

# Minutes of Investor Meeting (Presentation + Q&As)

February 12, 2020

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Attendees from the Mitsubishi Chemical Holdings Group:

(Mitsubishi Chemical Holdings Corporation <MCHC>)

President and Chief Executive Officer Hitoshi Ochi

Managing Corporate Executive Officer, CFO Hidefumi Date

Managing Corporate Executive Officer Yoshihiro Ikegawa

(Mitsubishi Chemical Corporation <MCC>)

President & CEO Masayuki Waga

(Mitsubishi Tanabe Pharma Corporation)

President & CEO Masayuki Mitsuka

(Life Science Institute, Inc.)

President & CEO Seiichi Kiso

(Taiyo Nippon Sanso Corporation)

President & CEO Yujiro Ichihara

(Mitsubishi Chemical Holdings Corporation)

Representative Senior Managing Corporate Executive Officer

Kazuyuki Ookubo

Managing Corporate Executive Officer

Larry Meixner

Managing Corporate Executive Officer

Ken Fujiwara

## <Presentation>

### President & CEO Ochi

Good afternoon, ladies and gentlemen. Thank you for coming to our analyst meeting despite the cold weather and your busy schedules. I am going to talk about our progress toward the medium-term management plan and our approach to the company's future.

#### P6 [1. Progress with Financial Goals: Operating Results]

Unfortunately, our projection for FY2019 core operating income is ¥210 billion. Given the current business conditions, we consider it is very difficult to achieve the FY2020 target. The job that has been given to us is to steadily build the basis for the next stage. The current situation resembles the *new normal* that China experienced in 2011 and 2012. At that time, China's annual GDP growth rate shrank from over 10% to less than 8%. With this, MMA's profit nosedived from around ¥45 billion to approximately ¥6 billion. This is very similar to the current situation, where our profit has declined from ¥100 billion to ¥20 to 30 billion. Our operating income at the time was about ¥90 billion, of which healthcare accounted for ¥75 billion and performance products slightly less than ¥20 billion. Petrochemicals posted a loss in magnitude of around ¥20 billion. The situation was very tough. Although we are similarly in a tough situation, the decline taking place in healthcare is offset by industrial gases. Performance products are realizing a profit of about ¥70

billion. MMA is also generating a profit of ¥20 to 30 billion. I think that the structural reforms and enhancement to business foundations that each business line has implemented are supporting the current profit level.

P7 [1. Progress with Financial Goals: Financial Indicators]

The data shows the difference between the FY2020 targets and the projections we have made for this term. Under the current conditions, we consider that the foundation is being created to generate a profit of ¥300-350 billion in total, of which industrial gases account for ¥90-100 billion, performance products account for ¥80-95 billion, chemicals account for ¥60-90 billion, and healthcare account for over ¥60 billion in the absence of a large-scale economic recession. The key points are how we improve our earnings power and how we reform our portfolio.

P8 [1. Progress with Financial Goals: Investment Plan Progress]

The data shows our recent actions in connection with the investment plan. These do not include investments and loans that we have made Mitsubishi Tanabe Pharma as our wholly owned subsidiary. It is evident that we are falling behind in terms of the expansion and improvement of performance products. Although other capital investments and R&D investments are progressing as planned, we need to enhance R&D expenses based on rigorous selection partly to create new investments. If we do not do this properly, we will not have the seeds for our future business. We want to fully utilize startups and venture capital.

P9 [1. Progress with Financial Goals: Increasing Capital Efficiency]

Our initial plan in asset efficiency was ¥500 billion worth. We have sold cross-shareholdings, approximately ¥120 billion. Going forward, we expect to raise the asset efficiency equivalent amount of nearly ¥700 billion in the final year of the medium-term management plan through various efforts.

P10 [1. Progress with Financial Goals: Shareholder Returns]

Making investments for growth and improving financial fundamentals are very important for shareholder return. We set the medium-term benchmark for the payout ratio at 30%, and hope to provide stable shareholder return based on the stage of our growth. We want to maintain a per-share dividend of ¥40 for this term. This makes the payout ratio for FY2019 70%, but the average payout ratio for 2017 to 2019 is 34%. We consider that we pay dividends while maintaining a payout ratio of 30% as per our policy.

P12 [2. Priority Management Measures: Priority Management Measures Under APTSIS20]

Of measures listed in the material, the important ones are the following: accelerate portfolio reform for performance products; expand and maintain global market share of MMA and industrial gases; and in healthcare, enhance pipelines and develop business in the U.S. and commercialize regenerative medicine. Other key management measures include synergies from the integration of three chemical

companies, global business development, prompt commercialization of R&D themes, and workstyle reforms. In addition, we must reinforce our foundation to cater to the changing society. For this purpose, we will proceed digitalization, R&D enhancement and HR system reforms.

P13 [2-1. Focus Market Growth Strategies]

Looking at the change in our focus markets, I think we are generally making smooth progresses despite the impact of business sales and fluctuations in materials prices.

In the mobility area, how to grow compound and carbon fiber businesses is becoming the key in our response to CASE and the environment issues. Regarding IT, electronics and displays, how we expand display-related products, which are our strength, and how we enhance new semiconductor-related business are important. The proposed action plan includes an enhancement to optical films, the acquisition of Cleanpart Group regarding semiconductors, and the commencement of film production to accommodate 5G in Indonesia, among others.

P14 [2-1. Action Plan Progress: Mobility]

With respect to carbon fibers, the left-bottom diagram shows C.P.C. SRL, which processes a sheet called SMC (sheet modeling compound). C.P.C. has installed five new pressing facilities, which are nearly at full operation, with sales growing very strongly. We have decided to build a platform for carbon fiber reinforced plastic (CFRP) here. We are working on this project together with the creation of necessary, new SMC facilities. There are also strong needs for prepreg. In addition to the existing operations in Japan and the U.S., we have acquired a business in Europe and are offering various materials.

P15 [2-1. Progress Action Plan Progress: IT, Electronics, Displays]

We will work on 5G adaptability for our display-related business. We have decided to invest approximately USD130 million in Indonesia to increase output by 25,000 tons a year. We expect this business to grow steadily. We believe that we can produce high-performance products using advanced technologies.

P16 [2-1. Focus Market Growth Strategies]

Regarding the environment and energy, we are steadily making progress in reducing environmental footprints through LiB materials, wastewater treatment, biodegradable plastics, and bioplastics.

We are slightly falling behind with respect to packaging. While high-performance barrier products are needed for films used for food packaging, we are finally building a Diamiron™ plant in Thailand and enhancing our production capacity of Soarnol™. Although we are somewhat falling behind, we consider that we will be able to supply products to satisfy required needs.

P17 [2-1. Action Plan Progress: Environment, Energy (1)]

We are making good progress in increasing the production of electrolytes in the U.S. and Japan. With respect to anode materials, the key point is to ensure that CO2 emissions are sufficiently reduced in a

battery's life cycle assessment. The question now is whether the performance of artificial black lead is good or not and we are therefore reviewing natural graphite-based anode materials. We are at a stage where we are submitting for assessment products that can enhance charging and discharging performance in spherical form and lengthen product life.

#### P18 [2-1. Action Plan Progress: Environment, Energy (2)]

We used to sell only 2,000 to 3,000 tons of biodegradable polymers a year, but sales volume has finally risen to around 9,000 tons. Our production capacity is approximately 20,000 tons a year, and needs to be increased. DURABIO™ is also growing steadily. It is employed by users such as Mazda and Suzuki. The key point is that it is environmentally friendly and the painting process can be avoided. We hope to increase DURABIO™ sales to Tier 1 companies as well.

#### P19 [2-1. Action Plan Progress: Packaging, Labels, Films]

Soarnol™, which is produced in the U.K., Japan and the U.S., has a strong gas barrier performance. We will enhance its production in the U.S. by 3,000 tons to meet required needs.

#### P20 [2-1. Focus Market Growth Strategies]

We are working steadily in medical, foods and bio markets. We are working on expanding implant materials, nutrition in China and other Asian countries, and medical-related business. We have acquired and are enhancing medical business with regard to gases used in home-based medical care. Supplying oxygen gas for aquafarming is growing as well.

In the area of healthcare, we are making steady progress toward enhancing pharmaceutical pipelines, the U.S. business, vaccine business and regenerative medicine business. As we have made Mitsubishi Tanabe Pharma our wholly owned subsidiary, we want to expand the business for aiming next-generation. I think we are performing well in this regard.

#### P21 [2-1. Action Plan Progress: Medical, Food and Bio Products]

Oxygen gas for aquaculture is mainly used for farming salmon in Norway. Raising the oxygen concentration will help encourage the growth of salmon in large aquaculture farms and improve water quality through the decomposition of leftover feed. We will increase sales on the back of the growing demand for consumable fish.

#### P22 [2-2. Healthcare Strategies: Making MTPC a Wholly Owned Subsidiary]

Although we currently have an arbitration issue with Gilenya, as we have made Mitsubishi Tanabe Pharma our wholly owned subsidiary, our first step is to take care of present issues and to maximize the value of our pipelines toward 2023 for recovering the original conditions. We will steadily work on developing oral RADICAVA™, new influenza vaccines, and drugs for Parkinson's disease using devices.

P23 [2-2. Healthcare Strategies: Generating Group Synergies]

We will work on development toward 2030 bearing in mind how we can enhance synergies using the abundant data of Mitsubishi Tanabe Pharma's advantageous areas like the central nervous system, immunity disorders and vaccines and digital technologies, and assess how we should develop gene therapy, nucleic acid, and antibody drugs. There are various synergies at hand. We plan to produce results within two years in the areas of the commercialization of Muse cells, development of the gene therapeutic business, collaboration in medical materials, rationalization of manufacturing, usage of special gas for oxygen, and administration sharing and streamlining.

P24 [2-2. Healthcare Strategies: Regenerative Medicine Progress: Muse Cells]

Clinical trials are progressing smoothly with Muse cells. Preparations are in full swing to file an application in FY2020 and obtain approval in FY2021.

P25 [2-2. Healthcare Strategies: Muse Cell Business Promotion]

We will use MCC's materials and Taiyo Nippon Sanso's cold chain in the manufacturing process. After market launch, we will use Mitsubishi Tanabe Pharma's marketing and sales personnel. We will accelerate this business going forward.

P26 [2-3. Measures for the Industrial Materials Domain]

We offer basic materials that are important for Japanese industries. It is therefore important that we raise our productivity and manufacture our products stably. We want to start the MMA project in the U.S. as soon as possible. We want to use digital technologies effectively for for-sale SCM. In the area of petrochemicals, we want to achieve optimization for the entire combine through the well-designed combination with oil refining. We were able to create a very strong position in industrial gases. We want to further evolve our business and establish a global structure.

P27 [2-3. Action Plan Progress: Fundamental Industrial Materials]

We have established a partnership with JXTG Nippon Oil & Energy Corporation to optimize materials, products and energy in Kashima, Ibaraki Prefecture. Another issue is recycling plastic waste. Although materials and chemicals recycling is being performed, the process is rather difficult. Thermal recycling is primarily used. We will jointly work on how to conduct chemical recycling.

P28 [2-3. Establishment of the Industrial Gas Major Position (1)]

The business we acquired in Europe is performing well with strong earnings power. It also has possessed a large market share. The hydrogen business in the U.S. is also doing well.

P29 [2-3. Establishment of the Industrial Gas Major Position (2)]

We want to fully utilize our successful experience of business acquisitions in Europe and the U.S. For

this purpose, we want to adopt a shareholding company structure. President & CEO Ichihara has recently explained this. We will divide our operations into four geographical areas. Five business companies including THERMOS will come under its umbrella. Under the shareholding company structure, we will enhance governance to pursue best practices and to strengthen our earnings power.

#### P30 [2-4. Driving Growth through Synergies]

We have demonstrated growth and synergy through the consolidation of three chemical companies. Against the ¥35 billion projected synergy in the businesses, the actual synergy totaled ¥20 billion by FY2019. We estimate that this figure will rise to around ¥26 billion in FY2020. The synergy effect of the consolidation is the creation of business, but this takes time. We may not see its completion until 2022, but we want to continue working steadily.

#### P31 [2-5. Reinforce Foundations: Rationalization, Including from Integrating Three Chemical Companies]

While the initial projection of the rationalization measures of including the three companies was ¥15 billion, we estimate that it will reach approximately ¥19 billion. We reduced the 164 group companies by FY2019, which is equivalent to a progress rate of 86%. Productivity improvement efforts and workstyle reforms are starting to have an impact, including the rationalization of personnel in the head office. In addition, we are working on improving safety as a new, very important theme, as part of the consolidation of the three companies and our efforts to improve productivity.

#### P32 [2-5. Reinforce Foundations: Progress with Business Structural Reforms]

As part of our portfolio reforms, we transferred or sold businesses worth approximately ¥240 billion by 2019. During FY2019, we transferred the business of LSI Medience Corporation and sold a recording media business. The number of our group companies declined by 164. In 2020, we plan to implement rationalization measures worth ¥300 billion, involving 190 companies.

#### P33 [2-5. Reinforce Foundations: Promote Safety Measures]

We place emphasis on safety. Safety issues not only cause human loss but also major production loss. We listed 257 operations with high risk regarding MCC operations. We plan to invest ¥5 billion to remove 136 operations in FY2019. We consider this to be very important.

#### P34 [2-5. Reinforce Foundations: Global Market Access]

This shows the status of globalization of our operations. Our plan is to raise the ratio of overseas business to 50%. The ratio of overseas sales is almost same as oversea profit ration. We want to achieve this plan. Our estimate in FY2019 is approximately 45%. For instance, MCC is facilitating cost reduction and the sharing of management and marketing methods in Europe and the U.S. as One MCC.

P35 [2-5. Reinforce Foundations: DX Initiatives]

One of the important items in infrastructure enhancement is digitalization. We established a digital team in 2017 and have worked on creating infrastructure for three years. I think we have now established a suitable structure. There are about 160 voluntarily suggested themes, and we want to move to Phase 2 where we will move to bigger themes. In Phase 2, we want to start growing our business by making full use of digital technologies and using data-based optimization methods such as improving productivity and developing and selling new products using materials informatics.

P36 [2-6. Initiatives for Creating New Businesses (1)]

Another key point is to enhance R&D and we need to enhance in-house R&D. We will rebuild our laboratory in Yokohama to reinforce open innovation. We will improve efficiency, taking advantage of digital and other various technologies. We will proceed modernization by restructuring old pharmaceutical bases and using open facilities in Shonan. In addition, we will consolidate the technological function of Kashima with Onoda to raise efficiency.

P37 [2-6. Initiatives for Creating New Businesses (2)]

We are accelerating our efforts to create new businesses.

P38 [2-6. Initiatives for Creating New Businesses: 1. Power Semiconductor Materials]

With the spread of EVs, the need for GaN substrates for power semiconductors and lasers will increase. We will offer GaN substrates without delay. We have a 4-inch product that is produced using the liquid phase growth method. We can produce it with a defect rate that is two digits less than commercially available products. We want to proceed the evaluation and increase production. In addition, Taiyo Nippon Sanso is developing a new technology to create it from gas. We are looking into whether we can make something new by combining this and MCC's technologies.

P39 [2-6. Initiatives for Creating New Businesses: 2 Next- Generation Display Materials]

With respect to display materials, the problems with organic light emitting display (OLED) include cost and quality. Without a black bank layer and so on, both clarity and quality are poor. We are making proposals while combining low molecular weight coating materials.

P40 [2-6. Initiatives for Creating New Businesses: Harness CVC to Create New Businesses]

Diamond Edge Ventures, which was established two years ago, is doing well. It evaluated more than 280 themes up to last year. There, we are introducing three themes: display-related materials, 3D printing methodologies, and a polymer manufacturing simulation system. They are enhancing R&D with the help of external parties. Progress is being made as scheduled in terms of how to achieve globalization, R&D, digitalization, and market strength.

P42 [3. KAITEKI Management Initiatives: Progress with MOS Activities]

We are working on and assessing those related to greenhouse gas (GHG) reductions, evolution in preventative medicine, and safety and comfort.

P43 [3. KAITEKI Management Initiatives: Participation in Initiatives]

As described above, we are participating in various initiatives. We have joined the alliance team studying how to express corporate value, and built a KAITEKI center with the University of Arizona to look into heat management in Tokyo as a test case. With respect to plastic waste, we are also participating in various alliances related to the circular economy.

P44 [3. KAITEKI Management Initiatives: Maintaining and Enhancing Corporate ESG Assessment]

We are receiving various evaluations from corporate ESG assessments.

P46 [4. KAITEKI Vision 30: Overview]

We began creating KAITEKI management in 2008. Companies should contribute to society through their business. Without generating various solutions, companies cannot contribute to society, nor can they achieve their own growth. As society is changing dramatically and facing various serious issues, it is difficult to develop a short-term strategy. We therefore wish to create a long-term basic policy, based on which we will prepare the next medium-term management plan, which is provisionally called APTSIS25. This is the background behind the preparation of KAITEKI Vision 30. We are witnessing waves of major reforms in areas ranging from the environment and society to the tightening of regulations. I think that we need to think about what we aspire to be in 2030 from the perspectives of the Earth, society and people, based on our ideas about the kind of society or company we should aspire to create.

P47 [4. KAITEKI Vision 30: Society in 2050→One that Has Resolved its Issues]

What kind of society do we want to have in 2050? It would probably be a carbon-neutral world, where resources circulate in an optimum manner. We consider that technologies support our efforts to create a society where water- and food-related problems are resolved, where people can work in good health, where cities are sustainable, and where all people are competent and satisfied with their life.

P48 [4. KAITEKI Vision 30: Social Issues that MCHC Group Should Help Resolve]

There are various risks in achieving social problems. SDGs have 169 targets. We began with approximately 300 items to quantitatively evaluate what kind of risks we have and how we should address them. Eventually, we concluded that our role was to properly address the six business categories indicated at the bottom of the figure and to minimize risks and maximize opportunities. It is people who will do these six business categories; we therefore also need to implement human resources management reforms.

P49 [4. KAITEKI Vision 30: Identifying Growth Businesses]

We have thought about what is really important among these businesses. We plan to research business categories that will grow, and include them in our portfolio in 2030.

P50 [4. KAITEKI Vision 30: Business Model Transformation]

These business categories will naturally change. There are traditional business categories as well as business categories that are incorporated into social systems. What is important is to think about how we develop them and create value. We will think and make them into *events*.

P51 [4. KAITEKI Vision 30: Business Portfolio for 2030]

These kinds of businesses fall into roughly six business categories. We are looking at each of them in detail and thinking about how to incorporate them.

P52 [4. KAITEKI Vision 30: Business Portfolio Transformation]

Currently, 25% of our business corresponds with these six business categories. We want to raise this ratio to over 70% by 2030, or, in terms of sales revenue, ¥6 trillion. Based on this vision, we want to prepare the next medium-term management plan in the fiscal year starting in April of 2021 and explain details including the Action Plan in the analyst meeting in next December.

P53 [4. KAITEKI Vision 30: Sustainability Management Measures]

Consisting of people who support various measures.

P54 [4. KAITEKI Vision 30: Human Resources System Reforms and Global Management]

In the world's trends, the key point of HR system reform is respect for individuals, flexibility and market value. I consider that we will need to fundamentally revise our HR system to include these points.

P55 [4. KAITEKI Vision 30: Changes in Structural Environment and 2050 Goals]

Our vision for 2050 can be summarized as the following four items. Offer solutions to society; maximize our corporate value; exercise sustainability management well; and achieve collaboration between humans, robots and AI. Based on these, our vision for 2030 is as follows.

P56 [4. KAITEKI Vision 30: 2030 Goals]

We want to create a new plan to achieve these items.

P57 [Society in 2050]

I want to see this kind of good city, good town and good society.

## [Q&As]

Q1

I consider that the large-scale M&A to make Mitsubishi Tanabe Pharma MCHC's wholly owned subsidiary is the first step that MCHC has taken to eliminate the situation where both the parent and subsidiary are listed on a stock market. At the same time, Taiyo Nippon Sanso (TNSC) is attracting the attention of the stock market. TNSC explained that according to the rules, MCHC can sell but cannot buy TNSC's shares. What is your thinking, including financial aspects? Also, can you tell us if you are targeting a performance product company such as those related to semiconductors for M&A?

A1 (President & CEO Ochi)

With respect to Mitsubishi Tanabe Pharma, the situation will be tough if it does not change from its present state. At the same time, the chemicals-side also needs to change. We also have to think about bio- or gene-based polymers or protein-based polymers. There are similarities between us in terms of technological development. Mitsubishi Tanabe Pharma also has to get into genes and so on. If we share technologies, we can do various things. We cannot survive if we only handle simple low molecular weight molecules. We are therefore thinking of creating new generations by introducing new technologies. For this purpose, we considered it important to delist from the stock market and increase the speed of development by injecting resources. This is why we made Mitsubishi Tanabe Pharma our wholly owned subsidiary.

Taiyo Nippon Sanso has been smoothly growing and creating stable income sources. What it needs to do now is to further increase earnings power. It probably needs to make investments in Asia and elsewhere, and to develop businesses in specialty areas. We consider it important to allocate resources for business growth rather than using them for making Taiyo Nippon Sanso our wholly owned subsidiary. On the question of our future M&As based on our balance sheet, while our debt-to-equity (D/E) ratio is certainly high, we need to carry out M&A to a certain extent. Specifically, we do not have a sufficient foundation regarding performance products. We are lagging behind in the M&A of performance products, so we want to strengthen this a little more. We have sold businesses worth approximately ¥300 billion so far, but we need to think about what more we should do.

Q2

What is the progress of the rollout of MMA in the U.S.? In the 3Q results, the profit of your company, which is the top maker of MMA, did not reach a billion yen. How do you plan to geographically allocate MMA? How are you going to implement structural reforms for less competitive plants? Can you also explain why the market price has been slowly declining for two years, including the aspect of supply and demand?

A2 (President & CEO Ochi)

The situation concerning MMA is similar to the *new normal*. MMA is a material that is widely used for general products, and once the market collapses, it collapses substantially. In the previous collapse, our profit dropped from ¥45 billion to ¥6 billion. But the market started to recover later. It depends on the economy. I think the market will move in conjunction with GDP growth.

A2 (President & CEO Waga)

The announcement of our plan concerning the U.S. has fallen behind schedule. It is taking time to select land. We need to choose a place where it is easy to procure ethylene, and also where we can ensure logistics such as the transport of modules and equipment, given the building environment in the U.S. We have no choice but to be cautious. We are reaching the final stage and hope to make an announcement in a few months time.

As for market price conditions, coronavirus is currently having an impact. Before that, the export of home appliances made in China to the U.S. was halted due to the U.S.-China issue, which blocked the exit for PMMA, whose consumption has been strong. As a result, the supply-demand environment did not improve. There were three occasions when I thought the market price had hit bottom, but to date the price has not recovered. However, even with the coronavirus issue, there are no signs of further market contraction, and movement is now progressing sideways at the bottom. We have already made necessary capital and repair investments at the existing plant in the U.S., and the same is true in the U.K. Although production is slightly reduced in the U.S. and the U.K. due to market conditions, our plants are in a condition where they can operate fully. We will operate the plant that is more advantageous depending on the materials market conditions, and hope to adjust supply and demand as needed.

Q3

Can you tell us what measures you are going to take to increase earnings for performance products? While I understand that the macro environment is severe, it seems that the expansion of new products has been slow excluding CLEARFIT™, electrolytes and sustainable resources. How are you going to expand the business while ensuring profitability from the next term onward with respect to businesses such as carbon fibers, display materials and high-performance engineering plastics?

A3 (President & CEO Waga)

We are extremely close to an exit with respect to GaN. Regarding negative-electrode materials, we are thinking of launching a new type based on natural black lead. As for display materials, we have hope for low-molecular ink for OLED and black materials using black column spacer technology. We are also pushing the commercialization of alcohol separation technology using zeolite film. A number of new buds are sprouting. Although we cannot expect to have a major hit product soon, we consider that we can utilize the technologies we have developed for areas such as black bank materials, 5G and low-molecular ink for OLED.

Q4

What is your approach to dividends? Although the payout ratio for this term is said to be 70%, you have said that the average for the last three years is 34% and that you will maintain a dividend of ¥40 to make stable dividend payments in the medium- and long-term. Although your plan is to strengthen finance and reduce the D/E ratio from 1.8 to 1, if the business environment does not change in the next term, will you accept a payout ratio that is much greater than 30%? Meanwhile, you will receive dividends from Taiyo Nippon Sanso and Mitsubishi Tanabe Pharma. So the amount of dividends the parent company itself has to pay will be around ¥30 billion. Without any liquidity risk, will you therefore maintain a dividend of ¥40? Can you please tell us your approach to dividends including your company's financial fundamentals?

A4 (CFO Date)

We have worked on making stable dividend payments to be able to confidently say at some point in the future when we look back that the average payout ratio was 30%. I think the gist of your question is what will we do if our financial results in the next term are as weak as this term. I think we will still maintain the ¥40 level. We expect that the problem with Gilenya will be resolved within two years. If you look at past trends, we are not afraid of having a payout ratio of 100%. While we need to pay sufficient attention to ratings, we want to stably pay dividends while taking into account our future as well as our past.

With regard to lowering the D/E ratio from 1.8 to 1, we are creating cash flow. Even in the third quarter when our earnings were weak, we had cash flow. Our plan to use cash flow to raise asset efficiency and to reduce the D/E ratio to 1 at an early stage has not changed since we announced in November that we had made Mitsubishi Tanabe Pharma our wholly owned subsidiary. Although the current earnings situation is deteriorating, we will not change our approach.

Q5

Although I think what you have written in KV30 makes sense, I wonder how you are going to generate profit? Solving problems will not create money. You will not make any profit unless customers recognize that your company has contributed to solving problems. In the economic development of humanity over the past 2,000 years, GDP per capita did not grow very much until around 1820. Around this time, a transformation occurred towards a society with increasing entropy; this is when humans became dramatically rich. I cannot imagine that we can return to such a transformation in the next 20 or 30 years. Can you please tell me what transformation you can make such that it will be possible for your company to make a profit?

A5 (Managing Corporate Executive Officer Ikegawa)

As you pointed out, we expect that there will be a paradigm shift in the economy. We are aware that quality will become increasingly important rather than single-mindedly increasing entropy. This is one of the backbones of the portfolio reforms proposed in KV30. At the same time, the world population will grow from 6 billion to 10 billion by 2050. Currently, 4 billion of the 6 billion live in urban cities. Most of the

population that represent the marginal increase from 6 billion to 10 billion will live in cities, especially in developing countries. We will therefore need services and materials that will allow that to happen. We believe that the healthcare system will also be upgraded. Unless we transform ourselves into a business that caters to these services, we cannot offer added value. To minimize this risk, we will implement business model reforms and an innovation-based upgrade of our business model under KV30.

On the question of how we will link that to profitability, the business categories earmarked as opportunities in KV30 have three backgrounds. The first is their potential for market growth. The second is the technological trend. We are selecting businesses based on how likely we can access technologies that will be completed by 2030. And the last is market launch. We consider when the market will be created and how big it will be. As average earnings, we want to maintain 10%. We are choosing these business categories thinking that we will be able to maintain this level of earnings. Toward this plan, we will have two more medium-term management plans in which we hope to prepare action programs. This profit margin of 10% will change with time. It will be high during the peak, but it will decline as market participants increase. We therefore set 10% as the average.

Q6

Looking at the current technological trend, I imagine that regenerative medicine and healthcare innovation will be achieved by 2030. If it is likely that Muse cells will succeed, will you roll them out overseas or form an alliance? Are you going to adopt the open innovation approach in your healthcare strategy in areas other than Muse cells?

A6 (President & CEO Kiso)

In terms of our overseas strategy, we are thinking of first expanding business in the U.S. The data should be ready by the middle of this year. We will then go and talk with the FDA (U.S. Food and Drug Administration). We have started looking into the development and approach in the U.S. involving consultants. We will make specific approaches once the data are available.

Q7

You generated ¥11 billion during 2016 and 2018 through synergy and growth. You seem to have added ¥9 billion in 2019. You are achieving this despite the difficult economic environment. Can you tell us in which of the six categories you are achieving this and how you are doing this?

A7 (Managing Corporate Executive Officer Ikegawa)

The ¥35 billion was initially broken down into ¥5 billion in materials, ¥10 billion in synergies in carbon fiber and aqua, and ¥20 billion in performance products. With respect to materials, the original target was ¥5 billion, but the result rose to ¥10 billion due to cross-regional energy collaboration and an increase in sales of high-performance carbon materials. ¥5 billion, which is half of the ¥9 billion growth from last year, is attributable to materials. As for performance products, it is difficult to achieve the original synergy target

by 2020 in carbon fiber and aqua. We want to achieve this target by 2022/2023 through the expansion of carbon fiber business to automobiles in Europe and through water treatment in aqua. The remaining ¥4 billion reflects the total of high-performance polymers and other performance products.

Q8

The margin for methyl methacrylate (MMA) was at the 1% mark in the last quarter. It was at the same level in the December quarter in 2015, and thereafter fluctuated between 1 to 30%. What is the profit margin range you envisage? Can you tell us structural changes that have happened in the last four years such as commencement of operations of the Saudi Methacrylates Company (SAMAC) and the emergence of Chinese makers?

A8 (President & CEO Waga)

We see that the average profit margin for MMA and polymethyl methacrylate (PMMA) altogether is about 15%. We are aiming to maintain a 40% world market share. With the announcement of our plan in the U.S., we will maintain a 40% share in the growing market. Although the profit margin has dropped to 1% at the moment, it was pushed down in the third quarter due to the suspension of plants in Saudi Arabia caused by a lack of feedstock and the U.S. caused by mechanical problem. While we used to follow the price that was announced in China, we cannot do so now, as we have the largest market share. We had planned to announce across-the-board price hikes after the Chinese New Year holidays, but we were forced to pass due to coronavirus. Given our large market share, we consider it our mission to try to stabilize the market if the price goes up or down excessively by fulfilling the function of adjusting supply and demand, although we do not intend to control the market as if we owned it. We could not exercise any control before and after the Chinese New Year holidays, as we did not expect this situation at all. As for structural changes, it is true that many Chinese makers are participating in the market. However, the technological superiority of our Alpha Technology is unchanged. The market condition of petrochemicals products changes based on the supply and demand of monomers and other products. In this situation, we can produce MMA monomers all over the world using three manufacturing methods. We can ensure our relative competitive advantage by raising the operation of the plants that supply MMA monomers as materials, which is the most advantageous business. Something we did not expect occurred when we started operation of SAMAC. When SAMAC's ship carrying large lots docked in China, this information was leaked, and when the ship arrived, the Chinese makers dropped the price. This happened repeatedly. Aware of this, we decided to transport large lots from SAMAC to Europe. For China, we transport smaller lots from Japan to stabilize the market.

Q 9

Will it take about three to five years to reduce the net D/E ratio to 1? If it is three years, it will be difficult to achieve this in an organic way. Are you going to accelerate asset sales and other measures under the next medium-term management plan as well?

A9 (CFO Date)

As you pointed out, it will be difficult to achieve in three years in an organic manner. It may take 3.5 years or so. If we are to acquire assets, we should consider replacing our portfolio. I think that we should finance acquisitions with asset sales proceeds. However, it is difficult to do both at once. Either may happen first. With our current ability to produce cash flow from operating activities, I think we can drop the ratio to 1 in just over three years if we maintain the current portfolio.

Managing Corporate Executive Officer Ikegawa is working on structural reforms that ¥300 billion on sales revenue basis or more. We constantly review our portfolio, and every year we identify for-sale candidates.

Q10

You said that your company will use M&A to enhance the foundation for performance products. In the past, you had some downstream businesses, even though they were small. Is there any change to this policy?

A10 (President & CEO Ochi)

With respect to performance products, our strengths lie in engineering plastics, displays and films. We want to strengthen materials such as those related to semiconductors. Instead of doing something expensive, we will find a business whose technology or materials we can roll out. In terms of size, rather than doing something large all at once, we will steadily take small steps. We have created an M&A team who are looking into a broad range of businesses, including venture capital, in its search for candidates. We are ready, but each action has to be negotiated, and there are counterparties to deal with.

Q11

Please tell us your approach to the carbon business. I understand that you aim to supply coke stably, but given the current situation in the iron and steel industry and the environment surrounding needle coke, is this a business that your company should focus its efforts on?

A11 (President & CEO Ochi)

The environment is changing dramatically. We expected it to a certain extent but did not imagine that the steel industry would come to this state. Things are moving fast. We are supplying coke to iron and steel makers in Japan and are acting based on the balance between our relationships with them and overseas. We want to think about what solutions we can find with a view to the future, while talking to our clients and with the market.

Q12

You said that good progress has been made in improving the balance sheet up to 2020. When you look at the next medium-term management plan, how much do you think you can achieve in comparison with

the ¥660 billion? I think you have done a lot in terms of reducing operating capital and cash and deposits.

A12 (CFO Date)

The introduction of the Corporate Governance Code served as a tail wind for our efforts to reduce relationship-based shareholding. We have also done a lot towards controlling cash and deposits introducing CMS in each base. On the question of whether we will be able to do this much in the next five years, we haven't managed the balance sheet that loosely. We want to think carefully and tighten the balance sheet a little more. With respect to asset sales, there is a scope for sales when we review our portfolio. The ¥100 billion sales we made between 2016 and 2019 included land sales. This will change to the sale of businesses.

Q13

With respect to the Management of Sustainability (MOS) Indices, improvement has been made in terms of sustainability. Health Indices have been weaker than expected, while Comfort Indices have declined. Will the Health Indices improve if Muse cells and others grow? I think Comfort Indices decline when any plant trouble occurs. There have been problems with regard to MMA and Mizushima this year. These seem to be challenges. What is your view? You have introduced MOS Indices ahead of others and provided explanations, but I think you are mistaking the S in ESG for "Social." Can you please align your perspective with ours in KV30?

A13 (Managing Corporate Executive Officer Ikegawa)

With respect to Healthcare Indices, it is becoming increasingly difficult to increase sales of ethical drugs due to factors such as the pharmaceutical price revision. In this situation, we are accelerating business development in the U.S. However, it is not progressing toward a net increase in sales as we wanted. I think Comfort products are growing steadily. Performance products tend to be influenced by market conditions. Taking this into account, I think the 8.8% rise in FY2018 was reasonable progress.

Our approach to the MOS Indices is that in the KAITEKI Report, we include various indices other than those stated here. Upon reflection, it might be difficult for readers to read them. Another thing is that from the viewpoint of ensuring sustainable management, we probably should make changes so that progress can be seen using the MOS Indices in 1, 2 and 3 on page 51 excluding KAITEKI factories. We want to work on reforming indices at the same time as preparing the medium-term management plan. Specifically, taking the "evolution of life cycle assessment (LCA) tools" as an example, society and users want the LCA of each product. We consider it important to show the completion of this kind of LCA using the MOS Indices. We want to think about this in the next year.

Q14

Can you explain your approach to CO2 emissions? Although MMA is a business with a high level of CO2 emissions, you are going to develop this. In addition, while Taiyo Nippon Sanso is a positive factor in

terms of stabilizing cash flow, it accounts for one-third of the MCHC Group's CO2 emissions. How are you going to reduce CO2 emissions in the medium- and long-term?

A14 (Managing Corporate Executive Officer Ikegawa)

Taiyo Nippon Sanso purchases 0.5% of the electricity sold in Japan in terms of volume. The CO2 emission factor for power generation has a direct and major impact on CO2 emissions. The CO2 emission factor for power generation is largely influenced by changes in the government's energy mix. Up until 2030, nuclear power plants are projected to produce around 20%. The government has not changed this. A major factor is what will happen to this in the future. If the energy mix shifts to power generated from nondepletable energy sources or if coal-fired power generation shifts to LNG, the CO2 emission factor for power generation will be reduced. This will in turn reduce CO2 emissions of Taiyo Nippon Sanso and MCC. As our independent effort, we are discussing in KV30 about our awareness of a problem concerning what we will do over ten years or so regarding coal-based boilers that are said to emit a great deal of CO2. We will develop specific action plans in the two medium-term management plans. As an approach that underlies this, we want to address this issue with awareness of carbon pricing and so on.

A14 (President & CEO Ochi)

What unit we use to consider the issue of CO2 is important. We must think about it in the unit of 'country.' We need to consider what CO2 policy each country has and its positioning. We cannot solve this problem by applying a uniform approach all over the world. With respect to MMA, we also need to think about its position in Saudi Arabia and determine what approach we will take as a life cycle in the context of Saudi Arabia. It is impossible for a single company to make changes. We must consider how we will reduce CO2 emissions as a social system and what we can do as part of this system. This is a big job for the government. In this context, we will consider what we can do. For instance, we can consider this issue as an entire city. In this case, we need to consider CO2 emissions and energy consumption in Tokyo and the efficiency of the entire city. It is not helpful if someone says that power companies are the only problem because they use coal. Those who use electricity are worse. We need to consider what consensus we should form as a social system. During the transition period of environmental measures, we will transfer the cost needed for environmental measures to product prices. The Japanese government is saying that the country will reduce GHG emissions by 26% by 2030. We will make efforts to transfer the increased cost to product prices. In Europe, they have taxonomy, and naturally, the increased cost will be transferred. We will consider this according to trends in society.

End