

FY2019-FY2021 Corporate Business Plan Presentation Meeting
Q&A Summary

Date and time: Tuesday, March 12, 2019, 15:30 to 17:30
Presenter: Masakazu Tokura, President
Q&A: Masakazu Tokura, President,
Toshihisa Deguchi, Executive Vice President,
Kunio Nozaki, Senior Managing Executive Officer,
Ray Nishimoto, Senior Managing Executive Officer,
Hiroshi Ueda, Senior Managing Executive Officer,
Noriaki Takeshita, Senior Managing Executive Officer,
Hiroshi Niinuma, Senior Managing Executive Officer,
Keiichi Iwata, Senior Managing Executive Officer

Specialty Chemicals

Q. The core operating income variance analysis for the Energy & Functional Materials Sector (fiscal 2018 vs. fiscal 2021), on slide 54, shows volume as being quite large. You spoke earlier about expanding sales for battery materials and super engineering plastics and I guess that most of the increase in volume in battery materials will be separators, but for super engineering plastics, which will have the larger impact on volume, LCP or PES? Also, the negative impact of fixed costs and others is quite large, but should we understand the background behind this as being due to the expansion in separator production?

A. (Keiichi Iwata, Senior Managing Executive Officer): First, with regard to volume, this will primarily come in increased volume for separators, but in addition volume will also significantly increase for cathode materials (precursor) from Tanaka Chemical, our subsidiary. To be thorough, there will also be an increase in alumina, an inorganic material, because this is used as a material in coating separators, so that will account for about three-fourths of the increase in volume of alumina. On the other hand, in super-engineering plastics, volume will grow for both LCP and PES: we have high expectations for LCP, due to expanded sales for new applications such as in 5G technologies, and for PES, we expect sales expansion for automotive applications. With regard to fixed costs, as you point out, the biggest impact results from depreciation expenses and the increase of labor costs, as the production capacity of separators will be expanded at SSLM.

Q. With regard to the expansion of separator production capacity, you have explained about the coating component, but today you said that you would also expand production of the substrate. Doing the math, I guess you might expand production by a little over 100 million m²/year. You have spoken previously about wanting to expand production of the substrate as well if you had a prospect of a new manufacturing method, so should we understand this to mean that you have at last found a prospective new manufacturing method? Also, I would like to ask about the location.

A. (Keiichi Iwata, Senior Managing Executive Officer): At the current moment, substrate from a new production method is under development. We are confident that we have solidified the technology to some degree, but the final stages still remain. With regard to the location of the expansion, that is not yet determined, but the major factor will be the length of the construction period. From the start of construction on the building, that process alone will take about a year and a half and there is a possibility of missing a business opportunity; therefore it will come down to a place with a building we can effectively utilize, and which can be set up with a short construction period.

Q. Recently, there have been expansions in production lines in China, so are you considering purchasing substrate from a Chinese separator manufacturer?

A. (Keiichi Iwata, Senior Managing Executive Officer): That is one of our options, but at the current time we are not having concrete discussions.

Q. The profit margin for the IT-related Chemicals Sector for fiscal 2018 still may be on the upswing, but what will you do to improve profit margins to a level suitable for specialty chemicals? Also, could you please explain the state of your in-house developing technologies and your pipeline, including polymer coated-type OLED materials?

A. (Masakazu Tokura, President): The IT-related Chemicals businesses Sector has a high asset turnover ratio, so even if the core operating income to sales revenue appears low, the ROI is not low. In FY2021, its ROIs is likely to exceed our 7% target largely because the percentage of higher-value-added products based on our in-house developed technology increases. This is a business that cannot avoid a drop in prices of products, but we want to further strengthen our OLED display-related business through selling higher-value-added products using the materials developed in-house proprietary. In addition, we will focus on new efforts toward creating a business for OLED materials in the field of smart mobility.

(Toshihisa Deguchi, Executive Vice President): We have invested about 120 billion yen over the three years of the Corporate Business Plan that runs through fiscal 2018. Because those businesses will begin operation from fiscal 2019, we think that we can improve both sales revenue and core operating income.

As for our materials developed in-house, acrylic protective films have already been commercialized. This film offers outstanding permeability and resistance to humidity and is becoming the standard main protective film for large TVs. In addition, we are working to extend our liquid crystal coated retardation film, used with OLEDs, to small and medium-sized displays. While there is a need to change its characteristics somewhat, we hope to develop a film based on similar principles for the smartphone use. Outside of that, we are considering making display cover materials for the outermost surfaces of foldable displays. There are three products we can supply for foldable displays, which are polarizing film, touch screen panels, and display cover material.

With regard to the OLED materials, production has begun on JOLED products using our OLED materials, though the volume is quite small at the moment. We believe our materials will be shipped steadily as the production volume on the company's new line increases step by step. Our significant expectations are for TV applications; our products have been well received by panel manufacturer. Currently for TV applications, vapor-deposition white OLEDs (white OLEDs with color filters) are major, but we think we can extend coated-type OLEDs into this space, we think the coated-type exceeds the current vacuum deposition type in both cost and performance overall. We expect to have progress during the Corporate Business Plan running through fiscal 2021.

Q. On slide 57, you show a variance analysis for core operating income for the IT-related Chemicals Sector (fiscal 2018 vs. fiscal 2021), and the downward impact due to margins is about 100 billion yen, larger than the positive impact from volume, the assumed lowering of the margins during the coming three years is larger than over the last three years. While businesses such as polarizing film have matured, why do you need to lower your prices so much? Also, I would also like to ask about effects of display's shift from liquid crystal to OLED.

A. (Masakazu Tokura, President): In the world of IT-related chemicals, new products are demanded one after another, and when new products enter the market, if they are well received, they spread across the market all at once and massive increases in sales volume while lowering prices. For this reason, price differences are always large. However, we have focused on streamlining in order to cope with such market trends, In the past, there was a time when we were able to cover the losses from dropping the sales price with such streamlining, but the difficulty has been increasing gradually.

(Toshihisa Deguchi, Executive Vice President): While liquid crystal display market has matured, sizes of the displays are increasing. In liquid crystal displays, we think that the field where we can generate profits from now on is in the large size and high end field, we foresee the possibility price decreases there. Regarding 65-inch TVs, which are growing in demand, its price must be expected to fall considerably after two to three years.

As displays shift from liquid crystal to OLED, certainly unit prices will definitely increase. But it will also be necessary to cope with its price as OLED spreads across the market. Even in this business environment, we intend to shift to high-end fields with high profit margins as much as possible, by increasing added value through differentiation and manufacturing materials in-house.

Q. In the core operating income variance analysis for the Health & Crop Sciences Sector in FY 2021, volume accounts for more than 30.0 billion yen. You have said that this would be a combination of a number of small things, but we would like a few comments on at least the ones that will have the largest contribution to this difference in volume.

A. (Masakazu Tokura, President): A number of projects are lined up in excess of a few billion yen. For example, we expect that the 250,000 tons of methionine will fully contribute to sales. Moreover, we did not include very much of this in the presentation, but it is said that the products we are developing for pharmaceutical use with Bonac Nucleic Acid will generate ten billion yen in business in the near future in use as guide RNA for genome editing, so we have high expectations. Beyond this, there are five or six factors, such as biorationals.

(Ray Nishimoto, Senior Managing Executive Officer): We expect biorationals to continue to grow. We are seeing the growth of the products we have now, and we are factoring into that our intention to also consider small and medium-scale acquisitions during this Corporate Business Plan.

(Masakazu Tokura, President): Beyond that, in crop protection chemicals, our fungicide against soybean rust, INDIFLIN™, will be launched and contribute to sales in Japan and Brazil, though the scale will just be a few billion yen. The increase of the volume also includes items such as shipments for seed treatment applications to Corteva Agriscience™.

Q. Compared with the level in Oct-Dec of 2018, or its present level, how much do you expect the methionine market to recover, in percentage terms, by fiscal 2021? I would also like to hear the basis for your thoughts. I think demand certainly will grow, but if we consider that the capacity expansion plans of companies like Evonik, Bluestar, and Novus are likely to come up again, then even if demand grows 5-6%, I think it is feasible that utilization rates could fall, but what do you think?

A. (Masakazu Tokura, President): It is true that the price of methionine is currently crawling on the bottom, and even when it climbs a bit it has not climb again right away. For the next Corporate Business Plan, we expect that prices will rise by a few dozen cents.

The expansion plans set forth across all methionine supply companies amount to about 1.2 million tons of production capacity, but as far as we know, only about 400,000 tons of capacity have actually started construction. So, if demand grows at an annual rate of 6-7%, or in other words, demand increases by a little under 100,000 tons per year, then it will catch up the expanded capacity in 4-5 years, more or less.

In addition, looking at the circumstances of other companies, the current price is definitely not something they are satisfied with, either. Rather, I think they are struggling for profitability, though we have some cost competitiveness. So, we think that prices will definitely turn the corner and start rising.

(Ray Nishimoto, Senior Managing Executive Officer): We are aware that there are still uncertain factors in the future of the price; though we say that we are expecting an increase in the next Corporate Business Plan, we are taking a comparatively conservative view.

With regard to the balance of supply and demand, demand has continued to be vigorous; we do not expect any change at all in the trend that the volume will be completely absorbed over a relatively short timeframe, while there are expansion plans of capacity. We have no concerns about either the sales or the volume during the next Corporate Business Plan period.

Q. I would like to ask about how you will use the 220 billion yen in M&A. On Slide 41, “Major M&As” is listed under Pharmaceuticals, but what other fields and businesses do you think M&As are needed for? I understand that if it is similar to what you did under your Corporate Business Plan through fiscal 2018, then it will mainly be focused on Health & Crop Sciences, but is that the case? Regarding your global footprint, you spoke about letting things rest once in India and investing in South America for Health & Crop Sciences-related businesses, are you next considering someplace like Brazil, as candidate for M&A?

A. (Masakazu Tokura, President): As you remark, life sciences will be our focus. With regard to acquisitions in the Pharmaceutical Sector, I cannot say anything at the current stage. You would have to ask Sumitomo Dainippon Pharmaceuticals, but I think they are looking at post-Latuda. We have secured this level of funding in consideration that it may be necessary. Outside the Pharmaceutical Sector, our major focus is probably the field of biorationals. Through acquisitions we will buy both time and technology, strengthening our biorational field to another level. Also, if we can build a good new project regarding global footprint, we will invest in it. Even in the IT-related Chemicals Sector and the Energy & Functional Materials sector, we occasionally have opportunities to buy technology at the single digit billions of yen level, though not at the double digit level. We have not disclosed them because the scale was somewhat small, but we have conducted some small purchases in the IT-related Chemicals Sector. In short, the true nature of acquisitions is to buy time, and we will continue to make use of them going forward.

Q. Should we understand that, in the Health & Crop Sciences Sector, you are interested in investment opportunities in Brazil similar to Excel Crop Care in India?

A. (Masakazu Tokura, President): We are not at the stage where we can give out any specific project names, but we have made a number of efforts. They have not reached any definite plans, however.

Bulk Chemicals

Q. You are forecasting a fall in profits for the Petrochemicals & Plastics Sector in fiscal 2021 of 8 billion yen compared to fiscal 2018. You spoke about reduced margins for MMA, but I would like you to tell us as much as you can about your way of thinking about Rabigh's contributions to profits in fiscal 2018 and fiscal 2021.

A. (Masakazu Tokura, President): It is essential to think of Rabigh Phase I and Phase II separately.

I think that Phase I can maintain a high level of stable operations. But refinery margins have an extremely significant impact on Phase I, as Rabigh is an integrated complex; the lower refinery margins in fiscal 2018, which were comparatively high in fiscal 2017, was also a major factor in the decline of Rabigh's profit for fiscal 2018. At the moment they are once again slightly up, but it is extremely difficult to foresee fiscal 2019. However, we think that Phase I will produce a certain level of profits, regardless of refinery margins. With regard to Phase II, it will soon be undergoing CRT tests for three months, and if everything goes well, it will begin amortization and begin producing and selling products. But we do not think it will contribute to profits in fiscal 2019, as this is a startup period and initial expenses will be significant. Rather, it may have a negative impact; we expect it begin to contribute around fiscal 2021. This is not a pessimistic view, but just the view you need to take with this sort of major project.

(Noriaki Takeshita, Senior Managing Executive Officer): We hope that Phase II will move to commercial operations within the year, and if that is the case amortization can begin. In addition, there is the question of whether we can enter full operations immediately in the first year, and it also seems that market conditions are softening somewhat at the moment, so at the current stage, it may be somewhat difficult to make a profit overall. We expect that profitability will improve in fiscal 2021, but at the same time, because we will also have scheduled periodical maintenance shutdown (the full stop after the plant is started), the utilization rate for fiscal 2021 is still unclear in some places. This is something we are always saying, but because Petro Rabigh is a listed company, we cannot give too many details, so we will leave it there.

Q. Should we understand that you are taking a conservative view of refinery margins?

A. (Noriaki Takeshita, Senior Managing Executive Officer): They were extremely high until about the midpoint of last year, but gasoline has fallen drastically, and currently it is quite bad. We expect it to improve from there, but we do not expect the sort of high levels we saw until 2018.

Q. Outside of the Phase II investments that are being shifted from the current Corporate Business Plan to the next Corporate Business Plan, will there be any significant outlays? I think that you also have things like plans for investments to do with the refinery, but how do you envision this under this new capital expenditure and investments plan, and could you give us a sense of timeframe with your explanation?

A. (Masakazu Tokura, President): Since we began the Rabigh project, sophistication and lightning of the refinery has been raised as a topic. However, we prioritized to expand the fractions to aromatics, to organize the complex, and to set it up in Phase II. While we would like to consider positively investments for streamlining the refinery if those investments would generate significant benefits from a long-term perspective, we will have to make that decision in view of the profitability and financial status of Petro Rabigh as a whole.

We are often asked if Petro Rabigh will have a Phase III, but we will not. Phase I does business in ethane-derived ethylene and polypropylene, and if that were the end of it, that would have the highest profitability. However, we embarked on Phase II, as it is the petrochemical complex that uses all fractions effectively, and we felt that, in order to build long-term friendly relations with Saudi Arabia in a win-win way, it was necessary to set up a petrochemical complex.

We have not had a thoroughgoing discussion with the Saudi side, but we consider that the question of when we will next invest in streamlining must be discussed while taking into consideration factors such as the possibility that difficult times may continue, including both the setup of Phase II and market conditions.

Q. Should I understand that to mean that there have not been substantive discussions?

A. (Masakazu Tokura, President): Yes.

Others

Q. With regard to the major action item of your next Corporate Business Plan of “Improving Productivity through Digital Innovation,” I think it is the case that this field is one where the scale of investment is to some degree directly reflected in results, or in other words, that it is easy for this field to become a winner-takes-all competition that favors major players. As your company is not in the top class in terms of business scale in your various businesses, how will you focus on the digital investment of 60.0 billion yen, and in what sort of timeframe do you envision achieving results from this investment? If a major player like Dow DuPont or BASF were to invest a few hundred billion yen, is there not a danger that you will be at a competitive disadvantage?

A. (Masakazu Tokura, President): As you point out, we are a diversified chemical company, and we are aiming for a conglomerate premium, rather than a conglomerate discount, even with regard to, for example, our research databases. In other words, even if the amount invested is the same, we will be able to optimize our various research efforts by utilizing interoperability to link our databases.

Materials informatics (MI) is not something that we can set up in the three years of the next Corporate Business Plan, however. We have already begun initiatives such as deploying electronic notebooks for experiments and capturing failure data, in order to first make steady progress in database linking. Some people misunderstand MI, thinking that if they use MI, anyone can easily develop products if data is sold, but that is not the case. Domain knowledge is essential to look at the data and analyze what it means, and by repeatedly feeding research back into domain knowledge, research becomes more polished. In crop protection chemicals, for example, the difference in the amount of domain knowledge between an ordinary person and major agrochemical companies like BASF and Bayer is vast. Though our sales of crop protection chemicals may be relatively small, we are confident that in research and development, particularly in organic synthesis, we have a level of technology, including domain-specific technology, that is not far behind, or is even keeping pace with the majors, and is to be highly valued, if we do say so ourselves.

Next is improving productivity through digital innovation in plant operations. Detecting signs of abnormalities, which we often hear in contexts such as nuclear power, is something that can foresee unusual trends in extremely stable operations. On the other hand, it is extremely difficult to apply this to chemical plants, due not only to stopping operations for required periodical maintenance shutdown, but also to factors such as switching products like fine chemicals. We feel, however, that we must develop a system to make good use of the process data collected with plant information systems.

We think that where we can deploy the particular strengths of Japan, though they are not limited to Japan, is in increasing productivity by combining the real world data and domain-specific technology we have with both public data

available on the market and our own private data. I think we will continue to face challenging times, but we would like to work with a longer-term view.

(Hiroshi Ueda, Senior Managing Executive Officer): We have both data and samples of about 300,000 agrichemical compounds at our laboratory in Takarazuka, and between 300,000 and 400,000 pharmaceutically-related compounds at our Bioscience Research Laboratory in the Osaka area. Thus we have been collecting real data all the time; by applying statistical processing and current digital technology to this stored data, I think there is possibilities something will come of that.

When it comes to plants, as well, we have already been collecting data for all tags and meters for all plants on a minute-by-minute basis for over a decade. The time has now come to utilize that data, and we have created Digital Innovation Department to take the next few steps; aiming to further strengthen capability at every R&D facility and at every plant through introducing digital technology and training data engineers.

(Masakazu Tokura, President): Being Sumitomo means being a company that takes advantage of on-site capabilities and is always taking this sort of organic and organizational approach to growth, and we would like to take this approach to improve productivity through digital innovation as well. We would be grateful if you would evaluate this for the unique efforts of Sumitomo.

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