Questions and Answers at Business Unit IR Meeting 2022 Part 1
(Mineral Resources, Energy, Chemical & Electronics Business Unit)

[Date]	**December 8th, 2022, 1:00pm - 1:50pm**	
[Speaker]	**Yoshiyuki Sakamoto**	**Senior Managing Executive Officer, General Manager, Mineral Resources, Energy, Chemical & Electronics Business Unit**
	Takuya Tsujigaki	**Corporate Officer, General Manager, Planning & Coordination Department, Mineral Resources, Energy, Chemical & Electronics Business Unit**
	Koichiro Yazaki	**Corporate Officer, Deputy General Manager, Mineral Resources Division No.1**
	Shimpei Nitta	**Corporate Officer, General Manager, Mineral Resources Division No.2**
	Koji Endo	**Corporate Officer, General Manager, Energy Division**
	Naruyuki Ando	**General Manager, Basic Chemicals & Electronics Division**
	Masahito Uno	**Corporate Officer, General Manager, Life Science Division**
	Yoshinori Takayama	**Corporate Officer, General Manager, Investor Relations Dept.**

<Questioner 1>
Understood it is expected in Ambatovy project, subsidiary material costs will decrease and stabilize, while production volume will increase Could you please tell us then how you will improve the profitability by improving operation side going forward?

<Yazaki>
There are two initiatives to improve profitability. The first is our efforts to achieve high-level and stable production. We have repeatedly suspended operations due to unexpected situations. Although changes and effects are not immediately apparent, we are working to improve the operations by implementing multiple measures to reduce defects. For example, before the plant shutdown due to COVID-19, HPAL, a core facility, was often stopped, but the operations have been improving with intensive measures. On the other hand, the stable operation in HPAL caused the load and problems of other parts, we are now dealing with the problems. We are continuing our efforts to stabilize production not only by improving the quality of equipment repairs and maintenance but also by changing the way we operate and accumulating know-how.
The second is an initiative to reduce fixed costs. About 90% of Ambatovy's employees are Malagasy, and the company has long worked on maintenance and training to improve the quality of its employees. By strengthening the quality of our employees, we will be able to reduce the number of malfunctions and avoid unexpected equipment repairs, leading to lower fixed costs including human resources, etc. We will continue these initiatives and increase our revenue levels by increasing production and reducing fixed costs.

<Questioner 1>
Is it correct to assume that profits in the Agribusiness will increase significantly in the future towards FY2030 as shown in the materials? After substantial earnings gains this and last fiscal year, is there no rebound from the good run, or some positive boost? What are your expectations and measures for future earnings growth?

<Uno>
First, population growth and rising incomes in developing countries will continue to increase the demand for food. Compared to the current level, the demand will probably be 1.4 times higher in 2030, so the demand for agricultural materials will increase accordingly.
Our group's agricultural input and service business and crop protection distribution business account for less than 1% of the global market, so the company has the potentiality to increase its share in the market. In addition, as the cultivation area expands, I believe that we can grow profits significantly as organic growth by responding to expanded functions and expanding our business.
On the other hand, there are limits to the expansion of cultivation areas, so it is necessary to increase productivity in parallel. I believe we can achieve further growth through the in-organic growth in addition to organic growth by building a new revenue base while introducing new commercial products such as agri-tech and bio-pesticides to address environmental issues.

<Questioner 2>
Regarding the future of Ambatovy project, please tell us the scale of profit if subsidiary material costs settle down and annual production becomes consistently 50,000 tons per year?

<Yazaki>
Since the prices of the main product nickel and the by-product cobalt fluctuate, as well as the prices of the subsidiary materials, thermal coal and sulfur, it is difficult to indicate the scale of the profit. However, our company profit per $1 of the breakeven cost and the nickel price margin would be approximately 6 -7 billion yen in the current exchange rate. We think it's important how much we can secure this margin.

<Questioner 2>
There will also be amortization costs for the slurry pipeline, so should we expect the project to be profitable in five to six years?

<Yazaki>
We believe that we will be a little closer to achieve the profitability, but we assume that achieving ROIC exceeding WACC is on the same time frame you mentioned.

<Sakamoto>
Just to clarify, we have not given up on making Ambatoby Project profitable in this fiscal year. In the first half of the year, subsidiary material prices soared, but in the second half, while thermal coal prices remained high, sulfur prices were settling. We expect production to stabilize and return to profitability in the remaining four months of this fiscal year.
In addition, with ROIC exceeding WACC, we aim to generate returns commensurate with our invested capital as early as possible for all of our 62 SBUs. As for Ambatovy, I would like to work on toward achieving it the year after next, rather than in five or six years.

<Questioner 2>
What is the current and future profit structure of the agribusiness?

<Uno>
Out of the 17 billion yen forecast for FY 2022, the agricultural input and service business and the crop protection distribution business cannot be clearly separated, but roughly speaking, it is about 50-50. This ratio will not change much in the future. We will focus on the agricultural input and service business, but the crop protection distribution business will also grow, and we believe the ratio of results will not change much.

<Questioner 2>
As for agricultural input and service business, another trading company is also working on it in the United States, and I understand that the trading company have acquired more and more local companies and is finally making a meaningful profit. Is your strategy to expand the agricultural input and service business by acquiring local companies in similar way? Also, are there any companies in Brazil that are large enough to be acquired?

<Uno>
Agro Amazonia, which is based in Mato Grosso, Brazil, is planning to acquire Nativa, an agricultural input and service business company based in the southeastern state of Minas Gerais. This is a strategy similar to that of the other trading company. However, the Brazilian market is expected to grow more than that of the United States, as cultivated acreage continues to increase. Our company intends to expand laterally while capturing the growth of the market itself. In addition, we believe that there are many companies that could be acquired.

<Sakamoto>
As a result of our research for the market potential in agricultural countries in terms of agricultural input and service business, Brazil was at the top of the list and we are currently working on it. In fact, Myanmar and Russia were the other countries we were targeting. We had narrowed down the target companies and were making progress in negotiations, but the situation has been changed and we have suspended. Argentina is the second most targeted country after those countries. We will expand our successful business model in Brazil first, but we are looking at other emerging countries after that.

<Questioner 3>
Regarding agribusiness, you said that you were targeting Myanmar, but why Myanmar in Asia? What is your view on expanding to Asia other than Myanmar?

<Uno>
Myanmar is an agricultural country along with India, Indonesia, Vietnam and Thailand. The candidate company in Myanmar has a business model similar to our business in other regions, and we expected that there would be a lot of room for value enhancement by utilizing our company's know-how and knowledge.

<Sakamoto>
India is a major agricultural country in Asia, and we are already working on a joint venture with the Mahindra Group for crop protection distribution business. However, we have not expanded into agricultural input and service business due to institutional restrictions on direct access to farmers.

<Questioner 4>
Regarding trading business in general, my understanding is that there was a significant profit contribution in the first half and will be a rebound decline in the second half of this fiscal year. Please tell me the revenue scale of the trading business in each Division and the outlook for the second half, that is, whether the second half earnings will fall in line with market conditions, or whether stable earnings can be expected in the future as your trading functions has been evaluated amid the recent rise of uncertainty.

<Nitta>
Mineral Resources Division No.2 handles iron ore, manganese, coal and carbon. Although few trading companies continue to trade carbon, majority of the carbon department's revenue comes from trading businesses. Since we receive a fixed percentage of sales, our earnings will decline as market conditions soften, but in the carbon business, we are taking various measures to increase our downward tolerance for inventory trading, with the aim of achieving a steady level of profit.

<Endo>
Energy Division trades gas and electricity in the United States and Europe. As a result of the increased volatility in gas prices caused by the Russian invasion of Ukraine, we were able to make profit in the trading business in the first half. On the other hand, our company is also working on a business to liquefy trade-sourced gas and ship it as LNG at Cove Point in the United States, which generated substantial revenues due to the high market prices. In the second half of the year, there will be a scheduled repair at Cove Point, and although operations have already resumed in October, we expect earnings to be lower compared to the first half. We also believe that the trading business will not be as profitable as the first half because the volatility of the market will settle relative to the first half.

<Ando>
Basic Chemicals & Electronics Division has three SBUs: Basic Chemicals SBU, Electronics & Functional Materials SBU, and EMS Business SBU. Of these, EMS business SBU is based on manufacturing, while trading accounts for the majority of the other two. For Division as a whole, about 70% of revenues come from trading.
In terms of performance in the first and second half of the fiscal year, there are a wide range of products to be handled and each situation is different, but relatively speaking, the second half of the fiscal year for basic chemicals is expected to be a little tougher depending on market conditions. In the inorganic chemicals business, there is not much difference between the first half and the second half, and we expect a slight decline in trading of semiconductor materials, compared to the first half, due to an adjustment phase.

[END]