

**Mitsubishi Chemical Holdings Group**  
**Medium-Term Management Plan**  
***APTSIS 20***

**Investors Meeting**

**December 9, 2015**

The forward-looking statements are based largely on information available as of the date hereof, and are subject to risks and uncertainties that may be beyond company control. Actual results could differ largely due to numerous factors, including but not limited to the following: Group companies engage in businesses across many different fields, such as information and electronics, performance products, polymers and processed products, pharmaceuticals, carbon and inorganic products, and petrochemicals, and these businesses are subject to influences such as world demand, exchange rates, price and procurement volume of crude oil and naphtha, market price trends, speed in technology innovation, National Health Insurance price revisions, product liabilities, lawsuits, laws and regulations.

In attendance on company side:

**Mitsubishi Chemical Holdings Corporation  
(MCHC)**

Hitoshi Ochi

Representative Corporate Executive Officer,  
President and Chief Executive Officer

Kenkichi Kosakai

Representative Corporate Executive Officer,  
Senior Managing Corporate Executive Officer,  
Chief Financial Officer

Ryoji Tanaka

Managing Corporate Executive Officer

Noriyoshi Ohira

Representative Corporate Executive Officer,  
Senior Managing Corporate Executive Officer

**Mitsubishi Chemical Corporation (MCC)**

Hiroaki Ishizuka

Representative Director, Member of the Board,  
President and Chief Executive Officer

**Mitsubishi Tanabe Pharma Corporation  
(MTPC)**

Masayuki Mitsuka

President & Representative Director,  
Chief Executive Officer

**Mitsubishi Plastics, Inc. (MPI)**

Takumi Ubagai

Representative Member of the Board,  
President & Chief Executive Officer

**Life Science Institute, Inc. (LSII)**

Seiichi Kiso

Representative Director,  
Member of the Board, President

**Taiyo Nippon Sanso Corporation (TNSC)**

Tadashige Maruyama

Board of Director,  
Executive Vice President

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Today, we will outline our achievements in the final year of the *APTSIS 15* medium-term management plan and the remaining issues to be addressed in the next medium-term management plan *APTSIS 20*, which will start in April 2016.

**P5: Operating Results**

MCHC was established in 2005, and this year we marked a milestone with our 10th anniversary. Looking back at the years since the collapse of Lehman Brothers in 2008, we had taken a wide variety of measures in *APTSIS 10* with the aim of recovering from the deep recession. After that, we worked to strengthen our capabilities for growth and enabling us to leap ahead in *APTSIS 15*, which began in 2011. The key missions were to address difficulties in moving ahead with structural reforms — particularly the petrochemical business, which has been a difficult issue up to now, and to expand our businesses through M&A to create a solid foundation for growth. We believe we have made steady progress toward on those issues. Speaking of operating results, net sales

increased to about ¥4 trillion and operating income to about ¥25 billion with both figures reflecting generally steady growth despite a few ups and downs. We must continue our efforts.

#### **P6: Achievements of Principal Measures**

Achievements of *APTSIS 15* Step 1 and Step 2 are shown in the chart.

Looking at our structural reforms, we completed withdrawal from some businesses, which accounted for about ¥300 billion in net sales and about ¥17 billion in operating income. As part of our portfolio reform, we acquired Qualicaps, made Quadrant a wholly owned subsidiary, established LSII, and converted TNSC to a consolidated subsidiary, to expand the scope of our business.

#### **P7: Differences from Targets in Step 2**

The Performance Products domain showed tremendous growth, but not all growth businesses grew and some of them did not achieve their targets, particularly due to the large impact of the delay in securing stable earnings from next-generation growth businesses. Speaking of the Health Care domain, measures to promote use of generics and National Health Insurance (NHI) drug price revisions are undeniable factors behind the current severe business environment. Though we made several efforts to recover by generating license fee revenue from overseas, we fell about ¥20 billion short of our target. In the Industrial Materials domain, structural reform of the petrochemical business has made progress, but slack markets for PTA and MMA in North America dampened

the plan. The Industrial Materials domain achieved its target thanks to a ¥42 billion increase in income due to TNSC consolidation. Other segments include various targets to be achieved, showing ups and downs in results.

We project a shortfall of ¥32 billion from the operating income target of ¥280 billion for FY2015. On the other hand, capital expenditures are anticipated at ¥1,260 billion and R&D expenditures at ¥680 billion, which are in nearly line with our target. This was the result of building foundations by strengthening our existing businesses and investing in restructuring and reconstruction, as well as proactive capital expenditures in our next-generation growth business and growth business centered on the Performance Products domain and fortifying our revenue base through M&A. We believe this positions us for a strategic move in the future.

#### **P8: Overview of *APTSIS 15***

To summarize the above, items achieved and remaining issues to be addressed are shown in the chart. Among the items achieved, we worked especially hard to meet corporate governance codes. As an issue to be addressed, ROE is currently at the 6% level, which indicates that earnings will not be sufficient to drive significant growth of the company. Our overseas sales to net sales is 43%, but the ROS is less than 2%. Thus, increasing the profitability of our overseas businesses is a big issue. We are also experiencing delays in achieving profitability of the next-generation growth business. We need to exert group-wide synergy to take a major step forward. In the column "Efficiency," there are still

many unprofitable businesses remaining. Under “Strengthening Foundations,” we need to improve our global management system, which covers about 700 group companies, and strengthen our financial position.

#### **P9: APTSIS 20 Policies and Targets**

Now we will explain the next medium-term management plan.

#### **P10: Environmental Recognition**

As you know, the market economy is becoming more diverse and more global every day. ICT and AI will drastically be advanced over five years as technological innovation accelerates, which will have an impact on production systems. In the health/medicine field, medical costs are a major issue, so the nationwide system will be changed. We expect growth in support functions for regenerative medicine and remote medicine thanks to the introduction of ICT, and anticipate drastic changes in regenerative medicine. On the other hand, climate change and insufficiency of water resources in the Global Environment/Resources field will become a very serious issue.

#### **P11: Medium-term Management Plan, APTSIS 20: Outline**

We formulated the next medium-term management plan based on those factors. We called it *APTSIS 20*, and it covers the five years from FY2016 to FY2020. Our vision and decision criteria for corporate activities are the same as we have conventionally used. Increasing profitability is critical to achieving our aspirations

for 2020. In addition, we hope to achieve truly global recognition as THE KAITEKI COMPANY by pursuing innovation and contributing to sustainability.

#### **P12: Basic Policy**

Our basic policy is the flipside of the issues on page 8. We aim to increase our overseas earning rate, commercialize new energy businesses such as optoelectronics including lithium-ion battery materials and GaN, promote generation of synergies within the group, and enhance competitiveness by integration of three chemical operating companies, in addition to continuing a business portfolio management approach and enhancing sustainable growth and profitability. In terms of “Efficiency,” we will increase productivity and implement fundamental measures to address unprofitable and low-profit businesses in the MCHC Group. Under “Strengthening Foundations,” we will improve global management systems and strengthen our financial position in addition to thorough safety and compliance measures.

#### **P13: Numerical Targets for FY2020**

Numerical targets for FY2020 are as described. Though we wish to show them on an IFRS base, please allow us to show them on Japanese accounting standards (JGAAP) to provide a better comparison with our past targets. Our IFRS base core operating income target is ¥380.0 billion. Our assumptions include crude oil prices of \$50 for FY2016 - FY2017, and \$70 for FY2018 - FY2020, but of course this is uncertain. The US\$ exchange rate is assumed at ¥120, and

the euro rate at ¥140. The difference between the ¥380.0 billion IFRS base core operating income and JGAAP ¥340.0 billion is goodwill amortization and ¥13.0 billion of difference in the scope of consolidation, which is due mostly to MMA's Saudi Arabia-related factors and our Korean equity method company. Our ROS target is 8%, net income attributable to shareholders of the parent is ¥180.0 billion, ROE is 12%, and the net D/E ratio is 0.8.

#### **P14: Analysis of Contributory Factors in Increased Operating Income (FY2015 → FY2020)**

This is an analysis of contributory factors in our forecast of operating income for FY2015 and our FY2020 target. It shows “Contributory factors in the business environment” in red. This includes the impact of NHI drug price revisions, expanding generic drug use, and income from licensing fees, but excludes lump-sum revenue brought by royalties from products licensed out. Part of the pharmaceutical business and LSII's business that are categorized as “Organic growth” are actually included in “Contributory factors in the business environment.” Fixed cost reduction in the Health Care domain and rationalization of fixed costs and variable costs in the Performance Products and Industrial Materials domains are included in “Rationalization and cost reductions.” “Organic growth” will be ¥47.0 billion when LSII's business, as I mentioned, and ¥15.0 billion from other sources are added. “Organic growth” also includes expanded sales and others in the Performance Products and Industrial Materials

domains. Breaking down the ¥20.0 billion in “Effect of integration,” ¥15.0 billion is the integration in business, with ¥5.0 billion for rationalization and improvement of productivity. The ¥20.0 billion in “M&A” includes the M&A plans related to pharmaceutical products, LSII, industrial gas, and so on.

Thus, we project that operating income will increase to about ¥92.0 billion based on the figures above.

#### **P15: Earnings Structure for FY2020**

Operating income for FY 2010 reached a record high of ¥226.5 billion. It is projected at ¥248.0 billion for FY2015, and ¥340.0 billion for FY2020. We expect growth of MMA and industrial gas in the Industrial Materials domain, and expansion of pharmaceutical product-related and LSII's businesses in the Health Care domain. The Performance Products domain showed strong growth from FY2010 through FY2015, but we expect its most robust expansion as we approach FY2020. We will achieve a better balance of operating income in these three business domains.

#### **P16: Concept of ROE Management**

Aiming for sustainable improvement in corporate value, it is important to implement ROE management underpinned by business strategies and financial strategies as two wheels. We will implement our business strategies by carefully selecting prioritized investment in growth businesses. And we will develop other strategies such as “generating synergies,” “new energy business to achieve profitability at early

stage,” “improvement of management efficiency,” and “liquidation of unprofitable businesses.”

Then, we will streamline our balance sheet as part of our financial strategies. Our target is to increase profit margin on sales from 6% to 8%, and also increase total asset turnover. Achieving this will increase ROE from 6% to 10%. We plan to decrease our net D/E ratio from 1.1 times to 0.8, reflecting the high priority we place on strengthening our financial position.

#### **P17: Resource Allocation Policy**

We will allocate ¥1.0 trillion in investment for growth and ¥700.0 billion in R&D investment. In *APTSIS 15*, capital expenditures totaled about ¥800.0 billion, strategic investment about ¥500.0 billion, and R&D investment about ¥700 billion. In *APTSIS 20*, we will increase capital expenditures now that TNSC has become a consolidated subsidiary. We have also decided to increase resource allocation in the Performance Products domain compared to *APTSIS 15*. This includes about ¥50.0 billion that will be used for M&A to expand business and acquire technologies. In the Industrial Materials domain, we will pursue M&A and industrial gas related investment and loans. Capital expenditures for the Health Care domain will not be large. We will invest ¥200.0 billion in pharmaceuticals to establish the business foundation in the U.S. This includes LSII's healthcare and medical ICT-related investment and loans. We anticipate about ¥300.0 billion investment in Health Care this time. Basically, we will strengthen Performance Products and Health Care domains. Our R&D investment remains unchanged at conventional

levels. Our investment allocations are as shown on this page.

#### **P18: Financial Strategy**

We will work to improve corporate value while maintaining an appropriate balance between “investment for growth,” “enhancement of shareholder return,” “strengthening our financial position,” and paying close attention to our cash flow. We project a cumulative five-year total operating cash flow of ¥1.9 trillion. Depreciation and amortization are ¥1.0 trillion. We plan to allocate ¥200.0 billion from one-third of net income and ¥300.0 billion by asset compression such as reduction of policy stockholdings and shrinking of the current account balance. So we plan to cover our investment cash flow with ¥1.5 trillion in total. We will reduce liabilities and provide a return to shareholders by using two-thirds of net income. We plan to reduce net interest-bearing debt from ¥1.2 trillion to ¥1.1 trillion, increase shareholders' equity ratio from 24% to 30%, and decrease net D/E ratio from 1.2 times to 0.8.

#### **P19: Shareholder Returns**

We will regard 30% as our consolidated dividend payout ratio benchmark, taking the medium-term profit level into account. This will basically remain unchanged even after we switch to IFRS-based financial statements. That means shareholder return will be increased.

#### **P20: Principal Measures**

Now I will explain our principal measures.

### **P21: Integration of Three Chemical Operating Companies**

Three chemical operating companies—MCC, MPI, and MRC – will be integrated through a merger, with MRC as the merging company, effective April 1, 2017. We will maximize the three companies' management resources, generate synergies, and spur innovation. We will take a detailed approach to rebuilding their business portfolios, in addition to clarifying the direction of each business. We will also strengthen cost competitiveness through rationalization and build up the global operations framework with portfolio transformation and implementation of growth strategies.

### **P22: Outline of New Integrated Company**

MCHC will continue to manage the Group using a holding company system. It is important for the new integrated company to create synergies and innovation, and to encourage that, we are planning to have seven units in the Performance Products domain and three in the Industrial Materials domain.

### **P23: Business Portfolio Management**

We will develop our business portfolio with an eye toward high growth and high profits. The basic concept follows the previous four-quadrant model, but we made some slight revisions to the names. We are basically positioning return on invested capital (ROIC) as capital efficiency, sales growth ratio as growth, and return on sales (ROS) as profitability.

### **P24: Business Portfolio (FY2017-)**

The business portfolio will be composed of 10 units as mentioned on page 22, and 13 units including ethical pharmaceuticals, life science, and industrial gases. Growth businesses include high-performance polymers, high-performance chemicals, high-performance films, environment and living solutions, advanced moldings and composites, new energy (lithium-ion battery materials, optoelectronics materials (including GaN related materials)), ethical pharmaceuticals, and life science (healthcare and medical ICT). Cash-generating businesses include electronics and displays, petrochemicals, carbon products, MMA, industrial gases, and life science (drug discovery solutions). Businesses to be restructured include unprofitable and low-profit businesses such as PTA. We will clearly show and implement the policy for PTA in FY2016. Next-generation businesses include healthcare solutions, bio solutions, gas solutions, new energy and frontier materials, and solutions integrating big data and ICT.

### **P25: Next-Generation Businesses**

Next-generation businesses are positioned as incubation businesses instrumental to growth in 2020-2025. We will occasionally change details. Healthcare solutions include diagnostic support systems, which support regenerative medicine and healthcare and medical ICT, and plant-derived vaccines. Bio solutions include functional vegetables using plant factories, growth factors, which are used for regenerative medicine, plant-derived monomers and polymers, and effective usage of enterobacterium. We plan

to include CO<sub>2</sub> enriched water systems, cryopreservation-related technologies, hydrogen stations, medical applications of gases, stable isotope pharmaceuticals, and gas/liquid separation materials in gas solutions. New energy and frontier materials include organic photovoltaic materials, a market that has not yet matured, and silicon-related materials. We will make optimum use of solutions integrating big data and ICT for R&D, manufacturing, and supply chains.

#### **P26: Global Development**

We must increase our overseas earning capability as part of our global development. In Asia, we will establish a marketing center and regional headquarters to enhance operations for growing fields such as automobiles, packaging, medical, and environment and living, using existing performance products. We will launch more high-performance products in Europe and the U.S., specifically, medical products, aircraft parts, automobile-related products, and pharmaceutical products. We aim to increase our percentage of overseas sales from the current 43% to over 50%.

#### **P27: MCHC Group Business Strategies**

I will introduce the details of each business by focusing on key points.

#### **P28: Performance Products: Policy and Earnings Targets**

Growth through innovation is essential for the Performance Products domain. Hence we will enhance synergies and integration. We can

achieve new growth for smoother innovation and more seamless joint business development by restructuring our strategic business units (SBUs) into seven units. We are allocating ¥390.0 billion for investments and ¥170.0 billion for R&D expenditures. Key strategies are: "Expand our high-performance, high-value-added products business and solutions business," "Accelerate global development," "Strengthen innovation by integration of three chemical operating companies," and "Achieve profitability of new energy businesses as quickly as possible." We increased our operating income target significantly, from ¥70.0 billion to ¥120.0 billion.

#### **P28: Performance Products: High-Performance Polymers**

Performance polymers have been a growth market, and we have expanded the business through a proactive M&A approach. We will also make aggressive investments in emerging markets, particularly Russia, the Middle East, India, and South America, to expand the business. We aim to increase net sales by 50%, led by medical use and precision parts, cooperating closely with customers to develop world-leading products. We have reduced costs for polycarbonate (PC), but the market is changing. We will accelerate development of new materials by changing the design of monomer structures and exploring new fields of automobiles, home electric appliances, foods, and medical care. We will also develop high-performance resin compounds that utilize melting method PC to expand the business. We have developed applications for ISP material in



automobiles and smart phones while leveraging the optical properties. We will expand the businesses and pioneer new markets by developing new functions such as moisture/heat resistance.

**P30: Performance Products:  
High-Performance Chemicals**

We will enhance product development and sales capabilities by integrating R&D and sales, while working to expand our business. We will also develop new fields for our film business and advanced moldings and compounds. We will expand our coating business to increase sales of vessel and automotive paint solvents in Asia, and develop environment-friendly emulsion-based coating materials. We plan to develop new materials for automotive and electronics applications through integration of each company's UV-curing resin technology. In food ingredients, we recently concluded a purchase agreement to acquire all shares of Eizai Food & Chemical Co., Ltd. Through this agreement, we will expand our emulsifier and antioxidant businesses for home-meal replacement.

**P31: Performance Products: Electronics and Displays**

The key to success in electronics and displays is how swiftly we can respond to market movements and how well we can differentiate our products. We will work closely with subsidiaries to develop synergies. In PET film, our goal is to firmly secure our position in the Chinese market. We aim to expand our market

share with total solutions from processing to products. We will also work to increase production of optical PVOH film, *OPL film* and time it properly to meet rising demand.

**P32: Performance Products:  
High-Performance Films**

In high-performance films, markets for food packaging and so on are expanding in Asia, and we intend to capitalize on this trend with expanded sales of *Diamiron*. In Japan, needs for barrier film are burgeoning, so we aim to increase production and expand sales for medical use. We have launched a new polyester film production line in the U.S., a move to advance our development of high-performance products. In Europe, we are working to expand medical and other markets using existing facilities.

**P33: Performance Products: Environment and Living Solutions**

The key point for environment and living solutions is integration of ion-exchange resins, membranes, flocculants, and so on in aqua and separation solutions, to advance our design and service functions. We will create new solutions while making full use of MCC's activated sludge system and analysis technologies. In particular, we aim to develop markets such as agriculture, pig farming, foods, and medical care.

**P34: Performance Products: Advanced Moldings and Composites**

We focused on advanced moldings and composites even in *APTSIS 15*. We have

expanded our high-performance engineering plastic business into the aircraft and medical fields. Quadrant has expanded sales of their products in emerging markets, Europe, and the U.S., and we aim to achieve even higher growth. We will make effective use of Quadrant sales channels and sites to market carbon fiber and composite materials, aiming to build a predominant position in that market, while accelerating marketing and sales of Prepreg Compression Molding (PCM) and Sheet Molding Compound (SMC) in Japan and Europe. Accordingly, we plan to increase production in Japan, the U.S., and Europe, aiming for net sales of ¥100.0 billion or higher for carbon fiber and composite materials.

#### **P35: Performance Products: New Energy**

We focus on large-scale and high-end applications in lithium-ion battery materials, aiming to secure 40% of the electrolyte market and 20% of anode materials to ensure the growth of the business. We aim to expand our optoelectronics materials business through new development and application of phosphors, and expand sales in China and other markets. We intend to achieve stable profitability starting in FY2017, while striving to improve the productivity of C-plane and M-plane GaN substrates. Market exploration is important for OPV. We will forge ahead under close collaborative ties with 3M Japan Limited.

#### **P36: Industrial Materials: Policies and Earnings Targets**

We are planning investments of ¥580.0 billion

on petrochemicals, carbon products, MMA, and industrial gases. We aim to ensure more stable earnings by strengthening our cost competitiveness. We will take a proactive stance in developing overseas businesses in MMA, PP compounds, and industrial gases.

#### **P37: Industrial Materials: Petrochemicals**

Our cracker structural reforms will be completed with the unification of naphtha crackers in Mizushima in April 2016. We will build a supply system that is optimized and appropriate to the scale of domestic demand. And we continue to produce high value-added products to secure profitability. We will organize a system that can smoothly, efficiently generate stable earnings.

#### **P38: Industrial Materials: MMA**

Our plant in Saudi Arabia will start operation in mid-2017. We are working with The Dow Chemical Company to finalize the construction schedule of a plant in the U.S. using shale gas, with the project slated to break ground in 2018 and be completed in 2020.

#### **P39: Industrial Materials: Carbon Products/Industrial Gases**

Coke oven batteries are highly susceptible to damage, but we will secure earnings by maintaining sales to overseas steel makers while following a timely, deliberate plan for repairing them. We will promote the growth of our industrial gas business while proactively investing in Asia, North America, Australia, and other countries, and while developing new

products.

#### **P40: Health Care: Policy and Earnings**

##### **Targets**

We will maximize product potential in new drugs and priority products by strengthening value development and sales in the Health Care domain, despite a severe climate in Japan's domestic market, exemplified by a policy to promote generic drugs and the NIH's move to revise drug prices. Development of overseas markets is also indispensable. At the same time, we will work to advance our position in the medical care field and expand our healthcare support business. To achieve those aims, we are planning investments of ¥460.0 billion and R&D of ¥440.0 billion.

#### **P41: Health Care: Ethical Pharmaceuticals**

We will accelerate our efforts to create new drugs that can be deployed worldwide by investing ¥400.0 billion in R&D, and cope with the expiration of drug patents in the future. Conditions in Japan's domestic market are severe, but we will maintain domestic sales of ¥300.0 billion by strengthening value development and sales, especially in new drugs and priority products. We are considering the launch of a business foundation in the U.S. with investment of ¥200.0 billion. We will build a product lineup with *Radicut* for the treatment of amyotrophic lateral sclerosis (ALS) as the first step to win approval for sales in the U.S., with the goal of increasing net sales in the U.S. to around ¥80.0 billion.

#### **P42: Health Care: Life Science**

We are planning to leverage our clinical testing, diagnostic, health care, and medical checkup businesses, etc. to establish a foundation for healthcare and medical ICT. In drug discovery solutions, we will expand the supply system of Qualicaps capsule business in Asia and other regions.

#### **P43: Toward Enhancing KAITEKI Value**

##### **P44: Materiality Assessment**

##### **P45: Progress of Sustainability (MOS)**

##### **P46: APTSIS 20 MOS Indices**

##### **P47: Direction of MOS and Numerical Targets**

##### **P48: Direction of MOT**

#### **P49: Enhancement of Corporate Value through KAITEKI Management**

We will continue working to increase *KAITEKI* value as a non-financial related issue. We changed our Materiality Assessment, Management of Sustainability (MOS) Indices, numerical targets, and the direction of Management of Technology (MOT). We aim to forge ahead with *KAITEKI* management on a global scale.

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#### **Q&A Session**

##### **Q1**

I think your management policies are now based on segment needs. We would think the objective in integrating the three companies was to achieve synergy, rationalize operations, and

reduced costs. Could you tell us the time axis for your plans?

**A1**

In the current medium-term management plan, we divided operations into some 60 SBUs with plans to grow each, but found that there were limitations to achievable growth. We integrated so that each SBU could use the technologies, markets, and sales channels of others for growth. The integration will take place on April 1, 2017, and we foresee many different effects. As we have explained heretofore, carbon fiber and composite materials will be able to use Quadrant's sales channels, etc., and being in the same business unit will enable effective movement. Further, in the performance chemicals, MRC's UV curable resins and resins made from organic processes are sold for use in coatings or construction materials, but MCC also produces UV curable resins as well as olefin-based emulsions. In addition, Nippon Synthetic Chemical Industry produces and markets UV curable resins, adhesive resins, and vinyl acetate emulsions, and these are sold for use in UV inks, materials for adhesive sheets, automotive-use, and textile treatment agents, etc. Of course, there is no need to wait until April 2017. Even though the company organizations form walls, we can still move ahead in each business unit. As operation of the aqua and separator solutions and the water treatment and services moved to Osaki, we intend to move operational functions all to one place. And with water treatment and services, we also envision future synergy in ion-exchange resins. We have materials and additives for display and film

operations, and plan to do development work in these fields.

Of the ¥20.0 billion we foresee as a result of merger integration, synergy will account for about ¥15.0 billion, some ¥10.0 billion of which we already estimated to secure. You may think that an additional ¥5.0 billion is low, but we must work to expand as we innovate.

The remaining ¥5.0 billion of the estimated integration result of ¥20.0 billion will be achieved through rationalization, coupled with improved productivity. Overlapping functions will be optimized through integration. And, where improved productivity is concerned, each company has its own way of operations and its own systems, which will all be changed when the three companies are integrated, thereby improving productivity. The IT systems are different, so the ways for budget control, monthly management, and the company managers' management approach are different. Some can be changed quickly, others will take time, but all the systems should be unitized in three-to-four years. Allocation of personnel that became uneven when productivity improvements were made will be adjusted so that the right people are placed in the right jobs, and best use can be made of the results. We must train people who use ICT, too. Of course we must think carefully when implementing rationalization measures in the areas of production operations and R&D. In some cases, too much data causes reduced efficiency. Personnel will be necessary to accomplish the reforms. We will improve productivity in R&D, but it will take three-to-five years.

**Q2**

We understand that profitability of Performance Products in FY2020, compared to FY2015, will be considerably improved, but could you tell us which business will contribute most to that improvement?

**A2**

All six business units, including lithium-ion battery materials in growth businesses, will improve significantly.

**Q3**

About the forecast of ¥250.0 billion in operating income for FY2015, how many billions of deficits are expected from unprofitable businesses, and how much is the profit from the profitable ones? Further, when do you expect the unprofitable businesses to break even?

**A3**

PTA shows poor performance, but that part is incorporated, and efforts are under way to rationalize and reduce costs there.

**Q4**

Is the cost synergy of integrating the three companies included in "Rationalization and Cost Reduction"?

**A4**

No. That is included in "Effect of Integration."

**Q5**

The Performance Products domain has significantly grown in the past five years, but you plan to grow the domain even further. Is it that you see something attractive in the trends of

polyester film demand and supply, or in lithium-ion battery materials, two fields that seem highly competitive, and if so, could you explain a little more about this?

**A5**

It seems prices of PET film for the electronics and displays unit will fall, even though demand may increase somewhat. We aim to maintain profits by covering the entire range from materials through products. Production of PET film for the high-performance film unit is increasing in the U.S., and production of high-performance products is increasing in Europe, and we think it will expand here as well.

And with lithium-ion battery materials, we are taking considerable care in setting our strategies. We have built excellent relationships with our customers, so we are confident of increased performance even though competition is fierce. Our target in lithium-ion battery materials is a 40% share of the electrolytes market and a 20% market share of anode materials, but this concerns the automotive market. However, we frankly don't have enough power in the consumer market. In principle, automobile manufacturers prefer local procurement. We are aiming to establish tetrapolar global coverage for our electrolytes and anode materials, and we have connections to local automakers and battery makers in each area.

Currently, we own a 40% share of electrolytes and a 20% share of anode materials. The year 2013 is considered the starting year for electric vehicles such as plug-in hybrid electric vehicles, but it has taken two or three years to

see movement in the market. As technological and marketing capabilities reached similar levels in 2015, we were able to turn a profit.

Automakers look for long-life batteries and high density. The batteries we supply to an automaker are 24kw, but they are looking for 30-40kw of power, and with our speedy development capabilities, we are able to meet those needs. From FY2016, in *APTSIS 20*, we will do even better. And we think we can accomplish that.

**Q6**

MMA has a loose supply-demand balance, and the spread is low, so could you tell us your thinking about reducing capacity within the Group? Further, what restructuring is likely to happen, and do you expect contributions from Saudi Arabia?

**A6**

On MMA, its competitiveness in the ACH process is weak. Prices for acetone fluctuate, which means MMA has a very tough time, as do operations in the U.S. and Europe. We hear rumors of other companies planning to sell their businesses, but we are hanging on in China. In addition, we are very competitive in MMA production processes such as the C4 process and Alpha technology, and will launch our plant applying these processes in Saudi Arabia in 2017. On the other hand, Sumitomo Chemical Co., Ltd. also plans to produce MMA in Saudi Arabia, so the situation will be even more severe. We have a weakness in the ACH process in the U.S. and the U.K., but we will offset that by utilizing Saudi Arabia while coordinating production as necessary. We are also planning

to launch a new MMA project using Alpha technology in the U.S., so we'll consider the optimum balance in the U.S. and Europe. For a balance in Asia, we will match operations to demand. As the Otake Plant's output can be easily adjusted, we will use it to make the necessary changes. We think that Saudi Arabia will make significant contributions to profits. We think this is close to the amount of difference in the scope of consolidation (+¥13.0 billion) as explained on page 13.

**Q7**

Could you tell us more about the "decision" on PTA? Are you planning to move in the direction of withdrawal?

**A7**

It's difficult to speak about details. The statement is "We will take clear and decisive action in FY2016." We can't say more than that.

**Q8**

If we just add up the numbers, the integration of three chemical companies will result in net sales of ¥3 trillion and operating income of ¥ 75.0 billion, and an operating profit margin of 2.5%, but could you tell us what level of profits you will achieve after considering integration and synergy? And please tell us what the time axis will be?

**A8**

We think our net sales after the integration will be in the ¥3.0-3.3 trillion range. There is still a concern about PTA, so we cannot project precisely. The target of operating income will increase on an IFRS basis. The Performance

Products and MMA move toward increased profits. Rationalization of the petrochemicals is in progress, and stopping crackers should generate several billion. Thus, rationalization and cost reduction should help to the tune of over ¥50.0 billion. Our firm projections at the moment show ¥15.0 billion in synergy effect as part of the ¥20.0 billion integration effect and ¥5.0 billion from improved productivity. Of the ¥15.0 billion in synergy effect, about ¥10.0 billion will come from carbon fiber and composite materials, performance chemicals, and aqua solutions. We imagine that the integration will have even greater effects. The increase in sales volume expected from the integration is included in the organic growth.

**Q9**

The target of net income attributable to Shareholders of the parent under Japanese standards is ¥150.0 billion, but could you tell us what extraordinary losses might occur? Have you dissolved any large unprofitable projects?

**A9**

We hope to increase the speed of reorganization and restructuring. There is no plan for a large extraordinary loss in FY2020. Still, there will be a necessity for a certain degree of scrap-and-build, which means, we think that each year will see extraordinary losses of some ¥10.0 billion over the last three years.

**Q10**

Most of the investments in *APTSIS 20* are for the life science field. On the other hand, net sales and operating income in that field do not

show significant growth. Please explain if this is positioned as an investment for the future? And how do you position pharmaceuticals within the MCHC Group?

**A10**

We position incubation businesses as “next-generation businesses,” but that does not mean we will invest billions of yen. We don’t mean to reduce investment in fields other than the Health Care domain. We will make investments to build a foundation for growth and get us ready to take leaps ahead.

Investments of ¥500.0 billion in *APTSIS 15* were for making TNSC, Quadrant, and Qualicaps consolidated subsidiaries, but now we will make strategic investments (such as M&A) of ¥200.0 billion in the pharmaceutical business. This means we will get back the profits we failed to gain because we didn’t pay enough attention to the development of overseas business. We must rebuild our overseas business and have no choice but to make investments in the future. We are still considering an investment of ¥100.0 billion in LSII. We have to establish a more definite business framework. The details may change.

Positioning of the pharmaceutical business is very important. The pharmaceutical business network is critical in conducting regenerative medicine, health care and medical ICT businesses. We can engage in fields like regenerative medicine because we have a strong foundation in the pharmaceutical business, with a network of hospitals and other various sources. We position this as part of our plan for an overall healthcare strategy, not

pharmaceuticals alone.

Operating income for investments is low, but investments for the next five years will get us ready for great advances starting in 2020. MTPC created two block buster products — *Gilenya* and *Invokana* – which are distributed to global markets. But it stays in acquisition of running royalties, which means, we cannot have business experiences in the U.S. market. We aim to change our profit models so we can take risks and reap benefits in specialty areas where we don't need a big sales organization. We aim to build a foundation for about ¥800.0 billion in net sales in the U.S., while creating some pipelines in addition to our domestic business. We are looking to build an organizational structure that can increase profits within the company in Japan and the U.S. We estimate depreciation over five years through corporate acquisition and product acquisition, which will not lead to a big increase in operating income. But we will achieve great success through this investment in 2020 and beyond. We set ¥400.0 billion as our total R&D expenditure for five years from FY2016, and will increase it by ¥10.0 billion every year, compared to ¥350.0 billion for the past five years. Our target is to create 10 late-development products over five years, leading to product introductions in Japan and the U.S. This is our great ambition after 2020. MTPC raised its consolidated dividend payout ratio target to 50% during the past five years, but we aim to turn the rest toward reinvestment for future growth.

#### **Q11**

Please tell us if you use Japanese financial standards for both of the net income targets in the petrochemical business: ¥970.0 billion and ¥1 trillion. Also, please explain what increased in the business.

#### **A11**

The net sales plan is based on Japanese financial standards. The unit includes the current divisions: the Basic Petrochemicals Division (olefin and polyolefin) and the Chemical Derivative Division. FY2015-based net sales of PTA are included in *APTSIS 20*, putting us at the break-even point for profitability. We are planning various alternatives as drastic measures to the PTA issue. The floor pricing system is prevalent in Indonesia, and rationalization is in progress. We expect to return to profitability on an operating income basis by FY2017. We will rationalize Samnam Petrochemical Co., Ltd. in Korea, which is a joint venture with Samyang Holdings Corporation (the former Samyang Corporation), GS Caltex Corporation, and Mitsubishi Chemical, while increasing sales, aiming to reach profitability. Turning to our rationalization in India and China, we have implemented the moves we promised, such as electric power purchasing, fuel conversion, and anti-dumping. But we have not resolved the issue of India's basic import customs duty. Unfortunately, the market continues to show huge fluctuations due to overcapacity of facilities. We will take appropriate action while carefully reviewing our forecast for the supply-demand balance in 2016.

Looking at polyolefin, the polypropylene



compound business is included in the petrochemicals business unit. We aim to take a proactive stance in expanding the business into new markets, while developing it globally.

In the field of derivatives, our ethylene carbonate, ethylene oxide, and other ethylene derivatives are competitive because of their higher quality, and we aim to further enhance that competitiveness.

We think a ¥30.0 billion increase in earnings is appropriate, considering the contribution of the polypropylene compound business and high-performance derivatives. However, this may change depending on how decide to approach PTA.

**Q12**

The number of employees on a consolidated basis is 68,000. How will that change in 2020? And can you break it down by three fields?

**A12**

We think the number of employees will be the same. Systems in manufacturing facilities may change somewhat due to advances in IT. Some employees may be transferred from operations to other departments. But we don't plan a drastic reduction in personnel. We will increase the number of employees on a small scale according to expanding carbon fiber production. Looking at the proportion of employees in the three fields, the numbers are high in the Performance Products and Industrial Materials domains, and low in the Health Care domain.

**Q13**

Total operating income of all companies will

increase by ¥92.0 billion for five years in *APTSIS 20*, which means it will be ¥18.0 billion annually. Will operating income increase uniformly? Or, will it increase during the first half and remain unchanged during the second half, or vice versa. How do you picture it?

**A13**

In FY2015, we had impacts such as lump-sum royalty revenues from products licensed out overseas in the pharmaceutical business and a good market spread in the Industrial Materials domain. We expect operating income to remain mostly firm in FY2016, and to grow almost evenly after that.

**Q14**

We want to make sure that large extraordinary losses will occur only during the first two years of the new plan. Did you plan to write off all the losses in *APTSIS 15*? Please tell us if you have projects that will account for around ¥30.0 billion to ¥50.0 billion in extraordinary losses in FY2016 and FY2017.

**A14**

We will accelerate restructuring, but we cannot make decisions on everything by ourselves. If we write off all extraordinary losses, we presume that the losses will continue to occur on a level of over ¥10.0 billion in the last three years in *APTSIS 20*. We project that ¥15.0 billion a year in extraordinary losses will occur steadily, which means a total of ¥75.0 billion by multiplying ¥15.0 billion by five years. We already include the unification of naphtha crackers in Mizushima in the extraordinary losses. As top management, we make every

effort to prevent the generation of extraordinary losses.

**Q15**

You set a dividend payout ratio of 30% as a guideline. Will you raise it gradually? Do you think you will reach that level sooner? Is there a risk that dividend payments will be reduced?

**A15**

Our policy is to maintain a dividend payout ratio of 30%. We have implemented the policy, and will continue it in the future. On an IFRS basis, profits will increase slightly, but we will stick to our policy of a 30% dividend payout ratio. At some point we intend to increase the ratio as profits increase in the future, but we think we have to start the plan first and show our strength. There are uncertainties in the economy, but we have implemented measures to address them. Our business risks, which vary depending on economic uncertainties, are becoming much smaller, and we will seek to maintain a dividend payout ratio of 30% on average.