ULVAC, Inc.

Q&A for FY2020 business results presentation (held on Aug 11, 2021) and Analyst meetings

【Upward Revision of Mid-term Management Plan】

① Why did you revise upward the final year targets of the mid-term management plan announced in August 2020 at this time?

A: Comparing to the time when the mid-term management plan was established last year, the trend of investment in semiconductors, electronics and FPDs has changed further to an expanding trend. In the semiconductor sector, foundry and memory companies have taken a more aggressive stance toward medium- and long-term investment this year, and in the electronics sector, the investment in power devices has become more active in Japan and China. In addition to power devices, the investment in optical and communication devices has also become more active in China under its domestic production policy. This trend is expected to continue. Also, the demand for LCD panels for IT applications, such as PCs and tablets, is rapidly increasing due to stay-at-home.

In addition to the improvement of the business environment, joint development with the world's top companies has increased as a result of our efforts to strengthen R&D capabilities as a part of the management reforms. Efforts to improve profit margins by strengthening manufacturing capabilities have steadily progressed, resulting in an improvement in the gross profit margin. As a result, we are confident that we will be able to achieve our mid-term management plan.

In this environment, orders received, sales, and operating profit in FY2020, the first year of the mid-term management plan, exceeded the initial plan, and the performance in FY2021 is also expected to exceed the initial plan. As a result, we have revised upward our sales forecast for FY2022, the final year of our mid-term management plan, from ¥210 billion to ¥235 billion and our operating profit forecast from ¥34 billion yen to ¥38 billion.

【FY2020 Results】

② Why did orders for FY2020 exceed the revised forecast in May by ¥13.9 billion?

A: At the time of the disclosure of the revision in May, there was a possibility that orders for two OLED evaporation lines (in China) would be postponed until FY2021, so the FPD order forecast was revised downward (the overall consolidated forecast was revised upward) but as a result, orders for one line of less than ¥10 billion were received in June. In addition, FPD orders increased less than ¥2 billion from the May forecast due to additional investment in LCD-related equipment.

Orders for components were also up by ¥1.6 billion due to advance orders for cryopumps and other products.

③ Why did operating profit improve by only ¥2.2 billion in FY2020, even though the net sales exceeded the initial plan by ¥18 billion (and why did the gross profit margin fall short of the initial plan, at 29.4% compared to 31.2%)?

A: The gross profit margin has improved from 27.3% in FY2019 to 29.4% in FY2020, and the profit margin has been improving every quarter during FY2020 due to the steady progress in improving the profit margin by strengthening manufacturing capabilities.

Although there is a delay in comparison to the initial plan, we will further strengthen our manufacturing capabilities and steadily improve the profit margin in FY2021 and FY2022.

④ What was the breakdown of orders and sales of FPDs and semiconductor electronic devices by application for full year result?

A: As per Exhibit 1.

⑤ How about the full year operating profit margin rank by segment?

A: As per Exhibit 1.

【FY2021 Plan】

⑥ The plan for orders in FY2021 is ¥230 billion, which is much higher than the ¥198.9 billion of FY2020. Please tell us what will grow and how.

A: We are planning for orders of ¥230 billion in FY2021, driven by an increase in orders of less than ¥10 billion for semiconductors, approx. ¥3 billion for electronics, and more than ¥14 billion for FPD compared to FY2020.

In the semiconductor market, while logic foundries are announcing aggressive investment plans, the investment in the metal hard mask (MHM) process, required for EUV-related investment (more than 70% of logic-related investment), which is at the key stage of miniaturization, will increase, and the overall number of MHM processes will increase in line with miniaturization. Memory-related investment will also increase, and the semiconductor-related investment is expected to increase by 40%.
In electronics, we expect an increase due to the active investment in power optical and communication devices in China.

For FPDs, we expect an increase of about 40% over FY2020 for sputtering and evaporation equipment for small- and medium-sized OLEDs, and a slight increase over FY2020 for LCD-related equipment.

⑦ The gross profit margin of 31.9% planned for FY2021 is a high level, but is it likely to be achieved?

A: We are making steady progress in our efforts to improve the profit margin by strengthening our manufacturing capabilities, and the gross profit margin improved every quarter last year, reaching 31.4% in the fourth quarter. We will continue to improve it in the current fiscal year.

⑧ What are the expected sales, profits, etc. for the 1H,2H, and the 1Q,2Q of FY2021?

A: As shown in the graph on page 12 of the business results presentation, we plan to achieve sales of ¥96.0 billion and operating profit of ¥9.0 billion in the 1H, and sales of ¥114.0 billion and operating profit of ¥17.5 billion in the 2H, with orders also expected to be higher in the 2H.

In the 1Q, due to a change in accounting standards (revenue recognition standards), some transactions (several billions of yen) will be changed from the percentage-of-completion method to the acceptance inspection method, resulting in a temporary decline in sales and operating profit, but it is expected to recover from the 2Q.

⑨ What was the breakdown of orders and sales of FPDs and semiconductor electronic devices by application for full year forecast?

A: As per Exhibit 2.

【FY2022 Targets】

⑩ The gross profit margin of 35% for FY2022 appears to be an ambitious target, but is there any positive factors?
Which factors will contribute to the improvement of the profit margin, the effect of strengthening manufacturing capabilities, the effect of increased sales or the effect of improved mix of segments?

A: Since the reforms in engineering design, purchasing, and production processes that we are undertaking to strengthen our manufacturing capabilities are gradual improvements, and it is difficult to predict the results numerically in advance. The entire company is working together on these activities as the most important theme of the management reform.

In FY2020, the weight of semiconductors and electronics, which have high profit margins, increased, but from FY2021 onward, FPDs are also on the rise, and the effect of improving the mix of segments is limited, so from FY2021 onward, the effect of improving profit margins by strengthening manufacturing capabilities and increasing sales will contribute to the improvement of profit margins.

【Market trends, etc.】

⑪ **While memory is expected to grow at the same level as the market, logic is expected to grow at a very high rate. How are you extending it?**

A: The logic business is expected to steadily grow faster than the market growth due to the increase in MHM processes that will be required in conjunction with the use of EUV as miniaturization progresses and the aggressive investment plans announced by foundry companies.

In addition, the entry into the MHM process has increased the reputation of ULVAC's equipment, and joint development and other efforts to enter other processes are increasing, which we believe will enable the company to achieve high growth.

⑫ **How do you expect orders for PCRAM to grow in the next fiscal year and beyond? How much do you expect in your mid-term management plan?**

A: The most advanced logic manufacturers are actively promoting customized PCRAM proposals to their customers and explaining on their websites that their proposals have been well received. We believe that they are steadily developing the market. We expect to see a reasonable amount of investment during the mid-term management plan period, but mass production will largely depend on the market formation of customers. Development and pilot projects including those of other memory manufacturers are continuing, and each company is introducing our sputtering equipment, so the scope of our business is expanding.

We believe that we will be able to achieve our forecast for orders related to semiconductors in FY2021, even if we do not expect to have investment in PCRAM.

⑬ **Please tell us about the investment trends in power devices, including the characteristics by region.**

A: Strong demand for power devices for automotive and industrial machinery are driving the capital investment in Japan and China. In Japan, demand for sputtering equipment for IGBTs is strong, while in China, inquiries for Ion implantation equipment for high-end SiC power devices and locally manufactured evaporation equipment for low-end power devices are strong.

⑭ **What is the trend of 12inch size investment in power semiconductors? Is ULVAC ready for 12inch size?**

A: While Europe is moving toward 12inch size, Japan is still in the process of resolving issues related to mass production and has not yet to make a full-scale transition, but ULVAC already has the 12inch equipment lineup.

⑮ **How long do you think the booming electronics-related investment in China will continue?**

A: In China, under the policy of domestic production, there is a strong appetite for electronics-related investment with the active support of local governments. Many view that the investment in China is just getting started and it will continue for a long term. We believe that investment will continue to expand at a high level.

⑯ **Please tell us about the competition with Chinese equipment manufacturers.**

A: In China, there are many companies that are trying to develop and manufacture cutting-edge products, and there is a strong desire to purchase equipment from ULVAC, since we already provide equipment to the world's leading Japanese electronic device manufacturers.

First of all, we would like to set a firm base for the future by participating in the investment plans that are currently increasing and have high feasibility. The general manager-level engineers of each division are staying in China for a long time to strengthen the technical sales force. There is a large difference in the current performance of equipment against the Chinese equipment manufacturers, so we are not so worried about the current competition. However, Chinese equipment manufacturers have been catching up quickly, and there is a possibility that they will catch up in about three years. To counter the threats posed by Chinese equipment manufacturers in the next few years, we plan to secure a dominant position in the Chinese market by providing full support for the mass production development and productivity improvement to the companies which we have delivered our products. We will also constantly be conscious of differentiation and working on the development of cutting-edge technologies.

⑰ **With regard to LCD investment, will it continue until FY2022, as there is an expectation that the supply and demand for panels will ease? Will the investment ever stop?**

A: Large LCD factories in China have already started the production, and the major Korean LCD factory that was scheduled to be closed has extended its operation due to the tight demand for IT panels caused by stay-at-home. We are told that the current supply and demand for panels are still tight, and we are aware that panel prices are at a high level. While there is a possibility that the supply-demand balance for panels will ease in the near future, we believe that Chinese companies are willing to invest in response to the demand for IT panels for tablets and PCs.

⑱ **Will the investment in OLED large substrate really start in 2021~2022?**

A: Several of the world's top panel makers are working on mass production development of large substrate OLEDs for IT panels such as tablets, PCs, medical, automotive, and gaming applications.

In particular, as Chinese panel manufacturers with government support continue to launch G10.5 large substrate LCD factories, Korean manufacturers, which have been leading the FPD industry, have announced a policy of withdrawing from LCDs and are trying to differentiate themselves by shifting to OLEDs. On the other hand, major Chinese panel makers are also stepping up their efforts toward the cutting-edge technologies, and we believe that the shift to larger OLED substrates will continue steadily.

⑲ **There seem to be several methods for OLED large substrate production, but with which companies and by what methods are you working on? What kind of development are you doing?**

A: Although we cannot talk about each company individually, there are a few top companies that are trying to work on mass production development of OLEDs on large substrates for IT panels such as tablets, PCs, medical, automotive, and games.

Each company is considering its own manufacturing method, but there are many areas in which ULVAC can contribute, such as sputtering equipment for backplanes and evaporation deposition equipment other than the inkjet method.

We cannot discuss the details of the development, but we would like to make use of ULVAC's technological expertise in large substrate sputtering equipment to solve issues such as stable production of large substrates and realization of higher resolution.

⑳ **When will the battery business start to make a contribution?**

A: The investment in rolling deposition equipment to meet the demand for smaller and larger capacity automotive batteries is expected to start gradually in FY2022, but full-scale growth is not expected until FY2023 or later.

㉑ **I've heard that semiconductor-related manufacturing equipment manufacturers are experiencing longer delivery times for parts and materials, but is ULVAC also experiencing tighter procurement? What measures are you taking?**

A: In addition to the increase in demand for semiconductor-related capital investment, the supply of parts and materials has not returned to the level due to the effects of the cold wave and power outages in Texas, U.S.A.. Also with the shortage of various materials, the difficulty in procuring semiconductors itself has resulted in an increase in the number of products with long delivery time. At this point, we are not causing any inconvenience

to our customers in terms of delivery dates, but as the procurement environment becomes more severe, we will work with suppliers to adjust the dates, so that our delivery will not be affected.

【R&D investment】

㉒ **You said that you will increase R&D investment by ￥15 billion to ￥65 billion during FY2020-FY2022. Please tell us about the areas of the increase, and the main R&D themes, and the development lead time.**

A: The breakdown of the ¥15 billion increase in R&D investment is ¥10 billion for semiconductor-related projects and ¥5 billion for FPD-related projects.

The main applications for the semiconductor-related are joint development projects with top semiconductor manufacturers for logic and memory-related equipment, and FPD-related products for large OLED substrates and LCD sputtering equipment.

The lead time for development varies depending on the customer, but is usually 5-6 years for semiconductors, 2-4 years for FPDs, and 1-3 years for electronics.

㉓ **How much of an impact will the ¥15 billion increase in R&D investment have on the costs in FY 2021 and FY 2022?**

A: In reviewing the mid-term management plan, we have reviewed mainly the R&D investment but also in other factors, so it is not possible to make a general comparison, but we expect fixed costs to increase by approx. ¥4.5 billion in FY2021 and ¥5 billion in FY2022 compared to the initial plan.

㉔ **To what extent do you think the burden of depreciation will increase in the future if the investment in R&D Capex increases significantly in FY2021 and FY2022?**

A: More than half of the R&D Capex is planned to be invested in semiconductor electronics, but since evaluation equipment accounts for a large percentage of the Capex and these evaluation equipment are often eventually purchased as the initial equipment by the customer, about half of the R&D capex will not have a significant impact on the depreciation burden in the medium to long term.

＜Exhibit 1＞

●Breakdown for Order Received (Actual)

Order Received	FY2020
Semiconductor/ Electronics(1billion¥)	**58.6**
・Memory	more than 30%
・Logic	around 10%
・Electronics Device	less than 30%
・Power Device	around 20%
・Packaging	less than 10%
FPD(1billion¥)	**52.7**
・LCD	mid-40%
（for large-sized）	（around 60%）
・OLED	more than 40%
・Others	around 10%

●Breakdown for Net Sales (Actual)

Net Sales	FY2020
Semiconductor/ Electronics(1billion¥)	**56.5**
・Memory	mid-40%
・Logic	less than 10%
・Electronics Device	more than 30%
・Power Device	less than 20%
・Packaging	less than 10%
FPD(1billion¥)	**45.3**
・LCD	mid-30%
（for large-sized）	（mid-70%）
・OLED	more than 50%
・Others	mid-10%

●Operating Profit Margin Rank of FY2020

Rank	Segment
1	Semiconductor and Electronics
2	Component
3	FPD
4	General Industries
5	Materials
6	Others

Overall average is between
1) Semiconductor and Electronics and
2) Component

＜Exhibit 2＞

● **Breakdown for Order Received (Forecast)**

Order Received	FY2021
Semiconductor/ Electronics(1billion¥)	**71.0**
・Memory	more than 30%
・Logic	mid-10%
・Electronics Device	mid-30%
・Power Device	more than 20%
・Packaging	mid-digit
FPD(1billion¥)	**67.0**
・LCD	mid-60%
（for large-sized）	（less than 80%）
・OLED	more than 30%
・Others	mid-digit

● **Breakdown for Net Sales (Forecast)**

Net Sales	FY2021
Semiconductor/ Electronics(1billion¥)	**68.0**
・Memory	mid-40%
・Logic	less than 10%
・Electronics Device	more than 30%
・Power Device	more than 10%
・Packaging	less than 10%
FPD(1billion¥)	**54.5**
・LCD	mid-30%
（for large-sized）	(more than 70%)
・OLED	mid-50%
・Others	less than 10%