

Mitsubishi Chemical Holdings Corporation

THE KAITEKI COMPANY



KAITEKI REPORT 2016
Integrated Report

The Mitsubishi Chemical Holdings Group provides products and services based on chemistry that contribute to the sustainable development for people, society and the Earth in the three domains of Performance Products, Industrial Materials and Health Care.

Organizational Structure (As of March 31, 2016)

Mitsubishi Chemical Holdings
Corporation (MCC)

Mitsubishi Chemical Holdings
Corporation (MCC)

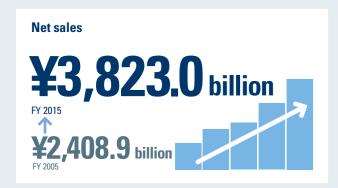
Mitsubishi Chemical Corporation (MCC)

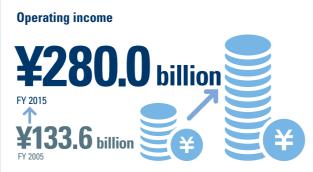
Mitsubishi Tanabe Pharma Corporation (MTPC)

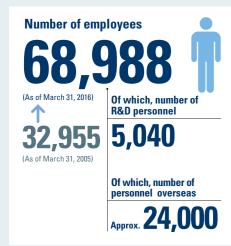
Mitsubishi Plastics, Inc. (MPI)

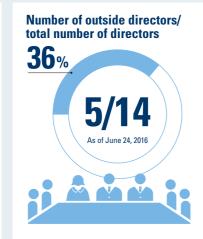
Life Science Institute, Inc. (LSII)

Taiyo Nippon Sanso Corporation (TNSC)











Approx. 20,000

Reduction of CO<sub>2</sub> emissions through our products

1.43 million t-CO<sub>2</sub>
FY 2015

Total number of products provided by the Group

Number of awards in products and technologies category

10 FY 2015

Contribution to quality of life (QOL) improvement

1.43 million t-CO<sub>2</sub>
FY 2015

FY 2015

FY 2015

Compared with FY 2009)

Number of patents held

Japan 13,176
Overseas
FY 2015

Number of chemical product management seminar participants

975
FY 2015

#### **Corporate Brand**

## THE KAITEKI COMPANY

KAITEKI is an original concept advocated by the MCHC Group that signifies "a sustainable condition which is comfortable for people, society and the Earth, transcending time and generations."

The MCHC Group has decided to take the lead in acting on our vision for THE KAITEKI COMPANY aiming to realize KAITEKI.

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#### Leadership

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#### Growth Strategies

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#### Publication of the KAITEKI Report 2016

Positioning the realization of *KAITEKI* as its vision, the MCHC Group has promoted *KAITEKI* Management through the pursuit of innovation while working to improve both economic value and sustainability. With a particular focus on our progress and outlook for corporate activities aimed at the realization of *KAITEKI*, the MCHC Group publishes the *KAITEKI* Report. In addition to operating summary, it includes items to be shared with our stakeholders as well as what we judge to be highly pertinent to our decision criteria and results of materiality assessments for corporate activities. On preparing this report, we referred to the International Integrated Reporting Framework promoted by the

International Integrated Reporting Council.

This report can be perused in conjunction with more detailed information available on MCHC's website.

For detailed financial information, please refer to our securities filings with the Financial Services Agency. For detailed governance information, please refer to our corporate governance report to the Tokyo Stock Exchange.

MCHC has decided to adopt International Financial Reporting Standards (IFRS), effective from the first quarter of fiscal 2016, the financial year ending March 31, 2017. In this report, forecasts of consolidated results for fiscal 2016 and numerical

medium-term targets of management indices are based on IFRS, however, the other figures are based on J-GAAP unless otherwise noted.

#### ■ Period Covered by the Report

Fiscal 2015 (April 2015–March 2016). Some information from fiscal 2016 is included.

#### ■ Reporting Boundary

This report covers information relating to MCHC and the MCHC Group. For matters with a different reporting scope, we clearly specify the covered reporting scope.

1 Mitsubishi Chemical Holdings Corporation KAITEKI REPORT 2016

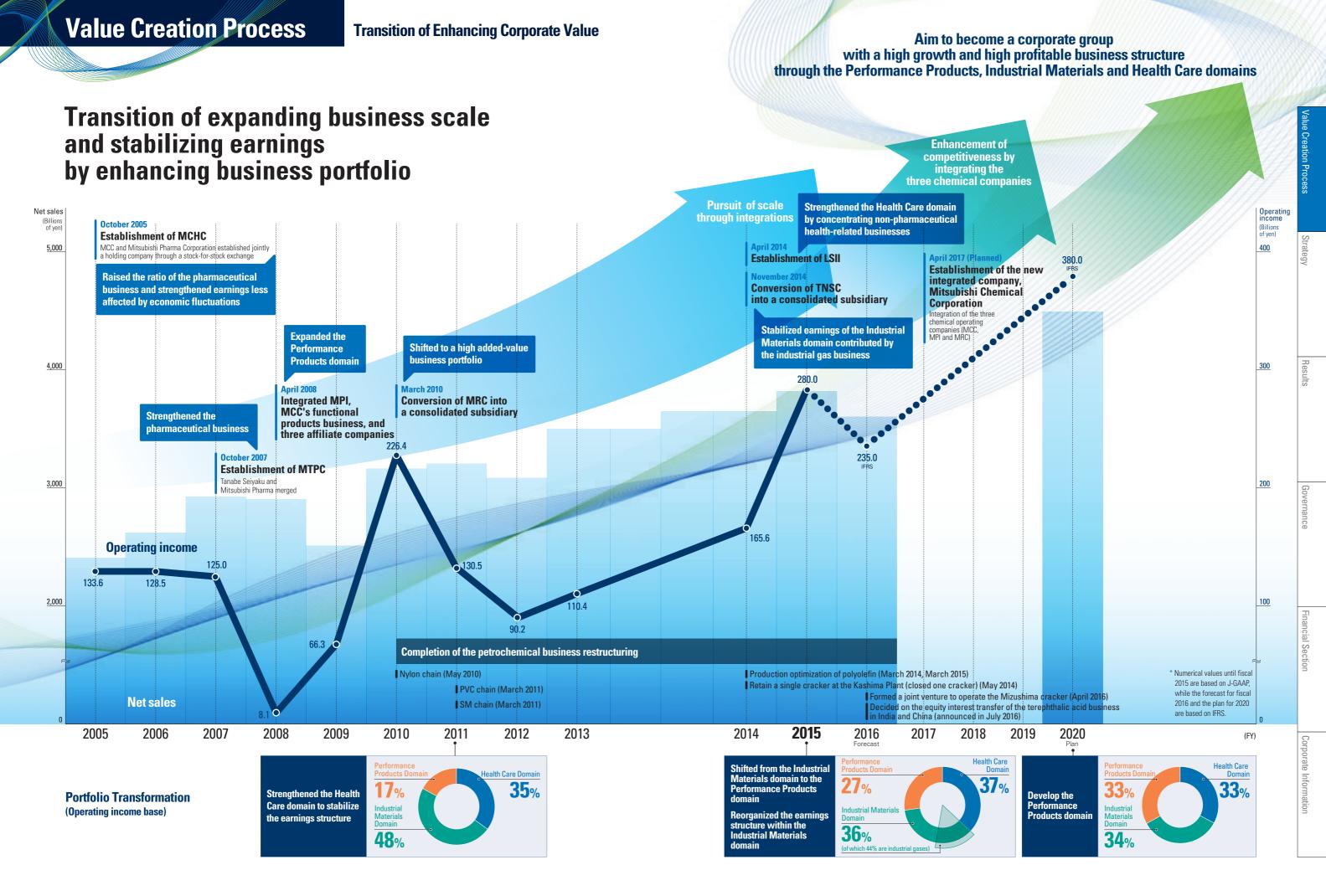
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Results

Go

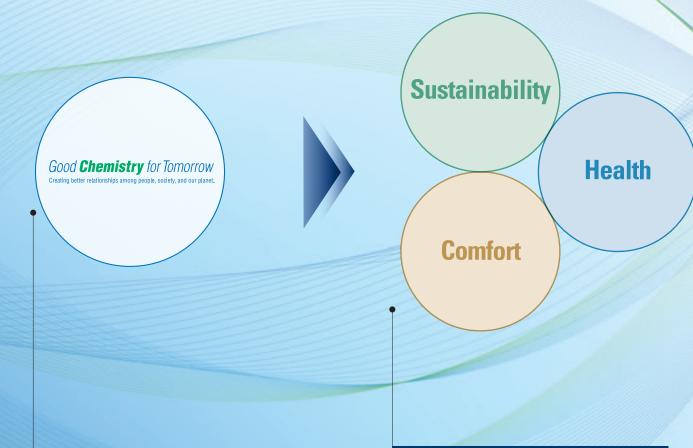
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## Value Creation Process Toward Realizing KAITEKI

The MCHC Group's Approach to Value Enhancement

We promote a value creation cycle in pursuit of sustainable growth = realizing KAITEKI, taking into account stakeholders' requirements and social tides.



#### **Group Philosophy**

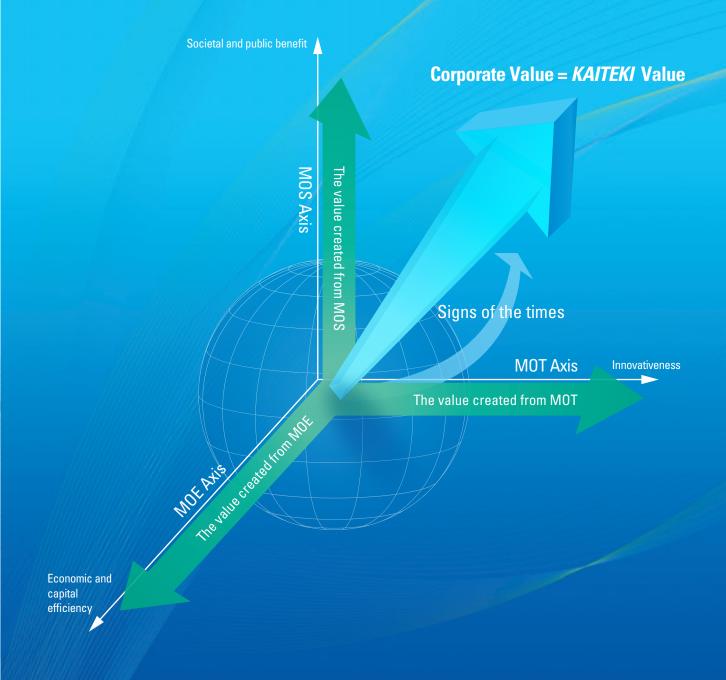
Taking Good Chemistry, which has the power to change the world, as our starting point

The word "chemistry" has a secondary meaning, referring to the relationships and interconnection between people. By assembling a variety of Good Chemistry, we believe it will lead to the sustainable development of people, society and the Earth, which is the basis for realizing KAITEKI.

#### **Decision Criteria for Corporate Activities**

**Established decision criteria of** contributing to resolution of global and social issues

Utilizing the diverse resources of the MCHC Group, our compass for value creation through contributing to resolving issues takes into account Sustainability, Health and Comfort, our three decision criteria for corporate activities.



# **KAITEKI** Management

## **Increase Corporate Value through the Three Axes**

The MCHC Group lays three axes directed to (1) the pursuit of economic and capital efficiencies, (2) the pursuit of innovation, and (3) the enhancement of sustainability. The Group defines its corporate value as the sum of values created through corporate activities conducted in adherence of the concepts of the three axes. The MCHC Group's activities target enhancement of KAITEKI Value and at the same time we are committed to advancing corporate activities toward realizing KAITEKI, which is the creation of a sustainable condition for people, society and the Earth.

## MOE: Management of Economics

This management axis aims to increase income and capital efficiency as benchmarks. We also disclose our results and outlook at business briefings with shareholders and investors.

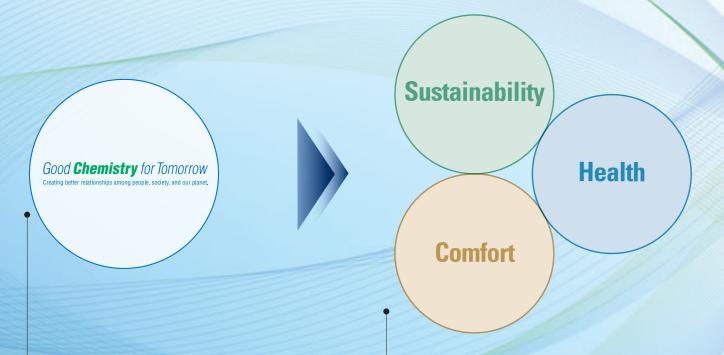
## MOT : Management of Technology

This management axis aims to create innovations that lead to improvements in economic and social value through the development of new technologies and differentiation of existing technologies. In of management emphasizes time-sensitive outcomes by building open and shared business models through alliances with other companies around the world.

This management axis aims to create a better future for people, society and the Earth by resolving various environmental and social issues. MCHC has created quantitative indices for Sustainability, Health and Comfort that it uses as decision criteria for corporate activities, and has built its own framework based on the PDCA cycle.

The MCHC Group's Approach to Value Enhancement

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#### **Group Philosophy**

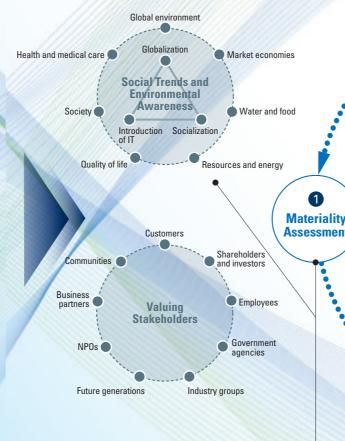
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#### **Materiality Assessment**

#### **Identifying priority issues toward** the realization of KAITEKI

As the starting point on our value creation cycle, MCHC identifies priority issues (materiality assessment) by reflecting decision criteria for corporate activities and grasping social trends ("signs of the times") in the business environment and growing requirements of our stakeholders.

Overview of Business Segments: Opportunities and Risks	p36,	p42, p40
■ Materiality Matrix		p59
■ Governance: Risk Management		p7
Management's Discussion and Analysis:		

Foreign Exchange and Naphtha Price Trends

Review\*

**Health Care** 

of value creation based on a highly transparent corporate governance structure and reports its findings to stakeholders.

MCHC reviews the PDCA 

### APTSIS 15 Fiscal 2013 to Fiscal 2015 Review ------ p17 Overview of Business Segments: Fiscal 2015 Segment Result and

p36, p42, p46 APTSIS 15 Step 2 Review ---\*This report includes a review of the former Medium-Term Management Plan

Review •••••••••

MOT Axis

......

SOM

**Execute** KAITEKI

Toward t

Realization of *KAITEK* 

Human resources, business diversity, network, and technological foundation

APTSIS 20

....

Industrial Materials

Domain

(Medium-Term Management)

#### What We Aspire to Be in 2020

#### **Establishing a foundation as THE** KAITEKI COMPANY with global recognition in the industry by improving profitability, pursuing innovation and contributing to sustainability

The Group has regulated what we aspire to be by drawing from the priority issues, meeting stakeholders' expectations and management direction.

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#### APTSIS 20 Fiscal 2016 to Fiscal 2020 **New Medium-Term Management Plan**

### Formulate and implement a management plan to realize what we aspire to be

The Group has formulated a management plan to realize what we aspire to be within a scope of five years and with an aim for sustainable corporate value enhancement by implementing various measures appropriately and at the proper times.

■ APTSIS 20 Fiscal 2016 to Fiscal 2020 Overview of Business Segments: p37, p43, p47

#### **Shared Value**

#### Share the values of the three axes and realize sustainable growth with stakeholders

To achieve our vision of realizing KAITEKI, MCHC will realize value creation that fosters sustainable development while communicating the values of the three axes to stakeholders.

■ Overview of Business Segments: Review of Segments in Fiscal 2015 p36, p42, p46 Sustainability p53 Financial Section

# **Expanding KAITEKI Value**

## Driven to realizing KAITEKI, we are expanding output to improve both social and economic value.

As an example, we have selected a number of leading products that fulfill both qualitative assessment criteria that represent social values such as "relaxation, relief" and "advanced," as well as quantitative assessment criteria, including revenue growth rates and market shares, and categorized these among the products and services that contribute to a more comfortable society and better lifestyles. We incorporate these products into our MOS Indices and aim to expand these sales.

## Supporting healthy and active lifestyles

As cutting-edge medical technologies advance further, the use of plastics in medical instruments has risen. Our artificial joint materials help patients maintain and regain physical functions owing to the use of engineering plastics with lightweight, mechanical strength, safeness, dimensional stability and molding processability.

As exemplified by Diamana, a golf shaft that has won high praise from professional golfers around the world, MCHC has a variety of brands tailored to a broad range of users. As the only carbon shaft maker in the world with production of both pitch-based and PAN-based carbon fibers, integrated from the materials stage, we make golf more enjoyable for people all over the world.





## Supporting automotive evolution

The adoption of electric and hybrid vehicles are becoming popular as a means to reduce fossil fuel consumption and eenhouse gas emissions.

We aim to expand our market share by enhancing battery performance and utilizing the broad range of capabilities in chemistry to design and control the physical properties of the key materials for lithium-ion batteries.

Performance polymers satisfy customers' sophisticated needs. We contribute to making automobiles highly functional and creating the future through the provision of products crucial for the comfort and safety of automobiles such as interior materials of high-quality texture, highperformance airbag cover materials and sealing materials for windows and door areas

# **For Comfort**

Products and services that contribute to a more comfortable society and better lifestyles\*

Fiscal 2020 net sales up 40% (Compared to fiscal 2014)

Contribute to realizing KAITEKI through sales expansion of about 40 products and services that meet the following criteria.

#### **Examples of social value**

Relaxation, relief

**Impression** 

**Fulfillment** 

**Advanced** Applicable to two or more of the above

#### **Examples of economic value**

For Health

**Provision of products and services** 

Sales growth of at least 5%

Top market share (World and Japan) Operating margin of at least 8%

One of the above



Corresponds to MOS Indices C-3

## Supporting realization of highly convenient and innovative lifestyles

We provide films such as OPL Film, DIAFOIL and CLEARFIT which contribute to the functional improvement of information displays which are indispensable to a modern lifestyle. MCHC will establish a firm position in the fast-growing markets of East Asia, due to the combined strengths of designing raw material resin, functional designs, advanced film production, and surface treatment technologies.





The THERMOS brand, which has become synonymous with vacuum bottles, is a preferred choice for customers seeking lifestyles of health and sustainability. Using the insulation technologies we have accumulated as a pioneer in vacuum bottles, we are making food more delicious and convenient to consume. We expect strong growth not only in Japan, but also in overseas markets centered on Southeast Asia.

The MCHC Group aims to become THE KAITEKI COMPANY and be recognized on a truly global level through sustained growth that contributes to improving global sustainability by solving issues affecting people, society and the Earth.

# Hitoshi Ochi Representative Corporate Executive Officer, President and CEO

We aim for growth amid rapid change by leveraging the diverse resources of

One year has passed since I was appointed as the president on the 10th anniversary of MCHC establishment. There were a number of challenging situations that the MCHC Group confronted during its first 10 years, such as the 2008 financial crisis and the Great East Japan Earthquake in 2011, and last year was equally difficult. I am acutely aware of the increasing complexity and accelerating pace of change in the business environment. I also ponder that the medium- and long-term outlook for the global economy calls for slower growth than in the past. That is to say, the global economy has basically entered a period of low growth, not just "new normal" of China's economy, but even in advanced economies such as the U.S. and Europe. Based on this understanding, we must manage our business from the standpoint of prospering in this new era. To sustain growth in a rapidly changing, complex and delicate business environment beset with greater volatility and uncertainty, the MCHC Group can draw strength from the portfolio reformation accomplished to date and by realizing KAITEKI\*1, its vision for the future. When MCHC was established, its initial business structure was heavily dependent on businesses, such as petrochemicals, that have substantial earnings volatility to the business environment. Thus, management needed to establish a stable business structure to keep earnings volatility in check. Based on its medium-term management plan, MCHC tackled this problem head-on by transforming its business portfolio, withdrawing from unprofitable businesses and pursuing M&As. As a result, MCHC has created a stronger and more stable earnings foundation. Moreover, I believe we have nurtured a corporate culture more adept at fine-tuning the business structure.

While promptly addressing change, we believe sustained growth will lead to improvement in corporate value over the longer term in line with our vision of realizing KAITEKI. Our efforts to promote a set of common values among employees based on this vision should also lead to meaningful advantages. Using our technologies to contribute to sustainable development while solving issues faced by people, society and the Earth, the MCHC Group is taking measures that ensure its own sustainable growth on the path toward becoming THE KAITEKI COMPANY and intends to further integrate them.

\*1 An original concept advocated by the MCHC Group; "a sustainable condition which is comfortable for people, society and the Earth, transcending time and generations.

# Value Creation Process

#### Review of Medium-Term Management Plan APTSIS 15

Through decisive structural reforms, the MCHC Group has expanded its corporate scale and laid the foundation to reinforce the earnings base as drawn in the long-term strategy

Fiscal 2015 was the final year of the five-year medium-term management plan APTSIS 15, under which we aimed to polish our strengths and make steady progress on reformation of the business portfolio toward realizing KAITEKI.

We strengthened high-performance, high-value-added businesses in the Performance Products domain, which include polyester film and carbon fiber, while streamlining and rebuilding unprofitable businesses. In addition, we continued to reform the business portfolio by expanding and reinforcing the earnings foundation through the acquisitions of Qualicaps Co., Ltd., a manufacturer of capsules for pharmaceutical and nutraceutical industries in 2013, as well as TNSC, a manufacturer of industrial gases and related equipment and devices in 2014.

The MCHC Group also implemented measures to thoroughly cut costs and scale down unhealthy assets while pursuing these reforms. As a result, in fiscal 2015, the MCHC Group's consolidated financial results recorded net sales of ¥3,823.0 billion, an increase of ¥166.8 billion (4.5%) from the previous fiscal year. Operating income totaled ¥280.0 billion, an increase of ¥114.3 billion (69.0%), and ordinary income amounted to ¥270.6 billion, an increase of ¥107.5 billion (65.9%) from the previous fiscal year. Accordingly, we were able to achieve our target for operating income in the final fiscal year of APTSIS 15. ROA and the net D/E ratio have improved since fiscal 2011, the first fiscal year of APTSIS 15, but not enough to reach their targets, owing to expansion in total assets and interest-bearing debt from acquisitions, as well as the posting of extraordinary losses related to restructuring. The ratio of overseas net sales increased by 6.5% compared with fiscal 2011, owing to a faster pace of global business development. We are in a firm position to realize growth, having strengthened our earnings foundation with the addition to our portfolio of stable businesses like industrial gases, expanded our corporate scale to be able to compete worldwide, and generated the highest level of operating income since the founding of MCHC.

Of the three management axes for KAITEKI Management, we have two axes that go beyond the pursuit of profits: Management of Technology (MOT), which fosters the creation of innovation, and Management of Sustainability (MOS), which aims to enhance sustainability. On the basis of these two management axes, I would like to look back on our achievements under APTSIS 15. First, under MOT, we prioritized the early monetization of next-generation growth businesses. Although we did not make as much overall progress as initially anticipated, we have drawn the contours of future growth drivers by promoting open innovation and established Life Science Institute, Inc. (LSII) to accelerate the development of the healthcare solutions business. (refer to pages 49-52)

We believe MOS is an increasingly important aspect of management amid major changes in the social environment surrounding companies and the demands placed on companies by society. Our initiatives to index and quantitatively measure the degree of our contributions to sustainability, such as by reducing CO<sub>2</sub> emissions and saving resources and energy, progressed more or less in line with our original targets, albeit with some individual issues remaining. Using the experience we accumulated during APTSIS 15, we aim to further enhance our performance in terms of these indices and tie it in with corporate value. (refer to pages 53-61)

#### Current Business Challenges, Basic Policy and Key Measures of New Medium-Term Management Plan APTSIS 20

#### Basic policy: pursue further growth and capital efficiency by strengthening profitability

In the final fiscal year of the previous medium-term management plan, the MCHC Group posted a new record high in operating income, but did not achieve targets for ROA or the net D/E ratio, for example, leaving behind issues to be addressed under the new medium-term management plan APTSIS 20. Of these issues, I believe it is my mission as the president to pursue further growth and capital efficiency by strengthening profitability. Over this past year as the president, I formulated APTSIS 20 while discussing those issues with other members of management. My first and most important responsibility was to identify the issues and key fields that we should focus on the most, and then draw up highly effective management plans.

Here, I would like to explain the numerical targets in APTSIS 20, which organically ties together the current business challenges we have identified and decided to address, and key measures for achieving these targets.

MCHC is applying International Financial Reporting Standards (IFRS) from fiscal 2016, and has set financial targets for APTSIS 20 on an IFRS basis. As an example of a new target, the MCHC Group aims to achieve ¥380.0 billion in core operating income \*2, which corresponds to operating income under J-GAAP. Under APTSIS 20, we target ROE of at least 10% as an indicator of improvement in capital efficiency.

#### Key measures: integrate three chemical operating companies, advance well-integrated global group management, and accelerate growth in performance products to turn into a high-growth and high-profit model company

#### Integration of Three Chemical Operating Companies

The MCHC Group has decided to integrate its three chemical operating companies, MCC, MPI and MRC, in April 2017 to maximize business synergies, thoroughly deal with unprofitable businesses and low-profit businesses, as well as accelerate moves to boost cost competitiveness by increasing productivity. (In July 2016, MCHC decided on the equity interest transfer in the terephthalic acid business in India and China.) After integrating these three companies, the new-Mitsubishi Chemical Corporation will be able to fully leverage its business resources. I have made their integration our highest priority under APTSIS 20. To maximize the benefits from this integration, we plan to reorganize the nearly 60 strategic business units (SBUs) of the three chemical companies into 10 new business units, including high-performance polymers, high-performance chemicals, petrochemicals and new energy. These changes will allow us to take a broader approach to marketing and business strategies from a medium-term perspective, which had tended to be narrowly focused on the short term in the past. Moreover, these changes will enhance our ability to develop products that will become new growth drivers, by taking a longer view of 5-15 years on R&D plans, which had been insufficient. The changes will also enable medium-scale M&As, which had been problematic due to the smaller scales of individual business units. We aim to make it easier to pursue M&A deals that complement existing operations and increase profitability.

As an example of new possibilities from these changes, sales of MRC's carbon fiber

could be expanded more easily through the sales channels for high-performance engineering plastics in the European automobile market held by Quadrant AG, a subsidiary of MPI, because both will belong to the same business unit from fiscal 2017 onward. We are now putting the final touches on medium-term growth strategies for the new business units after the three chemical companies are merged to enhance Group synergies in tandem with tighter business integration.

#### Advance Well-Integrated Global Group Management

We are aware that increasing profitability overseas is a major issue. When appointed as the president, I aspired for THE KAITEKI COMPANY to be recognized on a truly global level and incorporated this goal in APTSIS 20 to create our medium-term vision under which we will advance global operations with determination.

Amid changes at breathtaking speeds in our business environment, we have noticed limitations in the conventional style of business management, where a central

#### \*2 Core operating income

Gains/losses incurred by staged gain/loss introduced in accordance with transition to IFRS. Ordinary income excluding gains/losses incurred by non-recurrring factors.

headquarters supervises and directs operations in each region of the world. We are taking the integration of the three chemical companies as an opportunity to define regions of operation outside Japan, as China, Asia, Europe and the Americas, and are preparing to establish regional headquarters for each region within the new-Mitsubishi Chemical Corporation. In addition, we intend to consolidate Group companies and increase management efficiency while strengthening Group governance.

Through these measures, the vertical management lines of each business will be combined with horizontal lines that stretch across regions. We will balance both autonomous regional management for each business and global management for the entire Group, which should lead to more advanced levels of management rich in diversity.

In addition to the aforementioned, we are moving quickly with a sense of agility to establish a business foundation for MTPC in the U.S., the world's largest pharmaceutical market, and to expand operations overseas at TNSC. Through these initiatives, we aim to increase the overseas sales ratio to at least 50% and strengthen earnings potential overseas by maximizing our technology, information and trade networks in each region.

#### Target Growth in Performance Products Domain

To improve profitability, an issue being addressed under *APTSIS 20*, we aim for growth through balanced business development in the three business domains, with a particular focus on the Performance Products domain. Among our performance product business lines, we aim to improve profitability by increasing the number of high-value-added, high-performance products with sales on the scale of several ten billion yen, instead of commodity products exposed to market prices. To do so, we will leverage the integration of the three chemical companies to maximize the utilization of business resources and bolster innovation. We also aim to develop high-performance, high-value-added products, expand earnings and accelerate global business development.

In the Industrial Materials domain, we aim to continue boosting cost competitiveness in basic petrochemical products, while at the same time accelerate global business development

in such businesses as MMA and industrial gases.



#### Accelerate Growth

We must innovate our business process to implement measures faster, matching the speed of changes in the business environment. IT is the key to succeeding here. While integrating information systems throughout the Group and implementing more sophisticated decision-making support systems, it will be vital to organically embed technological innovation in the major measures I have mentioned, especially in the areas of the Internet of Things (IoT) and artificial intelligence (Al). In particular, we are currently examining ways to apply technological innovation in the Health Care and Performance Products domains. We created a project team to work on this issue, given the urgent need to acquire and train personnel able to realize the full potential of the technology, and take a completely different approach to deploying IT within the corporate organization.

#### Prioritize Resource Allocation

Regarding resource allocation under *APTSIS 20*, the MCHC Group has earmarked ¥1 trillion for priority growth investments and ¥700 billion for R&D investment. As for individual business domains, the MCHC Group is allocating a larger portion of resources to the Performance Products and Health Care domains under *APTSIS 20* than under *APTSIS 15*. We accordingly aim to magnify and strengthen the effectiveness of the key measures I have explained so far.

## Individual employees focusing on process safety, compliance and their own health

Under APTSIS 20, the MCHC Group will rapidly advance measures to accelerate growth and increase earnings, while remaining true to the core of Group corporate activities, namely process safety and compliance in corporate management. As we stand at a milestone in terms of the new management plan and new business operation structure, I'd like to once again stress the importance of each individual employee being aware of our core policy. We must motivate our employees and improve the productivity of every person, in addition to ongoing measures to prevent accidents and provide mental health care when needed. This is essential in nurturing the creativity to foresee changes in a rapidly shifting business environment and the ability to flexibly and resolutely take action. As the president, I have made a declaration to promote health management, and am committed to proactively investing in and supporting programs that promote the health of all employees with the aim of stimulating employees actively. We are working on the finer details of this action plan, and believe it will ultimately help reinvigorate not only the organization but also society.

#### Shareholder Returns

The MCHC Group aims to increase corporate value while maintaining a proper balance of "investment for growth," "enhancement of shareholder return" and "strengthening of the financial position."

While maintaining a proper balance between investing in growth businesses and strengthening the financial position, MCHC has provided a stable dividend to shareholders with a dividend payout ratio of 30% as a medium-term target. This dividend policy will not change after applying IFRS. In the previous fiscal year, MCHC paid an annual dividend of ¥15 per share, an increase of ¥2 per share. For the current fiscal year, MCHC plans to pay ¥8 per share in both interim and year-end dividends for a total annual dividend of ¥16 per share.

#### To Our Stakeholders

## We aim to achieve sustained growth through dialog and coordination with stakeholders toward the realization of *KAITEKI*.

The MCHC Group intends to cooperate via dialog with shareholders, customers and other stakeholders, sharing issues and goals for realizing *KAITEKI*. On creating *APTSIS 20*, we took into account the macro outlook and viewpoints of our stakeholders when conducting the materiality assessment, and used the results from this assessment as policies for corporate strategies. The MCHC Group has specified priorities to address the global agenda outlined by the United Nations sustainable development goals (SDGs), such as climate change, water resources and food issues, as well as various challenges in healthcare. *APTSIS 20* proactively incorporates external viewpoints being created with opinions from outside directors in addition to vigorous and unrestricted discussions.

With the ultimate vision of realizing *KAITEKI*, the MCHC Group aims for sustained growth while contributing to the sustainable development of the world and to the solving of issues faced by people, society and the Earth, through proactive and constructive dialog and cooperation with its stakeholders.

We thank all our stakeholders for their continued support and look forward to sharing success in the future.

Representative Corporate Executive Officer,
President and CFO

## APTSIS 15 Step 2 (Fiscal 2013 to Fiscal 2015) Basic Policy

### Strengthening business foundation for growth and taking leaps ahead

 Orchestration
 Realized synergies

 Strengthened footholds
 Improved financial position

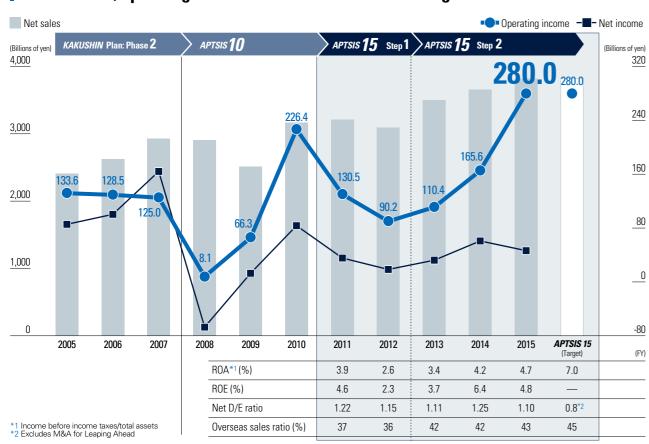
 Growth
 Further reform business structure

#### **Management Indices Review**

Indices	Result	Target	Remarks	
Operating income	¥280.0 billion	¥280.0 billion	Achieved	
ROA (income before income taxes)	4.7%	7% or above	Increases in total assets and interest-bearing debt from acquisitions, as well as extraordinary losses related to restructuring	
Net D/E ratio	1.1	0.8		
Overseas sales ratio	43.4%	45% or above	Not achieved FY 2010 37% → FY 2015 Improved to 43%	
Capital expenditures and investments	¥879.8 billion	¥840.0 billion	Increase through acquisitions	

### Quantitative Review 1

## In fiscal 2015, operating income achieved medium-term target and reached new record

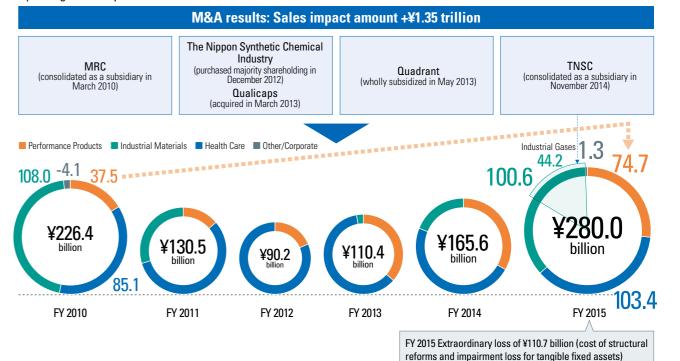


#### Quantitative Review 2

### Strengthened and expanded earnings foundation through business portfolio reforms

- ➤ Expanded the Performance Products domain's double fiscal 2010 operating income by strengthening high-performance and high-value-added businesses
- > Stabilized earnings in the materials business by reforming the petrochemical business and acquisition of TNSC

Operating Income by Business Field



#### Result of withdrawal and rebuilding: Sales impact amount -¥310.0 billion

Nylon chain (May 2010) PVC chain (March 2011) SM chain (March 2011) Piping materials (March 2013) Superabsorbent polymers (March 2013) Production optimization of polyolefin (March 2014, March 2015) Retain a single cracker at the Kashima plant (closed one cracker) (May 2014)

Formed a joint venture to operate the Mizushima cracker (April 2016)

#### **Overview**

	Achievements	Ongoing Tasks
Growth	Strengthened and expanded business base through business portfolio reforms     Expanded overseas business through capital investment and M&As	<ul> <li>Increase growth and strengthen earnings capabilities of existing businesses</li> <li>Strengthen earning capability of overseas business</li> <li>Achieve profitability of new energy businesses at an early stage</li> <li>Promote Group orchestration</li> </ul>
Efficiency	Reformed the petrochemical business	Promote operational efficiency and cost reduction  Take drastic measures in unprofitable and low-profit-margin businesses
Strengthen Base	Strengthened the corporate governance system     Introduced sustainability as a cornerstone of management	• Establish global management structure • Strengthen financial position

## APTSIS 20 Fiscal 2016 to Fiscal 2020 Basic Policy

# Aim to become a corporate group with a high-growth and high-profit business structure through the Performance Products, Industrial Materials and Health Care domains

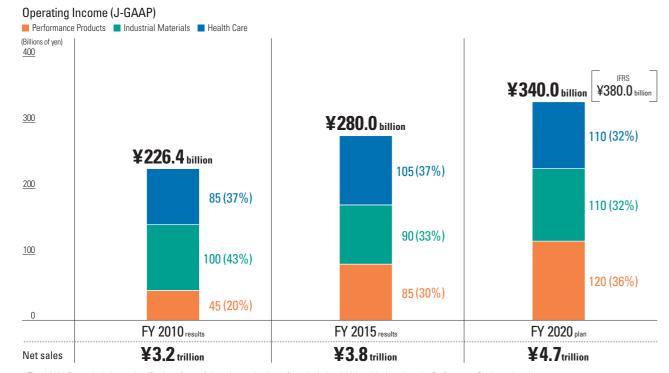
- Promote orchestration and integration of the MCHC Group
- Accelerate overseas business development and advancing well-integrated management
- Strengthen portfolio management with awareness of earnings
- Realize a highly productive corporate structure through cost-cutting and other measures
- Strengthen the financial position

#### **Quantitative Targets**

#### Raise capital efficiency and aim for ROE of 10% or above

Indices	IFRS	J-GAAP (Reference)
Core operating income and operating income	¥380.0 billion	¥340.0 billion
ROS (core operating income) and ROS (operating income)	8% or above	7% or above
Net income attributable to owners of the parent	¥180.0 billion	¥150.0 billion
ROE	10% or above (12%)	11%
Net D/E ratio	0.8	

# Expanded earnings and balanced development of the Performance Products, Industrial Materials and Health Care domains



<sup>\*</sup> Fiscal 2020 figures include a reclassification of part of the polymers business from the Industrial Materials domain to the Performance Products domain. (Figures for fiscal 2010 and fiscal 2015 have been adjusted.)

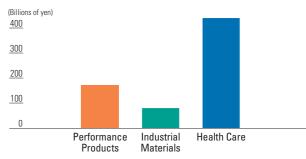
#### **Resource Allocation**

# Concentrate allocation of ¥1 trillion for investment in future growth and invest ¥700 billion in R&D



Industrial





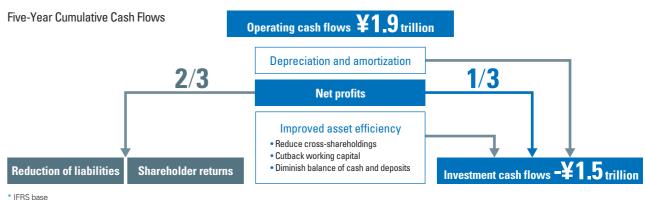
#### Financial Strategy

Performance

**Products** 

100

Increase corporate value while maintaining a proper balance between investing in growth businesses, enhancing shareholder returns and strengthening our financial position



\* Amount is cumulative over five years

Financial Targets		FY 2015 results	FY 2020 plan
	Shareholders' equity ratio	22.9%	30%
	Net D/E ratio	1.1 times	0.8 times

#### **Shareholder Returns**

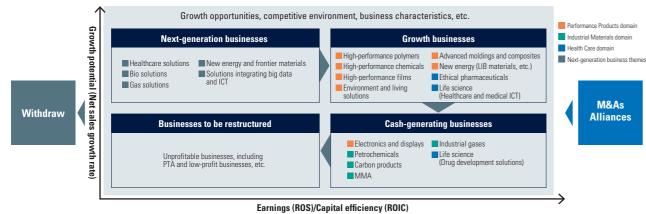
Aim to improve shareholder value by enhancing corporate value In dividend policy, consider the balance between growth investment and improving financial position

- ▶ Target a consolidated dividend payout ratio of 30% as a benchmark, taking the medium-term profit into account
- ► Aiming for making stable payment of dividends

#### **Main Measures**

Strengthen and expand business base by promoting portfolio reforms

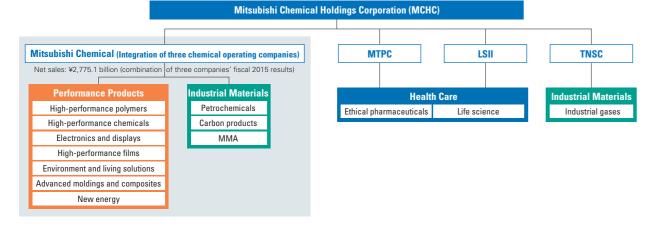
We will thoroughly implement portfolio management aiming to create a high-growth and high-profit business structure.



<sup>\*</sup> Under APTSIS 15, next-generation businesses were next-generation growth businesses

## **Integration of three chemical operating companies** (From April 2017)

- ▶ Restructure about 60 SBUs into 10 business units to maximize synergetic effects to promote growth and enhance earnings
- ▶ Promote efficiency of technology platform, sales channels and corporate functions



## Global operations

- Expand the overseas sales ratio from 43% to 50%
- ► Advancing well-integrated management in each area around the world

### **Strengthen the interconnection** among MOE/MOT/MOS

- ► Start operation of new MOT Indices (refer to page 50)
- ► Promote sustainability enhancement using new MOS Indices (refer to page 60)

#### **Fiscal 2016 Actions**

Strengthen portfolio management drawing from the new medium-term management plan (In July 2016, MCHC decided on the equity interest transfer of the terephthalic acid business in India and China)

Complete work on the integration of the three chemical operating companies to generate synergistic effects in the early stage (new company organization, institutional design, area management, etc.)

Formulate further growth strategies for new business departments

Capital efficiency (reduce cross-shareholdings, etc.)



#### **Advancing Well-Integrated Management among MCHC Group** that Prioritizes Scale to Compete Globally, Growth and Strengthening Earnings Potential

Seimiya Launched in April 2016, the new medium-term management plan APTSIS 20 builds on the initiatives MCHC has implemented thus far to enhance corporate value. In this forward-looking plan, I recognize a shift in emphasis from expanding scale to strengthening earnings potential as MCHC evolves into a corporate group able to compete globally. Could you give us the highlights of APTSIS 20, in light of the outcomes of the previous medium-term management plan APTSIS 15? Kosakai Over the five-year period of APTSIS 15, MCHC concentrated efforts on reforming the business structure to expand scale and compete on a global basis. As a result, MCHC recorded ¥3,823.0 billion in net sales in fiscal 2015, underscoring the scale it has attained. At the same time, we pushed through reforms to stabilize

The MCHC Group consists of three business domains, Performance Products, Industrial Materials and Health Care, and each domain has an optimized portfolio of current business lines under MCHC's strategy. Among our initiatives, we worked to stabilize earnings by shifting the weight of the earnings structure toward the Performance Products domain and away from the Industrial Materials domain. The Industrial Materials domain, which encompasses the petrochemicals business, is characterized by high volatility and unmanageable factors, while the Performance Products domain has relatively stable businesses in highly specialized fields. We were determined to reform the business portfolio by focusing our efforts on how to shift as much weight as possible onto the Performance Products domain, and off the Industrial Materials domain

earnings, which had been an issue.

As a result, the contribution of the Performance Products domain to operating income increased to 27% over the five-year period of APTSIS 15, from 17% when the plan was launched in fiscal 2010, while the weighting of the Industrial Materials

Seimiya What measures did MCHC implement for the Industrial Materials domain, a major cause of earnings volatility?

domain decreased to 36% from 48%.

Value Creation Process

Kosakai Operating income in the Industrial Materials domain was just over ¥100 billion in both fiscal 2010 and 2015, but the quality of the profits was guite different.

In fiscal 2010, roughly 80% of this operating income was generated by terephthalic acid, MMA, carbon products and polyolefin. In fiscal 2014, however, the industrial gas business accounted for about half of the profits in the Industrial Materials domain, reflecting the addition of relatively stable earnings from the industrial gas business of TNSC, bringing more stability to the entire business domain. Under the current medium-term management plan APTSIS 20, we are focusing on how to deepen our involvement in the three business domains, instead of broadening our reach under the previous plan. In other words, we are keenly focused on boosting growth and asset efficiency in each business. In this context, I think that it is essential that we advance well-integrated management among MCHC Group centered on MCHC.



**Seimiya** I think it is extremely important that MCHC, as a pure holding company with multiple operating companies, drives efforts to generate synergies among the operating companies. Has MCHC put in place any required common rules or processes in business management to put together the diverse operations of the Group? As a holding company, how does MCHC keep a grip on operations?

Kosakai The MCHC Group has been managing approximately 60 strategic business units (SBUs), setting annual missions for each business unit and evaluating performance using a common set of metrics that apply across operating companies and business units. In addition to financial indicators such as operating income, we have also adopted non-financial indicators of our performance, such as the Management of Sustainability (MOS) Indices, indicators we developed to measure our contributions to sustainability, to assess overall business performance. Seimiya I understand that the Group uses common metrics to evaluate the performance of each business. under APTSIS 20, the MCHC Group manages its portfolio based on a four-quadrant model comprising the growth businesses, the next-generation businesses, the cash-generating businesses, and the businesses to be restructured. How does MCHC screen for businesses to be restructured? Kosakai MCHC takes a comprehensive look at each business unit's progress toward their targets, identifies businesses that are struggling, and thoroughly facilitates reconstruction of these businesses. If a business continues to struggle after measures to streamline and improve the business with an eye to its future potential, we have in place an exit rule where we withdraw from the business after three years of losses. Seimiya Does this mean that each business unit is managed based on its own balance sheet and cash flow? Kosakai We have managed businesses on this basis to a certain degree in the past.

With the MCHC Group applying IFRS in fiscal 2016, we are now able to more accurately compare each business unit, including subsidiaries inside and outside Japan. We believe this will lead to more advanced levels of management.

#### **Cash Management on a Global Basis**

Kosakai As CFO, I am primarily focused on tightening discipline from a financial perspective, while laying the groundwork for the voluntary adoption of IFRS. First of all, we are rolling out cash management systems (CMS) globally, including in Europe, at an early stage. We have already introduced this system in Japan, and parts of the U.S. and China, and believe that it will lead to higher capital efficiency. However, more importantly, we aim to have an impact on Group governance via cash management. Cash flow tells us the true condition of the business because it just does not lie. By having MCHC completely ascertain and manage the flow of cash throughout the Group, we will be able to achieve a well-integrated management.

**Seimiya** When will the global deployment of CMS be completed during APTSIS 20? Kosakai We will center on creating Group synergies in the next five years, being requiring the management of business from an all-encompassing perspective. We aim to finish the global rollout of CMS at an early stage of APTSIS 20. Introducing CMS is one measure that we are taking in our shift toward well-integrated management centered on MCHC, instead of management by each operating company.

**Seimiya** Strengthening capabilities to generate cash is a key factor in increasing corporate value. As CMS improves the MCHC Group's ability to generate cash, there is a greater likelihood that the MCHC Group will be able to meet its targets for financial health and plans for growth investments. From the standpoint of financial strategy, what are MCHC's priorities in allocating cash flow?

Kosakai With regard to shareholder returns, MCHC first aims to maintain a dividend payout ratio at 30% of medium-term profits, linking performance to stable dividends.

Next, MCHC will prioritize its financial health. At the end of fiscal 2015, MCHC's shareholders' equity ratio was 22%, a level that could be better. We are keenly aware of the importance of having a stable financial position in order to sustain long-term growth, and have set a goal to increase the shareholders' equity ratio to 30%. We plan to allocate one-third of net income, an amount equivalent to depreciation and the cash freed up from greater asset efficiency, to investments in growing businesses. We intend to take a balanced and appropriate approach to growth investments from a stable financial position. Seimiya As the adoption of IFRS sharpens the management of each business unit based on individual balance sheets and cash flow statements. I believe MCHC will be able to create strategies based on more accurate financial statement forecasts. Indeed, this will significantly advance well-integrated management.

#### **Well-integrated Portfolio Management Seeking High Capital Efficiency**

Seimiya Putting into practice ROE-based management is another pillar of APTSIS 20. I understand that MCHC can achieve its target for ROE of at least 10% through bottom-up initiatives in each business. Can you shed some light on these bottom-up initiatives? Kosakai MCHC has always managed its operations with an eye to asset efficiency. However, our management of operations based on the statements of income tended to target growth in sales, and did not sufficiently reward efforts on the frontlines to reduce inventories or increase efficiency by other means. Since APTSIS 20 has set ROE as a key target, MCHC has adopted ROIC as a management target and assessment benchmark. This will clarify the benefits of measures such as inventory reduction. MPI has already implemented management of front-line operations using targets based on ROIC (refer to pages 39-40). We are now preparing a management framework including managing operations based on ROIC for the new-Mitsubishi Chemical Corporation from fiscal 2017.

Seimiya I think that front-line managers/staff will become more adept at screening businesses as their awareness on efficiency improves from the use of common management benchmarks.

Kosakai We will make our investment decisions based on detailed evaluation standards that take into account hurdle rates for each business type, product life cycles and market conditions. With the full-fledged introduction of ROIC as a benchmark, we will take a scalpel to not only unprofitable businesses\*1 but also low-profit businesses. Seimiya From this standpoint, MCHC is advancing portfolio management based on the four-quadrant model. Will MCHC, as a holding company, screen investment

\*1 In July 2016, MCHC decided on the equity interest transfer of the in India and China.

terephthalic acid business

proposals, business management ideas and business withdrawal suggestions that rise up from operating companies, or will management teams at the operating companies make these decisions from a top-down approach?

Kosakai Until now, MCHC has been making the final decision regarding proposals received from the operating companies, reflecting the actual circumstances that management at the operating companies was conducted by MCHC executives. From now on, we will separate supervisory functions and business execution functions. This will let the operating companies be in charge of business execution, and clarify the business supervision role of MCHC. With respect to business portfolios, resource allocation and internal controls, MCHC is responsible for the overall policy, and the operating companies will execute plans based on this policy. MCHC is also responsible for governance, evaluating the business execution performance of the operating companies.

Seimiya I understand that MCHC as a group will create and keep in motion a cycle of business optimization while respecting the independence of the operating companies.

#### **Group Management Incorporating Non-Financial Benchmarks**

**Seimiya** I have high regards for the MCHC Group's initiatives on the non-financial front, such as its vision of realizing *KAITEKI*, MOS and Management of Technology (MOT), from the perspective of sustained improvement in corporate value. As an outsider, however, it is difficult to get a firm grasp of all these initiatives. Have employees come to understand these initiatives, and to what degree?



**Kosakai** At each operating company, a Chief Sustainability Officer (CSO) has been appointed to promote sustainability through meetings. Meetings are held at least once a month to promote sustainability, including subcommittees for each MOS-related subject, to tightly coordinate actions. In addition, twice a year, each operating company holds a reporting event about the state and degree of penetration of Group-wide activities.

Our annual survey of employee perceptions monitors the degree of awareness of *KAITEKI* based on questions about whether the employee is on board with our management philosophy. At this stage, more than 70% of our employees have indicated that they sympathize with the concept of *KAITEKI*.

**Seimiya** I understand that MCHC is keeping tabs on employee awareness. How are the MOS and MOT Indices used in management?

**Kosakai** When a business investment is considered, the decision is typically based on a financial assessment using metrics like the internal rate of return (IRR). In contrast, MCHC also takes into account the investment target's degree of contribution to sustainability as a basis of its investment decisions.

Thus, we have been putting the MOS Indices into practice by quantifying their contribution to sustainability, and our next challenge is how we link this approach to financial indicators.

We aim to come up with a practical solution to this over the five years of APTSIS 20.

We are examining how to clearly link MOT to corporate value, and aim to embed it in our framework for establishing businesses with competitive advantages.

#### **Aiming to Create a Conglomerate Premium**

**Seimiya** Market participants have noted that after excluding the corporate value of listed subsidiaries in terms of their market capitalization, there is little value left over

that is attributable to other businesses. The integration of the three chemical companies is an attempt to dispel this so-called conglomerate discount.

**Kosakai** The planned integration of the three chemical companies, MCC, MPI and MRC, in April 2017 will bring together operating companies with different corporate cultures, and by combining the best parts of these companies, we aim to rapidly generate synergies and improve product competitiveness. Through their integration, we aim to improve R&D efficiency and share sales channels. We believe the new-Mitsubishi Chemical Corporation will derive value from being able to apply all of the Group's capabilities to meet the needs of end users.

**Seimiya** From the standpoint of synergies and integrating operations, it seems it would be challenging to manage chemical-related businesses and other types of businesses, that is, the healthcare business, under the same umbrella, due to their significantly different business cycles and investment amounts in R&D. Can you clarify MCHC's intentions on this issue?

Kosakai There is a strong preconception that healthcare equals pharmaceuticals. But in addition to pharmaceuticals, the MCHC Group is involved in a broad range of materials for healthcare businesses. Artificial joints and medical materials are such examples, and we have sales of roughly ¥100 billion annually outside the Health Care domain. Although the current contribution to consolidated net sales is small, we believe this domain has growth potential. In addition to pharmaceuticals, our materials and solutions have the potential to contribute to comprehensive medical service, and this is why MCHC engages in both businesses.

MCHC's first and foremost mission is to increase corporate value in a sustained and reliable manner. To this end, we must decide on the composition of our business portfolios and earnings structures. I believe we must strive to create a "conglomerate premium", in other words, create new businesses that are an organic fit with our three business domains.



#### **Message Looking Forward**

**Seimiya** I think that one way to look at MCHC is from the perspective of its accomplishments in visualizing and indexing initiatives that appear difficult at first glance but bring positive outcomes, as well as the incorporation of these initiatives in its management strategies and the fostering of a corporate culture that supports these initiatives. The Company's vision of realizing *KAITEKI*, criteria for deciding corporate activities, and plan for 2020 excels in terms of non-financial information and ESG, and are likely to lead to superior financial performance, in my opinion, over the medium- to long-term. To realize this vision, I think it is crucial for the CFO and financial departments to have a framework in place for optimally allocating capital. Our dialog today has given me a more detailed understanding of the concepts behind MCHC's initiatives to increase corporate value. As the MCHC Group steadily advances these initiatives, I expect to see not only an improvement in figures on the statements of income, but also a decrease in the cost of capital, and lead to greater trust among investors in management's abilities from a medium- to long-term investment perspective.

I look forward to seeing MCHC realize greater corporate value through its unique initiatives

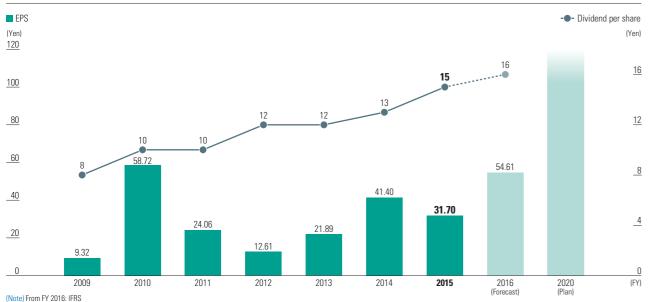
**Kosakai** Our dialog today was a precious opportunity to reassert that our most important mission is to increase corporate value in a sustained and stable manner. The MCHC Group will make concerted efforts to meet the expectations of its investors to the utmost extent.

## **Basic Policy on Shareholder Returns**

## Aim to improve shareholder value by enhancing corporate value In dividend policy, consider the balance between growth investment and improving financial position

- Target a consolidated dividend payout ratio of 30% as a benchmark, taking the medium-term profit into account
- Aiming for making stable payment of dividends

#### **Dividend/EPS**



#### Stock Information (As of March 31, 2016)

Stock listing	Tokyo Stock Exchange	Outstanding shares
Securities code	4188	Number of shareholders
Shares per unit	100	General Meeting of Share
Authorized shares	6,000,000,000	Transfer agent

Outstanding shares	1,506,288,107
Number of shareholders	172,016
General Meeting of Shareholders	Annually in June
Transfer agent	Mitsubishi UFJ Trust and Banking Corporation

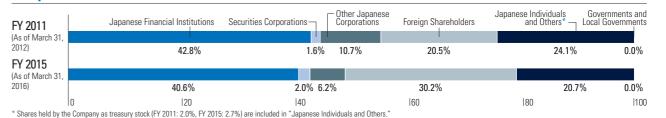
#### **Major Shareholders**

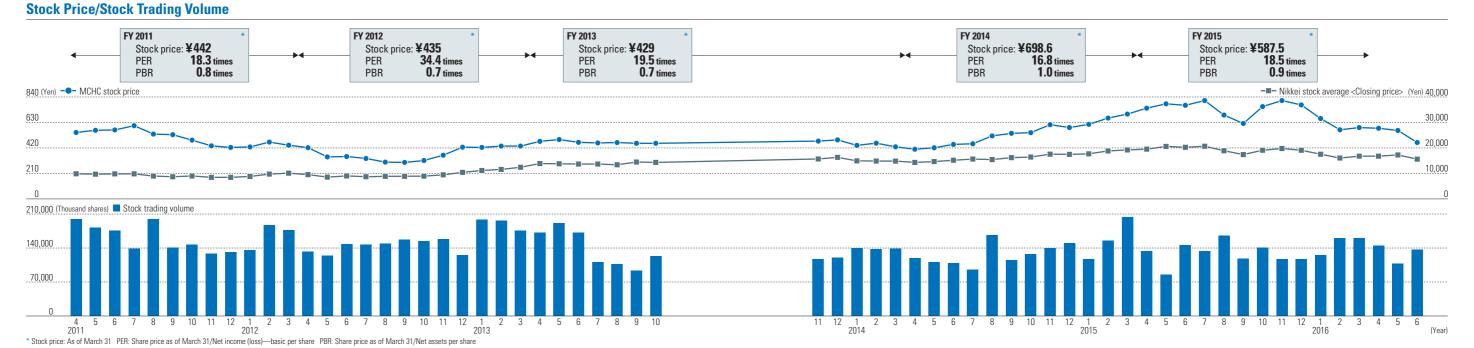
Name	Number of Shares (Thousands)	Percentage (%)
The Master Trust Bank of Japan, Ltd. (Trust account)	84,178	5.7
Japan Trustee Service Bank, Ltd. (Trust account)	77,474	5.2
Meiji Yasuda Life Insurance Company	64,388	4.3
Nippon Life Insurance Company	42,509	2.9
The Bank of Tokyo-Mitsubishi UFJ, Ltd.	31,105	2.1
Tokio Marine & Nichido Fire Insurance Co., Ltd.	25,638	1.7
Japan Trustee Service Bank, Ltd. (Trust account 4)	21,761	1.4
State Street Bank West Client-Treaty 505234	20,589	1.4
Japan Trustee Service Bank, Ltd. (Trust account 9)	19,727	1.3
Taiyo Life Insurance Company	18,838	1.2

(Notes) 1. In addition to the above, MCHC holds 41,485 thousand shares of treasury stock, but these shares are non-voting pursuant to the provisions of Article 308, Paragraph 2 of the Companies Act

Percentage is calculated excluding treasury stock (41,485 thousand shares).

#### **Composition of Shareholders**





<sup>3.</sup> In addition to the above, equity investments of The Bank of Tokyo-Mitsubishi UFJ, Ltd. in MCHC include 4,750 thousand shares of stock (representing a percentage of 0.3%) held in the name of "The Nomura Trust and Banking Co., Ltd. (Retirement Benefit Trust The Bank of Tokyo-Mitsubishi UE.I Account)" over which The Bank of Tokyo-Mitsubishi UE.I Itd. retains the right to issue instructions regarding the exercise of the relevant voting right

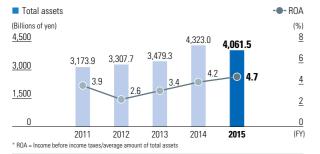
#### **Financial/Non-Financial Highlights**

#### **Net Sales and Overseas Sales Ratio**



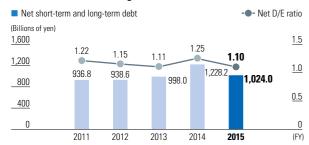
Net sales were up from fiscal 2014, influenced by the full-year consolidated sales of industrial gases. The overseas sales ratio reached 43.4% (+1.9 pp y/y), supported by a weaker yen (- $\pm$ 9.6/US \$ y/y) and gradual recovery of the global economy centered on Europe and the U.S.

#### Total Assets and ROA\*



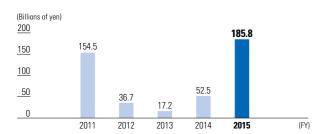
Total assets were ¥4.061.5 billion as of March 31, 2016, a decrease of ¥261.4 billion from the previous fiscal year-end, reflecting a stronger yen toward the year-end, decreased inventory assets and trade receivables, and fixed asset impairment loss. ROA increased to

#### Net Short-Term and Long-Term Debt and Net D/E Ratio



Net interest-bearing debt was ¥1,024.0 billion (-¥204.2 billion y/y). The net D/E ratio stood at 1.10, an improvement of 0.15 point from a year earlier

#### Free Cash Flow



Free cash flow finished at ¥185.8 billion, far above the initial target, supported by improved cash flow from operating activities associated with decreased working capital, and from investment activities in connection with sales of cross-shareholders.

#### **Operating Income and Operating Margin**



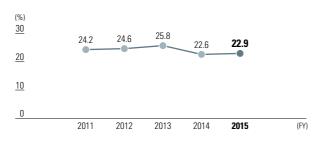
Operating income rose ¥114.3 billion (+69% y/y), owing to a wider gap between purchasing costs and sales prices in the Industrial Materials and Performance Products domains and increased royalty income in the Health Care domain. MCHC recorded its highest-ever operating income since its founding. The operating margin was 7.3%, up 2.8 pp from the previous fiscal year.

#### Net Income Attributable to Owners of the Parent and ROE



Net income attributable to owners of the parent was 446.4 billion (414.4 billion or 23% y/y), mainly due to the recording of extraordinary losses of 4110.6 billion including structural reform expenses and fixed asset impairment losses. ROE stood at 4.8%

#### **Shareholders' Equity Ratio**



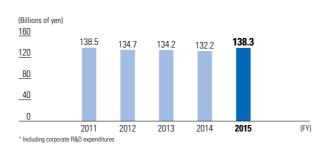
The shareholders' equity ratio improved by 0.3 pp from a year earlier to 22.9%, mainly reflecting a reduction in total assets, despite a decline in shareholders' equity with a simultaneous decrease in accumulated other comprehensive income (AOCI).

#### Net Income—Basic Per Share and Dividends Per Share



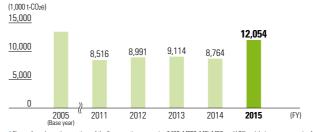
Net income per share declined by ¥9.70 from a year earlier, due to a recorded extraordinary loss. However, MCHC paid an annual dividend of ¥15 per share (+¥2 y/y), after comprehensively taking into consideration the achievement of record-high operating income and the enhancement of shareholder returns.

#### **R&D Expenditures\***



Although total R&D expenditures fell below the amount planned for APTSIS 15 (¥700.0 billion over five years), R&D expenditures of over ¥130.0 billion were made every year during the APTSIS 15 period. R&D activities were implemented to upgrade existing

**GHG Emissions\*** 



\* Figures from domestic operations of the five operating companies (MCC, MTPC, MPI, MRC, and LSIII) and their group companies for fiscal 2011 to fiscal 2014. The base year and fiscal 2015 include TNSC and its group companies. Please refer to page 61 for the calculation methods.

Number of R&D Personnel\*

4 966

2011

the launch of new products in fiscal 2015.

2011

123 TJ from a year earlier.

2012

**Energy Consumption**<sup>3</sup>

4.921

2012

5 036

When Medicago and TNSC joined the Group in fiscal 2013 and fiscal 2014, respectively,

the number of R&D employees had significantly exceeded 5,000, yet the number has now decreased to 5,040 as quite a few employees were transferred to technical services with

127,842 127,562 120,553

2013

The integration of TNSC raised the total energy consumption to 165,851 TJ ( $\pm$ 45,298 TJ y/y) while the emissions from the five operating companies other than TNSC decreased by

2014

5.130

165,851

2015

119

115

(Persons)

6,000

4,000

2.000

180,000

120,000

60,000

The integration of TNSC raised total GHG emissions to 12,054 thousand t-C02e (+3,290 thousand t-C02e y/y) while the emissions from the five operating companies other than TNSC decreased by 80 thousand t-CO2e from a year earlier.

#### Contribution to Medical Treatment\*1, \*2 Trends in the Number of People Taking Diagnostic Tests\*1



\_50 2009 2011 2012 2013 2014 2015

<u>150</u>

100

0.6

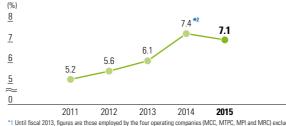
\*1 One of the MOS Indices, the Group's proprietary indices developed to provide a visualization of the degree of contribution to sustainability by the Group's corporate activities. Each index represents changes from the base-year result, which is regarded as 100%. \*2 Contribution to medical treatment is equal to the degree of difficulty to treat diseases multiplied by the number of administered patients

Resulted in a 2-point year-on-year increase to 120%. Due to rapid growth of the generic drugs market, the achievement rate of the assigned MOS Indices was only 40%, where the final target had been set at 150%. MOS Indices: H-1

Resulted in a 2-point year-on-year increase to 121%. The achievement rate of the assigned MOS Indices was 96%, where the final target had been set at 126%.

121

#### Percentage of Female Managers\*1, \*2



0.4 0.2 (FY) 2011 2012 2013 2015 2014

Lost-Time Injuries Frequency Rate (LTIFR)\*1, \*3

1 Until fiscal 2013, figures are those employed by the four operating companies (MCC, MTPC, MPI and MRC) excluding those seconded to other companies but including those seconded from other companies. Employees of the four operating companies in fiscal 2014, and those of the original four and TNSC in fiscal 2015, respectively include those seconded to other companies but exclude those seconded from other companies. LSII has no employees other than those seconded from the Group.

\*2 Until KAITEKI Report 2015, proprietarily indexed figures were disclosed as "the percentage of female employees to

LTIFR deteriorated by 0.16 of a points from the previous fiscal year to 0.48, mainly due to

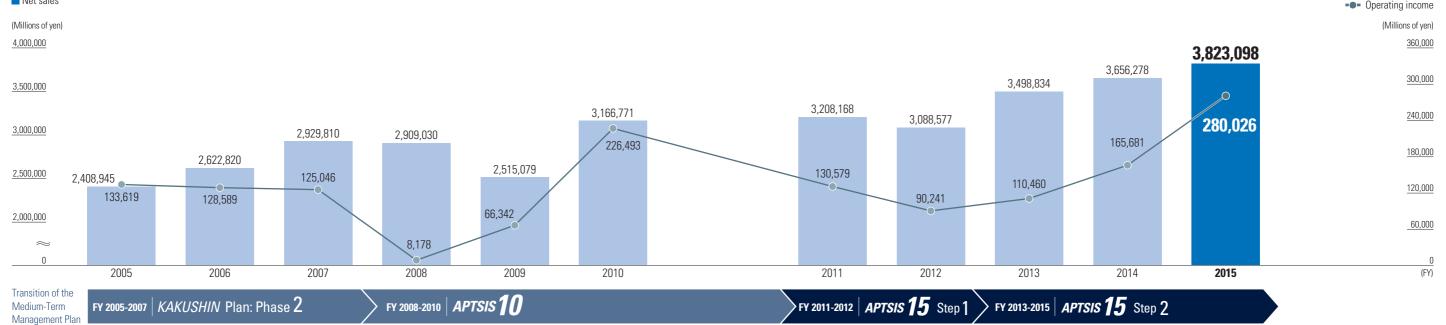
employees, the percentage decreased to 7.1%, a decline of 0.3 points compared to the previous fiscal year due to the change in the range of people covered in reporting.

Please refer to pages S3-55 for an explanation of the MOS Indices and information on results other than the indices presented here. The figures with a tick mark 🗹 have been independently assured by a third-party organization. Please refer to page 62 for the details.

an increase in the number of lost-time injuries. We will continue working to reduce the risk of those injuries by promoting various measures including stabilizing facilities and processes and ensuring work safety.

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Strategy



<sup>\*</sup> The data for fiscal 2005 is collated for the MCC consolidation in the first half of the year and for the MCHC consolidation in the second half of the year. (Notes) 1. In this report, fiscal year refers to the period beginning April 1 and ending March 31. Fiscal 2015 refers to the year ended March 31, 2016.

2. U.S. dollar amounts are converted from year at the rate of \(\frac{1}{4}\)13 = U.S. \(\frac{1}{4}\). S. 1.00.

(Notes) 4. ROE is calculated as net income divided by average shareholders' equity.

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Value Creation Process

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<sup>3.</sup> ROA is calculated as income before income taxes and minority interests in consolidated subsidiaries divided by average total assets.

<sup>5.</sup> Shareholders' equity, when used in the calculation of ROE and shareholders' equity ratio, represents the sum of total shareholders' equity and total accumulated other comprehensive income.

<sup>6.</sup> When non-recurring depreciation on non-current assets is recorded, the amount is included in depreciation and amortization.

MCC Group MTPC Group MPI Group MRC Group LSII Group TNSC Group

## MCHC provides diverse solutions through its three business domains of Performance Products, Industrial Materials and Health Care.



\*1 Based on the business unit formation from April 2017 \*2 Thermoplastic olefin-based elastomer \*3 Polyethylene terephthalate \*4 Polybutylene terephthalate \*5 Polyvinyl alcohol \*6 Polyethylene terephthalate glycol-modified \*7 Fiber reinforced plastic \*8 Stainless steel \*9 Polyethylene \*10 Polypropylene \*11 Long fiber thermoplastics \*12 Methyl methacrylate monome

<sup>(</sup>Notes) 1. ROA=Operating income/Total assets (Annual average)
2. In addition to the above five business segments, there is the "Other" segment, which includes engineering, transportation, warehousing and other businesses.

#### **Business Lines by Segment**

#### **Electronics Applications**

With technologies such as material design, processing, centered on information technology and electronics are provided in a wide array of areas.

#### **Designed Materials**

Based on solid technologies including molecular design technology, functional design technology, and polymer processing technology, accumulated over many years, the Designed Materials segment is developing a variety of products such as composite materials, inorganic chemicals, polymer processing products, and films.



#### **Main Businesses and Products**



#### **Fusion of three core technologies**

We combine the MCHC Group's proprietary material technologies, long-standing film production technologies, and various high performance technologies in an optimal way to provide numerous high-value-added products that have secured a significant share of their respective markets.



#### **Developing business with two types of** carbon fiber materials

We have capabilities in both pitch-based and PAN-based carbon fibers. These are the basic materials in a unified product chain extending from intermediate materials to mold processed products, which is utilized in a wide array of applications including aircraft, satellites, automobiles, wind turbines. pressure vessels, industrial materials, and sporting goods.



#### **Bases in 20 countries**

The Quadrant Group is a global leader in high-performance plastic materials. With bases in 20 countries it is engaged in businesses such as engineering plastic processed products, glass fiber composite materials, and molded products.



#### **Providing three key materials**

We respond to increasing customer needs based on high technical capabilities, which comprehensively cover all processes from materials development to safety evaluations, and utilize our global supply network to provide the three key materials for lithium-ion rechargeable batteries: electrolytes, anode materials, and separators.

#### **Opportunities and Risks**

#### **Strengths**

- · Ability to create solutions for saving and storing energy by leveraging the Group's extremely broad technology base and business foundation
- Strong market position in high-performance films, especially for optical applications
- Strong market position for wide businesses ranging from high-performance engineering plastic materials to mold processing field
- Dual carbon fiber product line and capability to meet market needs ranging to molding solutions

#### **Growth Opportunities**

- Market needs becoming more sophisticated and diverse as the Green Business market expands
- Business network capable of responding to growing global demand (high-performance films, high-performance engineering plastics, carbon fibers)
- Expanding demand for carbon fiber (particularly in automobiles, wind turbines, pressure vessels and other industrial sectors)

#### Risks

- Unexpectedly rapid technological innovation and changes in market conditions, especially in the electronics field
- Competing products in high-performance films, high-performance engineering plastics and carbon fibers
- Need to build a global supply framework for carbon fibers to respond to sharp growth in demand
- Growth in high-performance film in the flat panel display (FPD) field is expected to be the impact of short-term demand, changing technologies and deceleration of growth for the medium- to

#### **Review of Segments in Fiscal 2015**

Refer to page 76 for a breakdown of performance by segment.

#### **Electronics Applications**

Net Sales

¥115.6 billion

Operating Loss

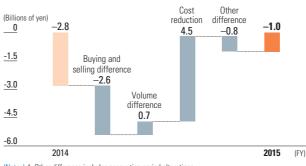
#### **Designed Materials**

Net Sales

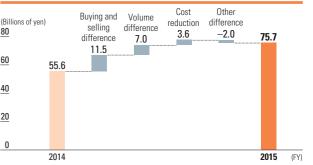
¥852.5 billion

Operating Income

#### Contributing Factors to Operating Income (Figures disclosed in MCHC operating summaries



#### Contributing Factors to Operating Income (Figures disclosed in MCHC operating summaries



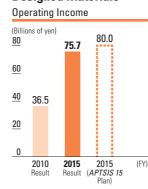
- (Notes) 1. Other difference includes accounting period alterations
  - 2. In fiscal 2015, some businesses were moved from the Chemicals and Others segment to the Designed Materials segment and Polymers segment. Accordingly, figures for fiscal 2014 have been restated to

### **APTSIS 15 Step 2 Review and Forecast**

## **Electronics Applications**

# Operating Income 2.5 1.0 -0.9 2010 **2015** 2015 Result Result (*APTSIS* 15

#### **Designed Materials**



In Electronics Applications, delays in achieving profitability in new next-generation growth businesses resulted in falling ¥6.0 billion short of the APTSIS 15 operating income target.

Designed Materials saw films for optical applications and engineering plastics grow significantly, but agua solutions and other areas did not grow as initially forecast, resulting in a ¥4.3 billion shortfall against the APTSIS 15 operating income target.

Market conditions change rapidly in the business environment encompassing our segment, but looking ahead, we will grasp customer needs more accurately and provide solutions to accelerate global development and advance technical innovation.

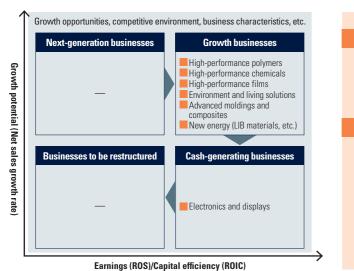
Value Creation Process

Strategy

Information

#### **Growth Strategies**

#### **Business Portfolios (by Business Unit)**



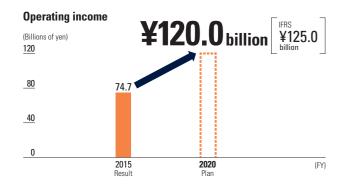
#### Policy

> Accelerate growth by generating synergies, and supply high-performance products/solutions globally to growth markets

#### **Key Strategies**

- Expand high-performance, high-value-added products business and solutions business
- Accelerate global development
- > Strengthen innovation by integration of three chemical operating companies
- Achieve profitability of new energy businesses at an early stage

#### Plan Values APTSIS 20 Five-Year Plan (J-GAAP)



¥390.0 billion

**R&D** investment (Five-year plan, total)

¥170.0 billion

#### **APTSIS 20** Action Plans

#### High-Performance Polymers

Expand global market share in performance polymers (increase sales by 50%)

#### High-Performance Chemicals

Increase sales by 1.5x in the food ingredients business from the acquisition of Eisai Food & Chemical Co., Ltd.

#### **Electronics and Displays**

Secure 30% share of polyester film for FPDs in fiscal 2020

#### High-Performance Films

Increase ratio of overseas sales to 35% in fiscal 2020

#### **Environment and Living Solutions**

Aim for net sales of ¥100 billion in aqua and separator solutions fields

#### Advanced Moldings and Composites

Increase sales of high-performance engineering plastic products by 20% above current levels in fiscal 2020 through M&A in the aircraft and medical fields as well as business expansion in developing countries

#### New Energy

For lithium-ion battery materials, secure shares of 40% in electrolytes and 20% in anode materials by fiscal 2020 in growing target markets (automobiles)

## **FOCUS** | **High-Performance Films**

#### **Priority Measures**

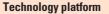
#### Securing a leading position in Japan and accelerating global business development with higher-performance products

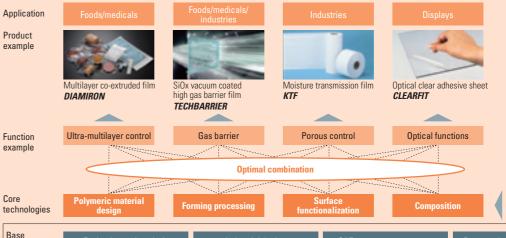
In the field of high-performance films, we offer a wide variety of high-value-added products with added functionalities, such as gas barrier, porous control, multiple layers, and optical properties, applied through the optimal combination of technologies that are a source of strength for the MCHC Group, including polymeric material design, formation and processing. surface treatment, and composition. These products contribute to earnings with high market shares in foods, industries, medicals and displays.

Demand in the Japanese market is likely to weaken as the population declines. This has made it necessary to establish a highly efficient business structure able to stably generate earnings.

To address these changes in the business environment for high-performance films, we aim to strengthen its earnings potential, a policy of its new medium-term management plan APTSIS 20, in the following three ways.

- (1) Develop products with even better functionality, maintain and build on position as the market leader
- (2) Establish sales and production structures in ASEAN markets likely to see strong growth, and in markets in Europe and the U.S. where there is demand for higher performance products
- (3) Create an optimal market portfolio that fully leverages coordination among Group companies





#### POINT of VIEW | Solutions for Social and Environmental Issues

#### **MOS Indices**

S-3-1 Provide products and services that contribute to reducing GHG emissions

#### **MCHC Group Target**

Reduce 150 million tons CO<sub>2</sub> equivalent of GHG emissions in fiscal 2020 by providing products and services

#### Carbon fiber and other products help reduce CO<sub>2</sub> emissions

We, through provision of automotive and LED lighting materials, contribute to reducing environmental burden and achieving a resource-circulating society. One-quarter the weight of steel and roughly 10 times stronger, the market for carbon fiber has growth potential on the back of stronger demand in the automobile, aerospace and industrial fields.

The MCHC Group is the only company in the world with technologies for producing both PAN-based carbon fiber, which excels in strength, and pitch-based

carbon fiber, which excels in elasticity. Currently, our carbon fiber is mainly used in automobiles and aircraft to reduce weight, improving fuel economy and reducing CO<sub>2</sub> emissions as a result.

To more effectively utilize resources amid strengthening demand for carbon fiber products, we have commercialized a carbon fiber recycling operation with Shinryo Corporation, a fully owned subsidiary of MCC that engages in the environmental recycling business.

### "MoRoic Activities" to Improve ROIC with Participation of TOPICS all MPI Group Employees

#### "MoRoic\* Activities"

\* MoRoic: Abbreviation of "Management of ROIC Improvement

Portfolio management is a key measure for creating a high-growth, high-earnings business structure at the MCHC Group, which takes a hands-on approach to managing its business portfolio based on various indicators such as return on invested capital (ROIC), growth potential (sales growth rates), and profitability (ROS). It is crucial that not only management, but all members of the organization understand this key measure. The MPI Group has designated "MoRoic Activities" as front line activities that employees spontaneously or continuously undertake to improve ROIC-related indicators.

The main point of "MoRoic Activities" is that all employees participate. Actions taken by individuals and groups may have a small impact on ROIC, but when all employees act together, the impact on ROIC is significant. Based on this concept, all employees work in concert across divisions including sales and administration, in

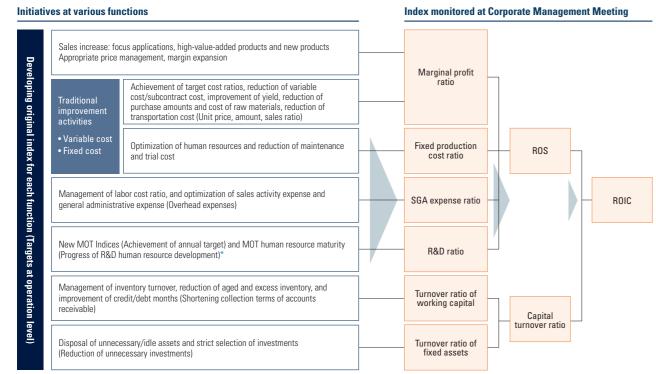
addition to traditional group improvement activities, mainly at production plants.

MPI has a large number of key plants in the Kansai region. "MoRoic" (i.e., moroikoka!! in Japanese) carries in it a nuance of the Kansai dialect, making it easier for many employees to remember.

The MPI Group has adopted ROIC as a business performance indicator. Each business division uses ROIC as a management benchmark for operations, and periodically submits reports to the Management Committee. In goal-setting meetings between managers and their employees, they discuss how individual goals can be tied to improving ROIC within the ROIC tree (see below). By drawing connections between individual goals and management objectives, awareness of ROIC improves and each employee is able to engage in "MoRoic Activities" more proactively.

#### **MPI Group ROIC Tree**

#### Management indicator for improvement in ROIC



#### \* An independent indicator of "MoRoic Activity" to monitor improvements in the R&D ratio

#### Example of "MoRoic Activity"

#### HISHIMETAL plastic film-laminated steel sheets

HISHIMETAL is plastic film-laminated steel sheets that combine the toughness of steel with the functionality of plastics and their superb properties for design. It is mainly used for exterior facing materials such as entrance doors and eaves, as well as interior materials including modular bathrooms, closet doors, curtain rails and other interior features. The breadth of its applications also extends to measuring instruments and vehicle interior decoration.

During processing and transportation, protective films are attached to HISHIMETAL to protect products against surface scratching.

It had been a struggle to reduce inventories of this protective film, because it comes in many varieties of sizes and functions. However, the participation of all employees in "MoRoic Activities" led to a reduction in inventories of

the protective film, leading to an improvement in ROIC.

Improving ROIC requires either growth in profits (i.e., increasing the numerator of the ROIC equation) or a reduction

in invested capital (i.e., decreasing the denominator of the ROIC equation). In the past, measures to improve ROIC tended to focus on increasing the numerator, which is easier to grasp quantitatively. Through "MoRoic Activities," however, employees now understand that decreasing the denominator of the equation also improves ROIC, refocusing their efforts on this facet. The MCHC Group seeks to foster high-earnings, high-efficiency management through activities like this.



uses HISHIMFTAL as a

Understanding the current situation of the protective film

There was an excessive amount of the protective film inventory unable to fit into a single place, and thereby storing them in two separate warehouses. This caused unnecessary transfers of the inventory and also posed a risk to set off inventory management and clearance errors.

from off-line to in-line, there was a build-up of short-wound protective film (small roll inventory) that had to be disposed.

#### **Initiatives for** an improvemen in ROIC

#### Contributing to an improvement of the turnover ratio for working capital

By reducing new films in inventory by reviewing the timing of placing orders and volume of orders, we were able to integrate two storage warehouses into one.

#### Contributing to marginal income ratio by reducing losses

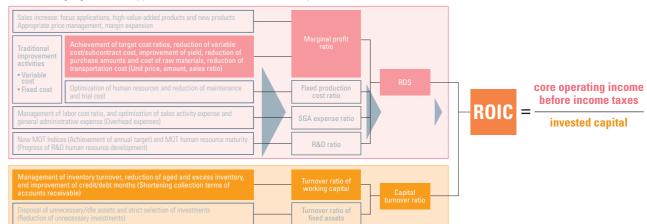
As a result of changing attachment process of protective film

For short rolls that were in inventory, we adjusted width by re-slitting, and standardized control of type and size to make it easy to use for different processes, and were able to eliminate the short rolls within the entire process.

Shrinking the denominator (reduce invested capital)

#### **Improved ROIC**

#### ROIC tree (highlighted area) applicable to the HISHIMETAL case study



**Our products and technologies** in the Industrial Materials domain are supporting a variety of industries and societies. We are proceeding with the diversification of raw materials, including renewable resources and strengthening our business structures.

#### **Business Lines by Segment**

#### Chemicals

The Chemicals segment is expanding its business in the areas of basic petrochemicals including ethylene and propylene derived from naphtha, basic chemicals such as materials for synthetic fibers, coke and other carbon products and the industrial gas business.

#### **Polymers**

We are utilizing our unique marketing capabilities, product development capabilities, and manufacturing technologies to provide synthetic resins and other products that meet advanced and specialized needs.



#### **Main Businesses and Products**



#### Continue extensive cost reduction

As we have resolutely enforced and completed our structural reforms, we are going to supply very cost-competitive basic petrochemicals through our extensive cost reduction. On the other hand, we will further promote a shift to high-performance and high-value-added petrochemical products.

Review of Business Units in Fiscal 2015



#### One of the largest coke ovens in the world

With one of the largest coke ovens in the world, we supply coke to steelmakers inside and outside Japan. From the coal tar, the coking byproduct, we produce a variety of carbon products that support steelmaking and automobile industries around the world.



### World's No. 1 supplier

We dominate the global MMA market with a 40% share. Our robust business model, based on a value chain extending from monomers to polymers and processing, contributes to earnings stability.



#### **The Gas Professionals**

We have a leading 40% share of the domestic market for industrial gases. mainly oxygen, nitrogen and argon. We are expanding our business areas overseas while focusing on North America and Asia as key markets.

#### **Opportunities and Risks**

#### **Strengths**

- · Global marketing capabilities based on a global supply framework for MMA, performance polymers\*1 and industrial gases
- Market position in MMA business with excellent cost competitiveness and No. 1 share of global market, broad range of MMA-related
- Increase in business opportunities from synergies with the industrial gas business
- Accomplishment of restructuring naphtha crackers and utilities to quickly optimize and advance functionality of polyolefin production

#### **Growth Opportunities**

- · Business network capable of addressing growing global demand (MMA business lines, performance polymers\*1 and industrial gases)
- Growing demand in emerging markets: India, the Middle East, Eastern Europe and Africa

#### Risks

- Sharp fluctuations in earnings on commodity petrochemicals due to changes in the supply/demand balance, raw material prices and product prices
- Oversupply in terephthalic acid market\*2 due to mega-expansions and new entrants in China
- Competition from products made with cheaper raw materials, such as shale gas in the U.S. and
- Ongoing shrinking demand for petrochemical products in Japan, market impact of products made in China, which has excess production capacity

#### **Review of Segments in Fiscal 2015**

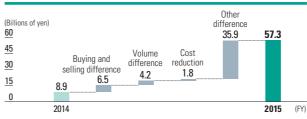
Refer to page 76 for a breakdown of performance by segment.

Operating Income

#### Chemicals

Operating Income

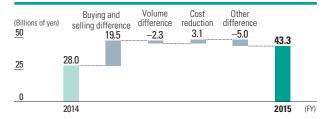
#### Contributing Factors to Operating Income (Figures disclosed in MCHC operating summaries



#### **Polymers**

**Net Sales** 

#### Contributing Factors to Operating Income (Figures disclosed in MCHC operating summaries)



(Notes) 1. Other differences include the impact of the change in the end of the fiscal year 2. In fiscal 2015, some businesses were moved from the Chemicals and Others segment to the Designed Materials segment and Polymers segment. Accordingly, figures for fiscal 2014 have been restated to

#### **APTSIS 15 Step 2 Review and Forecast**

#### Chemicals **Polymers** Operating Income Operating Income (Billions of yen) 55.0 53.0 <u>45</u> 30 <u>15</u> 2015

2015 Result (APTSIS 15

\* Leaping Ahead includes equivalent of ¥20.0 billion for M&As

Result (APTSIS 15

Chemicals recorded a ¥12.3 billion surplus compared to the operating income target in APTSIS 15, reflecting the addition of TNSC to the scope of consolidation.

Operating income in the Polymers segment exceeded the target in APTSIS 15 by ¥8.3 billion, owing in part to fixed cost reductions and improvement in the spread between product and raw material prices, such as polyolefin.

The business environment for this segment is likely to remain challenging, amid shrinking demand for petrochemical products in Japan and unstable commodity prices for products. Accordingly, we aim to increase cost competitiveness and accelerate global business development.

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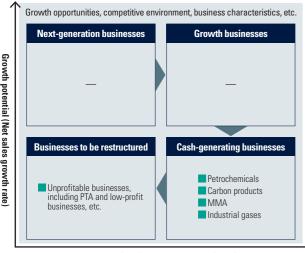
<u>15</u>

<sup>\*1</sup> Performance polymers is scheduled to be moved to the high-performance polymers husiness of the Performance Products domain in April 2017

<sup>\*2</sup> In July 2016, MCHC decided on the equity interest transfer of the terephthalic acid business in India and China.

#### **Growth Strategies**

#### **Business Portfolios (by Business Unit)**



#### Policy

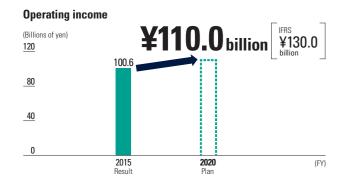
- Stabilization of earnings by strengthening of cost-competitiveness
- Acceleration of growth and strengthening of presence in the global market

#### **Key Strategies**

- > Strengthening of cost-competitiveness
- Acceleration of global development (MMA, Industrial gases)
- ► Business rebuilding

#### Earnings (ROS)/Capital efficiency (ROIC)

#### Plan Values APTSIS 20 Five-Year Plan (J-GAAP)



nvestment amount (Five-year plan, total)

¥580.0 billion

**R&D investment** (Five-year plan, total)

¥80.0 billion

#### **APTSIS 20** Action Plans

#### Petrochemicals

- Aim to restructure crackers by unification of naphtha crackers in Mizushima in 2016
- Continue extensive cost reduction
- Shift to high-performance products, increase proportion of high-value-added products
- Implementation of drastic measures in terephthalic acid business (In July 2016, MCHC decided on the equity interest transfer of the terephthalic acid business in India and China.)

#### Carbon Products

- Repairing coke oven batteries in planned manner, maintain sales to overseas steelmakers
- For high-performance graphite and carbon black, promote development/sales expansion of high-performance products

#### MMA

- "Jump start" of new Saudi JV planned for full operation in 2017
- Ensure competitiveness and stable, high ROS by production system optimization
- Development of new fields and creation of new applications by expansion of high-performance product lineup

#### Industrial Gases

- Promote greater streamlining and optimizing to maintain a stable revenue base in Japan
- Promote M&As on global scale and strategically invest management resources in overseas markets and steadily take in growth opportunities

#### FOCUS | MMA/PMMA

#### **Priority Measures**

## Contribute to stable earnings through superior competitiveness in monomers and an integrated value chain by differentiating and advancing functionality of polymers

MRC has a global network of production and sales bases as the No. 1 supplier of MMA in the world with an approximately 40% share of global production capacity. MRC has built a robust business model with high cost competitiveness and a broad value chain, ranging from commodity products to high-performance products, beginning with MMA monomers and extending to polymers and processed products.

MMA contributes broadly to the advancement of industry and society as a basic material used in acrylic resins (MMA polymers) and other resin modifiers, as well as in high-performance coatings.

Acrylic resins, primary product from MMA, offer high transparency and excellent weatherability, and are used in diverse end products such as signage for convenience stores, lighting, automobile lamp covers, the transparent parts of home appliances, sanitary ware, and aquarium panels. MMA demand is likely to increase in the future.

The value that MRC provides to customers is the capability to support their growth strategies. Along with borderless business, companies can choose where to locate their plants and production bases around the world. By supplying products and services where customers need them, whether it be in Europe, the U.S. or Asia, MRC supports the growth strategies of its customers. Another unique value is its ability to supply MMA-related products like a one-stop shop. With technological prowess, MRC is able to provide high-quality, finely customized solutions that fulfill the

needs of its customers, drawing from its broad product lines, starting from MMA monomers, polymers and processed products which include molding materials, resin sheets, resin improvers, and plastic films, as well as coating materials, optical fiber, and rod lenses.

In a bid to increase competitiveness in the MMA business, we are collaborating with Saudi Basic Industries Corporation on the construction of an MMA plant in Saudi Arabia that uses a new ethylene method\*. With annual production capacity of 250,000 tons, it will be one of the largest MMA plants in the world. We are also considering the construction of a new MMA plant in North America that uses the same production method with shale gas as a feedstock. We aim to improve profitability through this strategy to expand MMA business lines, from monomers to polymers.

In 2008, the new ethylene method was industrialized for the first time in the world and uses commodity chemicals as feedstock, such as methanol and ethylene. Scaling up facilities is also relatively straightforward, so the new ethylene method is highly likely to have cost advantages over the other traditional production methods.

# MMA/PMMA Production sites Under construction MMA monomers MMA polymers

#### POINT of VIEW | Solutions for Social and Environmental Issues

Cover 6 million PET scans per year with a stable supply of Water-180\*1 by expanding production capacity\*2 in 2015

#### Water-180 contributes to early detection and prevention of diseases

PET\*3 scan is the most popular tool in the early detection of cancer. Based on its advanced gas separation technologies as an industrial gas manufacturer, TNSC has developed proprietary cryogenic separation technologies for stable isotopes of oxygen. These technologies facilitate the efficient production of Water-<sup>18</sup>O, a starting material for diagnostic agents of PET scan.

In addition to cancer, PET scan is to be widely used to detect brain disease and heart disease. Accordingly, PET scan market is expected to expand by 5-10% globally per year. To satisfy such strong demand since launching Water-18O in 2004, we expanded production capacity in 2013 and 2015, which led us to have approximately 40% share of the global production capacity. We currently

supply Water-18O to 20 countries around the world.

TNSC contributes to the realization of *KAITEKI* for society by aiding in the early detection and prevention of cancer, brain diseases and heart diseases through the reliable supply of PET scan market amid increasing demand.



Water-18O

- \*1 Water-<sup>18</sup>O is water with a 98% enrichment of <sup>18</sup>O, which only exists as 0.2% of oxygen in the atmosphere. It is used to make PET diagnostic agents "<sup>18</sup>FDG".
- \*2 Water-180 production capacity (from 300kg/year to 600kg/year)
- \*3 Positron Emission Tomography. Cancer cells uptake several times more glucose than healthy cells. PET scan visualizes the location of fluorodeoxyglucose. PET (\*\*PFDG), a radioactive glucose analogue, absorbed by cancer cells. PET scans market has rapidly increased due to their noninvasiveness and ability of initial cancer detection with a single full body scan.

# **Health Care** Domain

Capitalizing on the Group's comprehensive capabilities and network, the Health Care domain develops businesses for pharmaceuticals, diagnostic reagents and instruments, clinical testing, healthy support service, support for new pharmaceutical development, active pharmaceutical ingredients and intermediates, pharmaceutical formulation materials such as capsules, pharmaceutical equipment.

#### **Business Lines by Segment**

#### **Health Care**

The health care business comprehensively covers pharmaceuticals such as diagnostic reagents and instruments, clinical testing, as well as support for new pharmaceutical development. We also take on the challenge of creating new businesses, such as regenerative medicine, while aiming to expand into the health and medical businesses using ICT. In addition to disease treatments, MCHC is advancing operations with the ultimate aim of realizing a society where people can live long and healthy lives



Masayuki Mitsuka **President and Chief** xecutive Officer, MTPC



#### Main Businesses and Products

**Pharmaceuticals** 

Net sales ¥430 billion



#### **Growth into top-class drugs by IKUYAKU** (drug fostering and evolution)

We have put on the market Remicade and Simponi, autoimmune disease treatments with two routes of administration for the diverse lifestyles of patients. These two drugs have grown into the top of their class in the autoimmune disease field, gaining traction through relationships of trust established with medical practitioners.



### **Drug discovery capabilities for world-first** original drugs

Imusera\* is a world's first orally administered treatment for multiple sclerosis. It has been administered to more than 140,000 patients in over 80 countries including the U.S. and countries in the European Union.

sed to Novartis Pharma AG and sold under the name *Gilenva* 

Pharmaceutical development support, clinical testing and diagnostic reagents, pharmaceutical formulation materials Net sales ¥120 billion



#### No.1 share in the world for HPMC\* capsules

We have the No. 1 share in the world for HPMC capsules made of plant-derived raw materials, after being the first in the world to successfully commercialize them



#### **Contributing to the healthy promotion of** sports as the only doping control laboratory in Japan

We contribute to a variety of international sporting events as the only doping control laboratory in Japan and the first in Asia that is officially accredited by the World Anti-Doping Agency.

#### **Opportunities and Risks**

#### **Strengths**

- · Broad business foundation covering sick care to health care and life care
- Ability to discover and post-marketing development in the pharmaceutical business
- Strong market position in the capsule business

#### **Growth Opportunities**

- Diversification of medical needs
- Growing demand in the healthcare field as elderly populations increase around the world
- Upward trend in use of Big Data via healthcare and medical ICT
- Government incentives to maintain health and prevent serious diseases to restrain growth in medical expenditures
- Government incentives to promote health checkups and self-medication

#### Risks

- Declined success rate for new drug development and increased R&D spending from stricter drug approval process
- Delayed global operations
- Various policies to control healthcare expenditures
- High ratio of long-listed drugs in the pharmaceutical business
- · Lack of economic incentives in healthcare

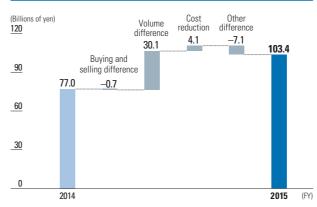
#### **Review of Segments in Fiscal 2015**

Refer to page 76 for a breakdown of performance by segment

#### **Health Care** Net Sales

Operating Income

#### Contributing Factors to Operating Income (Figures disclosed in MCHC operating summari



(Note) Other difference includes costs associated with sales management

#### Stage of New Product Development Progress of major pipeline (Since fiscal 2015)

	Development			Р	hase	Э		Þ
Disease area	code/ Product name (Out-licensee)	Expected indications	Region	1	2	3	Filed	Approved
Auto-		Refractory Kawasaki disease, entero-, neuro-, and vacsulo Behcet's disease	Japan					<b>†</b>
immune diseases	TA-650/ Remicade	Crohn's disease, ulcerative colitis Pediatric: Crohn's disease, ulcerative colitis	Taiwan				_	<b>†</b>
		Psoriasis (increased dosage)	Japan			_		<b>→</b>
Diabetes and kidney	TA-7284*1 (Janssen Pharmaceuticals, Inc.)	Type 2 diabetes mellitus/ fixed-dose combination with metformin, XR	U.S.			-	<b>→</b>	
diseases	MT-4580*1 (Kyowa Hakko Kirin Co., Ltd.)	Secondary hyperparathyroidism in hemodialysis patients	Japan			<b>→</b>		
	MCI-186/ Radicut	Amyotrophic lateral sclerosis	Japan, South Korea				-	<b>→</b>
Central nervous system diseases	пашси		U.S.				•	
	MT-1303	Crohn's disease	Japan, Europe	_	<b>→</b>			
	MT-8554	Nervous system, etc.	Europe	<b>→</b>				
	MT-5199	Nervous system	Japan	<b>→</b>				

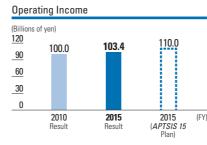
\*1 Licensing-out

Vaccines Tribik

Prophylaxis of pertussis, diphtheria.

#### APTSIS 15 Step 2 Review and Forecast

#### **Health Care**



The Health Care domain fell short of its operating income target under APTSIS 15 by ¥6.6 billion. This was due in part to a sharp decline in earnings for long-listed drugs as a result of stronger-than-anticipated government policies to encourage the use of generic drugs in the earnings base of the domestic ethical pharmaceutical market. It was also due to slow business development in the U.S., the world's largest drug market, owing to the abandonment of a drug under development for treating kidney disease.

Amid rapid change in the business environment for this segment, the MCHC Group aims to sustain growth by accelerating global business development. At the same time, we are also expanding in the health and medical businesses that use ICT, and developing new businesses such as regenerative medicine.

<sup>\*2</sup> We jointly developed with permission from the Research Foundation for Microbial Diseases of Osaka

Earnings (ROS)/Capital efficiency (ROIC)

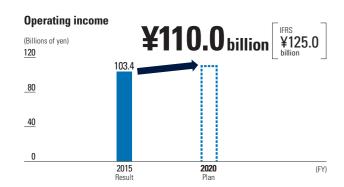
#### Policy

- ➤ Aim at worldwide growth in ethical pharmaceutical business
- Establish and expand the health and medical business utilizing ICT and regenerative medicine business

#### **Key Strategies**

- Promote overseas business mainly in the U.S.
- > Strengthen new drug creation abilities
- Maximize potential of new drugs and priority products by strengthening value development and sales
- Expand the healthcare and medical business utilizing ICT
- Promote the regenerative medicine business

#### Plan Values APTSIS 20 Five-Year Plan (J-GAAP)



**Investment amount** (Five-year plan. total)

¥460.0 billion

**R&D** investment (Five-year plan, total)

¥440.0 billion

#### **APTSIS 20** Action Plans

#### **Ethical Pharmaceuticals**

- •Invest ¥400 billion in R&D and create new drugs that can be deployed worldwide
- Achieve domestic sales of ¥300 billion (new drug and priority product sales ratio of 75%) by strengthening value development and sales especially in new drugs and priority products
- •In the U.S., establish a sustainable growth platform by establishing business platforms with strategic investments of ¥200 billion or more, including M&A and by building a product lineup with open shared business (*OSB\**)
- \* MCHC registered trademark No. 5585432

#### Life Science

- Expand the healthcare-medical business that utilizes ICT (health prediction support, diagnostic support, etc.) by viewing the progress of the use of digital information as a business opportunity
- Obtain early approval of regenerative medicine products that use Muse cells in 2019
- Improve profitability and expand business by global spread in the capsule business

#### FOCUS | Pharmaceutical Business

#### **Priority Measures**

#### Establish a sustained growth platform by developing business in the U.S.

Amid rapid changes in the business environment for ethical pharmaceuticals, in its aim for sustained growth in the pharmaceutical business, MTPC must quickly roll out a business platform for marketing drugs on its own in the U.S., the world's largest pharmaceutical market, and maximize the value of priority products by strengthening value development and sales in the domestic market, while enhancing its presence in priority disease fields.

In June 2016, MTPC filed a New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA) for *Radicut* (MCI-186), which was approved in Japan as an additional indication for amyotrophic lateral sclerosis (ALS) in June 2015. On the assumption the drug will be approved in fiscal 2016, we are making its

#### Build business foundation in specialty fields in the U.S.

- ➤ Build a product lineup, with MCI-186 (indication: ALS) as the first step
- Establish a marketing organization that meets the needs of specialists in such fields as neurology

NDA filed (June, 2016) MCI-186

First step in obtaining approval for in-house products

market launch our highest priority. As the first step for MCI-186, we plan to make the necessary preparations for creating a product lineup for nervous system disorders and rare diseases, such as putting in place a marketing structure focused on medical specialists. We plan to invest more than ¥200 billion over the course of the medium-term management plan (fiscal 2016-2020), including M&A, to expand the business foundation in the U.S. By fiscal 2020, we target sales of ¥80 billion in the U.S. Moreover, we aim to build up our product lines in the U.S. by acquiring products and products under development through various types of partnerships with academia, venture companies and pharmaceutical companies, in addition to our own pharmaceutical discovery capabilities.



Medicago Inc.
virus like particle
(VLP) vaccines

Strengthen product lineup through
in-house discovery and acquisition

product

Strategic investment in the U.S. of more than **¥200.0** billion

Running royalty income

## POINT of VIEW | Solutions for Social and Environmental Issues

#### **MOS** Indices

H-3 Contribute to achieving healthy and hygienic lives through products and services

#### **MCHC Group Target**

Improve the index of product provision in the health field by 14 points and growth in sales of related products and services in the medical field to 60% in fiscal 2020

## Contribute by providing valuable products and services in the health care and medical fields while accelerating global development

Qualicaps, an affiliate of LSII that produces and sells capsules for drugs and health foods, has produced and sold capsules for drugs and health foods, as well as pharmaceutical processing equipment, since its establishment in 1965 with global operations centered on Japan, the U.S. and Europe.

In December 2015, Qualicaps acquired Genix Industria Farmaceutica Ltda. and turned it into a consolidated subsidiary with the objective of acquiring production and sales bases while tapping into the pharmaceutical market in Latin America, which is projected to grow an average of 5-8% annually through 2019. Genix has more than 50% of the hard capsule market in Brazil.

Amid growing awareness of health around the world, companies have been developing a variety of products for the growing markets of health foods, medical foods and supplements. In these fields, we anticipate stronger de



Genix Industria Farmaceutica Ltda.

fields, we anticipate stronger demand for capsules and technologies for printing on tablets.

Qualicaps has established strong relationships with customers and business partners in Latin America, in addition to Japan, Europe and the U.S., and is aggressively developing business in these regions.

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## Message from the CTO

Gutilizing the Group's rich resources and through open innovation, we provide comprehensive solutions that contribute to the realization of KAITEKI.



Glenn H. Fredrickson Managing Corporate Executive Officer, CTO

As we enter 2016, the MCHC Group continues to face a highly competitive business environment worldwide. To survive and flourish, we must accelerate innovation by strengthening our technology base. In addition to vigorous in-house development, we are increasingly collaborating with global universities and launching open shared business (OSB\*) relationships with mature and start-up companies to source necessary technologies. During the previous medium-term management plan APTSIS 15 period, the Group achieved significant technology milestones in advancing the next-generation growth businesses, although the launch and profitability of several of these was delayed relative to the plan. We will continue to support their technology needs in the new medium-term management plan APTSIS 20 period, along with the APTSIS 20 next-generation businesses, by fully utilizing the Group's rich resources and promoting OSB.

The integration of MCC, MPI, and MRC in 2017 represents a particular opportunity. We will build a modern R&D organization that combines the

accumulated knowledge, capabilities, and facilities from across the three companies. The foundation for the new organization will be the 12 technology platforms that were identified in last year's core technology mapping exercise. We aim for a flexible organization that can balance the short- and long-term needs of the business units against the desire to diversify and strengthen platform technologies. The R&D organization of the new-Mitsubishi Chemical Corporation will also have a significant commitment to open innovation, building strong ties with top universities and venture-backed companies from around the world.

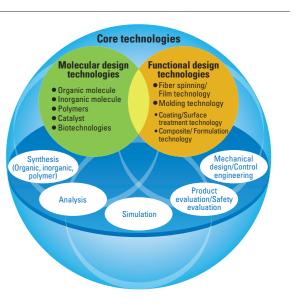
The APTSIS 20 plan identified five next-generation businesses that will be the focus of our innovation efforts. In Healthcare Solutions, we are looking to leverage the exciting plant-based vaccine technology of our Medicago unit. R&D within Bio Solutions includes the identification of new sustainably-sourced monomers that can be used to design high-performance polymer resins. In Gas Solutions. we seek to exploit TNSC's broad technology base to new markets in medicine and healthcare. New Energy and Frontier Materials will develop broad new classes of hybrid materials that contain silicon and carbon components. Finally, Solutions Integrating Big Data and ICT will seek to incorporate world-class data analytics, discovery, and optimization tools into all of our activities including R&D, manufacturing, supply chain, operations, sales and services.

We are excited by the opportunities for innovation that our next-generation business targets and integrated R&D organization will provide in the APTSIS 20 period and beyond.

\* OSB (Open Shared Business) is the MCHC framework for working with organizations outside the Group. We promote collaboration in both R&D and business and build a distinctive value chain by using the OSB framework.

#### **Strengthening Our In-House Technologies**

The MCHC Group sells tens of thousands of products ranging from basic materials to consumer products, applying its proprietary technologies and expertise in each field. R&D and manufacturing departments are managed with the goal of improving the value and competitiveness of our technologies. Using the foundation of the core technologies shown in the diagram, targets for R&D are set on the themes in accordance with "Sustainability," "Health" and "Comfort." We are working on further strengthening our core technologies and creating new core technologies, while at the same time we promote an integrated R&D system by formulating R&D strategies that meet the needs of our business strategy and intellectual property strategy, so that we can rapidly commercialize the fruition of our R&D. The procurement, logistics, sales and other departments are building up know-how in their operations and driving innovation in work practices.



#### **Open Innovation**

The MCHC Group seeks to fully apply Group technologies and expertise in production and sales in order to provide optimal products and services in a timely fashion in accordance with the needs of markets and society. We believe it is essential to vigorously collaborate with our partners possessing advanced technologies, efficient production systems and sales networks. We consequently utilize OSB in all fields from R&D to

business, strategically design in-house black box (closed) sections and sections to collaborate with external entities (open) in sequence to rapidly develop a business model that cannot be easily imitated by others.

To support business through advanced technology, we fuse in-house core technologies with outside technologies to achieve a higher technology level.

#### **MOT Indices**

To accelerate creating innovation, MCHC has introduced the MOT Indices to quantitatively manage our progress in the innovation process. Three indices comprise the MOT Indices: the R&D Index, the Intellectual Property Index, and the Market Index. We have used the MOT Indices on a trial basis since fiscal 2013. Based on the outcome, we reviewed them during formulation of APTSIS 20 and have started operating the new indices.

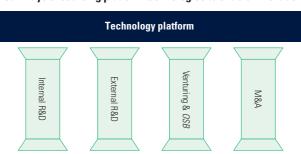
#### **Examples of the MOT Indices**

MOT Indices	Specific Example of the Indices			
R&D Index Elevated stage success ratio (development stage to launch stage)				
Intellectual Property Index  Overseas patent applications ratio (the proportion overseas applications account for the entire number of applications)				
Market Index	New product ratio (the proportion new products and services account for sales)			

#### Approach to Innovation

The MCHC Group understands "innovation" to mean the provision and realization of comprehensive solutions such as creating new value chains and lifestyles that did not exist previously. Moreover, we go beyond R&D of components and materials, and aim for the creation of innovations, where we take into account wide perspectives from the manufacturing process, distribution channels, up to the proposal of new uses and applications. To strengthen the technology platform that becomes the base for this, the MCHC Group promotes the four initiatives of internal R&D, external R&D, venturing & OSB, and M&A.

#### Four ways of sourcing platform technologies to enable innovation



#### **Next-Generation Businesses**

In the business portfolio for APTSIS 20, we have selected incubation businesses to drive growth for the MCHC Group from 2020-2025. These next-generation businesses take into account the business strategies of each operating company and overall Group strengths.

#### **Business portfolio**



Farnings (ROS)/Capital efficiency (ROIC)

# Value Creation Process

Strategy

Financial Section

#### TOPICS Next-Generation Businesses

We have selected five items for incubation businesses that will be instrumental in driving growth for the MCHC Group in 2020-2025. We are advancing the development using the OSB framework while fully leveraging the abundant resources of the Group.

Next-generation businesses	Research areas
Healthcare solutions	Regenerative medicine, diagnostic support systems, plant-derived vaccines
Bio solutions Functional vegetables and growth factors using plant factories, plant-derived monomers and polymers, effective use of enterobations	
Gas solutions	CO2 enriched water system, cryopreservation-related technologies, hydrogen stations, medical applications of gases, stable isotope pharmaceuticals, gas/liquid separation materials
New energy and frontier materials	Organic photovoltaic materials, silicon-related materials
Solutions integrating big data and ICT	Proactive utilization of big data and ICT for all activities ranging from manufacturing, R&D to businesses and services

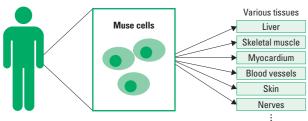
#### **Healthcare Solutions**

#### **Next-Generation Regenerative Medicine** using Muse Cells

Regenerative medicine is a cutting-edge medical technology that restores the functions of organs/tissues that have been damaged by injury or disease. On June 1. 2015, LSII acquired Clio, Inc. for its exclusive license to use Muse cells\*, a type of stem cell that is applicable to regenerative medicine. Clio is conducting R&D to commercialize regenerative medicine using Muse cells.

Muse cells are stem cells that naturally exist inside living body, thus are believed to be safe, and have the ability to differentiate into various types of cells that constitute the body. In animal experiments, for example, infusing Muse cells into the blood vessels of animals with injuries to their hearts due to myocardial infarction exerted a therapeutic effect, as these Muse cells migrate to the heart and spontaneously differentiate into cardiomyocytes as well as cells in blood vessels to replenish the damaged cells. Clio has been investigating stable manufacturing methods of safe Muse cell preparations that can be given to humans.

#### What are Muse cells?



#### Regenerative therapy by Muse cells





Clio plans to begin clinical trials in the next fiscal year after conducting nonclinical toxicity studies required by regulations. Muse cells are believed to show efficacy for diverse organ diseases, not only myocardial infarction. The regenerative medicine using Muse cells holds promise for bringing groundbreaking treatments to patients suffering from diseases that still lack effective treatments even with modern medicine

\* Muse cell: Multilineage-differentiating stress-enduring cell

#### **Technologies that Support Regenerative Medicine**

The commercialization of regenerative medicine requires the development of a variety of technologies and systems to handle biological specimens. Leveraging its strengths as Japan's only manufacturer of cryopreservation containers, in 2009, TNSC released the CryoLibrary, a fully automated cryopreservation system that features an automated storage and retrieval function that prevents mistakes when handling biological specimens. In March 2015, TNSC followed up with the release of CryoLibrary Advance, which halves liquid nitrogen evaporation while more than tripling the storage efficiency of biological specimens.

In June 2016, TNSC launched CryoLibrary iMaster, an integrated record management system for specimen temperature data of the entire process from its cultivation to shipping, thawing, and post-thaw culture. It was developed working on consignment from the Stem Cell Evaluation Technology Research Association on a project

promoted by the Japan Agency for Medical Research and Development (AMED). This server-based system enables using bar codes and other data carriers with specialized PC software to manage temperature data for each stage of the process.

TNSC plans to develop other systems that support the commercialization of regenerative medicine.



CryoLibrary Advance

#### **Gas Solutions**

#### Package-Type Hydrogen Refueling Station for Fuel Cell Vehicles (Hydro Shuttle)

Hydrogen is said to be the ultimate source of energy in terms of alleviating environmental impact. Fuel cell vehicles (FCVs) that use hydrogen as a fuel do not emit carbon dioxide when driving. For FCVs to become widely used, a nationwide network of hydrogen stations must be installed to supply hydrogen gas.

TNSC focuses on hydrogen projects, leveraging the industrial gas production and delivery technologies it has accumulated over many years. TNSC has participated in the national WE-NET Project from the outset, and in 2002, the first-ever mobile hydrogen station was unveiled in Kasumigaseki as a part of the Japan Hydrogen & Fuel Cell Demonstration Project (JHFC) being promoted by the New Energy and Industrial Technology Development Organization (NEDO). To increase the number of hydrogen refueling stations and promote commercialization, TNSC has managed to lower the cost and reduce the size and weight of each device to develop the Hydro Shuttle, a package-type hydrogen refueling station. It cuts installation costs by roughly 50%, is compact enough to fit on a truck, and

systems with identical specifications can be installed as stationary or mobile stations. In February 2015, TNSC established a joint venture with Toyota Tsusho Corporation and Iwatani Corporation to supply mobile hydrogen stations. In March 2016, group company Shikoku Taiyo Nippon Sanso Co., Ltd. opened the first mobile hydrogen station in Shikoku in Tokushima City. TNSC will continue to contribute to the creation of hydrogen refueling infrastructure for FCVs.



Mobile hydrogen station Hydro Shuttle

#### **New Energy and Frontier Materials**

#### **Commercializing Thin-Film Organic Photovoltaics**

Coating transparent films such as plastics with organic semiconductor materials, enables the production of thin-layered, lightweight and flexible solar cells through which light can penetrate (see-through). With these thin-film organic photovoltaics (OPV), it will become possible to generate electricity in places where conventional silicon-based solar panels could not be easily installed, such as on building walls and windows.

MCC has developed OPV using its core technologies in molecular design, synthesis and functional design. To accelerate the commercialization of OPV, MCC has installed 11 experimental testing facilities during 2013-2015 as a part of a NEDO project to verify the durability of its OPV and their capacity to generate electricity in an actual working environment.

At the Mizushima Plant, a test production facility was launched in 2012 for the roll-to-roll process, which coats organic semiconductors onto rolled film. The OPV film produced at this facility is used in a variety of modules in the forms of film, glass and sheet, and were installed under differing conditions whether indoor/outdoor, connected to independent/interconnected power systems and also facing various directions and angles. This flexible, see-through OPV was installed inside the Sendai International Center. MCC also jointly developed the world's first OPV unit for building exteriors with Taisei Corporation for its Zero Energy Building (ZEB) concept, and are now field-testing the units. In addition, MCC has made significant progress toward the commercialization of see-through OPV film,

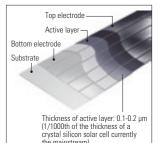
achieving an energy conversion efficiency of 6%, the highest level in the world, by improving its organic semiconductors used in the active layer.



OPV installation example at the Sendai International Center



OPV installation example at the ZEB Demonstration Facility (Taisei Corporation)



Cross-section of OPV

#### Message from the CSO

Our approach to sustainability entails a diverse array of initiatives to create value that contributes to the realization of KAITEKI.



Shushichi Yoshimura Managing Corporate Executive Officer, Chief Sustainability Officer

Management of Sustainability (MOS) is a key management axis at the MCHC Group for the sustainable development of society and the Earth. MOS has gained traction within and outside the organization as more people have come to appreciate its significance, and this has translated to improvements in corporate value. In the MOS Indices, a quantitative measurement of indexed progress on core issues, we reached 244 points under the previous management plan, 81% of the 300-point target we had set for fiscal 2015. Targets were achieved for reducing environmental impact, saving energy, treating and preventing disease, improving stakeholder satisfaction, and advancing diversity. However, not enough progress was made toward targets for the lost-time injuries frequency rate, use of recyclable resources, and contributions to solving water resource issues. We will

work harder to achieve these targets under APTSIS 20.

Turning to global trends, amid the increasing complexity and multipolarization of economies, countries have gradually come together in an international approach to addressing commonly shared issues related to the environment and society around the world, including through U.N. Sustainable Development Goals (SDGs) and the Paris Agreement\*. Meanwhile, companies are playing an increasingly important role in meeting these targets.

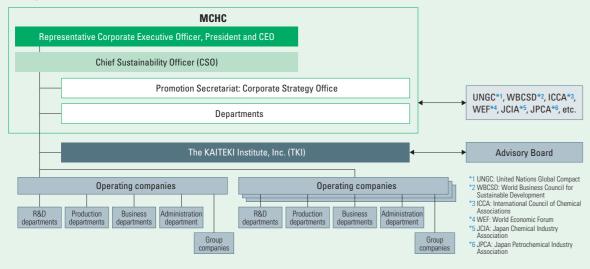
Leveraging our accumulated experience in KAITEKI Management in this business environment, we newly identified issues to be addressed (Materiality Assessment) under our new medium-term management plan that commenced in April 2016, and are advancing measures at the starting point of our strategies. For the new MOS Indices, we have worked on improving criteria and management methods within the context of materiality.



adopted at the 21st Conference of the Parties of the UNFCC (COP21).



#### MOS promotion framework



# **Performance Evaluation and Disclosure**

#### **APTSIS 15 MOS Indices (Contribution to Sustainability)**

From the outset of the previous medium-term management plan APTSIS 15, the MCHC Group has used the MOS Indices as a new management benchmark to visualize the degree of its contribution to sustainability. The MCHC Group has selected quantifiable criteria as indicators of how its corporate activities have had a major impact on solving a broad range of emerging environmental and social issues. The MCHC Group developed a scoring methodology, where a target score is 300 points, with 22 indices based on three decision criteria: "Sustainability," "Health," and "Comfort." In fiscal 2015, the MCHC Group scored 244 points. Under APTSIS 20, we will continue to utilizing

the MOS Indices as a measure of our progress during the course of the new medium-term management plan.

#### Progress of the MOS Indices toward the goal



#### The MOS Indices progress at a glance

Self-assessment of APTSIS 15 results compared to fiscal 2015 targets

★★★ 80-100% attained ★★ 60-79% attained ★ Less than 60% attained

				PLAN	D0	CHECK
		MOS Indices		FY 2015 Targets	FY 2015 Results	Self- Assessment
Tar	gets t	that must be achieved	Achie	ve zero occurrences of serious accidents and compliance violations	Zero occurrences	***
	0.4	Contribute to reducing	S-1-1	Reduce environmental impact by 30% from FY 2005 levels	36%	***
	S-1	environmental impact through products and services	S-1-2	Generate reduction of CO <sub>2</sub> emissions by 3.5 megatons through products	1,427,000 tons	*
			S-2-1	Procure reusable materials equivalent to 10,000 tons of heavy oil in FY 2015	1,330 tons	*
Sustainability	S-2	Take action against the depletion of natural resources and implement	S-2-2	Reduce cumulative rare metal usage by 1,200 tons through improving processes and innovating products	953 tons	**
[Green] Index		energy-saving initiatives	S-2-3	Generate resources and power savings of ¥8.8 billion	¥11.29 billion	***
			S-2-4	Provide 900 million tons of reusable water through our products	550 million tons	**
		Contribute to solving social and	S-3-1	Achieve 80% purchased items surveyed for toxic substances	84%	***
	S-3	environmental issues through supply chain management	S-3-2	Achieve 90% purchasing of raw materials and packaging according to CSR guidelines	95%	***
Health Index	H-1	1 Contribute to medical treatment		Increase the index performance derived by the degree of difficulty to treat diseases multiplied by the number of administered patients by 50% (compared with FY 2009)	20% increase	*
	H-2	Contribute to improvements of QOL	H-2	Increase contribution to QOL improvements by 70% (compared with FY 2009)	94% increase	***
		Contribute to early detection and	H-3-1	Increase the index of vaccine treatment by 17% (compared with FY 2009)	129% increase	***
	H-3	prevention of diseases	H-3-2	Increase the number of people taking diagnostic tests by 26% (compared with FY 2009)	21% increase	***
	C-1	Deliver products (development and manufacturing) for comfortable	C-1-1	Increase sales of comfort-oriented products by ¥400 billion (compared with FY 2010)	¥229.1 million (compared with FY 2010)	*
		lifestyles	C-1-2	Increase the new product ratio from 16% to 30%	25%	**
			C-2-1	Improve third-party corporate assessments	Nikkei NICES*1 Ranking: 51	***
	C-2	Improve stakeholder satisfaction	C-2-2	Achieve targets for employee-related indices	66.4% achieved	**
Comfort			C-2-3	Improve customer satisfaction to 80% or more	72%	***
Index			Reduce safety accidents		68% reduction vs. base year*2	***
			Redu	ce environmental accidents	0 incidents	***
	C-3	Earn recognition of corporate trust	Redu	ce claims to products	61% reduction vs. base year*2	***
			Redu	ce the lost-time injuries frequency rate	0.50*3	*
			Asses	ss product safety according to GPS for 70% of products	Confirmed for 77%	***

- \*1 The C-2-1 Index is rated by various corporate assessments. Nikkei NICES, which was conducted by a Japanese newspaper, is one of the indicators of this assessmen\*
  10 House and the highest number of accidents or claims from fiscal 2008 through 2010 has been set as the base year.
  11 Indexed based on the figures for four operating companies (MCC, MIPC, MPI, and MRC)

# Performance Evaluation and Disclosure

#### FOCUS | MOS Indices Topics

#### Sustainability S-2-1 Procure reusable materials equivalent to 10,000 tons of heavy oil in fiscal 2015

Society is increasingly in need of plant-derived bioplastics amid concerns about the depletion of fossil-derived resources in the future. In recent years, however, the price of crude oil has declined, increasing the relative competitiveness of petrochemical products for the time being. Moreover, simply because a product is derived from plants does not mean it can actively replace existing petrochemical products. For these and other reasons, the bioplastics market did not expand as quickly as we had anticipated under *APTSIS 15*.

From a longer-term perspective, however, prices for exhaustible natural resources are likely to start rising again and amplify social demands for bioplastics. In Europe and other regions, momentum has been gathering toward regulating the biodegradability and bio content of products. Under *APTSIS 20*, the MCHC Group aims to surmount higher hurdles and achieve target for index related to reusable raw materials. Through products like *DURABIO* and *BioPBS* that are able to take on a variety of functions, we meet the diverse needs of our customers while taking a step closer to realizing *KAITEKI*.



#### Health H-3-2 Increase the number of people taking diagnostic tests by 26% (compared with fiscal 2009)

At the end of *APTSIS 15*, the index for the number of people taking diagnostic tests and health checkups was 21% higher than in fiscal 2009. This reflects robust expansion in the clinical testing market alongside growth in the adult population and the number of elderly people, firm growth in the health checkup market amid rising interest in health, and measures to differentiate ourselves from rivals by introducing new items, collaborating with industry and academia, and marketing proposals. Under *APTSIS 20*, MCHC aims to take another step toward realizing *KAITEKI* while advancing operations further in this field, measuring progress against the index whose evaluation coverage has newly included diagnostic instruments and self-medication services.



#### Comfort C-1-2 Increase the new product ratio from 16% to 30%

The index for increasing the new product ratio is a measure of products that connect to providing new comfort value and satisfying the needs of stakeholders. Over the five-year period of *APTSIS 15*, the new product ratio increased by 8 percent points to 25%, but not enough to achieve the 30% target. In the Health Care domain, this ratio improved from the launch of treatments for diabetes and rheumatoid arthritis as scheduled, as well as strong expansion in overseas markets for multiple sclerosis treatments. In the Performance Products and Industrial Materials domains, the new product ratio fell short on account of delays launching businesses that were expected to drive growth in the next generation. Under *APTSIS 20*, MCHC has set MOT Indices for measuring progress on innovation and R&D outcomes from a market perspective.



# Performance Evaluation and Disclosure

#### **TOPICS**

#### **Initiatives for Stable Operations**

MCC is developing and deploying Super Stable Operation Technology (SSOT) to avoid interruptions to operations and problems that reduce production efficiency. For example, heat exchangers used for heating and cooling applications experience a loss in heat transfer efficiency when fouling occurs at internal parts, which also increases fuel consumption. If fouling completely blocks key parts, the heat exchanger can no longer be operated, resulting in significant losses. To solve this problem, we took a hard look at the root causes, taking a methodical approach to identifying and understanding the issues, and then creating and implementing solutions. We then deployed basic technologies to verify that the problem has been solved based on our hypothesis. These efforts have contributed to

the stable plants. The steps involving the identification and understanding of phenomena are particularly important. To this end, we are also developing testing equipment that



reproduces fouling conditions and technologies to measure the amount of dirt using operational data. These initiatives have contributed to improvements in the MOS Indices through the avoidance of production loss, conservation of energy, reductions in irregular work for operators, and a lower risk of residue into the atmosphere caused by the opening of equipment for repair work.

#### Component technologies making up SSOT



#### **Climate Change Initiatives**

As a group of chemical companies with global operations, the MCHC Group recognizes that climate change and global warming are environmental issues of vital importance, and has taken action on various fronts to help solve these issues by advancing measures to slow climate change and combat global warming. Under APTSIS 15, MCHC not only reduced its own emissions of GHG, but also contributed to the creation and proliferation of solutions for reducing GHG emissions around the world through the provision of LED materials, lithium-ion battery materials, and carbon fiber composites. Based on the c-LCA (carbon life cycle assessment) method, MCHC has created and disclosed its method for calculating Scope 3 emissions, provided data about the carbon footprint of its products to customers, and formulated the MOS Indices for measuring the contribution its products make in reducing GHG.

Through these initiatives, MCHC has improved considerably in terms of CDP (formerly the carbon disclosure project) assessments related to carbon management. We

intend to accelerate these initiatives with the aim of cooperating in keeping the global average temperature rise to below 2°C above pre-industrial levels, as set by the Paris Agreement adopted at COP21.





Source: Japan Chemical Industry Association

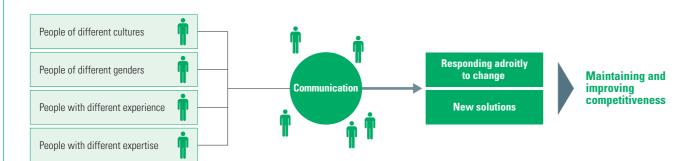
# **Performance Evaluation and Disclosure**

## TOPICS Promoting Success of Diverse Human Resources

Amid the globalization of corporations, maintaining our competitive advantages requires resilience to change. A corporate culture that celebrates diversity is paramount to having this competitive edge. We aim to be a company that

encourages people from diverse backgrounds to work enthusiastically and grow as a result, while continuing to lead fulfilling lives.

Source of resilience	Example of measures	Example of communication of measures		
Diverse culture Accelerate employment of local staff and seek business opportunities by interacting with multinational employees.		Local Senior Staff Development Program     Overseas Business Challenge Program		
Gender	Support women in management roles and aim to keep management unbiased by valuing women's perspectives in management.			
Expertise	Strive to eliminate stereotypes and advance innovation by creating work environments that facilitate information sharing and discussions among experts in various fields.	Group Technology Reports     Group-wide Small Group Activities Event		
Wide array of generations				
Fulfilling lifestyles	Create a platform for quality communications and endeavor to provide workplaces where each and every employee can work enthusiastically while maintaining a healthy mind and body.	Mental Health Support     Health Promotion Activities (including the walk rall		



#### **Cultural Diversity Initiatives**

As Group companies accelerate business development overseas, the MCHC Group has implemented training programs for the entire Group around the world. One of these training programs is local group training for employees in managerial positions. In 2015, these local group training sessions, were held in Singapore, Indonesia, Thailand, India, Taiwan and South Korea. Instructors dispatched from Japan and local managers were put in charge of these training sessions where participants of different nationalities engaged in lively face-to-face discussions of ideas related to compliance. The MCHC Group will continue to advance business activities blending different cultures by promoting interactions among personnel on a global scale.





#### **Principles**

To improve sustainability for people, society and the Earth, the MCHC Group believes it is important to engage in dialog with stakeholders. The MCHC Group engages in discussions with its stakeholders with the aim of sharing its values with them, in addition to disclosing results on its efforts to improve sustainability, such as the MOS Indices. We aim to reflect in our corporate activities the diverse perspectives of all our stakeholders in a bid to improve sustainability.



In May 2006, MCHC expressed support for the United Nations Global Compact, which states 10 principles in the areas of human rights, labor, the environment, and anti-corruption, and the MCHC Group is promoting its corporate activities in accordance with the norms of the 10 principles.

#### **TOPICS**

#### **Dialog with Business Partners**

To create a sustainable society, the MCHC Group believes it is essential to share its values about sustainability with stakeholders who are connected to its value chain while cooperating with them.

Putting this belief into practice, we have conducted customer satisfaction surveys since fiscal 2012, issued a guidebook, Developing Cooperative Business Practices with Suppliers and Business Partners, in fiscal 2014 based on the MCHC Group Charter of Corporate Behavior, created the Product Stewardship Policy in September 2015, and promoted dialog with our business partners.

# **Customer satisfaction** 2013 2014

#### **Dialog with Society**

The MCHC Group has participated in the Eco Products Exhibition, one of the largest environmental product exhibitions in Japan, since 2014 in a bid to broadly disseminate its values with stakeholders. In regard to KAITEKI, we put on display the product lines of the MCHC Group that bring us closer to realizing KAITEKI and provide solutions for environmental and social issues. In 2015, approximately 4,500 people visited our exhibit over a three-day period, between December 10 and 12. Of the 2,789 people who answered our survey, 92% stated that they agreed with the efforts being made by the MCHC Group to realize KAITEKI. Employees who explained KAITEKI while talking with attendees came away from the experience with a greater appreciation of what society asks of the MCHC Group. This gave them an opportunity to view our operations from a more objective standpoint.



#### **Dialog with Employees and Society**

Materiality is an important management issue. To address the wide range of opinions of its stakeholders, while reviewing materiality assessments in fiscal 2015, the MCHC Group conducted a survey of stakeholders inside and outside the Company on the importance of social and environmental issues that the MCHC Group should focus on more strongly as a part of KAITEKI activities. The valuable opinions of nearly 1,000 people were gathered from the survey, and these stakeholder viewpoints are being incorporated in our reviews of the importance of social and environmental issues. As a consequence, we have gained traction on MOS under APTSIS 20, allowing us to better incorporate the opinions and expectations of our stakeholders.



MCHC has identified the important issues in its materiality assessment for the medium-term management plan *APTSIS 20*, and prioritized these issues based on their

impact on corporate activities and other factors. This materiality assessment and its accompanying matrix are used as a compass for our corporate activities.

#### **Materiality matrix**

Most Important Key Management Issues Related to the MCHC Group's Existence: (2) Compliance, Process Safety, Corporate Governance

#### **Key Issues Related to the Global Environment**

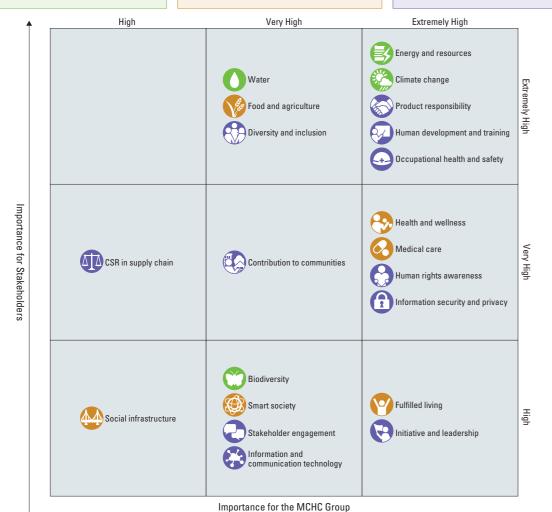
Key management issues that the MCHC Group should address through its corporate activities, innovation of products and services in the aim of achieving comfort for the Earth.

#### Key Issues Related to Social Systems

Key management issues that the MCHC Group should address through its corporate activities, innovation, and provision of products and services in the aim of creating a more comfortable society.

## Key Issues Related to the Company and Its Organizational Structure

Key management issues that the MCHC Group should address in its internal operations and external relations as a corporate group aiming to realize KAITEKI.



Process 1	> Process <b>2</b>	> Process 3	> Process 4	> Process <b>5</b>
Set issues to be researched and analyzed	Assess issues from the viewpoint of stakeholders	Identify and prioritize material management issues the MCHC Group needs to address	Create the materiality matrix	Company approval procedures
As a starting point, ordered corporate activities under APTSIS 20 by analyzing macro trends. Reviewed material issues identified in the previous assessment and added new issues.	Order and assess the importance of the issues based on public sustainability data, questionnaires, and interviews with experts.	MCHC management identifies material management issues accounting for management strategies, policies and activities under APTSIS 20 and prioritized them (three issues of highest priority related to the MCHC Group's existence and 21 materiality issues to be addressed!	Create the matrix along the two axes of importance (the magnitude of effect) for stakeholders and importance for the MCHC Group.	Discuss and approve the process of materiality assessment and the materiality matrix in the MCHC Management Committee.

#### APTSIS 20 MOS Indices

		MOS Indices		Initiatives	Assessment criteria	FY 2020 numerical target	Point allocation	Related materiality theme
Index that need to be achieved			Achie	ve zero occurrences of serious accidents an	d compliance violations			
		Contribute to reducing environmental impact	S-1-1	Reduce burden on the atmospheric environment	Reduction of per-unit impact on the atmospheric environment	20%	10	
	S-1		S-1-2	Reduce burden on the water environment	Reduction of per-unit impact on the water environment	25%	8	
			S-1-3	Reduce burden on the soil environment	Reduction of per-unit impact on the soil environment	15%	10	
			S-2-1	Promote activities to conserve energy	Heavy oil equivalent of energy-saving benefit	66,000 tons	13	
s	S-2	Efficient use of resources and	S-2-2	Convert to resource-saving and reusable	Reduction in heavy oil equivalent of resource volume	12,000 tons	13	
Index	02	energy	0 2 2	materials	Growth rate in provision of resource recycling services	28%	10	
			S-2-3	Promote use of renewable energy	Volume of renewable energy generated and supplied	50 MW	13	
		Contribute to the sustainability	S-3-1	Provide products and services that contribute to reducing GHG emissions	Contribution to the reduction of GHG emission	150 million tons-CO <sub>2</sub> equivalent	13	
	S-3	of the environment and resources through products and services	S-3-2	Provide products and services that help solve water resource problems	Volume of reused water supplied	1.7 billion tons	10	
			S-3-3	Provide products and services that help solve food problems	Growth in sales of related products and services	30%	10	
	H-1	Contribute to medical	H-1-1	Pharmaceuticals provision	Improvement in the pharmaceuticals provision contribution index	15 points	15	
		treatment	H-1-2	Provide clinical testing services	Improvement in the contribution index for providing clinical testing services	15 points	15	
		Contribute to the prevention and early detection of diseases	H-2-1	Provide vaccines	Enhance contribution indices	14 points	14	
H Index	H-2		H-2-2	Provide health management and health checkup information	Frequency of health information provisions	3.25 times	14	
		Contribute to achieving healthy and hygienic lives through products and services	H-3-1	Provide products for the health field	Improve the index of product provision in the health field	14 points	14	
	H-3		H-3-2	Provide products for the sanitation field	Growth in sales of related products and services	60%	14	
			H-3-3	Provide products for the medical field	Growth in sales of related products and services	60%	14	
			C-1-1	Improve awareness of compliance	Improvement in the compliance index	21 points	21	<b>P</b>
					Improvement in the safety incident index	60%		
	C-1	Endeavor to earn greater recognition of corporate trust	C-1-2	Prevent accidents and injuries	Improvement in the environmental incident index	100%	19	
		from society			Improvement in the lost-time injuries frequency index	50%		44
			C-1-3	Initiatives to provide products and services	Improvement in customer satisfaction	47 points	17	
C Index			010	trusted by society	Improvement in the number of complaints	50%	.,	
			C-2-1	Promote communication with business partners	Improvement in the communication promotion index	83 points	7	AA
	C-2	Promote communication and work in concert with stakeholders	C-2-2	Improve evaluation by stakeholders	Improvement in the external evaluation index	11 points	11	
			C-2-3	Build a dynamic and cooperative organization	Improvement in the employee wellness index	16 points	16	
	C-3	Contribute to achieving a more comfortable society and better lifestyle	C-3-1	Provide products and services that contribute to a comfortable society and better lifestyles	Improvement in the comfort value provision index	40%	9	

Scope of data aggregation: Data for fiscal 2013 and fiscal 2014 covers the five major operating companies (MCC, MTPC, MPI, MRC, and LSII) as well as their domestic Group companies. With the addition of TNSC, data for fiscal 2015 covers the six major operating companies and the activities of their domestic Group companies. The data represents 56% of the MCHC Group's consolidated net sales (including overseas sales).

	FY 2013	FY 2014	FY 2015
Energy consumption/Greenhouse gases (GHG)			
GHG emissions (1,000 t-CO <sub>2</sub> e) *1	9,114	8,764	12,054*2
✓ Energy consumption (TJ) *2	127,562	120,553	165,851* <sup>2</sup>

<sup>\*1</sup> Calculation standards: The Group's calculations are in accordance with the methods stipulated by the Act on the Rational Use of Energy and Act on Promotion of Global Warming Countermeasures. Regarding GHG emissions not covered by either law, the Group develops calculation methods for each type of GHG emission based on considerations such as the balance of chemical reaction

<sup>\*2</sup> Due to the relation to energy management, 1.65 million tons CO2 equivalent of GHG emissions produced and 18,110 TJ of energy consumed by closely involved affiliates are included.

Environmental impact			
✓ NOx emissions (1,000 tons)	9.94	8.88	8.04
SOx emissions (1,000 tons)	3.22	3.06	3.08
✓ COD emissions (1,000 tons) *3	1.93	1.75	1.74
✓ Total nitrogen emissions in drained water (1,000 tons) *3	5.76	5.68	5.53
✓ Total phosphorous emissions (1,000 tons) *3	0.07	0.06	0.05

<sup>\*3</sup> Total COD emissions, total nitrogen emissions and total phosphorous emissions include total volume of emissions into rivers, lakes and oceans. Exclude emissions into sewage systems.

Water use			
✓ Volume of water use (million m³) (not including seawater)	181	174	171

#### **Social Data**

	FY 2013	FY 2014	FY 2015
Affinity with company (MCHC Group)			
Number of consolidated employees	56,031	68,263	68,988
Number of employees by area Japan	_	_	44,858
Outside Japan		_	24,130

Aggregation period: Each fiscal year from April 1 to March 31, or as of March 31

Scope of data aggregation: In fiscal 2013, figures are those employed by the four operating companies (MCC, MTPC, MPI and MRC), excluding those seconded to other companies but including those seconded from other companies.

> Employees of the four operating companies in fiscal 2014, and those of the original four and TNSC in fiscal 2015, respectively include those seconded to other companies but exclude those seconded from other companies.

LSII has no employees other than those seconded from the Group.

Diversity/ Work-Life Balance/ Occupational Safety				
✓ Number of employees	16,580	20,886	22,508	
✓ Number of employees by gender Male	14,186	17,742	19,194	
Female	2,394	3,144	3,314	
✓ Percentage of females (%)	14.4	15.1	14.7	
✓ Ratio of female managers (%) *4	6.1	7.4	7.1	
✓ Paid leave utilization rate (%)	66.7	66.9	66.8	
✓ Lost-time injuries frequency rate (LTIFR)*5,*6	0.32	0.32	0.48	



#### Independent Assurance Report

To the President and CEO of Mitsubishi Chemical Holdings Corporation

We were engaged by Mitsubishi Chemical Holdings Corporation (the "Company") to undertake a limited assurance engagement of the environmental and social performance indicators marked with of for the period from April 1, 2015 to March 31, 2016 (the "Indicators") included in its KAITEKI REPORT 2016 (the "Report") for the fiscal year ended March 31, 2016.

#### The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Report, which are derived, among others, from the Act on the Rational Use of Energy, Act on Promotion of Global Warming Countermeasures, G4 Sustainability Reporting Guidelines of the Global Reporting Initiative and Environmental Reporting Guidelines of Japan's Ministry of the Environment.

#### Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information', 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements', issued by the International Auditing and Assurance Standards Board, and the 'Practical Guidelines for the Assurance of Sustainability Information' of the Japanese Association of Assurance Organizations for Sustainability Information. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing with the Company's responsible personnel to obtain an understanding of its policy for the preparation of the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical reviews of the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and also recalculating the Indicators.
- Visiting to the Nagahama plant of Mitsubishi Plastics, Inc. selected on the basis of a risk analysis.
- Evaluating the overall statement in which the Indicators are expressed.

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

#### Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

KPMG AZSA Sustamblety Co., Ltd.

KPMG AZSA Sustainability Co., Ltd.

Tokyo, Japan

September 8, 2016

Value Creation Process

<sup>\*4</sup> Percentage of female employees to employees at assistant manager level and above.
\*5 Scope of data aggregation: Figures from domestic operations of the six operating companies (MCC, MTPC, MPI, MRC, LSII and TNSC) and their Group companies with operating divisions active within Japan.

<sup>\*6</sup> The LTIFR is the number of lost-time injuries and fatalities per million hours worked.



#### Yoshimitsu Kobayashi

Chairperson

MCHC transitioned to a company with a nominating committee, etc., in June 2015, positioning the strengthening of corporate governance as one of its highest management priorities. In fiscal 2015, MCHC focused efforts on measures to facilitate and improve the effectiveness of the Board of Directors, centered on its oversight function, to enhance the effectiveness of this new corporate structure.

As the chairperson, I led initiatives to further energize the Board of Directors and reinforce management oversight functions.

#### **Establishment of Outside Director Liaison** Committee

In addition to the Board of Directors, the Outside Director Liaison Committee was created to share critical management information and serve as a forum for exchanging frank opinions about management issues. The Outside Director Liaison Committee comprises outside directors, the chairperson, the president, and key corporate executive officers who meet once a month to discuss issues with an emphasis on taking advantage of the expertise and advanced insight of our outside

directors. In fiscal 2015, the members of the committee held their frank and vigorous discussions about the medium-term management plan APTSIS 20, the Corporate Governance Code, and diversity of human resources.

#### **Deciding on Corporate Governance Guidelines**

In November 2015, MCHC formulated Corporate Governance Guidelines based on deliberations by the Outside Director Liaison Committee and the Board of Directors. These guidelines were created to help establish a better corporate governance structure by instituting a constant review of the framework, including the guidelines, and support systems for improving both the soundness and efficiency of management, as well as enhancing management transparency through the timely disclosure of information and dialog with stakeholders.

#### **Evaluation on Effectiveness of Board of Directors**

In June 2016, MCHC conducted a survey of all directors and evaluated the effectiveness of its Board of Directors based on discussions of the survey results among non-executive directors, centered on outside directors.

This effectiveness evaluation served as an opportunity for all directors to reaffirm their understanding of the responsibilities of the Board of Directors as set forth by the Corporate Governance Guidelines, as well as to discover issues to be addressed in future meetings of the Board of Directors

Based on the results of this effectiveness evaluation. MCHC will endeavor to further improve the oversight function of the Board of Directors, such as by strengthening the reporting system and properly monitoring the execution of APTSIS 20, that began in fiscal 2016.

#### **Increasing Number of Outside Directors**

In fiscal 2016, MCHC welcomed as new outside director Mr. Takayuki Hashimoto, Vice Chairperson of IBM Japan, Ltd., who has served in the past as the president and the chairperson there, adding diversity to the members of the Board of Directors. Along with the President Hitoshi Ochi and the rest of the management team, the Board of Directors will make proper decisions through intense deliberations over medium- and long-term strategies and the business portfolio, with the ultimate aim of realizing KAITEKI and enhancing corporate value.



Outside Director Liaison Co

#### Highlights Outline of Results of Evaluation on Effectiveness of Board of Directors

In fiscal 2016, under the governance structure consisting of a nominating committee, etc., directors worked on developing a common perception regarding how the Board of Directors should establish and manage a system aimed at fulfilling its role. In addition, the Board of Directors analyzed and evaluated its overall effectiveness as part of its efforts to identify future issues.

The Board of Directors is supposed to analyze and evaluate its own effectiveness annually and disclose an outline of an evaluation report, also compiled annually.

#### **Evaluation Method**

 A survey was conducted among directors (from late March to late April 2016)

The directors were asked to freely describe what they think are insufficient points and areas requiring improvement measures regarding the selection of matters subject to deliberation and reporting by the Board of Directors, and methods to assess the medium-term management plan.

2 Discussion was held among non-executive directors

Non-executive directors (outside directors, the chairperson of the Board of Directors and internal Audit Committee members) discussed the role of the Board of Directors and issues to be addressed in the future in connection with the board, based on the results of the abovementioned survey.

3 Evaluation by the chairperson of the Board of Directors (June 2016)

The chairperson of the Board of Directors evaluated the effectiveness of the board based on the results of the survey and the content of the discussion referred to under 2, and reported the result of the evaluation to the Board of Directors.

#### **Evaluation Results**

The Board of Directors concluded that matters subject to its deliberation and reporting had been essentially selected in an appropriate manner, and there was sufficient diversity among the members constituting the Board of Directors. As a whole. the board, in light of its own role to be played, decided that its effectiveness has been warranted. On the other hand, the board recognized that further improvements are necessary in the fields listed below.

• Further discussion is necessary over the direction of medium- and long-term management policies

Example: The Board of Directors will take time from the proposal stage to discuss the formulation of a medium- to long-term strategy and a business portfolio.

•Enhanced monitoring is necessary over the progress of the medium-term management plan

Example: The Board of Directors will try to identify business projects that require remedial measures at an early stage by focusing on their difference to the medium-term management plan and by monitoring progress and considering measures deemed appropriate

• Further efforts are necessary to strengthen the reporting system Example: The Board of Directors will clarify reporting standards regarding not only the progress of business but negative incidents such as work accidents related to security and safety and violations of compliance. The Board of Directors will seek timely reporting on such incidents as part of its efforts to strengthen the board's oversight function.

Based on the above evaluation results, MCHC will work on improving the operations and management of its Board of Directors and further enhancing the board's effectiveness.



#### Yoshimitsu Kobayashi

Member of the Nominating Committee

Dec. 1974 Joined Mitsubishi Chemical Industries Limited (now MCC)
Jun. 2003 Executive Officer of MCC
Apr. 2005 Managing Executive Officer of MCC
Jun. 2006 Member of the Board of MCHC
Feb. 2007 Member of the Board, Managing Executive Officer of MCC
Apr. 2007 Member of the Board, President and Chief Executive
Officer of MCHC
Member of the Board, President and Chief Executive
Officer of MCHC
Officer of MCHC
Officer of MCC

Apr. 2012 Member of the Board, Chairperson of MCC (current)
Apr. 2015 Member of the Board, Chairperson of MCHC (current)

◆ Member of the Audit Committee

#### Hiroaki Ishizuka

Apr. 1972 Joined Mitsubishi Chemical Industries Limited (now MCC)
Apr. 2007 Executive Officer of MCC
Apr. 2009 Managing Executive Officer of MCC
Jun. 2009 Member of the Board, Managing Executive Officer of MCC
Apr. 2011 Member of the Board, Senior Managing Executive Officer of MCC
Apr. 2012 Member of the Board, President and Chief Executive Officer of MCC (current)
Jun. 2012 Member of the Board of MCHC
Jun. 2016 Member of the Board of MCHC
(current)

Member of the Compensation Committee

#### Takumi Ubagai

Apr. 1971 Joined MRC
Jun. 2001 Member of the Board, Executive Officer of MRC
Jun. 2004 Managing Director, Senior Executive Officer of MRC
Jun. 2007 Member of the Board, Senior Managing Executive Officer
of MRC (until Mar. 2012)
Apr. 2012 Member of the Board, President and Chief Executive
Officer of MPI (current)
Jun. 2012 Member of the Board of MCHC
Jun. 2015 Member of the Board, Vice Chairperson of MCHC
(current)

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#### Hitoshi Ochi

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

Apr. 1977 Joined Mitsubishi Chemical Industries Limited (now MCC)
Jun. 2007 Executive Officer of MCHC
Executive Officer of MCC (until Mar. 2010)
Apr. 2009 Member of the Board of MPI (until Mar. 2011)
Jun. 2009 Member of the Board, Executive Officer of MCHC
Jun. 2010 Member of the Board, Managing Executive Officer of MCHC
Member of the Board of MRC (until Jun. 2011)
Apr. 2011 Member of the Board of MCHC (until Jun. 2011)
Member of the Board of MCHC (until Jun. 2011)
Member of the Board, President and Chief Executive
Officer of MRC (current)
Jun. 2012 Member of the Board of MCHC
Apr. 2015 Member of the Board of MCHC
Apr. 2016 Member of the Board of MCHC
Apr. 2016 Member of the Board of MCHC
Officer of MCHC (current)

**+** •

#### Masayuki Mitsuka

Apr. 1982 Joined Mitsubishi Chemical Industries Limited (now MCC)
Jun. 2008 Executive Officer of MTPC
Jun. 2009 Member of the Board, Executive Officer of MTPC
Apr. 2012 Member of the Board, Managing Executive Officer of
MTPC
Apr. 2014 Member of the Board, Senior Managing Executive Officer
of MTPC
Jun. 2014 Member of the Board, President and Chief Executive
Officer of MTPC (current)
Member of the Board of MCHC (current)

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#### Yujiro Ichihara

Apr. 1974 Joined Nippon Sanso Corporation (now TNSC)
Jun. 2005 Executive Officer of TNSC
Jun. 2008 Managing Executive Officer of TNSC
Jun. 2010 Managing Director of TNSC
Jun. 2012 Senior Managing Director of TNSC
Jun. 2013 Member of the Board, Vice President of TNSC
Jun. 2014 President and Chief Executive Officer of TNSC (current)
Jun. 2015 Member of the Board of MCHC (current)

#### Glenn H. Fredrickson

Member of the Board, Managing Corporate Executive Officer

Managing Corporate Executive Officer

Jan. 1990 Associate Professor, Departments of Chemical Engineering and Materials, University of California, Santa Barbara (UCSB)

Jul. 1991 Professor, Departments of Chemical Engineering and Materials, UCSB (current)

May 1998 Chairperson, Department of Chemical Engineering, UCSB (until Jul. 2001)

Mar. 2001 Director, Mitsubishi Chemical Center for Advanced Materials, UCSB (current)

Apr. 2014 Managing Executive Officer of MCHC

Jun. 2014 Member of the Board, Managing Executive Officer of MCHC

Jun. 2015 Member of the Board, Managing Corporate Executive Officer of MCHC

(current)

## Yoshihiro Umeha

Apr. 1977 Joined Mitsubishi Chemical Industries Limited (now MCC)
Jun. 2008 Executive Officer of MCC
Apr. 2012 Member of the Board, Managing Executive Officer of MCC (until Mar. 2015)
Jun. 2015 Corporate Auditor of MCC (current)
Corporate Auditor of MRC (current)
Member of the Board of MCHC (current)

### Hisao Urata

Jan. 1991 Joined Mitsubishi Kasei Corporation (now MCC)
Jun. 2011 Executive Officer of MCC (until Mar. 2014)
Executive Officer of MCHC
Apr. 2015 Managing Executive Officer of MCHC
Jun. 2015 Managing Corporate Executive Officer of MCHC (until Mar. 2016)
Jun. 2016 Corporate Auditor of MPI (current)
Member of the Board of MCHC (current)

Takeo Kikkawa



Apr. 1987 Associate Professor, School of Business, Aoyama Gakuin University
Oct. 1993 Associate Professor, Institute of Social Science, The University of Tokyo
Apr. 1996 Professor, Institute of Social Science, The University of Tokyo
Apr. 2007 Professor, Graduate School of Commerce and Management,
Hitotsubashi University
Jun. 2013 Outside Member of the Board of MCHC (current)
Apr. 2015 Professor, Graduate School of Innovation Studies, Tokyo University of Science (current)

Science (current)

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#### Taigi Ito Outside Member of the Board

Jan. 1970 Joined Tsuji Audit Corporation
May 1973 Registered as a Certified Public
Accountant
Feb. 1989 Representative Partner of MISUZU
Audit Corporation
Jul. 2004 Deputy Chairperson of the Japanese
Institute of Certified Public
Accountants (JICPA) (until Jun. 2007)
May 2006 Executive Board Member of MISUZU
Audit Corporation (until Jul. 2007)
Apr. 2009 Professor, Graduate School of
Accountint Mysseral Linkersity (until

Accounting, Waseda University (until Mar. 2013) Jan. 2012 Chairperson of Disciplinary Committee

Jan. 2012 Chairperson of Disciplinary Committee of JICPA (current)

Jun. 2014 Corporate Auditor of MCC (current)

Outside Corporate Auditor of MCHC

Jun. 2015 Outside Member of the Board of MCHC (current)

## Kazuhiro Watanabe

Apr. 1974 Appointed as a Prosecutor
Jul. 1998 Assistant Vice-Minister of Justice,
Ministry of Justice
Apr. 2001 Prosecutor of the Supreme Public
Prosecutors Office
Jan. 2002 Chief Prosecutor of the Mara District
Public Prosecutors Office
Sep. 2004 Chief Prosecutor of the Maebashi
District Public Prosecutors Office
Sep. 2005 Chief Prosecutors Office
Sep. 2005 Chief Prosecutors Office
Jun. 2007 Chief Prosecutors Office
Jun. 2007 Chief Prosecutors Office
Jul. 2008 Superintending Prosecutors Office
Jul. 2008 Superintending Prosecutor of the
Sapporo High Public Prosecutors
Office (Retired in Jul. 2009)
Sep. 2009 Registered as a lawyer
Professor, Law School, Tokai
University (current)
Jun. 2010 Corporate Auditor of MPI (current)
Jan. 2011 Lawyer, Counselor, Higashimachi LPC
(current)

(current)
Jun. 2014 Outside Corporate Auditor of MCHC
Jun. 2015 Outside Member of the Board of
MCHC (current)

#### Hideko Kunii

May 1982 Joined Ricoh Company, Ltd.
Jun. 2005 Corporate Senior Vice President of
Ricoh Company, Ltd. (until Mar. 2008)
Apr. 2008 Chairperson of Ricoh Software Co.,
Ltd. (now Ricoh IT Solutions Co., Ltd.)
Apr. 2009 Associate Director of Ricoh Company,
Ltd. (until Mar. 2013)
Jul. 2009 Chairperson of Ricoh IT Solutions Co.,
Ltd. (until Mar. 2013)

Jul. 2009 Chairperson of Ricoh IT Solutions Co., Ltd. (until Mar. 2013)

Apr. 2012 Professor, Graduate School of Engineening Management, Shibaura Institute of Technology (current)

Apr. 2013 Deputy President, Shibaura Institute of Technology (current)

Oct. 2013 Director, Center for Promotion of Clausting Linguisting Competer Equality. Educational Innovation Gender Equality Promotion Office, Shibaura Institute of

Technology (current)
Jun. 2015 Outside Member of the Board of MCHC (current)

#### Takayuki Hashimoto

Apr. 1978 Joined IBM Japan, Ltd.
Apr. 2000 Member of the Board of IBM Japan,
Ltd.
Apr. 2003 Managing Executive Officer of IBM
Japan, Ltd.
Jan. 2007 Senior Managing Executive Officer of
IBM Japan, Ltd.
Apr. 2008 Member of the Board, Senior
Managing Officer of IBM Japan, Ltd.
Jan. 2009 Member of the Board, President of
IBM Japan, Ltd.
May 2012 Member of the Board, Chairman of

May 2012 Member of the Board, Chairman of IBM Japan, Ltd.

IBM Japan, Ltd.
Apr. 2014 Chairperson of IBM Japan, Ltd.
Jan. 2015 Vice Chairperson of IBM Japan, Ltd.

(current) Jun. 2016 Outside Member of the Board of MCHC (current)

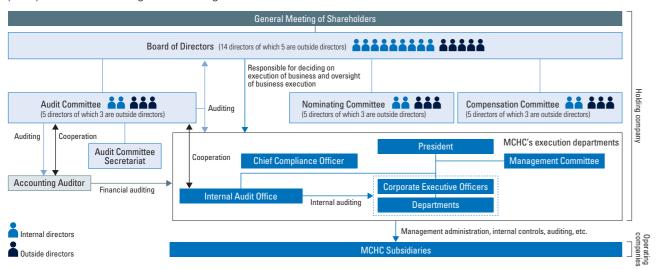
65 Mitsubishi Chemical Holdings Corporation  $\it{KA/TEKI}$  REPORT 2016

MCHC aims to contribute to the sustainable development of society and the Earth, in addition to solving environmental and social issues through corporate activities for the realization of KAITEKI. With eyes on these objectives, we are focusing efforts on establishing a better corporate governance structure by improving management transparency through proper disclosure and dialog with stakeholders, while updating systems for enhancing both the soundness and efficiency of management.

#### Corporate Governance System for Sound Management and Greater Efficiency (As of June 24, 2016)

MCHC is a company with a nominating committee, etc., which separates functions for the supervision and execution of business in a bid to enhance management transparency and openness, strengthens oversight functions, and improves management agility through prompter decision-making. While management

supervision is now undertaken by the Board of Directors and three committees comprised of the Nominating Committee, Audit Committee, and Compensation Committee, corporate executive officers make business decisions and are in charge of business execution.



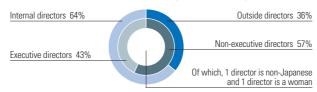
#### **Approach to the Board Roles and Constitution**

The Board of Directors determines basic management policies, such as medium- to long-term business strategies and annual budgets, and supervises the execution of business by the corporate executive officers, who are responsible, in principle, for deciding about business execution based on these basic policies, with the exception of matters that must be legally resolved by the Board of Directors.

To reflect diverse opinions as well as to strengthen supervisory functions, MCHC has elected not only internal directors who have an intimate knowledge of the Group's wide range of operations and its three business domains comprising Performance Products, Industrial Materials and Health Care, but also five outside directors with experience in corporate management, expertise in social and economic issues as well as science and technology, and accreditations as certified public accountants and attorneys. In addition to the outside directors, there are three non-executive directors among the internal directors who do not execute business for MCHC or its core operating companies. Accordingly, a majority of the directors are in non-executive roles, establishing a system enabling the proper supervision of the execution of duties.

MCHC's Articles of Incorporation restrict the number of directors to less than 20. As of June 24, 2016, there were 14 directors, including five outside directors and two directors who also serve as corporate executive officers. The term of each director is one year, which helps clarify management responsibilities. Our management structure is able to swiftly respond to changes in the business environment.

#### Constitution of Board of Directors (As of June 24, 2016)



#### Nominating Committee

The Nominating Committee nominates candidates for directors and corporate executive officers, as well as the presidents of major directly-owned subsidiaries that are not listed subsidiaries: MCC, MPI, MRC and LSII. In consideration of transparency and fairness in the process of nominating candidates, an outside director serves as the chairperson of the committee.

#### **Activities of Outside Directors**

Name	Activities	Attendance at Meetings of the Board of Directors and Each Committee (FY 2015)	
	At Board of Directors meetings, Mr. Kikkawa makes remarks as necessary based on his profound	Board of Directors	10 of 11 meetings (90%)
Takeo Kikkawa	insight into company management from the perspective of business history and his experience as an expert in theories on the energy industry. As the chairperson of the Nominating Committee, he takes care of committee procedures and reports findings to the Board of Directors. As a member of the	Nominating Committee	4 of 4 meetings (100%)
	Compensation Committee, he expresses his opinion as necessary at meetings.	Compensation Committee	4 of 4 meetings (100%)
	At Board of Directors meetings, Mr. Ito comments as necessary, utilizing his experience and strong	Board of Directors	7 of 7 meetings (100%)
Taigi Ito	perceptions as a certified public accountant. As a member of the Audit Committee, he proposes audit plans, monitors audits in progress and their results, and expresses his opinions if necessary. As the chairperson of the Compensation Committee, he oversees meeting procedures and reports the results	Audit Committee	10 of 10 meetings (100%)
	to the Board of Directors.	Compensation Committee	4 of 4 meetings (100%)
	At Board of Directors meetings, Mr. Watanabe makes remarks as needed, utilizing his experience and profound insight as a prosecutor and lawyer. As a member of the Compensation Committee, he expresses his opinion as necessary at meetings. As a member of the Audit Committee, he proposes audit plans, monitors audits in progress and their results, and expresses his opinions if necessary.	Board of Directors	7 of 7 meetings (100%)
Vazubira Watanaha		Nominating Committee	4 of 4 meetings (100%)
Kazuhiro Watanabe		Audit Committee	10 of 10 meetings (100%)
		Compensation Committee	4 of 4 meetings (100%)
	At Board of Directors meetings, Ms. Kunii makes remarks as necessary, utilizing her extensive experience in corporate management and as an expert in information processing, as well as her profound insight into the promotion of diversity. As a member of the Nominating Committee, she expresses her opinion as necessary at meetings. As a member of the Audit Committee, she proposes audit plans, monitors audits in progress and their results, and expresses her opinions if necessary.	Board of Directors	7 of 7 meetings (100%)
Hideko Kunii		Nominating Committee	4 of 4 meetings (100%)
		Audit Committee	10 of 10 meetings (100%)
Takayuki Hashimoto	With extensive experience in corporate management as a president and chairperson of a Japanese subsidiary of a global corporation and profound insight in ICT (information and communication technology), Mr. Hashimoto was appointed as an outside director at the General Meeting of Shareholders held in June 2016, with the expectation that he will contribute to proper decision-making and fair oversight of the Board of Directors of MCHC. His experience and insight will be useful in his role as a member of the Board of Directors and the Nominating Committee.	_	

#### **Audit Committee**

The Audit Committee audits the execution of duties by corporate executive officers and directors, and reviews the Group's internal control systems, etc. In principle, the committee meets once a month. The Audit Committee consists of five members, including three outside directors. With two full-time members, the Audit Committee collaborates closely with the accounting auditor, the Internal Audit Office, which conducts internal audits, and the Internal Control Office, which formulates and promotes policies on establishing internal control systems, to enhance the audit system administered by the Audit Committee. An internal director who is a full-time member

of the Audit Committee serves as the chairperson of the committee to ensure the smooth collection of information and sufficient cooperation between departments.

#### Compensation Committee

The Compensation Committee determines the amount of remuneration for each director and corporate executive officer. It also determines the amount of remuneration for each of the presidents of major directly-owned subsidiaries that are not listed subsidiaries. Moreover, an outside director serves as the chairperson of the committee to increase transparency and fairness in the decision-making process.

#### **Audit Committee Activities**



Yoshihiro Umeha Chairperson Audit Committee

Of the three committees that support the Board of Directors, which has the two core functions of establishment of basic management policies and oversight, the Audit Committee's main role is to support the latter function. The Audit Committee consists of five directors and holds meetings frequently and regularly each month.

Three members of the Audit Committee, a majority, are outside directors of different backgrounds who bring a wealth of knowledge to the table. At each meeting of the Audit Committee and in interviews with Group companies, the outside directors provide excellent and meaningful advice from various perspectives. Meanwhile, matters monitored by the Audit Committee are better understood with knowledge of the circumstances and background to each individual case. In these cases, the in-house knowledge of two internal directors is quite helpful.

The Audit Committee functions well as each member works in concert to fulfill their duties, expressing their opinions even at occasional social gatherings, and listening carefully to various opinions from different perspectives.

# Value Creation Process

#### **Business Execution System**

Corporate executive officers, under the guidance of the president, are appointed by the Board of Directors to make decisions regarding business execution and take responsibility for business operations. To enhance efficiency, for important decisions about business execution, the decision-making process requires that corporate executive officers seek approval from the president.

Important matters related to the management of MCHC and the MCHC Group (important business execution such as investment and financing, compliance, risk management, environment and safety, human rights education and social contributions) are discussed by the Management Committee, formed as an advisory organ to facilitate decision-making, and following these discussions, the president makes decisions. The Management Committee is comprised of the president, corporate executive officers and the presidents of major directly-owned subsidiaries. It meets about twice each month.

Corporate executive officers also oversee the management of subsidiaries based on basic management policies determined by the Board of Directors (i.e., Group medium-term management plans, fiscal year budgets, etc.), and report back to MCHC important matters pertaining to the management of subsidiaries through the Management Committee and the administration of medium-term management plans and fiscal year budgets.

#### Director Remuneration

The remuneration of each director and corporate executive officer is decided by the Compensation Committee based on the following policies. The Compensation Committee continues to review the appropriateness of policies for remuneration levels, basic remuneration and performance-linked remuneration.

#### Policy on Deciding Remuneration for Directors and **Corporate Executive Officers**

- Remuneration for directors consists only of basic remuneration (fixed remuneration).
- Basic remuneration is based on title and classification such as full-time or

#### . The amount of remuneration is determined at a level necessary for Directors securing personnel suitable for carrying out the responsibilities of a director of a company with nominating committee, etc., while also taking

- into consideration the levels of other companies. \* When a director concurrently serves as a corporate executive officer, remuneration as a corporate executive officer is applied.
- Remuneration for corporate executive officers consists of basic remuneration (fixed remuneration) and performance-based remuneration (variable remuneration).
- Basic remuneration is based on title and duties such as having the right of

#### Corporate • The amount of remuneration is determined at a level necessary for securing outstanding personnel and improving MCHC's competitiveness, while also taking into consideration the levels of other companies. officers

 Performance-hased remuneration entails stock ontions as stock-hased remuneration (¥1 per share stock options) to enhance sustainable medium- to long-term corporate value as well as create incentives associated with shareholder value.

#### **Amount of Remuneration**

Category	Remuneration		
Category	Number of Persons	Amount (Millions of yen)	
Directors	14	254	
Corporate executive officers	8	214	
Corporate auditors	5	28	
Total	22	497	

(Notes) 1. The amounts paid for remuneration, etc. listed above were paid to the corporate auditors before MCHC transitioned to a company with nominating committee, etc. in June 2015.

- 2. Directors who concurrently serve as corporate executive officers receive remuneration as a corporate executive officer, in accordance with the aforementioned policy for determining
- 3. The aforementioned amounts of remuneration to directors include ¥16 million in stock options as performance-based remuneration.
- 4. In addition to the aforementioned remuneration paid to directors, corporate executive officers and corporate auditors, directors, corporate executive officers and corporate auditors who concurrently serve as executive officers of MCHC subsidiaries received the following remuneration from those subsidiaries: directors ¥296 million, corporate executive officers ¥85 million and corporate auditors ¥4 million.
- tioned payments of remuneration to directors and corporate auditors, remuneration paid to the five outside directors totaled ¥46 million. Outside directors who currently serve as corporate auditors of MCHC subsidiaries received remuneration amounting to ¥12 million from the subsidiaries.
- 6. Payments to the total number of persons exclude overlap arising from the retirement of corporate auditors and their reappointment as directors at the time of transition to a company with a nominating committee, etc.

#### Message from the Outside Member of the Board



Hideko Kunii Outside Member of the Board

One year has passed since I assumed the role of an outside director. It was an extremely rewarding year interacting with wonderful employees inside and outside Japan who are working toward the realization of KAITEKI. Through this process, I recognized two things that would bring us one step closer to realizing KAITEKI. The first is that KAITEKI Management must evolve quicker than ever before to keep up with frequent changes in a business environment characterized by advances in ICT such as IoT and AI, as well as the rapid globalization of economies. The second is that we must pick up the pace in diversifying our human resources. Change requires innovation in all fields. For advances in innovation to occur, it is vital that we create an environment where people of different backgrounds and perspectives can discuss matters on an equitable basis in the spirit of cooperation. MCHC has taken a leading role in Japan's manufacturing industry in this regard, but has not yet realized the full potential of its female and non-Japanese employees. I look forward to the future as MCHC endeavors to create an optimal organization and corporate culture to realize KAITEKI.

#### **Dialog with Stakeholders**

MCHC has an active and constructive dialog with stakeholders such as shareholders and customers through various opportunities, and aims to cooperate for the realization of KAITEKI by sharing issues and goals.

#### **Basic Policy on Dialog and Cooperation with Stakeholders**

Type of	Type of dialog and cooperation Basic stance		Main activities
Dialog with shareholders and investors		MCHC will ensure appropriate disclosure so as to gain the trust of our shareholders and encourage long-term holding of MCHC's shares. MCHC also intends to engage in active dialog with shareholders and reflect it in our corporate activities.  Disclosure to and dialog with shareholders shall be implemented by each relevant department, in cooperation with each other, under the supervision of the president, an officer in charge of investor relations and an officer in charge of administration. Opinions obtained through the dialog will be reported to the Board of Directors, etc., and shared by the management.	Refer to the table below: "Key Activities for Dialog with Shareholders and Investors."
stakeh	Dialog with non-shareholder takeholders, including customers  Refer to page 58 for more details.		
Materiality assessment		MCHC shall identify important issues (materiality) that must be addressed by the Group while bearing in mind the stakeholders' perspective, and prioritize important issues while taking into consideration the impact of corporate activities on stakeholders.	Refer to page 59 for the results of the materiality assessment.

#### Vov. Activities for Dislan with Charabeldors and Investors

Activity	Content	FY 2015 results
General Meeting of Shareholders	In fiscal 2015, MCHC submitted its business report and consolidated financial statements, along with proposals for the nomination of 14 directors. We received a total of 16 questions and 4 opinions and requests from shareholders, such as about the integration of the three chemical operating companies and the dividend distribution policy.	Held on June 24, 2016 Attendance: 1,714 people (Reference: 1,677 attended in 2015)
For institutional investors	New medium-term management plan APTSIS 20 announced at the business briefing held in December	1 briefing
and analysts	Tours of business sites inside and outside Japan	4 tours
	We held online conferences at the time of our financial results announcements.	4 conferences
For overseas investors	Officers in charge of investor relations and others conducted overseas investor roadshows in North America, the Middle East and Asia.	3 courses
For individual investors	We held briefings for individual investors (organized by securities firms) and explained current business conditions and future business developments, among other matters.	15 conferences

#### **Evaluations from Various Parties through Dialog and Cooperation**

Evaluation	Highly valued attributes	FY 2015 results	
Inclusion in SRI Indices	Recognized the MCHC Group's activities to enhance corporate value as a result of contributions to greater sustainability through KAITEKI Management	Dow Jones Sustainability Indices In Collaboration with RobecoSAM  FTSE4Good	
Award received for the disclosure of information through MCHC website's "Investor Center"	Comprehensively recognized the understandability and availability of financial information and other information needed by investors	2015 Internet IR Excellence Award from Daiwa Investor Relations Co., Ltd.	
Award received as an issuer (operating company) of outstanding bonds and stock in the capital market	Received recognition for MCHC's achievement in stimulating the buying appetite of investors with five-year, seven-year and 10-year bonds issued in December 2015 despite weak sales of ordinary bonds at the time. Follow-up deals were also met with robust demand, proving that supply/demand conditions were improving in the 10-year bond zone, which had been the greatest concern.	DEALWATCH AWARDS 2015 "Bond of the Year" Award sponsored by Thomson Reuters Markets KK  DEALWATCH  AWARDS 2015  CELEBRATING THE ACHIEVERS IN JAPAN'S CAPITAL MARKETS	

As Group companies become more active overseas, we

Strategy

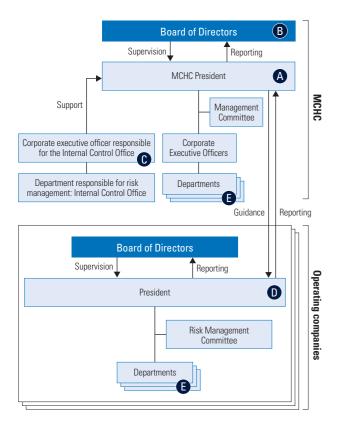
Value Creation Process

The MCHC Group defines risks as potential events that could, during the course of corporate activities, undermine public trust in or the corporate value of the MCHC Group.

We identify, analyze, and evaluate risks and prevent materialization of significant risks. We take measures to minimize the personal, economic and social damage arising in case of materialization.

#### **Risk Management System**

MCHC has in place a risk management system whereby MCHC president is responsible for risk management across the entire Group based on the MCHC Group Risk Management Basic Rule.



- A Important matters pertaining to risk management are discussed by the Management Committee, in accordance with the basic policy and procedures for risk management at the MCHC Group. Decisions are made by MCHC president.
- **B** MCHC president submits reports on risk management initiatives to the Board of Directors as needed
- The corporate executive officer in charge of the Internal Control Office, which serves as the risk management secretariat at MCHC, assists MCHC president and deals with all kinds of risk management across the board.
- **D** The presidents of operating companies are in charge of risk management at Group companies, embedding the risk management systems at Group companies and addressing issues through the Risk Management Committees of their respective operating companies. They also periodically report on the state of risk management to MCHC president.
- MCHC Group employees strive to prevent risks from materializing in their own areas of responsibility. In the event of a serious incident, managers promptly report to the department in charge of risk management.

#### **Risk Management Process**

#### 1. Identification of risks

Identification of risks is undertaken each year at every company of the Group. It includes consideration of frequency and degree of impact from the personal, economic and public reputational perspectives. When identifying risks, due consideration is paid to risks arising from internal environments based on the type of business and characteristics of each company and their business processes. We presume certain risks, such as political and social risks in each country and global warming, while keeping an eye on rapidly changing social trends.

#### 2. Risk assessment and measures

Identified risks are prioritized in order of importance. measures are examined, and actions are taken by relevant management departments to mitigate risks. Senior management also reviews the risks identified by each department, and screens for risks (major risks) that could have a major impact on Group management via businesses and operations under their control. The relevant departments then implement appropriate risk measures as instructed.

#### 3. Detailed examination of risk measures

Risk measures are periodically scrutinized, and measures for major risks in particular are reported to MCHC president.

#### **Auditing**

To ensure the proper administration of risk management systems, including these related processes, the Internal Audit Office at MCHC periodically audits the risk management system, and reports its findings to MCHC president.

# **Risk Management Process**

#### **Major Risks Facing the MCHC Group**

Through the risk management process, the MCHC Group has isolated the following categories of risk as warranting priority measures. After identification of such risks, we take measures to avoid their incidence or to minimize the resulting damage if the risks materialize.

#### **Compliance violations**

In order to entrench compliance within the Group, MCHC and its operating companies have compiled rules and standards, such as the MCHC Group Charter of Corporate Behavior, published a compliance guidebook, provided education, training and seminars on compliance, performed audits, and operated a compliance hotline. At overseas Group companies as well, we endeavor to strengthen compliance by compiling rules and codes of conduct in accordance with the laws, regulations and social norms of each country.

#### Accidents in our facilities and injuries in workplace

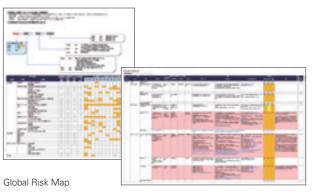
Each MCHC Group operating site endeavors to prevent facility-related accidents by ensuring the soundness of facilities and equipment and the proper operation through their appropriate maintenance as well as extensive education and training of their operators. If an accident occurs, the Group works to avoid recurrence by analyzing the cause, taking measures, and verifying their effectiveness through inspections or maintenance patrols. Moreover, the Group works to prevent accidents by applying these measures laterally to similar facilities and equipment or operations.

#### Information security breaches

MCHC has formulated an Information Security Policy in order to protect its information systems and assets from internal and external threats, with the aim of maintaining and improving corporate value. We have established the Information Security Committee according to this policy and charged it with reinforcing the management of information security at our business sites inside and outside Japan. We periodically conduct educational and training sessions for all employees including those overseas on our Information Security Policy to ensure employee awareness and compliance with the policy.

#### Overseas business development risks

have created the Global Risk Map as a collection of publically available case studies of significant problems and legal violations that have occurred in each country, to prevent lapses in awareness of the serious risks related to the particular laws, regulations and systems of the country in which they do business. We distribute this map to Group companies overseas, and in fiscal 2015. delivered it to 17 countries, four more than the previous fiscal year. We aim to enhance the content of the map by increasing the number of countries covered. In addition, we have established a communications system for local companies, the head offices of operating companies, and MCHC to use in the event of disruption in the country, such as political turmoil.



#### **Natural disasters**

Learning lessons from the Great East Japan Earthquake in 2011, which damaged a number of our business sites and facilities, MCHC has made improvements to its business continuity plan (BCP). In the event that it is impossible to continue operations in Tokyo where the head office of MCHC is located, we have made plans to transfer head office functions to a temporary backup site with the aim of minimizing damage and ensuring business continuity in a disaster situation. We are examining ways to maintain the procurement of raw materials and the responsibilities for supply products by procuring from several suppliers as a part of business continuity planning.

#### **FOCUS**

#### Training on how to deal with targeted attack emails to mitigate information security risks

In fiscal 2015, MCHC trained employees on how to identify and respond to targeted email attacks in a bid to reduce information security risks. This training was given to employees of domestic MCHC Group companies, in light of frequent incidents where important information has been leaked as a result of targeted email attacks

directed at companies and organizations. The training studies cases of confirmed cyberattacks against other companies to remind employees of what to be mindful of regarding information security. This training served well to raise awareness of information security risks among all employees.

The MCHC Group recognizes the word "Compliance" as a broad term covering corporate ethics and general social norms, not only basic legal adherence.

We regard compliance as the most important managerial issue to remain a company that earns the trust of the public, and we take measures to embed a compliance culture in the entire Group.

#### **Compliance Promotion Structure**

The Chief Compliance Officer (CCO) of the Group is appointed by the Board of Directors of MCHC. The Internal Control Office supports the CCO, acting as a secretariat dealing with compliance matters on a Group-wide basis. To support Group activities, the secretariat compiles joint education tools, has arranged training courses, established hotline systems for overseas Group companies and aims to ensure compliance to adapt to regional conditions through the regional control companies established in North America, Europe and China. Each operating company has its own Compliance Promotion Committee and internal control promotion department to serve as the secretariat. They operate hotline systems and arrange training courses and seminars, business audits and compliance perception surveys based on the Group basic compliance regulations. The company that caused compliance violations should report to and consult with its internal control promotion departments and Internal Control Office of MCHC and take corrective actions and measures to prevent recurrence.

#### **Measures and Outcomes in Fiscal 2015**

In fiscal 2015, MCHC continued to implement local training courses and self-guided training to spread and entrench awareness of compliance, especially in the Asia region. Compared with both of the previous two years, there was an increase in the number of participating companies and employees. We have set up Group-wide hotline systems in regions around the world, and in 2015, we instituted new hotlines for China and Singapore. We are preparing to set up hotline systems in Indonesia and South America.

Every year in Japan, we survey compliance awareness among all employees affiliated with the MCHC Group as a part of ongoing monitoring of the spread of compliance awareness. Based on the results of the

survey conducted in fiscal 2015, it is apparent that the level of awareness of compliance and many of the other items attained higher scores than in fiscal 2014, and proved that our initiatives in raising awareness have succeeded. We are expanding the scope of this awareness survey to Asian countries including China. Surveyed items related to compliance have gradually improved, and by analyzing the results of the survey, we are making further improvements in activities to raise awareness. Looking ahead, Japan, the Americas, Europe, China and other regions will exchange more information about compliance, and through this network, we aim to advance compliance further as a Group.

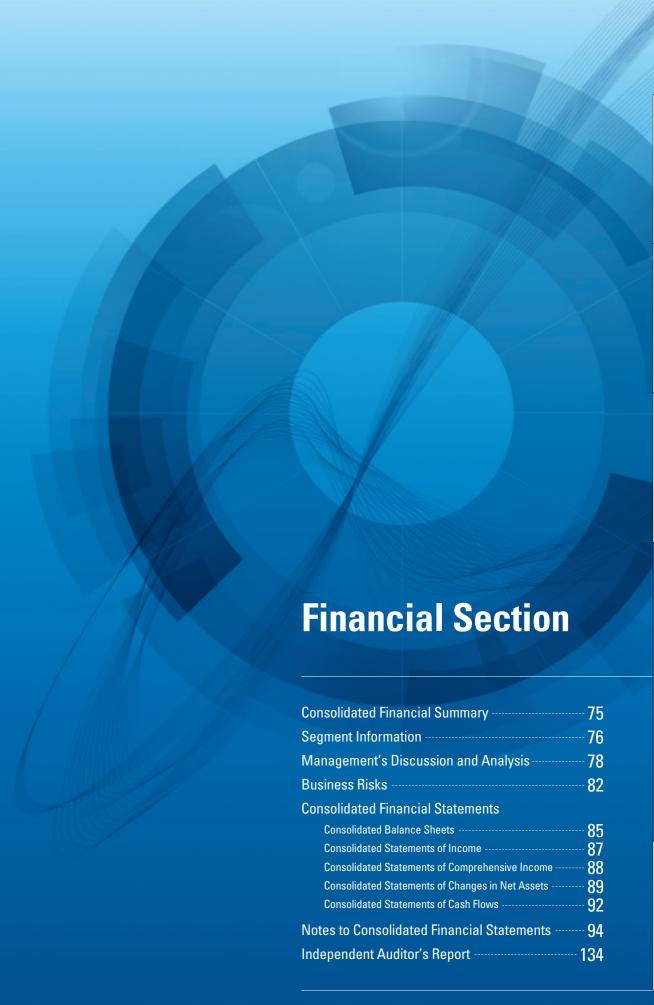
#### **Initiatives for Fair Business Practices**

In 2014, we compiled the Mitsubishi Chemical Holdings Group Global Anti-Bribery Policy and the Mitsubishi Chemical Holdings Group Global Antitrust Policy, and we have been drawing up quidelines to supplement the Global Anti-Bribery Policy for China in 2015 and the rest of Asia going forward. As a result of these initiatives, there were no major violations of relevant laws and regulations including anti-bribery and antitrust during fiscal 2015.

Going forward, we will continue to take measures to ensure not only legal adherence in each country, but also to prevent bribery and violations of antimonopoly law, from a global perspective.

## Hotline System

The Group operates hotline systems with the internal control promotion departments of MCHC and operating companies, and external lawyers as contact points. In fiscal 2015, 155 cases were reported via the hotline system. We responded through our investigation teams headed by the internal control promotion department managers and took prompt corrective measures under the direction of the CCO when issues were identified.



			Millions	of yen			Thousands of U.S. dollars
	2016	2015	2014	2013	2012	2011	2016
For the Year:							
Net sales	¥3,823,098	¥3,656,278	¥ 3,498,834	¥3,088,577	¥3,208,168	¥3,166,771	\$33,872,726
Operating income	280,026	165,681	110,460	90,241	130,579	226,493	2,478,106
Profit before income taxes	198,248	165,621	116,594	82,900	127,474	169,552	1,754,407
Profit attributable to owners of parent	46,444	60,859	32,248	18,596	35,486	83,581	411,009
Total comprehensive income	7,695	173,692	134,016	94,900	64,199	86,742	68,097
Capital expenditures	176,508	165,057	133,339	132,221	116,145	117,806	1,562,018
Depreciation and amortization	180,374	151,253	131,571	129,549	145,695	148,697	1,596,230
R&D expenditures	138,364	132,217	134,260	134,723	138,545	130,825	1,224,460
Net cash provided by operating activities	388,663	329,776	177,027	206,504	217,954	288,853	3,439,496
Net cash used in investing activities	(202,796)	(277,223)	(159,789)	(169,758)	(63,404)	(101,064)	(1,794,655
Net cash provided by (used in) financing activities	(156,957)	(2,061)	(8,307)	(26,250)	(164,146)	(149,493)	(1,389,000
At Year-End:							
Total assets	4,061,572	4,323,038	3,479,359	3,307,758	3,173,970	3,294,014	35,943,115
Property, plant and equipment	1,390,727	1,498,146	1,118,050	1,061,551	1,032,738	1,088,369	12,307,319
Short-term and long-term debt	1,465,752	1,603,595	1,258,186	1,198,799	1,164,128	1,304,589	12,971,257
Total net assets	1,554,528	1,588,601	1,314,870	1,203,316	1,144,954	1,114,003	13,756,885
			Ye	en			U.S. dollars
Per Share:							
Profit attributable to owners of parent  —Basic	¥ 31.70	¥ 41.40	¥ 21.89	¥ 12.61	¥ 24.06	¥ 58.72	\$0.28
Net assets	636.43	669.77	611.95	553.54	522.77	514.30	5.63
Cash dividends	15.00	13.00	12.00	12.00	10.00	10.00	0.13
Ratios:							
Return on assets (ROA) (%)	4.7	4.2	3.4	2.6	3.9	5.1	_
Return on equity (ROE) (%)	4.8	6.4	3.7	2.3	4.6	11.6	_
Shareholders' equity ratio (%)	22.9	22.6	25.8	24.6	24.2	23.0	_

Notes: 1. U.S. dollar amounts are converted from yen, for convenience only, at the rate of ¥113 = U.S.\$1.00, the approximate exchange rate prevailing on March 31, 2016.

- 2. Financial results of Mitsubishi Rayon Co., Ltd. are included only from the fiscal year ended March 31, 2011.
- 3. ROA is calculated as profit before income taxes divided by average total assets.
- ROE is calculated as profit attributable to owners of parent divided by average shareholders' equity.
   Shareholders' equity, when used in the calculation of ROE and shareholders' equity ratio, represents the sum of total shareholders' equity and total
- accumulated other comprehensive income.

  6. The Company plans to voluntarily apply International Financial Reporting Standards (IFRS) from the first quarter of the year ending March 31, 2017.

  The Company's consolidated operating results under IFRS in the year ended March 31, 2016, were as follows. These figures are presented purely as reference, and are unaudited.

¥3,672,285 million (\$32,498,097 thousand) Sales Revenue ¥294,217 million (\$2,603,690 thousand) Core Operating Income Operating Income ¥198,901 million (\$1,760,186 thousand) Earnings Before Taxes ¥179,744 million (\$1,590,655 thousand) ¥104,858 million (\$927,947 thousand) Net Income Attributable to Shareholders of MCHC ¥51,358 million (\$454,496 thousand)

## Segment Information

Mitsubishi Chemical Holdings Corporation and Consolidated Subsidiaries Years ended/as of March 31

The Overview of Reporting Segments is detailed in Note 19 (Segment Information).

		Net Sales*		Segment Earnings			
	Millions o	f yen	Thousands of U.S. dollars	Millions of	yen	Thousands of U.S. dollars	
REPORTING SEGMENT	2016	2015	2016	2016	2015	2016	
Electronics Applications	¥ 115,649	¥ 118,752	\$ 1,023,442	¥ (988)	¥ (2,725)	\$ (8,743)	
Designed Materials	852,565	818,591	7,544,823	75,713	55,629	670,027	
Health Care	554,056	531,933	4,903,150	103,417	77,012	915,195	
Chemicals	1,321,112	1,113,952	11,691,257	57,256	8,823	506,690	
Polymers	773,672	873,611	6,846,655	43,340	27,969	383,540	
Others	206,044	199,439	1,823,398	7,284	6,056	64,460	
Subtotal	3,823,098	3,656,278	33,832,726	286,022	172,764	2,531,168	
Corporate costs	_	1-1	_	(5,996)	(7,083)	(53,062)	
Total	¥3,823,098	¥3,656,278	\$33,832,726	¥280,026	¥165,681	\$2,478,106	

\* Inter-segment sales and transfers are not included.

	s	Segment Assets		Depreciation and Amortization			
	Millions of	f yen	Thousands of U.S. dollars	Millions of	yen		ands of dollars
REPORTING SEGMENT	2016	2015	2016	2016	2015	20	016
Electronics Applications	¥ 102,769	¥ 117,474	\$ 909,460	¥ 6,231	¥ 6,134	\$	55,142
Designed Materials	834,760	841,498	7,387,257	42,079	40,181		372,381
Health Care	1,059,035	1,050,987	9,371,991	16,219	15,712		143,531
Chemicals	1,296,916	1,421,283	11,477,133	71,153	46,189	- 5	629,673
Polymers	743,781	822,070	6,582,133	40,010	38,150		354,071
Others	658,865	603,121	5,830,664	3,059	3,097		27,071
Subtotal	4,696,126	4,856,433	41,558,637	178,751	149,463	1,	581,867
Corporate assets and eliminations	(634,554)	(533,395)	(5,615,522)	1,623	1,790		14,363
Total	¥4,061,572	¥4,323,038	\$35,943,115	¥180,374	¥151,253	\$1,	,596,230

	Increase in Tangit	ole and Intangibl	e Fixed Assets*	R&D Expenditures			
	Millions of	yen	Thousands of U.S. dollars	Millions of	f yen	Thousands of U.S. dollars	
REPORTING SEGMENT	2016	2015	2016	2016	2015	2016	
Electronics Applications	¥ 5,056	¥ 5,889	\$ 44,743	¥ 7,223	¥ 8,251	\$ 63,920	
Designed Materials	49,676	53,666	439,611	21,751	21,325	192,487	
Health Care	21,302	24,608	188,513	86,339	80,465	764,062	
Chemicals	73,562	44,666	650,991	4,787	3,335	42,363	
Polymers	21,861	30,191	193,460	13,247	13,610	117,230	
Others	3,510	3,642	31,062	341	467	3,018	
Subtotal	174,967	162,662	1,548,381	133,688	127,453	1,183,080	
Corporate R&D and other	1,541	2,395	13,637	4,676	4,764	41,380	
Total	¥ 176,508	¥165,057	\$1,562,018	¥ 138,364	¥132,217	\$1,224,460	

\* "Increase in Tangible and Intangible Fixed Assets" is equivalent to "Capital Expenditures."

	Employees Number			
REPORTING SEGMENT	2016	2015		
Electronics Applications	2,529	2,719		
Designed Materials	17,635	16,929		
Health Care	12,876	12,886		
Chemicals	18,915	17,961		
Polymers	8,052	8,219		
Others	8,229	8,730		
Subtotal	68,236	67,444		
Corporate R&D and other	752	819		
Total	68,988	68,263		

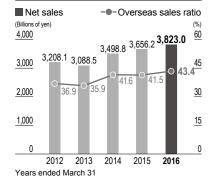
75 Mitsubishi Chemical Holdings Corporation KAITEKI REPORT 2016 Mitsubishi Chemical Holdings Corporation KAITEKI REPORT 2016 76

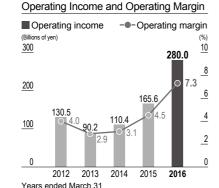
		Net Sales				
	Millions	of yen	Thousands of U.S. dollars			
GEOGRAPHIC SEGMENT	2016	2015	2016			
Japan	¥ 2,553,074	¥ 2,534,691	\$22,593,575			
Overseas	1,270,024	1,121,587	11,239,150			
Total	¥ 3,823,098	¥ 3,656,278	\$ 33,832,725			

		Operating Income				
	Millions	s of yen	Thousands of U.S. dollars			
GEOGRAPHIC SEGMENT	2016	2015	2016			
Japan	¥ 225,793	¥ 140,798	\$1,998,168			
Overseas	54,233	24,883	4,79,938			
Total	¥ 280,026	¥ 165,681	\$2,478,106			

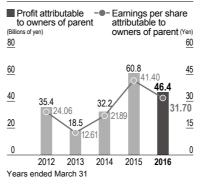
	Millions	Thousands of U.S. dollars	
OVERSEAS SALES	2016	2015	2016
Overseas sales	¥1,659,077	¥1,519,083	\$14,682,097
Overseas sales as a percentage of consolidated net sales	43.4%	41.5%	_

#### Net Sales and Overseas Sales Ratio





#### Profit Attributable to Owners of Parent and Earnings per Share Attributable to Owners of Parent



#### The Consolidated **Accounting Period** under Review

#### Performance Overview

In fiscal 2015, ended March 31, 2016, the operating climate for the MCHC Group was generally favorable, as the domestic and overseas economies generally continued mild recoveries that offset such downsides as a slowdown of the Chinese economy. In the Performance Products and the Industrial Materials domains, market conditions were solid for petrochemical-related products amid declining raw materials costs. The Health Care domain performed well, with higher royalty revenues offsetting the impact of such factors as measures to reduce spending on pharmaceuticals.

During the term, which was the last year of APTSIS 15, a five-year medium-term management plan, the Group pushed ahead in overhauling its portfolio and restructuring its petrochemicals business, one move being to integrate ethylene plants in Mizushima. At the same time, the Group accelerated efforts to cultivate overseas operations to grow and leap ahead. The Group took steps to build business infrastructure in the United States. In the Performance Products domain, Mitsubishi Plastics, Inc., resolved to bolster its U.S. polyethylene film production capacity. In the Health Care domain, Mitsubishi Tanabe Pharma Corporation established an American sales company with a view to seeking and receiving approval during fiscal 2016 in the United States for a drug to treat amyotrophic lateral sclerosis.

In the Industrial Materials domain, Taiyo Nippon Sanso Corporation acquired an Australian company, Renegade Gas Pty Ltd. which sells industrial gases, and also purchased businesses and made capital investments in the United States and Thailand. The Group also endeavored to reinforce its comprehensive capabilities through collaboration while deploying measures Groupwide to rigorously cut costs and constrain assets and thereby enhance profitability.

As a result of these efforts, net sales increased ¥166.8 billion, to ¥3,823.0 billion. Operating income advanced ¥114.3 billion, to ¥280.0 billion. Net income attributable to owners of parent was down ¥14.4 billion, however, to ¥46.4 billion.

#### Results of Operations

#### Net Sales and Operating Income

Net sales increased ¥166.8 billion, to ¥3,823.0 billion. This result reflected the consolidation of Taiyo Nippon Sanso in the third quarter of the previous fiscal year.

Operating income was up ¥114.3 billion, to ¥280.0 billion.

The operating margin was 7.3%, from 4.5% a year earlier.

Reference

#### Results by Segment

#### **Electronics Applications**

Sales of information and electronics-related materials were down, as the market for optical discs recording media continued to decline, while sales volumes were down for optical photoconductor drums and toner, despite an increase in sales of display materials and precision cleaning and recycling of wafers for semiconductors.

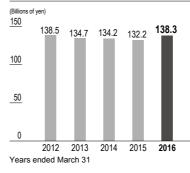
Segment sales thus decreased ¥3.1 billion, to ¥115.6 billion. The operating loss decreased ¥1.7 billion, to ¥900 million, largely because of a reduction in fixed costs.

#### **Designed Materials**

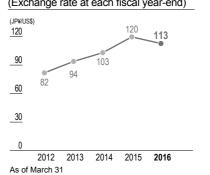
In polymer processing products, demand remained firm for high-performance films. Sales volumes increased for engineering plastic-related products and aluminum composite materials. In fine chemicals, sales were again solid of coating materials and other products. In battery materials, sales volumes for automobile batteries increased. In composite materials, demand was again generally steady for carbon fibers, while alumina fiber sales volumes

Segment sales therefore soared ¥33.9 billion, to ¥852.5 billion. Operating income soared ¥20.0 billion, to ¥75.7 billion, reflecting lower raw materials costs.

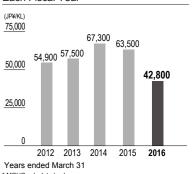
#### **R&D** Expenditures



#### Foreign Exchange (Exchange rate at each fiscal year-end)



#### Domestic Naphtha Average Price of Each Fiscal Year\*



#### **Health Care**

Sales of pharmaceuticals increased. This increase reflected higher sales volumes for such key products as Tenelia, a treatment agent for type 2 diabetes mellitus and vaccines, and gains in royalty revenues for Invokana, a treatment agent for type 2 diabetes mellitus and for Gilenva, a treatment for multiple sclerosis. Lump-sum royalty revenues from products licensed out overseas were also up, offsetting the impacts of expanded generic drug use and a decline in sales associated with the ending of the sales alliance for plasma fractionation products at the end of March 2015. Sales were firm in other areas, reflecting higher diagnostic reagent and clinical testing sales.

As a result, segment sales increased ¥22.1 billion, to ¥554.0 billion. Operating income soared ¥26.4 billion, to ¥103.4 billion, reflecting higher royalty revenues for pharmaceuticals, including lump-sum amounts.

#### Chemicals

Sales were down for basic petrochemicals, chemical derivatives, and terephthalic acid, a synthetic fiber material, as lower raw materials costs led to lower prices. Sales declined for coke and other carbon products, largely because prices decreased along with lower coking coal costs. Sales soared for industrial gases, included in this segment from the third quarter of fiscal 2014.

Seament sales thereby increased ¥207.1 billion, to ¥1,321.1 billion. Operating income soared ¥48.4 billion, to ¥57.2 billion, reflecting firm conditions in the markets for basic petrochemicals and chemical derivatives and the scaling down of regular plant maintenance.

Receipts and payment losses for basic petrochemicals were ¥7.0 billion, down ¥8.5 billion from a year earlier, as conditions were solid in the petrochemicals market. For carbon operations, receipt and payment losses increased ¥300 million, to ¥900 million.

Segment sales decreased ¥99.9 billion, to ¥773.6 billion, reflecting lower sales of synthetic resins, including polyolefins, MMA monomers, and other products. Operating income soared ¥15.3 billion, to ¥43.3 billion. This stemmed from an improved gap between prices and raw materials costs for polyolefins and other products.

Receipts and payment losses increased ¥3.3 billion, to ¥13.4 billion.

#### Other Income and Expenses

Interest income was ¥3.3 billion. Dividend income was ¥9.0 billion. Together, these income sources were ¥200 million higher than a year earlier. Interest expense was ¥19.2 billion, up ¥1.6 billion. Net financial expenses therefore rose ¥1.4billion to ¥6.8 billion.

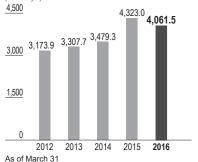
The company posted a ¥10.1 billion gain on equity in earnings of affiliates, up ¥6.2 billion from a year earlier. The Company posted net foreign exchange losses of ¥7.0 billion, compared with gains of ¥8.3 billion in the previous fiscal year.

Additional components of other income included a net gain on sales of investment securities of ¥30.2 billion and a ¥3.6 billion gain on sales of concurrent assets. Other expenses included a ¥78.9 billion impairment loss related to restructuring expenses and petrochemicals operations and ¥15.5 billion in special retirement expenses. Note 3 (Impairment Losses) presents the main components of impairment losses.

As a result of these factors, profit before income taxes was ¥198.2 billion, up ¥32.6 billion.



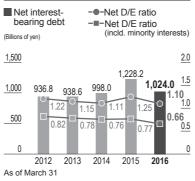
**Total Assets** 







Net Interest-bearing Debt, Net D/E Ratio, and Net D/E Ratio (incld. minority interests)



## Income Taxes, Profit Attributable to Non-Controlling Interests and Profit Attributable to Owners

Tax expenses for the year under review totaled ¥92.6 billion, comprising ¥80.8 billion in current income taxes and ¥11.8 billion in deferred income taxes. The effective rate after applying tax effect accounting was 46.7%, or 13.6% higher than the statutory tax rate. The main factor in this difference was losses at a company not applying tax-effect accounting. Details are presented in Note 15 (Income Taxes).

Profit attributable to non-controlling interests was ¥59.1 billion, up ¥23.5 billion.

As a result, profit attributable to owners of parent was ¥46.4 billion, down ¥14.4 billion.

#### R&D Expenditures

Group companies maintain independent R&D programs and collaborate with each other by sharing technology and market information, conducting joint research, and undertaking and outsourcing R&D. They are also working closely with businesses outside the Group to refine and develop technologies.

In fiscal 2015, consolidated R&D expenditures increased ¥6.1 billion, or 4.6%, to ¥138.3 billion. There were 5,040 R&D employees at the close of the term.

#### Liquidity and Sources of Funds

In the year under review, the final year of APTSIS 15, its medium-term management plan, MCHC endeavored to foster growth, innovation, and leap ahead by orchestrating the Group's strengths. MCHC pursued operating income, return on assets, the net debt-to-equity ratio, and the overseas sales ratio as basic benchmarks for this initiative. Key goals were to strengthen the Group by enhancing the Group's comprehensive strengths and financial position through restructuring.

As a result of these efforts, operating income in the year under review was ¥280.0 billion, matching management's objective. At year-end, return on assets was 4.7%, which was below the target of 7.0%. The net debt-to-equity ratio was 1.10, compared with a target of 0.80. Overseas sales represented 43.4% of consolidated net sales against the goal of 45.0%.

MCHC funds working capital and capital expenditures largely by drawing on internal reserves, loans, and bonds. The Group deployed a cash management system to employ its funds efficiently and cut financial expenses. Going forward, management will pursue Groupwide improvements in capital efficiency by consolidating Group fund procurement and management functions.

Net debt-to-equity ratio = net interest-bearing debts ÷ shareholders' equity

Net interest-bearing debts= interest-bearing debt - (cash and cash equivalents + investment of surplus funds)

#### **Financial Position**

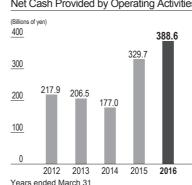
Assets

At March 31, 2016, total assets were ¥4,061.5 billion, down ¥261.4 billion from a year earlier. This decrease was due primarily to a decline in the assets of overseas consolidated subsidiaries upon conversion to yen because of a stronger yen. Another factor was a decrease in trade receivables and inventories, mainly reflecting lower costs for raw material

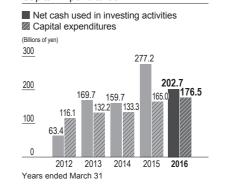
Cash and deposits were ¥314.7 billion, up ¥78.5 billion, owing mainly to a rise in the surplus cash within the Group. Investment securities were down ¥88.8 billion, to ¥266.9 billion, reflecting the sale of securities held and lower

Net defined benefit assets were down ¥13.6 billion, to ¥17.8 billion, owing mainly to a decline in the discount rate used in calculating retirement benefit obligations and a downturn in the management of pension assets.

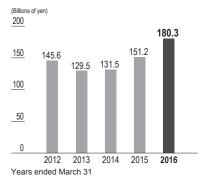
#### Net Cash Provided by Operating Activities



#### Net Cash Used in Investing Activities, Capital Expenditures



#### Depreciation and Amortization



#### **Business Risks**

#### Liabilities

At year-end, total liabilities were ¥2,507.0 billion, down ¥227.3 billion

Trade payables were down ¥51.0 billion, to ¥408.3 billion, mainly because of lower raw materials costs. Interest-bearing debt was ¥1,465.7 billion, down ¥137.8 billion.

Deferred tax liabilities decreased ¥19.3 billion, to ¥76.9 billion, largely because of lower market valuations of securities held. Details are presented in Note 15 (Income Taxes).

#### Net Assets

Net assets were ¥1.554.5 billion, down ¥34.0 billion. Key factors in this decline included a foreign currency translation adjustment of ¥32.2 billion, down ¥27.6 billion, as the yen was stronger at year-end than 12 months earlier and a net unrealized holding gain on other securities of ¥16.0 billion, down ¥24.2 billion, reflecting the sale of securities held and lower market valuations. Also, remeasurements of defined benefit plans were negative ¥17.1 billion, down ¥21.6 billion, due mainly to a decline in the discount rate used in calculating retirement benefit obligations and a downturn in the management of pension assets.

The shareholders' equity ratio thereby increased 0.3 percentage point, to 22.9%.

Cash Flows from Operating Activities

Net cash provided by operating activities was ¥388.6 billion, up ¥58.8 billion, owing primarily to inflows from profit before income taxes, depreciation and amortization, impairment loss, and a decrease in working capital associated with lower costs for raw material and fuel, which offset the impact of income taxes.

#### Cash Flows from Investing Activities

Net cash used in investing activities was ¥202.7 billion, a decline of ¥74.4 billion. This reflected outflows from capital expenditures and purchase of investments in subsidiaries resulting in change in scope of consolidation, which offset inflows from the sale of investment securities.

#### Cash Flows from Financing Activities

Net cash used in financing activities was ¥156.9 billion, up ¥154.8 billon, largely because of outflows from repayment of interest-bearing debt.

As a result of these factors, free cash flow, comprising cash flows from operating and investing activities, was ¥185.8 billion, up ¥133.3 billion. Cash and cash equivalents were ¥263.7 billion, an increase of ¥20.7 billion, reflecting a ¥8.5 billion effect of exchange rate changes on cash and cash equivalents, in addition to the abovementioned factors.

#### **Capital Expenditures**

Capital expenditures for the fiscal year ended March 31, 2016, were ¥176.5 billion, an increase of ¥11.5 billion from a year earlier. These expenditures were largely applied to construction of new or expand facilities, renewal of existing facilities, and rationalization investments in other facilities.

The major new or expanded facilities included a polyvinyl alcohol film production facilities expansion at The Nippon Synthetic Chemical Industry Co., Ltd. in Japan, new air separation production facilities at Taiyo Nippon Sanso Corporation in Japan, and carbon fiber production facilities expansion at Mitsubishi Rayon Carbon Fiber and Composites, Inc. in the United States.

The MCHC Group faces the following key risks, which could adversely affect its operating results and financial position. This section contains forward-looking statements based on information deemed relevant at March 31, 2016. The business risks presented are not all-encompassing. In recognition of exposure to risks such as those detailed below, the Group conducts risk assessments once a year. Based on these assessments, risk management systems are established and revised in consideration of the risks faced by specific businesses. In this manner, the Group is working to prevent the risks from occurring and minimize the impacts of such risks be realized.

#### **Changes Affecting** Operating Results

Many of the Group's products can be impacted by demand and product markets domestically and abroad; pricing and procurement volumes for crude oil, naphtha, utilities, and other raw materials and supplies; foreign exchange rates; and relevant laws and regulations. The principal assumed risks for each business domain are as follows.

#### (a) Performance Products Domain

These products must satisfy high-quality and performance requirements, and the Group must develop and supply them at the appropriate times to meet market needs. Group business results ("results") may be adversely affected if market needs change far more than the Group envisages, or if the Group is unable to ensure the timely supply of products that meet market needs, including issues with the availability of raw materials. If supply is interrupted for raw materials that can only be procured from certain areas or specific suppliers, then this could adversely affect

The Group outsources production of most information and electronics-related materials to other Asian manufacturers, so disasters or other issues with those facilities could disrupt the supply structure, adversely affecting results. Specifically, film and sheet products rely greatly on demand for liquid crystal display (LCD) panels, so drastic fluctuations in demand for LCD panels could adversely affect results.

#### (b) Health Care Domain

The results of the pharmaceuticals business are subject to the Group being unable to reach revenue and earnings targets by adequately expanding sales volumes of existing treatments or rationalizing operations in response to lower prices from periodic revisions in National Health Insurance prices of pharmaceuticals. Results are also subject to government policies in each country to constrain medical expenditures.

In general, lead times for drug research and development are far longer than in other industries, whereas the percentage of drugs receiving approval is not high. It is therefore difficult to produce accurate forecasts for the certainty or timing of commercialization. Results are thus subject to drugs not being commercialized as planned. Even where drugs are commercialized, results are subject to sales volumes being lower because of intensified competition with rival offerings, volumes declining on reports of new side effects when usage of these drugs becomes broad-based, generic drugs are commercialized after patents expire, or when approval is withdrawn.

Results are subject to supply disruptions on some raw materials for which the Group relies on external sources and can be influenced by an inability to secure adequate supplies of pharmaceuticals.

In clinical testing and diagnostic reagents and instruments, results can be affected by periodic revisions in medical treatment fees and drug price revisions. Results in these businesses are subject to the Group being unable to reach revenue and earnings targets by adequately expanding sales volumes of existing treatments or rationalizing operations in response to lower fees or prices. In the pharmaceutical intermediates and active pharmaceutical ingredients business and the capsules for pharmaceutical products, results are subject to lower sales volumes of customers' pharmaceuticals following revisions in National Health Insurance prices or patent expiries on customer products.

#### (c) Industrial Materials Domain

In this area, MCHC consumes large volumes of naphtha and other raw materials, and uses considerable amounts of electricity and steam in production processes. For those reasons, drastic fluctuations in the costs of naphtha, fuels, and other resources owing to changes in crude oil prices; the demand and supply balance for raw fuels or naphtha; or the impact of foreign exchange rates could adversely affect results if MCHC is not fully able to adjust its product prices, or if there are delays in such adjustments. MCHC relies on suppliers from certain areas for its raw fuels, and an inability to secure required fuels at the right times could adversely affect results. A worldwide recession or increased production capacity among rivals could adversely affect results if it becomes impossible to maintain the product demand and supply balance or MCHC is unable to generate revenues and earnings or reach goals that are commensurate with its capital expenditures.

MCHC relies heavily on certain business partners for some products in the Industrial Materials domain. For example, the coke business depends greatly on specific steelmakers, so if the steel output of those companies declines, such as because of dramatic fluctuations in the demand and supply of raw steel, the performances of such business partners could adversely affect MCHC's results.

#### (d) Others

The Group includes companies offering engineering and logistics services. Those companies secure some external orders. Significant fluctuations in demand within and outside the Group, or in market conditions worldwide, could adversely affect results.

#### (e) Overall Operations

The Group aims to grow, innovate, and leap ahead by orchestrating its strengths. It is therefore reinforcing its structure and implementing growth strategies (including to deliver high performance and added value), while cultivating innovative businesses. Changes in the economic or business climates (including social demands relating to climate change measures and other aspects of the environment) that are far greater than projected could adversely affect results

The Group's broad overseas activities include exporting products and manufacturing around the world. Risks in countries or regions relating to Group businesses, notably of conflicts, terrorism, civil wars, riots, demonstrations, deteriorating security, and other international geopolitical problems, unforeseeable issues with regulations, taxation, working conditions, customs, and other country risks, large-scale natural disasters, difficulties hiring and retaining employees, inadequate supplies from utilities or other infrastructural shortfalls, changes in the economic and financial climates, or other risks impacting specific countries or regions could adversely affect results.

#### Interest-Bearing Debt

The Group aims to balance its growth and innovation strategies with efforts to enhance its financial position. MCHC's results could be adversely affected in a situation where interest payments on interest-bearing debt rises. such as because interest-bearing debt increases, interest rates rise, or MCHC's credit rating declines owing to fluctuating Group performances. Results could also be adversely affected if it becomes essential to procure funds to upgrade facilities and the Group must obtain financing at unfavorable terms.

#### Risks Associated with Acquisitions, Mergers, or Restructuring

Results could be adversely affected if mergers, acquisitions, or joint ventures created in Japan or abroad to expand scale or overhaul MCHC's business portfolio fail to deliver anticipated synergies or other benefits, or if the Group's financial burden thereby increases or, if after mergers or acquisitions, the Group encounters new debt or other issues that it did not initially envisage. Other factors that could adversely affect results include reorganizations as part of business selection and concentration initiatives, through which MCHC withdraws from unprofitable businesses or liquidates affiliates.

#### **Deferred Tax Assets**

The Group records deferred tax assets for deductible temporary differences on tax loss carryforwards. Deferred tax assets are calculated based on various predictions and assumptions about future taxable income. If results differ from such predictions and assumptions, or if tax rates change in line with changes to the tax system, MCHC would need to recalculate deferred tax assets, which could adversely affect results.

#### Impairment of Securities

The Group holds marketable securities, mainly as a non-controlling shareholder in customer companies or financial institutions to maintain long-term relationships with them. Major declines in the market values of such securities could adversely affect results.

## **Assets**

Impairment of Fixed The Group applies accounting standards related to fixed asset impairment. The Group could incur impairment losses owing to dramatically deteriorating performances or major declines in property values, which could adversely affect results.

#### Pension and Severance Plans

The Group calculates retirement benefit obligations and expenses for current and former employees based on actuarial assumptions, investment returns on plan assets, and other factors. A decline in the value of pension assets, fluctuations in the interest rate climate, and changes in retirement benefit obligations and expenses owing to changes in the retirement plan and pension systems could adversely affect results.

#### Impact of Inventory Valuations

The Group states inventory assets principally at cost based on the moving average method. Declines in the costs of naphtha or raw materials during the fiscal period could detract from earnings by affecting relatively expensive inventories at the start of a term, thereby increasing the cost of sales. Earnings would conversely rise if fuel costs rose during the fiscal period. Changes in fuel costs could therefore affect results. The Group applies the Accounting Standard for Measurement of Inventories (ASBJ Statement No. 9), so any book value write-down based on lower profitability could adversely affect results.

#### Changes in Foreign **Exchange Rates**

The Group endeavors to minimize the short-term impact of fluctuations in foreign currency transactions, primarily for exports and imports, notably by using forward foreign exchange contracts. Changes in exchange rates in the short, medium, and long terms may affect results.

The Group engages in production and sales in Asia, Europe, North America, and other locations overseas. It translates sales, expenses, assets, and other items denominated in foreign currencies in such regions into yen in its consolidated financial statements. Even if the foreign currency valuations of such items remain unchanged, the yen equivalents could change after conversion from other currencies, so foreign exchange rate fluctuations could affect the Group's results and financial position.

#### Laws and Regulations

The Group's operations are subject to related laws and regulations in Japan and abroad. Such laws and regulations may govern security and safety, the environment and chemical substances, pharmaceutical safety policies, and other areas relating to Group operations.

The Group maintains voluntary rules that are stricter than legal provisions while pursuing thorough compliance to satisfy laws and regulations in engaging in business activities. Dramatic changes in laws and regulations or strengthened legislation could further restrict the Group's activities or increase its costs. Furthermore, should the Group violate laws or regulations, it could be ordered to halt operations at plants, and trust from society could be lost. All these factors have the possibility of influencing results.

#### **Product Liability**

The Group manufactures and sells products that conform with standards as ISO 9001, the international standard for quality management systems. The Group endeavors to prevent product liability problems from arising when launching products or improving quality by previously evaluating such liability risks. The Group cannot guarantee, however, that all of its products will be free of defects. It therefore has product liability insurance to cover possible accidents. Regardless, product defects that could cause major product liability exposure with damages exceeding the range of such insurance could adversely affect results.

#### Accidents and Disasters

The Group regularly inspects its plants and otherwise endeavors to prevent accidents at facilities. It cannot, however, completely prevent or mitigate accidents at such facilities, nor natural disasters such as earthquakes. Accidents that damage property, cause human suffering or loss of life, or create environmental pollution could adversely impact production activities and reduce social trust in the Group, thereby adversely affecting results. Natural disasters that damage property, cause human suffering or loss of life, or significantly damage or functionally degrade the social infrastructure and chronically affect the Group's activities could affect results.

#### Information Management

The Group strictly manages corporate and personal information in its possession. Problems resulting from leaks of such information could decrease competitiveness or reduce social trust in the Group, which may adversely affect results

#### Research and Development

The Group deems research and development as pivotal to supporting sustainable corporate growth, and has long undertaken solid R&D. It intends to deploy resources in a planned and sustainably stable manner from long-term perspectives. Results could be adversely affected, however, if the fruits of R&D are far less than anticipated.

#### Intellectual Property

The Group takes ample precautions to avoid violating the intellectual property of third parties. Nonetheless, injunctions or damages claims by third parties on the basis of patent or other infringements could adversely affect results.

#### Litigation

The Group maintains various businesses, as mentioned in Changes Affecting Operating Results. In engaging in business, or in reorganizing or restructuring operations, the Group could face litigation from business partners or other third parties relating to intellectual property or the Group's products. It is impossible to predict or assess the results of such lawsuits, which could adversely affect results.

Litigation proceedings to which the Group is currently subject is as follows:

Mitsubishi Tanabe Pharma Corporation was a codefendant with the Japanese government in damages lawsuits over blood products tainted with hepatitis C virus. In September 2008, the defendants concluded a basic agreement with nationwide plaintiff groups and their attorneys to resolve this case in response to the Act on Special Measures concerning the Payment of Benefits to Relieve the Victims of Hepatitis C Infected through Specified Fibrinogen Concentrates and Specified Coagulation Factor XI Concentrates. The plaintiffs began dropping litigation against the company, and in April 2009 the company decided to pay costs to the hepatitis C sufferers according to the payment apportionment standards of the above act.

		N	Millions o	f yen	Thousands of U.S. dollars (Note 2)
		2016	6	2015	2016
Assets	Current assets:				
	Cash and deposits (Notes 9,11)	¥ 31	4,782	¥ 236,186	\$ 2,785,681
	Trade receivables (Note 9)	703	3,996	759,850	6,230,053
	Securities (Notes 9,10)	12:	3,500	127,805	1,092,920
	Inventories:				
	Finished goods	294	4,332	330,029	2,604,708
	Work in process	7(	6,046	83,603	672,973
	Raw materials and supplies	170	6,922	180,821	1,565,681
	Land held for sale		526	1,052	4,655
	Deferred income taxes—current (Note 15)	32	2,339	36,482	286,186
	Prepaid expenses and other current assets	9:	9,091	106,119	876,912
	Allowance for doubtful accounts	(4	4,032)	(4,698)	(35,681)
	Total current assets	1,81	7,502	1,857,249	16,084,088

roperty, plant and equipment:			
Land	304,888	308,995	2,698,124
Buildings	1,067,788	1,087,046	9,449,451
Machinery and equipment	3,259,981	3,271,982	28,849,389
Construction in progress	88,551	101,649	783,637
	4,721,208	4,769,672	41,780,602
Accumulated depreciation	(3,330,481)	(3,271,526)	(29,473,283
Property, plant and equipment, net	1,390,727	1,498,146	12,307,319

nvestments and other assets:			
Investment securities (Notes 9,10)	266,926	355,743	2,362,177
Long-term loans receivable	5,084	2,983	44,991
Deferred income taxes—noncurrent (Note 15)	62,211	62,804	550,540
Net defined benefit assets (Note 13)	17,811	31,494	157,619
Goodwill	248,164	243,797	2,196,142
Other	254,538	272,290	2,252,549
Allowance for doubtful accounts	(1,391)	(1,468)	(12,310)
Total investments and other assets	853,343	967,643	7,551,708
Total assets	¥4,061,572	¥4,323,038	\$35,943,115

		Millions o	of ven	Thousands of U.S. dollars (Note 2)
	_	2016	2015	2016
1-1-1141	Current liabilities:	2010	2010	2010
iabilities and	Short-term debt (Notes 9,18)	¥ 424,688	¥ 544,985	\$ 3,758,301
	Current portion of long-term debt (Notes 9,18)	178,481	198,667	1,579,478
	Trade payables (Note 9)	408,315	459,345	3,613,407
	Accrued expenses (Note 1)	108,629	108,115	961,319
	Accrued income taxes	39,914	36,224	353,221
	Other current liabilities (Notes 1,15)	186,217	218,611	1,647,938
	Total current liabilities	1,346,244	1,565,947	11,913,664
	Long-term liabilities:			
	Long-term debt (Notes 9,18)	862,583	859,943	7,633,478
	Net defined benefit liabilities (Note 13)	143,713	132,921	1,271,796
	Other noncurrent liabilities (Notes 1,15)	154,504	175,626	1,367,292
	Total long-term liabilities	1,160,800	1,168,490	10,272,566
	Net assets:			
	Shareholders' equity:			
	Common stock:			
	Authorized—6,000,000 thousand shares:			
	Issued and outstanding— 1,506,288 thousand shares at March 31, 2016 and 2015	50,000	50,000	442,478
	Additional paid-in capital	317,037	317,714	2,805,637
	Retained earnings	549,430	523,149	4,862,212
	Less, treasury stock at cost— 41,485 thousand shares at March 31, 2016 and 41,624 thousand shares at March 31, 2015	(16,240)	(16,236)	(143,717
	Total shareholders' equity	900,227	874,627	7,966,611
	Accumulated other comprehensive income:			
	Net unrealized holding gain (loss) on other securities	16,011	40,308	141,690
	Gain (loss) on deferred hedges	139	(26)	1,230
	Land revaluation surplus	790	1,682	6,991
	Foreign currency translation adjustments	32,261	59,947	285,496
	Remeasurements of defined benefit plans (Note 13)	(17,176)	4,455	(152,000
	Total accumulated other comprehensive income	32,025	106,366	283,407
	Warrants (Notes 7,14)	515	471	4,558
	Non-controlling interests in consolidated subsidiaries	621,761	607,137	5,502,310
	Total net assets	1,554,528	1,588,601	13,756,885
	Total liabilities and net assets	¥ 4,061,572	¥4,323,038	\$ 35,943,115

The accompanying notes are an integral part of these consolidated financial statements.

## Consolidated Statements of Comprehensive Income

Mitsubishi Chemical Holdings Corporation and Consolidated Subsidiaries Years ended March 31

			Thousands of U.S. dollars
	Millions		(Note 2)
	2016	2015	2016
Net sales	¥3,823,098	¥3,656,278	\$33,832,726
Cost of sales	2,779,584	2,826,197	24,598,088
Gross profit	1,043,514	830,081	9,234,637
Selling, general and administrative expenses (Note 5)	763,488	664,400	6,756,531
Operating income	280,026	165,681	2,478,106
Other income (expenses):			
Interest and dividend income	12,430	12,164	110,000
Equity in earnings of affiliates, net	10,105	3,843	89,425
Foreign exchange gain (loss), net	(7,094)	8,339	(62,779)
Interest expense	(19,293)	(17,599)	(170,735)
Gain on sales of investment securities, net	30,196	6,162	267,221
Gain on step acquisitions, net	1,861	34,144	16,469
Impairment loss	(78,992)	(31,183)	(699,044)
Special retirement expenses	(15,502)	(727)	(137,186)
Gain (loss) on sales and retirement of noncurrent assets, net	(2,976)	6,334	(26,336)
Provision for prospective loss on removal of fixed assets	_	(7,769)	_
Other, net	(12,513)	(13,768)	(110,735)
Profit before income taxes	198,248	165,621	1,754,407
Income taxes (Note 15):			
Current	80,829	60,481	715,301
Deferred	11,819	8,690	104,593
	92,648	69,171	819,894
Profit	105,600	96,450	934,513
Profit attributable to:			
Non-controlling interests	59,156	35,591	523,504
Owners of parent (Note 17):	¥46,444	¥ 60,859	\$411,009

	Yen	Yen		
Per share (Note 17):	2016	2015	2016	
Profit attributable to owners of parent—Basic	¥31.70	¥41.40	\$0.28	
—Diluted	31.68	41.37	0.28	
Cash dividends	15.00	13.00	0.13	

The accompanying notes are an integral part of these consolidated financial statements.

	Millions of yen		Thousands of U.S. dollars (Note 2)	
	2016	2015	2016	
Profit	¥105,600	¥ 96,450	\$ 934,513	
Other comprehensive income (loss):				
Net unrealized holding gain (loss) on other securities	(29,729)	24,299	(263,088)	
Gain (loss) on deferred hedges	298	(562)	2,637	
Foreign currency translation adjustments	(36,732)	40,733	(325,062)	
Remeasurements of defined benefit plans	(26,328)	4,344	(232,991)	
Other comprehensive income (loss) for affiliates accounted for using equity method	(5,414)	8,428	(47,912)	
Other comprehensive income (loss), net (Note 6)	(97,905)	77,242	(866,416)	
Total comprehensive income	¥ 7,695	¥173,692	\$ 68,097	
Total comprehensive income (loss) attributable to:				
Owners of parent	¥(26,977)	¥116,014	\$(238,735	
Non-controlling interests	34.672	57.678	306.832	

The accompanying notes are an integral part of these consolidated financial statements.

	Millions of yen		Thousands of U.S. dollars (Note 2)	
	2016	2015	2016	
Number of outstanding shares of common stock (thousands)				
Balance at beginning of year	1,506,288	1,506,288	_	
Balance at end of year	1,506,288	1,506,288	_	
Shareholders' equity:				
Common stock				
Balance at beginning of year	¥ 50,000	¥ 50,000	\$ 442,478	
Cumulative effects of changes in accounting policies	_	_	_	
Restated balance at beginning of year	50,000	50,000	442,478	
Balance at end of year	¥ 50,000	¥ 50,000	\$ 442,478	
Additional paid-in capital				
Balance at beginning of year	¥317,714	¥317,737	\$ 2,811,628	
Cumulative effects of changes in accounting policies	_	1-1	_	
Restated balance at beginning of year	317,714	317,737	2,811,628	
Disposal of treasury stock	4	31	35	
Change in treasury shares of parent arising from transactions with non-controlling shareholders	(681)	_	(6,027)	
Reduction in additional paid-in capital due to acquisition of treasury stock from consolidated subsidiary	_	(54)	_	
Balance at end of year	¥317,037	¥317,714	\$ 2,805,637	
Retained earnings				
Balance at beginning of year	¥523,149	¥493,611	\$ 4,629,637	
Cumulative effects of changes in accounting policies	+320,143	(13,343)	Ψ 4,023,007	
Restated balance at beginning of year	523,149	480,268	4,629,637	
Cash dividends	(20,507)	(17,637)	(181,478)	
Profit attributable to owners of parent	46,444	60,859	411,009	
Change in scope of consolidation	86	(341)	761	
Change in scope of equity method	(504)	(541)	(4,460)	
Reversal of revaluation reserve for land	762		6,743	
Balance at end of year	¥549,430	¥523,149	\$ 4,862,212	
Towns and all all and				
Treasury stock at cost	V (40 000)	V/44 750\	A (440.004)	
Balance at beginning of year	¥ (16,236)	¥ (11,756)	\$ (143,681)	
Cumulative effects of changes in accounting policies				
Restated balance at beginning of year	(16,236)	(11,756)	(143,681)	
Purchase of treasury stock	(48)	(2,705)	(425)	
Disposal of treasury stock	11	16	97	
Change in scope of consolidation		(1,791)		
Change in scope of equity method  Balance at end of year	33 ¥ (16,240)	¥ (16,236)	292 \$ (143,717)	
Total shareholders' equity  Balance at beginning of year	¥ 874,627	¥849,592	\$ 7,740,062	
Cumulative effects of changes in accounting policies	+ 014,021	(13,343)	ψ 1,140,002	
Restated balance at beginning of year	874,627	836,249	7,740,062	
Cash dividends	(20,507)	(17,637)	(181,478)	
Profit attributable to owners of parent for the period	46,444	60,859	411,009	
Purchase of treasury stock	(48)	(2,705)	(425)	
Disposal of treasury stock	15	47	133	
Change in treasury shares of parent arising from transactions with non-controlling	(681)	-	(6,027)	
shareholders  Change in scope of consolidation	86	(2,132)	761	
Change in scope of equity method	(471)		(4,168)	
Reversal of revaluation reserve for land	762	S-3	6,743	
Reduction in additional paid-in capital due to acquisition of treasury stock from consolidated subsidiary	_	(54)	_	
Balance at end of year	¥ 900,227	¥874,627	\$ 7,966,611	
	,		+ -,,•	

		Millions o	f yen		Thousands of (Note	
	201			015	20	
Accumulated other comprehensive income:						
Net unrealized holding gain on other securities						
Balance at beginning of year	¥	40,308	¥	20,748	\$	356,708
Cumulative effects of changes in accounting policies		40.200		20.749		256 700
Restated balance at beginning of year		40,308		20,748		356,708
Net change in items other than those in shareholders' equity  Balance at end of year		(24,297) 16,011	¥	19,560 40,308	\$	(215,018 141,690
Dalance at end of year	*	10,011	+	40,300	4	141,030
Gain (loss) on deferred hedges						
Balance at beginning of year	¥	(26)	¥	209	\$	(230
Cumulative effects of changes in accounting policies						
Restated balance at beginning of year		(26)		209	_	(230
Net change in items other than those in shareholders' equity		165		(235)		1,460
Balance at end of year	¥	139	¥	(26)	\$	1,230
Land revaluation surplus						
Balance at beginning of year	¥	1,682	¥	1,581	\$	14,88
Cumulative effects of changes in accounting policies		_				
Restated balance at beginning of year		1,682		1,581		14,88
Net change in items other than those in shareholders' equity		(892)		101		(7,89
Balance at end of year	¥	790	¥	1,682	\$	6,991
Foreign currency translation adjustments						
Balance at beginning of year	¥	59,947	¥	25,556	\$	530,504
Cumulative effects of changes in accounting policies		_		_		_
Restated balance at beginning of year		59,947		25,556		530,504
Net change in items other than those in shareholders' equity		(27,686)		34,391		(245,009
Balance at end of year	¥	32,261	¥	59,947	\$	285,496
Remeasurements of defined benefit plans						
Balance at beginning of year	¥	4,455	¥	3,117	\$	39,425
Cumulative effects of changes in accounting policies						
Restated balance at beginning of year		4,455		3,117		39,425
Net change in items other than those in shareholders' equity		(21,631)		1,338		(191,42
Balance at end of year	¥	(17,176)	¥	4,455	\$	(152,000
Total accumulated other comprehensive income			5/2			
Balance at beginning of year	¥ 1	106,366	¥	51,211	\$	941,292
Cumulative effects of changes in accounting policies		1_1		2_7		
Restated balance at beginning of year	1	106,366		51,211		941,292
Net change in items other than those in shareholders' equity		(74,341)		55,155		(657,885
Balance at end of year	¥	32,025	¥	106,366	\$	283,40
Warrants						
Balance at beginning of year	¥	471	¥	496	\$	4,168
Cumulative effects of changes in accounting policies		_				
Restated balance at beginning of year		471		496		4,168
Net change in items other than those in shareholders' equity		44		(25)		389
Balance at end of year	¥	515	¥	471	\$	4,558
Non-controlling interests in consolidated subsidiaries						
Balance at beginning of year	¥ €	607,137	¥	413,571	\$	5,372,894
Cumulative effects of changes in accounting policies		_		(3,807)		_
Restated balance at beginning of year	6	607,137		409,764		5,372,894
Net change in items other than those in shareholders' equity		14,624		197,373		129,416
Balance at end of year	¥ 6	321,761	¥	607,137	\$	5,502,310
,						
		200 004	¥ 1	,314,870	\$	14,058,416
Total net assets  Balance at beginning of year	¥ 1,5	000,601				
Total net assets	¥ 1,5	-		(17,150)		_
Total net assets  Balance at beginning of year		- 588,601		(17,150) ,297,720		14,058,416
Total net assets  Balance at beginning of year  Cumulative effects of changes in accounting policies	1,5	_				14,058,416
Total net assets  Balance at beginning of year  Cumulative effects of changes in accounting policies  Restated balance at beginning of year	1,5	 588, <b>601</b>		,297,720		

Disposal of treasury stock	15	47	133
Change in treasury shares of parent arising from transactions with non-controlling shareholders	(681)	-	(6,027)
Change in scope of consolidation	86	(2,132)	761
Change in scope of equity method	(471)	i— "	(4,168)
Reversal of revaluation reserve for land	762	<del>-</del>	6,743
Reduction in additional paid-in capital due to acquisition of treasury stock from consolidated subsidiary	_	(54)	-
Net change in items other than those in shareholders' equity	(59,673)	252,503	(528,080)
Balance at end of year	¥ 1,554,528	¥ 1,588,601	\$ 13,756,885

Note: Reduction in additional paid-in capital due to acquisition of treasury stock from consolidated subsidiary

MCHC deducted taxes applicable to gains on transfers of shares in consolidated subsidiaries from capital surplus based on the Practical Guidelines for Tax Effect Accounting on the Consolidated Financial Statements (Report No. 6 of the JICPA Accounting System Committee). This was in keeping with the acquisition of the Company's shares from a consolidated subsidiary, Taiyo Nippon Sanso Corporation, and was pursuant to a resolution of the Board of Directors on February 4, 2015 in accordance with the provisions of Article 156-1 and Article 163 of the Companies Act of Japan.

## Consolidated Statements of Cash Flows

Mitsubishi Chemical Holdings Corporation and Consolidated Subsidiaries Years ended March 31

	Millions of	Millions of yen	
	2016	2015	(Note 2) 2016
Cash flows from operating activities:			
Profit before income taxes	¥198,248	¥ 165,621	\$1,754,407
Adjustments for:			
Depreciation and amortization	180,374	151,253	1,596,230
Amortization of goodwill	20,379	21,144	180,345
Interest expense	19,293	17,599	170,735
Interest and dividend income	(12,430)	(12,164)	(110,000)
Equity in (earnings) losses of affiliates, net	(10,105)	(3,843)	(89,425)
Foreign exchange (gains) losses, net	1,311	(672)	11,602
Impairment loss	78,992	31,183	699,044
(Gain) loss on sales and retirement of noncurrent assets, net	2,976	(6,334)	26,336
Provision for prospective loss on removal of fixed assets	<b>—</b>	7,769	_
(Gain) loss on sales of investment securities, net	(30,196)	(6,162)	(267,221)
(Gain) loss on step acquisitions, net	(1,861)	(34,144)	(16,469)
(Increase) decrease in trade receivables	56,353	4,302	498,699
(Increase) decrease in inventories	39,783	58,975	352,062
Increase (decrease) in trade payables	(46,301)	(38,092)	(409,743)
Increase (decrease) in net defined benefit liabilities	(22,199)	8,326	(196,451)
Other, net	(1,946)	18,778	(17,221)
Subtotal	472,671	383,539	4,182,929
Interest and dividend income received	17,095	14,378	151,283
Interest expenses paid	(19,576)	(18,057)	(173,239)
Income taxes paid	(81,527)	(50,084)	(721,478)
Net cash provided by operating activities	388,663	329,776	3,439,496
Cash flows from investing activities:			
Payment for time deposits	(150,895)	(29,365)	(1,335,354)
Proceeds from repayment of time deposits	58,875	7,967	521,018
Purchase of short-term investment securities	(142,500)	(122,300)	(1,261,062)
Proceeds from sales and redemption of securities	183,800	95,871	1,626,549
Purchase of property, plant and equipment	(177,228)	(157,265)	(1,568,389)
Proceeds from sales of property, plant and equipment	11,822	15,587	104,619
Purchase of intangible assets	(3,412)	(3,423)	(30,195)
Purchase of investment securities	(6,744)	(4,583)	(59,681)
Proceeds from sales and redemption of investment securities	66,415	14,639	587,743
Purchase of investments in subsidiaries resulting in change in scope of consolidation	(44,279)	(70,527)	(391,850)
Proceeds from sales of investments in subsidiaries resulting in change in scope of consolidation	_	4,467	_
Payment for investments in capital of subsidiaries and affiliates	_	(18,377)	_
(Increase) decrease in loans receivable, net	17	(6,826)	150
Purchase of long-term prepaid expenses	(1,904)	(6,990)	(16,850)
Other, net	3,237	3,902	28,646
Net cash used in investing activities	(202,796)	(277,223)	(1,794,655)

The accompanying notes are an integral part of these consolidated financial statements.

Cash flows from financing activities:			
Increase (decrease) in short-term debt, net	(102,314)	93,773	(905,434
Proceeds from issuance of long-term debt	197,915	202,702	1,751,460
Repayment of long-term debt	(205,569)	(262,845)	(1,819,195
Proceeds from stock issuance to non-controlling shareholders	3,699	2,602	32,735
Cash dividends paid	(20,507)	(17,637)	(181,478
Cash dividends paid to non-controlling interests	(23,322)	(17,602)	(206,389
Payments from changes in ownership interests in subsidiaries that do not result in change in scope of consolidation	(2,747)	-	(24,310
Proceeds from changes in ownership interests in subsidiaries that do not result in change in scope of consolidation	9	-	80
Purchase of treasury stock	(48)	(38)	(425
Proceeds from sales of treasury stock	1	36	9
Other, net	(4,074)	(3,052)	(36,053
Net cash used in financing activities	(156,957)	(2,061)	(1,389,000
Effect of exchange rate changes on cash and cash equivalents	(8,502)	11,807	(75,239
Net increase (decrease) in cash and cash equivalents	20,408	62,299	180,602
Cash and cash equivalents at beginning of the year	243,055	179,556	2,150,929
Net increase (decrease) in cash and cash equivalents resulting from change in scope of consolidation	307	1,200	2,717
Cash and cash equivalents at end of period (Note 11)	¥263,770	¥243,055	\$2,334,248

#### Notes to Consolidated Financial Statements

Mitsubishi Chemical Holdings Corporation and Consolidated Subsidiaries March 31, 2016

#### Note 1

#### Significant **Accounting Policies**

#### (a) Basis of Presentation

The accompanying consolidated financial statements are compiled from the consolidated financial statements prepared by the Company as required by the Financial Instruments and Exchange Law of Japan and are prepared on the basis of accounting principles generally accepted in Japan, which are different in certain respects from the application and disclosure requirements of International Financial Reporting Standards (IFRS). In presenting the accompanying consolidated financial statements, certain items have been reclassified for the convenience of readers outside Japan. As permitted, amounts of less than one million yen have been omitted. As a result, the totals shown in the accompanying consolidated financial statements (both in yen and in U.S. dollars) do not necessarily agree with the sum of the individual amounts. Certain amounts from the prior year have been reclassified to conform to the current year's presentation.

#### (b) Principles of Consolidation and Accounting for Investments in Unconsolidated **Subsidiaries and Affiliates**

The accompanying consolidated financial statements include the accounts of MCHC and all significant subsidiaries over which substantial control is exerted either through majority ownership of voting stock and/or by other means. Investments in certain unconsolidated subsidiaries and significant affiliates are accounted for by the equity method. Other investments in unconsolidated subsidiaries and affiliates are stated at cost or less. Where there has been a permanent decline in the value of such investments, MCHC has written them down to reflect the impairment.

All significant intercompany balances and transactions have been eliminated in consolidation. On acquisition, the assets and liabilities of the consolidated subsidiaries are valued at fair value.

Goodwill on acquisition of underlying net equity in consolidated subsidiaries and the excess of cost over fair value in affiliates accounted for by the equity method is amortized on a straight-line basis over a period of less than 20 years depending on the source.

Investment securities are classified as either held-to-maturity debt securities or other securities. Held-to-maturity debt securities are either amortized or accumulated to face value. Other securities with quoted market prices are carried at market value. The difference between the acquisition cost and the carrying value of other securities. including unrealized gain and loss, net of the applicable income taxes, is recognized as a component of net assets and is reflected as "Net unrealized holding gain or loss on other securities." The cost of other securities sold is computed by the moving average method. Other securities without quoted market prices are stated at cost based on the moving average method.

Held-to-maturity debt securities due within one year are presented as "Current assets" in the accompanying consolidated balance sheets. All other securities are presented as "Investments and other assets" in the accompanying consolidated balance

#### (d) Derivative Transactions

Derivative transactions are measured at fair value.

Finished goods, work in process, raw materials, and other inventory assets are stated principally at cost based on the average cost. Supplies (excluding packaging materials and deteriorated assets) are stated primarily at cost based on the moving average

Balance sheet amounts are calculated by writing down their book values in accordance with decreases in profitability.

#### (f) Property, Plant and Equipment

Property, plant and equipment is stated at cost. Depreciation of property, plant and equipment is principally calculated using the straight-line method.

Principal estimated useful lives of the assets are as follows:

Buildings: 3–50 years Machinery and equipment: 3–22 years

#### (g) Allowance for Doubtful Accounts

Allowance for doubtful accounts is provided for at an amount estimated with reference to individual accounts deemed uncollectible plus an amount calculated by a historical rate based on the actual uncollectible amounts in prior years.

#### (h) Accrued Bonuses to Employees

To provide for payments of bonuses to its employees, bonuses and related social insurance premium are accrued and recorded at the amount expected to be paid. The corresponding balances of ¥42,516 million (\$376,248 thousand) and ¥39,286 million are included in "Accrued expenses" in the accompanying consolidated balance sheets as of March 31, 2016 and 2015, respectively.

#### (i) Reserves for Possible Losses in Connection with Litigation

Reserves for possible losses in connection with litigation are set aside for payments to settle lawsuits and in preparation for payments that may arise in the future.

#### 1. Reserve for Health Management Allowances for HIV Compensation

Balances of ¥1,564 million (\$13,841 thousand) and ¥1,700 million are included in "Other noncurrent liabilities" in the accompanying consolidated balance sheets as of March 31, 2016 and 2015, respectively.

To provide for future payments of health management allowances and settlement payments (including attorney fees) in connection with a lawsuit for damages filed by plaintiffs infected with HIV, the consolidated subsidiary, Mitsubishi Tanabe Pharma Corporation (MTPC) has set aside an estimated amount for such future payments.

#### 2. Reserve for HCV Litigation

Balances of ¥5,020 million (\$44,425 thousand) and ¥2,036 million are included in "Other noncurrent liabilities" in the accompanying consolidated balance sheets as of March 31, 2016 and 2015, respectively.

To provide for losses that may arise in the future from a settlement of lawsuits filed by plaintiffs infected with HCV (hepatitis C virus), MTPC has set aside an estimated amount for payments related to such settlement based on estimates of the number of people receiving relief and the amount of relief payments required under a law which stipulates that relief be provided to people who contracted hepatitis C from specific fibrinogen products or specific coagulation factor IX products.

## 3. Reserve for Health Management Allowances for Sub-acute Myelo-Optical Neuropathy (SMON) Compensation

Balances of ¥2,522 million (\$22,319 thousand) and ¥2,731 million are included in "Other noncurrent liabilities" in the accompanying consolidated balance sheets as of March 31, 2016 and 2015, respectively.

MTPC pays health management allowances and nursing expenses for plaintiffs covered under the compromise settlement reached in the SMON litigation.

MTPC has made a provision in the accompanying consolidated financial statements for the estimated future medical treatment payments to be made over the remaining lives of the parties entitled to such payments under the compromise settlement.

#### (j) Reserve for Periodic Repairs

Several consolidated subsidiaries provide for costs of periodic repairs of production facilities in plants and oil tanks. The corresponding balances of ¥8,254 million (\$73,044 thousand) and ¥8,617 million are included in "Other current liabilities" and "Other noncurrent liabilities" in the accompanying consolidated balance sheets as of March 31, 2016 and 2015, respectively.

#### (k) Directors' Retirement Benefits

Accrued lump-sum retirement benefits for directors, executive officers and corporate auditors are determined based on internal regulations. The corresponding balances of ¥2,146 million (\$18,991 thousand) and ¥2,258 million are included in "Other noncurrent liabilities" in the accompanying consolidated balance sheets as of March 31, 2016 and 2015, respectively.

(I) Reserve for Costs Associated with Liquidation of Subsidiaries and Affiliates Several consolidated subsidiaries provide for estimated costs derived from liquidation of its subsidiaries and affiliates. The corresponding balances of ¥415 million (\$3,673 thousand) and ¥476 million are included in "Other noncurrent liabilities" in the accompanying consolidated balance sheets as of March 31, 2016 and 2015, respectively.

#### (m) Reserve for Prospective Loss on Removal of Fixed Assets

Several consolidated subsidiaries provide for prospective loss on removal of fixed assets. The corresponding balances of ¥4,875 million (\$43,142 thousand) and ¥8,527 million are included in "Other current liabilities" and "Other noncurrent liabilities" in the accompanying consolidated balance sheets as of March 31, 2016 and 2015, respectively.

#### (n) Provision for Environmental Measures

Provision is made to cover estimated future losses from environmental measures work. Balances of ¥2,334 million (\$20,655 thousand) and ¥2,338 million are included in "Other noncurrent liabilities" in the accompanying consolidated balance sheets as of March 31, 2016, and 2015, respectively.

#### (o) Retirement Benefits

#### 1. Period attribution method for expected post-retirement benefit obligation

The Group uses the benefit formula standard as the period attribution method through the end of the fiscal year ended March 31, 2016 to calculate the expected post-retirement benefit obligation.

# 2. Amortization method for actuarial gain or loss, service cost and differences from accounting policy transitions

The Group amortizes actuarial gains or losses beginning in the year following that in which they are incurred by using the straight-line method over a certain period (in principle, five years) that is shorter than the remaining average service period from the date incurred. The Group amortizes prior service cost by using the straight-line method over a certain period (in principle, five years) that is shorter than the remaining average service period from the date incurred.

#### (p) Foreign Currency Translation

Current and noncurrent monetary assets and liabilities denominated in foreign currencies of MCHC and its domestic consolidated subsidiaries are translated into yen at the exchange rates in effect at the balance sheet date. Gains and losses arising from foreign exchange differences are credited or charged to income in the year in which they are made or incurred.

#### (q) Foreign Currency Financial Statements

The balance sheet accounts of foreign consolidated subsidiaries and affiliates are translated into yen at the exchange rates in effect at the balance sheet date, except for the components of net assets excluding non-controlling interests, which are translated at their historical exchange rates. Revenue and expense accounts of foreign consolidated subsidiaries and affiliates are translated into yen at the average exchange rates in effect during the year.

Translation adjustments resulting from the process of translating the financial statements of foreign consolidated subsidiaries and affiliates into yen are accumulated and presented under "Non-controlling interests in consolidated subsidiaries" and "Foreign currency translation adjustments" as a component of net assets.

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Mitsubishi Chemical Holdings Corporation KAITEKI REPORT 2016

#### (r) Principal Hedge Accounting Methods

#### 1. Hedge accounting method

The Group defers recognition of gains or losses related to fair or appraised value hedges. For receivables and payables denominated in foreign currencies, such as those with foreign exchange contracts, deferral hedging is used where satisfying deferral hedging criteria, while specific matching is used for interest rate swaps meeting specific matching criteria.

#### 2. Hedging instruments and targets

The Group uses foreign exchange contracts and currency swaps to reduce exposure to foreign exchange risks arising from transactions denominated in foreign currencies, notably imports and exports, financing, and funds management. The Group similarly uses interest rate swaps to lower exposure to interest rate fluctuations in financing and funds management transactions. The Group also uses commodity futures contracts to hedge against the risks of fluctuations in the purchase costs of raw materials.

#### 3. Hedging policy

The Group maintains a policy of limiting the use of derivative transactions to actual demand and does not engage in such transactions for speculative purposes. The Group minimizes credit risk stemming from breaches of contract of counterparties by restricting its use of derivative transactions to financial institutions with high credit ratings.

#### 4. Method of assessing hedge effectiveness

The Group has confirmed that the hedging instruments and targets used in executing derivative transactions nearly match crucial requirements, and it can offset the effects of market fluctuations on and after implementing hedges.

The Group decides on whether to engage in planned transactions after assessing whether or not such transactions are extremely feasible.

#### (s) Amortization of Goodwill

Goodwill is amortized on a straight-line basis over less than 20 years, depending on the source. Goodwill related to the launch of consolidated subsidiary Mitsubishi Tanabe Pharma Corporation is being amortized over 15 years. Goodwill from making Mitsubishi Plastics, Inc., into a wholly owned subsidiary is being amortized over 10 years. Goodwill from making Mitsubishi Rayon Co., Ltd. and Qualicaps Co., Ltd. into wholly owned consolidated subsidiaries and Taiyo Nippon Sanso Corporation into a consolidated subsidiary is being amortized over 20 years.

#### (t) Cash Equivalents

All highly liquid investments, generally with a maturity of three months or less when purchased, which are readily convertible into known amounts of cash and are so near maturity that they represent only an insignificant risk of any change in value attributable to changes in interest rates, are considered cash equivalents.

#### (u) Research and Development

Expenses related to research and development activities are charged to income as incurred.

#### (v) Distribution of Retained Earnings

Cash dividends are recorded in the fiscal year in which they are approved at the relevant shareholders' meeting or, in the case of interim dividends, the respective years in which they are declared by the Board of Directors.

#### (w) Income Taxes

Deferred income taxes are recognized by the asset and liability method under which deferred tax assets and liabilities are determined based on the differences between financial reporting and the tax bases of the assets and liabilities, and are measured using the enacted tax rates and laws which will be in effect when the differences are expected to reverse

A valuation allowance is provided against the deferred tax assets where it is considered more likely than not that they will not be realized.

#### Additional Information

#### Several Consolidated Subsidiaries' Year-end Switched to March 31

During the fiscal year ended March 31, 2016, Quadrant AG and 112 other companies switched their fiscal year-end from December 31 to March 31. The Company thus prepared consolidated financial statements based on the financial statements for those companies for the 12 months ended December 31, 2015, and three months through March 31, 2016.

The fiscal year-end of Mitsubishi Chemical Performance Polymers (China) Co., Ltd. and 12 other companies is December 31, but from this fiscal year the Company started to prepare its consolidated financial statements using provisional settlements of accounts for those companies as of March 31.

#### **Change in Accounting Policy**

#### Application of Accounting Standard for Business Combinations

From the year ended March 31, 2016, the Company applied the Accounting Standard for Business Combinations (Accounting Standards Board of Japan (ASBJ) Statement No. 21, revised on September 13, 2013), the Accounting Standard for Consolidated Financial Statements (ASBJ Statement No. 22, revised on September 13, 2013), the Accounting Standard for Business Divestitures (ASBJ Statement No. 7, revised on September 13, 2013, and other standards. As a result, any change in the Company's ownership interests in a subsidiary when the Company retains control over the subsidiary is accounted for in capital surplus, and acquisition-related costs are expensed in the year in which costs are incurred. For any business combinations on or after the beginning of the fiscal year ended March 31, 2016, subsequent measurement of the provisional amount recognized based on the revision of the purchase price allocation due to the completion of accounting for the business combination is reflected in the consolidated financial statements for the period in which the business combination occurs. In addition, the presentation of net income was amended and "minority interests" was changed to "non-controlling interests". To reflect these changes in presentation, adjustments have been made to the consolidated financial statements for the previous fiscal year ended March 31, 2015.

In the consolidated statement of cash flows for the fiscal year ended March 31, 2016, cash flows from changes in ownership interests in subsidiaries that do not result in a change in the scope of consolidation are recognized under "cash flows from financing activities." Cash flows for costs related to the purchase of ownership interests in subsidiaries that result in a change in the scope of consolidation are recognized under "cash flows from operating activities."

The aforementioned accounting standards were adopted from the beginning of the fiscal year ended March 31, 2016, according to the transitional treatment provided for in Paragraph 58-2 (4) of the Accounting Standard for Business Combinations, Paragraph 44-5 (4) of the Accounting Standard for Consolidated Financial Statements and Paragraph 57-4 (4) of the Accounting Standard for Business Divestitures.

The effects of these changes on operating income, ordinary income, and profit before income taxes in the fiscal year ended March 31, 2016, and on capital surplus at the end of that period were immaterial.

#### Accounting Standards Yet to Be Applied

# Guidance on Recoverability of Deferred Tax Assets (ASBJ Guidance No. 26, March 28, 2016)

(1) Outline

Entities are classified in five categories under the framework of Auditing Guidance No. 66, Auditing Treatment for Judgment of Recoverability of Deferred Assets, for treating the recoverability of deferred tax assets. The Company basically follows the framework for estimating deferred tax asset totals in keeping with the relevant categories, making the necessary reviews for the following treatments:

- 1. Treatment for entities that do not satisfy criteria for categories 1 through 5
- 2. Criteria for categories 2 and 3
- Treatment for deductible temporary differences for which scheduling is impossible at category 2 entities
- 4. Treatment for periods for which reasonable estimates are possible for taxable income prior to deductible temporary differences at category 3 entities
- 5. Treatment where entities are in categories 2 or 3 and satisfy criteria for category 4

(2) Impact of scheduled application

The MCHC Group will voluntarily apply IFRS from the first quarter of the year ending March 31, 2017, and has not evaluated the impact on the consolidated financial statements because it has no plans to adopt this standard.

#### Note 2

#### U.S. Dollar Amounts

MCHC and its domestic consolidated subsidiaries maintain their accounting records in Japanese yen. The U.S. dollar amounts are included solely for convenience and have been translated, as a matter of arithmetical computation only, at the rate of ¥113 to U.S.\$1.00, the approximate exchange rate prevailing on the Tokyo foreign exchange market at March 31, 2016. This translation should not be construed as a representation that yen amounts actually represent, or have been, or could be, converted into U.S. dollars at this, or any other rate.

#### Note 3

#### Impairment Losses

In principle, the MCHC Group maintains its grouping of assets in terms of operational, manufacturing process, and regional relevance based on business units. The Group recognizes impairment losses for idle assets by individual asset. In the fiscal year ended March 31, 2016, the Group posted ¥78,992 million (\$699,044 thousand) in impairment losses as part of other expenses. The main assets for which impairment losses were recognized are as follows:

Use	Location	Category	Impairment loss
Terephthalic acid production facilities	MCC PTA India Corp. Private Limited (West Bengal State, India)	Machinery and equipment, Others	¥43,217 million (\$382,451 thousand)
Terephthalic acid production facilities	Ningbo Mitsubishi Chemical Co., Ltd. (Zhejiang Province, China)	Machinery and equipment, Others	¥20,435 million (\$180,841 thousand)
Recombinant human serum albumin production facilities	Bipha Corporation (Chitose, Hokkaido)	Buildings and structures, Land, Others	¥3,329 million (\$29,460 thousand)
Electrolyte production facilities	MC Ionic Solutions UK, Ltd. (Stockton-on-Tees, United Kingdom)	Machinery and equipment, Others	¥3,076 million (\$27,221 thousand)
Toner production facilities, product warehousing, and common buildings	Mitsubishi Kagaku Imaging Corp. (Virginia, USA)	Buildings and structures, Machinery and equipment, Others	¥2,033 million (\$17,991 thousand)
Industrial gases production facilities	Leeden National Oxygen Ltd. (Singapore)	Machinery and equipment	¥1,386 million (\$12,265 thousand)
Specialty resin production facilities	Lucite International Inc. (West Virginia, USA)	Machinery and equipment, Others	¥1,145 million (\$10,133 thousand)
·			

#### **Composition of Impairment Losses**

Terephthalic acid production facilities (India)

The impairment loss of ¥43,217 million (\$382,451 thousand) includes ¥37,100 million (\$328,319 thousand) for machinery and equipment, and ¥6,117 million (\$54,132 thousand) for others.

Performance was sluggish at the terephthalic acid production facilities of MCC PTA India Corp. Private Limited, and a recovery in the business climate was unlikely. Because it was unlikely that investments would therefore be recoverable, the book value was reduced to the recoverable amount. That amount was based on the value in use. The discounted future cash flows were negative, so the discount rate is not presented.

Terephthalic acid production facilities (China)

The impairment loss of ¥20,435 million (\$180,841 thousand) includes ¥18,652 million (\$165,062 thousand) for machinery and equipment, and ¥1,783 million (\$15,779

thousand) for others.

Performance was sluggish at the terephthalic acid production facilities of Ningbo Mitsubishi Chemical Co., Ltd., in China, and a recovery in the business climate was unlikely. Because it was unlikely that investments would therefore be recoverable, the book value was reduced to the recoverable amount. That amount is the net selling price.

#### Recombinant human serum albumin production facilities

The impairment loss of ¥3.329 million (\$29.460 thousand) includes ¥2.019 million (\$17.867 thousand) for buildings and structures, ¥594 million (\$5.257 thousand) for land, ¥548 million (\$4,850 thousand) for machinery and equipment and vehicles, and ¥168 million (\$1.487 thousand) for others.

As the Mitsubishi Tanabe Pharma Group pushed ahead with preparations to restart production of recombinant human serum albumin, it became clear that there would be delays with these plans during the year ended March 31, 2016, prompting its management to revise such plans. With a resulting shift in focus away from the apeutic to non-therapeutic applications, it became likely that there would be a greater business scaling back than originally planned for the recombinant human serum albumin production facilities of Bipha Corporation. Because the future cash flow estimate was below the book value, which was therefore reduced to the recoverable amount. That amount is the net selling price, and is based on reasonably calculated prices (including real estate appraisals).

#### Electrolyte production facilities

The impairment loss of ¥3.076 million (\$27.221 thousand) includes ¥2.804 million (\$24,814 thousand) for machinery and equipment, and ¥272 million (\$2,407 thousand) for others.

Sales volume had not grown at the electrolyte production facilities of MC Ionic Solutions UK, Ltd., and management decided to remit operations at the facilities because a large increase was unlikely in the foreseeable future. Because it was unlikely that investments would therefore be recoverable, the book value was reduced to the recoverable amount. That amount was based on the value in use. The discounted future cash flows were negative, so the discount rate is not presented.

#### Toner production facilities, product warehousing, and common buildings

The impairment loss of ¥2,033 million (\$17,991 thousand) includes ¥1,668 million (\$14,761 thousand) for buildings and structures, ¥255 million (\$2,257 thousand) for machinery and equipment, and ¥110 million (\$973 thousand) for others. Management decided to halt operations at the Mitsubishi Kagaku Imaging Corp.'s toner production facilities, product warehousing, and common buildings because profitability plummeted amid a deteriorating market environment. Because it was unlikely that investments would therefore be recoverable, the book value was reduced to the recoverable amount. That amount was based on the value in use and calculated by discounting future cash flows by 12.5%.

#### Industrial gases production facilities

The impairment loss of ¥1,386 million (\$12,265 thousand) is all for machinery and

It became apparent that the profitability of industrial gases production facilities at Leeden National Oxygen Ltd. in Singapore would decline owing to changes in the business climate. Because the future cash flow estimate was below the book value, which was therefore reduced to the recoverable amount. That amount was based on the value in use and calculated by discounting future cash flows by 10.1%.

#### Specialty resin production facilities

The impairment loss of ¥1,145 million (\$10,133 thousand) includes ¥1,102 million (\$9,752 thousand) for machinery and equipment, and ¥43 million (\$381 thousand) for buildings and structures.

Management decided to shut down specialty resin production facilities at Lucite International Inc. Because it was therefore unlikely that investments would be recoverable, the book value was reduced to the recoverable amount. That amount was based on the value in use. The discounted future cash flows were negative, so the discount rate is not presented.

MCHC and its consolidated subsidiaries were guarantors for the following borrowings principally incurred by unconsolidated subsidiaries, affiliates and others:

#### Year ended March 31, 2016

	Net MCHC's at Consolidated subsice third parties' liabilities own liabilities		subsidiaries'	
	Millions of yen	Thousands of U.S. dollars	Millions of yen	Thousands of U.S. dollars
Guarantees	¥37,187	\$329,088	¥37,013	\$327,549
Stand-by guarantees	175	1,549	160	1,416

#### Year ended March 31, 2015

	Gross including third parties' liabilities	Net MCHC's and consolidated subsidiaries' own liabilities
	Millions of yen	Millions of yen
Guarantees	¥23,411	¥22,915
Stand-by guarantees	155	138

#### **Trademark Infringement Lawsuit**

#### Year ended March 31, 2016

The consolidated subsidiary Verbatim Corporation (US) was sued for trademark infringement in Brazil. In May 2007, a court in Manaus, in the Brazilian state of Amazonas, ruled in favor of the plaintiff and ordered Verbatim Corporation to pay 377 million Brazilian real, or ¥11,811 million (\$104,522 thousand). Verbatim Corporation, believing that no trademark infringement took place, and dissatisfied with the fact that reasons for recognizing the plaintiff's monetary claim were not disclosed, immediately filed an appeal with Brazil's Supreme Court. In February 2008, the Supreme Court ruled in favor of Verbatim Corporation and returned the case to the Manaus court for retrial.

In the following proceedings, the court ruled against Verbatim. However, dissatisfied with the ruling, Verbatim made a special appeal to Brazil's Supreme Court, requesting that the case be tried in that court. In June 2011, the Supreme Court dismissed the charges of trademark infringement filed against Verbatim, and overruled the lower court's order for Verbatim to pay the abovementioned damages. However, in April 2012 the plaintiff requested that the Supreme Court clarify its ruling, and the Company cannot deny the possibility that the plaintiff will oppose this ruling in the future.

#### Year ended March 31, 2015

The consolidated subsidiary Verbatim Corporation (US) was sued for trademark infringement in Brazil. In May 2007, a court in Manaus, in the Brazilian state of Amazonas, ruled in favor of the plaintiff and ordered Verbatim Corporation to pay 377 million Brazilian real, or ¥14,031 million. Verbatim Corporation, believing that no trademark infringement took place, and dissatisfied with the fact that reasons for recognizing the plaintiff's monetary claim were not disclosed, immediately filed an appeal with Brazil's Supreme Court. In February 2008, the Supreme Court ruled in favor of Verbatim Corporation and returned the case to the Manaus court for retrial.

In the following proceedings, the court ruled against Verbatim. However, dissatisfied with the ruling, Verbatim made a special appeal to Brazil's Supreme Court, requesting that the case be tried in that court. In June 2011, the Supreme Court dismissed the charges of trademark infringement filed against Verbatim, and overruled the lower court's order for Verbatim to pay the abovementioned damages. However, in April 2012 the plaintiff requested that the Supreme Court clarify its ruling, and the Company cannot deny the possibility that the plaintiff will oppose this ruling in the future.

#### Note 5

#### Selling, General and Administrative Expenses

For the years ended March 31, 2016 and 2015, the following items were recorded in the consolidated statements of income:

	Millions	s of yen	U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Transportation costs	¥119,864	¥102,210	\$1,060,743
Labor costs	205,949	163,530	1,822,558
Research and development	138,364	132,217	1,224,460

Notes: 1. Labor costs include a provision for bonuses of ¥19,470 million (\$172,301 thousand) and ¥15,238 million for the years ended March 31, 2016 and 2015, respectively.

2. "Research and development" includes expenditures on personnel, and depreciation and amortization of research facilities.

#### Note 6

Supplementary Information for Consolidated Statements of Comprehensive Income

	Millions	s of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Net unrealized holding gain (loss) on other securities:			
Amount arising during the period	¥ (14,823)	¥ 39,527	\$ (131,177)
Reclassification adjustment	(29,202)	(3,991)	(258,425)
Before tax effect	(44,025)	35,536	(389,602)
Tax effect	14,296	(11,237)	126,513
Net unrealized holding gain (loss) on other securities	¥ (29,729)	¥ 24,299	\$ (263,088)
Gain (loss) on deferred hedges:			
Amount arising during the period	¥ 85	¥ 633	\$ 752
Reclassification adjustment	392	(1,318)	3,469
Amount of acquisition cost adjustment	(11)	(210)	(97)
Before tax effect	466	(895)	4,124
Tax effect	(168)	333	(1,487)
Gain (loss) on deferred hedges	¥ 298	¥ (562)	\$ 2,637
Foreign currency translation adjustments:			
Amount arising during the period	¥ (36,732)	¥ 41,575	\$ (325,062)
Reclassification adjustment		(842)	
Before tax effect	(36,732)	40,733	(325,062)
Tax effect	_	_	_
Foreign currency translation adjustments	¥ (36,732)	¥ 40,733	\$ (325,062)
Remeasurements of defined benefit plans:			
Amount arising during the period	¥ (38,062)	¥ 8,234	\$ (336,832)
Reclassification adjustment	56	(1,601)	496
Before tax effect	(38,006)	6,633	(336,336)
Tax effect	11,678	(2,289)	103,345
Remeasurements of defined		100 100 10	

Amount arising during the period	¥ (38,062)	¥ 8,234	\$ (336,832)
Reclassification adjustment	56	(1,601)	496
Before tax effect	(38,006)	6,633	(336,336)
Tax effect	11,678	(2,289)	103,345
Remeasurements of defined benefit plans	¥ (26,328)	¥ 4,344	\$ (232,991)

Other comprehensive income (loss) for affiliates accounted for using equity method:

Amount arising during the period	¥ (4,851)	¥ 11,085	\$ (42,929)
Reclassification adjustment	(563)	(2,657)	(4,982)
Other comprehensive income (loss) for affiliates accounted for using equity method:	(5,414)	8,428	(47,912)
Other comprehensive income (loss), net	¥ (97,905)	¥ 77,242	\$ (866,416)

#### Note 7

#### Supplementary Information for Consolidated Statements of Changes in Net Assets

#### Year ended March 31, 2016

#### (a) Type and Number of Outstanding Shares

	Number of shares (Thousands)					
	Balance at beginning of year	Increase in shares during the year	Decrease in shares during the year	Balance at end of year		
Type of shares						
Issued stock:						
Common stock	1,506,288	_	_	1,506,288		
Total	1,506,288	_	_	1,506,288		
Treasury stock:						
Common stock <sup>1, 2</sup>	41,624	64	203	41,485		
Total	41,624	64	203	41,485		

 A 64 thousand increase in the number of shares of common stock held in treasury was as follows: Purchases of fractional shares of less than one unit
 64 thousand

#### (b) Warrants

#### Number of outstanding shares

			(	(Thousands	s)		
	Description	Type of outstanding shares	Balance at beginning of year	Increase (Decrease)	Balance at end of year	Millions of yen	Thousands of U.S. dollars
MCHC	Warrants as stock options			_	•	¥515	\$4,558
Consolidated subsidiaries	_			_		_	_
Total				_		¥515	\$4,558

#### (c) Dividends

## (1) Dividends paid to shareholders

Date of approval	Resolution approved by	Type of shares	Amount (Millions of yen)	Amount (Thousands of U.S. dollars)	Amount per share (Yen)	Amount per share (U.S. dollars)	Entitlement date	Effective date
June 24, 2015	Annual general meeting of shareholders	Common stock	¥10,253	\$90,735	¥7	\$0.06	March 31, 2015	June 25, 2015
November 5, 2015	Board of Directors	Common stock	¥10,253	\$90,735	¥7	\$0.06	September 30, 2015	December 2, 2015

(2) Dividends whose entitlement date was in the year ended March 31, 2016, and whose effective date will be in the subsequent fiscal year

			Amount	Amount		Amount	Amount			
Date of	Resolution	Type of	(Millions	(Thousands of	Paid	per share	per share	Entitlement	Effective	
approval	approved by	shares	of yen)	U.S. dollars)	from	(Yen)	(U.S. dollars)	date	date	
May 18,	Board of	Common	¥11,718	\$103,699	Retained	¥8	\$0.07	March 31,	June 3,	
2016	Directors	stock	+11,710	\$105,099	earnings	+0	\$0.07	2016	2016	

Note: The Japanese Corporate Law provides that an amount equal to 10% of the amount to be distributed as distributions of capital surplus (other than the capital reserve) and retained earnings (other than the legal reserve) be transferred to the capital reserve and the legal reserve, respectively, until the sum of the capital reserve and the legal reserve equals 25% of the common stock account. Such distributions can be made at any time by resolution of the shareholders, or by the Board of Directors if certain conditions are met, but neither the capital reserve nor the legal reserve is available for distributions.

 <sup>2.</sup> A 203 thousand decrease in the number of shares of common stock held in treasury was as follows:
 Sales of fractional shares of less than one unit
 Withdrawal related to the exercise of stock options
 Removals from scope of equity method
 thousand
 thousand
 thousand

#### (a) Type and Number of Outstanding Shares

Year ended March 31, 2015

		Number of shares (Thousands)					
	Balance at beginning of year	Increase in shares during the year	Decrease in shares during the year	Balance at end of year			
Type of shares							
Issued stock:							
Common stock	1,506,288	_	_	1,506,288			
Total	1,506,288	_	_	1,506,288			
Treasury stock:							
Common stock <sup>1, 2</sup>	34,268	7,446	90	41,624			
Total	34,268	7,446	90	41,624			

1. A 7.446 thousand increase in the number of shares of common stock held in treasury was as follows: Purchases of fractional shares of less than one unit Increase associated with transition from equity method affiliate to consolidated subsidiary 2,401 thousand Increase attributable to acquisition of treasury stock from consolidated

4,972 thousand

2. A 90 thousand decrease in the number of shares of common stock held in treasury was as follows: Sales of fractional shares of less than one unit thousand Withdrawal related to the exercise of stock options Consolidated subsidiary sales of treasury stock 61 thousand 26 thousand

#### (b) Warrants

Number of outstanding shares

				(Thousands	)	
		Type of outstanding	Balance at beginning	Increase	Balance at	Millions
	Description	shares	of year	(Decrease)	end of year	of yen
мснс	Warrants as stock options			_		¥471
Consolidated subsidiaries	_			_		_
Total				-		¥471

#### (c) Dividends

#### (1) Dividends paid to shareholders

Date of approval	Resolution approved by	Type of shares	Amount (Millions of yen)	Amount per share (Yen)	Entitlement date	Effective date
June 25, 2014	Annual general meeting of shareholders	Common stock	¥8,849	¥6	March 31, 2014	June 26, 2014
October 31, 2014	Board of Directors	Common stock	¥8,849	¥6	September 30, 2014	December 2, 2014

Note: The discrepancy between the dividend amount and dividends from retained earnings in the consolidated statements of changes in net assets reflects the elimination of dividends for MCHC stock held by consolidated subsidiaries.

(2) Dividends whose entitlement date was in the year ended March 31, 2015, and whose effective date will be in the subsequent fiscal year

Date of approval	Resolution approved by	Type of shares	Amount (Millions of yen)	Paid from	Amount per share (Yen)	Entitlement date	Effective date	
June 24, 2015	Annual general meeting of	Common stock	¥10,253	Retained earnings	¥7	March 31, 2015	June 25, 2015	

Note: The Japanese Corporate Law provides that an amount equal to 10% of the amount to be distributed as distributions of capital surplus (other than the capital reserve) and retained earnings (other than the legal reserve) be transferred to the capital reserve and the legal reserve, respectively, until the sum of the capital reserve and the legal reserve equals 25% of the common stock account. Such distributions can be made at any time by resolution of the shareholders, or by the Board of Directors if certain conditions are met, but neither the capital reserve nor the legal reserve is available for distributions.

#### Lease **Transactions**

At March 31, 2016 and 2015, as lessee, noncancellable operating lease obligations were accounted for as follows:

Future minimum lease payments for the remaining lease periods

	Millions	of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Due within one year	¥11,614	¥11,762	\$ 102,779
Due after one year	22,347	22,462	197,761
	¥33,961	¥34,224	\$ 300,540

At March 31, 2016 and 2015, as lessor, finance leases other than those deemed to transfer the ownership of the leased assets to the lessees were accounted for as operating leases, and the details were as follows:

Acquisition costs, accumulated depreciation, accumulated impairment loss and balance at

	Millions	of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Buildings			
Acquisition costs	¥965	¥920	\$8,540
Accumulated depreciation	454	429	4,018
Accumulated impairment loss		_	_
Balance at year-end	¥511	¥491	\$4,522

Future minimum sublease income for the remaining lease periods

	Millions	Millions of yen	
	March 31, 2016	March 31, 2015	March 31, 2016
Due within one year	¥ 66	¥ 66	\$ 584
Due after one year	150	215	1,327
	¥ 216	¥ 281	\$ 1.912

Sublease income, amortization expense, depreciation expense and impairment loss

	Millions	s of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Sublease income	¥66	¥66	\$584
Amortization expense amount	_		_
Depreciation expense amount	25	24	221
Impairment loss on leased assets	¥—	¥—	\$ —

Note: Depreciation expense is calculated using the straight-line method with the lease period as the useful life with a nil residual value.

At March 31, 2016 and 2015, noncancellable operating lease receivables were accounted for as follows:

Future minimum sublease income for the remaining lease periods

	Millions	of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Due within one year	¥ 240	¥ 250	\$ 2,124
Due after one year	1,984	2,196	17,558
	¥ 2,224	¥ 2,446	\$19,681

#### \_\_\_\_\_

## Financial Overview Instruments (1) Policy

(1) Policy for Financial Instruments

MCHC's policy is to manage highly stable financial assets, centered on investments in short-term deposits, and raise funds largely by obtaining bank loans, issuing commercial papers and corporate bonds. MCHC deployed a cash management system to facilitate intragroup lending and borrowing and use funds more efficiently and reduce financial costs, engaging in intragroup lending and borrowing. Other policies are to ensure that derivatives transactions purely accommodate actual demand and to refrain from speculative trading.

(2) Financial Instruments and Risks

Trade receivables are exposed to customer credit risk. As MCHC operates globally, foreign currency denominated trade receivables are subject to foreign exchange fluctuations. MCHC hedges the resulting risks, net of trade payables in those currencies, with forward foreign exchange contracts. Marketable and investment securities are subject to market risk. Those securities mainly comprise held-to-maturity debt securities and shares in other companies with which the Group does business or has capital affiliations.

Most trade payables are due within one year. While partly exposed to foreign exchange risks from imports of raw materials and other items, MCHC hedges with forward foreign exchange contracts as it does with trade receivables.

Borrowings and corporate bonds are to secure the funding needed for operations and capital investments. Some of these instruments are subject to interest rate fluctuation risks, which MCHC hedges using interest rate swaps.

MCHC engages in various types of derivatives transaction. They include forward foreign exchange contracts and currency swaps to hedge foreign exchange fluctuation risks associated with foreign currency denominated trade receivables and payables, borrowings and loans. MCHC also uses interest rate swaps to hedge fluctuations in interest rates on borrowings and loans, as well as commodity futures contracts to hedge the risks of price fluctuations from raw materials purchases.

- (3) Financial Instrument Risk Management Structure
  - a. Credit Risk Management (including risks of customers breaching contracts) In keeping with its credit management rules, MCHC regularly monitors the statuses of key customers with outstanding trade and long-term receivables and oversees dates and balances while endeavoring to swiftly identify and ameliorate collection concerns that could stem from deteriorating financial positions or other factors.

The credit risks of held-to-maturity debt securities are insignificant, as MCHC's portfolio includes only instruments with high credit ratings.

MCHC minimizes credit risks relating to counterparty breaches of contract with derivatives by transacting solely with highly creditworthy financial institutions.

The maximum credit risk amount at March 31, 2016, is the balance sheet value of financial assets exposed to such risks.

b. Market Risk Management (foreign exchange and interest rate risks) Where necessary, MCHC uses forward exchange contracts and currency swaps to hedge foreign currency denominated operating receivables, debt and loans. It uses interest rate swaps to minimize the risks of interest payment fluctuations for debt and corporate bonds.

MCHC regularly assesses the prices of marketable and investment securities and the financial positions of issuers (business partners). It factors in relationships with business partners in constantly reviewing the necessity of instruments other than held-to-maturity debt securities.

In keeping with internal rules on transaction rights and limitations, reports on the contract balances and market prices of derivative transactions are submitted regularly to the director in charge of such matters.

c. Funding-Related Liquidity Risk Management (risk of inability to settle by payment

MCHC is exposed to liquidity risk for customer credit and debt, managing them by producing and managing funding plans.

(4) Supplementary Explanation of the Estimated Fair Value of Financial Instruments The fair value of financial instruments is based on their quoted market price, if available. When there is no quoted market price available, fair value is reasonably estimated. Since various assumptions and factors are reflected in estimating the fair value, different assumptions and factors could result in different fair value.

#### **Estimated Fair Value of Financial Instruments**

The carrying value of financial instruments in the consolidated balance sheets as of March 31, 2016 and 2015, and estimated fair value are shown in the following table. The table below excludes instruments whose fair value is extremely difficult to determine.

			Million	s of yen		
March 31, 2016	Carryii	ng value	Fair	value	Differer	псе
Cash and deposits	¥	314,782	¥	314,782	¥	_
Trade receivables		703,996		703,996		-
Marketable and investment						
securities:						
Held-to-maturity debt securities		4,759		4,925		166
Shares of affiliates		839		1,508		669
Other marketable securities		245,428		245,428		_
Total assets	¥1	,269,804	¥1	,270,639	¥	835
Trade navables	¥	408,315	¥	408,315	¥	
Trade payables	Ŧ		Ŧ		Ŧ	
Short-term loans		394,688		394,688		
Current portion of long-term loans		138,471		138,471		,—, a
Commercial papers		30,000		30,000		_
Bonds due in one year or less		40,010		40,010		_
Corporate bonds		325,000		332,505		7,505
Long-term loans		537,583		543,903		6,320
Total liabilities	¥1	,874,067	¥1	,887,892	¥1	3,825
Derivatives transactions:						
	¥	4 462	¥	4 462	¥	
Hedge accounting not applied	+	1,163	+	1,163	#	
Hedge accounting applied		(8)		(8)		
Total derivatives transactions	¥	1,155	¥	1,155	¥	_

Note: Net receivables and payables from derivatives transactions are presented, with net payables in totals shown in parentheses.

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	Millions of yen				
March 31, 2015	Carrying value	Fair value	Difference		
Cash and deposits	¥ 236,186	¥ 236,186	¥ —		
Trade receivables	759,850	759,850	_		
Marketable and investment					
securities:					
Held-to-maturity debt securities	12,450	12,780	330		
Shares of affiliates	6,832	4,002	(2,830)		
Other marketable securities	325,607	325,607	_		
Total assets	¥1,340,925	¥1,338,425	¥ (2,500)		
Trade payables	¥ 459,345	¥ 459,345	¥ —		
Short-term loans	518,985	518,985	_		
Current portion of long-term loans	178,627	178,627	_		
Commercial papers	26,000	26,000	_		
Bonds due in one year or less	20,040	20,040	_		
Corporate bonds	305,010	311,297	6,287		
Long-term loans	554,933	558,736	3,803		
Total liabilities	¥2,062,940	¥2,073,030	¥ 10,090		
Derivatives transactions:	-				
	V (247)	V (247)	V		
Hedge accounting not applied	¥ (217)	¥ (217)	¥ —		
Hedge accounting applied	102	102			
Total derivatives transactions	¥ (115)	¥ (115)	¥ —		

Note: Net receivables and payables from derivatives transactions are presented, with net payables in totals shown in parentheses.

	Thousands of U.S. dollars				3	
March 31, 2016	Carrying	yalue	Fair v	/alue	Differ	ence
Cash and deposits		785,681	\$ 2,	785,681	\$	
Trade receivables	6,	230,053	6,	230,053		_
Marketable and investment						
securities:						
Held-to-maturity debt securities		42,115		43,584		1,469
Shares of affiliates		7,425		13,345		5,920
Other marketable securities	2,	171,929	2,	171,929		
Total assets	\$11,	237,203	\$11,	244,592	\$	7,389
Trade payables	\$ 3,	613,407	\$ 3,	613,407	\$	
Short-term loans	3,	492,814	3,	492,814		_
Current portion of long-term loans	1,	225,407	1,	225,407		_
Commercial papers	- 3	265,487		265,487		_
Bonds due in one year or less	26	354,071		354,071		_
Corporate bonds	2,	876,106	2,	942,522		66,416
Long-term loans	4,	757,372	4,	813,301		55,929
Total liabilities	\$16,	584,664	\$16,	707,009	\$	122,345
Derivatives transactions:						
Hedge accounting not applied	\$	10,292	\$	10,292	\$	
Hedge accounting applied		(71)		(71)		_
Total derivatives transactions	\$	10,221	\$	10,221	\$	

Note: Net receivables and payables from derivatives transactions are presented, with net payables in totals shown in parentheses.

# 1. Method to Determine the Estimated Fair Values of Financial Instruments and Other Matters Related to Securities and Derivatives Transactions

#### Assets

Cash and deposits

Book value is used, as it approximates market value because of the short maturities of these instruments.

#### Trade receivables

Book value is used, as it approximates market value because of the short maturities of these instruments.

#### Marketable and investment securities

The fair value of stocks is based on quoted market prices, while the fair value of debt securities is based on quoted market prices or the prices provided by the financial institutions with which MCHC conducts transactions. Book value is used for negotiable certificates of deposit and commercial papers, as it approximates market value because of the short settlements of these instruments. For information on securities classified by holding purpose, please refer to Note 10, Securities.

#### Liabilities

Trade payables, short-term loans, current portion of long-term loans, commercial papers, and bonds due in one year or less.

Book value is used, as it approximates market value because of the short maturities of these instruments.

#### Corporate bonds

The market price of corporate bonds is based on the quoted market price.

#### Long-term loans

Market value is based on the present value of principal and interest, discounted using current assumed rates for similar new loans.

Long-term loans are subject to special procedures for interest rate swaps (see Note 12, Derivative Financial Instruments and Hedge Accounting) and the total principal and interest for these swaps are discounted using rationally estimated interest rates for similar new loans.

#### **Derivative Transactions**

Please refer to Note 12, Derivative Financial Instruments and Hedge Accounting.

## 2. Financial Instruments for which it is Extremely Difficult or Impossible to Determine the Fair Value

			Thousands of
	Million	s of yen	U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Unlisted shares	¥137,525	¥136,249	\$1,217,035
Investment securities	1,875	2,410	16,593

These instruments are omitted from marketable and investment securities because they have no market price and it is extremely difficult or impossible to estimate forward cash flows or assess their fair value.

# 3. Projected Redemptions of Monetary Claims and Marketable Securities Due after March 31, 2016

	Millions of yen					
		Due after				
		one year	Due after five			
	Due in one	through five	years through	Due after		
March 31, 2016	year or less	years	ten years	ten years		
Cash and deposits	¥ 314,782	¥ —	¥ —	¥ —		
Trade receivables	703,996	_	_	_		
Marketable and investment securities						
Held-to-maturity debt securities						
(1) Government bonds	_	2,749	_	_		
(2) Others	_	_	_	2,000		
Other securities with maturities						
(1) Government bonds	_	4,400	_	_		
(2) Others	123,500	_	·—	_		
Total	¥1,142,278	¥7,149	¥ —	¥2,000		

	Millions of yen						
March 31, 2015	Due in one year or less	Due after one year through five years	Due after five years through ten years	Due after ten years			
Cash and deposits	¥ 236,186	¥ —	¥—	¥ —			
Trade receivables	759,850	_	_				
Marketable and investment securities							
Held-to-maturity debt securities							
(1) Government bonds	_	2,932	_	_			
(2) Others	_	3,500	_	6,000			
Other securities with maturities							
(1) Government bonds	7,300	6,400	_	· -			
(2) Others	120,500	_	_ ,	·— ]			
Total	¥1,123,836	¥12,832	¥—	¥6,000			

	Thousands of U.S. dollars					
		Due after				
	Due in one	one year	Due after five			
	year or	through five	years through	Due after		
March 31, 2016	less	years	ten years	ten years		
Cash and deposits	\$ 2,785,681	\$ —	\$—	\$ —		
Trade receivables	6,230,053	_	_	_		
Marketable and investment securities						
Held-to-maturity debt securities						
(1) Government bonds		24,327	_			
(2) Others	.—.	_	_	17,699		
Other securities with maturities						
(1) Government bonds	<del></del> :	38,938	_	-		
(2) Others	1,092,920	_	_	6		
Total	\$10,108,654	\$63,265	\$—	\$17,699		

# 4. Scheduled Repayments of Corporate Bonds, Long-Term Loans and Other Interest-Bearing Debt after March 31, 2016

			Millions	s of yen		
-		Due after	Due after	Due after	Due after	
	Due in	one year	two years	three years	four years	Due after
	one year	through two	through	through	through five	five
March 31, 2016	or less	years	three years	four years	years	years
Short-term loans	¥394,688	¥ —	¥ —	¥ —	¥ —	¥ —
Current portion of long-	138,471					
term loans	130,471	_			_	
Commercial papers	30,000	_	_	_	_	
Bonds due in one year or	40.010					
less	40,010	_		_	_	
Corporate bonds	_	40,000	65,000	60,000	55,000	105,000
Long-term loans	_	134,154	102,931	157,619	80,326	62,553
Total	¥603,169	¥ 174,154	¥ 167,931	¥ 217,619	¥135,326	¥ 167,553

	Millions of yen						
		Due after	Due after	Due after	Due after		
	Due in	one year	two years	three years	four years	Due after	
	one year	through two	through	through	through five	five	
March 31, 2015	or less	years	three years	four years	years	years	
Short-term loans	¥518,985	¥ —	¥ —	¥ —	¥ —	¥ —	
Current portion of long-	178,627						
term loans	170,027	_					
Commercial papers	26,000	_	_	_	_	_	
Bonds due in one year	20.040						
or less	20,040	_	_	_	_	_	
Corporate bonds	-	40,010	40,000	65,000	60,000	100,000	
Long-term loans	_	138,612	137,144	97,765	106,295	75,117	
Total	¥743,652	¥ 178,622	¥ 177,144	¥ 162,765	¥ 166,295	¥ 175,117	

	Thousands of U.S. dollars						
March 31, 2016	Due in one year or less	Due after I one year through two the years	Oue after two years hrough three years	three years	Due after four years through five years	Due after five years	
Short-term loans	\$3,492,814	\$ <u> </u>	\$ <b>—</b>	\$ <u></u>	\$ <b>—</b>	\$ <b>—</b>	
Current portion of long- term loans	1,225,407	-	_	_	_	_	
Commercial papers	265,487	_	_	_	_	_	
Bonds due in one year or less	354,071	_	_	_	_	_	
Corporate bonds	_	353,982	575,221	530,973	486,726	929,204	
Long-term loans	_	1,187,204	910,894	1,394,858	710,850	553,566	
Total	\$5,337,779	\$ 1,541,186	\$ 1,486,115	\$ 1,925,831	\$ 1,197,576	\$ 1,482,770	

#### Note 10

#### Securities

Held-to-maturity debt securities are measured at amortized cost in the accompanying balance sheets.

However, certain held-to-maturity debt securities have fair value. The carrying value, gross unrealized gains, gross unrealized losses and estimated fair value of held-to-maturity debt securities at March 31, 2016 and 2015, are summarized as follows:

		Millions of yen					
March 31, 2016	Carrying value	Gross unrealized gains		Gross unrealized losses	Estimated fair value		
Held-to-maturity debt securities:							
Government bonds	¥2,759	¥	141	¥ —	¥2,900		
Corporate bonds	_		_	_	_		
Other debt securities	2,000	7	25	_	2,025		
	¥4,759	¥	166	¥ —	¥4,925		

		Millions of yen					
March 31, 2015	Carrying value	Gross unrealized gains	Gross unrealized losses	Estimated fair value			
Held-to-maturity debt securities:		945		1411 1414			
Government bonds	¥ 2,949	¥264	¥ —	¥ 3,213			
Corporate bonds	_	_	_	_			
Other debt securities	9,501	193	(127)	9,567			
	¥ 12,450	¥457	¥(127)	¥ 12,780			

	Thousands of U.S. dollars					
	*	Gross	Gros	s		
	Carrying	unrealized	armodileod Eo		Estimated	
March 31, 2016	value	gains			fair value	
Held-to-maturity debt securities:						
Government bonds	\$24,416	\$ 1,248	\$	_	\$ 25,664	
Corporate bonds	_			_		
Other debt securities	17,699	221		_	17,920	
	\$42,115	\$ 1,469	\$	_	\$ 43,584	

Other marketable securities with quoted market prices are measured at fair value.

Differences between fair value and acquisition costs are recorded as a component of net assets. The differences at March 31, 2016 and 2015, are summarized as follows:

	Millions of yen						
				(Breako	lown)		
	Acquisition		Net		Gross		
March 31, 2016	costs	Fair value	differences	Gross gains	losses		
Other marketable							
securities:							
Equity securities	¥ 85,809	¥ 117,271	¥ 31,462	¥ 38,940	¥(7,478)		
Government bonds	_	_	_	_	_		
Corporate bonds	_	_	_	_	_		
Other debt securities	128,028	128,157	129	130	(1)		
	¥213,837	¥ 245,428	¥ 31,591	¥ 39,070	¥(7,479)		

			Millions of year	n	
				(Break	down)
	Acquisition		Net		Gross
March 31, 2015	costs	Fair value	differences	Gross gains	losses
Other marketable					
securities:					
Equity securities	¥ 93,933	¥ 190,721	¥ 96,788	¥97,090	¥ (302)
Government bonds	1	3	2	2	_
Corporate bonds	_			_	
Other debt securities	134,561	134,883	322	324	(2)
	¥228,495	¥ 325,607	¥ 97,112	¥ 97,416	¥ (304)

	Thousands of U.S. dollars					
					(Break	down)
	A	cquisition		Net		Gross
March 31, 2016		costs	Fair value	differences	Gross gains	losses
Other marketable						
securities:						
Equity securities	\$	759,371	\$1,037,796	\$278,425	\$344,602	\$(66,177)
Government bonds			_	_	_	1-
Corporate bonds		_	_	_	_	_
Other debt securities	1	,132,992	1,134,133	1,141	1,150	(9)
	\$1	,892,363	\$2,171,929	\$279,566	\$345,752	\$(66,186)

Sales of other securities for the fiscal year ended March 31, 2016 and 2015 are shown

		Millions of yen			
	Sales	Gains	Losses		
Year ended March 31, 2016	¥ 57,491	¥ 28,734	¥ (98)		
	Millions of yen				
	Sales	Gains	Losses		
Year ended March 31, 2015	¥11,265	¥6,027	¥(27)		
	Thous	sands of U.S. do	llars		
	Sales	Gains	Losses		
Year ended March 31, 2016	\$508,770	\$254,283	\$(867)		

Investment securities of unconsolidated subsidiaries and affiliates at March 31, 2016 and 2015 are shown below:

			Thousands of
	Millions	of yen	U.S. dollars
	March 31, 2016	March 31,2015	March 31, 2016
Stock	¥111,659	¥116,181	\$988,133
Capital	20,602	22,458	182,319

Impairment of investment securities for the fiscal year ended March 31, 2016 are shown below:

March 31, 2016	Millions of yen	Thousands of U.S. dollars
Available-fur-sales securities	¥1,845	\$16,327

#### Note 11

## Supplementary

Cash and cash equivalents as of March 31, 2016 and 2015, are reconciled to the Cash Flow Information accounts reported in the consolidated balance sheets as follows:

	Millions	of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Cash and deposits	¥314,782	¥236,186	\$ 2,785,681
Time deposits with maturities of more than three months	(121,012)	(30,131)	(1,070,903)
Cash equivalents included in securities <sup>1</sup>	70,000	37,000	619,469
Cash and cash equivalents	¥263,770	¥243,055	\$ 2,334,248

<sup>1.</sup> This represents short-term, highly liquid investments readily convertible into cash held by overseas subsidiaries.

Assets and liabilities of acquired company which became consolidated subsidiary via stock acquisition

The composition of the assets acquired and liabilities assumed of Renegade Gas Pty Ltd. (RGP) upon consolidation in line with the acquisition of stock and the relationship between the acquisition cost for RGP shares and the net expenditure on the acquisition are as follows:

	Millions of yen	Thousands of U.S. dollars
Current assets	¥ 1,954	\$ 17,292
Noncurrent assets	8,487	75,106
Goodwill	10,939	96,805
Current liabilities	(1,796)	(15,894)
Noncurrent liabilities	(4,623)	(40,912)
Total cost of stock acquisition	14,961	132,398
Cash and cash equivalents	(249)	(2,204)
Shares issued by stock exchange	(2,244)	(19,858)
Less: Purchase of investments in subsidiaries resulting in change in scope of consolidation	¥12,468	\$110,336

#### Derivative Financial Instruments and Hedge Accounting

#### **Derivative Transactions**

## 1. Derivative Transactions (Hedge accounting not applied)

#### (1) Currency-related transactions

		Millions	of yen	
		Maturing after		Appraised
Year ended March 31, 2016	Notional value	one year	Fair value	gains/losses
Off-market transactions				
Forward exchange agreements				
Put				
U.S. dollars	¥117,309	¥—	¥1,171	¥1,171
Euros	372		(2)	(2)
British pounds	74	_	1	1
Yen	3	_	0	0
Call				
U.S. dollars	717	-	(1)	(1)
Thai baht	25	_	0	0
Currency options				
Call				
Canadian dollars	135	_	(6)	(6)

	Millions of yen				
		Maturing after			
Year ended March 31, 2015	Notional value	one year	Fair value	gains/losses	
Off-market transactions					
Forward exchange agreements					
Put					
U.S. dollars	¥24,324	¥—	¥(207)	¥(207)	
Euros	357	<u> </u>	8	8	
Yen	9		0	0	
Call					
U.S. dollars	38	19	7	7	
Thai baht	150	7_7	0	0	
Currency swaps					
Receive U.S. dollars, pay Thai baht	1,473	0	(25)	7	

		Thousands of U.S. dollars				
		Maturing after				
Year ended March 31, 2016	Notional value	one year	Fair value	gains/losses		
Off-market transactions						
Forward exchange agreements						
Put						
U.S. dollars	\$ 1,038,133	\$—	\$10,363	\$10,363		
Euros	3,292	_	(18)	(18)		
British pounds	655		9	9		
Yen	27	— ·	0	0		
Call						
U.S. dollars	6,345	_	(9)	(9)		
Thai baht	221	_	0	0		
Currency options						
Call						
Canadian dollars	1,195		(53)	(53)		

Note: Fair value calculations are based on quoted prices from financial and other institutions with which MCHC conducts transactions.

## 2. Hedged Derivative Transactions

## (1) Currency-related transactions

			William Or y Cit	
		Notional	Maturing after	Fair
ear ended March 31, 2016	Hedged items	amounts	one year	value
ledge accounting method				
Principle-based accounting				
Forward exchange agreements				
Put				
U.S. dollars	Accounts receivable trade	¥635	¥—	¥
Euros	Accounts receivable trade	28	_	(2
Call				
British pounds	Accounts payable trade	927	_	(49
Malaysian ringgit	Accounts payable trade	414	_	
Euros	Accounts payable trade	1,121	.—.	28
Tai baht	Accounts payable trade	7	_	
Yen	Accounts payable trade	43	_	
ledge accounting method				
Forward exchange deferral accounting				
Forward exchange contracts				
Put				
U.S. dollars	Accounts receivable trade	3,409	u—.	
Euros	Accounts receivable trade	1,192	1—7	
Taiwan dollars	Accounts receivable trade	4	_	2
Call				
U.S. dollars	Accounts payable trade	7,198	_	
Euros	Accounts payable trade	131	_	
Taiwan dollars	Accounts payable trade	1,576	_	
Swiss franc	Accounts payable trade	292	_	
Singapore dollars	Accounts payable trade	31	_	

			Millions of yen	
		Notional	Maturing after	Fair
Year ended March 31, 2015	Hedged items	amounts	one year	value
Hedge accounting method				
Principle-based accounting				
Forward exchange agreements				
Call			10	
U.S. dollars	Accounts payable trade	¥10,732	¥—	¥16
British pounds	Accounts payable trade	686	_	2
Malaysian ringgit	Accounts payable trade	161	53	- 5
Yen	Accounts payable trade	155	_	
Hedge accounting method				
Forward exchange deferral accounting				
Forward exchange contracts				
Put				
U.S. dollars	Accounts receivable trade	26,624	_	
Euros	Accounts receivable trade	11,200	_	
Malaysian ringgit	Accounts receivable trade	664	_	
Call				
U.S. dollars	Accounts payable trade	1,374	_	
Euros	Accounts payable trade	160	_	
Taiwan dollars	Accounts payable trade	1,624	_	
Swiss franc	Accounts payable trade	46	_	
Singapore dollars	Accounts payable trade	4	_	
Currency swaps	· ·			
Receive yen, pay U.S. dollars	Long-term debt	50	_	
Receive Singapore dollars, pay yen	Long-term debt	30	_	

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Millions of yen

		Thousa	ands of U.S. do	ollars
			Maturing	
		Notional	after	Fair
Year ended March 31, 2016	Hedged items	amounts	one year	value
Hedge accounting method				
Principle-based accounting				
Forward exchange agreements				
Put				
U.S. dollars	Accounts receivable trade	\$ 5,619	\$ —	\$ 53
Euros	Accounts receivable trade	248	_	(18)
Call				
British pounds	Accounts payable trade	8,204	_	(434)
Malaysian ringgit	Accounts payable trade	3,664	_	62
Euros	Accounts payable trade	9,920	_	248
Tai baht	Accounts payable trade	62	_	0
Yen	Accounts payable trade	381	_	9
Hedge accounting method				
Forward exchange deferral accounting				
Forward exchange contracts				
Put				
U.S. dollars	Accounts receivable trade	30,168	_	*
Euros	Accounts receivable trade	10,549	_	*
Taiwan dollars	Accounts receivable trade	35	_	*
Call				
U.S. dollars	Accounts payable trade	63,699	_	*
Euros	Accounts payable trade	1,159	_	*
Taiwan dollars	Accounts payable trade	13,947	_	*
Swiss franc	Accounts payable trade	2,584	_	*
Singapore dollars	Accounts payable trade	274	_	*

- Notes: 1. Fair value calculations are based on quoted prices from financial and other institutions with which MCHC conducts transactions.
  - MCHC accounts for forward exchange deferrals by together accounting for hedged long-term debt\*
    and trade receivables\* and payables\*, and thus presents fair values that include the fair values of
    those instruments.
  - With deferral accounting procedures for currency swaps, MCHC accounts for hedged long-term debt\* and trade receivables\* and payables\*, and thus presents fair values that include the fair values of the relevant long-term debt.

#### (2) Interest-related transactions

			Millions of ye	en
		Notional	Maturing aft	er Fair
Year ended March 31, 2016	Hedged items	amounts	one year	value
Hedge accounting method				
Principle-based accounting				-
Interest rate swaps				
Pay fixed rate, receive floating rate	Long-term debt	¥ 3,488	¥ —	¥(1)
Special accounting procedures for				
interest rate swaps				
Interest rate swaps				
Pay fixed rate, receive floating rate	Long-term debt	156,381	134,424	*
Combined accounting procedures for in	nterest rate and currency	swaps (special	and deferral	accounting
procedures)				
Interest rate and currency swaps				
Pay fixed rate, receive floating rate	Lang tarm daht	5.700	E 700	*
Receive U.S. dollars, pay yen	Long-term debt	5,700	5,700	
Pay floating rate, receive floating rate	Long-term debt	8.300	8,300	*
Receive U.S. dollars, pay yen	Long-term dept	8,300	8,300	

			Millions of yen	
		Notional	Maturing after	Fair
Year ended March 31, 2015	Hedged items	amounts	one year	value
Hedge accounting method				
Principle-based accounting				
Interest rate swaps				
Pay fixed rate, receive floating rate	Long-term debt	¥ 7,001	¥ 3,732	¥(87)
Special accounting procedures for				
interest rate swaps				
Interest rate swaps				
Pay fixed rate, receive floating rate	Long-term debt	192,109	86,378	*
Combined accounting procedures for interest procedures)	st rate and currency	swaps (special	and deferral ac	counting
Interest rate and currency swaps				
Pay fixed rate, receive floating rate Receive U.S. dollars, pay yen	Long-term debt	5,700	5,700	*
Pay floating rate, receive floating rate Receive U.S. dollars, pay yen	Long-term debt	8,300	8,300	*

		Thous	sands of U.S. do	.S. dollars	
		Notional	Maturing after	Fair	
Year ended March 31, 2016	Hedged items	amounts	one year	value	
Hedge accounting method					
Principle-based accounting					
Interest rate swaps					
Pay fixed rate, receive floating rate	Long-term debt	\$ 30,867	\$ —	\$(9)	
Special accounting procedures for interest					
rate swaps					
Interest rate swaps					
Pay fixed rate, receive floating rate	Long-term debt	1,383,903	1,189,593	*	
Combined accounting procedures for interest ra	ate and currency swaps	s (special and de	eferral accounting	g	
procedures)					
Interest rate and currency swaps					
Pay fixed rate, receive floating rate	l and take dabt	E0 442	E0 440	*	
Receive U.S. dollars, pay yen	Long-term debt	50,442	50,442		
Pay floating rate, receive floating rate	Long term debt	73,451	73,451	*	
Receive U.S. dollars, pay yen	Long-term debt	73,451	7 3,45 1		

- Notes: 1. Fair value calculations are based on quoted prices from financial and other institutions with which MCHC conducts transactions.
  - 2. With special accounting procedures for interest rate swaps and combined (special and deferral) accounting procedures for interest rate and currency swaps, MCHC accounts for hedged long-term debt\* and trade receivables\* and payables\*, and thus presents fair values that include the fair values of the relevant long-term debt.

#### (3) Commodity-related Transactions

		Notional	Maturing after	Fair
Year ended March 31, 2016	Hedged items	amounts	one year	value
Hedge accounting method				
Principle-based accounting				
Forward transactions for aluminum ingots				
Put	Aluminum ingot trading	¥172	¥—	¥2
			Millions of yen	
		Notional	Maturing after	Fair
Year ended March 31, 2015	Hedged items	amounts	one year	value
Hedge accounting method				
Principle-based accounting				
Forward transactions for aluminum ingots				
Put	Aluminum ingot trading	¥215	¥—	¥1
		Thou	sands of U.S. dol	lars

		IIIOus	idio	
ear ended March 31, 2016	Hedged items	Notional amounts	Maturing after one year	Fair value
Hedge accounting method				
Principle-based accounting				
Forward transactions for aluminum ingots				
Put	Aluminum ingot trading	\$1,522	\$—	\$18

Note: Fair value calculations are based on quoted prices from financial and other institutions with which MCHC conducts transactions.

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Millions of yen

# Pension and

**Severance Plans** 

Information on pension and severance plans for the years ended March 31, 2016, and 2015 are shown below:

#### 1. Overview

Consolidated subsidiaries adopt or combine cash balance pension plans, corporate pension plans, and welfare pension plans as defined benefits plans, and/or lump-sum retirement benefits and defined contribution plans.

Consolidated subsidiaries may pay premium benefits to employees on retirement. Some domestic consolidated subsidiaries have established retirement benefits trusts.

#### 2. Defined Benefit Plans

(1) Reconciliation of retirement benefit obligations at beginning and end of year

	Millions	s of yen	U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Retirement benefit obligations at beginning of year	¥654,331	¥575,390	\$5,790,540
Cumulative effects of changes in accounting policies	_	25,960	_
Restated balance at beginning of year	654,331	601,350	5,790,540
Service cost	19,370	18,350	171,416
Interest expense	7,216	8,556	63,858
Actuarial gain or loss	18,603	28,163	164,628
Retirement benefit payments	(40,449)	(39,178)	(357,956)
Prior service cost	260	31	2,301
Effect of business combination*	114	33,429	1,009
Other	(8,418)	3,630	(74,496)
Retirement benefit obligations at end of year	¥651,027	¥654,331	\$5,761,301

- Notes: 1 Some domestic consolidated subsidiaries use the simplified method to calculate retirement benefit obligations.
  - 2. Other includes translation differences for foreign subsidiaries.
  - The increase in the fiscal year ended March 31, 2015 is attributable to the inclusion of Taiyo Nippon Sanso Corporation and its subsidiaries in the scope of consolidation.
- (2) Reconciliation of plan assets at beginning and end of year

	Millions	of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Plan assets at beginning of year	¥552,904	¥484,924	\$4,892,956
Expected return on assets	11,232	13,019	99,398
Actuarial gains and losses	(19,314)	37,142	(170,920)
Contributions from employer	19,057	13,143	168,646
Retirement benefit payments	(33,310)	(31,251)	(294,779)
Effect of business combination*	_	34,882	_
Other	(5,444)	1,045	(48,177)
Plan assets at end of year	¥525,125	¥552,904	\$4,647,124

- Notes: 1. Other includes translation differences for foreign subsidiaries.
  - Includes plans applying the simplified method.
  - The increase in the fiscal year ended March 31, 2015 is attributable to the inclusion of Taiyo Nippon Sanso Corporation and its subsidiaries in the scope of consolidation.
- (3) Reconciliation of retirement benefit obligations and plan assets at year-end and net defined benefit liabilities and assets in consolidated balance sheets

	Millions	s of yen	U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Retirement benefit obligations of funded plans	¥588,186	¥593,811	\$5,205,186
Plan assets	(525,125)	(552,904)	(4,647,124)
	63,061	40,907	558,062
Retirement benefit obligations of unfunded plans	62,841	60,520	556,115
Net liabilities and assets in consolidated balance sheets	¥125,902	¥101,427	\$1,114,177

	Millions	s of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Net defined benefit liabilities	¥143,713	¥132,921	\$1,271,796
Net defined benefit assets	(17,811)	(31,494)	(157,619)
Net liabilities and assets in consolidated balance sheets	¥125,902	¥101,427	\$1,114,177

Note: Includes plans applying the simplified method.

#### (4) Retirement benefit costs and charges by category

31, 2016	March 31, 2015	
	Maich 31, 2013	March 31, 2016
19,024	¥18,063	\$168,354
7,216	8,556	63,858
(11,232)	(13,019)	(99,398)
(1,649)	(2,300)	(14,593)
1,705	2,199	15,088
-	770	_
15,064	¥14,269	\$133,310
	7,216 (11,232) (1,649) 1,705	7,216     8,556       (11,232)     (13,019)       (1,649)     (2,300)       1,705     2,199       —     770

- Notes: 1. Employee contributions to defined benefits plans are deducted.
  - The retirement benefit expenses of consolidated subsidiaries using the simplified method are stated in service cost.
  - In addition to the above retirement benefit costs, the Company recorded ¥15,502 million (\$137,186 thousand) and ¥727 million for the years ended March 31, 2016 and 2015, respectively, for special retirement expenses.

#### (5) Remeasurements of defined benefit plans

Components (before tax effect) of remeasurements of defined benefit plans in other comprehensive income are as follows.

	Millions	s of yen	U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Actuarial gains and losses	¥ (39,141)	¥3,298	\$(346,381)
Prior service cost	1,135	2,565	10,044
Transition amount under post- employment benefit accounting	_	770	_
Total	¥ (38,006)	¥6,633	\$(336,336)

#### (6) Accumulated remeasurements of defined benefit plans

Components (before tax effect) of remeasurements of defined benefit plans in accumulated other comprehensive income are as follows.

	Millions	s of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2015	March 31, 2016
Unrecognized actuarial gains and losses	¥ (32,035)	¥7,106	\$(283,496)
Unrecognized prior service cost	993	(142)	8,788
Total	¥ (31,042)	¥6,964	\$(274,708)

#### (7) Plan assets

Main components of plan assets

Ratios for main components of plan assets are as follows.

	March 31, 2016	March 31, 2015
Bonds	40%	44%
Stocks	27%	34%
Life insurance company general accounts	18%	13%
Other	15%	9%
Total	100%	100%

Note: Retirement benefit trusts for corporate pension plans account for 11% and 10% of the plan assets total as of March 31, 2016 and 2015, respectively.

② Methodology for setting expected long-term rates of return The long-term expected rates of return for plan assets are determined by considering current and projected plan asset allocations and current and anticipated long-term rates of return from diverse plan assets.

#### (8) Actuarial assumptions

The principal actuarial assumptions (represented by weighted averages) at the end of fiscal years ended March 31, 2016 and 2015 were as follows.

	March 31, 2016	March 31, 2015
Discount rate	Principally 0.3%	Principally 0.6%
Expected long-term rate of return on plan	Principally 2.5% or	Principally 2.0% or
assets	2.8%	2.5%

Note: Assumed rates of salary increases are principally 1.4% to 4.8%.

#### 3. Defined Contribution Plans

The required contributions of the Company and consolidated subsidiaries to defined contribution plans totaled ¥5,159 million (\$45,655 thousand) and ¥4,190 million for the fiscal year ended March 31, 2016 and 2015, respectively.

#### Note 14

#### Stock-Based **Compensation Plan**

Stock option expenses of ¥58 million (\$513 thousand) and ¥17 million are included in general and administrative expenses for the years ended March 31, 2016 and 2015, respectively.

Information on stock-based compensation plans at March 31, 2016, is shown below:

	2015 plan	2015 plan
Grantees	1 director of MCHC	1 executive officer of MCHC
		1 retiring director of MCHC
		4 retiring executive officers of MCHC
Type of stock	Common stock	Common stock
Date of grant	September 28, 2015	September 28, 2015
Number of shares granted	31,500	78,000
Exercisable period	from September 29, 2015 to September 28, 2035	from September 29, 2015 to September 28, 2035
	2014 plan	2014 plan
Grantees	2014 plan 2 directors of MCHC	2014 plan 3 executive officers of MCHC
Grantees -	<u> </u>	3 executive officers of
Grantees -	<u> </u>	3 executive officers of MCHC 1 retiring director
Grantees	<u> </u>	3 executive officers of MCHC  1 retiring director of MCHC  1 retiring executive officer
-	2 directors of MCHC	3 executive officers of MCHC  1 retiring director of MCHC  1 retiring executive officer of MCHC
Type of stock	2 directors of MCHC	3 executive officers of MCHC  1 retiring director of MCHC  1 retiring executive officer of MCHC  Common stock

There were no stock-based compensation plans granted during the fiscal year ended March 31, 2014.

	2012 plan	2012 plan	
Grantees		1 executive officer of MCHC	
Type of stock	Common stock	Common stock	
Date of grant	September 12, 2012	September 12, 2012	
Number of shares granted	21,500	4,500	
Exercisable period	from September 13, 2012 to September 12, 2032	from September 13, 2012 to September 12, 2032	
	2011 plan	2011 plan	
Grantees	2 directors of MCHC	1 executive officer of MCHC	
		1 retiring director of MCHC	
Type of stock	Common stock	Common stock	
Date of grant	September 14, 2011	September 14, 2011	
Number of shares granted	48,000	27,000	
Exercisable period	from September 15, 2011 to September 14, 2031	from September 15, 2011 to September 14, 2031	
	2010 plan	2010 plan	2010 plan
Grantees	3 directors of MCHC	1 executive officer of MCHC	4 directors of a subsidiary
		1 retiring director of MCHC	12 executive officers of a subsidiary
			4 retiring executive officers of a subsidiary
Type of stock	Common stock	Common stock	Common stock
Date of grant	September 14, 2010	September 14, 2010	September 15, 2010
Number of shares granted	44,700	20,500	144,450
Exercisable period	from September 15, 2010 to September 14, 2030	from September 15, 2010 to September 14, 2030	from September 16, 2010 to September 15, 2030

There were no stock-based compensation plans granted during the fiscal year ended March 31, 2010.

2008 plan	2008 plan	2008 plan
3 directors of	1 retiring director	1 director of a
MCHC	of MCHC	subsidiary
		1 retiring director
		of a subsidiary
		20 executive officers
		of a subsidiary
		4 retiring executive
		officers of a subsidiary
Common stock	Common stock	Common stock
September 10, 2008	September 10, 2008	September 12, 2008
32,650	12,800	227,700
from September 11, 2008	from September 11, 2008	from September 13, 2008
to September 10, 2028	to September 10, 2028	to September 12, 2028
2007 plan	2007 plan	2007 plan
		1 director of a
MCHC	of MCHC	subsidiary
	2 retiring directors	1 retiring director
	of MCHC	of a subsidiary
		20 executive officers
		20 executive officers of a subsidiary
		20 executive officers of a subsidiary 5 retiring executive
		20 executive officers of a subsidiary 5 retiring executive officers of a subsidiary
Common stock	Common stock	20 executive officers of a subsidiary 5 retiring executive officers of a subsidiary Common stock
Common stock December 12, 2007		20 executive officers of a subsidiary 5 retiring executive officers of a subsidiary
December 12, 2007 39,700	Common stock December 12, 2007 49,450	20 executive officers of a subsidiary 5 retiring executive officers of a subsidiary Common stock December 14, 2007
December 12, 2007	Common stock December 12, 2007	20 executive officers of a subsidiary 5 retiring executive officers of a subsidiary Common stock December 14, 2007
	Common stock September 10, 2008 32,650 from September 11, 2008 to September 10, 2028	Common stock   Common stock   September 10, 2008   September 10, 2008   32,650   12,800

	2006 plan	2006 plan	2006 plan	2005 plan
Grantees	3 directors of MCHC	1 executive officer	2 directors of	7 directors of
		of MCHC	a subsidiary	a subsidiary
		1 retiring director	1 retiring director	19 executive officers
		of MCHC	of a subsidiary	of a subsidiary
			19 executive officers	3 retiring executive
	-		of a subsidiary	officers of a subsidiary
			4 retiring executive	
			officers of a subsidiary	
Type of stock	Common stock	Common stock	Common stock	Common stock
Date of grant	December 13, 2006	December 13, 2006	December 15, 2006	July 1, 2005
Number of shares granted	70,400	28,200	331,000	466,050
Exercisable period	from December 14, 2006	from June 28, 2007	from December 16, 2006	from June 28, 2006
	to December 13, 2026	to June 27, 2027	to December 15, 2026	to June 27, 2026

Number, movement and price of stock options were as follows:

#### 1. Number of stock options

								Number	of shares
	2005	2006	2007	2008	2010	2011	2012	2014	2015
	plan	plan	plan	plan	plan	plan	plan	plan	plan
Before vesting									
Outstanding as of March 31, 2015	58,200	68,400	91,700	127,450	161,950	75,000	26,000	36,500	_
Granted	1-1	_	-	-				I -	109,500
Expired	-	-	_	_	_	_	_	1-	_
Vested	_	1	_	11,700	12,450	_	_	-	_
Outstanding as of March 31, 2016	58,200	68,400	91,700	115,750	149,500	75,000	26,000	36,500	109,500
After vesting									-
Outstanding as of March 31, 2015	10,350	18,150	59,650	76,200	25,000	_	_	_	_
Vested	_	_	_	11,700	12,450	_	_	_	_
Rights exercised	_	_	_	21,400	7,000	_	_	_	_
Expired	1-1	-	_			_		1-	_
Outstanding as of March 31, 2016	10,350	18,150	59,650	66,500	30,450	_	_	_	_

Note: Number of stock options are listed after conversion to share numbers

#### 2. Price information

									Yen
	2005	2006	2007	2008	2010	2011	2012	2014	2015
	plan	plan	plan	plan	plan	plan	plan	plan	plan
Exercise price	1	1	1	1	1	1	1	1	1
Average share price on exercising options		_	-	674.4	588.3	1	_	_	_
Fair valuation on grant date	_	682	887	514	396	486	281	485	530

U.S. dollars

	2005 plan	2006 plan	2007 plan	2008 plan	2010 plan	2011 plan	2012 plan	2014 plan	2015 plan
Exercise price	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Average share price on exercising options	_	_	_	5.97	5.21	_	-	_	_
Fair valuation on grant date	_	6.04	7.85	4.55	3.50	4.30	2.49	4.29	4.69

3. Method for estimating fair value of stock options

Options pricing model used: Black-Scholes model Main basic factors and estimation method:

	2015 stock options
Share price volatility (note 1)	33.643%
Expected term (note 2)	6.75 years
Expected dividends (note 3)	¥13 (\$0.1) per share
Risk-free interest rate (note 4)	0.092%

Notes: 1. Calculated based on the daily share price over the past six years and 9 months (closing price each trading day from December 26, 2008, to September 28, 2015).

- 2. Using a period up to the expected average exercise time from the grant date.
- Based on interim dividends of ¥6 and year-end dividends of ¥7 per share in the fiscal year ended March 31, 2015.
- 4. The yield on government bonds for the expected term.
- 4. Since it is fundamentally difficult to reasonably estimate the number of options that will expire in the future, the Company uses a method that only reflects actual expiration numbers.

		Million	s of y	en		ousands of .S. dollars
	Marci	h 31, 2016	Marc	ch 31, 2015	Mai	rch 31, 2016
Deferred tax assets:	20 %					
Tax loss carryforwards	¥	137,189	¥	150,560	\$	1,214,062
Net defined benefit liabilities		46,970		40,007		415,664
Impairment loss on fixed assets		26,853		10,203		237,637
Accrued bonuses to employees		13,745		13,519		121,637
Depreciation		8,319		7,185		73,619
Unrealized profit on sale of fixed assets		6,601		6,594		58,416
Loss on liquidation of subsidiaries and affiliates	;	5,782		6,048		51,168
Write-downs of investment securities		4,280		6,655		37,876
Other		73,891		67,593		653,903
Gross deferred tax assets	¥	323,630	¥	308,364	\$	2,863,982
Valuation allowance		(147,084)		(128,271)		(1,301,628)
Total deferred tax assets	¥	176,546	¥	180,093	\$	1,562,354
Deferred tax liabilities:				-		
Accelerated tax depreciation	¥	(54,559)	¥	(61,764)	\$	(482,823)
Valuation of assets		(53,677)		(56,479)		(475,018)
Valuation gain on investment securities		(17,446)		(35,483)		(154,389)
Tax deductible reserve		(6,608)		(7,919)		(58,478)
Other		(26,900)		(15,769)		(238,053)
Total deferred tax liabilities	¥	(159,190)	¥	(177,414)	\$	(1,408,761)
Net deferred tax assets	¥	17,356	¥	2,679	\$	153,593

At March 31, 2016 and 2015, deferred tax assets and liabilities included in the consolidated balance sheets are summarized as follows:

	Millions	Thousands of U.S. dollars	
	March 31, 2016	March 31, 2015	March 31, 2016
Deferred income taxes—current	¥ 32,339	¥ 36,482	\$ 286,186
Deferred income taxes—noncurrent	62,211	62,804	550,540
Other current liabilities	(200)	(262)	(1,770)
Other noncurrent liabilities	(76,994)	(96,345)	(681,363)

A reconciliation of the statutory tax rates to the effective tax rates for the years ended March 31, 2016 and 2015, was as follows:

	March 31, 2016	March 31, 2015
Statutory tax rate	33.1%	35.6%
Increase (decrease) in taxes resulting from:		
Increase in valuation allowance for cumulative losses of consolidated subsidiaries	15.6	8.3
Amortization of goodwill	3.3	3.8
Permanent differences	2.2	2.2
Tax credits for research and development costs	(3.2)	(3.2)
Valuation allowance	(2.9)	(1.0)
Difference of statutory tax rate in overseas subsidiaries	(1.8)	(2.5)
Equity in earnings of affiliates, net	(1.2)	(0.5)
Other	1.6	(0.9)
Effective tax rate	46.7%	41.8%

(Impact of Change etc. in Corporate Tax Rate)

March 29, 2016, saw the enactments of the Partial Amendment of the Income Tax Act (Act No. 15 of 2016) and the Partial Revision of the Local Corporation Tax Act (Act No. 13 of 2016), which changed corporate tax rates as of the start of the fiscal year beginning April 1, 2016. The resulting deferred tax assets and liabilities as of March 31, 2016 were calculated using the applicable statutory tax rates to be in effect after the rate revisions for fiscal years in which it would be expected that the temporary differences would be resolved.

The impacts of these changes on the consolidated financial statements for the year

From the fiscal year that started on April 1, 2016, the loss carry-forward system limited

#### Note 16

#### Business Combinations, Etc.

#### 1. Acquisition of Renegade Gas Pty Ltd. by Taiyo Nippon Sanso Corporation (Business Combination through Acquisition)

On July 21, 2015, the Board of Directors of consolidated subsidiary Taivo Nippon Sanso Corporation decided to acquire all of the shares of Renegade Gas Pty Ltd. (RGP), which sells LPG and industrial gases in Australia, through TNSC (Australia) Pty Ltd. (in which Taiyo Nippon Sanso has 85% ownership), which was established to acquire and hold RGP's shares. RGP became a consolidated subsidiary of the Company on July 31, 2015.

(1) Overview of Business Combination

1. Name and business description of acquired company

Name: Renegade Gas Ptv Ltd

Business description: Filling and sales of LPG and industrial gases, and sales

and rentals of related equipment

2. Main reason for business combination

Consolidated subsidiary Taiyo Nippon Sanso Corporation is exploring ways to expand its operations into new countries to broaden its regional scope as part of efforts to reach the globalization objectives that are part of its Ortus Stage 1 medium-term management plan. Australia has the 12th largest GDP in the world and a population growth rate of 1% to 2% annually, a high level among advanced nations. Its economy is set to expand at around 3% annually over the next few years, reflecting growth in housing investment and personal consumption. The industrial gas market should benefit from steady growth in housing construction and infrastructure-related demand and from new demand from mining and energy sectors.

Taiyo Nippon Sanso will position RGP as a beachhead for cultivating the industrial gas markets of Australia and the rest of Oceania, leveraging that company's existing network to broaden its product lineup and expand its geographic reach.

The MCHC Group will launch efforts to materialize synergies from RGP and establish a solid footing in the Australian industrial gas business.

3. Date of business combination

July 31, 2015

4. Legal form of business combination

Acquisition of shares for cash and exchange of shares through consolidated subsidiary TNSC (Australia)

5. Percentage of voting rights acquired

(2) The acquired company's financial results included in the consolidated statement of income correspond to the following period:

July 1 to December 31, 2015

(3) Acquisition cost of the company and its breakdown

	Millions of Australian dollars	Millions of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2016	March 31, 2016
Consideration for acquisition			
Cash	A\$142	¥12,717	\$112,540
TNSC (Australia) shares	25	2,244	19,858
Acquisition cost	A\$167	¥14,961	\$132,398

- (4) Share exchange ratio by share class and its calculation method, and number of shares issued
  - 1. Share exchange ratio by share class

1 share of RGP common stock for 100 shares of TNSC (Australia) common stock

125 Mitsubishi Chemical Holdings Corporation KAITEKI REPORT 2016 Mitsubishi Chemical Holdings Corporation KAITEKI REPORT 2016 126 2. Calculation method for share exchange ratio

Calculated as a result of discussions with the relevant parties referring to stock valuation reports submitted by third-party appraisal institutions and other sources.

3. Number of shares issued

TNSC (Australia) shares: 15,868,013

#### (5) Breakdown of transaction-related costs

	Millions of yen	U.S. dollars
	March 31, 2016	March 31, 2016
Financial advisory remuneration and fees, etc.	¥226	\$2,000
Attorney remuneration and fees, etc.	79	699

- (6) Amount of goodwill recognized, reason for recognition, method of amortization, and period of amortization
  - 1. Amount of goodwill recognized

A\$124 million (¥10,939 million (\$96,805 thousand))

2. Reason for recognition

Goodwill was recognized due to the difference between the Company's interest in the acquired company and the acquisition cost.

3. Method of amortization and period of amortization Straight-line method over 20 years

(7) Amount of assets acquired and liabilities assumed on the date of business combination and its breakdown

	Millions of Australian dollars March 31, 2016	Millions of yen March 31, 2016	Thousands of U.S. dollars  March 31, 2016
Current assets	A\$ 20	¥ 1,954	\$17,292
Noncurrent assets	91	8,487	75,106
Total assets	A\$111	¥10,441	\$92,398
Current liabilities	A\$ 19	¥ 1,796	\$15,894
Noncurrent liabilities	49	4,623	40,912
Total liabilities	A\$ 68	¥ 6,419	\$56,805

(8) Estimated impact on Consolidated Statements of Income for year ended March 31, 2016, and method of calculating such impact assuming that the business combination was completed on the first day of the year ended March 31, 2016

	Millions of Australian dollars March 31, 2016	Millions of yen March 31, 2016	Thousands of U.S. dollars  March 31, 2016
Net sales	A\$ 43	¥ 3,920	\$34,690
Operating income	6	630	5,575
Profit before income taxes	4	426	3,770
Profit attributable to owners of parent	A\$ 1	¥ 64	\$ 566

Method for calculating estimates

Based on the consolidated sales and income information of RGP from January 1, 2015, through June 30, 2015, estimates reflect amortization of the goodwill that was recognized at the time of the business combination on the assumption that the goodwill had arisen on the first day of the fiscal year ended March 31, 2016.

These estimates are unaudited.

#### Note 17

#### Per Share Information

	Y	U.S. dollars	
	March 31, 2016	March 31, 2015	March 31, 2016
Net assets	¥ 636.43	¥ 669.77	\$ 5.63
Profit attributable to owners of parent  —Basic	31.70	41.40	0.28
—Diluted	31.68	41.37	0.28

1. The basis for calculating profit attributable to owners of parent per share for the year ended March 31, 2016 and diluted profit attributable to owners of parent per share was as

	Millions	dollars	
Profit attributable to owners of parent per share	March 31, 2016	March 31, 2015	March 31, 2016
Profit attributable to owners of parent	¥ 46,444	¥ 60,859	\$411,009
Profit attributable to owners of parent applicable to common shares	46,444	60,859	411,009
Average number of common shares during period (thousands of shares)	1,464,811	1,469,998	_
Increase in number of common shares: (thousands of shares)	887	842	_
Warrants	(887)	(842)	

2. The basis for calculating net assets per share as of March 31, 2016 was as follows:

	Millions	U.S. dollars	
Net assets per share	March 31, 2016	March 31, 2015	March 31, 2016
Total net assets	¥1,554,528	¥1,588,601	\$13,756,885
Amounts deducted from total net assets:	622,276	607,608	5,506,867
Warrants	515	471	4,558
Non-controlling interests in consolidated subsidiaries	621,761	607,137	5,502,310
Net assets applicable to common shares	932,252	980,993	8,250,018
Number of common shares at the end of the fiscal year used in calculation of net assets per share (thousands of shares)	1,464,802	1,464,664	_

Debt

Short-Term Debt and Long-Term

At March 31, 2016 and 2015, short-term debt of MCHC and its consolidated subsidiaries consisted of the following:

	Millions	Thousands of U.S. dollars	
	March 31, 2016	March 31, 2015	March 31, 2016
Short-term loans principally from banks and other financial institutions at average interest rate of: 0.910% at March 31, 2016, and 0.889% at March 31, 2015	¥394,688	¥518,985	\$3,492,814
Commercial papers	30,000	26,000	265,487
	¥424,688	¥544,985	\$3,758,301

At March 31, 2016 and 2015, long-term debt of MCHC and its consolidated subsidiaries consisted of the following:

the following:		Millions	of ve	n		usands of 3. dollars
	March					h 31, 2016
Debt issued by MCHC:			- 2			
0.499% notes due 2016	¥	20,000	¥	20,000	\$	176,991
1.204% notes due 2021		10,000		10,000		88,496
0.366% notes due 2017		15,000		15,000		132,743
0.556% notes due 2019		10,000		10,000		88,496
0.439% notes due 2017		15,000		15,000		132,743
0.665% notes due 2019		10,000		10,000		88,496
0.615% notes due 2018		20,000		20,000		176,991
0.948% notes due 2020		10,000		10,000		88,496
1.226% notes due 2023		10,000		10,000		88,496
0.319% notes due 2018		10,000		10,000		88,496
0.604% notes due 2020		15,000		15,000		132,743
0.918% notes due 2023		15,000		15,000		132,743
0.319% notes due 2019		25,000		25,000		221,239
0.482% notes due 2021		15,000		15,000		132,743
0.800% notes due 2024		15,000		15,000		132,743
0.433% notes due 2022		10,000		_		88,496
0.755% notes due 2025		10,000		_		88,496
0.281% notes due 2020		20,000				176,991
0.476% notes due 2022		10,000		_		88,496
0.711% notes due 2025		10,000				88,496
Debt issued by MCC:						
2.010% notes due 2016	¥	_	¥	20,000	\$	_
2.050% notes due 2016		10,000		10,000		88,496
2.030% notes due 2018		20,000		20,000		176,991
2.020% notes due 2019		10,000		10,000		88,496
Debt issued by consolidated subsidiaries other than MCC, due 2021 or before at interest rates ranging from 0.319% to 1.940% at March 31,		50,010		50,050		442,566
2016, and 2015, respectively.  Loans, principally from banks and insurance companies due 2016 to 2035:						
Collateralized		8,408		9,357		74,407
Non-collateralized		667,646		724,203		5,908,372
		,041,064	¥	1,058,610	\$	9,212,956
Less current portion		(178,481)		(198,667)	(	1,579,478)
	¥	862,583	¥	859,943	\$	7,633,478

Note: The average interest rates of loans were as follows:

March 31, 2016 Current portion 1.757% Less current portion 1.235% Secured assets as of March 31, 2016 and 2015, are shown below:

	Millions	Millions of yen		
	March 31, 2016	March 31, 2015	March 31, 2016	
Buildings	¥ 8,085	¥ 9,858	\$ 71,549	
Land	10,191	10,343	90,186	
Machinery and equipment	36,467	78,553	322,717	
Total	¥ 54,743	¥98,754	\$ 484,451	

Secured liabilities as of March 31, 2016 and 2015, are shown below:

	Millions	Millions of yen			
	March 31, 2016	March 31, 2015	March 31, 2016		
Short-term debt	¥ 6,357	¥ 7,658	\$ 56,257		
Long-term debt	6,323	4,883	55,956		
Trade payables	405	366	3,584		
Total	¥13,085	¥12,907	\$ 115,796		

The aggregate annual maturities of long-term debt are summarized as follows:

	Millions of yen	Thousands of U.S. dollars
	March 31, 2016	March 31, 2016
2016	¥174,154	\$1,541,186
2017	167,931	1,486,115
2018	217,619	1,925,832
2019	135,326	1,197,575
2020 and thereafter	167,553	1,482,770
	¥862,583	\$7,633,478

#### Note 19

#### Segment Information 1. Overview of Reporting Segments

The Company's reporting segments comprise financial information that can be segregated, and the Board of Directors regularly assess this information in deciding how to allocate resources and evaluate results.

MCHC is a holding company for six key businesses. They are Mitsubishi Chemical Corporation, Mitsubishi Tanabe Pharma Corporation, Mitsubishi Plastics, Inc., Mitsubishi Rayon Co., Ltd., Life Science Institute, Inc., and Taiyo Nippon Sanso Corporation. MCHC coordinates Group operations, categorizing each company's businesses by product and managing its portfolio based on those categories. Accordingly, MCHC's segments comprise product-specific business categories. The five principal reporting segments are Electronics Applications, Designed Materials, Health Care, Chemicals, and Polymers.

The main products in each reporting segment are as follows.

Reporting Segment	Main Products
Electronics Applications	Recording media, Information and
0.00	electronics-related materials, Imaging supplies
Designed Materials	Food ingredients, Battery materials, Fine chemicals,
	Polymer processing products, Composite materials,
	Inorganic chemicals, Fibers
Health Care	Pharmaceuticals, Diagnostic reagents and instruments,
	Clinical testing, Pharmaceutical formulation materials
Chemicals	Basic petrochemicals, Chemical derivatives, Synthetic
	fiber materials, Carbon products, Industrial gases
Polymers	Synthetic resins

#### 2. Basis for Calculating Sales, Earnings or Losses, Assets, Liabilities, and Other Amounts by Reporting Segment

The Company accounts for its reported business segments as described in Note 1. Intersegment sales and transfers are based mainly on prevailing market prices.

#### 3. Information on Sales, Earnings or Losses, Assets, Liabilities and Other Financials by Reporting Segment

		Net Sales*		Inter-segment Sales and Transfers				
			Thousands of			Thousands of		
	Millions	of yen	U.S. dollars	Millions	of yen	U.S. dollars		
REPORTING SEGMENT	March 31,	March 31,	March 31,	March 31,	March 31,	March 31,		
REPORTING SEGMENT	2016	2015	2016	2016	2015	2016		
Electronics Applications	¥ 115,649	¥ 118,752	\$ 1,023,442	¥ 4,337	¥ 4,895	\$ 38,381		
Designed Materials	852,565	818,591	7,544,823	33,262	30,281	294,354		
Health Care	554,056	531,933	4,903,150	2,258	1,985	19,982		
Chemicals	1,321,112	1,113,952	11,691,257	121,290	156,738	1,073,363		
Polymers	773,672	873,611	6,846,655	68,873	81,615	609,496		
Others	206,044	199,439	1,823,398	124,933	119,581	1,105,602		
Subtotal	3,823,098	3,656,278	33,832,726	354,953	395,095	3,141,177		
Adjustments	_	_	_	(354,953)	(395,095)	(3,141,177)		
Total	¥3,823,098	¥3,656,278	\$33,832,726	¥ —	¥ —	\$ —		

<sup>\*</sup> Inter-segment sales and transfers are not included.

	S	egment Earni		Segment Assets					
	Millions	of yen	Thousands of U.S. dollars	Millions	Thousands of U.S. dollars				
REPORTING SEGMENT	March 31, March 31, 2016 2015		March 31, 2016			March 31, 2016			
Electronics Applications	¥ (988)	¥ (2,725)	\$ (8,743)	¥ 102,769	¥ 117,474	\$ 909,460			
Designed Materials	75,713	55,629	670,027	834,760	841,498	7,387,257			
Health Care	103,417	77,012	915,195	1,059,035	1,050,987	9,371,991			
Chemicals	57,256	8,823	506,690	1,296,916	1,421,283	11,477,133			
Polymers	43,340	27,969	383,540	743,781	822,070	6,582,133			
Others	7,284	6,056	64,460	658,865	603,121	5,830,664			
Subtotal	286,022	172,764	2,531,168	4,696,126	4,856,433	41,558,637			
Adjustments	(5,996)	(7,083)	(53,062)	(634,554)	(533,395)	(5,615,522)			
Total	¥280,026	¥165,681	\$2,478,106	¥4,061,572	¥4,323,038	\$35,943,115			

	Depreciation and Amortization					Amortization of Goodwill						
						usands of						ands of
		Millions	of ye	en	U.8	S. dollars	M	illions	of yen		U.S. 0	dollars
REPORTING SEGMENT	Mar	ch 31,	Mai	rch 31,	Ma	arch 31,	March	31,	March	n 31,	Marc	ch 31,
INEL ORTHOGOEOMENT	20	016	2	2015		2016	201	6	201	15	2016	
Electronics Applications	¥	6,231	¥	6,134	\$	55,142	¥	4	¥	4	\$	35
Designed Materials		42,079		40,181		372,381	4	,903	4	1,456		43,389
Health Care		16,219		15,712		143,531	7	,812	8	3,243	(	69,133
Chemicals		71,153		46,189		629,673	4	,909	2	2,143		43,442
Polymers		40,010		38,150		354,071	2	,749	2	2,735		24,327
Others		3,059		3,097		27,071		2		59		18
Subtotal	1	78,751	1	149,463	1	1,581,867	20	,379	17	7,640	18	80,345
Adjustments		1,623		1,790		14,363		_		_		_
Total	¥1	80,374	¥1	151,253	\$1	1,596,230	¥20	,379	¥1	7,640	\$18	80,345

	Investment in Equity Method Affiliates			Increase in Tangible and Intangible Fixed Assets*				
	Thousands of Millions of yen U.S. dollars			of yen		ousands of S. dollars		
REPORTING SEGMENT	March 31 2016	,	rch 31, 2015	March 31, 2016	March 31, 2016			larch 31, 2016
Electronics Applications	¥ 8	35 ¥	227	\$ 752	¥ 5,056	¥ 5,889	\$	44,743
Designed Materials	11,21	0	11,754	99,204	49,676	53,666		439,611
Health Care	25	57	264	2,274	21,302	24,608		188,513
Chemicals	40,92	22	44,766	362,142	73,562	44,666		650,991
Polymers	50,53	36	39,615	447,221	21,861	30,191		193,460
Others	89	3	5,349	7,903	3,510	3,642		31,062
Subtotal	103,90	)3 ^	101,975	919,496	174,967	162,662		1,548,381
Adjustments			-	_	1,541	2,395		13,637
Total	¥103,90	3 ¥	101,975	\$919,496	¥176,508	¥165,057	\$	1,562,018

<sup>\* &</sup>quot;Increase in Tangible and Intangible Fixed Assets" is equivalent to "Capital Expenditures."

- 1.The Others category is a business segment excluded from reporting segments and mainly encompasses engineering, transportation, and warehousing operations.
- 2. Adjustments are as follows:
- (1) The ¥5,996 million (\$53,062 thousand) and ¥7,083 million adjustment for segment earnings or losses includes ¥6,666 million (\$58,991 thousand) and ¥7,345 million in corporate costs not allocated to each reporting segment and ¥670 million (\$5,929 thousand) and ¥262 million in inter-segment eliminations for the fiscal years ended March 31, 2016 and 2015, respectively. Corporate costs include expenditures on basic testing, research, and other activities not allocated to reporting segments.
- (2) The segment asset adjustment of ¥634,554 million (\$5,615,522 thousand) and ¥533,395 million includes corporate assets of ¥135,870 million (\$1,202,389 thousand) and ¥211,221 million not allocated to reporting segments and inter-segment eliminations of ¥770,424 million (\$6,817,912 thousand) and ¥744,616 million for the fiscal years ended March 31, 2016 and 2015, respectively.
- (3) Adjustments to depreciation and amortization of ¥1,623 million (\$14,363 thousand) and ¥1,790 million are corporate costs that are not allocated to reporting segments for the fiscal years ended March 31, 2016 and 2015, respectively.
- (4) Adjustments to increase in tangible and intangible fixed assets of ¥1,541 million (\$13,637 thousand) and ¥2,395 million are capital expenditures against corporate assets that are not allocated to reporting segments for the fiscal years ended March 31, 2016 and 2015, respectively.
- 3.Total segment earnings and adjustments match operating income in the consolidated financial statements. 4.In light of business repositioning within the Group of some operations of one consolidated subsidiary and the operations of three other consolidated subsidiaries, from the fiscal year ended March 31, 2016, the Company reclassified some businesses of one consolidated subsidiary from Chemicals to Polymers and Designed Materials. The Company reclassified the businesses of the other three consolidated subsidiaries from the Others category to Polymers. The Company has reconfigured segment information for the previous fiscal year to reflect the new classification.

#### 4. Related Information

Geographic Information

(1) Sales

	Millions of yen			
	Japan	U.S.A.	Other	Total
Year ended March 31, 2016	¥2,164,021	¥442,826	¥1,216,251	¥3,823,098
		Millions	of yen	
	Japan	U.S.A.	Other	Total
Year ended March 31, 2015	¥2,137,195	¥288,066	¥1,231,017	¥3,656,278
	-	Thousands o	f U.S. dollars	
	Japan	U.S.A.	Other	Total
Year ended March 31, 2016	\$19,150,628	\$3,918,814	\$10,763,283	\$33,832,726

Note: Sales are based on the locations of customers and categorized according to country or region. (Changes in Presentation)

"PRC," which was presented separately in the fiscal year ended March 31, 2015, was included in "Other" in the fiscal year ended March 31, 2016, as it accounted for less than 10% of consolidated net sales in the fiscal year ended March 31, 2016. "U.S.A.," which was included in "Other" in the fiscal year ended March 31, 2015, was presented separately in the fiscal year ended March 31, 2016, as it accounted for more than 10% of consolidated net sales in the fiscal year ended March 31, 2016.

Results for the fiscal year ended March 31, 2015, have been restated to reflect these changes in presentation. As a result, ¥332,259 million included in "PRC" sales in the fiscal year ended March 31, 2015, was included in "Other," and ¥288,066 million included in "Other" sales in the fiscal year ended March 31, 2015, was included in "U.S.A."

#### (2) Tangible Fixed Assets

	Millions	of yen				
Japan	U.S.A.	Other	Total			
¥883,236	¥230,163	¥277,328	¥1,390,727			
Millions of yen						
Japan	U.S.A.	Other	Total			
¥902,880	¥237,784	¥357,482	¥1,498,146			
Japan	U.S.A.	Other	Total			
\$7,816,248	\$2,036,841	\$2,454,230	\$12,307,319			
	¥883,236  Japan  ¥902,880  Japan	Japan U.S.A.	Yes   Yes			

#### 5. Information on Impairment Loss by Reporting Segment

	Millions	Millions of yen		
REPORTING SEGMENT	March 31, 2016	March 31, 2015	March 31, 2016	
Electronics Applications	¥ 2,104	¥ 362	\$ 18,619	
Designed Materials	4,588	4,749	40,602	
Health Care	4,664	10,980	41,274	
Chemicals	65,994	13,278	584,018	
Polymers	1,636	1,768	14,478 53	
Others	6	46	53	
Corporate and Eliminations	_			
Total	¥78,992	¥31,183	\$699,044	

#### 6. Information on Amortization of Goodwill and Unamortized Balance by Reporting Segment

	Balance at year-end				
	Millions	Millions of yen			
REPORTING SEGMENT	ORTING SEGMENT March 31, 2016 March 31, 2015		March 31, 2016		
Electronics Applications	¥ 4	¥ 8	\$ 35		
Designed Materials	39,977	44,247	353,779		
Health Care	74,169	78,042	656,363		
Chemicals	96,627	81,346	855,106		
Polymers	37,397	40,173	330,947		
Others'	(10)	(19)	(88)		
Corporate and Eliminations					
Total	¥248,164	¥243,797	\$2,196,142		

#### Note 20

#### Significant Subsequent Events

On April 28, 2016, the Board of Directors of consolidated subsidiary Taiyo Nippon Sanso Corporation resolved to have Matheson Tri-Gas, Inc., its wholly owned subsidiary, purchase certain American industrial gas operations and related business assets from Air Liquide Industrial U.S. LP and Airgas, Inc. Accordingly, the company signed a contract. On May 13, the U.S. Federal Trade Commission (FTC) approved of American Air Liquide Holdings, Inc.'s acquisition of Airgas, Inc., subject to the sale of certain assets to a third party buyer, the execution of such sale being a requirement for the FTC's approval.

#### (1) Reason for Business Transfer

Expand the U.S. industrial gas business to become a national supplier and reinforce the position of Taiyo Nippon Sanso as a manufacturer, enhancing its ability to maintain stable supplies and enhance customer trust around the United States

(2) Names of Companies Selling Divested Assets Air Liquide Industrial U.S., LP, and Airgas, Inc.

#### (3) Main Businesses to be Acquired

Gas separation business, carbon dioxide business, packaged gases business, and nitrous oxide business

(4) Value of Assets to be Acquired and Liabilities to be Assumed and Acquisition Cost The asset and liability values have yet to be determined. The acquisition cost cannot be disclosed owing to confidentiality requirements in the contract with the acquired companies.

#### (5) Acquisition Timing

To be determined upon the FTC's approval.

(6) Payment Funding and Payment Method

Management plans to procure internal and external funding for the acquisition.

#### Independent Auditor's Report

The Board of Directors Mitsubishi Chemical Holdings Corporation

We have audited the accompanying consolidated financial statements of Mitsubishi Chemical Holdings Corporation and its consolidated subsidiaries, which comprise the consolidated balance sheet as at March 31, 2016, and the consolidated statements of income, comprehensive income, changes in net assets, and cash flows for the year then ended and a summary of significant accounting policies and other explanatory information, all expressed in Japanese yen.

#### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for designing and operating such internal control as management determines is necessary to enable the preparation and fair presentation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. The purpose of an audit of the consolidated financial statements is not to express an opinion on the effectiveness of the entity's internal control, but in making these risk assessments the auditor considers internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Mitsubishi Chemical Holdings Corporation and its consolidated subsidiaries as at March 31, 2016, and their consolidated financial performance and cash flows for the year then ended in conformity with accounting principles generally accepted in Japan.

#### Convenience Translation

We have reviewed the translation of these consolidated financial statements into U.S. dollars, presented for the convenience of readers, and, in our opinion, the accompanying consolidated financial statements have been properly translated on the basis described in Note 2.

Ernst & young Shinhihan LLC

June 24, 2016 Tokyo, Japan

# **Corporate Information**

## **Corporate Data**

#### **Mitsubishi Chemical Holdings Corporation**

(As of March 31, 2016)

Address of the head office 1-1 Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8251 Establishment October 3, 2005 Paid-in capital ¥50.0 billion Net sales (consolidated) ¥3,823.0 billion (fiscal 2015)

68,988

## **Organizational Structure**

Number of employees (consolidated)

lolding company		Function-sharing companies
ormulation of Group strategies, optimal allocation of nanagement resources, supervision of business manage	ment and others	Investigation into future societal issues and research for proving solutions to those issues
MCHC*1	100%	The KAITEKI Institute
	100%	Regional control companies Overseas administrative representatives in North America, Europe and China  Mitsubishi Chemical Holdings America
	100%	Mitsubishi Chemical Holdings (Beijing)      Mitsubishi Chemical Holdings Europe
	100%	Common function companies General affairs, accounting, financial affairs and auditing  Mitsubishi Chemical Holdings Corporate Staff
	100%	Advance of common platform technologies in R&D  MCHC R&D Synergy Center
Operating companies Rusiness operations in the three domains of Perform		

Business operations in the three domains of Performance Products, Industrial Materials and Health Care								
	100%	56.3%	100%	100%	100%	50.5%*2		
M	CC*3	MTPC*1	MPI*3	MRC*3	LSII	TNSC*1		
¥5 <b>Ne</b> ¥1, <b>Bu</b> Per inc	id-in capital 0.0 billion It sales (consolidated) 745.9 billion Issiness lines Iformance products, Justrial materials, and Justrial materials, and	Paid-in capital ¥50.0 billion Net sales (consolidated) ¥431.7 billion Business lines Pharmaceuticals and others	Paid-in capital ¥21,503 million Net sales (consolidated) ¥480.8 billion Business lines Plastic products and others	Paid-in capital ¥53,229 million Net sales (consolidated) ¥548.4 billion Business lines Chemical products, resins, fibers, carbon fiber and composite materials, water treatment systems and services, and others	Paid-in capital ¥3.0 billion Net sales (consolidated) ¥136.0 billion Business lines Healthcare and medical ICT, drug development solutions, and next-generation healthcare	Paid-in capital ¥37,344 million Net sales (consolidated) ¥641.5 billion Business lines Industrial gases, related equipment and facilities, and others		
•	siness domain Performance Products domain Industrial Materials domain	Business domain  Health Care domain	Business domain Performance Products domain	Business domain Performance Products domain Industrial Materials domain	Business domain  Health Care domain	Business domain Industrial Materials domain		
Gr	oup companies	Group companies	Group companies	Group companies	Group companies	Group companies		

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<sup>\*1</sup> Listed company
\*2 MCHC Group total stake (%)
\*3 The three chemical operating companies will be integrated as the new-Mitsubishi Chemical Corporation on April 1, 2017.

Company Name	Major Products or Lines of Business	Capital	Equity Participatio (%)
Direct Investees			
Mitsubishi Chemical Corporation	Manufacture and marketing of chemical products	¥50.0 billion	100.0
Mitsubishi Tanabe Pharma Corporation	Manufacture and marketing of pharmaceuticals	¥50.0 billion	56.3
Mitsubishi Plastics, Inc.	Manufacture and marketing of polymer processing products	¥21.5 billion	100.0
Mitsubishi Rayon Co., Ltd.	Manufacture and marketing of chemical products	¥53.2 billion	100.0
Life Science Institute, Inc.	Management of the healthcare solutions business	¥3.0 billion	100.0
Taiyo Nippon Sanso Corporation	Manufacture and marketing of industrial gases	¥37.3 billion	50.5 (14.0)
The KAITEKI Institute, Inc.	Research and investigation into future societal trends	¥10 million	100.0
Indirect Investees			
Performance Products Domain			
ectronics Applications Segment			
Verbatim Limited	Marketing of recording media and computer peripheral equipment	€3 million	100.0
esigned Materials Segment			
The Nippon Synthetic Chemical Industry Co., Ltd.	Manufacture and marketing of polymer processing products	¥17.9 billion	50.9
Quadrant AG	Management of subsidiaries that engage in the engineering plastic business	CHF27 million	100.0
Industrial Materials Domain			
hemicals Segment			
Kansai Coke and Chemicals Co., Ltd.	Manufacture and marketing of coke	¥6.0 billion	51.0
Matheson Tri-Gas, Inc.	Manufacture and marketing of industrial gases	U.S.\$42	100.0
olymers Segment			
Japan Polypropylene Corporation	Manufacture and marketing of polypropylene	¥11.7 billion	65.0
Japan Polyethylene Corporation	Manufacture and marketing of polyethylene	¥7.5 billion	58.0
Mitsubishi Rayon Lucite Group Limited	Management of subsidiaries that engage in the MMA business	£246 million	100.0
Health Care Domain			
ealth Care Segment			
API Corporation	Manufacture and marketing of active pharmaceutical ingredients and intermediates	¥4.0 billion	100.0
LSI Medience Corporation	Clinical testing and medical support services; marketing of in vitro diagnostic agents	¥3.0 billion	100.0
Qualicaps Co., Ltd.	Manufacture and marketing of capsules for pharmaceuticals and health food, and pharmaceutical processing equipment	¥2.8 billion	100.0

(Notes) 1. MCC operates businesses in the Performance Products and Industrial Materials domains and Others.

Mitsubishi Chemical Logistics Corporation

Mitsubishi Chemical Engineering Corporation

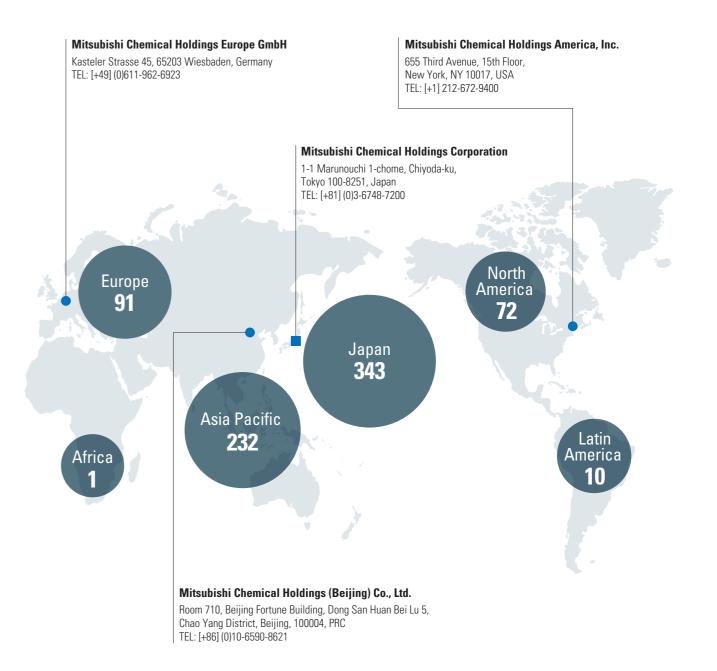
- MCC operates businesses in the Health Care domain.
   MPI operates businesses in the Performance Products domain.
- 4. MRC operates businesses in the Performance Products and Industrial Materials domains and Others. 5. LSII operates businesses in the Health Care domain through its subsidiaries.
- 6. TNSC operates businesses in the Industrial Materials domain. The equity participation ratio in parentheses () for TNSC indicates the ratio owned by MCC.
  7. The KAITEKI Institute conducts basic research activities that cannot be classified in any specific domain.

Logistics and warehouse services

Engineering and construction services

Number of Subsidiaries and Affiliates (Japan): 343

Number of Subsidiaries and Affiliates (Outside Japan): 406



100.0

100.0

¥1.5 billion

¥1.4 billion

This report contains forward-looking statements based on the Company's current assumptions and beliefs in light of the information currently available to it, and are subject to risks and uncertainties that may be beyond the Company's control. Actual results could differ largely due to numerous factors, including but not limited to the following: Group companies execute businesses in many different fields, such as information and electronics, polymers and processed products, pharmaceuticals, carbon and inorganic products, industrial gases and petrochemicals, and these businesses results are subject to influences of the global demands, exchange rates, price and procurement volume of crude oil and naphtha, trends in market price, speed of technological innovation, National Health Insurance price revisions, product liabilities, lawsuits, laws, and regulations. Product names, brand names, and service names used in this report are denoted in italics and are trademarks or registered trademarks of the MCHC Group in Japan and/or overseas. Other product names, brand names, and service names may also be protected.