to maintain in excess of 50% share of the memory tester market?

A: There will naturally be gains and losses of business at individual customers. However, we believe that on the whole we are stronger in the memory space. In addition, we have begun to see wins in the flash memory market, where we had not previously been successful, and we also think that we can be successful in burn-in testing. We believe that we will be able to maintain in excess of 50% share of the memory testing market.

Q: It seems your SLT business booked considerable orders in 3Q. How sustainable do you think that will be?

A: We currently have SLT products for two applications, SSDs and SoCs, the latter of which we acquired last year. Both types are selling well at present. Going forward we believe we will see some ups and downs for the SSD type but believe we can expect ample growth nonetheless. As regards the SoC type, we look for a growing number of markets to require not only chip testing but also system-level testing in order to ensure reliability as semiconductors become increasingly complex. For this reason, we expect FY20 to also be a year of stable growth with little in the way of ups or downs for our SoC SLT systems.

Q: The SoC tester market has seen sustained expansion since bottoming in 2015. In addition, volatility in that market also seems to have diminished. Why do you think that is?

A: We believe that there may still be fluctuations in tester demand going forward depending on the speed of technological advancement and the supply-demand balance for semiconductors. As you note, the end result has been that the SoC tester market has grown up and to the right since 2015, but if you break the market down further, you see that there have still been major fluctuations, but that 5G-related tester demand has offset the slump in demand for DDI testers, for example. We believe that market fluctuations have diminished because technological evolution has led to new types of SoC semiconductors and new applications for them, which means that drops in one type of demand have been offset with increases elsewhere.

- Q: How significant was 5G-related demand in 2019? Do you look for 5G-related demand to increase or slow in 2020?
- A: We had initially forecast a boost of around 200-400 million dollars to the market from 5G, but we saw demand in excess of that in 2019. We think there was probably around 500-600 million dollars in 5G-related demand. At present, we anticipate the same level of 5G-related demand in 2020 as in 2019.
- Q: At the previous quarter's results briefing, you mentioned the possibility of a slowdown in 5G-related tester demand. What is your current outlook?
- A: We have seen 5G-related inquiries coming in somewhat earlier than we had anticipated, and that has been a major contributor to FY19 earnings. In part because those inquiries came in earlier, we currently expect our 5G-related business to be flat in FY20, which is the same as our expectation for the SoC tester market as a whole. However, the number of 5G handsets is definitely going to be growing. We excel at testing systems for 5G handsets and want to make certain we leverage that trend to grow our business.
- Q: You say that you look for the memory tester market to grow by just over 20% YoY in 2020. Do you look for flash memory or DRAM to be the greater driver of the memory tester market in 2020?
- A: LPDDR5 has taken off more quickly than we had anticipated, and we believe it will continue to grow gradually. In the case of flash memory, we believe that recoveries in client and enterprise SSDs will drive tester demand going forward. Our visibility on 2H is limited, but given that DDR5 is slated to take off in the DRAM space, we believe that DRAM will be the greater contributor in dollar terms to the growth of the memory tester market in 2020.
- Q: Could you give us more detail on your 5G-related orders? In 1Q they were for engineering purposes, and in 2Q they were for initial volume production. What were they for in 3Q? Also, when do you expect to see orders related to full-fledged mass production for 5G?
- A: Our clients have already begun producing in volume albeit perhaps not at the level of mass production as of yet. We ascribe 3Q orders to that. The test demand associated with application processors for smartphones looks likely to grow again in 1Q FY20 and beyond, and we expect to see such orders placed in 1Q FY20.
- Q: Is there any chance your 5G-related market share will grow further in CY20?

A: Market shares fluctuate depending on your customer mix. As such, the first half of CY20 could include some challenging periods, but we look for conditions to begin to favor us as of the second half of CY20.

Q: Do you have any sense that you have actually lost share to the competition for LPDDR5 applications?

A: We believe that our products offer advantages, and we have well-established relationships with our clients. As such, we do not have a crisis mentality regarding the potential for market share losses. It is true that our customers are increasingly adopting dual-sourcing strategies, but we intend to maintain a high market share in this domain.

Q: What is the 1H versus 2H split for your CY20 outlooks for a market scale of 2.7 billion dollars for SoCs and 800 million dollars for memory? Also, is it possible that 5G-related demand might be more concentrated in 2H CY19 and 1H CY20 and slow down in 2H CY20?

A: We look for the SoC market to be flat between 1H and 2H, and we look for the memory business to pick up in 2H. We expect computing and communications to account for roughly 60% of SoC tester sales. However, given the diversity of factors likely to shape the market going forward, including demand for testers for evaluation purposes and for ensuring reliability on new nodes, we believe our outlooks will require careful review.

Q: What sort of impact will deterioration in yields resulting from the use of EUV lithography on the 5nm and 7nm nodes have on SoC tester demand?

A: We cannot comment on our customers' yields. Generally speaking, declines in yield mean that customers will need more testers if they are going to try to achieve the same output. However, tester demand is determined in large part by changes in the volumes of semiconductors produced, not just by yields. We had expected SoC tester demand to slow in 2H CY19, but the reason the drop was not as great as we had anticipated is because major players began producing 5G semiconductors in decent volumes, thus driving volume growth.

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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