Investors' Meeting for Business Strategy for the IT-related Chemicals Sector Q&A Summary

Date and time: Friday, October 4, 2019, 10:00 to 11:15 a.m. Presenter: Masaki Matsui, Representative Director &

Managing Executive Officer

<Display-related materials>

- Q. I would like to ask how the U.S.-China problem and the Japan-Korea problem are affecting your business. In addition, although it was reported that products that leverage the materials development capabilities of chemical manufacturers contribute to profits, I would like to know the background behind your improvement in profitability in the last year or so.
- A. In response to your first question, in the case of the U.S. and China problem and the Japan-Korea problem, as well as the China-Taiwan problem, over the past six months to one year, a variety of problems have occurred, causing significant trouble, but they have not affected our business very much in a broad sense. The U.S.-China problem is mainly tariffs, but the tariffs have never had any direct effect on our negotiations with customers. Regarding the Japan-Korea problem, there were various problems in commerce, and there were some cases in which the timing of shipments was slightly affected, but there was no large effect in general.

Regarding your second question about the background to our improvement in profitability, the main factor was the use of our products in high-grade and large-size displays from the second half of last year to the first half of this year. For TV applications, we believe that earnings have improved because our products were used relatively early in customers' large-size and high-end displays. In mobile devices, sales of polarizing films for full screen displays and OLED displays are higher than expected.

- Q. Does your company expect to retain a competitive advantage for the time being in polarizing films for high-end TVs and full screen displays?
- A. We believe we can maintain our advantage in the TV market, but the market is now slightly more challenging, and that may have a slight impact on sales prices and volumes. In mobile device applications, we expect to retain our advantage and that, accordingly, the situation of overall solid performance will continue.
- Q. I would like to ask separate questions about polarizing film for use in large TVs and for use in mobile phones. First, for large TVs, prices for panels have fallen below costs for almost all sizes. Drastic changes are forecast for the panel industry, which is your customer, and there is also talk that subsidies from China will be cut. Under these circumstances,
 - I would like to ask how you expect to maintain or expand sales volumes and prices.
- A. Slide 23, "Change of Polarizing Film Business Structure," shows sales of polarizing films by use in fiscal 2016 and fiscal 2021. Although not listed in the documents, we believe that the proportion of sales of polarizing film films for TVs will not increase significantly in fiscal 2021 compared to fiscal 2018 and fiscal 2019 because sales of polarizing films for TVs had already grown to account for a fairly large proportion by fiscal 2018. We intend to maintain and improve competitiveness by using acrylic protective film, a material we make ourselves and whose production capacity we increased this year.

- Q. For polarizing films for use in OLEDs for mobile devices, an area in which you are very strong, do you expect to be able to maintain an exceptionally high market share even after next year? In addition, it is my understanding that competitors of yours are leading the market for foldable displays, but is there any room for you to differentiate yourself by developing liquid crystal-coated retardation films for mobile devices as well?
- A. We have had a high market share in OLED polarizing films for mobile devices both last year and this year. We expect to maintain a relatively high market share next year. For foldable displays, while one company is already selling them and other manufacturers will soon begin selling them, we can exhibit a very high profile by approaching the market with all of our products, such as window film, touchscreen panel, and polarizing film.
- Q. You stated that, in expanding core operating income from 35 billion yen to 50 billion yen, the contribution from next-generation businesses is expected to be large. Four next-generation businesses are listed in slides 30-33, and, in particular, which fields are expected to expand? Please explain the competitive advantages of your company in these fields.
- A. One factor that increases core operating income from 35 billion yen to 50 billion yen is the materials related to foldable displays. Second, Sanritz will become part of the Sumitomo Chemical Group, adding income from polarizing films for automobiles. In addition, we expect compound semiconductors to contribute to the increase. Our products for use in foldable displays are highly rated by customers for their performance, and, although it will depend on how much the market expands, but we believe that they will contribute to the profit expansion if they are launched in the market. For polarizing films for automotive applications, we will work with Sanritz to develop films to meet the demand for high-performance panels.

Q. You stated that you would focus on products for window films, full screen displays, and large TVs in the future. Can we understand that the current Corporate Business Plan can be achieved simply through an extension of existing initiatives? I would like to ask if there is likely to be any shortfall in the target for fiscal 2021.

In addition, I would like to ask about your investment spending required for the development of next-generation businesses during the period of the Corporate Business Plan, including in materials for foldable displays.

A. Our polarizing film business was extremely challenging around fiscal 2014-2015. Although we had a number of polarizing film production facilities and benefited from them, some of them were inefficient. Consolidating the production lines to some extent reduced these inefficiencies. We have also taken various steps to achieve high yields since the launch of new products. This was also true for polarizing film used for TVs and mobile devices, but we believe that this steady effort has resulted in improved profits.

In addition, from a relatively early stage we determined that we had a competitive advantage in polarizing film for large-screen TVs and high-end televisions, and focusing on those areas led to our success, resulting in a significant improvement in earnings from the latter half of fiscal 2017 to the present. Going forward, it will be difficult to achieve enormous profits from polarizing film for TVs, so we want to grow business in polarizing film for mobile devices.

The production system for such products as polarizing film, touchscreen panels, and window film is basically in place, and there is no need for large-scale new investments for the time being. If the market for foldable displays expands beyond expectations, it may be necessary to invest in preparing a production system for window films and liquid crystal-coated retardation films.

Q. I would like to ask about the demand trends for smartphones in China.

- A. When the commercial frictions occurred this past spring, demand for smartphones, in general, as well as our products dropped slightly, but we believe that it recovered relatively quickly. Although there are areas of uncertainty in the future, no signs of considerable severity have been projected at the moment.
- Q. I understood that Sanritz is strong for automotive applications, but I would like to ask you if it has technological advantages. In addition, the company has two production lines for polarizing film, but is it considering investing in new facilities in the future?
- A. In terms of technology, Sanritz and Sumitomo Chemical have slightly different manufacturing methods, and Sanritz has a line that can provide higher durability. The reason for the business partnership was that Sanritz has such technologies as polarizing films and adhesives for automotive applications. Of the two production lines it currently has, one line is mainly for smaller-scale applications, such as automotive applications, and the other line is mainly for monitors, notebooks, and TVs. As for additional capital investment, there is a possibility of investing in improving the productivity of existing lines rather than adding new lines, but we would like to make any such decisions after a careful examination of market trends.

<Semiconductor materials>

- Q. You stated that you are actively expanding your semiconductor materials business, but it requires even greater R&D investments than the display-related materials business, and competition is intense. In a field in which major players are leading the way, how will you strengthen your competitiveness? You stated that your final goal is to achieve core operating income of 50 billion yen for the entire sector, but I would like to ask how much of that amount do you expect to be from your semiconductor business.
- A. One of our strengths in semiconductor materials is immersion ArF resists. We actively invested resources in this product, and we were able to capture a high share of the market. Although we were not the first to enter the field of EUV resists, our EUV resists have received high acclaim from customers. Our success was triggered by our high market share in immersion ArF resists, enabling us to establish very deep relationships with customers, and enabling us to sell to customers everywhere around the world. We are also actively strengthening our sales activities in China. The status of our product development and sales activities in the growing Chinese market is not bad at all, and we have high expectations for the expansion of the market in China.

Of our core operating income target of 35 billion yen for the final fiscal year of the current Corporate Business Plan (fiscal 2021), we expect nearly half to come from our semiconductor business

Q. When your core operating income reaches 50 billion yen, will the proportion of profits from semiconductor materials exceed that of display-related materials?

A. Core operating income of 50 billion yen is expected to include considerable profits from products for foldable displays and other new displays, and we expect profit from other display-related materials and compound semiconductor to gradually add to the total. Regarding semiconductor materials, since we have new plants that will start up in China and Japan next year or the year after, it is expected that the contribution to profitability will expand around that time, and that it will flatten out at a certain level afterwards.

- Q. Unlike ArF resists, EUV resists have up to just three users, and there are already three suppliers. Equipment is also very expensive in this business. Despite this situation, why did you decide to enter this market?
- A. There were similar problems initially with ArF resists, but we decided to enter the market in view of the prospects for the size of the market, and finally succeeded. Although we still do not know how large the EUV resists market will be, we are implementing various initiatives. For the time being, we will be supplying without making huge investments. We are working in consulting with customers, and the quality of our product has been very highly rated.

\leq Others>

- Q. Regarding Polymer coated-type light-emitting materials, you spoke earlier about JOLED, but I would like to ask about your progress in developing Polymer coated-type light-emitting materials for TVs.
- A. TV markets themselves have been determined to be somewhat stagnant, so it is a very difficult situation, but indications from panel manufacturers other than JOLED panel manufacturers are somewhat good. Though it is the decision of the customer whether to adopt our product, we believe that, in terms of our technology, it has reached the stage where it can perform well.
- Q. I would like to ask about your thinking in regards to your M&A strategy. You are collaborating with Japanese companies, such as Hitachi Metals in compound semiconductors and Sanritz, but what criteria do you use for partner selection?
- A. Both companies had capabilities in areas where we felt we were deficient. If there is a company that has the technology we need, we would like to cooperate both in Japan and overseas. When we cooperate however, if we are unable to understand and respect each other, it will be difficult. In that sense, even though we need to speed up our progress, we would like to spend a certain amount of time building bonds of trust with companies with which we would like to collaborate.

- Q. The market for materials for CMOS image sensors is not so large, but there is already supplier. Why did you decide to enter this market?
- A. There is one very strong supplier of materials for CMOS image sensors. Although we are familiar with that company's strengths, we continued to study color in the LCD color resist business. We propose technologies that are slightly different from that other company to our customers, and these technologies have received very high ratings from our customers, so we believe that we can gradually increase our market share.

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