

The Sumitomo Business Spirit

Article 1

Sumitomo shall achieve strength and prosperity by placing prime importance on integrity and sound management in the conduct of its business.

Article 2

Sumitomo shall manage its activities with foresight and flexibility in order to cope effectively with the changing times. Under no circumstances, however, shall it pursue easy gains or act imprudently.

SMM Group Corporate Philosophy

Sumitomo Metal Mining Co., Ltd. (SMM), in accordance with the Sumitomo Business Spirit, shall, through the performance of sound corporate activities and the promotion of sustainable co-existence with the global environment, seek to make positive contributions to society and to fulfill its responsibilities to its stakeholders, in order to win ever greater trust.

SMM shall, based on respect for all individuals and recognizing each person’s dignity and value, seek to be a forward-minded and vibrant company.

SMM Group Management Vision

By improving technical capabilities, we shall fulfill our social responsibilities as a manufacturing enterprise.

Based on the principles of compliance, environmental protection and operational safety, SMM Group shall pursue maximum corporate value through the securing of resources and the provision of high-quality materials such as non-ferrous metals and advanced materials via its global network.

Integrated Report 2019 Concepts

Taking on the Challenge for New Growth

Here we will explain our 2018 3-Year Business Plan, which was announced in February 2019. The theme of the plan is “Become a World Leader in the Non-Ferrous Metals Industry—Taking on the Challenge for New Growth.” A lot of the SMM Group’s business requires long spans of five to 10 years from conception, through shaping and planning, to implementation, so management plans have a 10 to 15-year focus. Therefore, the 3-year plan is formulated by making a backcast to decide the measures that should be implemented over the next three years, so the 2018 3-Year Business Plan is not just a strategy for a three-year period but incorporates what should be done to work toward long-term objectives. It is an aggressive plan into which management resources are being invested on an unprecedented scale. In order to realize sustainable growth, we will implement the plan with resolve and strive to achieve new growth.

Maximizing Corporate Value and Ensuring Sound Management

SMM’s basic approach to corporate governance is to “maximize corporate value and ensure sound management.” We think that the maximization of corporate value can be realized by promoting our growth strategy and ensuring steady profits from this by continuously strengthening our business base. Therefore, we are working toward being an organization in which each individual employee is aware of what it means to work for SMM and which can face up to challenges.

Co-Creating Value with All

Stakeholders are becoming more diverse and specific in how they want to see companies approach sustainable social development. We recognize that responding appropriately to this trend of continuous large change is a pressing issue. We are deepening our communication with all stakeholders to facilitate understanding of the SMM Group’s strategy and measures. The Group’s CSR objective is “sustainable co-existence with the global environment,” and we will work to solve social issues through our core business while mutually communicating with diverse stakeholders.

World Leader in the Non-Ferrous Metals Industry

Long-Term Vision

The SMM Group possesses leading technology and a unique business model that covers from the securing of resources to the provision of high-functionality materials in house that cannot be easily emulated, even by other major mineral resource companies. This is one of the Group’s competitive strengths and means we are able to effectively utilize resources and materials without limits.

Our ambition is to raise our societal value through sustainable growth and become the world leader in the non-ferrous metals industry.

We aim to have a global presence in terms of mineral resource interests and metal production volumes (be in the global top five), to grow sustainably and stably produce a certain amount of profit, to actively tackle social issues such as the SDGs, and to have employees working with spirit. This is what we are aiming for, what our long-term vision of becoming the world leader in the non-ferrous metals industry looks like.

Targets

**Nickel (Ni)** Annual production capacity of 150 kt  
A quantity that will position us as top class globally (about 5th)  
A responsible quantity for meeting growing demand, including for battery materials

**Copper (Cu)** Annual production interest of 300 kt  
A quantity that will position us as mid-level globally  
Achievement expected through participation in the Quebrada Blanca 2 Project → Continue to maintain

**Gold (Au)** Participation in new mine operations through the acquisition of superior interests  
Increasing profitability and value of operational experience by participation in superior projects, rather than increasing the number of interests

**Materials** Achievement of annual profit before tax of ¥25.0 billion through portfolio management  
Creating a presence as a core business by selecting the best mix of businesses based on the life cycle of each product group

**Profit** Annual profit ¥150.0 billion

1500

## Management and Organization .....

1600

1700

In the Edo period, about half of all copper produced in Japan for international trade is exported through Nagasaki. In the year 1698, Sumitomo's annual production reaches about 1,500 tons, a quantity that accounts for one quarter of Japan's copper production.

1800

1900

Starting in the Meiji Period, with the growth in demand for communications lines, wires for electric lighting, and copper alloy fabricated products, domestic demand for copper increases significantly. The Besshi Copper Mine, which introduces Western-style smelting and refining, supports the industry in Japan.

Nickel is used as a raw material in stainless steel and special steels. These materials are used in various areas such as communications, medical, construction materials, and the generation of electricity.

The Sumitomo Business Spirit, which continues to this day, has its origins in the *Monjuin Shiiigaki*, written by the founder of the Sumitomo family, Sumitomo Masatomo (1585–1652), in his later years to explain the merchant's frame of mind.



Large-scale reforestation operations are started after Iba Teigo, the second Director-General, becomes manager of the Besshi Copper Mine. At peak, more than two million trees are being planted annually and Mt. Besshi once again overflows with greenery.



The Besshi Copper Mine in the past (left) and today (right)

## Mineral Resources Business .....

... Copper mines

1691  
Opening of the  
Besshi Copper Mine

Smelting & Refining  
Business ..... Co

..... Copper  
smelting and  
refining

1590  
Start of the copper  
smelting and refining  
business

In Japan at this time, there was no technology for removing the silver from copper ore, so copper was sold and exported at copper prices while it still included silver. Soga Riemon, SMM's founder, develops a smelting and refining technology for separating copper and silver, known as *Nanban-buki*. He shares this widely with others in the same business in Osaka, preventing the loss of wealth.



1905  
Relocation of copper smelting and refining from the Niihama coast to the Shisaka Island

1939  
Start of the nickel smelting and refining business

In 1939, SMM launches its nickel smelting and refining business and goes on to develop nickel refining technologies such as the MCLE method. In the 2000's, factors such as the diversification of raw material procurement through the practical application of HPAL technology push us toward becoming the world leader in nickel smelting and refining technology.



1960  
Entry into the materials business



As mining business in Japan undergoes a contraction, attention turns to electronic materials business as a new market. In 1960, SMM begins production of germanium dioxide for use in transistors. Since then, we have continued to provide the market with various electronic materials.

## Column

## 1691

The Besshi Copper Mine operated continuously for 283 years from its opening and made a huge contribution to Sumitomo's development. The opening of the mine presented an opportunity to expand the company's business to include mineral resources business in addition to copper smelting and refining. The mining technology cultivated at the Besshi Copper Mine continues to be inherited by SMM's Mineral Resources Business as it expands across the globe.

## 1917

At a time when the importance of gold as a resource was growing, we acquired the management rights for the Kounomai Mine in Hokkaido. This added gold as a new metal to our Mineral Resources Business portfolio, which had previously been centered on copper.



## 1939

In 1939, we realized zero emissions of sulfur dioxide gas, which was a root cause of the smoke damage, becoming the first in the world to solve the problem of smoke damage that was afflicting smelters all over the globe.



## 1961

After WWII, the closure of mines in Japan meant that smelting and refining businesses had to switch to resources procured from overseas. In 1961, SMM signed an investment and financing contract with Bethlehem Mine, beginning the company's involvement with overseas mines. To present, SMM has created footholds in mine interests and in 1986 we acquired an interest in the Morenci Copper Mine, known as a superior copper mine.



2000

Around 2000  
Rapidly rising demand for cathode materials for automotive secondary batteries

Against the background of rising environmental awareness, demand has risen rapidly for cathode materials for hybrid and electric vehicle secondary batteries. Through close collaboration with customers, the SMM Group is working to supply high performance, safe battery cathode materials in addition to fulfilling its obligation as a producer of nickel and cobalt, the raw materials of battery cathode materials.

1999

#### The JCO criticality accident

A criticality accident occurs at SMM subsidiary, JCO Co., Ltd., which manufactures fuel for nuclear power generation. The SMM Group reflects on this accident and in 2000 it formulates the Corporate Reform Plan which promotes the reconfirmation and thorough execution of the corporate philosophy, reinforcement of corporate organization, and reform of corporate culture.

2010

#### Switch to three core businesses – Mineral Resources, Smelting & Refining and Materials

In the 2009 3-Year Business Plan, it is announced that SMM will switch to a business model with three core businesses – Mineral Resources & Smelting & Refining & Materials. Management resources are concentrated and invested in these core businesses.

2017

#### Working style reform

2019

#### Reconsideration of the Long-Term Vision

The 2018 3-Year Business Plan is announced. This reveals a reconsideration of the Long-Term Vision and a target of ¥150.0 billion in annual profit as a world leader in the non-ferrous metals industry.

1985

Start of operations at the Hishikari Mine

1986

Acquisition of interest in the Morenci Copper Mine. Full-scale investment in overseas mines

2005

Start of production at the Cerro Verde Copper Mine

2015

Start of operations at the Sierra Gorda Copper Mine



2016

Acquisition of additional interest in the Morenci Copper Mine

2017

Acquisition of interest in the Cote Gold Mine

2019

Acquisition of interest in the Quebrada Blanca Copper Mine

1992

Conversion of nickel refining process to MCLE technology



2005

Start of production at Coral Bay Nickel Corporation

#### Innovation Topic

##### Practical application of the HPAL method

SMM is the first in the world to apply the HPAL method to convert low-grade nickel oxide ore into a nickel resource. In addition to contributing to the realization of in-house procurement and the effective use of nickel resources, we also carry out activities that contribute to society in the Philippines, where the operations are based.

2013

Start of production at Taganito HPAL Nickel Corporation



2001

Start of production of materials for automotive secondary batteries

#### Innovation Topic

##### Making high-capacity batteries possible

Lithium nickel oxide produced by the SMM Group has high-levels of nickel content which has made high-capacity batteries possible. We are leveraging our strength of being able to provide an integrated production structure that ranges from resource procurement to battery material supply and contributing to extending the range that an electric vehicle can travel on a single charge.

2014

Increase production of battery materials, increase production of SAW filter LT/LN<sup>1</sup>

Lithium nickel oxide (battery material)



1. LT/LN: Lithium Tantalate and Lithium Niobate. These refer to Lithium Tantalate substrates and Lithium Niobate substrates. Used in chips for information and communication terminal SAW filters.

#### Mineral Resources Business

1985

##### Starting operation of the Hishikari Mine

With the closure of the Sazare Mine in 1979, the curtain closes for a time on SMM's heritage of mining technology. However, in 1985, operations begin at the Hishikari Mine and SMM Group's technology begins to chart a new history in a new area. The mine boasts a rich gold content ratio to date and has become a primary source of profit for the Group, and it also plays a role in passing down our mining technology.

#### Management

1999

##### Corporate reform since the JCO criticality accident

The JCO criticality accident in 1999 was a turning point for the management of the SMM Group. Since then we have taken a strong turn toward returning to core values and thorough compliance through the Corporate Reform Plan. Even 20 years after the accident, we will not forget and will pass the lessons learnt on to younger generations.

#### Materials Business

2014

##### Increasing the production of battery materials

In 2014, we announced that we were increasing production of cathode materials for secondary batteries and converting the business structure of our Harima Refinery to increase nickel sulfate production. We leveraged our strength of an integrated process from the procurement of nickel raw material through to processing in order to further advance material performance and ensure a stable supply.

## Seven Competitive Strengths that Support the Sustainability of the SMM Group



### Technology that has been continually honed over 420 years and is focused on the next generation

Innovation and technology accumulated since the *Nanban-bukiera*



### Employees who share our business spirit and an open and vibrant organizational climate

*Monjuin Shiigaki* inherited from the founder of the Sumitomo family



### Relationships of trust with business partners that have been formed with a long-term perspective

The acquisition of interests in superior mines around the world as a foothold into involvement with overseas mines



### Involvement with local communities that has been built up through our core business

Social contribution and town development in the areas around mines that began with the reforestation of the Besshi Copper Mine



### A firm resolve in regard to safety and a management framework that heightens hazard awareness

The embedding and strengthening of a culture of safety to prevent serious accidents



### A close affinity with our customers' needs and the collaborative capabilities to continuously respond to them

The stable supply of high-quality mineral resources, advanced materials, and safety materials that meet customers' demands



### Financial standing that enables us to take advantage of investment opportunities

Superior mines that generate profits



# Contents

## Introduction

- 2 Development of the SMM Group
- 6 The Global Non-Ferrous Metal Industry and the SMM Group
- 10 The SMM Group's Creation of Value
- 12 Seven Competitive Capabilities Cultivated Over 420 Years of History
- 14 SMM Group Overview

17

## The SMM Group's Creation of Value

- 18 Opportunities and Risks
- 20 Business Model
- 22 Our Vision for 2020 and Material Issues
- 24 Material Issues for the SMM Group
- 26 **Special Feature**  
Toward the Formulation of the SMM Group's Vision for 2030
- 28 **Special Feature**  
The SDGs and the SMM Group
- 30 Financial and Non-Financial Highlights

33

## Where is the SMM Group Going?

- 34 Interview with the President
- 42 **Special Feature: Start of a New 3-Year Business Plan**  
Become a World Leader in the Non-Ferrous Metals Industry  
—Taking on the Challenge for New Growth
- 52 FY2018 Results and FY2019 Plan
- 54 Financial Position and Financial Strategy
- 56 Mineral Resources Business
- 62 Smelting & Refining Business
- 68 Materials Business  
Battery Materials Business,  
Advanced Materials Business
- 74 Research & Development

77

## A Foundation Supporting the Creation of Value

- 78 Corporate Governance
- 84 Round-Table Discussion by Outside Directors
- 86 Directors and Audit & Supervisory Board Members
- 88 Sustainability at the SMM Group
- 91 Activities and Achievements for the Six CSR Areas of High Priority
  - 91 Effective Use of Resources
  - 92 Environmental Preservation
  - 93 Contribution to Society and Local Communities
  - 94 Respect for People and Human Rights
  - 96 Occupational Health and Safety
  - 97 Stakeholder Communication
- 98 Identification of Material Issues for the SMM Group
- 100 Occupational Health and Safety
- 102 Compliance
- 104 Risk Management
- 106 Human Rights Management
- 108 Human Resources Management
- 110 Supply Chain Management
- 112 Quality Assurance
- 114 Environmental Management
- 116 Stakeholder Communication

## 118 Sustainability Data

- 118 Effective Use of Resources
- 119 Global Environmental Considerations
- 126 Contribution to Society and Local Communities
- 128 Respect for People and Human Rights
- 134 Occupational Health and Safety
- 138 Stakeholder Communication
- 141 Other
- 142 Independent Assurance Report
- 144 Glossary

147

## Financial Data/Corporate Data

- 148 Eleven-Year Financial Summary
- 150 Consolidated Statements of Financial Position
- 152 Consolidated Statements of Profit or Loss
- 153 Consolidated Statements of Comprehensive Income
- 154 Consolidated Statements of Changes in Equity
- 157 Consolidated Statements of Cash Flows
- 159 Notes to Consolidated Financial Statements
- 257 Independent Auditor's Report
- 258 Corporate Data and Investor Information

### Editorial Policy

Since 2016, we have been publishing this integrated report so that all of our stakeholders, including customers, shareholders and investors, and local communities, can gain an even better understanding of our initiatives aimed at sustainable growth and maximization of corporate value, which is the goal of the SMM Group. In this Sumitomo Metal Mining Co., Ltd. Integrated Report 2019, the fourth publication of the integrated report, we newly reorganized the relationships among the risks and opportunities surrounding the Group and its businesses, our competitiveness and the value we provide, and our business models and strategies.

In this report, CBNC and THPAL are acronyms for Coral Bay Nickel Corporation and Taganito HPAL Nickel Corporation, respectively. Also, unless otherwise stated, the term "ton" refers to a metric ton.

### Referenced Guidelines and Assurance

In editing this report, we referenced the International Integrated Reporting Framework of the International Integrated Reporting Council (IIRC), and the Guidance for Collaborative Value Creation of the Ministry of Economy, Trade and Industry. For information on sustainability, we have complied with the Core option of the Global Reporting Initiative's<sup>1</sup> Sustainability Reporting Standards, and the Company's self-declaration and performance data have received independent assurance.

1. Global Reporting Initiative (GRI): An organization established with the purpose of creating and promoting international guidelines for sustainability reports. An index for GRI contents is on our website: <http://www.smm.co.jp/E/>

### Boundary of the Report

Sumitomo Metal Mining Co., Ltd. (SMM)

The Sumitomo Metal Mining Group (SMM and consolidated subsidiaries)

#### Economic Topics

SMM, consolidated subsidiaries and equity-method affiliates

#### Environmental Topics

SMM and consolidated subsidiaries (31 companies)

The boundary of the report is stated on p. 14–15. Companies marked with an asterisk (\*) and Sumitomo Metal Mining Pogo LLC, which we sold in September 2018, are included in the boundary of the report.

#### Social Topics

SMM and consolidated subsidiaries

### Publication Date

November 2019

Next scheduled publication: November 2020  
(Previous publication: November 2018)

### Period Covered

(Some activities before or after the following periods have also been included)

Japan: April 1, 2018–March 31, 2019

Overseas: January 1, 2018–December 31, 2018

### Referenced Guidelines

GRI's Sustainability Reporting Standards

IIRC's International Integrated Reporting Framework

Ministry of Economy, Trade and Industry's Environmental Reporting

Guidelines (Fiscal Year 2018 Version)

Guidance for Collaborative Value Creation



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### Disclaimer

The forward-looking statements in this integrated report, including business result forecasts, are based on information available to the Company and on certain assumptions deemed to be reasonable as of the date of release of this report. Actual business results may differ substantially due to a number of factors.

# The Global Non-Ferrous Metal Industry and the SMM Group

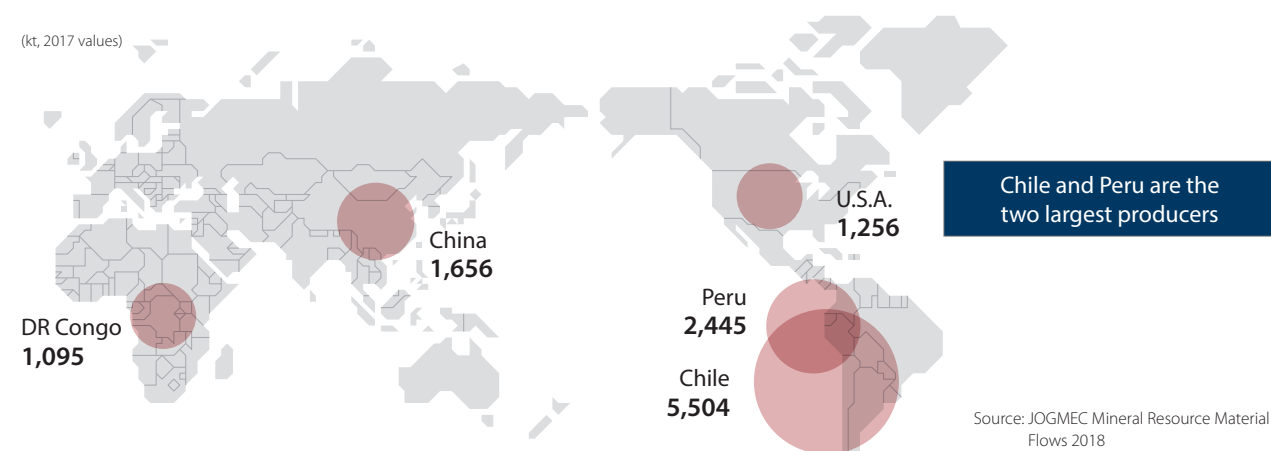
## ■ The Business Environment Surrounding Copper

Copper is thought to be the first metal used in human history. It offers high heat and electrical conductivity, is relatively inexpensive, and has superior workability. This has resulted in it becoming an indispensable base metal for electrical wiring and copper alloy fabricated products in a wide range of industries.

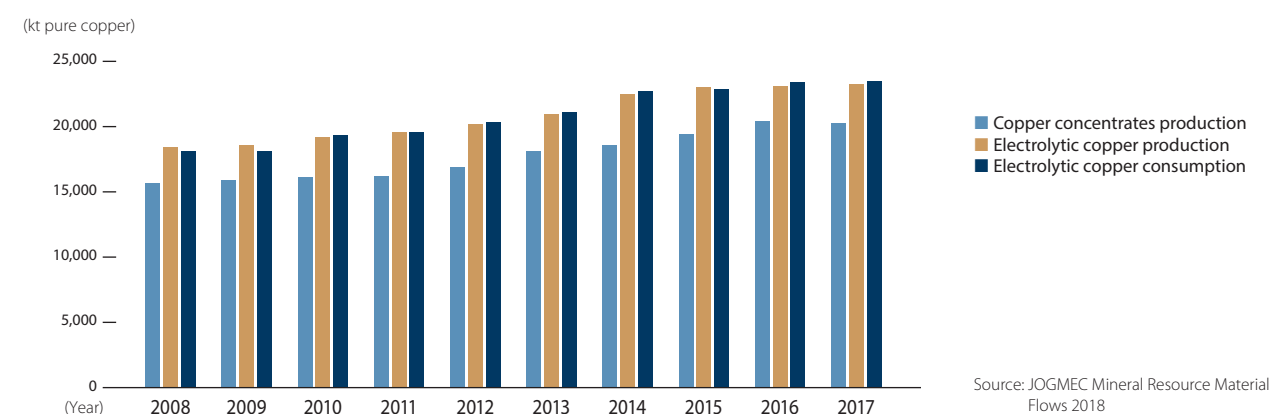
Chile and Peru are the world's two largest copper ore producing countries, followed by China and the U.S.A.

Copper is an indispensable base metal in a wide range of industries, particularly for infrastructure such as electrical wiring and copper alloy fabricated products, and China accounts for about half of global copper demand. Going forward, there is expected to be firm increases in demand along with global economic development. However, on the supply side, with development moving forward on the world's superior mines, the development of new sites will unavoidably occur in increasingly remote locations or higher elevations and with increasingly lower grade ore, making it more difficult. It is thought that this will result in the continuation of the current tight situation, including for recycled products. As a result of the factors described above, the current tight copper supply and demand circumstances are expected to continue.

### ■ World's Largest Copper Ore Producing Countries

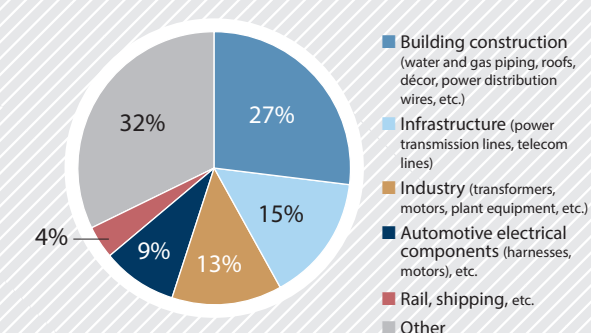


### ■ Global Copper Supply and Demand

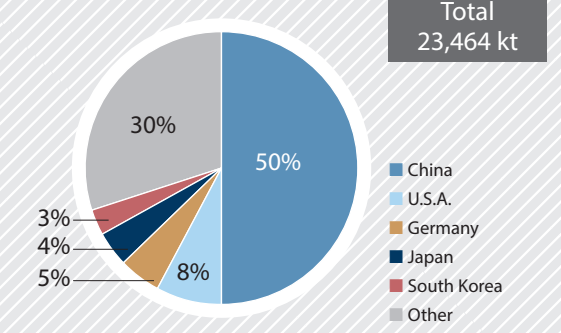


### Statistical Data Regarding Copper

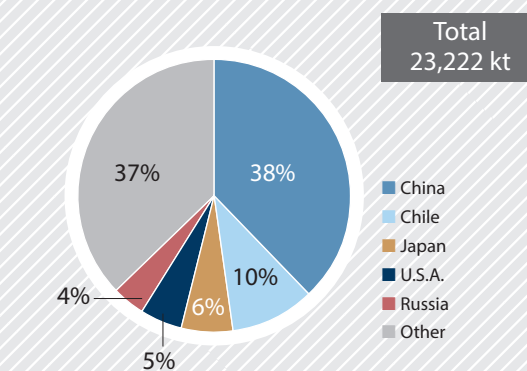
#### ■ Copper End-Use (2018 results)



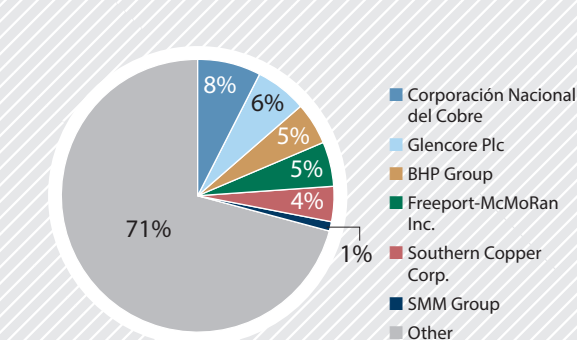
#### ■ Copper Metal Consumption by Country/Region (2017 results)



#### ■ Copper Metal Production by Country (2017 results)

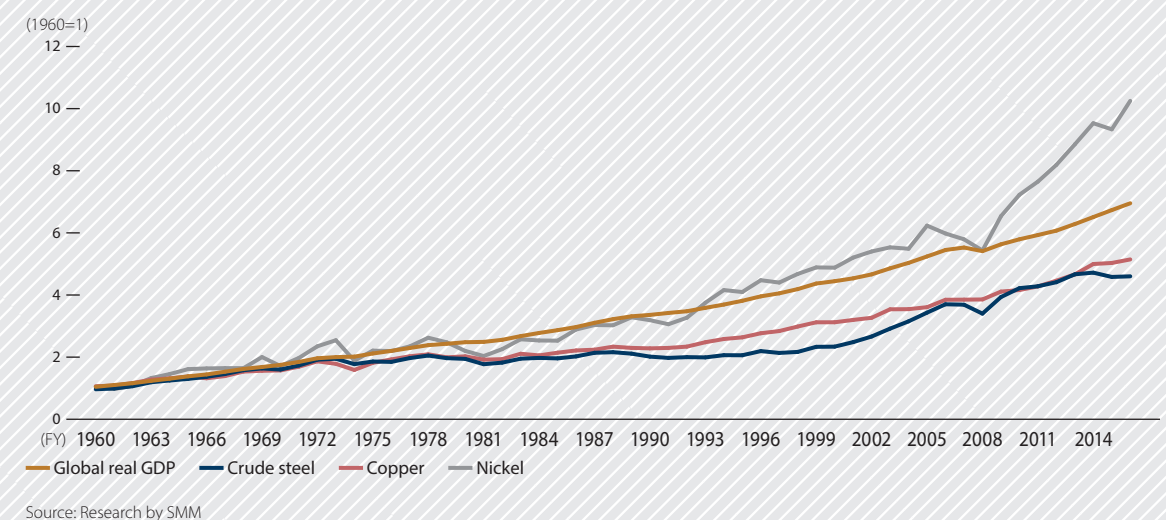


#### ■ Global Copper Interest Production (2018 results)



The size of the global copper market is about 24,000 kt  
The SMM Group ranks 20th in the world for global copper interest production (FY2018: 240 kt)

#### ■ Global Resource Demand Trends



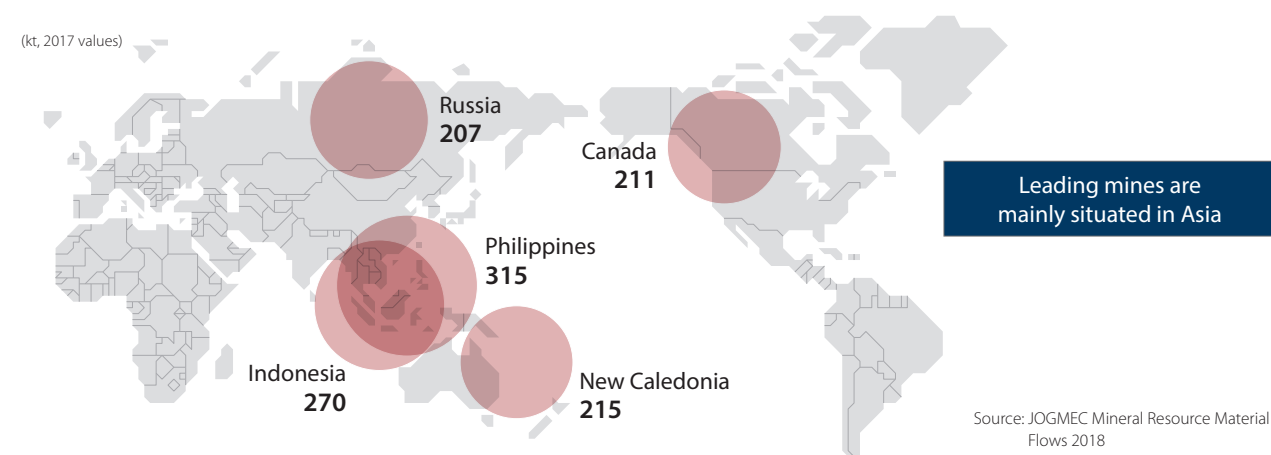
## The Global Non-Ferrous Metal Industry and the SMM Group

### ■ The Business Environment Surrounding Nickel

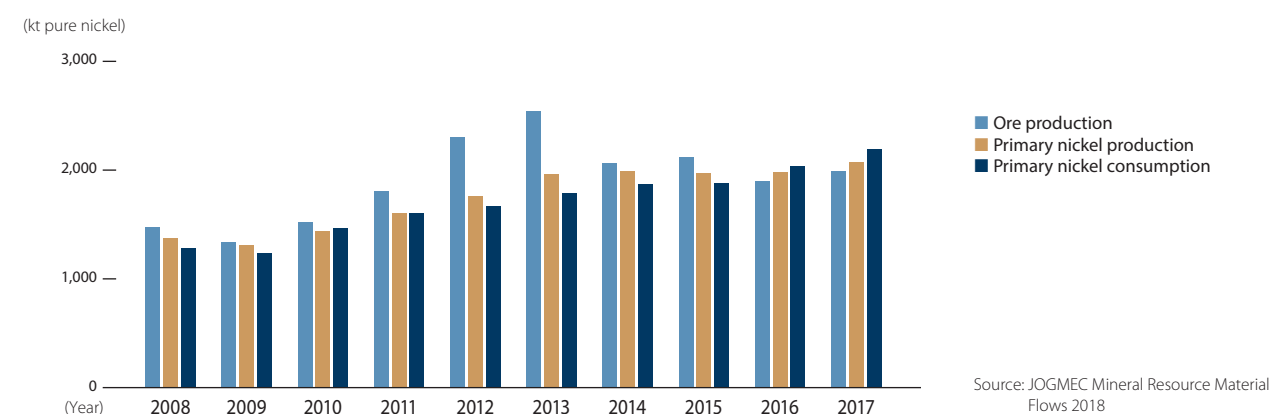
The main end-use of nickel is in stainless steel and a certain amount of increase in demand is expected. In addition to this, the flow toward EV in the automotive sector has accelerated globally in recent years and an increase in demand for nickel for use in cathode materials for lithium-ion secondary batteries is expected to accompany this.

The Philippines and Indonesia are the world's two largest nickel ore producing countries. The end-use of about 70% of all nickel is in stainless steel and, like copper, China accounts for about half of global demand. In recent years, the growth in demand for nickel has been increasing at a much greater rate than growth in demand for copper and going forward, an increase in demand for use in cathode materials for lithium-ion secondary batteries is expected to accompany the spread of EVs. However, on the supply side, although the supply of products that are not of particularly high grade – so-called “class 2” nickel grades, such as ferronickel and nickel pig iron (NPI), which are mainly used as raw materials for stainless steel production – will be brisk due to development by Chinese companies in countries such as Indonesia, for products in the “class 1” high-grade nickel category used as raw materials in special steels and EVs, there is a limit to the specific new development that can be carried out and a situation in which demand exceeds supply is expected to continue.

### ■ World's Largest Nickel Ore Producing Countries

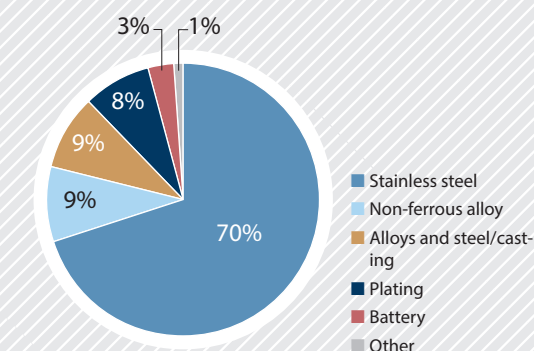


### ■ Global Nickel Supply and Demand

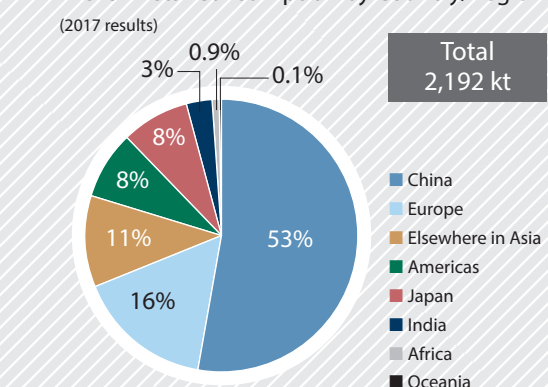


### Statistical Data Regarding Nickel

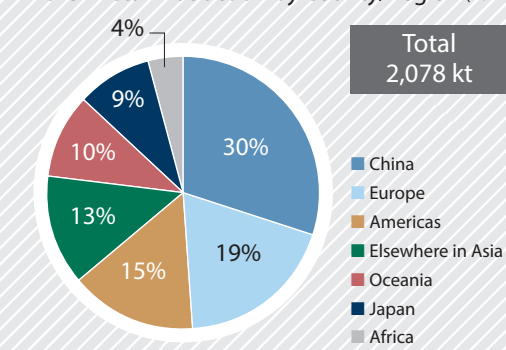
#### ■ Nickel End-Use



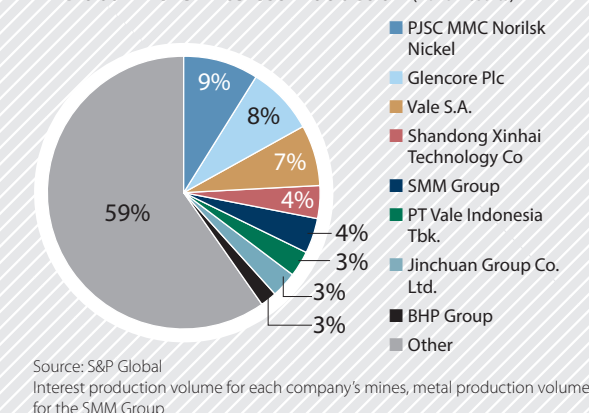
#### ■ Nickel Metal Consumption by Country/Region



#### ■ Nickel Metal Production by Country/Region (2017 Results)

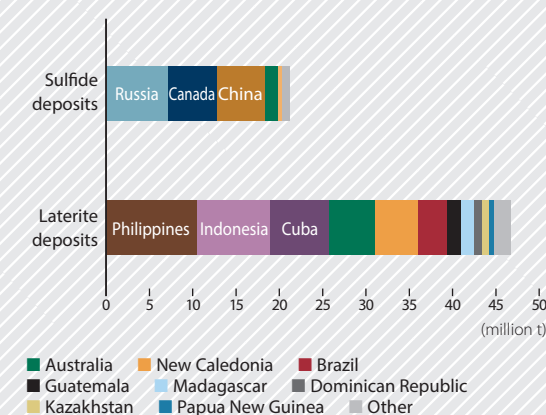


#### ■ Global Nickel Interest Production (2018 Results)

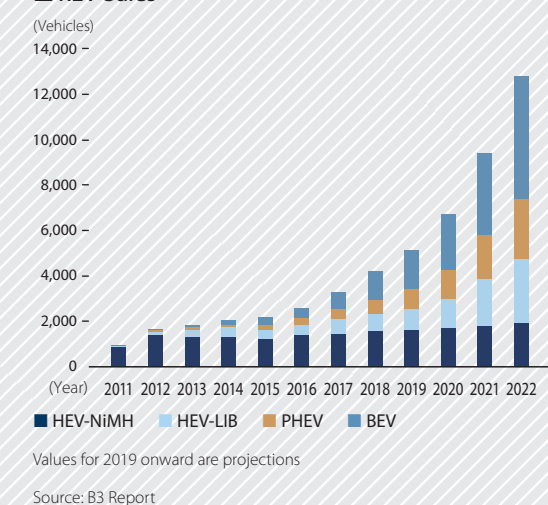


SMM Group is one of the top five producers of nickel as a metal in the world by volume (FY2018: 85 kt)

#### ■ Nickel in Reserves



#### ■ xEV Sales





## The SMM Group's Creation of Value

### Tackling Social Issues, Maximizing Corporate Value

The SMM Group is contributing to solving social issues and realizing a sustainable society by providing a stable supply of basic materials and highly advanced materials through collaboration among our three businesses of Mineral Resources, Smelting & Refining, and Materials. On the other hand, the SMM Group's business, which includes mine development and non-ferrous metal smelting and refining, puts a considerable burden on the earth's environment. In order to realize the "sustainable co-existence with the global environment" stated in our corporate philosophy, we will strive to contribute to global environmental preservation and local communities in every way possible to achieve value creation. Furthermore, in order to steadily implement our growth strategy, we must further strengthen our business base, including harmonious and mutually beneficial relationships with local communities, manufacturing capabilities, and good relationships between labor and management. Under our new Long-Term Vision, we will continuously tackle social issues and maximize corporate value while working toward solutions for these.

#### Awareness of Business Environment and Social Issues

##### ■ Rising awareness regarding the formation of a sustainable society

Global environmental problems, increasingly severe accidents and disasters

##### ■ Changes in the social and business environments are accelerating

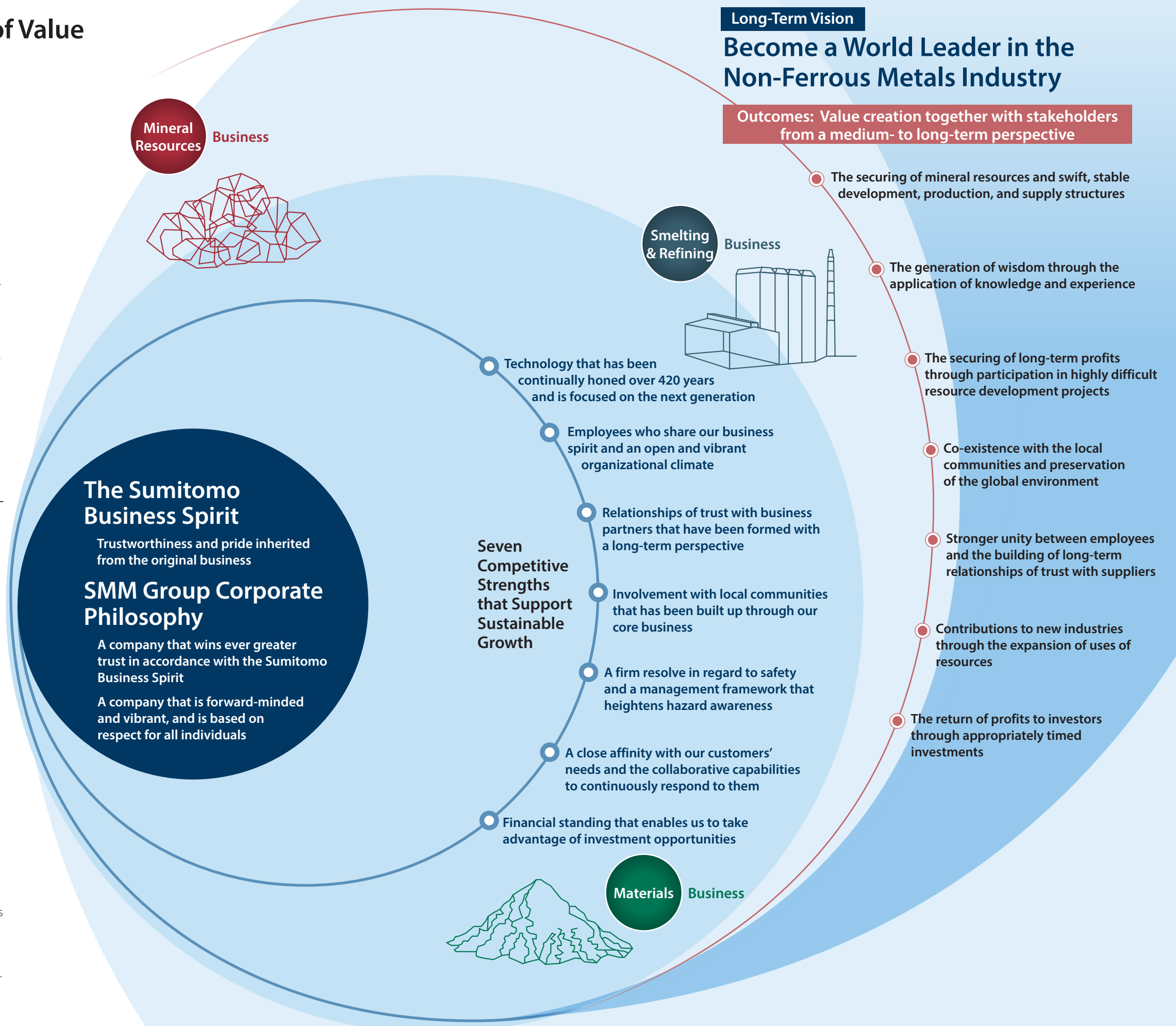
Responding to globalization, enhancing and improving site management capability (production capabilities), metal price and exchange rate fluctuations, commodification of technology, resource depletion and growing resource nationalism

##### ■ Development and making the most of human resources and respect for human rights

Working style reform, revisions to human resources systems, revisions to recruitment strategy, prevention of human rights infringements

##### ■ Mutual understanding with stakeholders

Dialogue with employees, local communities, civil society organization, shareholders, and investors



# Seven Competitive Capabilities Cultivated Over 420 Years of History

Among the management assets possessed by the SMM Group, which inherited the copper smelting business that was the original business of the Sumitomo Group, are seven competitive capabilities that have been cultivated over a history going back more than 420 years. These assets form the base of the Group's growth and they are built upon the Sumitomo Business Spirit. The application of this business spirit has enabled the Group to overcome every difficulty so far. Now we are responding flexibly to the changes of the times through collaboration among our three businesses of mineral resources, smelting and refining, and materials. All employees are united upon the foundation provided by our business spirit and we are aiming to become a world leader in the non-ferrous metals industry.



## Technology that has been continually honed over 420 years and is focused on the next generation

The origins of the SMM Group's technologies are found in the *Nanban-buki* method started in Kyoto by Soga Riemon in around 1600. Nowadays, copper continues to be an essential metal and the SMM Group's technology and expertise for dealing with copper have been honed continuously and uninterruptedly over 420 years. Our advanced technological capabilities include exploration, mining, and mineral processing technology for taking on the challenges presented by difficult-to-develop new deposits and sea-floor resource development, advanced smelting and refining technology such as HPAL, the world's first method for converting low-grade oxide ore into a nickel resource, and crystal growth and processing technology in the materials field. Against this technological background, we have built a business model in which our three businesses collaborate through a fully integrated supply chain. We are the only company in Japan to produce electrolytic nickel and electrolytic cobalt and have grown to being close to the world's fifth largest producer of nickel by volume. We are also advancing technological development such as the production of automotive secondary batteries and "battery to battery" recycling, and we are focused on creating new technologies for new industries. In recent years, we have been actively building partnerships with academic institutions and every day we are engaged in technological innovation focused on the society of 2050.



## Employees who share our business spirit and an open and vibrant organizational climate

SMM Group employees take pride in our long history of procuring materials from all over the world that provide the platform for business development and supplying these to resource-scarce Japan. By training and cultivating human resources who can take on this important business, act with integrity, and take on individual tasks with a sense of responsibility, we have been able to inherit technology and personal connections over generations. At the heart of this is the desire to raise human resources who can be entrusted with 420 years of Sumitomo DNA. Training for new employees always involves a climb up to the former Besshi Copper Mine where the core of the Sumitomo's development took place, and management training and the like sometimes involves visiting sites where Sumitomo's various businesses were developed and where, through periods of often difficult management, we gradually fostered our traditional business spirit as represented by the phrase, "Benefit yourself and others, for they are the same" (our business must benefit society even as it benefits Sumitomo itself). Recently, we have adapted to changes in the speed of the development environment to actively recruit mid-career employees who can hit the ground running and we are ensuring diversity in our human resources in order to reenergize the organization and realize further growth.



## Relationships of trust with business partners that have been formed with a long-term perspective

In each area of Mineral Resources, Smelting & Refining, and Materials, the SMM Group is unable to operate completely by ourselves. In order to ensure the success of projects that span several decades, it is essential to gradually build trust with partners. In the long-term, there are many cases where making SMM the "choice if you want to work together" has led to new business opportunities and there are businesses that have been started through connections made by employees who had already retired. Although the excellent mine interests we possess are one of the Group's strengths, the first step toward this was the acquisition of the Bethlehem Mine around 60 years ago. Nowadays, we can acquire these interests not only because of the funds generated by Group assets such as the Hishikari Mine, but also because of the relationships of trust we have with our partners. The SMM Group has cultivated expertise through Niihama and the Besshi Copper Mine and the superior process engineering abilities of our engineers have resulted in continuous success after success. Unlike general trading companies, we do not just hold overseas interests. The SMM Group has the technology to implement processes all the way to smelting and refining and our model creates partnerships with business contacts.



## Involvement with local communities that has been built up through our core business

The SMM Group cannot continue to operate our businesses without buy-in from local communities. In cases where a business can only be developed in a certain location, we put extra care into our relationships with the local community. Based on the spirit of "repaying for what was reaped from the land" (remember debts of gratitude, be thankful for the blessings of nature and achievements of ancestors), the Group's growth continues with the approach of our predecessors for making people happy, including the families of employees, as well as developing together with society. Since the time of the Besshi Copper Mine, we have worked to realize harmonious and mutually beneficial relationships with local communities through projects that contribute to society, such as reforestation. Since olden times, mine development has started with the creation of a town through the establishment of schools, hospitals and the like. Sumitomo founded an elementary school in Niihama City 120 years ago and in order to share with future generations the philosophy that a company cannot continue to prosper unless it prospers together with employees and the local community, we built two bridges on Niihama's Showa-dori street, *Kyozon-bashi* (bridge of co-existence) and *Kyoei-bashi* (bridge of mutual prosperity), which still stand today. In addition to Japan, we are also contributing to local communities overseas through scholarship programs, the operation of hospitals and schools, road construction, and other initiatives.



## A firm resolve in regard to safety and a management framework that heightens hazard awareness

In both mine development and smelting and refining business, unless the correct management framework is established, there is the risk of serious accidents occurring that cost lives. In the SMM Group, each business division is responsible for this management through line management, and our staff divisions provide cross-organizational support for this line management. Staff members patrol workplaces to discover issues, and support for setting up systems for avoiding accidents is leading to the creation of workplaces that have a sense of alertness, ensuring high safety standards. Even small incidents that are not accompanied by lost work time are recorded in the total number of accidents, and we strive to minimize risk, including accidents at this level. Under the awareness that injuries should definitely not be allowed to happen, we continuously work to increase safety by enhancing facilities to prevent human error and we implement ongoing education and training such as hazard simulation training at in-house facilities in order to ensure hazard awareness levels do not fall. At workplaces, experienced staff take care and follow up on other workers, which together with efforts to strengthen internal management and communication between employees, ensures that unsafe acts are not overlooked. Also, we believe that skill is important in regard to safety activities, so we offer a wide variety of training for improving skills.



## A close affinity with our customers' needs and the collaborative capabilities to continuously respond to them

The automotive and information and communication industries, the primary supply destinations for materials fields showing remarkable growth, are both notable for experiencing rapid and significant change, including globalization. This change requires a timely and high-quality response from material suppliers. The SMM Group is leveraging our strength of possessing a full knowledge of not only materials, but also the characteristics of their component materials, in order to connect the various technologies we have developed to date with the innovation sought by the customer. We possess technology for deriving nickel from low-grade oxide ore and a framework that enables us to secure materials stably, and we boast the top share of the global market of cathode materials for lithium-ion batteries used by major electric vehicle manufacturers. On the other hand, we recognize the importance of handling customer demands steadily and sincerely in a way that wins trust. Although technology evolves on a daily basis and the materials needed change, we will make energy and the environment, and information and communications our domain, and continually create new products.



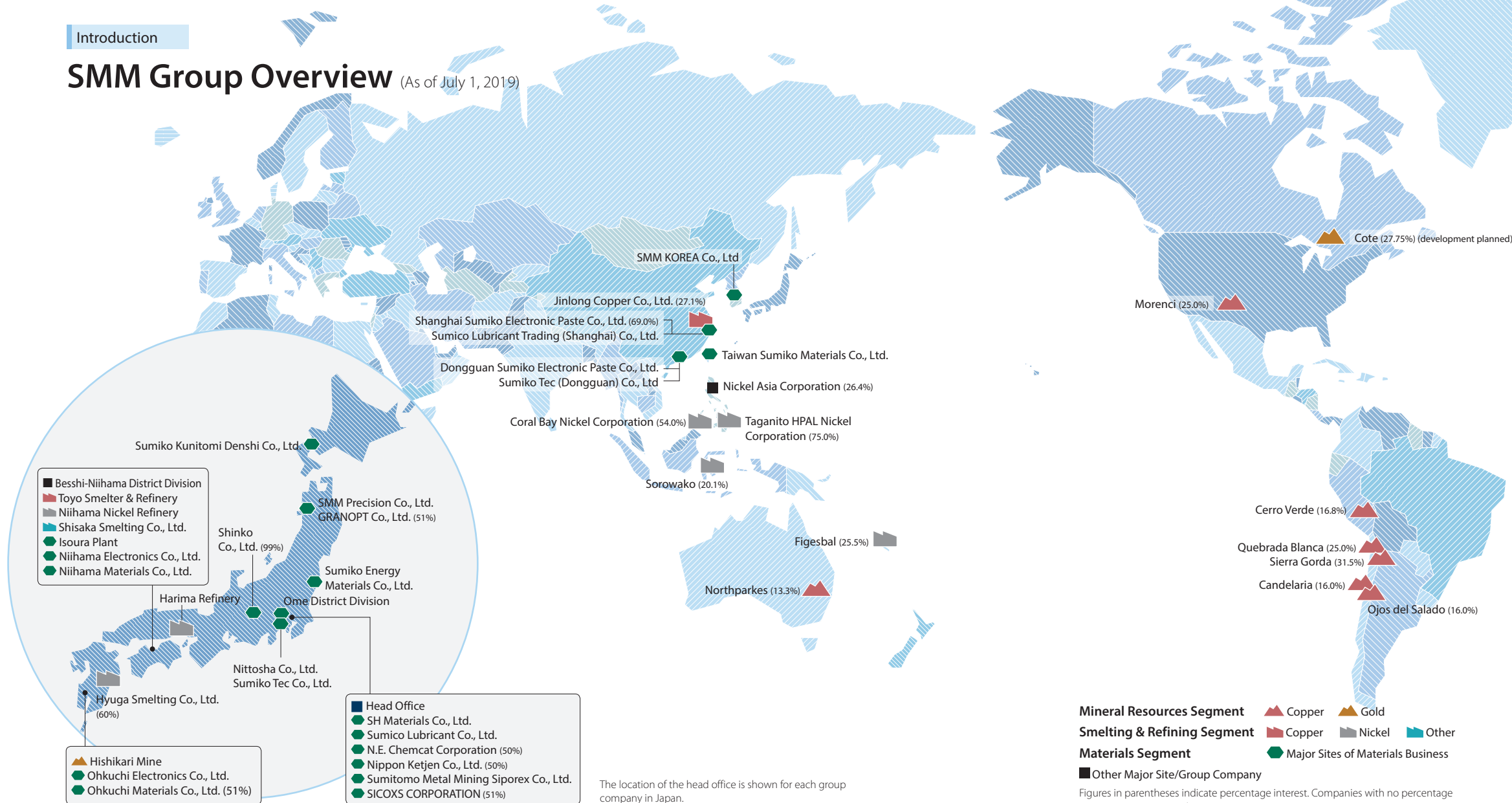
## Financial standing that enables us to take advantage of investment opportunities

To be a successful global competitor, it is crucial to have sufficient financial power in order to acquire superior interests. In order to realize sustainable growth, from 2000 onward we set a course to return to core business and with a firm conviction that mineral resources and smelting and refining are growth industries that will support global economic growth, we implemented a process of selection and concentration and invested overseas. We focus on keeping initial investments as low as possible, carefully timing aggressive investment in accordance with growth strategies and defensive investment that strengthens our business base, building solid positions in drastically fluctuating markets, and concentrating limited management resources on core business. We are proud that by implementing high levels of investment while at the same time boosting the profitability of existing businesses, including the Materials Business, we have become a company that can generate a certain amount of profit, even when the market is sluggish. In fact, we possess the Hishikari Mine, which is the only gold mine in Japan that produces commercially on a large-scale, as well as multiple excellent mine interests, such as an interest in the Morenci Copper Mine, one of the world's top-class producers of copper. We aim to maintain a sound financial standing that befits our status as one of the major global non-ferrous metal companies and a partner to major resources companies and maximize corporate value.



# SMM Group Overview

(As of July 1, 2019)



## Corporate Data

Company name	Sumitomo Metal Mining Co., Ltd.
President	Akira Nozaki
Founded	1590
Incorporated	1950
Capital	¥93.2 billion
Listing	Tokyo Stock Exchange
No. of subsidiaries (consolidated)	61 (including the money held in trust which is deemed to be a consolidated company)
No. of equity-method affiliates	16
Net sales (consolidated)	¥912.2 billion (for the year ended March 31, 2019)
Profit before tax (consolidated)	¥89.4 billion (for the year ended March 31, 2019)

## Main Facilities

Head Office	11-3, Shimbashi 5-chome, Minato-ku, Tokyo (Shimbashi Sumitomo Building)
Main Branch	Osaka Branch
Branches	Nagoya Branch (Aichi Prefecture) Besshi-Niihama District Division (Ehime Prefecture)
Plants	Toyo Smelter & Refinery (Ehime Prefecture) Niihama Nickel Refinery (Ehime Prefecture) Harima Refinery (Hyogo Prefecture) Ome District Division (Tokyo) Isoura Plant (Ehime Prefecture)
Mine	Hishikari Mine (Kagoshima Prefecture)
Research centers	Niihama Research Laboratories (Ehime Prefecture) Battery Research Laboratories (Ehime Prefecture) Materials Laboratories (Tokyo) Ichikawa Research Center (Chiba Prefecture)

## Main Products

Mineral Resources Segment	Gold and silver ore, copper concentrates, copper, gold
Smelting and Refining Segment	Copper, gold, silver, electrolytic nickel, electrolytic cobalt, ferronickel, chemical products
Materials Segment	Battery materials, thick film materials, crystal materials, thin film materials, magnetic materials, package materials, oil refining catalysts, automotive catalysts, autoclaved lightweight concrete, lubricants

No. of countries and regions where business is conducted

15

◆ Consolidated subsidiaries ● Equity-method affiliates \* Included in the boundary of the environmental performance data

## Japan

### Sumitomo Metal Mining Co., Ltd.\*

#### Mineral Resources

- ◆ Sumiko Resources Exploration & Development Co., Ltd.
- ◆ Sumiko Solomon Exploration Co., Ltd.

#### Smelting & Refining

- Acids Co., Ltd.
- MS Zinc Co., Ltd.
- ◆ Shisaka Smelting Co., Ltd.\*
- ◆ Sumiko Logistics Co., Ltd.\*
- ◆ Taihei Metal Industry Co., Ltd.\*
- ◆ Hyuga Smelting Co., Ltd.\*
- Mitsui Sumitomo Metal Mining Brass & Copper Co., Ltd.

#### Materials

- ◆ SH Materials Co., Ltd.\*
- ◆ SMM Precision Co., Ltd.\*
- N.E. Chemcat Corporation
- ◆ Ohkuchi Electronics Co., Ltd.\*
- Ohkuchi Materials Co., Ltd.\*
- ◆ GRANOPT Co., Ltd.\*
- ◆ SICOXS CORPORATION
- ◆ Shinko Co., Ltd.\*
- ◆ Sumiko Energy Materials Co., Ltd.\*

- ◆ Sumiko Kunitomi Denshi Co., Ltd.\*
- ◆ Sumico Lubricant Co., Ltd.\*
- ◆ Sumiko Tec Co., Ltd.\*
- ◆ Sumitomo Metal Mining Siporex Co., Ltd.\*
- ◆ Niihama Electronics Co., Ltd.\*
- ◆ Niihama Materials Co., Ltd.\*
- ◆ Nittosha Co., Ltd.\*
- Nippon Ketjen Co., Ltd.\*

#### Other

- ◆ Igeta Heim Co., Ltd.\*
- ◆ JCO Co., Ltd.\*
- ◆ Sumiko Technical Service Co., Ltd.
- ◆ Sumiko Techno-Research Co., Ltd.\*
- ◆ Sumitomo Metal Mining Engineering Co., Ltd.\*
- ◆ Japan Irradiation Service Co., Ltd.\*

## Asia

#### Mineral Resources

- Cordillera Exploration Co., Inc. (Philippines)

#### Smelting & Refining

- Jinlong Copper Co., Ltd. (China)
- ◆ Sumitomo Metal Mining Management (Shanghai) Co., Ltd. (China)
- ◆ Sumitomo Metal Mining (Hong Kong) Co., Ltd. (China)

- ◆ Coral Bay Nickel Corporation (Philippines)\*
- Nickel Asia Corporation (Philippines)
- ◆ Taganito HPAL Nickel Corporation (Philippines)\*
- ◆ Sumitomo Metal Mining Philippine Holdings Corporation (Philippines)
- PT Vale Indonesia Tbk. (Indonesia)

#### Materials

- ◆ Dongguan Sumiko Electronic Paste Co., Ltd. (China)\*
- ◆ Shanghai Sumiko Electronic Paste Co., Ltd. (China)\*
- ◆ Sumico Lubricant Trading (Shanghai) Co., Ltd. (China)
- ◆ Sumiko Tec (Dongguan) Co., Ltd. (China)
- ◆ Taiwan Sumiko Materials Co., Ltd. (Taiwan)\*
- ◆ SMM KOREA Co., Ltd. (South Korea)
- ◆ Sumiko Tec (Thailand) Co., Ltd. (Thailand)

## North America

#### Mineral Resources

- ◆ SMM Candelaria Inc. (U.S.A.)
- ◆ SMM Exploration Corporation (U.S.A.)
- ◆ Sumitomo Metal Mining America Inc. (U.S.A.)
- ◆ Sumitomo Metal Mining Arizona Inc. (U.S.A.)
- ◆ SMM Morenci Inc. (U.S.A.)
- ◆ SMM Gold Cote Inc. (Canada)
- ◆ Sumitomo Metal Mining Canada Ltd. (Canada)
- ◆ SMM Resources Inc. (Canada)

## Other Regions

#### Mineral Resources

- Compania Contractual Minera Candelaria (Chile)
- Compania Contractual Minera Ojos Del Salado (Chile)
- ◆ Sumitomo Metal Mining Chile Ltda. (Chile)
- ◆ SMM Sierra Gorda Inversiones Ltda. (Chile)
- Sierra Gorda S.C.M. (Chile)
- ◆ SMM-SG Holding Inversiones Ltda. (Chile)
- ◆ SMMQB Holding SpA (Chile)
- ◆ SMM Quebrada Blanca SpA (Chile)
- Quebrada Blanca Holdings SpA (Chile)
- ◆ Sumitomo Metal Mining Peru S.A. (Peru)
- Sociedad Minera Cerro Verde S.A.A. (Peru)
- ◆ Sumitomo Metal Mining do Brasil Ltda. (Brazil)
- ◆ Sumitomo Metal Mining Oceania Pty. Ltd. (Australia)
- ◆ SMM Cerro Verde Netherlands B.V. (Netherlands)
- ◆ SMM CV Holding B.V. (Netherlands)

#### Smelting & Refining

- FIGESBAL (New Caledonia)

#### Other

- ◆ SMM Holland B.V. (Netherlands)



## Business Summary

**Mineral Resources Business**

The skills cultivated at the Besshi Copper Mine, which began operations in 1691, have been handed down in an unbroken line to our current Mineral Resources business, which is now global in scale.

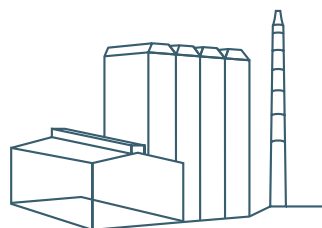
Although demand for non-ferrous metal resources continues to rise in accordance with the growth of global GDP, issues related to resource development, including a decrease in superior mines and rising resource nationalism, are becoming increasingly serious. Within this environment, relationships of trust built up over many years with major resource companies and partner companies are enabling the SMM Group to acquire new resource interests. The Group's business model ranges from resource procurement to highly advanced materials, a model that is rare throughout the world. The Mineral Resources business holds the most upstream position within this model and has the important role of continuously providing a stable supply of non-ferrous metal materials not only within the Group, but also to various industries in both Japan and overseas.

As natural resources will eventually become depleted, there is a need to continuously carry out the exploration of new mines and to acquire interests in superior mines. The Mineral Resources business is currently engaged in planning the development of the Quebrada Blanca Copper Mine, which is expected to make a huge contribution to realizing our Long-Term Vision, as well as advancing the Côté Gold Project and carrying out initiatives aimed at increasing the processing volume of the Sierra Gorda Copper Mine.

**Smelting & Refining Business**

Our smelting and refining business has its roots in Sumitomo's original business of copper smelting, which was started in Kyoto in 1590 under the name of Izumiya. At that time, copper smelting technology in Japan was still undeveloped, meaning that the copper exported overseas still contained silver impurities, reducing profits. Sumitomo developed the *Nanban-buki* smelting technique which separates copper from silver. This technique was shared widely within the industry, enabling Japan's copper production to make a huge leap forward in development. In modern times, we have responded to issues regarding the effective use of resources through our technology, including establishing the HPAL method, which enables the efficient recovery of nickel from low-grade ores that were previously discarded, and successfully realizing the world's first commercial production of nickel intermediates. The Smelting & Refining business smelts and refines resources procured from sources including the Mineral Resources business and foreign mining companies to convert them into metals such as copper, nickel and gold and then sell them. It fulfills a central role in the Group's business model and continuously supplies quality materials produced through cost-competitive smelting and refining processes to SMM's Materials business and various industries that support society.

Currently the Smelting & Refining business is honing a complex plan for realizing the Pomalaa Project, which would become the company's third HPAL plant. We are also strengthening management in order to increase manufacturing capabilities and will continue to fulfill our supply responsibilities to customers and the SMM Group's Materials business.

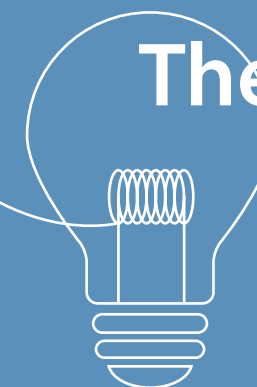
**Materials Business**

The Materials business was launched in 1960 to leverage the strengths of our Minerals and Smelting & Refining businesses.

The most important aspects of the Materials business are "seeds" and "needs." The SMM Group's technological "seeds" enable us to answer the needs of the market and customers. We consider our main strengths in regard to materials development to be our powder synthesis and surface treatment technology, particularly for metals, and our crystal growth and processing technology. These kinds of technologies are the backbone of our business and we are further strengthening initiatives in which our sales representatives communicate with customers to clarify their needs in order to guide development. Collaboration among our three businesses of Mineral Resources, Smelting & Refining, and Materials offers significant advantages including the sharing of market information and recognition of customer trends, and the ability to respond flexibly in terms of technology and quality. The Materials Business is working to collaborate closely within the company while also building relationships with the customers that are the supply destination of materials and watching trends to carefully time investments. On April 1, 2019, the Materials business established the Battery Materials Division with the aim of creating an organization that can respond swiftly and flexibly to the rapid expansion of the battery materials market, and the Advanced Materials Division as an organization for realizing sustainable growth in advanced materials fields, especially the energy and environment, and information fields.



# The SMM Group's Creation of Value



# Opportunities and Risks

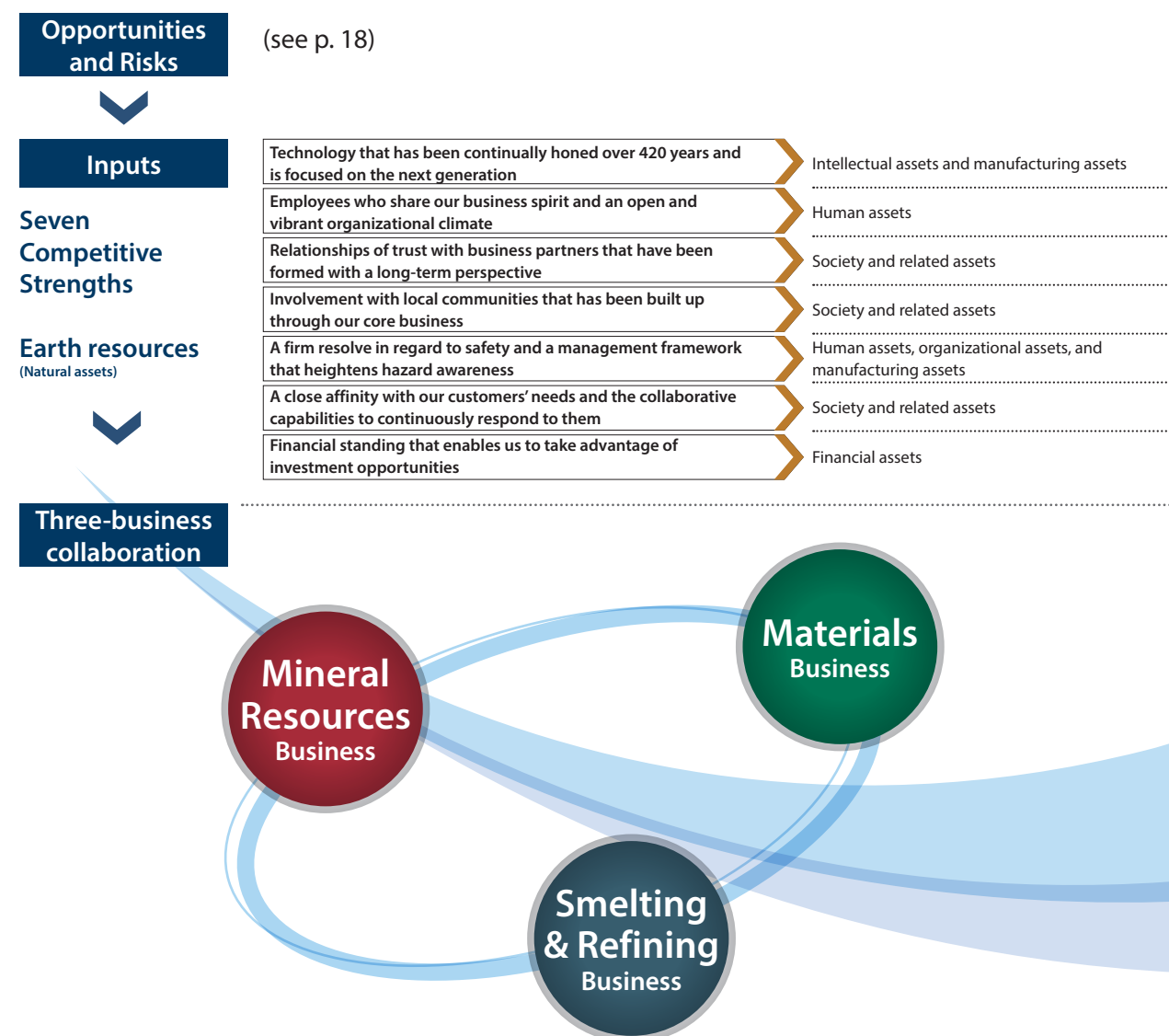
As the SMM Group advances value creation, it is unavoidable that our management will have to tackle opportunities and risks. We have established a medium- to long-term strategy based on our Seven Competitive Strengths and by working to maximize opportunities and reduce risks, we are balancing the maximizing of corporate value with disciplined management to contribute to realizing a sustainable society.

External Environment	Risks to the Group	Opportunities for the Group	Three Main Basic Strategies (see p. 45)	Strategies	Competitive Strengths
<b>1 Current situation and issues regarding governments and policy</b> <ul style="list-style-type: none"> <li>• Sharp rise in protectionism</li> <li>• Growing state capitalism</li> <li>• Stricter regulation accompanying environmental destruction</li> <li>• Heightening mineral resource nationalism</li> </ul>	<ul style="list-style-type: none"> <li>■ Fall in profits due to increased taxation</li> <li>■ Increase in the cost of investing in and operating mines and refineries</li> </ul>	<ul style="list-style-type: none"> <li>■ Procure stably from mine interests possessed</li> <li>■ Realize the advanced processing of local nickel ores through HPAL plants</li> </ul>	<b>1 Strengthen the growth foundation</b>	<ul style="list-style-type: none"> <li>• Leverage our extensive experience and knowledge of exploration and mine valuation to carry out selective investment that fully considers cost competitiveness and country risk</li> <li>• Avoid taxation risk through local smelting and refining using HPAL plants</li> </ul>	<ul style="list-style-type: none"> <li>• Technology that has been continually honed over 420 years and is focused on the next generation</li> <li>• Involvement with local communities that has been built up through our core business</li> <li>• Relationships of trust with business partners that have been formed with a long-term perspective</li> <li>• Financial standing that enables us to take advantage of investment opportunities</li> </ul>
<b>2 Current situation and issues regarding the business environment</b> <ul style="list-style-type: none"> <li>• Metal price and forex movement</li> <li>• Commodification of technology</li> <li>• Rising awareness regarding the forming of a sustainable society</li> </ul>	<ul style="list-style-type: none"> <li>■ Fall in profits</li> <li>■ Fall in price and decline in superiority of material products</li> <li>■ Decline in superiority of HPAL technology</li> <li>■ Rise in development and operation costs in response to the demands of society (carbon taxes, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>■ Rise in demand for nickel, cobalt, and copper accompanying growth in demand for electric vehicles</li> <li>■ Rise in demand for cathode materials accompanying growth in demand for electric vehicles</li> </ul>	<b>1 Strengthen the growth foundation</b> <b>2 Strengthen three-business collaboration</b> <b>3 Strengthen corporate functions</b>	<ul style="list-style-type: none"> <li>• Actively engage in measures to tackle climate change</li> <li>• Build a framework for sustainable new product creation</li> <li>• Strengthen cost competitiveness by turning by-products from HPAL plants into resources</li> <li>• Further strengthen collaboration between the three businesses</li> </ul>	<ul style="list-style-type: none"> <li>• Employees who share our business spirit and an open and vibrant organizational climate</li> <li>• Technology that has been continually honed over 420 years and is focused on the next generation</li> <li>• A close affinity with our customers' needs and the collaborative capabilities to continuously respond to them</li> <li>• Financial standing that enables us to take advantage of investment opportunities</li> </ul>
<b>3 Current situation and issues regarding resource development</b> <ul style="list-style-type: none"> <li>• Resource depletion</li> <li>• Growing seriousness of accidents and disasters</li> <li>• Growing awareness of human rights</li> </ul>	<ul style="list-style-type: none"> <li>■ Increase in the cost of investing in and operating mines</li> <li>■ Stronger competition for acquiring interests in superior mines</li> <li>■ Delay and/or withdraw from projects due to opposition from local communities</li> </ul>	<ul style="list-style-type: none"> <li>■ Collaborate with business partners building good relationships</li> <li>■ Increase in demand for the procurement of conflict-free resources</li> </ul>	<b>1 Strengthen the growth foundation</b> <b>2 Strengthen three-business collaboration</b>	<ul style="list-style-type: none"> <li>• Continue to build relationships with good partners</li> <li>• Build relationships of trust with local communities</li> <li>• Further strengthen collaboration between the three businesses</li> </ul>	<ul style="list-style-type: none"> <li>• Relationships of trust with business partners that have been formed with a long-term perspective</li> <li>• Involvement with local communities that has been built up through our core business</li> <li>• Technology that has been continually honed over 420 years and is focused on the next generation</li> <li>• Employees who share our business spirit and an open and vibrant organizational climate</li> </ul>
<b>4 Current situation and issues regarding work environments</b> <ul style="list-style-type: none"> <li>• Decreasing working-age population due to dwindling birth-rates and aging populations</li> </ul>	<ul style="list-style-type: none"> <li>■ Decrease production due to labor shortages</li> <li>■ Loss of opportunities to participate in new projects due to a lack of human assets</li> </ul>	<ul style="list-style-type: none"> <li>■ Evolve and develop digital technology and streamlining and labor-savings as it enhances infrastructure (IoT, AI, VR, 5G, etc.)</li> </ul>	<b>1 Strengthen the growth foundation</b> <b>3 Strengthen corporate functions</b>	<ul style="list-style-type: none"> <li>• Strengthen recruitment of new graduates</li> <li>• Ensure diversity by actively recruiting mid-career employees who can hit the ground running</li> <li>• Enhance training systems</li> <li>• Expand opportunities in the Materials business</li> </ul>	<ul style="list-style-type: none"> <li>• Technology that has been continually honed over 420 years and is focused on the next generation</li> <li>• Employees who share our business spirit and an open and vibrant organizational climate</li> <li>• A firm resolve in regard to safety and a management framework that heightens hazard awareness</li> </ul>

## Business Model

### Become a World Leader in the Non-Ferrous Metals Industry Through a Collaboration Model Between Mineral Resources, Smelting & Refining, and Materials

The SMM Group, which started as a copper smelting and refining business 420 years ago, has organically diversified to engage in mine development to acquire superior resources and a materials business that adds new value to metals produced by the company. As a result of selection and concentration based on our growth strategy, we designed a model in which our three businesses collaborate and today we have established a business model that cannot be easily emulated by other companies. In our 2018 3-Year Business Plan, we have further strengthened collaboration between the three businesses with a central role for electric vehicles.



#### Long-Term Vision

### Become a World Leader in the Non-Ferrous Metals Industry

Achieve sustainable growth and maximize corporate value

#### Outcomes

#### Solve social issues and contribute to realizing a sustainable society together with our partners

Providing value for customers and business partners leads to solutions for social issues and contributions to realizing a sustainable society.

- The securing of mineral resources and swift, stable development, production, and supply structures
- The generation of wisdom through the application of knowledge and experience
- The securing of long-term profits through participation in highly difficult resource development projects
- Co-existence with the local communities and preservation of the global environment
- Stronger unity between employees and the building of long-term relationships of trust with suppliers
- Contributions to new industries through the expansion of uses of resources
- The return of profits to investors through appropriately timed investments

#### Outputs

Nickel (Ni)	Annual production capacity of 150 kt
Copper (Cu)	Annual production interest of 300 kt
Gold (Au)	Participation in new mine operations through the acquisition of superior interests
Materials	Achievement of annual profit before tax of ¥25.0 billion through portfolio management
Profit	Annual profit ¥150.0 billion

#### Competitive Capabilities Generated by our Unique Three-Business Collaboration Model

- Greatly reduced procurement risk due to the sharing of controlled resource development and supply and demand trends
- Efficient collaboration such as new product development with materials business customers through the sharing of technological information concerning non-ferrous metals
- A stable supply of cathode materials for electric vehicle secondary batteries made possible by collaboration between the smelting & refining and materials businesses
- Optimized characteristics in the materials we supply realized through collaboration between the smelting & refining and materials businesses
- Advance knowledge and expansion of mining business opportunities through collaboration between the mineral resources and smelting & refining businesses
- Cutting-edge innovation through the collective wisdom possessed by human resources with diverse backgrounds



# Our Vision for 2020 and Material Issues

The social conditions surrounding the SMM Group and the demands of the times continue to change. In our Six CSR Areas of High Priority, the SMM Group has put forth its Vision for 2020 to establish the directions that we must pursue, and is assessing our achievement of these through KPIs. With the aim of sustainable co-existence with the global environment as advocated in our Corporate Philosophy, we will actively tackle these areas and achieve sustainable growth.

## The Background to Our Efforts

### Effective Use of Resources

The mining of mineral resources reduces and eventually depletes reserves. As the business of the SMM Group is built on the utilization of these valuable but limited natural resources, the effective use of resources is a key management issue for the sustainable development of our business. We are tackling the effective utilization of low-grade ores, hard-to-process ores, and other unused resources through technological development aimed at using by-products as resources. At the same time, from the perspective of resource recycling, we are advancing cost optimization while moving forward with effective recovery technologies.

### Environment Preservation

The risk of climate change has come to be recognized as a societal issue, and international countermeasures continue to move forward, as seen in the Paris Agreement. In addition, considerable thought is being given to the preservation of biodiversity and of local communities' living environments in areas undergoing development, as this preservation is very likely to be connected to people's lifestyles and interests. As the SMM Group handles a large number of chemical substances in our manufacturing activities and generates a relatively high amount of CO<sub>2</sub>, as well, it is vital that we engage in such environmentally considerate initiatives. We are working to reduce our impacts on the environment, with a focus on the prevention of environmental pollution.

### Contribution to Society and Local Communities

Improving local communities' living environments through contributions to society in places where we engage in business is connected to the sustainable development of our Group's business in those regions. By engaging actively in economic activities such as employing people from surrounding communities and procuring from local suppliers, as well as by improving infrastructure, we contribute to the invigoration of local economies. Furthermore, through contributions to society such as improvement of sanitation and operation of schools and hospitals, we are working to improve co-existence and relationships of trust with local communities.

### Respect for People and Human Rights

An environment in which diverse people can fully exert their respective capabilities and take action is vital to the sustainable growth of a company. A material issue for the SMM Group is the development of diverse human resources that share our goals and the Sumitomo Group Corporate Philosophy, which is based on The Sumitomo Business Spirit. Moreover, respecting the human rights of not only the SMM Group's employees but of all of our stakeholders is one of our social responsibilities and is vital to the smooth execution of projects and business. To prevent violations of human rights in the areas where we operate, we undertake all due considerations and exchange information with partner companies at mines where we hold interests.

### Occupational Health and Safety

Safe and sanitary workplaces lead to greater employee motivation, to relationships of trust with the company, and eventually to improved retention rates, the stable supply of products, greater production efficiency, cost reductions, and other positive effects. To achieve this, it is important that we move to strengthen essential measures for equipment safety, as well as improve employees' hazard awareness and ability to respond to hazards, under appropriate occupational health and safety management systems. We are taking action to do so, under this declaration in our CSR Policy: "According safety the highest priority, SMM shall provide safe, comfortable working environments and seek to eliminate occupational accidents."

### Stakeholder Communication

A company must identify the stakeholders that can be considered to bear impacts from the company's business, and must bear accountability for how it has met those expectations and concerns. Under the belief that transparent, timely, and appropriate disclosure of information is a responsibility of companies, the SMM Group works to impartially disclose information to related stakeholders. To meet their expectations, we seek to deepen mutual understanding through open communication.

## Vision for 2020—and the Six CSR Areas of High Priority—



### Effective Use of Resources

- A company that generates resources using innovative technology

#### KPI

- Develop and implement technologies to efficiently recover resources (low-grade/hard-to-process ores)
- Develop new and effective uses for by-products
- Promote recycling

▶ See p. 91 for details.



### Environment Preservation

- A company that uses advanced technologies to reduce environmental impacts and contributes to preserving the global environment

#### KPI

- Advance biodiversity preservation initiatives
- Maintain our record of zero significant environmental accidents

▶ See p. 92 for details.



### Contribution to Society and Local Communities

- A company that earns trust and contributes to regional development through our business and social contribution activities rooted in each region

#### KPI

- Communicate with local communities to recognize social issues in regions where we do business, and implement programs to support solutions to those issues.
- Provide support for the improvement of educational infrastructure and the maintenance and development of academic activities, culture, tradition, and art in countries where we do business.
- Provide support for recovery and reconstruction after large-scale disasters.
- Allocate financial resources for initiatives above.

▶ See p. 93 for details.



### Respect for People and Human Rights

- A company where diverse human resources exercise their ability sufficiently and take a vibrant and active part in each field  
A company that works with its stakeholders to strive for a society that actively respects human rights

#### KPI

- A company where employees can take a vibrant and active part
- Respect diversity
- Develop human resources
- Prevent major human rights infringements

▶ See p. 94 for details.



### Occupational Health and Safety

- A company that accords safety the highest priority and provides comfortable working environments

#### KPI

- Ensure safety
- Provide comfortable working environments

▶ See p. 96 for details.



### Stakeholder Communication

- A company that works to communicate transparently with all worldwide stakeholders to deepen mutual understanding

#### KPI

- Encourage deeper mutual understanding with employees
- Encourage mutual understanding with local communities and civil society organizations
- Encourage mutual understanding with shareholders and investors
- Encourage mutual understanding with other stakeholders

▶ See p. 97 for details.

# Material Issues for the SMM Group

The SMM Group has identified 26 material issues based on risks and opportunities in the practice and execution of our Long-Term Vision and our Vision for 2020. Below is an explanation of the background to these material issues, from four perspectives: management issues, risks, development and making the most of human resources, and the ESG initiatives that form the foundation for all of our activities.

## Global Management Issues

As the profitability of the SMM Group is greatly affected by metals prices and exchange rates, strengthening our cost competitiveness is vital. At the same time, resource development and the smelting and refining business cannot continue unless they are accepted by local communities. In order to bring projects to success over the long term, it is necessary that we not commit ourselves simply to success that lies immediately before us, but rather invest in communities and engage in local hiring and procurement, building relationships of trust with the local communities where we engage in business. Together with legal approvals to operate business, we consider the earning of a "social license to operate" based on relationships of trust with communities as a major premise of our business continuity. Addressing such issues will connect to the sustainable operation of business.

## Risks

Amid global recognition of the importance of measures to combat resource depletion and climate change risks, working toward environmental risk management and the reduction of environmental impacts in our corporate activities is an issue that we must actively undertake. In the business of the SMM Group, activities such as mine development and metal smelting and refining in plants have a great effect on local environments. We also handle many chemical substances in our business activities and release relatively large quantities of greenhouse gases. Accordingly, we must undertake environmental countermeasures from a long-term perspective. Moreover, in order to secure and stably supply limited global resources, it is vital that we advance the effective use and recycling of low-grade ores and other unused resources and by-products.

## Development and Making the Most of Human Resources

In order for a company to continue its corporate activities and grow its business sustainably, securing and developing human resources is indispensable. Taking into account the shrinking labor forces that accompany aging societies in advanced countries, there is a need for development of the human resources who will carry forward technology and personal networks, and for initiatives aimed at respect for diversity of employees' values and equalization of opportunities. By reconstructing a free and open organizational culture, the SMM Group seeks to prepare an environment in which employees can take individual action and exert their capabilities. What is first essential to achieving this is the assurance of safety. Under a powerful determination to keep any major accident from happening again, it is important that we always enhance our hazard awareness, actively invest in technologies and equipment for safety, and work to ensure occupational health and safety.

## ESG Initiatives that Form the Foundation for All of Our Activities

In the performance of business activities, companies exert impacts on their various stakeholders, and experience those impacts as well. For the survival and sustained growth of a company, it is important to understand diverse stakeholders' demands and changes in those demands through communication, and to build and maintain relationships of trust. The foundation for this is respect for human rights. Among vital issues in this area are survey activities aimed at avoiding involvement in human rights violations through the supply chain, and respect for the rights of not only the SMM Group's employees but also local communities and indigenous peoples who are affected by our business activities.

## The Twenty-Six Material Issues and the Purpose of Initiatives

The Six CSR Areas of High Priority	The Twenty-Six Material Issues	
Effective Use of Resources		<b>Effective Use of Resources</b> <span>Growth Potential</span> <ul style="list-style-type: none"><li>Utilizing unused resources (low-grade/hard-to-process ores)</li><li>Development of new applications and effective use of by-products</li><li>Exploration and development of new resources</li></ul>
		<b>Consideration of the Ecosystem and Preservation of Biodiversity</b> <span>Sustainability</span> <ul style="list-style-type: none"><li>Energy conservation at SMM business sites</li><li>Respect for nature preservation areas</li><li>Preservation and restoration of ecosystems in areas where we do business</li><li>Minimizing chemical substance emissions into the air, water, and soil (including in our portfolio companies and supply chain)</li><li>Reduction of release and transfer volume of chemical substances</li><li>Waste management</li></ul>
Environment Preservation		<b>Development and Stable Supply of Products with Low Environmental Impact</b> <span>Growth Potential</span> <ul style="list-style-type: none"><li>Development of products and technologies that contribute to reducing environmental impact</li></ul>
		<b>Contribution to Society and Local Communities</b> <span>Sustainability</span> <ul style="list-style-type: none"><li>Community investments</li><li>Local hiring</li><li>Local procurement</li><li>Utilization of partnerships</li><li>Management of closed mines</li><li>Recovery support for areas affected by devastating disasters</li></ul>
Contribution to Society and Local Communities		<b>Development of Human Resources and Making the Most of Diverse Human Resources</b> <span>Growth Potential</span> <ul style="list-style-type: none"><li>Human resources development</li><li>Diversity and equal opportunity</li></ul>
		<b>Occupational Health and Safety</b> <span>Sustainability</span> <ul style="list-style-type: none"><li>Ensure safety</li><li>Secure occupational health</li></ul>
Respect for People and Human Rights		<b>Communication and Respect for Human Rights</b> <span>Foundation</span> <ul style="list-style-type: none"><li>Protection of employees' human rights</li><li>Avoidance of contributing to human rights infringements with our supply chain</li><li>Respect for the rights of indigenous people</li><li>Engagement with local communities</li><li>Engagement with employees</li><li>Communication with shareholders and investors</li></ul>
		<b>Stakeholder Communication</b> <span>Foundation</span>

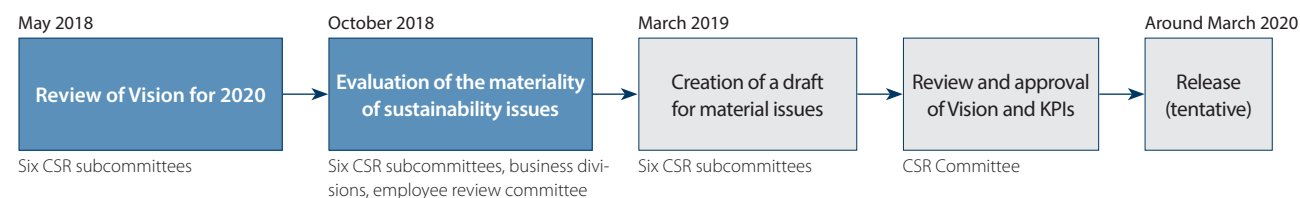
■ Material issues related to the sustainability of our business  
■ Material issues related to the growth of our business  
■ Material issues underlying all of our activities

# Toward the Formulation of the SMM Group's Vision for 2030

2030

Calling for sustainable co-existence with the global environment in our Corporate Philosophy, the SMM Group has worked to solve social issues through our business while communicating with diverse stakeholders. Our Vision for 2020, established as one indicator of directions for creating value, will shortly reach its final year. We are next setting a Vision with 2030 as its target year. Taking a sustainable society as our aim, during FY2019 we will formulate a new Vision that is linked to the SDGs that share the same target year.

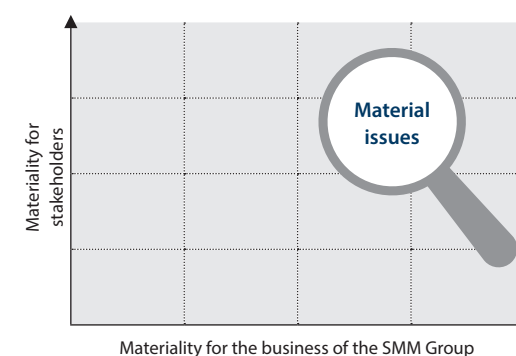
## ■ Formulation Process



## ■ Review of Vision for 2020 Evaluation of main initiatives and issues for the future (examples)

	Goals and KPIs	Evaluation	Reason for evaluation	Future issues
Effective Use of Resources	<b>Promote recycling</b> Improve our effective use of recycled resources	○	• In the development of the LIB recycling process, we developed a process for the generation, leaching, and refinement of battery raw materials from detoxified battery scrap, using a pyrometallurgical process and a hydrometallurgical process.	• With the rapid proliferation of electric vehicles (EVs), the early launch of battery recycling plants, and their expansion to meet this proliferation, are expected.
Environment Preservation	<b>Advance biodiversity preservation initiatives</b> Implement global warming counter-measures Achieve a 5-fold expansion of revenue (measured against FY2011) from materials for products contributing to a low carbon society	◎	• Products with low carbon impact (battery materials (for EV batteries), ink materials (for infrared absorbing films for buildings and automobiles), and lead frame materials (for LED substrates)) continue to grow steadily, with sales in FY2017 reaching 6.04 times sales in FY2011.	• Development of solid-state batteries and other materials for new batteries, securing of raw materials, expansion of production and supply of battery materials through recycling, etc.
Contribution to Local Society and Local Communities	<b>Communicate with local communities to recognize social issues in regions where we do business, and implement programs to support solutions to those issues</b>	○	• In activities to contribute to society, Coral Bay Nickel Corporation and Taganito HPAL Nickel Corporation communicate with local government bodies and communities, and conduct activities that range from improvement of social infrastructure such as education and medicine to agriculture and other projects involved with people's livelihoods.	• We must take further steps toward employees' participation in volunteer activities, toward dialog and collaboration with NPOs and NGOs engaged in social issues, etc.
Respect for People and Human Rights	<b>Prevent major human rights infringements</b> Implement regular human rights due diligence (human rights DD) in three categories (employees, supply chain, local communities): once every 3 years	○	• With regard to employees, we surveyed the human rights support structure of all SMM Group sites through questionnaires. • With regard to local residents, we performed a test survey in the Hishikari District (FY2017). • With regard to the supply chain, we conducted hearings with four companies every year.	• We must move forward in creating mechanisms for human rights due diligence involving employees. • Regarding local communities, we must further move forward in considering the implementation of human rights due diligence in the regions of our overseas sites. • We must move ahead in addressing supply chains not only in Japan but also overseas.
Occupational Health and Safety	<b>Ensure safety</b>	X	• The number of accidents in recent years is about 14 (with one fatal accident in 2017). • Reduction of risks on site and reform of safety consciousness in top management at sites are both progressing, but we have not deterred accidents that are caused primarily by unsafe behavior.	• While engaging in communication with workers, top management and managing supervisors must assess and improve work sites based on "the three realities principle (real places, real facts, real things)," and must advance the creation of workplaces where activities follow procedures that fully take safety into consideration.
Stakeholder Communication	<b>Encourage mutual understanding with shareholders and investors</b> Publish integrated reports and improve their content	◎	• Since 2015, we have made preparations for the integration of related departments, and in October 2016 published our first integrated report on schedule. Incorporating revisions based on opinions received inside and outside the company, the FY2017 edition has received a degree of acclaim, including commendations from outside the company.	• The information disclosure demands on integrated reports, such as information on ESG investing and connections to the SDGs, are becoming more sophisticated and wide-ranging. We will strengthen our editing structure and polish the content of our reports.

## ■ Results of Evaluation of the Materiality of Sustainability Issues



### Supplementary information

The term "sustainability issues" refers to the goals and targets of the SDGs and the GRI Standards, the industry rules and international norms of the ICMM and other groups, conditions in the year 2030 as predicted by bodies such as the OECD and IEA, and social issues organized in the reports of leading companies, especially Japanese and foreign companies in our industry.

The six CSR subcommittees evaluated materiality for stakeholders on the basis of the demands and expectations of stakeholders.

Our business divisions evaluated materiality for the SMM Group's business on the basis of impacts on our business.

## ■ Engagement with Experts (January 2019)

In formulating our Vision for 2030, based on our evaluation of the materiality of sustainability issues we held discussions and exchanged ideas with three experts concerning their evaluations of and expectations toward the SMM Group's initiatives.



**Mizue Unno** Representative Director, So-Tech Consulting Inc.

- Sustainability issues have now become business issues. Investors view sustainability issues as opportunities and risks for businesses.
- For the Mineral Resources business and Smelting & Refining business, gaining the trust of society has a higher importance than in other industries. SMM should consider how to better communicate the connections between its business and society.
- Just as Toyota is boldly changing into a "mobility company," SMM should also include innovation in its considerations. Among major resource companies overseas are those that have expressed visions with a change of business model in mind. Moreover, even if SMM takes its present condition as the starting point, in constructing its Vision the Group should perhaps develop an awareness that it cannot continue doing things in the same way that it has.
- "Partnership" is one of the goals of the SDGs, and the idea of "collective impact" exists as well. In its considerations, SMM should include cooperating with other organizations to carry out in what it cannot do on its own.



**Kaori Kuroda** Advisor, CSO Network Japan

- An "outside-in approach" is important. Thinking through the Vision, finding gaps with present conditions (i.e., issues), and considering measures should facilitate the birth of innovation. Another technique is to think through the steps of "output" for the sake of "outcomes," and initiatives to achieve this. SMM is already undertaking various forms of innovation, but does not seem to be successfully publicizing this.
- "Human rights due diligence (DD)" was a key word at the 2018 United Nations Forum on Business and Human Rights. In the business of the SMM Group, it is important to reconstruct and deepen mechanisms for human rights DD, to determine what sort of human rights violation risks are present.
- Regarding the human rights of local communities and indigenous peoples, and human rights in the supply chain, SMM should separately organize and consider these matters.



**Hidemi Tomita** Director, Lloyd's Register Japan K.K.

- Should the Vision address the year 2030 (10 years from now)? That year may be set as a milestone, but I understand that the resource business is a long, sustained one, and I feel that it would be ideal to set the Vision accordingly.
- As the "world leader in the non-ferrous metals industry" put forth in SMM's Long-Term Vision, I have expectations for a more positive Vision. Why not explicitly point to leveraging the SMM Group's strength in technology for making use of yet-unused resources? For the Mineral Resources business and Smelting & Refining business, thinking of safety as the top priority seems appropriate.
- "Business" and "sustainability" have been compared with a medical check-up. The idea is that financials are visible numbers for height and weight, non-financials are like the results of a blood test, and the results determine the health (quality) of the body. I suggest that the SMM Group consider what sort of vision to put forth for quality, not only quantity.



### We held employee review committee meetings for our Vision (July to September 2018)

We conducted Vision review committee meetings with participation by 21 young management track employees and 20 Besshi district plant leader employees. The management track employees offered opinions on evaluation systems, business activities, the appeal of the SMM Group's initiatives, and other topics. The plant leader employees reviewed the initiatives on health and safety and environmental preservation related to Vision for 2020, and exchanged ideas from workplace-based perspectives. The opinions of the committee are being incorporated into the process of formulating Vision for 2030, including use as reference in evaluating the materiality of sustainability issues.



## The SDGs and the SMM Group

How can the SMM Group contribute to a sustainable society, and a society in which no one is left behind?  
Drawing material issues that involve both our stakeholders and our Group from the SDGs, we are considering our SMM Group Vision for 2030.

## What the SDGs Mean to the SMM Group

Adopted by the United Nations in 2015 with 2030 as its target year, the Sustainable Development Goals (SDGs) address a wide range of issues involving economies, societies, and the environment, with an aim of achieving a society in which no one is left behind.

The principle of sustainable co-existence with the global environment is shared by both the SDGs and the SMM Group Corporate Philosophy. In order for our Mineral Resources business, one of the core businesses of the SMM Group, to secure the mineral resources unevenly distributed in certain regions around the world, it is necessary that we continue business in those regions. From long ago in the Meiji era (in the 1900s), the SMM Group has made the building of sustained relationships with local communities a major premise of our business, as seen in reforestation work at the Besshi Copper Mine.

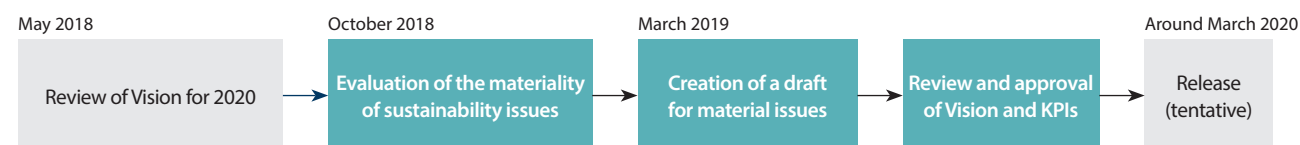
Regarding the SDGs that are so highly attuned to our Group's philosophy, in FY2018 we worked to enable learning and understanding of the SDGs by our officers and employees, through in-house lectures by experts, special features in in-house bulletins, the use of e-learning, and other means. At the same time, we are continuing activities that let people "experience" the SDGs, talking and working together with NPOs that support persons with disabilities, student and university NPOs, and other people undertaking advanced initiatives based on the principles of the SDGs (see a selection on the following page).

Toward the achievement of a sustainable society, we will formulate a Vision that further deepens our existing initiatives, and work with an awareness of partnerships aimed at the SDGs and other social issues.



**Shuichi Yasukawa**  
Executive Officer,  
General Manager of CSR Dept.

## The Relationship between Vision for 2030 and the SDGs



## The SMM Group's Initiatives Involving the SDGs



University SDGs ACTION! AWARDS 2019 (February 2019)

## Special Cooperation with the University SDGs ACTION! AWARDS 2019

SMM offered special cooperation with the University SDGs ACTION! AWARDS 2019 sponsored by The Asahi Shimbun Company. These awards support the activities of young people whose contributions will be vital to achieving the SDGs.

The final screening featured presentations on activity achievements and ideas by 12 groups, and workshops were held to generate suggestions to achieve the SDGs with the involvement of the businesses of the sponsoring companies. The SMM Group awarded the runner-up Sumitomo Metal Mining Award to Kindai University students who made a proposal for reducing unpaid labor by farmers and environmental burdens.



CSR Forum (April 2019)

## SMM CSR Forum (lecture meeting on social issues)

Shinsei is an NPO engaged in activities to support persons with disabilities in Koriyama, Fukushima Prefecture. We invited Director Tominaga of Shinsei to hold a lecture meeting on the theme of "a Fukushima in which no one is left behind." Shinsei was established after the Great East Japan Earthquake, and immediately after the Fukushima nuclear accident up to the present, it has cooperated with welfare offices on a variety of initiatives in the evacuation area. The NPO has now received the SDG Promotion Deputy-chiefs' Award (by the Chief Cabinet Secretary and the Foreign Minister) at the 1st Japan SDGs Awards.

After the lecture, a spot sale of the sweets, bags, and other goods sold by Shinsei was held. Learning from the activities of Shinsei, a group which puts into practice the "no one left behind" principle of the SDGs, provided us with an opportunity for deepening our understanding of the SDGs.



SDGs Networking Meet by the Ritsumeikan University Sustainable Week Steering Committee (April 2019)

## Special Support for the Ritsumeikan University SDGs Networking Meet

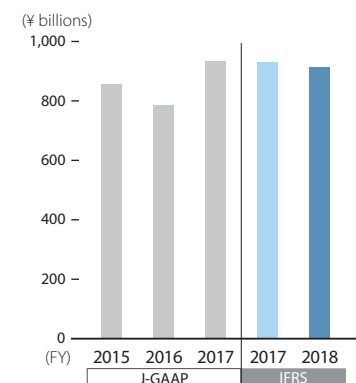
The steering committee of Sustainable Week, a student group at Ritsumeikan University, offers opportunities that let a variety of people and organizations feel connected to the SDGs and to take action.

Providing cooperation with the SDGs Networking Meet held by the steering committee, SMM presented a talk for students on the CSR activities that we conduct through our Group's business as company initiatives aimed at the SDGs.

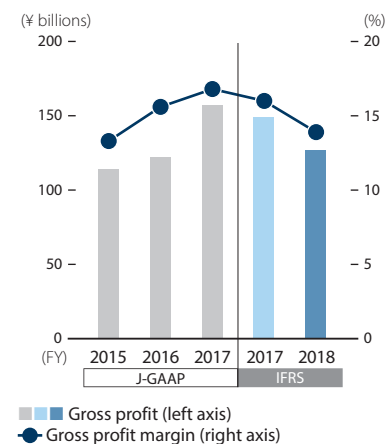
At the networking meet, we learned about students' diverse actions aimed at achieving the SDGs under a variety of ideas, which offered us an opportunity to gain new inspiration as a company.

# Financial and Non-Financial Highlights

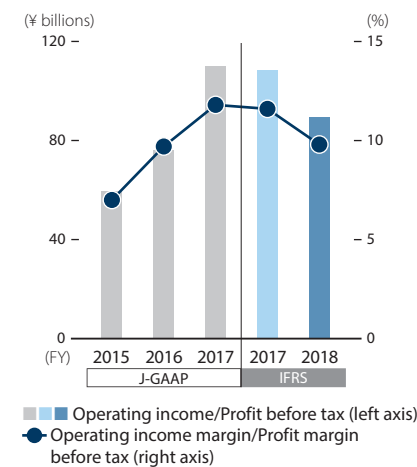
## Net Sales



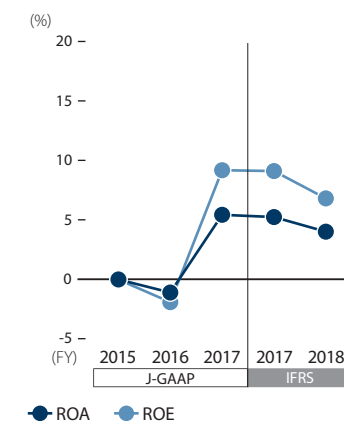
## Gross Profit/Gross Profit Margin



## Operating Income/Operating Income Margin Profit Before Tax/Profit Margin Before Tax (IFRS)



## ROA/ROE

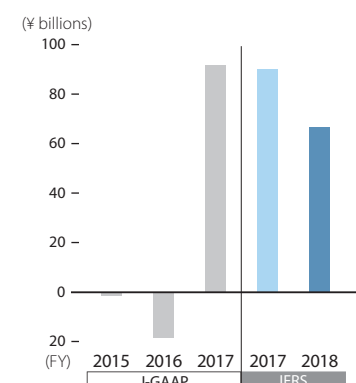


## Share Price by Fiscal Year

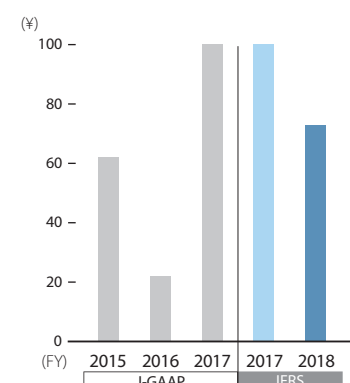
FY	Annual high (yen)	Annual low (yen)	Year-end (yen)	Volatility
2009	3,180	1,936	2,782	38.4%
2010	3,152	2,140	2,862	34.0%
2011	2,932	1,900	2,326	27.9%
2012	3,214	1,580	2,686	33.5%
2013	2,974	2,136	2,592	32.8%
2014	3,898	2,568	3,517	31.1%
2015	4,044	2,074	2,235	40.9%
2016	3,333	1,997	3,167	35.7%
2017	5,491	2,642	4,480	33.7%
2018	4,882	2,796	3,270	36.4%

• Volatility is calculated by annualizing the standard deviation of weekly closing prices for the 52 weeks of the year.  
• Prices before October 1, 2017 have been recalculated to be in line with the post-consolidation share basis.

## Profit Attributable to Owners of Parent

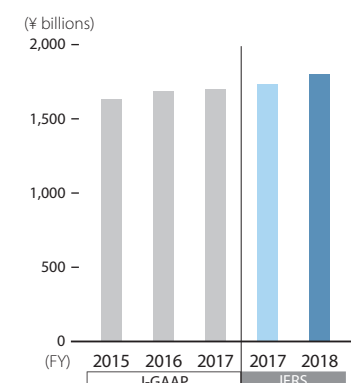


## Dividend per Share

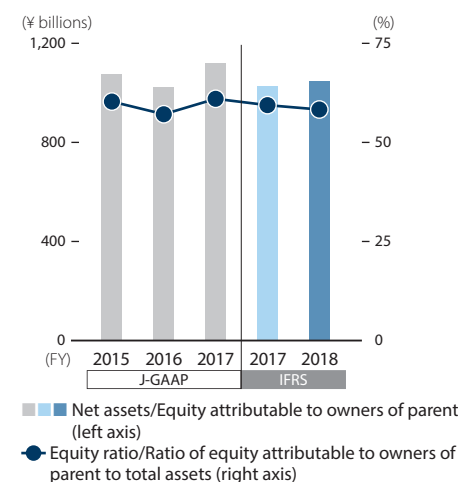


SMM consolidated its common stock at a rate of one share for every two shares with October 1, 2017 as the effective date. Values for 2015 and 2016 have been converted according to post-consolidation criteria.

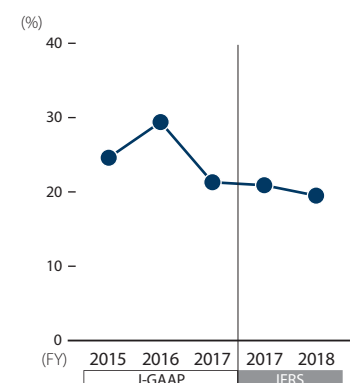
## Total Assets



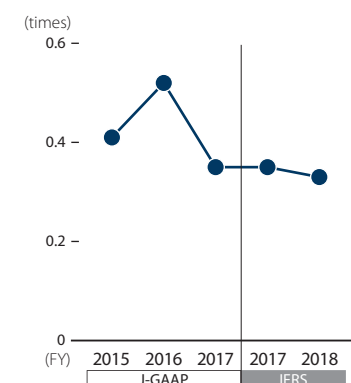
## Net Assets/Equity Ratio Equity Attributable to Owners of Parent/Ratio of Equity Attributable to Owners of Parent to Total Assets (IFRS)



## Interest-Bearing Liabilities to Total Assets Ratio



## Debt-to-Equity Ratio



## Share Price Performance (TSR)

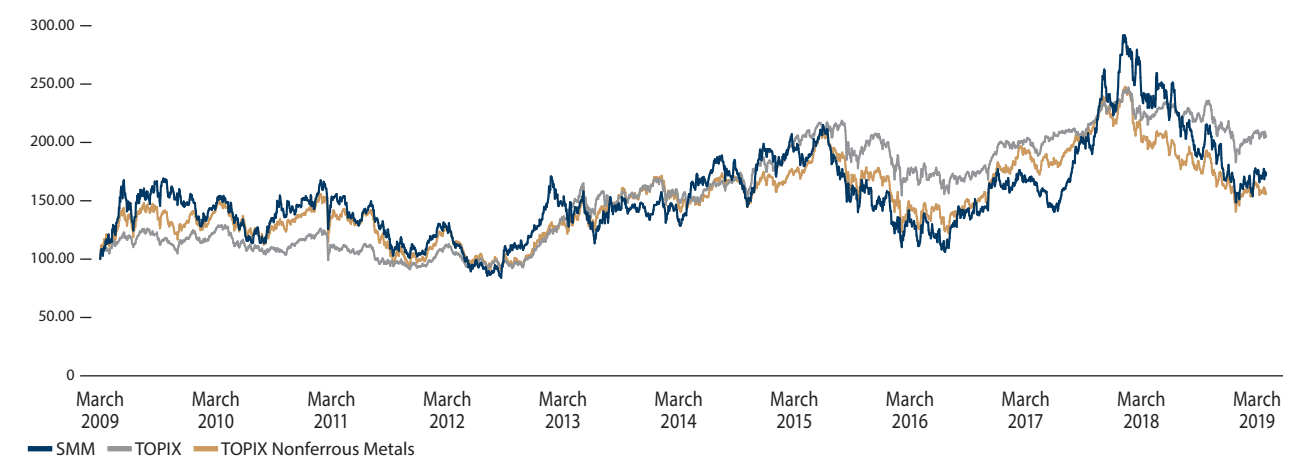
Investment period	1 year	3 years		5 years		10 years	
	Cumulative and Annualized	Cumulative	Annualized	Cumulative	Annualized	Cumulative	Annualized
SMM	-25.4%	55.0%	15.7%	39.8%	6.9%	108.6%	7.6%
TOPIX	-5.1%	25.5%	7.9%	45.0%	7.7%	138.0%	9.1%
TOPIX Nonferrous Metals	-19.9%	23.9%	7.4%	16.9%	3.2%	86.0%	6.4%

• TSR (Total Shareholder Return): Calculated using  $[(\text{share price at the end of the fiscal year ended March 31, 2019}) - (\text{share price at the end of the fiscal year X years previous to the fiscal year ended March 31, 2019}) + (\text{total cash dividend per share for the relevant period})] \div (\text{share price at the end of the fiscal year X years previous to the fiscal year ended March 31, 2019})$

• Annual cash dividend per share for TOPIX and TOPIX Nonferrous Metals: Calculated using the weighted average of the cash dividend per share value for each stock over the 12 months previous to the base date and the formula used by TOPIX itself (Calculated using Bloomberg values)

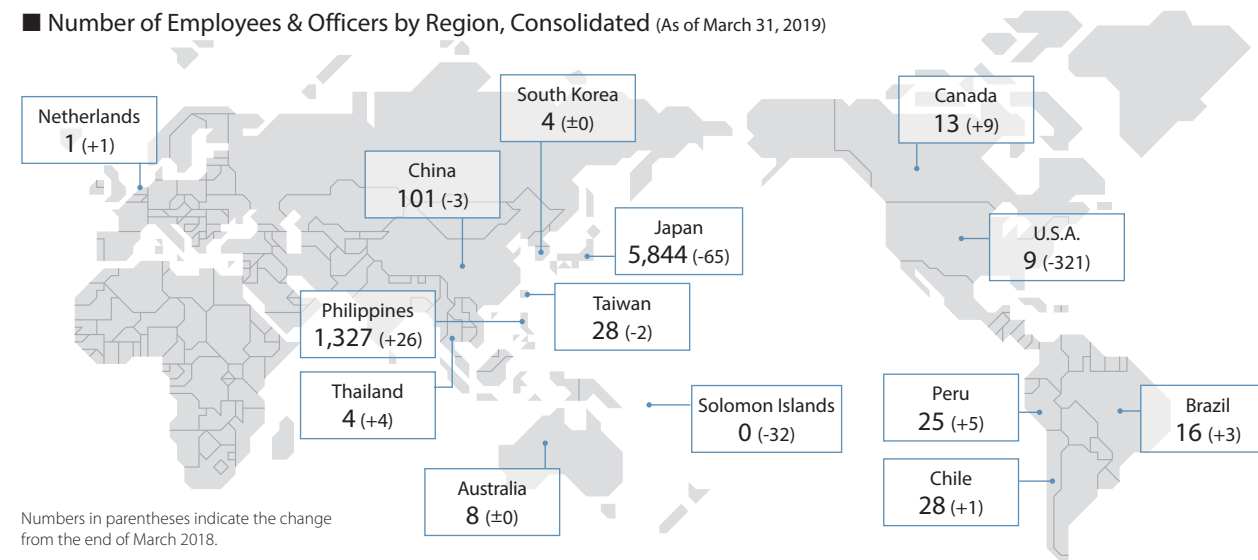
## Share Price Performance

Share price movement reflected using the share price at the end of March 31, 2009 as 100

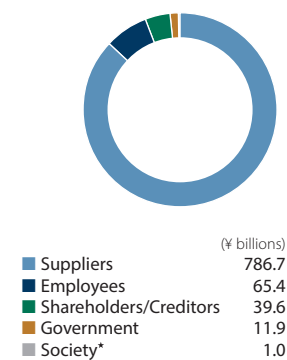


## Financial and Non-Financial Highlights

### Number of Employees & Officers by Region, Consolidated (As of March 31, 2019)



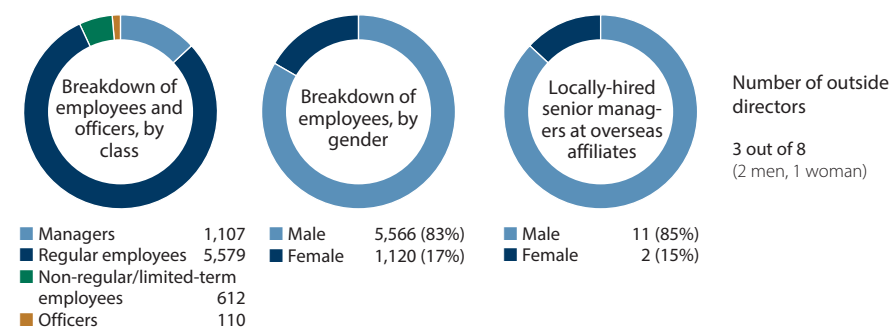
### Distribution of Economic Value to Stakeholders (FY2018)



\* Other than the above, there is retained value of ¥30.9 billion. Rent for use of land is minimal and therefore included in "Payments to suppliers."

★ In the Philippines (CBNC, THPAL), the ¥0.9 billion expended through the social development management program (SDMP) and other contributions in the same country is included.

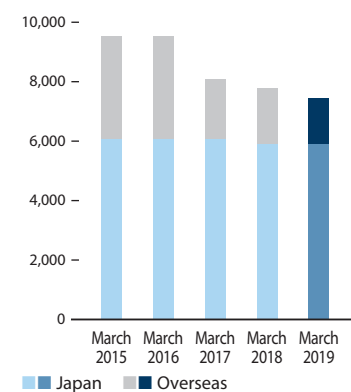
### Number of Employees & Officers Worldwide (Consolidated) (March 31, 2019)



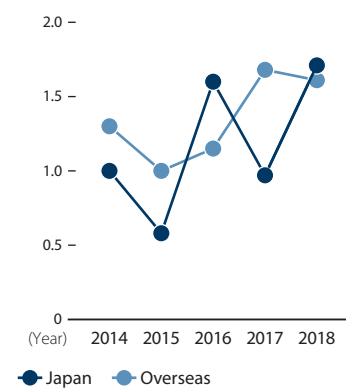
### Capital Expenditure Related to Environmental Preservation

FY	Pollution prevention / environmental preservation	Energy conservation	Total	Ratio of capital expenditure
2018	5,508	100	5,608	11.8%
2019 (plan)	8,655	245	8,901	12.3%

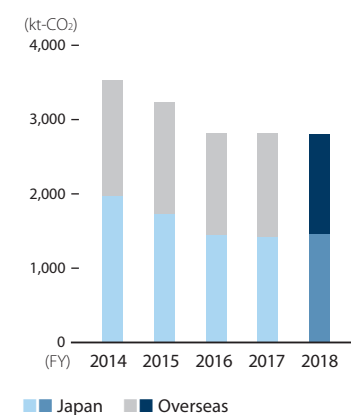
### Number of Employees & Officers Worldwide (Consolidated)



### Occupational Accident Frequency Rate



### CO<sub>2</sub> Emissions



# Where is the SMM Group Going?



# Interview with the President



Toward a New Growth Phase, Aiming to Become a “World Leader in the Non-Ferrous Metals Industry”

Akira Nozaki  
President and Representative Director

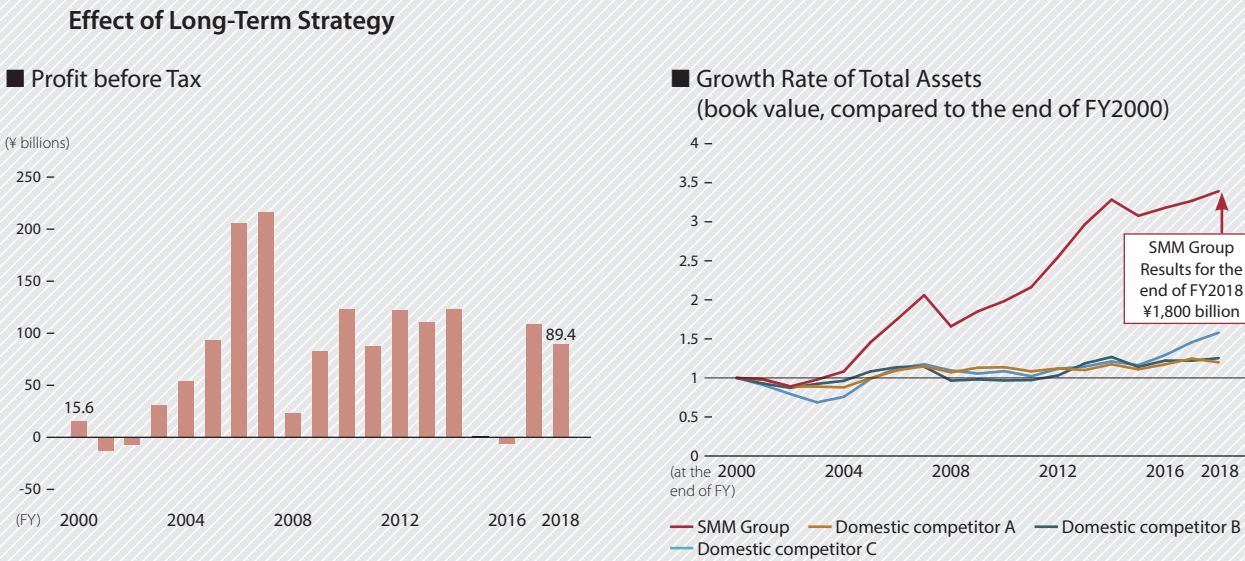
## Achievements and Challenges of the 3-Year Business Plans Under My Three Predecessors

Fiscal 2019 marks the first year of SMM’s 2018 3-Year Business Plan and 20 years since the JCO criticality accident. The year after the accident, the Company launched its Corporate Reform Plan aimed at achieving a major management shift, including reaffirmation and thorough implementation of SMM’s corporate philosophy. Starting with the 2003 3-Year Business Plan, we changed course significantly toward promotion of a growth strategy. Up to now, the management plans announced by my most recent three predecessors have been carried out as a concerted effort by all SMM Group employees. In the course of promoting a growth strategy, expanding our core businesses, and realigning our business structure, under the 2015 3-Year Business Plan the Company focused mainly on achieving collaboration between our three core businesses—Mineral Resources, Smelting & Refining, and Materials—advancement of large-scale projects, and restructuring of our Materials business. These initiatives included, I believe that our growth strategy reached an estimable level of success. Now, in our 2018 3-Year Business Plan, we are entering a new growth phase focused 10 to 15 years into the future, to maximize our corporate value.

Compared with fiscal 2000, we have achieved robust growth in assets, production scale and profit levels. Whereas in fiscal 2000 our copper interest production stood at 94 kilotonnes, as of fiscal 2018 this had increased to 249 kilotonnes. Meanwhile electrolytic copper production grew from 250 kilotonnes in fiscal 2000 to 450 kilotonnes in fiscal 2018. Nickel-based product production expanded from 58 kilotonnes in fiscal 2000 to 85 kilotonnes in fiscal 2018. Especially noteworthy is the fact that our nickel refining business now boasts one of the world’s highest levels of cost competitiveness, thanks to the pairing of our HPAL technology and MCLE processing at our Niihama Nickel Refinery.

SMM’s business results are significantly impacted by non-ferrous metal prices and fluctuations in exchange rates. However, when extraordinary temporary factors such as booking of impairment losses are excluded, I believe that, through steady implementation of our growth strategy, we have achieved a corporate structure that enables us to secure a certain level of profits even when these market conditions are in a slump. Our total assets have increased roughly 3.5 times compared to the end of fiscal 2000. To have achieved this level of growth without any large-scale mergers or acquisitions is surely rare, even at major overseas mineral resource companies. That said, our safety record has underperformed our target by a wide margin and our net sales and profit targets for fiscal 2018 in our 2015 3-Year Business Plan went unachieved. As such, today strengthening our business base is an issue that needs to be addressed, to further nurture a safety-oriented in-house culture and enhance our manufacturing and business management capabilities.

Themes of the 3-Year Business Plans in the Past 20 Years																			
'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18
JCO criticality accident Sept. 30	Corporate Reform Plan		2001 2-Yr Business Plan		2003 3-Yr Business Plan		2006 3-Yr Business Plan		2009 3-Yr Business Plan		2012 3-Yr Business Plan		2015 3-Yr Business Plan						
	Nurture legal compliance and a safety culture Reconfirm the Corporate Philosophy Reinforce Corporate Organization		Return to core business (Selection and Concentration)		Promote growth strategy (5 Major Projects +1)		Further boosting corporate value by promoting growth strategy		Growth strategy based on realigned business structure		Strengthen competitiveness through the execution of a continuous growth strategy		Growth strategy focused on efficient response to external business environment changes		Become a world leader in the non-ferrous metals industry and an excellent company of Japan				
	Reform management systems Manage risks Restructure the organization		Reform business structure  Reform cost structure		Expand and strengthen core businesses (Mineral Resources & Metals, Electronics & Advanced Materials)		Further expand core businesses		Shift business model to three core businesses (Mineral Resources, Smelting & Refining, Materials)  Concentrate management resources on mineral resources and nickel		Develop measures in line with the basic growth strategy model (Sowing, Planting, Nurturing, Harvesting)		Strengthen synergy through three-business collaboration (Mineral Resources x Smelting & Refining x Materials)  Globalization of the corporation • Publish an integrated report • Transition to IFRS						
	President Fukushima (from Apr. 1, 2000)							President Kemori (from Jun. 28, 2007)							President Nakazato (from Jun. 24, 2013) / President Nozaki (from Jun. 26, 2018)				



## Interview with the President

### ■ Long-Term Vision: “Becoming a World Leader in the Non-Ferrous Metals Industry”

In formulating the 2018 3-Year Business Plan, SMM partially revised its Long-Term Vision, removing the words “and an Excellent Company of Japan” and rephrasing the Company’s aim to “Becoming a World Leader in the Non-Ferrous Metals Industry.” This modification was based on the assumption that being “an excellent company of Japan” is inherently included in what defines a “World Leader in the Non-Ferrous Metals Industry.” Also, in lieu of setting numerical targets for gold as it did earlier, the Company has revised its long-range goal for gold to “new participation in mine operations through the acquisition of superior interests.” It has further revised its annual net profit target to 150.0 billion yen, on a par with the major overseas mineral resource companies.

The “World Leader in the Non-Ferrous Metals Industry” that SMM aspires to satisfies the following five conditions: 1) has a global presence in terms of mineral resource interests and metal production volumes; 2) has leading technology and a unique business model that cannot be easily emulated by other major mineral resource companies; 3) is growing sustainably and stably producing a certain amount of profit; 4) is actively tackling social issues such as the SDGs; and 5) has employees working with spirit.

The “unique business model that cannot be easily emulated” cited in the second point is a concise reference to SMM’s competitive strength: especially its 3-business collaboration, unseen anywhere else in the world, between its Mineral Resources, Smelting & Refining, and Materials businesses. This unique 3-business collaboration business model is sustained by the Company’s superlative technological capabilities burnished over the course of more than 420 years: for example, our exploration, mining and mineral processing technologies enabling the development of difficult new deposits; our smelting technologies enabling recovery of non-ferrous metal products from low-grade or difficult-to-process ore; and, in the Materials area, our battery materials and powder technologies applied in multi-layer ceramic capacitors (MLCC). And by enhancing our earning capacity by further improving our cost competitiveness, we will all the more strengthen our ability to generate a certain level of profit even when the non-ferrous metals market is severe.

If we are to be a true world leader, then in addition to achieving a certain business scale and earning power, we also hope to be a company that can contribute through its core businesses to society’s demands arising from environmental changes. Based on our deeply rooted “Sumitomo Business Spirit,” I, in my leadership role, aim not only to secure a safe work environment but also to make SMM a company worthy of being called a “world leader” in addressing corporate social responsibility (CSR) and the sustainable development goals (SDGs).

### ■ Class 1 Nickel Integrated Production System Like No Other

The 150.0 billion yen annual net profit target which we newly set in reviewing our Long-Term Vision is of a level on par with the major overseas mineral resource companies, including our business partners Freeport McMoRan and Teck Resources. It is a target befitting a true “World Leader in the Non-Ferrous Metals Industry,” and to achieve it all SMM Group companies will need to join forces. Although this isn’t a figure that we can achieve within the time frame of our 2018 3-Year Business Plan, we can expect to top 40.0 billion yen in profit if the major projects planned for these three years are brought to successful completion.

Our target for copper production from interests, 300 kilotonnes per year, places us in the middle ranks worldwide. This should be within our reach if Quebrada Blanca Copper Mine Phase 2 goes into operation. We haven’t changed our nickel target, but its significance has changed greatly now that business in cathode materials, in our Battery Materials Division, has expanded. Earlier, 300 kilotonnes was a quantity that would place SMM around No. 5 worldwide in terms of production volume, and our emphasis was on “scale.” Going forward, backed by HPAL technology, one of our core strengths, we will pursue top-class “quality,” with a focus on pure nickel usable in advanced materials, including battery materials. We will solidify our unique position as the only nickel producer operating a totally integrated system from raw material procurement through to product supply. Regarding gold, originally we had set a numerical target of 30 tonnes, but this has been eliminated. Various business models exist for developing gold resources: from mines of limited scale that produce high-grade ore at around 30 grams/tonne—like our Hishikari Mine—to mines of large scale but yielding low-grade ore near 1 gram/tonne. In the years ahead, SMM will continue to carefully select outstanding projects in which we can put our technologies to full use, and also to seek out operation opportunities. In our Materials segment, we will burnish our earning capability focused on battery materials while simultaneously targeting growth in other highly advanced materials. Because this is a business area characterized by the most intense technological changes, we will need to focus on increasing interfaces with the customer and continuously create new profit-generating businesses availing of our technological strengths. For this reason, we have set a profit target in this area.

## Long-Term Vision

### Become a World Leader in the Non-Ferrous Metals Industry



### Reasoning Behind the Targets

- A quantity that will position us as top class globally (about 5th)
- A responsible quantity for meeting growing demand, including for battery materials
- A quantity that will position us as mid-level globally
- Likelihood of achievement through participation in Quebrada Blanca 2 → Continued Stronger
- Rather than increasing the number of interests, participating in superior projects will increase profitability and value of operational experience
- Create a presence as a core business by selecting the best mix of businesses based on the life cycle of each product group



## Interview with the President

## ■ 2018 3-Year Business Plan: “Taking on the Challenge for New Growth”

The theme selected for our new 3-Year Business Plan is “Becoming a World Leader in the Non-Ferrous Metals Industry: Taking on the Challenge for New Growth.” In much of SMM’s business operations there is a need to commit a long span of time—five to 10 years—to proceed from initial conception through idea development and then planning, to actual implementation. For this reason, our Business Plans are formulated by “backcasting”: always looking 10 to 15 years into the future and then deciding what measures should be taken during the next three years. Our 2018 3-Year Business Plan too isn’t a strategy limited to the upcoming three years, but rather incorporates what needs to be done toward reaching the Company’s long-range targets. Much of what it contains are matters currently at a stage preliminary to decision-making or implementation: what in-house we call the “planting” phase. The 2018 3-Year Business Plan is an “aggressive” plan in which we will invest our management resources on unprecedented scale. The timing of investments isn’t ours to choose, and during the period of the 3-Year Business Plan investments ended up overlapping. I believe the plan was prepared with full consideration paid to financial background and each project’s feasibility. We are wholly resolved to implement the new plan in order to achieve our sustained growth.

## ■ Human Resources Development to Create Value Indispensable for Implementing the “Aggressive” Plan

Another major duty of ours is to carry on the solid relationships with SMM’s partners steadily forged by our predecessors and pass them onward to the next generation. Today, we are being called on to respond with specific working style reforms, and Japanese society in general is said to be marked by a decline in younger people’s sense of belonging to their company, a decline in their retention rate at one company, and increasing fluidity of the labor force. Amid these circumstances, a major management challenge today is how to develop and secure human resources that will enable us to keep ranks with our domestic or overseas partners or competitors.

Under our 2018 3-Year Business Plan, we will drive forward our growth strategy through three initiatives: “Secure human resources;” “Develop and make the most of human resources;” and “Improve organizational and workplace environments.” Specific measures toward those ends include: reviewing the Company’s recruitment strategy; promoting SMM’s uniqueness in coordination with PR activities; reviewing personnel-related systems to lead to flexibility, fairness and dynamism; and promoting diversity to improve productivity and respond to

various needs. We will also continue to support increasingly active participation by female employees. Up to now we have set in place various mechanisms for developing human resources, such as selective education, specialized education and unique introductory education; going forward we will rebuild an open and vibrant organizational climate. The “open and vibrant” environment I envision is one in which everyone within the organization can express their frank opinions with total honesty. During my first year as president, I took every opportunity to go straight to the workplaces. Through free exchanges of opinions with diverse employees having many different backgrounds, I will devise innovations in a broad sense, including improvements in our everyday business administrative procedures.

## ■ Simultaneous Maximization of Corporate Value and Achievement of Sound Management Practices

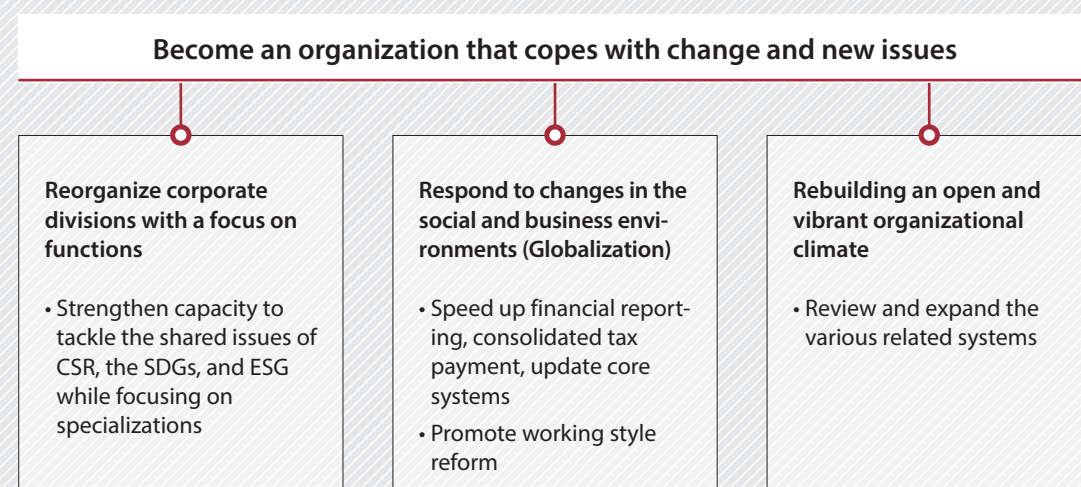
SMM views corporate governance as a “disciplinary framework for maximizing the corporate value of the SMM Group and for ensuring sound management practices,” and this is considered one of the most important management issues. Maximization of corporate value entails implementation of a growth strategy and strengthening of the business foundation in order to enable assured profitability. Only when a cycle of strategic profitability can be achieved can the Company proceed to its next growth measures. I hope to make ours an organization in which every employee will address the challenges ahead with a firm awareness that they are the key players in their respective positions.

SMM’s succession planning for holders of the office of Chief Executive Officer, i.e. President and Director, is conducted and executed on the basis of the Company’s corporate philosophy and business plans. To enhance transparency and objectivity in selecting the best candidate, the current CEO seeks advice from the Governance Committee—composed of the chairman of the Board of Directors, who is not an executive officer, and three independent Outside Directors—concerning whether the proposed candidates have qualifications, knowledge, experience, abilities and insight worthy of a President and Director. The final decision is then made by the Board of Directors.

The effective period for the takeover defense measures previously adopted ended with the Ordinary General Meeting of Shareholders held in June 2019, but in view of the ongoing risk of a hostile takeover due to the uniqueness of our business, those measures have been renewed. We have also drawn up Basic Policies for Compliance with Competition Laws and Basic Policies for Anti-Bribery for compliance with corruption prevention laws.

Currently, more than one in three members of the Board of Directors are Outside Directors. They actively take part in discussions pertaining to SMM management, bringing their outside perspective to all Board meetings.

### Strengthen Corporate Functions





Interview with the President

Joint Value Creation Together with Shareholders

Because SMM handles mineral resources that deplete over time, we are always seeking opportunities to acquire new interests. For that purpose, besides continuing our exploration endeavors it is vital that we maintain a sound financial standing so we can be viewed as a worthy partner in developing mineral resources, as well as to prepare for ever-larger projects and M&A activities. In our 2018 3-Year Business Plan, we have again set a financial target to maintain an equity ratio of 50% or higher. We have also raised our dividend payout ratio from 30% or higher to 35% or higher.

During the 2018 3-Year Business Plan the Company will be undertaking multiple large-scale investments. This is expected to result in a significant free cash flow deficit of 110 billion yen. However, each of those investments will strengthen the Company's future earnings base and set the foundation for our next growth phase. While executing investments at a high level, we will also implement measures to increase the earning capacity of our existing businesses, so we fully expect to be able to maintain a favorable financial standing. That said, the business environment defies prediction. Were the environment to deteriorate substantially or if deterioration is projected, we will steadily maintain our financial position by carefully screening investment projects in light of financial conditions, defer investments that are not urgent to the maximum extent, etc.

The decision to raise our dividend payout ratio reflects management's desire to increase returns to our shareholders, even if only to a modest degree. We are confident that the large-scale investments to be made under our 2018 3-Year Business Plan will contribute to enhancing future shareholder value. Just as management will steer the course of Company operations from a long-range perspective, we sincerely hope our shareholders will continue to support us as shareholders over the long term.

Message to Our Stakeholders

Our business environment is becoming increasingly opaque. Prices of non-ferrous metals entered a recovery mode early in 2019, but the prices of copper and nickel are now weakening, despite a favorable balance between supply and demand, under the impact mainly of U.S.-China trade frictions. Against this backdrop, fiscal 2019, the first year under our 2018 3-Year Business Plan, will be an important year for giving shape to major projects to drive our next growth phase.

Dividend Policy and Financial Targets

Dividend Policy	Financial Targets
<ul style="list-style-type: none"><li>Continue policy of performance-linked dividends</li><li>Consolidated dividend payout ratio raised from 30% or higher ➤ <b>35% or higher</b></li></ul>	<ul style="list-style-type: none"><li>Prepare for even larger-scale projects or M&amp;A by maintaining sound financial standing</li><li>Maintain <b>an equity ratio of 50% or higher</b></li></ul>
<div>Reasoning Behind Dividend Payout Ratio Increase</div> <p>In the 2018 3-Yr Business Plan, there will be a significant FCF deficit. However, the overall scale and profitability of business will be significantly greater than before, enabling us to cope with greater strategic investment while maintaining a healthy financial structure.</p>	

Reflects SMM management's resolve to increase shareholder return as much as possible

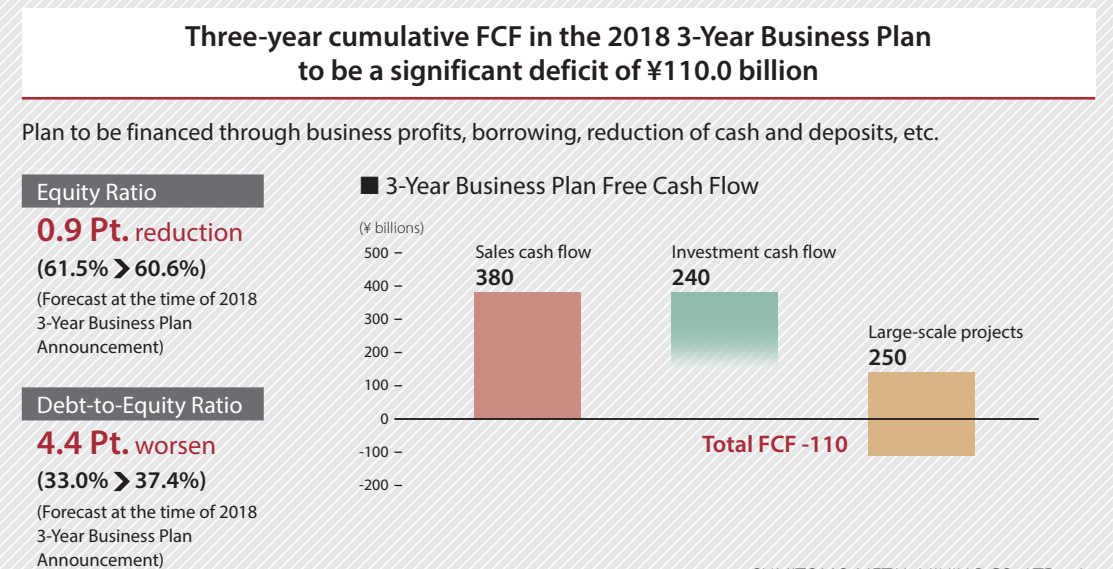
In the Mineral Resources business, we will move forward plans to develop the Quebrada Blanca Copper Mine, which is expected to contribute robustly to realization of our Long-Term Vision; carry forward the Côté Gold Project; and take steps to increase processing volume at the Sierra Gorda Copper Mine. In our Smelting & Refining business, we will develop more detailed plans for achieving the Pomalaa Project. We will also strengthen our management capabilities to improve our expertise in manufacturing, and fulfill our responsibility to supply our products to both our customers and our own Materials business. In our Materials business, in April we reorganized our former Materials Division into a new Battery Materials Division and Advanced Materials Division; this move was taken in order to put in place a structure for carrying out our strategy for the battery materials business and achieve sustained growth in our advanced materials business. In the area of research and development, we aim to strengthen our ability to propose themes using new businesses and new creation systems. In terms of next-generation businesses, we will explore for the "seeds" to sow in response to social trends and needs.

Concerning safety, our target for 2021 is "workplaces that prevent serious accidents by clearly defining priority issues needing improvement and implementing Plan-Do-Check-Act (PDCA) cycles while promoting safety activities." In managing production lines at workplaces, we will seek to nurture a safety culture in which those concerned observe work from the inside and communicate with workers, making improvements based primarily on the three realities principle—real places, real facts and real things.

Society at large and investors in particular today are making increasingly diverse and specific demands of corporations' stance toward achieving sustained social development. At SMM, we fully understand that responding appropriately to significantly changing trends is a challenge of great urgency. Going forward, we will further deepen our communication with all stakeholders in order to win their understanding of our strategies and the measures we are taking to implement them.

Our 3-Year Business Plans are our "guidance" for managing the Company, and their targets are immutable. However, to achieve those targets, at times it is necessary to change the measures taken, as circumstances may demand. We will hold firmly to our targets, which have been set after sufficient discussions, but we will take a flexible approach to the measures taken to achieve them, never sticking inflexibly to our original plans. My personal philosophy, when facing a difficulty, is that the method thought to be most difficult is the shortest toward resolving the problem. To realize our Long-Term Vision, we will set to the task in the 2018 3-Year Business Plan. And though the issues needing to be resolved are many, striving in concert with all employees we will achieve sustained growth and respond to the hopes and expectations of all stakeholders.

Free Cash Flow



## Special Feature: Start of a New 3-Year Business Plan

# Become a World Leader in the Non-Ferrous Metals Industry —Taking on the Challenge for New Growth

We launched our 2018 3-Year Business Plan in April 2019. Under the theme of “Taking on the Challenge for New Growth,” we formulated three Main Basic Strategies in this new 3-Year Business Plan, based on issues that became clear in the previous 2015 3-Year Business Plan. By steadily executing an aggressive plan to invest management resources on an unprecedented scale, we plan to achieve sustainable growth and maximize our corporate value.

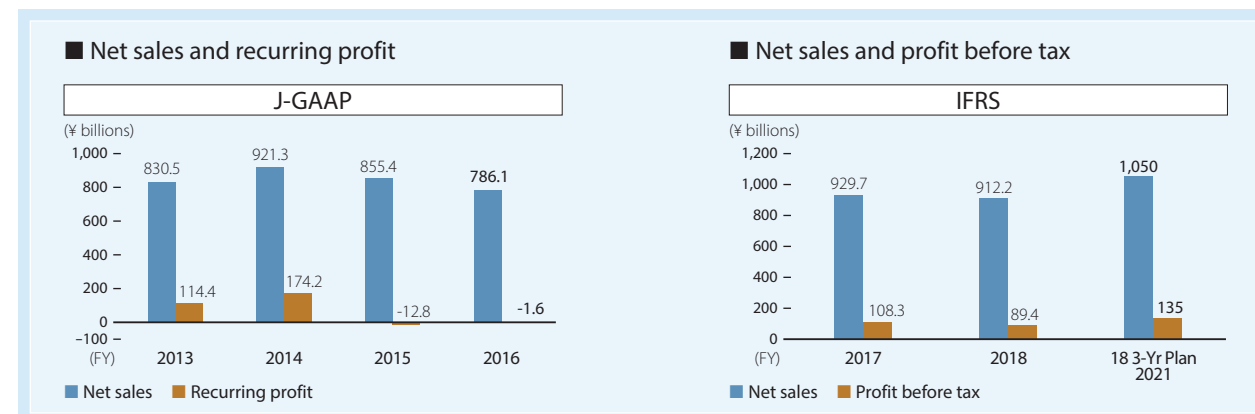
## Review of the 2015 3-Year Business Plan and Positioning of the 2018 3-Year Business Plan

### Evaluation of Our Three Businesses with Respect to Priorities

In our 2015 3-Year Business Plan, we were able to make significant achievements in securing and expanding interests, particularly for copper. While we faced issues such as reduced production of nickel due to equipment troubles at Taganito HPAL Nickel Corporation (THPAL) and the recording of an impairment loss due to production troubles at the Sierra Gorda Copper Mine, we evaluate our performance as having achieved most of our priorities. In the Materials business, we met our aim of growing battery materials to a scale that has a presence in the marketplace.

### Performance Trends

Looking at our performance, the 2015 3-Year Business Plan ended without meeting its estimated net sales or profit targets. Net sales were ¥912.2 billion, against projections of ¥1,060.0 billion, while profit before tax was ¥89.4 billion, against projections of ¥170.0 billion. Major factors behind the decline in profit before tax were a worsening of ¥34.0 billion attributable to a difference in quantity sold (due to reduced production caused by decline in quality, particularly at overseas copper mines, and equipment troubles at THPAL), and a worsening of ¥35.0 billion due to a difference in unit cost prices accompanying the decline in production. However, although estimated targets were unmet, our profit level and total assets in FY2018 were about 6 times and 3.5 times, respectively, those in FY2000, showing that our business base has grown remarkably.



### Current Issues

The issues facing our group span a wide range. They include enhancing and improving our site management capability (production capabilities) and management capability, creating new products and businesses, and securing and developing of human resources to support growth. To rebuild an open and vibrant organizational climate and strengthen our ability to assuredly achieve the plans we have set, we will work on strengthening our ability to engage in dialogues with business partners and key customers, and our ability to gather and analyze information.

### Positioning of the 2018 3-Year Business Plan

Positioned as a plan for “Taking on the Challenge for New Growth,” our 2018 3-Year Business Plan was formulated as a preparatory period to break into the next strategic stage and aim for new heights, from a medium- to long-term perspective that looks ahead to the next 10 to 15 years. The SMM Group’s technologies for mineral resource development, non-ferrous metal smelting and refining, and battery and functional materials are sectors expected to see considerable growth. Compared with an investment and financing amount of ¥392.1 billion in the 2015 3-Year Business Plan, the 2018 3-Year Business Plan calls for investment and financing of ¥490.0 billion. Through the assured execution of this aggressive plan to invest management resources on an unprecedented scale, we will work to achieve sustainable growth and maximize our corporate value.

### Top Priorities in the 2015 3-Year Business Plan

#### Mineral Resources

- Full-scale production at the Sierra Gorda Copper Mine
- Acquisition of new gold mine interests

• Sierra Gorda Copper Mine  
Production slump and rise in costs  
▶ Large impairment loss incurred

#### Smelting & Refining

- Expanding Taganito HPAL Nickel Corporation
- Advancing growth strategies using peripheral HPAL technologies
- Enhancing competitiveness of the copper smelting business

• Complete 36-kt production structure at Taganito HPAL  
▶ Stabilization measures are needed

#### Materials

- Profit contribution from expanded battery material and LT/LN production
- Sustainable innovation and adaptation of next-generation products

• Complete 4,550-t/month battery material production structure  
• Complete increased LN/LT production structure  
▶ No contribution to profits yet due to continued fall in demand

#### Corporate Governance

Increase number of outside directors, female directors, etc.

#### Globalization Measures

Publish integrated report  
Transition to IFRS

## Special Feature: Start of a New 3-Year Business Plan Become a World Leader in the Non-Ferrous Metals Industry —Taking on the Challenge for New Growth

### As a World Leader in the Non-Ferrous Metals Industry We Are Aiming to

- Have a global presence in terms of mineral resource interests and metal production volumes (be in the global top five)
- Have leading technology and a unique business model that cannot be easily emulated by other major mineral resource companies
- Be growing sustainably and stably producing a certain amount of profit
- Be actively tackling social issues such as the SDGs
- Have employees working with spirit

### Safety Initiatives and Our Three Main Basic Strategies

#### Safety Initiatives

The creation of work environments that are free from accidents and are conducive to work is vital in achieving our goals of actively tackling social issues such as the SDGs, and having employees working with spirit, as stated in our Long-Term Vision. The risks involved in our business are not small, but we have moved forward with

#### To Achieve by FY2021

Workplaces that prevent serious accidents by clearly defining priority issues needing improvement and implementing PDCA cycles while promoting safety activities

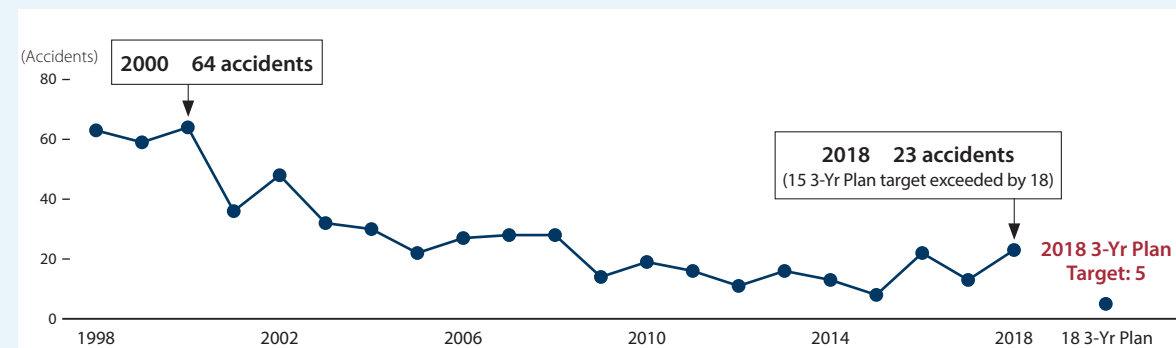
Workplaces that ensure that top management and supervisors communicate with workers, grasp actual conditions at sites and promote facility improvements based on the three realities principle (real places, real facts, real things), and work using procedures that naturally take safety into sufficient consideration.

#### 2018 3-Year Business Plan Targets

Limit domestic occupational accidents **to 5 or less**

Limit overseas occupational accidents **to 3 or less**

#### Domestic occupational accidents



countermeasures in both physical terms (safer equipment) and non-physical terms (safety education), to protect the well-being of our employees and their families. At the same time, our safety performance in Japan has been worsening since FY2016. In FY2018, 23 accidents occurred, greatly exceeding our targeted number of five and leaving our 3-Year Business Plan target unmet. Insufficiently thorough line management and insufficient safety improvements in facilities can be viewed as among the causes of this. However, a variety of factors are intertwined in safety management, and there is no particular countermeasure that will cut accidents to zero. To further enhance safety measures, we set a clear vision to achieve by FY2021 and are operating an effective PDCA cycle based on this, with the aim of cutting domestic employee accidents to five or fewer and all overseas business site accidents to three or fewer under the 2018 3-Year Business Plan.

### Three Main Basic Strategies

#### 1 Strengthen the growth foundation of core businesses (Mineral Resources, Smelting & Refining, Materials)

- Steady promotion of growth strategy and swift realization of competitiveness: Aggressive investment
- Minimization of lost profits and opportunity loss and consolidation of business base: Defensive investment

#### 2 Strengthen three-business collaboration centered on cathode materials for batteries

- Maximally leverage the integrated production structure and win through overall capabilities, including battery recycling

#### 3 Strengthen corporate functions

- Stimulate communication with stakeholders both inside and outside the company
- Rebuild an open and vibrant organizational climate

Seize the chances presented by changing times and establish a position as a world leader in the non-ferrous metals industry

Employees take the initiative and work with resolve to produce results

Move into a new stage of the growth strategy  
Minimize lost profits and opportunity loss

Investment on an unprecedented scale  
Secure and develop the human resources to promote and support growth



## Special Feature: Start of a New 3-Year Business Plan Become a World Leader in the Non-Ferrous Metals Industry —Taking on the Challenge for New Growth

### Specific Initiatives for Our Three Main Basic Strategies

#### 1 Strengthen the Growth Foundation of Core Businesses (Mineral Resources, Smelting & Refining, Materials): Three Major Projects

##### Mineral Resources Quebrada Blanca 2

In March 2019, we acquired a 25% interest in the Quebrada Blanca Copper Mine by acquiring some of the interest held by Teck Resources Limited of Canada. We will devote all our energies to moving forward with plans to start production in 2021 and achieve our goal of 300 kt/year copper production from interests, as put forth in our Long-Term Vision. We made efforts to accurately assess the state of progress through information sharing with partners, and began dispatching SMM Group employees to make effective use of our Group's experience.

##### Smelting & Refining Pomalaa Project

The Pomalaa Project is positioned as the third HPAL plant, following the Coral Bay Nickel Corporation and Taganito HPAL Nickel Corporation in the Philippines. During FY2019, we will conclude our definitive feasibility study and then make a decision on whether to invest. We envision a large-scale project with a nickel production quantity of 40 kt/year, which, if realized, will bring us close to the 150 kt/year nickel production set forth in our Long-Term Vision.

##### Materials Battery expansion

In the Battery Materials Business, we will increase our production capacity for cathode materials to 4,550 t/month, with a focus on profitability. With the aim of a production structure for cathode material (NCA, NMC, nickel hydroxide) of 10 kt/month during the 2024 3-Year Business Plan, during the period of the 2018 3-Year Business Plan we will invest ¥35.0 billion and make stepwise enhancements to capacity. In line with the shift to EVs, demand for automotive secondary batteries is on an upward trend. As changes in the external environment are increasing in severity and speed, we will respond aptly after first carefully assessing customer trends.

##### Mineral Resources

###### Quebrada Blanca 2 (Cu)

- Copper mine development project in Chile. Entry decided in December 2018 (Planned start of production: 2021. Mine life: Approx. 28 years. Average annual copper production volume: 240 kt)
- Capital contribution: Teck Resources Limited 60%, SMM 25%, Sumitomo Corporation 5%, other 10%
- Investment: US\$4.7 billion (100% of the project)

##### Smelting & Refining

###### Pomalaa (Ni/ Co)

- Third HPAL project in Sulawesi, Indonesia
- DFS (Definitive Feasibility Study) to be completed in FY2019 ► Decide whether or not to invest
- Production volume: 40 kt of Ni mixed sulfides (roughly)
- Investment: Several billion US\$ (100% of the project)
- Operation to start in the mid-2020s (target)

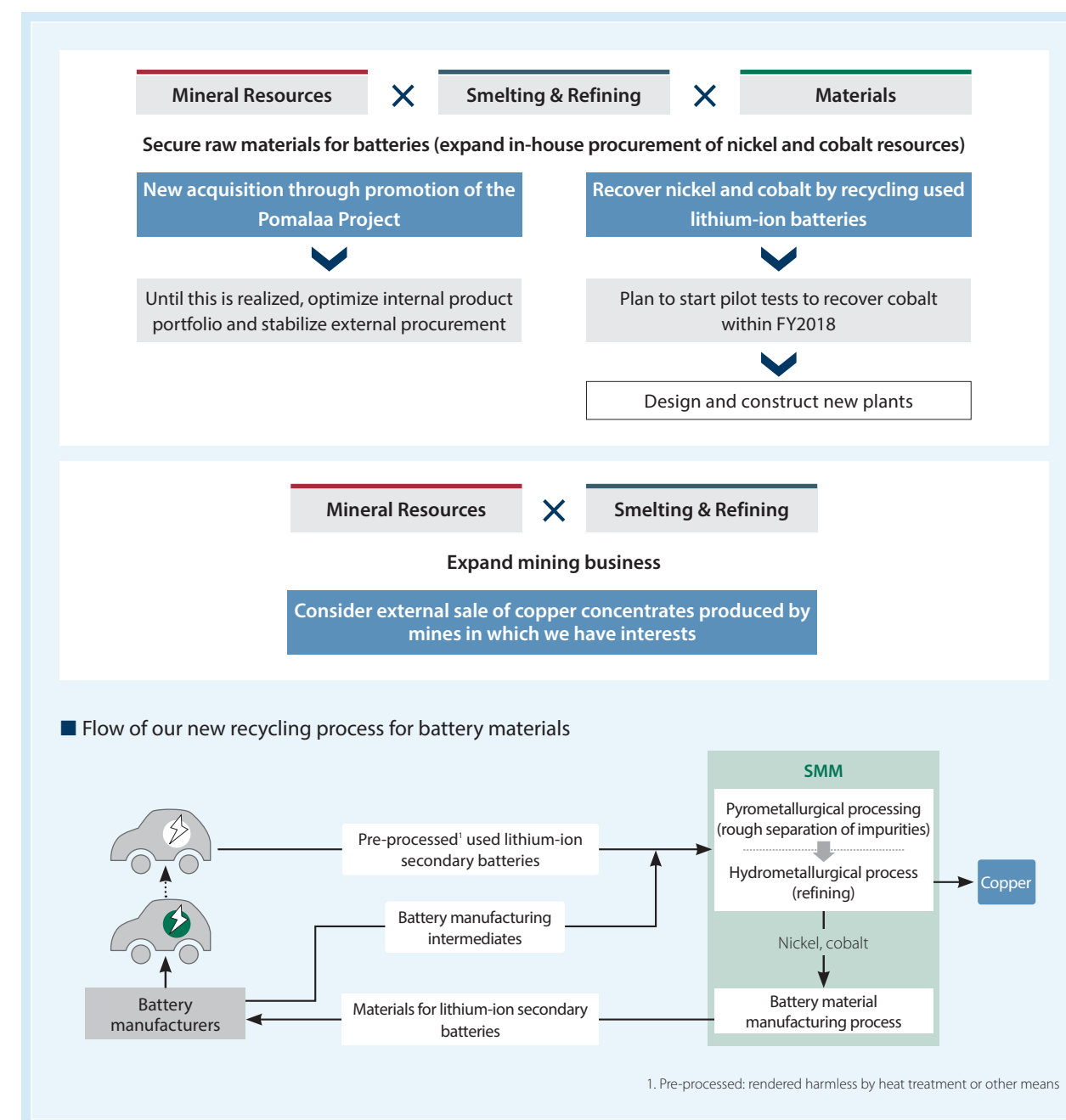
##### Materials

###### Battery expansion

- Expand capabilities in stages, and aim to produce 10 kt/month of cathode materials (NCA + NMC + Nickel hydroxide) during the 2024 3-Year Business Plan
- Investment (2018 3-Year Business Plan period): ¥35.0 billion

#### 2 Strengthen Three-Business Collaboration

Three-business collaboration among our Mineral Resources, Smelting and Refining, and Materials businesses, centered on cathode materials for batteries, is the key to competitive advantage for the SMM Group. To maximally leverage the strengths of our integrated production system, we aim to expand in-house procured resources, by acquiring new sources of raw materials through promotion of the Pomalaa Project, recovering nickel and cobalt through waste lithium-ion battery (LiB) recycling, and so on. We will perfect such original business models to become a one-of-a-kind company.



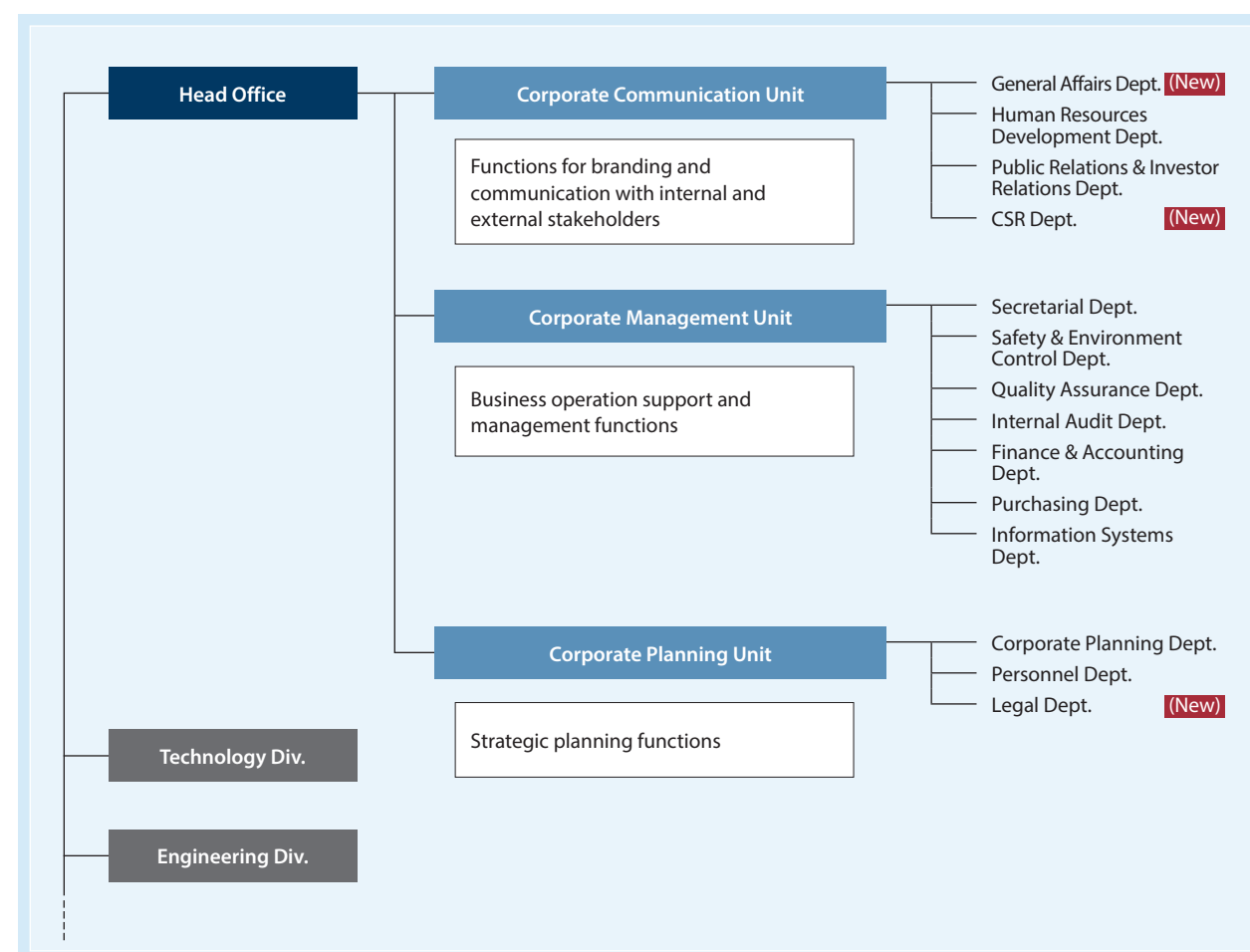
## Special Feature: Start of a New 3-Year Business Plan Become a World Leader in the Non-Ferrous Metals Industry —Taking on the Challenge for New Growth

### 3 Strengthen Corporate Functions

#### ① Reorganize corporate divisions with a focus on functions

In the 2018 3-Year Business Plan, we are taking on a transformation to aggressive corporate divisions. In April 2019, we changed our Head Office divisions to an organizational classification of Head Office, and reorganized it to three units by function: Corporate Communication Unit, Corporate Management Unit, and Corporate Planning Unit. By organizing the functions of each department into units and placing officers in charge of these, and by each organization collaborating to exert its functions and support business divisions, we will carry out the role of supporting growth strategies.

Specifically, we separated CSR Secretariat functions from the Safety & Environment Control Dept. and established the CSR Dept., which will take on the role of leading collaboration of units regarding SDG-related and other initiatives that are demanded as a part of our response to globalization. In addition, we divided the Legal & General Affairs Dept. into the Legal Dept. and the General Affairs Dept., which handles external communication, with the aim of creating organizations that address new issues with greater expertise.



#### ② Respond to changes in the social and business environments (Globalization)

Through over 420 years of history, the SMM Group has shared with its employees the idea that our Group's business operation itself is a CSR activity, and that we cannot achieve sustainable growth without such initiatives. Our units and divisions, and the Corporate Communication Unit in particular, will collaborate to address CSR, the SDGs, ESG, and other issues common to all units, while focusing on their own expertise.

The Corporate Management Unit will work to increase the efficiency of the flow of goods and information, along with reviewing work processes throughout the company, through the upgrading of core systems such as accounting and information systems. It will connect these to the promotion of working style reform and productivity improvements. In addition, it will move ahead with initiatives including earlier settling of accounts and consolidated payment of taxes.

#### ③ Rebuild an open and vibrant organizational climate

An open and vibrant organizational climate is essential to the achievement of "Have employees working with spirit," one of the goals in our Long-Term Vision. We will move ahead with tasks such as reviewing our personnel systems to create motivating workplaces. To adapt to an ever-changing business environment, we must be sensitive to changes around us and consider how these will affect the management and business of our Group. The ability to conceptualize how to collaborate with other units and the ability to take action will be vital in resolving the issues faced by not only our business units but also by each of our organizations. We will establish venues for discussion across units and otherwise communicate broadly, and will build an organizational climate in which open and vibrant ideas can be proposed and in which innovation is born.

## Human Resources

In relation to human resources, we face changes in the external environment such as Japan's aging population and dwindling birthrate, the increasing difficulty of securing human resources, and the growing need for diverse work styles. We also face changes in our internal environment, such as increasingly high turnover (especially of young people), and the fact that the generation of large-scale employment will reach the retirement age of 60 in several years. To tackle new growth amid these circumstances, the SMM Group will address issues under the important themes of securing human resources (creating recruitment strategies, strengthening of structures, etc.), developing and making the most of human resources (reviewing personnel-related systems, promoting diversity, etc.), and improving organizational and workplace environments (promoting working style reform, etc.).

### Secure Human Resources

An extremely harsh employment environment has continued in recent years, and we have struggled to secure our target number of new recruits. In response, we will make effective use of the recruitment branding that we reconsidered last year and will review related structures.

## Special Feature: Start of a New 3-Year Business Plan Become a World Leader in the Non-Ferrous Metals Industry —Taking on the Challenge for New Growth

Specifically, we will post our recruitment catch copy, “A venture founded 430 years ago: Sumitomo Metal Mining,” on our website and in other media and will share it with recruiters and other recruitment-related parties, to maintain consistency throughout our recruitment. We will also adapt to year-round recruitment, and will increase recruitment staff throughout the Group to boost opportunities for direct contact with students to convey the appeal of our company. In addition, through cooperation between the Public Relations & Investor Relations Dept. and the CSR Dept., we will carry out PR activities to let students learn about our company, and will take part in activities such as events related to the SDGs.

In addition to these initiatives, with the aim of achieving recruitment targets we will make use of career recruitment in close cooperation with individual divisions.

### Develop and Make the Most of Human Resources

We promote reviews of personnel-related systems that lead to fairness and the activation of human resources, and promote diversity to improve productivity and respond to varied needs. We will review systems aimed at achieving a society where people are still working at age 65, and will study new personnel management categories adapted to diversifying work styles, housing and solitary assignment systems, evaluation systems for working style reform, and so on. Moreover, we have strengthened our diversity promotion structure by assigning a dedicated director to the Diversity Promotion Section, and will further support active participation in work by women through individual training in line with a road map. In addition to activities to boost awareness of our support for the employment of people with disabilities and support for illness treatment based on guidelines from the Ministry of Health, Labour and Welfare, we will enhance initiatives to prevent major human rights violations and prevent harassment and will work toward respect for human rights. While continuing the training cycle and the ideal employee that was reviewed under the 2015 3-Year Business Plan, we will develop on-the-job training, off-the-job training, and self-study for the strategic human resources development.

### Improve Organizational and Workplace Environments

With the aim of achieving diverse work styles, we will expand our flextime system and optional staggered working hours system, expand the system for working at home, consider satellite offices, and review other systems, to carry out working style reform. We also launched a new employment system in March 2019 which supports working style reform and will act on departments and individuals with a pattern of long working hours, moving forward through the introduction of unit-specific training and AI, RPA, and systemization under a framework of accepting proposals from units.

With regard to health management, we will address mental health with a focus on prevention and prompt response, in partnership with health insurance societies. In addition, we will improve systems in our personnel department, strengthen the systems of the recruitment group, and provide support overseas through information exchanges with overseas sites and with other companies in the industry. We will also strengthen governance through the continuance of labor management training, and will provide support through ongoing working environment surveys and suggestions for improvement measures.

## Research and Development

In the 2018 3-Year Business Plan, we will make investments that are at least 20% more than the three-year cumulative research and development expenses under the 2015 3-Year Business Plan. We will make priority allocations of management resources to growth businesses, new businesses, and new product creation, and, targeting the automobile, environment, energy, and telecommunications sectors and waste LiB recycling, will engage in the creation of new businesses with a view to 10 years from now, the development of products that will be chosen by customers to win against the competition, and the development of new processes capable of differentiation to support sustainable growth.

## Capital Expenditure

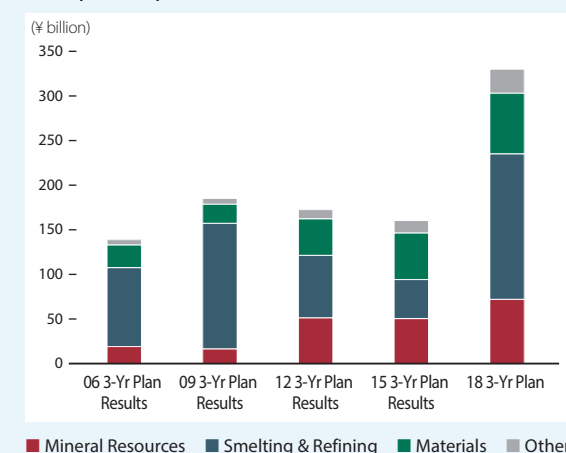
Planned three-year cumulative capital expenditure, investment, and financing under the 2018 3-Year Business Plan is an unprecedented ¥490.0 billion. However, most of the effects of this will not be seen until the next 3-year business plan (2021 3-Year Business Plan) and later.

Many of the growth strategies that our Group has undertaken over the past 15 years have yielded returns, and are built into our business foundation. The unprecedented scale of investment this time is indispensable to the further growth of our Group. To make our Long-Term Vision of “Become a World Leader in the Non-Ferrous Metals Industry” a reality, we will continue working to maximize our corporate value.

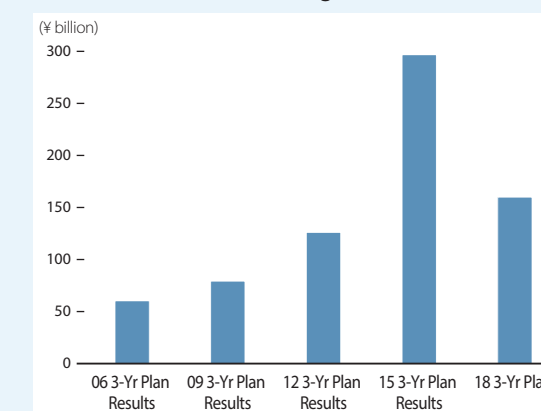
### Capital Expenditure

	FY2007-2009	FY2010-2012	FY2013-2015	FY2016-2018	FY2019-2021
Unit: billion yen	06 3-Yr Plan Results	09 3-Yr Plan Results	12 3-Yr Plan Results	15 3-Yr Plan Results	18 3-Yr Plan
<b>Total Investment</b> (Capital Expenditure + Investment and financing)	199.3	264.6	298.8	457.2	490.0

### Capital Expenditure (3-Yr Plan)



### Investment and Financing





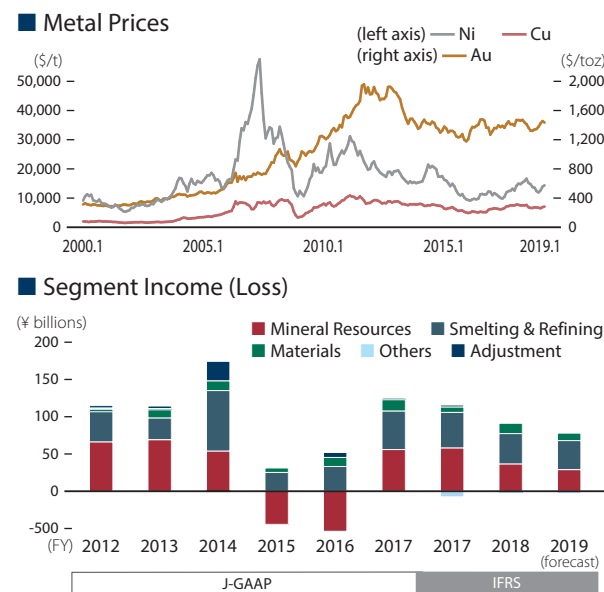
# FY2018 Results and FY2019 Plan

## Review of FY2018 Results

From FY2018, the SMM Group voluntarily adheres to International Financial Reporting Standards (IFRS). Financial figures for the previous fiscal year are also presented in accordance with IFRS for year-on-year comparative analysis.

Despite increased sales of battery materials, consolidated net sales in FY2018 decreased by ¥17.5 billion year-on-year to ¥912.3 billion, mainly due to the sale of the Pogo Gold Mine.

Consolidated profit before tax decreased by ¥18.9 billion year-on-year to ¥89.4 billion, due mainly to deterioration in gross profit and the share of profit (loss) of entities accounted for using equity method. Profit attributable to owners of parent decreased by ¥23.4 billion year-on-year to ¥66.8 billion, due mainly to decreased consolidated profit before tax.



The data used for values shown for fiscal years up to and including FY2017 is based on recurring profit or loss (J-GAAP), while data used for forecasts for FY2018 is based on profit before tax (IFRS).

## Mineral Resources Segment

Segment income decreased year-on-year, due primarily to a decrease in production at our main mines resulting from a drop in the grade of copper ore. Mining operations at the Hishikari Mine remained steady, and the gold content in sold ore was nearly unchanged from the previous fiscal year at 6 t. Production levels at the Morenci Copper Mine (of which the SMM Group holds a 25% interest) in the United States was 430 kt, due mainly to a decline in the grade of copper ore. Production levels at the Cerro Verde Copper Mine (of which the SMM Group holds a 16.8% interest) in Peru was 476 kt, due to a decline in the grade of copper ore. Production levels at the Sierra Gorda Copper Mine (of which the SMM Group holds a 31.5% interest) in Chile was 97 kt despite a temporary drop in the grade of supplied ore, due to improvements in operation capacity stemming from increased yield.

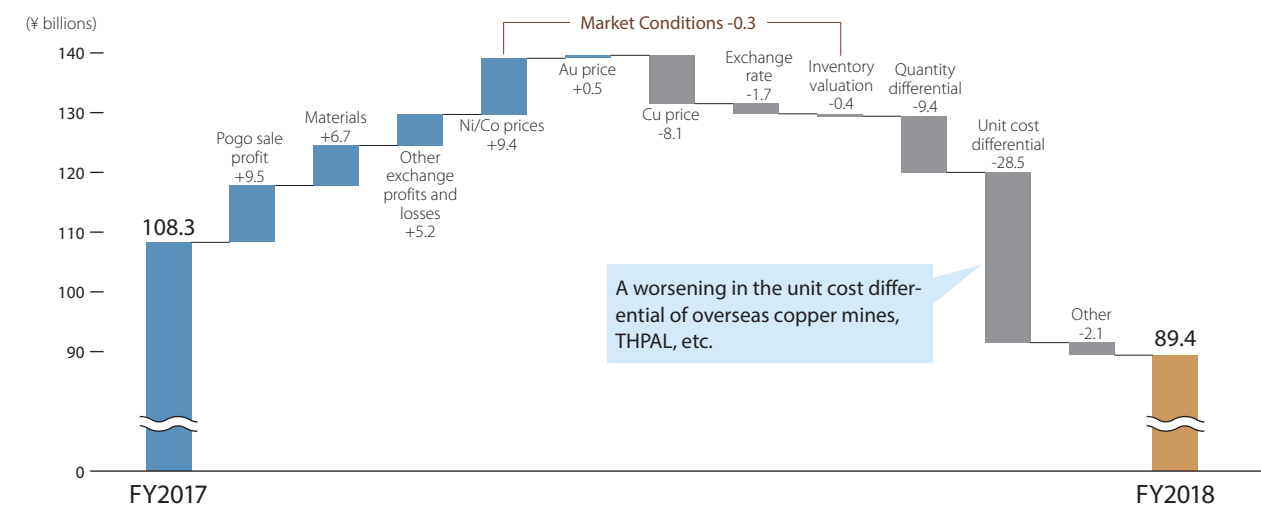
## Smelting & Refining Segment

Although production levels of nickel at Coral Bay Nickel Corporation (CBNC) increased year-on-year, production levels and sales volume of electrolytic nickel declined year-on-year due primarily to equipment problems at Taganito HPAL Nickel Corporation (THPAL). Although production levels and sales volume of copper increased year-on-year, segment income decreased year-on-year due mainly to the decline in electrolytic nickel sales.

## Materials Segment

While customer inventory adjustments continued in crystal materials, segment income increased year-on-year, due mainly to continued robust sales of battery materials against a backdrop of active demand for automotive batteries.

## Analysis of Profit before Tax (FY2017 vs. FY2018)



## FY2019 Plan

We have set a forecast for consolidated operating results for the next fiscal year, taking into account the current price levels of major non-ferrous metals prices to predict future supply and demand, and have made plans for production levels and

sales volumes of major products based on current results. As a result, we forecast net sales of ¥868.0 billion, profit before tax of ¥74.0 billion, and profit attributable to owners of parent of ¥64.0 billion on a consolidated basis.

## Mineral Resources Segment

In copper, we will move ahead with Phase 2 development plans at the Quebrada Blanca Copper Mine, will proceed with debottlenecking as planned at the Sierra Gorda Copper Mine, and will maintain stable operations at other overseas copper mines. In gold, we will continue stable operations at the Hishikari Mine while actively engaging in exploration to extend the life of the mine. We will also make every effort to begin production at the Côté Gold Project in 2021.

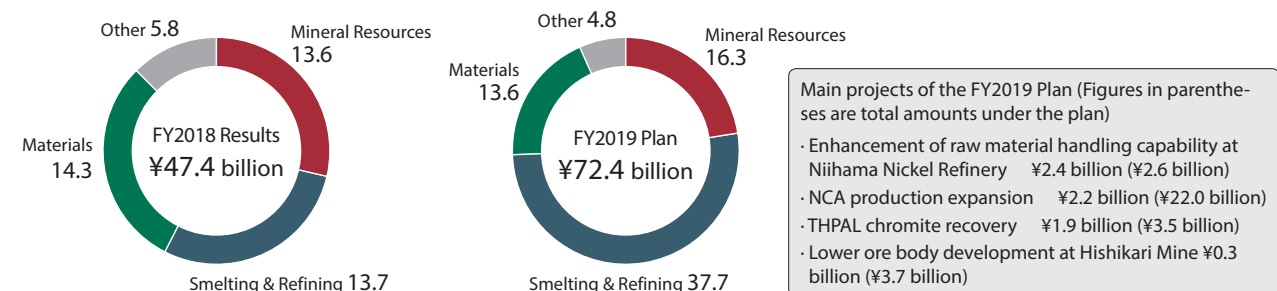
## Smelting & Refining Segment

In copper smelting and refining, we plan production of 420 kt, taking into account scheduled regular plant repair from late October 2019. In nickel smelting and refining, we will implement measures to improve the capacity utilization ratio at THPAL, and will move forward with operations under a full production structure. In by-product recovery, we are aiming for commercial production of chromite in 2020.

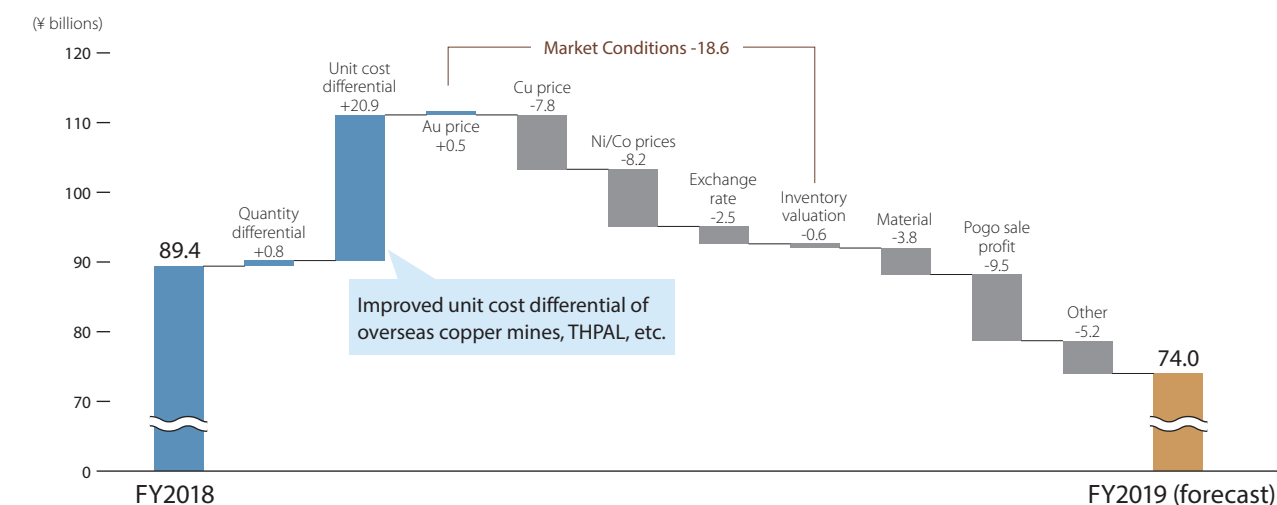
## Materials Segment

We will continue full production of battery materials to meet robust demand against a background of the electrification of automobiles.

## Capital Expenditures (FY2018 Results and FY2019 Plan)



## Analysis of Profit before Tax (FY2018 Results vs. FY2019 Forecast)



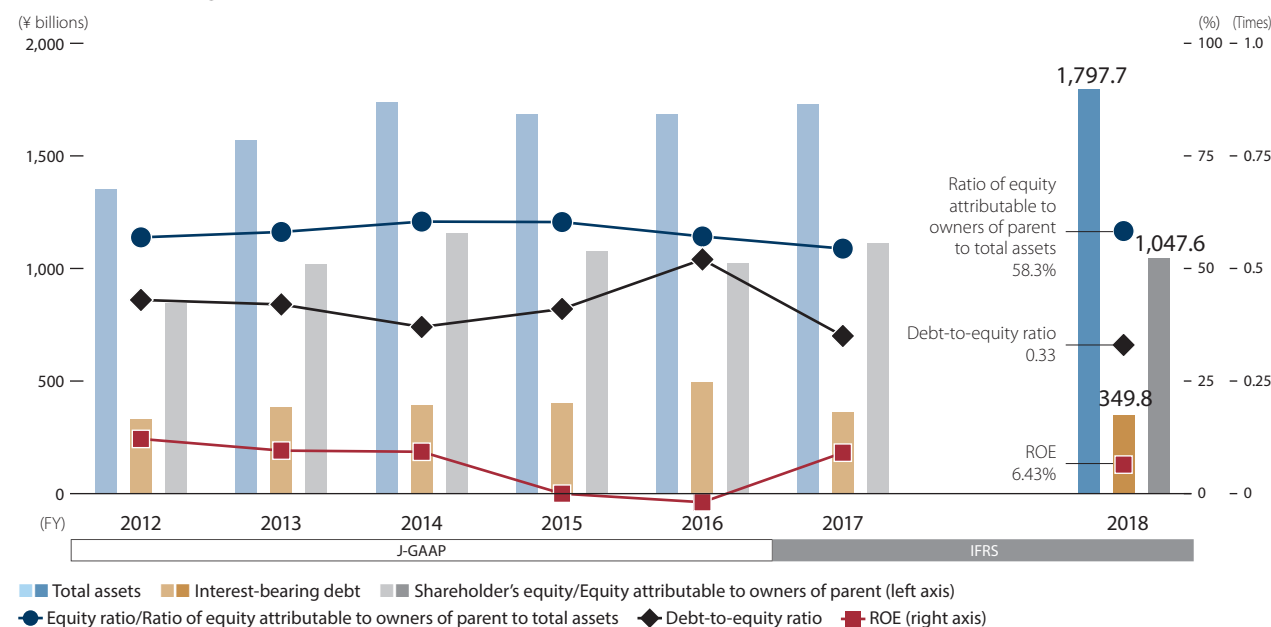
## Financial Position and Financial Strategy

The SMM Group's interest-bearing debt at the end of FY2018 was ¥349.8 billion on a consolidated basis, with a debt-to-equity ratio of 0.33. Our equity ratio was 58.3% on a consolidated basis. With regard to financial soundness, we are maintaining the 50% equity ratio that is a numerical target of our 3-Year Business Plan. Consistency of management is important to our Group, and we believe that executing growth strategies, reinforcing our business base, and steadily turning strategy into profit will lead to improvement of our corporate value. While preparing for medium- to long-term investment and risk and working to always maintain financial soundness, our Group aims to raise ROA and ROE in the medium to long term by improving profitability and asset efficiency.

At the same time, in mining and smelting projects, it is normal for recovery of investment to begin after about five years. While moving forward with such projects, enacting measures

to raise only the ROA or ROE of a given year is difficult by the nature of our business. For that reason, we aim to raise ROA and ROE in the medium to long term. Cash flow in the 2018 3-Year Business Plan is forecast to be a cumulative ¥-110.0 billion over the three years. However, we are working to reinforce our financial standing by strengthening capital efficiency, through means including creation of cash flow by improving the cash conversion cycle (CCC) and cash management systems (CMSs) within the Group. We will prepare for even larger projects and M&A, maintain an equity ratio of 50% and AA- (JCR) credit rating, and steadily enhance our investment capabilities for future business continuity and growth investments. Similarly, by strengthening our financial standing, we will also ready ourselves for changes in the business environment, including in non-ferrous metals markets and exchange rates.

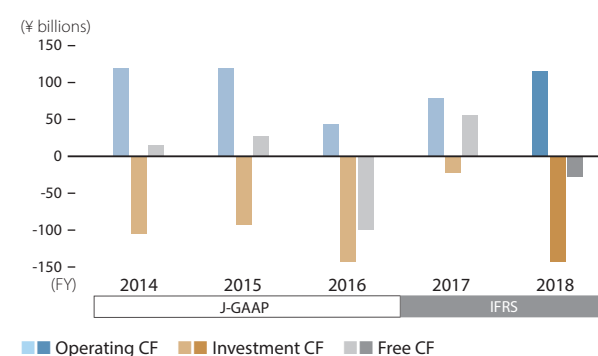
### Financial Strategies



### Approach to Funding

We believe it is necessary to maintain a certain amount of liquid funds on hand based on overall demand for funds such as large-scale overseas mining or processing projects or strategic expansions within the materials business. This is essential from the standpoint of management stabilization. Under that premise, we will procure funding that is favorable in accordance with the use of the funds, and also comprehensively consider the outlook for non-ferrous metal prices and currency exchange, and interest rate markets.

### Cash Flow Trends



### Investment

The SMM Group works to enhance its competitiveness in both raw materials procurement and manufacturing, pursuing measures to meet changes in the business environment. With regard to cost competitiveness in smelting and refining in particular, we have set a target of becoming world-class, ranking in at least the top one-third of companies. Due to factors including supply and demand, it is not always possible to purchase the raw material ores for non-ferrous metals in the necessary quantities or at economical prices. Natural disasters and other factors can also greatly impact prices. For that reason, it is our policy to raise our ratio of procurement from our own mines, securing stable sources of raw materials by developing and acquiring interests in overseas mines. In

mine development and acquisition of interests, we select investments carefully through strict assessments leveraging our long experience and knowledge of exploration and mine valuation, and fully taking country risk into account, to avoid additional expenditures or increases in mining costs arising from uncertainty. Under the 2018 3-Year Business Plan, we will actively carry out strategic investments, with cumulative capital expenditure, investment, and financing of ¥490.0 billion planned over the three years. While nearly all of the effects will not be seen until the next 2021 3-Year Business Plan and later, it is possible for us to maintain a sound financial standing during the 2018 3-Year Business Plan.

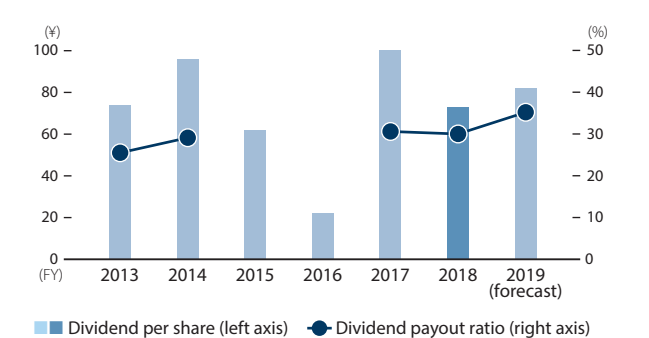
### Major Projects

Project name	FY2015	FY2016	FY2017	FY2018	FY2019 and later
<b>Mineral Resources</b>					
Cu Sierra Gorda Copper Mine	Start commercial production	110-kt production structure		Start debottlenecking	
Cu Morenci Copper Mine	Start expanded full-scale production	Acquisition of additional interest (12%→25%)			
Cu Cerro Verde Copper Mine		Start expanded full-scale production			
Ni Solomon			Decision to withdraw		
Au Côté			Acquisition of interest and start feasibility study	Completion of feasibility study	Start production
<b>Smelting &amp; Refining</b>					
Ni THPAL			36-kt production structure		
Ni Pomalaa Project			Start definitive feasibility study		Decision on whether to invest
Ni Harima Refinery nickel sulfate		Second line launch		49-kt production structure	
<b>Materials</b>					
Battery materials		NCA 1,850-t structure	NCA 3,550-t structure	NCA 4,550-t structure	
Crystal materials (LT/LN)	Decision on production increase	300-k piece production structure		(400-k piece production structure)	

### Return to Shareholders

In our dividend policy, we decide on a balance of distribution of surplus and internal reserves through comprehensive consideration of our business performance, dividend payout ratio, the future business outlook, the soundness of our financial standing, and other factors. The number of times that we distribute dividends during each fiscal year is based on business conditions. As our financial strategy in the 2018 3-Year Business Plan, we will continually preserve the soundness of our financial standing and maintain a consolidated equity ratio of 50% or higher. In the distribution of surplus in the fiscal year, we raised the consolidated dividend payout ratio to 35% or higher, under a wish by top management to increase returns to shareholders as much as possible even amid a decline in sales and profit before tax. While free cash flow will become significantly negative under the 2018 3-Year Business Plan, taking into account business scale and profitability, we believe that we can continue to maintain a healthy financial standing even while undertaking strategic investments.

### Dividends



SMM consolidated its common stock at a rate of one share for every two shares with October 1, 2017 as the effective date. Dividends per share trends for FY2017 and previous fiscal years shown in the graph above have been adjusted to reflect levels after said share consolidation.

# Mineral Resources Business



**Hiroshi Asahi**  
Director,  
Managing Executive Officer,  
General Manager of Mineral  
Resources Division



## The Business Environment and a Review of the 2015 3-Year Business Plan

Although U.S.-China trade friction and other factors have brought short-term uncertainties to non-ferrous metals market, we forecast continued growth on a global scale as the world economy expands in the medium to long term. In supply and demand of non-ferrous metals, there are expectations for continuing tight conditions for the time being and a rising trend in mineral resource prices over the medium term. We must solidly catch up with this growth and seek out new development projects. At the same time, finding new mine

development projects is not easy, and country risks such as resource nationalism are on the rise as well, making investment decisions increasingly difficult.

In the 2015 3-Year Business Plan, we named full production at the Sierra Gorda Copper Mine and the acquisition of new gold mine interests as top priorities. We recorded an impairment loss due to production troubles at the Sierra Gorda Copper Mine immediately after the start of the 3-Year Business Plan, but achieved full production in FY2018.

### Progress and Issues in Our Top Priorities

		FY2015	FY2016	FY2017	FY2018	FY2019 and later
Cu	Sierra Gorda Copper Mine	Start commercial production	110-kt production structure		Start debottlenecking	
Cu	Morenci Copper Mine	Start expanded full-scale production	Acquisition of additional interest (12%→25%)			
Cu	Cerro Verde Copper Mine		Start expanded full-scale production			
Ni	Solomon Exploration Project			Decision to withdraw		
Au	Côté Gold Project		Acquisition of interest and start feasibility study		Completion of feasibility study	Start production

**Full-scale production at the Sierra Gorda Copper Mine**  
**Acquisition of new gold mine interests**

**Sierra Gorda Copper Mine**  
**Production slump and rise in costs.**

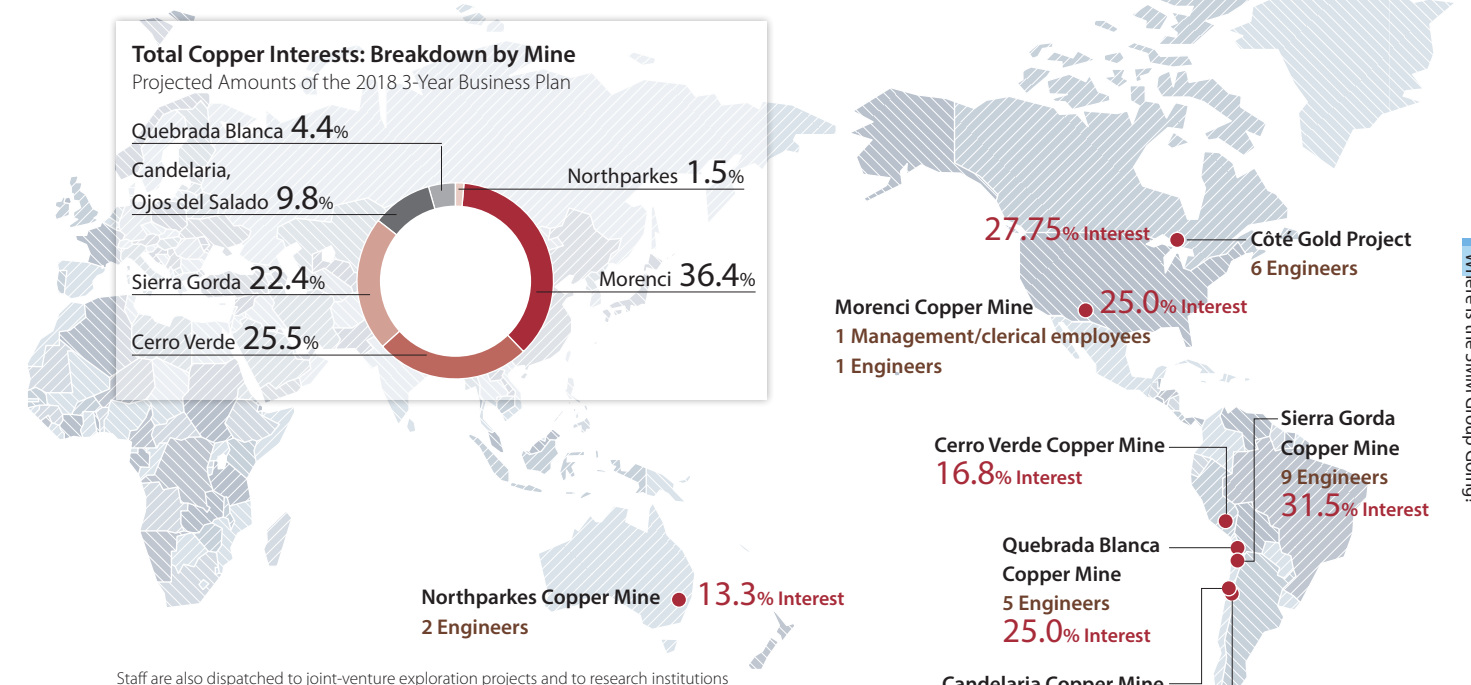
- Large impairment loss incurred
- Implementation of debottlenecking

- Expand Cerro Verde Copper Mine
- Acquire additional interest in Morenci Copper Mine
- Acquire interest in Quebrada Blanca Copper Mine
- Enter into Côté Gold Project
- Transfer Pogo Gold Mine interest

Furthermore, we significantly expanded production capacity in the copper business overall, including the expansion of the Cerro Verde Copper Mine, the acquisition of additional interests in the Morenci Copper Mine, and the acquisition of interests in the Quebrada Blanca Copper Mine. With regard to gold, we began participating in the Côté Gold Project in Canada, while disposing of the Pogo Gold Mine that we had operated in the US since 2006.

Mineral reserves decrease as a mine is excavated; accordingly, it is necessary to always acquire new interests. With regard to copper in particular, we must continue to hold world-class mines that can be excavated on a large scale, consistently, and at low cost. Amid these circumstances, we believe that it was the three years of the 2015 3-Year Business Plan that drove the leadership of top management's to strategic acquisition of interests.

### Staff Dispatched to Mines (as of July 1, 2019)



## The Role of the Mineral Resources Business in Business Collaboration

With the discovery of superior mines getting more difficult and an upsurge in resource nationalism, the relationships of trust that we have built with our partner companies over the years are leading to the acquisition of new resource interests for the SMM Group. Collaboration among our business divisions is another strength of our Group. The Mineral Resources Division has the role of supplying raw material ore and other

items to the Non-Ferrous Metals Division, achieving cost control and reduction of risk. The Division also leverages the diverse geological knowledge of resource engineers to support the Non-Ferrous Metals Division, the Materials Division, and the customers of these by providing information regarding the amounts and properties of mineral ore resources other than the non-ferrous metals produced by our Group.



## Mineral Resources Business

## Strengthen the Growth Foundation

## Quebrada Blanca 2 (QB2)

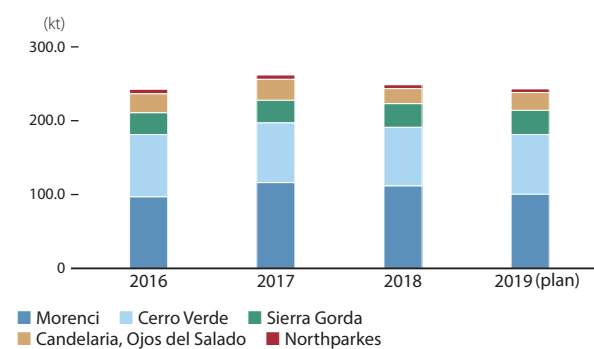
- Copper mine development project in Chile. Entry decided in December 2018 (Planned start of production: 2021. Mine life: Approximately 28 years. Average annual copper production volume: Approximately 240 kt)
- Capital contribution: Teck Resources Limited 60%, SMM 25%, Sumitomo Corporation 5%, other 10%
- Planned investment: US\$4.7 billion (100% of the project)

## Investment in Growth

## Promotion of the Quebrada Blanca 2 Project

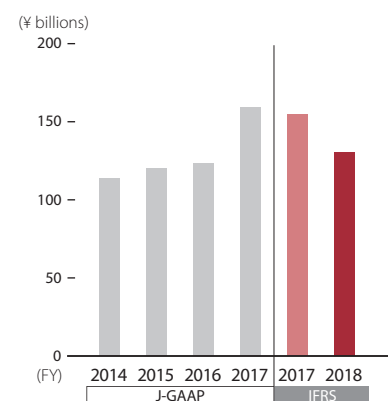
In December 2018, we entered into an agreement to acquire a 30% portion of the Quebrada Blanca Copper Mine held by the major Canadian resource company Teck Resources Limited, with 25% of that acquired by Sumitomo Metal Mining Co., Ltd. and 5% by Sumitomo Corporation. Production will be possible at the copper mine until the latter part of the 2040s under the current development plan (QB2), and abundant mineral resource reserves also lie below the mineral deposits targeted for development. For that reason, we will engage in long-range investigation with Teck Resources concerning large-scale expansion of production capacity and plans to extend the mine's life. The planned investment amount is US\$4.7 billion for 100% of the project. Our Group paid US\$800 million for the entry fee and US\$200 million in construction expenses in FY2018. Through the acquisition of interests, we expect to achieve the 300 kt/year copper production capacity from interests noted in our Long-Term Vision. Based on our reconsideration of the Sierra Gorda Project, we will put forth all our power and proceed accordingly to plan.

## Copper Production from Interests

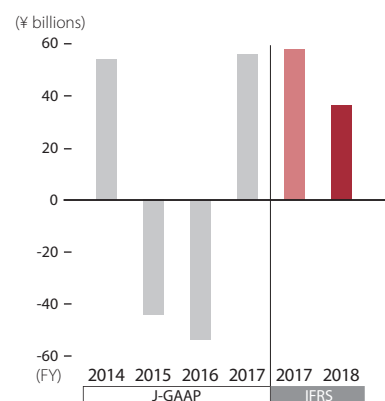


Location: About 240 km southeast of Iquique, capital of Iquique Province, Chile

## Segment Net Sales

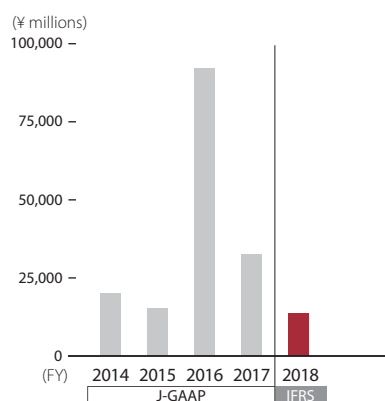


## Segment Income



Although we continued stable operation at major mines, segment income declined from the previous fiscal year due to factors such as lower production caused by a decline in the quality of copper contained in ore.

## Capital Expenditure



Capital expenditures in FY2018 include primarily capital expenditures for development at the Hishikari Mine and capital expenditures for exploitation and production at overseas mines.

## Stabilization of Operations at the Sierra Gorda Copper Mine

The Sierra Gorda Copper Mine in Chile was unable to achieve planned equipment capacity and planned production of copper volume and molybdenum volume, due to cost overruns at the construction stage and equipment troubles at initial launch.

With a decline in copper prices also having an impact, we recorded a second impairment loss.

However, at present we have been able to secure production volume according to plan by improving operating rate and actual yields, through operational improvements and strengthening of management during scheduled operation halts.

Furthermore, we are currently implementing debottlenecking measures aimed at boosting processing volume, which, if executed according to plan, will raise ore processing volume from the current 110 kt/day to 130 kt/day by 2020.

We expect to achieve profitability with stable cash flow through the increase in production output accompanying this increase in processing volume. We expect to reach high-quality mineral deposits in 2020, with copper production of about 200 kt/year in 2021, or nearly double the current level.

## Promotion of the Côté Gold Project

In the Côté Gold Project in Canada, in June 2017 we concluded the acquisition of 30% of the 92.5% interest held by Canadian gold producer IAMGOLD Corporation (IMG), an amount equivalent to 27.75% of the project overall. The life of the mine is about 16 years, with recoverable gold reserves of 198 tonnes. The interests that we acquired include periphery mining zones and are located within the Abitibi area in eastern Canada, one of the world's leading gold producing regions, so we believe that additional resource amounts may

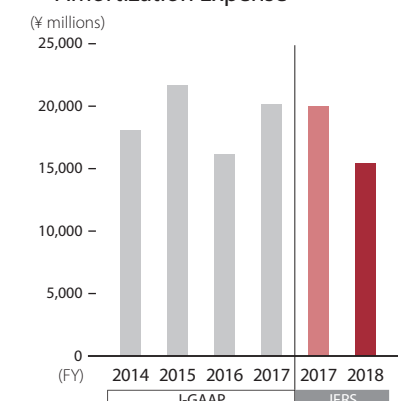
be added through future exploration. We will begin construction in the second half of 2019 and undertake the construction phase through collective effort with the aim of beginning production in FY2021. We have dispatched a nine-person project study team from our company, and are tackling detailed design and risk reduction measures. We also aim to use the acquisition of the interest as an opportunity to solidify our partnership with IMG in the gold business.



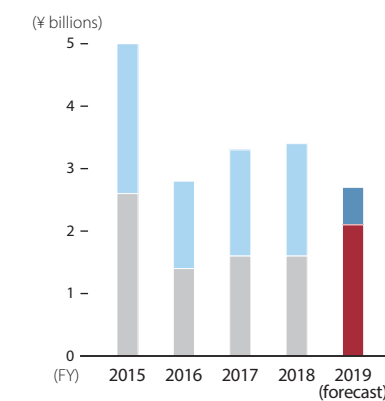
Location: About 120 km southwest of Timmins in Ontario Province, Canada

FY2017	FY2018	FY2019	FY2020	FY2021
PFS	FS	Detailed design	Construction	Commissioning & Ramp up

## Depreciation and Amortization Expense



## Exploration Costs



We will continue exploration in FY2019, with a focus on gold. Expenses for exploration in areas around operating mines will be at the same level as the previous year, but the amount is lower due to the transfer of interest in the Pogo Gold Mine.

## Metal Reserves at the Hishikari Mine

(gold: t)	2014	2015	2016	2017	2018
	170	170	169	169	167

Reserves of gold at the Hishikari Mine, calculated as of December 31, 2018, are 167 tonnes (down 2 tons from last fiscal year).

Reserves of gold in minable ore according to JIS standards

## Mineral Resources Business

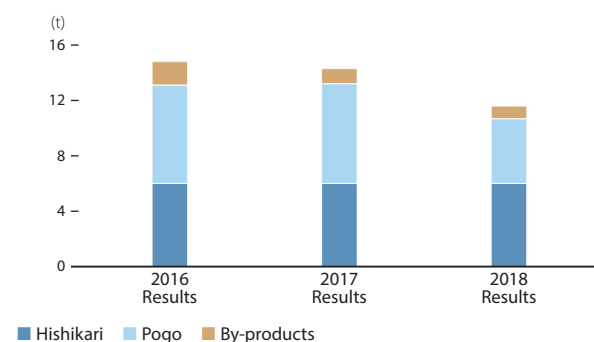
## Hishikari Mine: Establishment of a Foundation for Long-Term Stable Operation

Located in northern Kagoshima Prefecture, the Hishikari Mine has produced 242.2 tons of gold (as of the end of March 2019) since it opened in 1985. Worldwide, the amount of gold contained in gold ore is said to be 3 to 5 grams per ton. The Hishikari Mine is characterized by its high quality with 30 to 40 grams of gold per ton, or about 10 times the average. The mine continues to produce about 6 tons of gold per year. As of the end of December 2018, the mine has recoverable reserves of 167 tons. While maintaining stable operation under a 6 t/year gold production structure, we aim to secure ore reserves through the active continuation of exploration aimed at extending the life of the mine. The Hishikari Mine is the only gold mine in Japan at which large-scale operations are carried out on a commercial basis. We will also continue using the mine as a place for human resources development where resource engineers can accumulate the skills and experience needed for mine operation.

## Exploration Plans and Acquisition of New Interests

The possibility of success in exploration is said to be on the decline worldwide. However, exploration experts in the SMM Group are taking actions to enhance the chance of success through the strict selection of projects. We actively carry out investigation of gold- and copper-related exploration and participation projects, mainly in the Pacific Rim, and conduct exploration both on our own and through joint ventures, with a focus on high-potential regions. To enhance the possibility of fast transition to production, we also take an interest

## ■ Au Production (SMM's interests)



Location: Isa, Kagoshima Prefecture

in participation in exploration projects that deliver results at the initial stage. The difficulty of exploration is such that only about three in a thousand projects succeed, but we hope to engage in thorough target management and deliver results. With regard to the acquisition of new interests, in addition to the minor participation in large-scale projects that we have undertaken in the past, we are pursuing negotiations that also consider medium-scale mine participation where we can act as operator.

## ■ Business Strategy and Strategic Topics

## Transfer of the Pogo Gold Mine (Replacement of Assets)

The Pogo Gold Mine in Alaska, US, has been in operation since 2006, with the SMM Group acting as operator from 2009. In August 2018, however, we reached an agreement to transfer the entirety of our interest to major Australian gold producer Northern Star Resources Limited. Our Long-Term Vision calls for participation in new mine operations through the acquisition of superior interests. At the Côté Gold Project, in which we acquired an interest in 2017, there is no change

in our business development policy of seeking to operate it ourselves, and we have participated from the stage of considering business profitability and commercialization with the aim of full production from 2021. By acquiring further superior gold interests while continuing to work toward activation through the replacement of assets, we aim to be "The World Leader in the Non-Ferrous Metals Industry," a target we have set in our Long-Term Vision.

## SMM Human Resources Active around the World

The SMM Group's engineers became active around the world with our acquisition of interest in the Morenci Copper Mine in the US in 1986. Since then, by exposing engineers to experience through rotation among sites where we participate in business, we have accumulated skills and knowledge con-

cerning mining operations at international standards. When troubles occurred at the launch of the Sierra Gorda Copper Mine, we dispatched a group of expert engineers who are contributing to the stabilization the operations.

## ■ ESG Case Study

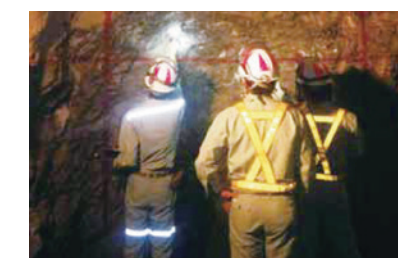
## The Appropriate Management of Tailings Dams (Slag Accumulation Sites)

Sustainable mine development and operation require efforts to minimize impacts on the environment. The rubble, slag, and sediment generated from a mine are collected in accumulation sites known as tailings dams. The SMM Group enacts safety measures at 42 tailing dam locations<sup>1</sup> that we manage in Japan. Of the 10 locations to which the "special conditions" in the Ministry of Economy, Trade and Industry's new technical guidelines apply, measures were deemed necessary for a total of five facilities at the Okuchi Mine (Kagoshima, closed in 1977) and Kounomai Mine (Hokkaido, closed in 1973). Roughly ¥4.5 billion was invested on stabilization work at these mines from FY2014 to FY2015. Furthermore, even at tailings dams to which "special conditions" do not apply, seismic resistance is being reevaluated for midscale seismic vibrations based on the previous technical guidelines. In FY2018, we completed stabilization work at the six locations that were determined to be insufficient.

1. We revised the number of tailing dams that require management, based on the study of past materials and local investigations.

## SMM's Mining School for Cultivating Mining Engineers

The continuation of mining operations requires that we develop engineers who are equipped with advanced and specialized knowledge and experience, and that we hand down these skills. Hishikari Mine, one of our main business sites, plays an important role as a training place for cultivating mining engineers and passing on advanced technological capabilities. The Mineral Resources Division assigns new mining and geology graduates to Hishikari Mine, and assigns new employees in mineral processing to the Niihama Research Laboratories in Ehime Prefecture, for on-the-job training (OJT) in specialized skills and the fundamentals of mine operation technologies. After graduating from the Mining School, the employees are sent to work at existing overseas mines, or in identification and development of new projects, resulting in engineers who are capable of performing at locations all over the world.

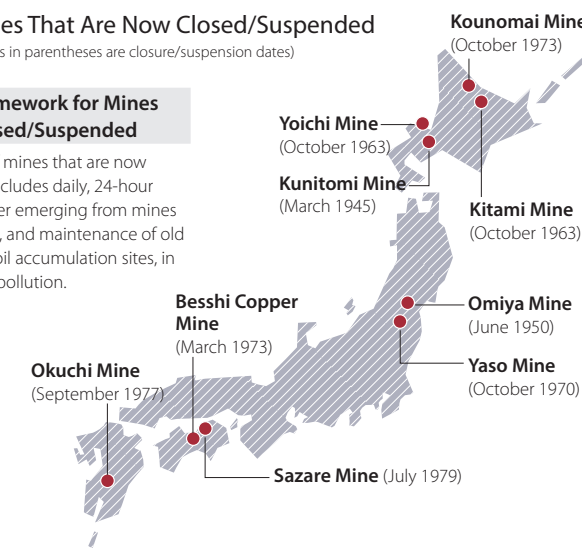


New employees receiving training inside the mine

■ Domestic Mines That Are Now Closed/Suspended  
(as of July 1, 2019, dates in parentheses are closure/suspension dates)

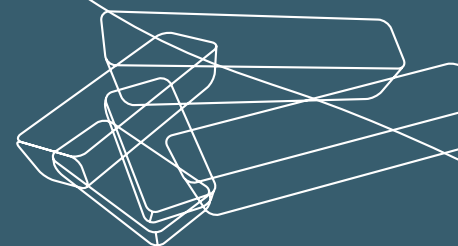
## Management Framework for Mines That Are Now Closed/Suspended

SMM's management of mines that are now closed or suspended includes daily, 24-hour treatment of wastewater emerging from mines and accumulation sites, and maintenance of old mines and slag and spoil accumulation sites, in order to prevent mine pollution.





# Smelting & Refining Business



**Nobuhiro Matsumoto**  
Director,  
Executive Officer,  
General Manager of  
Non-Ferrous Metals Division



## The Business Environment and a Review of the 2015 3-Year Business Plan

### Business Environment

Looking at the supply and demand of non-ferrous metals, despite concerns over a downswing in demand due to impacts from U.S.-China trade friction, supply shortages of copper and nickel are expected to continue at present.

Regarding copper, there are concerns over a decline in demand in China, which accounts for about half of global demand. However, as supply volume is also on a downswing due to factors including China's strengthened restrictions on scrap imports, reduced operating capacity at major Chilean

refineries, and suspension of operation at major Indian refineries, supply shortages are forecast to continue from 2018 into 2019.

For nickel, too, supply shortages are forecast to continue from 2018 into 2019, due to the steady growth in EV demand and the strength of stainless steel production in China, which accounts for about half of global demand for nickel. On the supply side, new projects are actively underway in Indonesia and elsewhere to produce the low-grade products known as

Class 2, including the nickel pig iron (NPI) and ferronickel used as raw materials in stainless steel. However, new projects to produce the high-grade products known as Class 1, which are raw materials used in special steels and EVs, are extremely limited, and demand continues to exceed supply.

### A Review of the 2015 3-Year Business Plan

In our 2015 3-Year Business Plan, we moved forward with initiatives under three top priorities: (1) Expanding Taganito HPAL Nickel Corporation (THPAL), (2) Advancing growth strategies using peripheral HPAL technologies, and (3) Enhancing the competitiveness of the copper smelting business.

First, regarding expansion at THPAL, we made low-cost investments in FY2017 to raise our annual production capacity of mixed nickel-cobalt sulfide (MS), a nickel intermediate product, by 20% from 30 kt (based on nickel content; the same applies below) to 36 kt, which, combined with the 24 kt annual production capacity at Coral Bay Nickel Corporation (CBNC), creates a 60 kt/year production structure. FY2018 output at THPAL stalled at over 27 kt due to the occurrence of equipment troubles, but through measures to strengthen and enforce preventive maintenance, we have returned to planned production volume from FY2019.

Next, in peripheral HPAL technologies, we are working to commercialize the recovery of scandium oxide and chromite. With regard to scandium oxide, we have constructed a plant to recover scandium from ore and manufacture intermediate products at THPAL, and a plant to process the intermediates into finished products at Harima Refinery, with commercial production starting in January 2019. Scandium is a rare earth element produced in small quantities, and demand for the element has been limited by its high cost. However, by enabling a stable supply, new applications for solid oxide fuel cells and aluminum alloys are expected to expand. Solid oxide fuel cells are expected to significantly reduce CO<sub>2</sub> emissions due to their high-power generation efficiency. In 2020, we aim to begin commercial production of chromite, a raw material used in products such as stainless steel containing chromium, and are now constructing a recovery plant at THPAL.

Finally, in enhancing the competitiveness of the copper smelting business, we have established a stable production structure under full-load operations, first achieving production of 450 kt of electrolytic copper in FY2016 and again in FY2018. Along with this, we promoted the processing of valuable secondary materials and reduction of costs to reinforce our competitiveness.

### Progress and Issues in Our Top Priorities

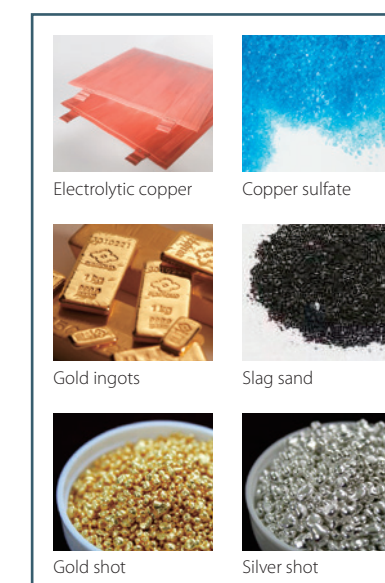
		FY2015	FY2016	FY2017	FY2018	FY2019 and later
Ni	Taganito HPAL Nickel Corporation			36-kt production structuring		
Ni	Pomalaa Project			Start definitive feasibility study		Decision on whether to invest
Ni	Harima Refinery Nickel sulfate		Second line launch	49-kt production structure		

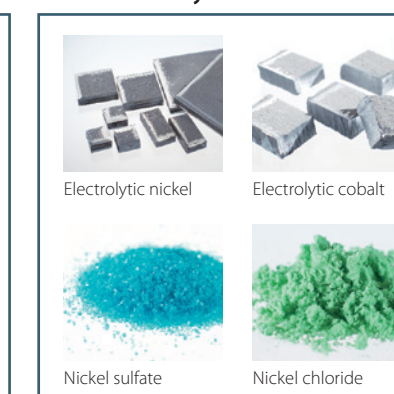
Expansion of Taganito HPAL Nickel Corporation	Development of growth strategy by peripheral technologies of HPAL	Enhancement of copper smelting and refining business competitiveness
<ul style="list-style-type: none"> <li>Taganito HPAL Nickel Corporation, complete 36-kt production structure</li> <li>Stabilization is an issue</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of scandium and chromite recovery commercialization</li> </ul>	<ul style="list-style-type: none"> <li>Achievement of electrolytic copper production of 450 kt</li> <li>Complete 49-kt nickel sulfate production structure in Harima</li> <li>Begin DFS of Pomalaa Project</li> <li>Starting demonstration tests of recycling of lithium-ion rechargeable batteries</li> </ul>

### SMM Group Refineries and Their Main Products

#### Toyo Smelter & Refinery



#### Niihama Nickel Refinery and Harima Refinery



#### Hyuga Smelting Co., Ltd.



#### Shisaka Smelting Co., Ltd.



#### Coral Bay Nickel Corporation Taganito HPAL Nickel Corporation





## Smelting & Refining Business

### ■ The Role of the Smelting & Refining Business in 3-Business Collaboration

The Smelting & Refining Business smelts and refines raw materials procured from mines in which we hold interests or from other overseas mining companies, creating high-purity copper, nickel, cobalt, gold, and other metals which we then sell. Among these metals, demand is growing year by year for nickel and cobalt, which are used in cathode materials in EV and other automobile secondary batteries. The SMM Group has established operations using the HPAL process, which can efficiently recover nickel and cobalt from previously-unused low-grade oxide ore, achieving the world's first commercial success in 2005 at CBNC. Subsequently, we launched THPAL as the second site for recovery of nickel and cobalt using the HPAL process and enhanced production capacity at the Niihama Nickel Refinery, as we worked to expand our production scale.

The SMM Group stably procures nickel ore through means including investment in overseas nickel mining companies,

and recovers nickel and cobalt through our technological capabilities in the HPAL process, Matte Chlorine Leaching Electrowinning (MCLE), and other processes. While stably supplying these materials to existing users, we also supply nickel sulfate and other products to materials business divisions. Few companies in the world have this sort of supply chain that spans the upstream to the downstream; with it, we are building a unique business model. We are earning the trust of customers by stably supplying products with a clear supply chain that enables use with confidence, and are working to achieve sustainable growth while creating synergies among our businesses.

Moreover, through our sharing of strategies among business divisions as we exchange information on a daily basis, there have been cases in which dealings with the customers of other business divisions have developed into new dealings for the Non-Ferrous Metals Division.

### ■ Investment in Growth

#### Expansion of Our Nickel Business

Our Long-Term Vision calls for annual nickel production capacity of 150 kt. To bring us closer to achievement of this target, we are moving forward with the Pomalaa Project in Indonesia. We plan to complete the definitive feasibility study by the end of the current fiscal year, then make a decision on

whether to invest. As an overview, we plan annual nickel production capacity of about 40 kt, with a total investment value of several billion U.S. dollars for 100% of the project, and launch of operations in the mid 2020s.

As an initiative to construct a sustainable, material-cycle society, we are developing recycling technology for lithium-ion secondary batteries. We developed a process that recovers and recycles cobalt, along with the copper and nickel that had previously been recoverable, from used lithium-ion secondary batteries or from intermediate products generated in the battery manufacturing process. We began operation of a pilot plant in March 2019 to verify this new recycling process and scale up the process to actual equipment. By recycling valuable metals contained in lithium-ion secondary batteries, we expect that we can further contribute to resource recycling to address worldwide depletion of resources.

#### Reinforcement and Improvement of Production Capabilities

##### Establishment of a Stable Full Production Structure at THPAL

Although THPAL increased its production capacity by 20% in FY2017, output fell short of plans in FY2018 due to the frequent occurrence of equipment troubles and the time required to procure the parts involved. By strengthening the management structure for spare parts and by increasing the number of managed items in daily inspection and in semi-annual scheduled operation halts from the standpoint of strengthening preventive maintenance, we are experiencing no major trouble at present and operation is proceeding as planned. Looking ahead, we aim to pursue the use of information and communication technology (ICT) as we establish a stable full production system.

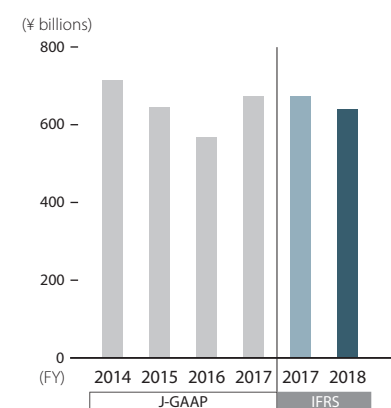
##### Toyo Smelter & Refinery: Establishment of a Stable Production System and the Pursuit of Earning Capacity

Located in Saijo, Ehime Prefecture, the Toyo Smelter & Refinery is a large-scale coastal smelter where we have established world-class smelting and refining technology, production management technology, and environmental preservation technology. It maintains a stable production system with annual electrolytic copper production capacity of 450 kt, and will strengthen its earning capacity through further streamlining and cost reductions. In FY2019, the smelter projects a 34 kt decline in production from the previous fiscal year to 420 kt, due to a planned one-month regular operation halt from late October 2019. While working to increase the facility's operating ratio through planned upkeep, renewal, and preventive maintenance of facilities, we will establish a stable production structure and strengthen profitability through increased collection of valuable secondary materials.

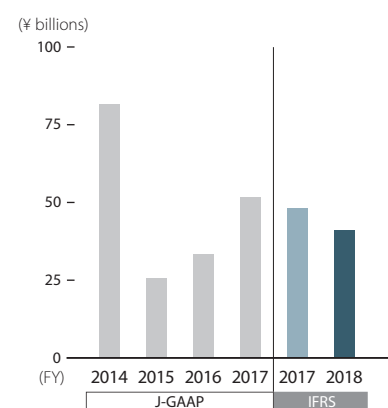


THPAL Plant

#### ■ Segment Net Sales

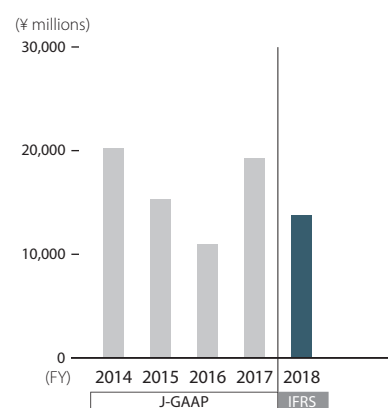


#### ■ Segment Income



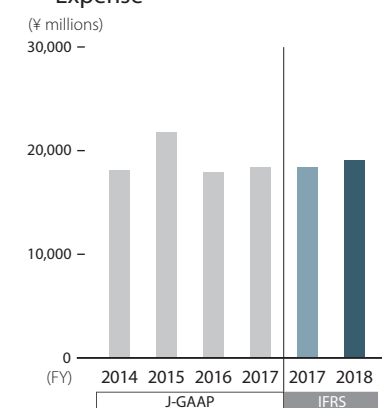
Although production and sales volume of copper increased year-on-year, segment income declined from the previous fiscal year due to factors including a decline in sales of electrolytic nickel.

#### ■ Capital Expenditure

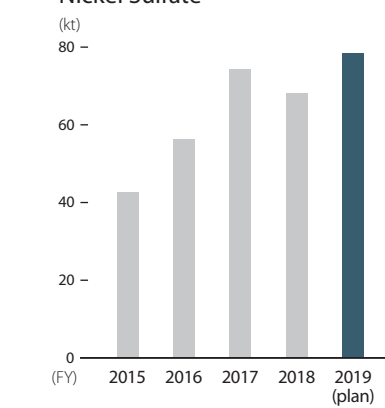


Capital expenditures in FY2018 include those related to upkeep and renewal of facilities at refineries and chromite recovery at THPAL.

#### ■ Depreciation and Amortization Expense



#### ■ Production Volume of Nickel Sulfate



#### ■ TC/RC (benchmark)



## Smelting &amp; Refining Business

## Niihama Nickel Refinery and Harima Refinery: Continuous Implementation of Productivity Improvements and Cost Reductions

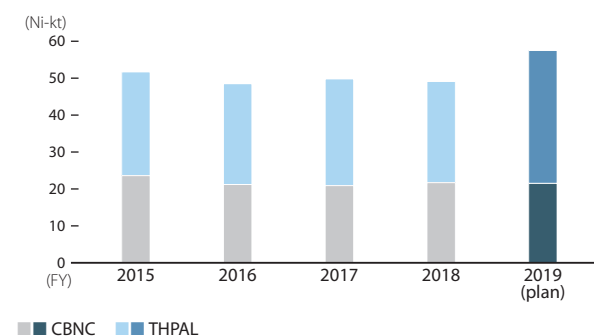
Located in Niihama, Ehime Prefecture, Niihama Nickel Refinery is the only plant in Japan producing electrolytic nickel and electrolytic cobalt, and is distinguished by its adoption of the extremely efficient production method called MCLE. Niihama Nickel Refinery produces electrolytic nickel, electrolytic cobalt, nickel sulfate, and other products using MS produced at CBNC and THPAL in the Philippines, and using the raw material called matte procured from locations including Indonesia. Nickel sulfate is produced at Harima Refinery in Hyogo Prefecture as well as Niihama Nickel Refinery. Because of the impact of lower production at THPAL, which produces the MS used as a raw material, production of electrolytic nickel in FY2018 fell short of the planned 65 kt at under 57 kt, and combined production of nickel sulfate at both plants was 68 kt, against planned production of 73 kt. Plans for FY2019 call for close to full production, with electrolytic nickel at 63 kt and nickel sulfate at 78 kt.

At both plants, we will move forward with further improvements in productivity and reductions in costs.

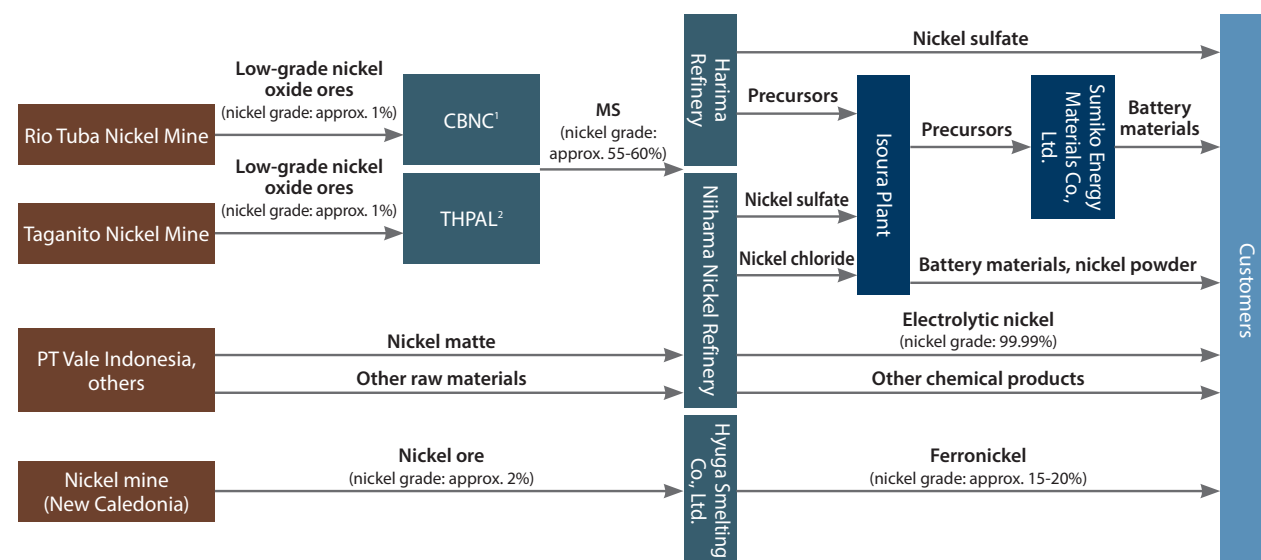
## Maximization of HPAL By-Product Recovery

The nickel ore used as a raw material at CBNC and THPAL contains trace amounts of scandium and chromite, which we are working to recover. Commercial production of scandium oxide began in January 2019. For chromite, we constructed a pilot plant at CBNC in September 2013 and carried out test operations, followed by sample production in September 2014. At present, we aim to begin commercial production in 2020 and are constructing a recovery plant at THPAL. Broad demand exists for chromite as a raw material in stainless steel and specialty steels. By efficiently recovering such by-products, the SMM Group is moving to enhance the value of our HPAL technology. We will also further enhance our company's presence by supplying new products for the stainless steel industry, the main purchaser of the products of our nickel business.

## MS Production Volume



## The Nickel Supply Chain



1. Coral Bay Nickel Corporation (CBNC): Shareholders: Sumitomo Metal Mining Co., Ltd. (54%); Mitsui & Co., Ltd. (18%); Sojitz Corp. (18%); Nickel Asia Corporation (10%). Head Office: Rio Tuba, Bataraza, Palawan Province, Philippines.

2. Taganito HPAL Nickel Corporation (THPAL): Shareholders: Sumitomo Metal Mining Co., Ltd. (75%); Mitsui & Co., Ltd. (15%); Nickel Asia Corporation (10%). Head Office: Taganito, Surigao del Norte Province, Philippines.

## ESG Case Study

## Utilizing Low-Grade Ore

The HPAL process adopted at CBNC and THPAL is able to recover metals such as nickel and cobalt from low-grade nickel oxide ore conventionally not subject to smelting and refining, and is noted for its effective utilization of unused resources. As demand for certain metals increases amid the shift to EVs, the ability to safely and stably secure these metals through our supply chain is a strength of the SMM Group.



Low-grade nickel oxide ore for THPAL

## Taganito HPAL Named as the Philippines' Largest Exporter (Mineral Sector)

THPAL was given the Top Exporter Award for Mineral Sector in 2017 at the National Export Congress of the Philippine Department of Trade and Industry. THPAL was also given the Hall of Fame Award for its status as the Top Export Performer in its sector for the past three consecutive years. The National Export Congress is held to raise the level of export industries in the Philippines and to promote development. Along with THPAL, 23 companies in the Philippines were commended for

their export performance in 2017. The award ceremony took place within the National Export Congress that was held at the Philippine International Convention Center on December 7, 2018.



Top Export Performer (Mineral Sector) trophy

## CBNC Wins Presidential Mineral Industry Environmental Award

CBNC was awarded the 2018 Presidential Mineral Industry Environmental Award (PMIEA) from the Philippine Department of Environment and Natural Resources (DENR), an award that the company has received for five consecutive years since 2014. The award was in the mineral processing category, and was determined based on a comprehensive evaluation of factors including environmental management, safety management, protection of the local environment, and contribution to local communities. Together with the PMIEA, CBNC was simultaneously given the Best Mining Forest Award and the Safest Mineral Processing - Extraction Award.

THPAL received the second-place award that follows the PMIEA.



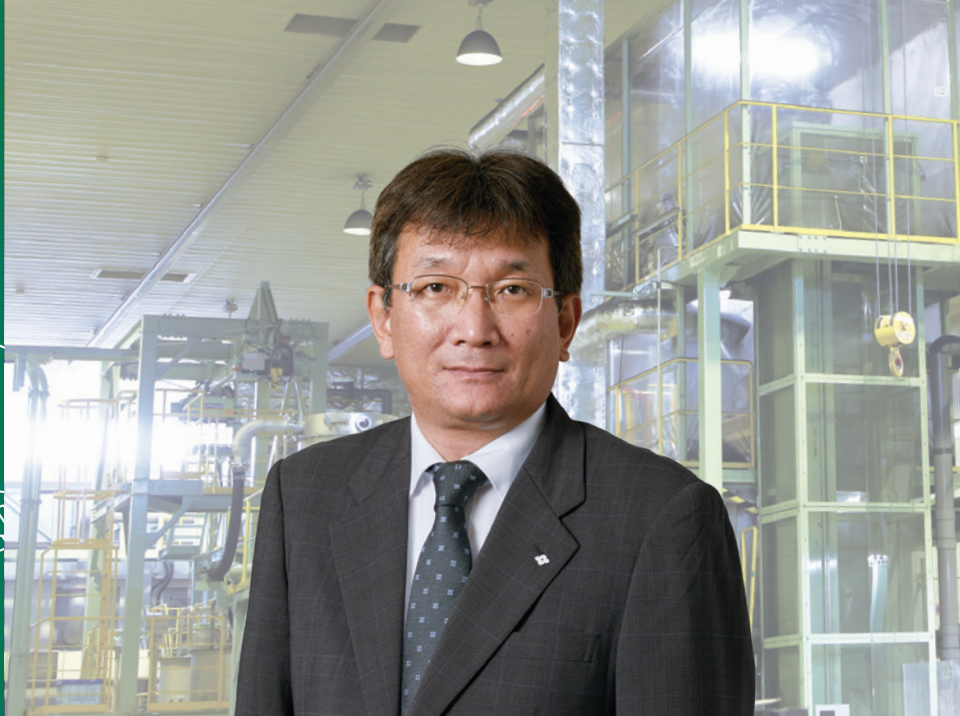
CBNC: Commemorative photograph upon receipt of the PMIEA



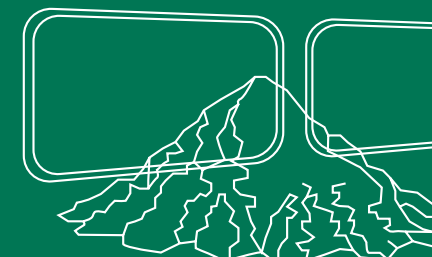
## Materials Business Battery Materials Business



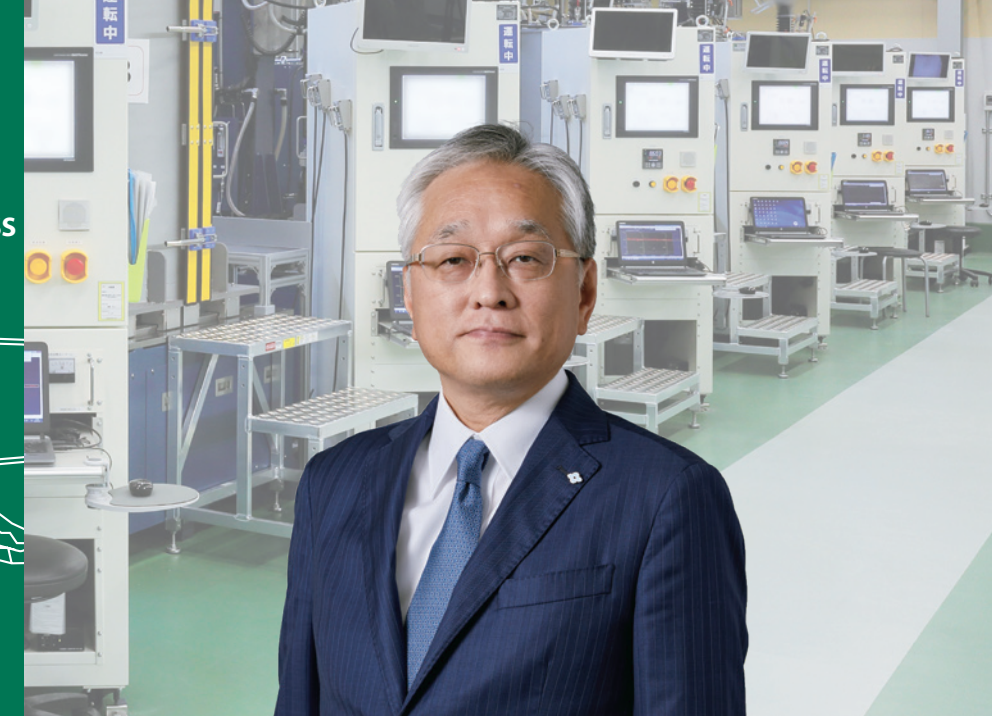
**Isao Abe**  
Executive Officer,  
General Manager of  
Battery Materials Division



## Advanced Materials Business



**Fumikazu Oshita**  
Executive Officer,  
General Manager of  
Advanced Materials Division



Effective April 1, 2019, we split up our Materials Division, establishing a Battery Materials Division as an organization capable of promptly and flexibly responding to the rapid expansion of the battery business, and an Advanced Materials Division as an organization to achieve sustainable growth in advanced materials sectors, particularly energy, environment, and information and communications.

### ■ The Business Environment and a Review of the 2015 3-Year Business Plan

The digitization of society is progressing rapidly, particularly the advance of IoT, the shift to CASE in automobiles, and the increasing speed of communications as seen in 5G. Backed by these trends, non-ferrous metal materials, from basic materials such as copper and nickel to rare metals, will play increasingly active roles.

The main tide in the world of automobiles is the shift to electric power, from the engine-based automobiles of the past to hybrid and electric vehicles. This is a major business opportunity for the cathode materials that we handle, yet it also means that many competitors will appear. We must maximize our advantage as the first mover and, to survive under competition, must speedily develop strategies. The Battery Materials Division, launched this year as an organization covering only battery cathode materials, will enhance our sensitivity to changes in this business area and will take action with agility.

The Advanced Materials Division handles materials that are indispensable in the shift to electric and digital in fields including communications. However, these fields are undergoing rapid change. While working to maximize our existing profits, we will achieve sustainable growth by nurturing our next businesses and by creating and incubating new businesses. During our 2015 3-Year Business Plan, we greatly increased production of NCAs, a battery cathode material for automobiles, and at the end of FY2018, the last year of the plan, completed a production structure of 4,550 t/month. We are continuing full production in line with expansion of the market, and believe that we have achieved a scale that exerts a presence in the market.

In the field of crystal materials, although we made additional investments in LT/LN for SAW filters, these have not contributed to profits due to weak demand.

### ■ Progress and Issues in Our Top Priorities

	FY2015	FY2016	FY2017	FY2018	FY2019 and later
Battery materials		NCA 1,850-t structure	NCA 3,550-t structure	NCA 4,550-t structure	
Crystal materials (LT/LN)	Decision on production increase	300-k piece production structure		(400-k piece production structure)	

**Profit contribution from expanded battery material and LT/LN production**

**Sustainable innovation and adaptation of next-generation products**

**Complete 4,550 t/month NCA production structure**

**Increase LT/LN production structure (partially postponed)**

- No contribution to profits yet due to continued fall in demand

- Develop nickel oxide powder for fuel cell electrodes
- Acquire shares of silicon carbide (SiC) development company
- Withdraw from lead frame business

### ■ Technical Strengths of the Materials Business

“Seeds” and “needs” are important to our Materials Business. The technological “seeds” of our Group are what allow us to meet the demands of markets and customers. We believe that our Materials Business has strengths in pulverization technology and crystallization technology, primarily in metals. While maintaining a backbone of such technology, we are strengthening initiatives by which our sales managers clarify the needs of customers through communication, after which we engage in development. Through collaboration, our

Group’s three businesses of Mineral Resources, Smelting & Refining, and Materials will share information about markets and prioritize the assessment of customer activity. While coordinating closely within the company, the Materials Business will build relationships of trust with customers that purchase materials, will assess trends, and will discern the timing for investments in new products and production increases.



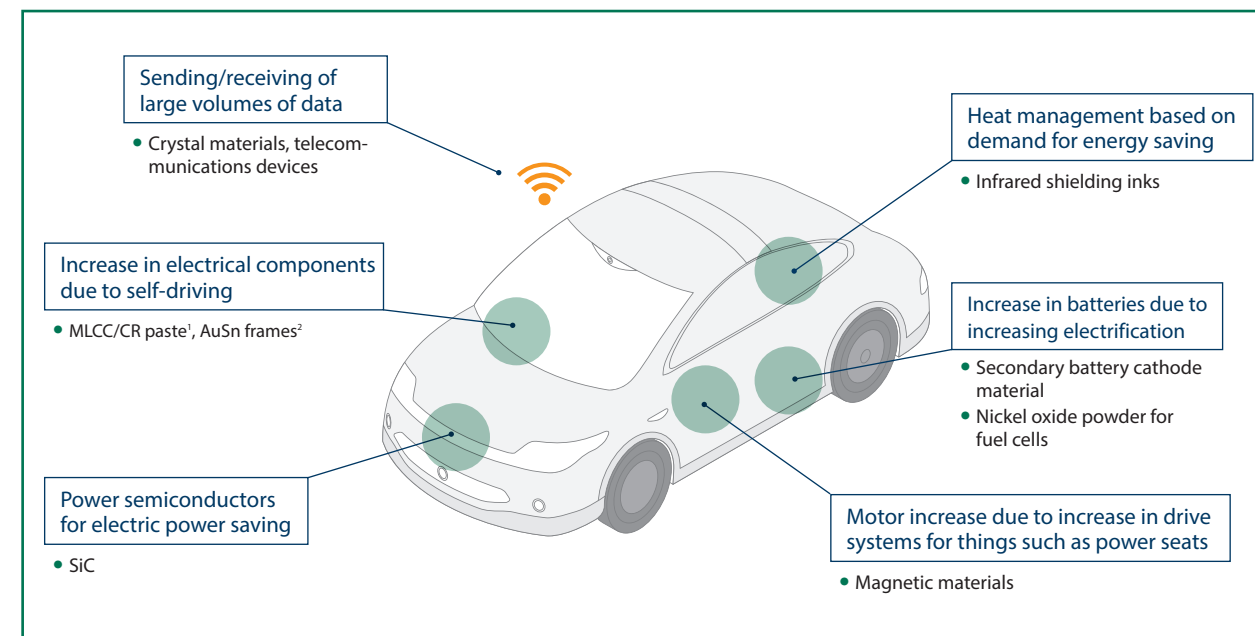
## Materials Business

### Strategic Topic

#### Expansion of Business Opportunities under the Advance of CASE

The progress of digital society has created opportunities for the growth of the SMM Group's products in the wide-ranging automobile industry. We will further increase points of contact with customers for various components so that we can highlight the technologies and materials of our Group. As the

business environment undergoes rapid change and materials that are demanded change every moment too, the SMM Group will continue to create new products in the domains of energy, environment, and information communications.

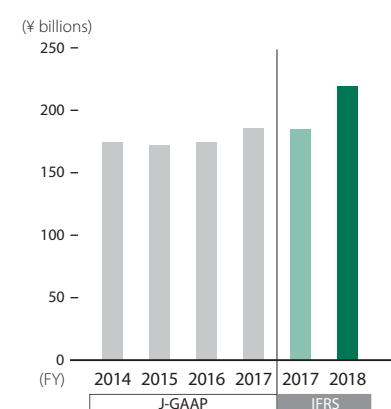


1. MLCC/CR paste: Paste for multilayer ceramic capacitors/chip resistors  
2. AuSn frame: Gold-tin alloy solder material

#### SMM Products in Daily Life

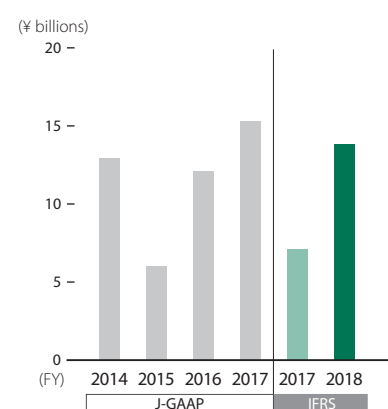


#### Segment Net Sales



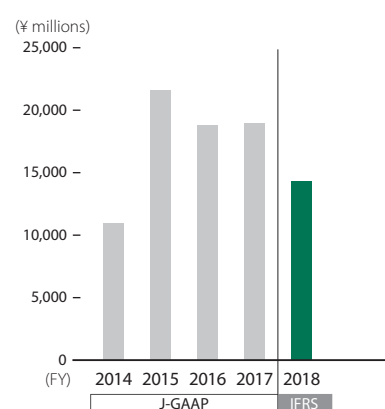
In sales of battery materials, we recorded all-time high shipment volumes against a background of robust demand.

#### Segment Income



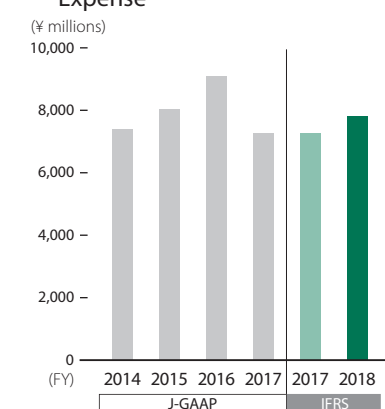
Despite ongoing inventory adjustments by customers in crystal materials, segment income grew from the previous fiscal year due to factors such as the lack of the impairment loss on property, plant and equipment that was recorded in the previous fiscal year.

#### Capital Expenditure

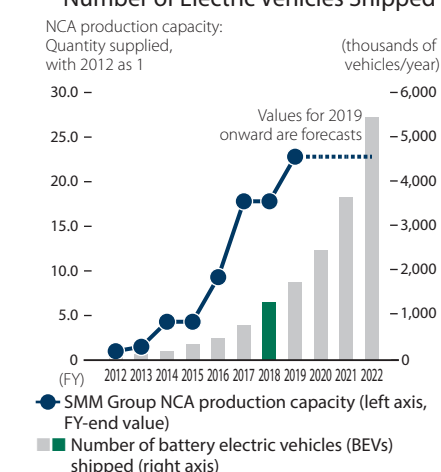


We are increasing the capacity of our battery material production equipment.

#### Depreciation and Amortization Expense



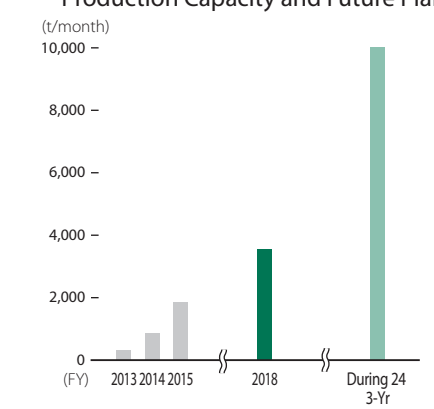
#### NCA Production Capacity and Number of Electric Vehicles Shipped



Demand for automobile batteries is forecast to continue to grow significantly. SMM is increasing production of NCA, a cathode material, in accordance with this growth.

Source of EV shipped units: B3 Report

#### Growth of Cathode Materials Production Capacity and Future Plans



## Materials Business

## Battery Materials Business

## ■ Investment in Growth

## Increasing Production Capacity of Automobile Secondary Battery Cathode Materials

During the 2015 3-Year Business Plan, our Battery Materials Business grew significantly. Our Group has a track record of continued stable and large-volume production of cathode materials with the high level of quality demanded for automobile secondary batteries. In addition to pricing that leverages economies of scale, it is important that we continue to hold competitive strengths in various aspects.

Demand for automobile secondary batteries is expanding rapidly with the advancing electrification of automobiles, and the business environment is becoming increasingly dynamic. In the fields of household appliances and tools, too, there is a growing trend toward high-capacity batteries. In response to expanding markets, we will boost production capacity with appropriate timing and with an eye on customer trends, and aim to establish a total 10 kt/month production system for cathode materials during the 2024 3-Year Business Plan.

## ■ Strategic Topic

## Development of a New Recycling Process for Used Lithium-Ion Batteries, and Start of Pilot Plant Operation

There is growing competition to acquire the nickel, cobalt, and other metal resources used in battery materials, and securing and providing stable supplies of these resources is becoming an issue. In July 2017, the SMM Group began recovering and recycling the copper and nickel contained in lithium-ion secondary batteries, leveraging processes at the Toyo Smelter & Refinery and Niihama Nickel Refinery. However, recovery of cobalt remained a problem.

We recently developed a new recycling process that recovers and recycles cobalt, along with copper and nickel, from used lithium-ion secondary batteries and from intermediate products generated in the battery manufacturing process.

Through a pyrometallurgical smelting process separate from existing processes, we perform batch removal of impurities contained in lithium-ion secondary batteries, and selectively recover nickel, cobalt, and copper as an alloy. We then dissolve and refine the alloy through a hydrometallurgical refining process, and recycle the nickel and cobalt as battery materials and the copper as electrolytic copper. We constructed a pilot plant with pyrometallurgical smelting and hydrometallurgical refining processes in Niihama, Ehime Prefecture to verify this new recycling process and scale up the process to actual equipment, and launched operation in March 2019.

## Advanced Materials Business

## ■ Investment in Growth

## Responding to Growing Demand for Crystal Materials (LT/LN) Aimed at the Expansion of 5G and the IoT

SAW filters, SAW duplexers, and other SAW devices are used in communications devices as filters that prevent noise and crosstalk in voice and data communications in smartphones

and other devices. Lithium tantalate (LT) and lithium niobate (LN) are used as materials in the SAW filters installed in these devices.

Although the crystal materials business strengthened its production capacity during the 2015 3-Year Business Plan, declines in both production and sales are forecast for FY2019 due to a global downswing in the smartphone market. In the medium to long term, we forecast an increase in LT/LN substrate demand due to expansion of SAW filter usage accompanying the advance of 5G from 2020 onward.

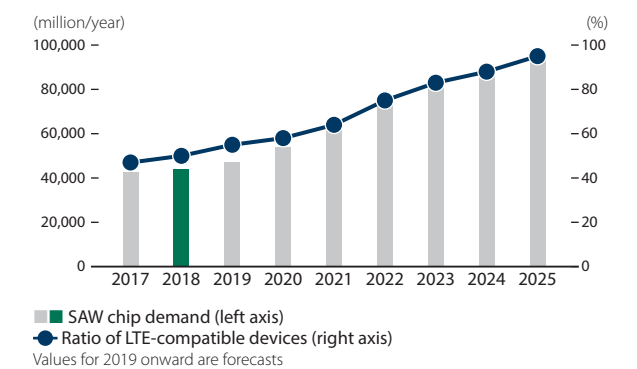
## ■ Strategic Topic

## Bringing Silicon Carbide (SiC) for Automobiles to Market

SiC is a next-generation semiconductor material used in products including power semiconductors that govern electric power. Compared to the silicon material that mainly used today, the use of SiC enables a reduction in energy loss and significant miniaturization. This has led to its use in wide-ranging fields including electric vehicles, trains, power transmission equipment, solar power conditioners, manufacturing equipment, servers, and more, with demand expected to further grow significantly.

In October 2017, we acquired 51% of SICOXS CORPORATION, a developer of SiC substrates. The company's bonding technology significantly reduces the high cost that

## ■ SAW Chip Demand and Ratio of LTE-Compatible Devices



is an issue in SiC substrate manufacturing. We are moving forward with development for mass production, aiming for consumer markets in 2020 and automobiles in 2025.



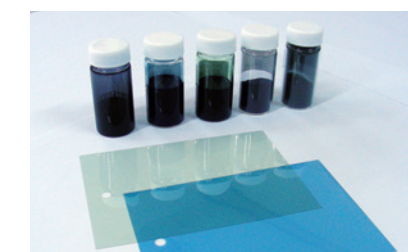
Silicon carbide wafers

## ■ ESG Case Study

## Near-Infrared Ray Shielding Materials (Functional Inks)

The near-infrared ray shielding materials handled by our Group combine both high transmittance of visible light and a strong absorption capacity for near-infrared rays. Used as window materials, the materials effectively cut the energy of the near-infrared rays in sunlight, retaining brightness while significantly suppressing rise in interior temperature and thereby exhibiting a high energy conservation effect. The materials have a high heat-shielding ability compared with conventional products from our Group and deliver an equivalent thermal shielding effect with a smaller amount being added, yielding a strong cost advantage. Through blending with polycarbonate and other plastic materials, and as surface coatings for glass and PET films, the materials confer superior heat shield properties to base materials while retaining high transparency. Our product lineup consists of a dispersion liquid for coating applications such as thermal barrier window

films for automobiles and construction materials (a nanoparticle dispersion in liquid form), and a dispersion powder for kneading applications mixed with resins such as thermal barrier resin sheets (a compound of nanoparticles and resin in powder form). We will move ahead with development to achieve even higher functionality.



Functional inks

## Research & Development



### ■ Recognition of the Business Environment and a Review of the 2015 3-Year Business Plan

While the current business environment is an unclear one, given the advance of CASE in the automobile industry and the adoption of 5G in the communications industry, it is certain that the SMM Group's business will grow in the medium to long term. Robust growth is also projected for non-ferrous base metals as the global economy advances, but ore grades are declining and processing is becoming more difficult, making the development of new mineral processing technologies and recycling technologies a pressing matter.

In our 2015 3-Year Business Plan, we focused resources on technological development in business divisions that contribute to our Group's growth strategies. Our Group refers to the commercialization by business divisions of technology developed by the Technology Division as "transfer." Our transfer achievement rate (number of cases of transfer/total number of themes) was 70% in FY2017 and 100% in FY2018, which made a considerable contribution to our current business.

### ■ Research and Development Strategy and Structure

#### Core Technologies and Basic Technologies

The SMM Group advances research and development with the Technology Division at the core. Under the 2015 3-Year Business Plan, in the selection and concentration that we performed in our core businesses of Mineral Resources, Smelting & Refining, and Materials, we carried out priority allocation of research and development costs and positioned smelting and refining process technology, powder synthesis and surface treatment technology, crystal growth and processing technology, and exploration, mining, and mineral processing technology as core technologies. We have also set analysis technology, computer aided engineering and analysis technology, and information and communications technology (ICT) as fundamental technologies, and carried out focused development on clearly defined technology domains.

Our Group has four research and development sites around the country, each of which performs specific roles. Niihama Research Laboratories is positioned as a smelting- and refining-related process laboratory that further raises the level of the smelting and refining technology that is the foun-

dation of our Group's technology. The Battery Research Laboratories, also located in the city of Niihama, performs development of high-performance cathode materials for lithium-ion secondary batteries. The Materials Laboratories performs research and development of crystal materials and paste materials. The Ichikawa Research Center is specialized in basic research that bears the function of sowing the seeds of the Group's materials development, centered on basic research into functional powders.

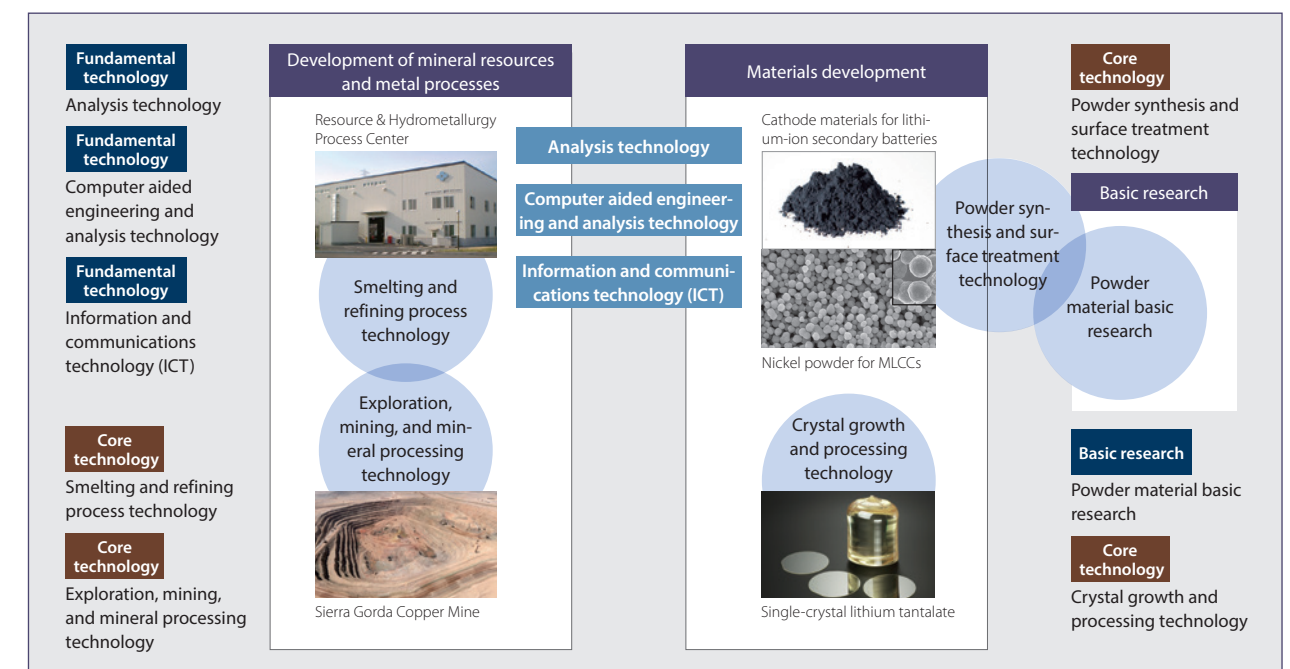
Our Group considers patents as an indicator of a company's technological capabilities, and at the same time holds expectations for the effect of patents as a barrier to entry. We hold over 2,000 such rights, including those for design. In the past we made applications for patents with number of patents as a goal, but as a patent strategy that contributes to our businesses under the 2018 3-Year Business Plan, we will work toward patents that contribute to new businesses and products, and toward the construction of a patent network to protect our existing business.

### Key Research Themes

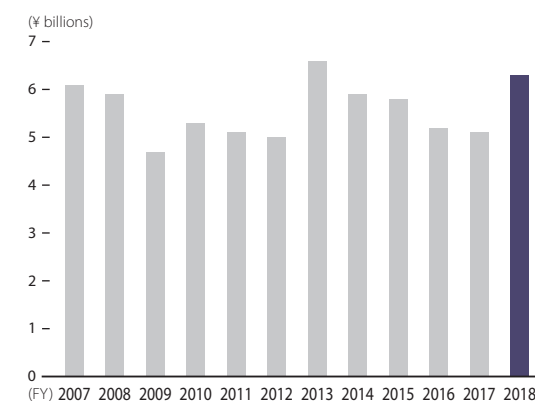
Under our 2018 3-Year Business Plan, we will increase the ratio of basic research expenses under medium- to long-term themes aimed at the creation of new businesses and new products. Our budget in FY2018 calls for 70% research expenditures that contribute to business divisions and 30% basic research expenses, but in FY2021, the final year of the plan, we plan to raise basic research expenses to about 50%.

Regarding the selection of themes, we are moving forward with a partnership with Tohoku University for the co-creation of a vision, and with the Foresight Project, which deliberates the future 10 to 30 years ahead to create innovative new businesses and products that are not an extension of the Group's past businesses.

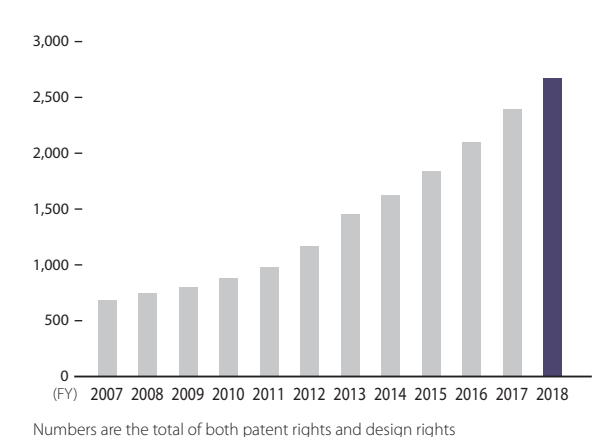
### ■ Research and Development by the SMM Group



### ■ Research and Development Expenses



### ■ Number of Patents Held by the SMM Group





## Research & Development

### ■ Investment in Growth

#### Going Far Beyond the 2015 3-Year Business Plan in Research and Development Expenses

In the 2018 3-Year Business Plan, our expenses for 3-year cumulative research and development will be 20% greater than under the 2015 3-Year Business Plan. While also covering areas close to our businesses, such as the improvement of resource mineral processing technologies, our research and development will allocate focused expenses on growth businesses and the creation of new businesses and products.

The growth businesses that we will target are cathode materials for automotive lithium-ion secondary batteries

(NMC, NCA), crystal materials for SAW filters (LT/LN), and substrate materials for power devices (SiC). In new businesses and new products, we will focus on fields including automotive, environment, energy, and communications. Three major themes that we will tackle in our research and development are (1) Creation of new businesses with a view toward 10 years ahead, (2) Development of products that customers will prefer and that will stay ahead of competitors, and (3) Development and proposal of new processes.

#### Progress in the Smelting & Refining Business (Development of Processes) and Materials Business (Development of Materials)

In the battery materials field under the 2015 3-Year Business Plan, the Materials Business (development of materials) advanced research and development of cathode materials for higher-performance lithium-ion secondary batteries and the development of cathode materials for solid-state lithium-ion batteries. In the crystal materials field, it undertook cost reductions ahead of commoditization, and achieved greater productivity by increasing crystal length and improving crystal growth and processing yield. In response to the needs of new users, the business established large-diameter LT crystal growth technology.

In the Smelting & Refining Business (development of processes), to secure battery raw materials (Ni/Co) the Materials Business established a chemical products manufacturing process specialized for battery materials that we use in-house. It also enabled the utilization of new nickel and cobalt raw materials and developed new processes for strengthening its ability to treat raw materials. Regarding lithium-ion battery recycling, we developed a process for cobalt recovery, which had been an issue, and migrated to pilot testing.

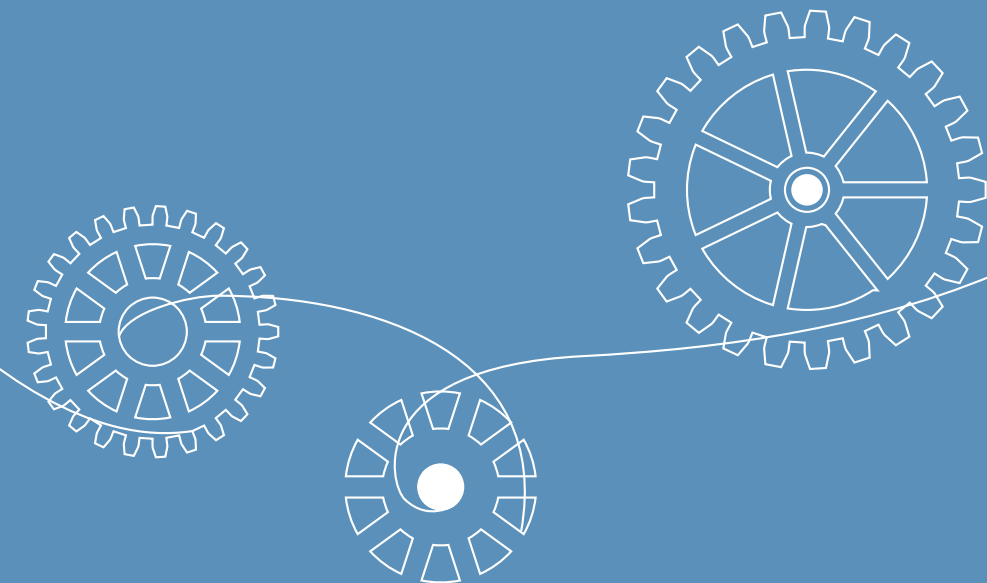
### ■ ESG Case Study

#### Open Innovation and Cultivating Personnel

For five years since April 2018, SMM has operated a joint research division within the Institute of Multidisciplinary Research for Advanced Materials at Tohoku University. Under a structure of industry-academia collaboration, we will engage in joint research and human resources development for the sustainable development of the domestic non-ferrous metal smelting and refining industry. Similarly, we are engaged in ongoing joint research and human resources development with Kyushu University. While contributing to greater international competitiveness of Japan's non-ferrous metal smelting and refining industry, we will develop human resources through opportunities for joint research, will highlight the appeal of the industry through seminars, plant tours,

and other activities in collaboration with other non-ferrous metal smelting and refining companies, and will work to develop and secure the human resources who will shoulder the next generation of the industry. Additionally, in the area of new materials development, we are establishing a framework for joint development with external institutions and cultivating a flexible environment through initiatives such as posting SMM researchers at university research labs. Going forward, we will continue to expand our collaboration with external partners in areas such as open innovation, and focus on personnel development with a medium- to long-term perspective.

# A Foundation Supporting the Creation of Value



# Corporate Governance

## Basic Approach

SMM views corporate governance as a disciplinary framework both for maximizing the corporate value of the SMM Group and for ensuring sound management practices. As such, it is one of the most important management issues.

SMM has established the following SMM Group Corporate Philosophy based on the Sumitomo Business Spirit.

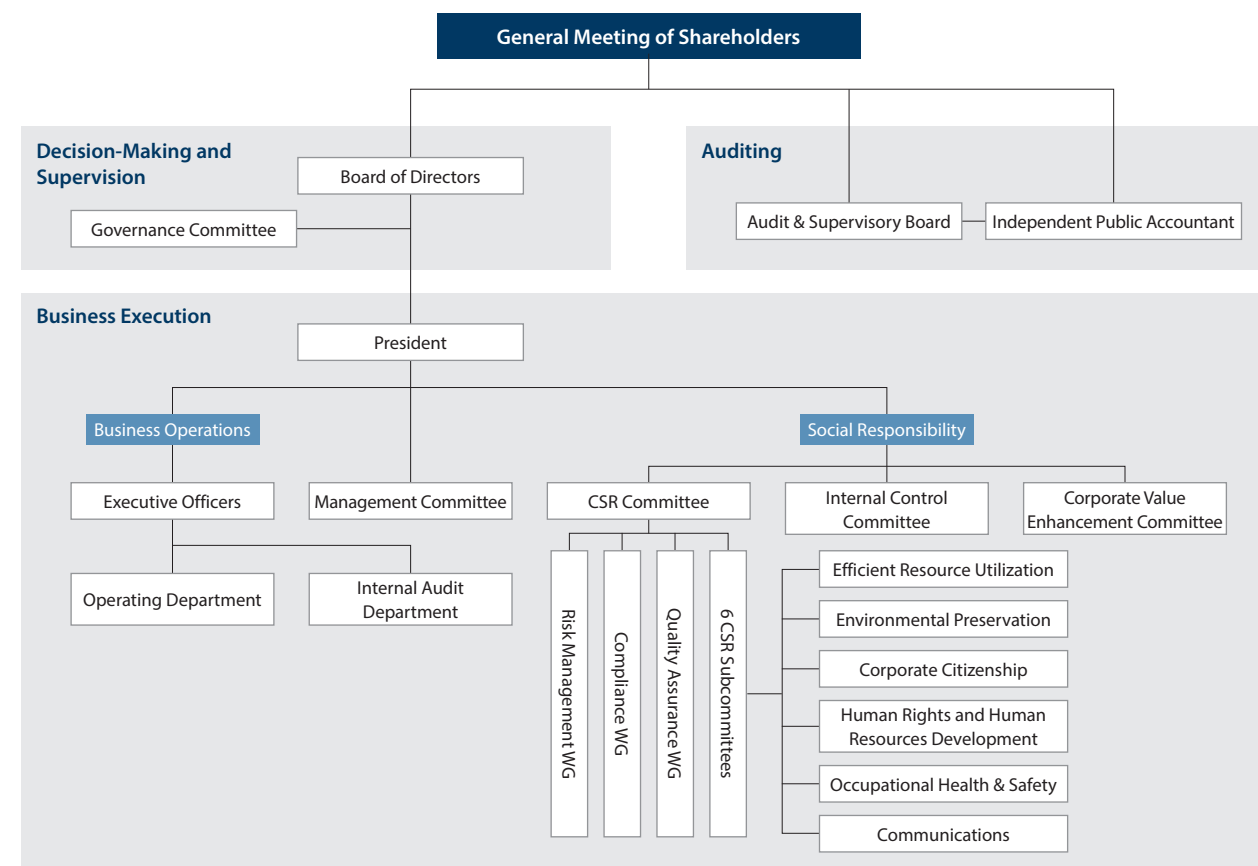
- (1) Sumitomo Metal Mining Co., Ltd. (SMM) in accordance with the Sumitomo Business Spirit, shall, through the performance of sound corporate activities and the promotion of sustainable co-existence with the global environment, seek to make positive contributions to society and to fulfill its responsibilities to its stakeholders, in order to win ever greater trust.
- (2) SMM shall, based on respect for all individuals and recognizing each person's dignity and value, seek to be a forward-minded and vibrant company.

Through striving to enhance our corporate governance, SMM will conduct efficient and sound business activities, make positive contributions to society, and fulfill our responsibilities to our shareholders and all other stakeholders in order to realize the SMM Group Corporate Philosophy.

### Governance Framework

SMM has adopted Audit & Supervisory Board and executive officer systems to ensure effective execution, monitoring, and supervisory functions within management. The Company is managed by three systems, namely (1) the Board of Directors, in charge of major decisions and supervision; (2) representative directors and executive officers, in charge of the execution of business; and (3) the Audit & Supervisory Board members and independent public accountant, in charge of auditing.

## ■ Corporate Governance Framework



## Decision-Making and Business Execution Structures and System

### Directors and the Board of Directors

SMM's Articles of Incorporation provide for a Board of Directors of up to ten members, each appointed for one year, and the "Chairman and Representative Director" is the Chairman of the Board. Furthermore, our policies stipulate that one-third or more of directors shall be independent outside directors. Currently, SMM has three outside directors among our eight directors. With regard to our directors being eight in number, we have determined that this is an appropriate number for ensuring agility and active discussion by the Board.

SMM works toward continuous improvement of the functions of the Board of Directors and conducts an evaluation of its effectiveness every year in order to verify whether it functions appropriately and, based on the findings, to enact appropriate measures, such as ameliorating problems.

The Management Committee is composed of the president, senior managing executive officers, and other executive officers. The Chairman of the Board as well as the outside directors, and Audit & Supervisory Board members may attend Management Committee meetings. Among matters to be resolved by the Board of Directors and matters to be approved by the president, the Management Committee will deliberate from a broad perspective on matters determined to require deliberation and then will determine whether those matters will be referred to the Board of Directors. The Committee also fulfills the function of supporting approval granted by the president.

### Executive Officer System

Substantial authority has been delegated to executive officers whose authority and responsibilities have been clearly defined to reinforce their executive function. Appointed by the Board of Directors, executive officers are entrusted with important positions (such as heading a business division, or heading a division or department at SMM's head office) and are expected to perform their duties with the specific authority assigned to each position.

### System of Internal Memorandums for Approval and the Management Committee

The basic method for making decisions on business execution is to examine and approve such matters through the system of internal memorandums. The Management Committee holds meetings for important management matters that require deliberation, thereby conducting careful decision-making and rational business judgment based on diverse perspectives.

## Auditing System

### Audit & Supervisory Board

At least half of the Audit & Supervisory Board members will be outside Audit & Supervisory Board members with a variety of expertise and diverse perspectives. Audit & Supervisory Board members from within SMM will conduct audits based on the particular characteristics of full-time members, such as by collecting information within the Company, and outside Audit & Supervisory Board members will conduct audits that make use of their areas of expertise.

In order to ensure managerial soundness and increase the corporate value of SMM, and in accordance with the audit policies, audit plans, and other such matters prescribed by the Audit & Supervisory Board, each Audit & Supervisory Board member will attend meetings of the Board of Directors, the Management Committee, and other important meetings, receive reports and, when necessary, request explanations from directors, executive officers, and employees regarding the status of the performance of their duties, inspect important approval and other such documents, and examine the status of operations and assets at the head office and other major business sites. At meetings of the Audit & Supervisory Board, standing Audit & Supervisory Board members shall report the details of onsite audits that have been conducted solely by standing Audit & Supervisory Board members as well as of meetings that were not attended by outside members.

### Collaboration between the Internal Audit Department, Independent Public Accountant and Audit & Supervisory Board Members

The Internal Audit Department regularly undertakes internal audits on the status of business execution across the SMM Group. The Department provides an explanation of its audit plans to Audit & Supervisory Board members while passing on all relevant information. At the same time, Audit & Supervisory Board members provide details of audit plans determined at meetings of the Audit & Supervisory Board to the Internal Audit Department, attend meetings when reports on the results of internal audits are delivered to executive officers and the heads of operational divisions and, when required, accompany staff of the Internal Audit Department when conducting internal audits. KPMG AZSA LLC, an independent registered public accounting firm, audits the consolidated financial statements and the effectiveness of the internal control over financial reporting. Audit & Supervisory Board members provide details of audit plans to the independent public accountant. Audit & Supervisory Board members in turn receive explanations regarding audit plans and reports on audit results from the independent public accountant. In this manner, close collaboration is maintained between the independent public accountant and Audit & Supervisory Board members.

## Corporate Governance

### Outside Directors and Outside Audit & Supervisory Board Members

At important meetings such as those of the Board of Directors, outside directors are expected to express their views from a broad perspective based on their knowledge, experience, abilities, and insight and are expected to fulfill the function of providing objective supervision from a standpoint

independent from the representative directors and the executive directors. Outside Audit & Supervisory Board members use their specialized expertise and diverse perspectives to offer supervision, provide valuable comments at Board of Directors and other meetings, and exercise oversight.

### Director and Audit & Supervisory Board Member Compensation

Maximum limits on the total amounts of basic compensation for directors and compensation for Audit & Supervisory Board members will be determined by resolution of the General Meeting of Shareholders. If bonuses are paid to directors, then the total amount of bonuses to directors, excluding outside directors, will be determined in the same way.

- Details of Procedures for Determining the Amount of Director Compensation  
The president & representative director, with the authorization of the Board of Directors, will determine the amount of director compensation as outlined below.

The specific amount of basic compensation for the Chairman of the Board and each director who also serves as an executive officer will be calculated by reflecting the individual performance of the director (calculated with position-specific evaluation items such as division performance, the degree to which individual targets set in accordance with medium- to long-term business strategies are being achieved, and safety results (number of labor accidents), etc. as standards) on a base compensation amount determined in consideration of the consolidated performance of the SMM Group; the compensation amount will then be determined after receiving the advice of the Governance Committee. The specific amount of each director's bonus will be calculated by reflecting the individual performance of each director, which is calculated with the same position-specific evaluation items as the above standards, on a base bonus amount determined in consideration of the consolidated performance of the SMM

Group; the bonus amount will then be determined after receiving the advice of the Governance Committee.

However, because of the importance placed on the outside directors fulfilling a supervisory function from a standpoint independent from business execution, individual performance will not be reflected and only the base compensation amount with no bonuses will be paid to outside directors.

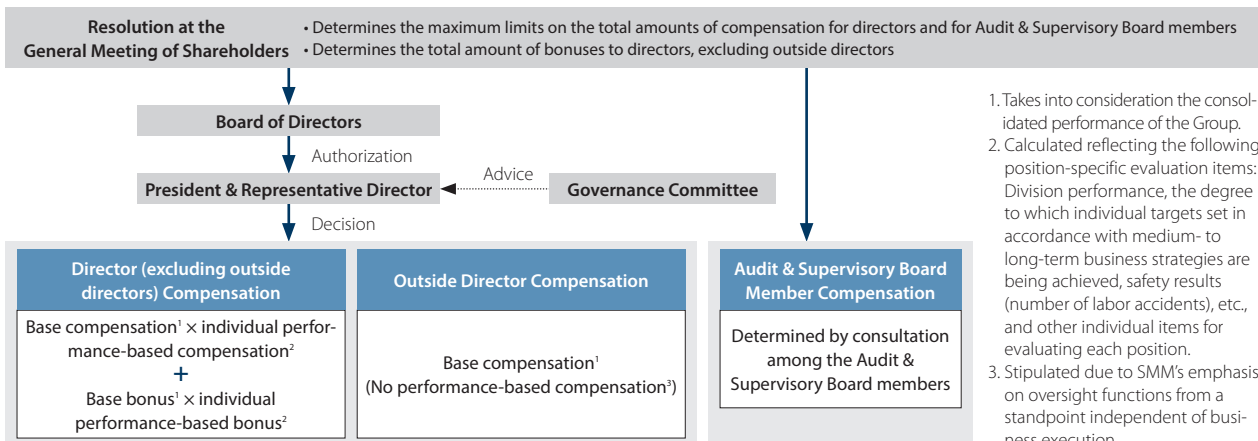
- Details of Procedures for Determining the Amount of Audit & Supervisory Board Member Compensation  
The amount of basic compensation for each individual Audit & Supervisory Board member will be determined by consultation among the Audit & Supervisory Board members at the Audit & Supervisory Board within the total compensation amount approved by the General Meeting of Shareholders.

#### ■ FY2018 Director and Audit & Supervisory Board Member Compensation

Officer Classification	Number of Officers	Total Compensation	Total Compensation by Type	
			Basic Compensation	Bonus
Directors (excluding outside directors)	6	¥298 million	¥248 million	¥50 million
Audit & Supervisory Board Members (excluding outside Audit & Supervisory Board members)	2	¥64 million	¥64 million	—
Outside Directors	4	¥40 million	¥40 million	—
Outside Audit & Supervisory Board Members	2	¥23 million	¥23 million	—

Note: In addition to the aforementioned, an employee salary portion totaling ¥6 million was paid to one person who serves concurrently as a director and executive officer.

#### ■ Procedures for Determining the Amount of Compensation for Directors and Audit & Supervisory Board Members



### Takeover Defense Measures

SMM has renewed our Countermeasures to Large-Scale Acquisitions of Sumitomo Metal Mining Co., Ltd. Shares (takeover defense measures) through partial revisions which received approval at the 94th Ordinary General Meeting of Shareholders held in June 2019. The effective period for the renewed measures is three years, up to the conclusion of the 97th Ordinary General Meeting of Shareholders to be held in June 2022.

The takeover defense measures have been introduced with the aim of deterring large-scale acquisition that have the potential to harm corporate value and the common interests of shareholders, and in the event of a large-scale acquisition of the Company's shares, enabling the SMM Board of Directors to offer an alternative proposal to shareholders or ensure that shareholders have the information and time required to decide whether to accept said large-scale acquisition.

The takeover defense measures set out procedures that acquirers must adhere to in advance and include require-

ments for acquirers to furnish information. Under the Japanese legal system, a party making an acquisition proposal does not have a duty to furnish information. Having takeover defense measures in place guarantees that a party making an acquisition proposal will furnish information and allows shareholders to compare statements by the acquirer and SMM management before deciding which course of action is preferable.

In cases in which the acquirer fails to follow the stipulated procedures, or if the large-scale acquisition of the Company's shares meets certain conditions stipulated in advance and approval is gained through a general meeting of the Company's shareholders, the gratis allotment of Stock Acquisition Rights will be exercised and the ratio of voting rights in the Company held by the acquirer will be diluted. Exercise of this measure requires the decision by an Independent Committee comprised of outside directors (independent officers), etc. in order to guarantee fairness and objectivity.

### Formulating Corporate Governance Guidelines

SMM has established Corporate Governance Guidelines which cover our basic philosophy on corporate governance and our corporate governance framework, including our relationship with stakeholders.

**WEB** Corporate Governance Guidelines

**WEB** Corporate Governance Report

<http://www.smm.co.jp/E/ir/management/governance/>

#### ■ Outside Directors and Outside Audit & Supervisory Board Members

	Reason for Appointment	Attendance at Meetings
<b>Outside Director</b> <b>Hitoshi Taimatsu</b>	In light of his specialized knowledge as a researcher in materials engineering specializing in metals and his organizational management experience at his university, he was appointed as an outside director to continue fulfilling his role in strengthening corporate governance.	In FY2018, the Board of Directors convened 18 times (12 regular meetings and 6 extraordinary sessions). He attended all meetings.
<b>Outside Director</b> <b>Kazuhisa Nakano</b>	He offers a wealth of knowledge and experience in company management and natural resources business and was appointed as an outside director to continue fulfilling his role in strengthening corporate governance.	In FY2018, the Board of Directors convened 18 times (12 regular meetings and 6 extraordinary sessions). He attended 17 meetings (12 regular meetings and 5 extraordinary sessions).
<b>Outside Director</b> <b>Taeko Ishii</b>	Based on her specialist knowledge and wealth of experience as a lawyer, she was appointed as an outside director to provide advice to SMM on business matters, particularly from a compliance perspective.	In FY2018, the Board of Directors convened 13 times since she joined (9 regular meetings and 4 extraordinary sessions). She attended 12 meetings (8 regular meetings and 4 extraordinary sessions).
<b>Outside Audit &amp; Supervisory Board Member</b> <b>Junichi Kondo</b>	He was appointed as an outside Audit & Supervisory Board member in order to exercise oversight that leverages his wealth of financial institution experience.	In FY2018, the Board of Directors convened 18 times (12 regular meetings and 6 extraordinary sessions), and the Audit & Supervisory Board convened 16 times. He attended all meetings of both.
<b>Outside Audit &amp; Supervisory Board Member</b> <b>Yuichi Yamada</b>	He was appointed an outside Audit & Supervisory Board member in order to exercise oversight that leverages his auditing experience accumulated over many years at audit firms as well as his extensive knowledge of accounting.	In FY2018, the Board of Directors convened 18 times (12 regular meetings and 6 extraordinary sessions), and the Audit & Supervisory Board convened 16 times. He attended all meetings of both.



Corporate Governance

Initiatives to Strengthen Governance at SMM

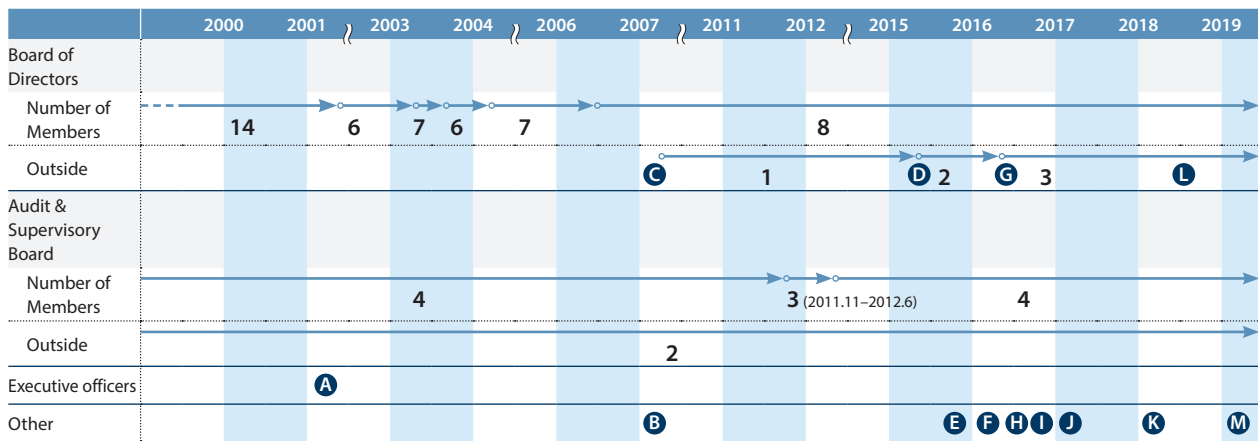
SMM positions corporate governance as one of the most important issues in our management, and is taking steps to strengthen governance.

In FY2016, we conducted discussions on what our Board of Directors should ideally be, and shared this understanding within the Board. We also convened an Outside Directors Council meeting as a venue for exchanging ideas among out-

side directors and outside Audit & Supervisory Board members.

To achieve even better corporate governance going forward, we will appropriately review our corporate governance framework in accordance with revisions to laws, changes in social conditions, and other external factors.

Transitions in Governance at SMM



- June 2001** Introduction of the executive officer system **A**  
Introduced the executive officer system with the aim of separating decision-making and supervisory functions in management, and revised the management system with the aim of further enhancing and strengthening the functions of each of these.
- February 2007** Introduction of takeover defense measures **B**  
Introduced countermeasures to large-scale acquisitions of the Company's shares (takeover defense measures).
- June 2007** Appointment of an outside director **C**  
Appointed one outside director in order to strengthen corporate governance through objective management decisions by an independent, external director. Shortened the term of directors from two years to one year to clarify management responsibilities.
- June 2015** Board of Directors composition changed to include two outside directors **D**
- November 2015** Establishment of a Governance Committee and evaluation of the effectiveness of the Board of Directors **E**  
Established a Governance Committee, which is not based on legal direction or necessity, for the purpose of obtaining objective advice from the Chairman of the Board and outside directors, who are not executive officers. Started analyzing and evaluating the effectiveness of the Board of Directors in FY2015.
- February 2016** Establishment of Corporate Governance Guidelines **F**  
Established the SMM Corporate Governance Guidelines which cover our basic philosophy on corporate governance and our corporate governance framework.
- June 2016** Board of Directors composition changed to include three outside directors **G**  
Appointed three outside directors in order to have one third or more of the directors in the Board of Directors be outside directors.
- August 2016** Outside Directors Council meeting held **H**  
Started convening Outside Directors Council meetings as a venue for discussion attended only by outside directors and outside Audit & Supervisory Board members, providing an opportunity for outside directors and outside Audit & Supervisory Board members to exchange information and share understanding.
- December 2016** Discussion of what the Board of Directors should ideally be **I**  
The Board deliberated what SMM's Board should ideally be, reaffirming that the Board make a point of making decisions.
- February 2017** Evaluation of the effectiveness of the Board of Directors **J**  
After discussions on the effectiveness evaluation, the following initiatives were implemented.
  - On April 1, 2017, standards for putting items on the agenda for the Board of Directors meetings were revised and the number of agenda and reporting items was reduced, especially those that are formalities.
  - Site visits by outside directors were strengthened and systemized.
- February 2018** Evaluation of the effectiveness of the Board of Directors **K**  
After discussions on the effectiveness evaluation, decided to establish opportunities to discuss management issues and policies at Board of Directors meetings twice a year from FY2018.
- June 2018** Appointment of a female director **L**  
Appointed the Company's first female director (outside).
- February 2019** Evaluation of the effectiveness of the Board of Directors **M**

Evaluation of the Effectiveness of the Board of Directors

According to the Corporate Governance Code formulated by the Financial Services Agency and the Tokyo Stock Exchange, Inc., the effectiveness of the entire board of directors should be analyzed and evaluated and a summary of those results should be disclosed. Referring to each director's self-evalua-

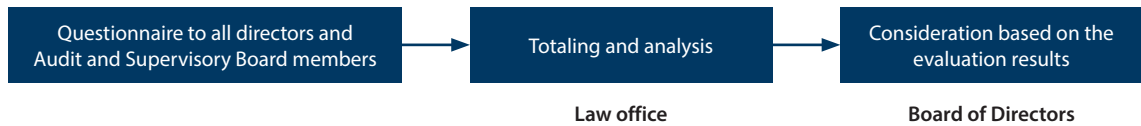
tion is a large pillar of this evaluation of the effectiveness of the board of directors. Also, the same is stipulated in SMM's Corporate Governance Guidelines, and the Board has been carrying out evaluations of itself, regarding appropriate decision-making and supervisory functions, since FY2015.

Overview of the Evaluation of Effectiveness

For the analysis and evaluation of the effectiveness of the Board of Directors, the Board carries out a questionnaire targeting the directors and Audit and Supervisory Board members every year. To make sure the responses are not seen by administrative staff, the responses are sent to an external law office, where the results are analyzed. The questionnaire cov-

ers mainly the supervisory function of the Board of Directors, its size, composition, and overall operation, training of the directors, the provision of information such as the site visits by outside directors, and self-evaluations. The Board analyzes and evaluates the effectiveness of itself based on external evaluation by the law office.

The Process of Evaluating the Effectiveness of the Board of Directors



FY2018 Evaluation Results and Initiatives Going Forward

The response on the FY2018 self-evaluations done by each director was that overall, initiatives are being undertaken at an acceptable level. The Company's Board of Directors compared this to what the Board of Directors should ideally be, which was discussed in FY2016, and confirmed that there were no major issues with their effectiveness, and that they are demonstrating their supervisory function through decision-making. Regarding the revision of various reporting items to secure time for more in-depth deliberations that was undertaken based on the FY2016 and FY2017 evaluations of effectiveness of the Board of Directors, it was evaluated as being appropriately improved. Also, regarding opportunities to discuss management issues and policies, discussions concerning policy for drawing up the 3-Year Business Plan and

the necessity of takeover defense measures were discussed at Board of Directors meetings, and discussions were also held regarding separate projects. Furthermore, in the survey, many respondents answered that the overall operation of the Board of Directors enabled serious and dynamic deliberation that provided sufficient opportunities to speak, showing proceedings are being managed appropriately. In FY2018, with a view to enabling in-depth deliberation regarding important management items at Board of Directors meetings, discussions were held to consider way monthly business reports are handled and further narrow down the agenda, and it was confirmed that improvements are ongoing. Going forward, we will strive to continually improve the effectiveness of the Board of Directors.

# Round-Table Discussion by Outside Directors

There is fast-growing interest in corporate governance, following the enactment of the Corporate Governance Code and Stewardship Code in Japan. SMM has appointed three outside directors among its eight directors. We recently held a round-table discussion among the outside directors to talk about the nature of SMM as a company and the sort of role that the Board of Directors should play.

## What Sort of Company is SMM?

**Taimatsu** As someone who held a position within a university, nurturing students and sending them out into the world, I place importance on the company being a place where students can spend their entire career after joining the working world. A company's stance toward its employees has commonalities with its stance toward the regions in which it is active. While co-existing with communities in the conduct of our business and overcoming issues, our company has built up a history of over 420 years. It seems to me that our stance of not only pursuing profit but also developing together with communities is what has sustained our growth for so long.

**Nakano** Within this history, our company has always had an awareness among top management and employees alike that our business is in the service of society. The concepts that are generally known as "governance" developed during our long history. The wish to not only pursue profit but also contribute to society has been continuously handed down in our DNA.

**Ishii** The thought that we mustn't do anything to shame that history is, I feel, the backbone of our company. I've worked for many years as an attorney, but today, when people are looking closely at not only compliance but also integrity (an honest managerial stance), our stance is a point on which I can feel reassured as an outside director.

## SMM's Business and Role in Society

**Nakano** I was earlier engaged in oil exploration work. In oil, just as in non-ferrous metals, reserves of resources become depleted as production takes place. Ongoing development of the business requires the addition of new interests. This is the most important and difficult job for resource companies, but our company has built up knowledge and high technological capabilities based on our long history.

When I earlier toured the company's nickel refinery in the Philippines, I talked with top management and with local employees. The need to continue incorporating contribution to society in our business, rather than putting increased profits first, is an idea that we share even with local employees. This is a rare thing.

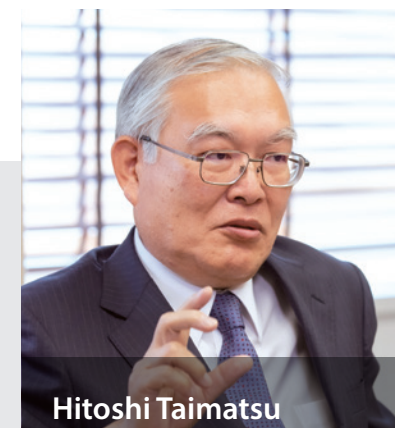
**Taimatsu** I also tour workplaces at times, and sometimes am welcomed by former students. For someone involved in education, seeing former students in action is a source of happiness. People work for a company for a long time because they have pride in it, and I think this company is one in which employees can have pride. I hope they understand that in addition to copper, gold, and nickel, we produce rare metals and rare earth that can be recovered from smelting and refining processes, and that as a supplier of non-ferrous metals, we support industry not only in Japan but throughout the world.

**Ishii** Diversity management is also an important role of companies. We're in an age in which companies cannot maintain further growth and activity if they do not incorporate the perspectives of women as a part of their business strategies. During training for female employees in June, I spoke about career formation for women. Serving as a director for this past year, I see the company's support for promoting activities by women, balancing home life and work, as considerably generous. The company has managed working hours from the perspectives of safety and health considerations, and is making a smooth transition on the path to working style reform.

## The Role of the Board of Directors

**Nakano** The evaluation of projects differs with the technological prowess of a company, and whether it can develop mines across a variety of environments. On the Board of Directors are technology experts such as Director Taimatsu, and company managers such as myself, that bring a different perspective from engineers to reducing risks, such as "we should analyze that area in a more circumspect manner" or "an approach from this perspective seems insufficient."

**Taimatsu** I believe it is incumbent on me as a director to provide a final technical evaluation and a perspective on operational human resources while taking a monitoring position like that of a general member of society. This is the approach I value.



Hitoshi Taimatsu

Mr. Taimatsu is a specialist in materials engineering and has held various positions at Akita University: professor in the Mining College and the Faculty of Engineering and Resource Science, the director of the university's Radioisotope Research Center, and the vice dean of the Graduate School of Engineering and Resource Science. In FY2016, he was presented with the Award for Distinguished Achievements in Research by the Japan Society of Powder and Powder Metallurgy. He has served as an outside director at SMM since 2015.



Kazuhisa Nakano

Mr. Nakano has been involved in company management for a long time, having previously served as both president and chairman of Idemitsu Kosan Co., Ltd. As the domestic market was becoming mature during his time at Idemitsu, he swiftly steered the company toward overseas development, promoting a growth strategy that included decisions such as investment in an oil refinery project in Vietnam. He has served as an outside director at SMM since 2016.



Taeko Ishii

Ms. Ishii was registered as a lawyer in 1986. She is a member of the Dai-ichi Tokyo Bar Association. She is particularly knowledgeable about legal practice concerning relationships between labor and management. Published works include "Legal Practices for Handling Problem Employees," and "A Q&A on Practice Relating to Equality Law, Childcare and Caregiver Leave Law, and Part-time Worker Law." She has served as an outside director at SMM since 2018.

**Ishii** It's my impression that outside directors speak up a lot on the Board of Directors. For supervisory functions, the balance is very good. What surprised me during my first year as a director is that discussions look tens of years into the future. For management I had the view that due to severe competition out there no one knows how things will be even next year, but in the case of mines, I woke up to the fact that discussions have to look tens of years ahead. I feel that making this understood by investors must be a difficult area.

**Nakano** I think of the shareholders of our company as supporters, to borrow a term from soccer. "SMM contributes to society through its business, and that's the kind of company we like and want to support"—that's the sort of relationship in which I'd like supporters to see us. I'll carry out the role demanded of me as an outside director by shareholders, so I can meet the expectations of our supporters.

## The Most Important Thing for SMM's Future

**Ishii** To maintain vitality into the future, all companies, not just ours, must consider what to do about human resources. The current approach of some companies is to buyout an entire company with technologies and people, rather than search for people through job referrals. I think the time will come when we, too, may have to do the same.

**Nakano** In the collaboration among three businesses that is our unique business model, the human resources demanded in the field of each business differ, especially in terms of skills. Accordingly, to achieve the goals of our 3-Year Business Plans, how to recruit and develop those human resources has become an issue. If we don't address this, we cannot continue with our model. This is also a matter that we are discussing in the Board of Directors.

**Taimatsu** In discussions in the Board of Directors, the importance of human resources, and approach human resources development, come up with every project. This is true for any company, but in our company in particular, the human resources needed are expected to undergo rapid changes in the materials business sector. As the materials sector transitions to advanced functional materials used in applications such as the IoT, there will likely be matters that we cannot address through the human resources in the materials sector of the past, and I think this will present great difficulties for managerial decision-making as well. Also, looking at things from the standpoint of those involved in education, I think it's going to become increasingly difficult to secure human resources who have studied smelting and refining and mineral resources in Japan. How to develop experts within the company is going to become a vital matter.



# Directors and Audit & Supervisory Board Members (As of July 1, 2019)



## Directors

### 1 Yoshiaki Nakazato

Number of shares of the Company owned: 21,800

#### Chairman and Representative Director

Born: 1953  
Apr. 1976 Joined the Company  
Dec. 1997 General Manager of Administration Dept., Electronics Div.  
Jun. 2004 General Manager of Corporate Planning Dept.  
Jun. 2005 Executive Officer  
Jun. 2006 Director  
Jun. 2007 General Manager of Affiliated Business Administration Dept.  
Jun. 2008 Managing Executive Officer  
Oct. 2008 General Manager of Advanced Materials Div.  
Oct. 2008 General Manager of Semiconductor Materials Div.

Jun. 2009 Executive Officer  
Jun. 2010 General Manager of Advanced Materials Div.  
Jun. 2010 Managing Executive Officer  
Jun. 2012 Representative Director  
Jun. 2012 Senior Managing Executive Officer  
Jun. 2013 President and Representative Director  
Jun. 2018 Chairman and Representative Director (Present Position)

### 3 Hiroyuki Asai

Number of shares of the Company owned: 7,500

#### Director, Senior Managing Executive Officer, General Manager of Corporate Planning Dept.

Born: 1958  
Apr. 1980 Joined the Company  
Oct. 2008 General Manager of Ome District Div., Advanced Materials Div.  
Jun. 2011 General Manager of Personnel Dept.  
Jun. 2012 Executive Officer  
Oct. 2015 General Manager of Human Resources Development Dept.  
Jun. 2016 General Manager of Public Relations & Investor Relations Dept.  
Jun. 2017 Managing Executive Officer  
Jun. 2018 Director (Present Position)  
Jun. 2019 Senior Managing Executive Officer (Present Position)

### 6 Hitoshi Taimatsu

Number of shares of the Company owned: 0

#### Outside Director

Born: 1951  
Apr. 1994 Professor of the Mining College of Akita University  
Apr. 1998 Professor of the Faculty of Engineering and Resource Science of Akita University  
Apr. 2006 Director of the Radioisotope Research Center of Akita University  
Apr. 2008 Member of the Education and Research Council of Akita University  
Apr. 2010 Vice Dean of the Faculty of Engineering and Resource Science of Akita University  
Apr. 2010 Professor of the Graduate School of Engineering and Resource Science of Akita University  
Apr. 2010 Vice Dean of the Graduate School of Engineering and Resource Science of Akita University  
Jun. 2015 Director of the Company (Present Position)  
Apr. 2016 Professor of the Graduate School of Engineering Science of Akita University  
Apr. 2017 Visiting Professor of Akita University  
Mar. 2019 Retired from Visiting Professor of Akita University

### 4 Hiroshi Asahi

Number of shares of the Company owned: 5,800

#### Director, Managing Executive Officer, General Manager of Mineral Resources Div.

Born: 1958  
Apr. 1982 Joined the Ministry of International Trade and Industry (current Ministry of Economy, Trade and Industry)  
Apr. 2008 Director for Technology Affairs of the Ministry of Economy, Trade and Industry  
Mar. 2010 Deputy Director-General for Energy and Environment of the Ministry of Economy, Trade and Industry  
Jul. 2012 Director-General for Technology Policy Coordination of the Ministry of Economy, Trade and Industry  
Oct. 2013 Left the Ministry of Economy, Trade and Industry  
Oct. 2013 Joined the Company  
Jun. 2014 Executive Officer  
Jun. 2014 Senior Deputy General Manager of Mineral Resources Div.  
Jun. 2017 Director (Present Position)  
Jun. 2018 Managing Executive Officer (Present Position)

### 7 Kazuhisa Nakano

Number of shares of the Company owned: 2,500

#### Outside Director

Born: 1948  
Apr. 1971 Joined Idemitsu Kosan Co., Ltd.  
Apr. 2003 Executive Officer and General Manager of Personnel Department of Idemitsu Kosan Co., Ltd.  
Jun. 2004 Director of Idemitsu Kosan Co., Ltd.  
Jun. 2005 Managing Director of Idemitsu Kosan Co., Ltd.  
Jun. 2007 Executive Vice President and Representative Director of Idemitsu Kosan Co., Ltd.  
Jun. 2009 President and Representative Director of Idemitsu Kosan Co., Ltd.  
Jun. 2013 Chairman and Representative Director of Idemitsu Kosan Co., Ltd.  
Jun. 2015 Executive Advisor of Idemitsu Kosan Co., Ltd.  
Jun. 2016 Director of the Company (Present Position)  
Jun. 2017 Retired from Executive Advisor of Idemitsu Kosan Co., Ltd.

### 2 Akira Nozaki

Number of shares of the Company owned: 8,900

#### President and Representative Director

Born: 1960  
Apr. 1984 Joined the Company  
Jul. 2010 Corporate Planning Dept.  
May 2012 Administration Dept., Sierra Gorda Project Dept.  
Jun. 2013 Executive Officer  
Jun. 2013 Senior Deputy General Manager of Non-Ferrous Metals Div.  
Jun. 2014 Director  
Jun. 2014 General Manager of Corporate Planning Dept.  
Jun. 2015 General Manager of Non-Ferrous Metals Div.  
Jun. 2016 Managing Executive Officer  
Jun. 2018 President and Representative Director (Present Position)

### 5 Nobuhiro Matsumoto

Number of shares of the Company owned: 2,600

#### Director, Executive Officer, General Manager of Non-Ferrous Metals Div.

Born: 1963  
Apr. 1987 Joined the Company  
Apr. 2008 General Manager of Niihama Nickel Refinery, Non-Ferrous Metals Div.  
Jun. 2014 General Manager of Administration Dept., Non-Ferrous Metals Div.  
Jun. 2016 Executive Officer (Present Position)  
Jun. 2016 Senior Deputy General Manager of Non-Ferrous Metals Div.  
Jun. 2018 General Manager of Non-Ferrous Metals Div. (Present Position)  
Jun. 2019 Director (Present Position)

### 8 Taeko Ishii

Number of shares of the Company owned: 0

#### Outside Director

Born: 1956  
Apr. 1986 Registered as a lawyer  
Mar. 1992 Joined Ryoichi Wada Law Firm  
Jun. 2018 Established Ohta & Ishii Law Firm  
Jun. 2018 Director of the Company (Present Position)

1. The number of shares of the Company owned is as of May 31, 2019.



## Audit & Supervisory Board Members

### 1 Kazushi Ino

#### Senior Audit & Supervisory Board Member (Standing)

Born: 1959  
Apr. 1982 Joined the Company  
Dec. 2010 General Manager of Administration Dept., Advanced Materials Div.  
Jun. 2012 General Manager of Legal & General Affairs Dept.  
Jun. 2014 Executive Officer  
Jun. 2014 Senior Deputy General Manager of Materials Div.  
Jun. 2017 Senior Audit & Supervisory Board Member (Standing) (Present Position)

### 3 Junichi Kondo

#### Outside Audit & Supervisory Board Member

Born: 1950  
Apr. 1973 Joined Export-Import Bank of Japan  
Apr. 1999 Director of General, Administration and General Services Department of Export-Import Bank of Japan  
Oct. 1999 Director of Corporate Finance Department of Japan Bank for International Cooperation (JBIC) (which was formed as a result of integration between the former Export-Import Bank of Japan and the former Overseas Economic Cooperation Fund)  
Apr. 2001 Director of Personnel Department of JBIC  
Nov. 2002 Executive Director of JBIC  
Oct. 2003 Resident Executive Director, Osaka Branch of JBIC  
Oct. 2005 Senior Executive Director of JBIC  
Sep. 2007 Resigned from Senior Executive Director of JBIC  
Jan. 2008 Corporate Advisor of Tokyo Electric Power Company, Incorporated  
Feb. 2012 Corporate Advisor of ITOCHU Corporation  
Jan. 2015 President and Representative Director of Japan Institute for Overseas Investment  
Jun. 2016 Audit & Supervisory Board Member of the Company (Present Position)

### 2 Yasuyuki Nakayama

#### Audit & Supervisory Board Member (Standing)

Born: 1959  
Apr. 1982 Joined the Company  
Apr. 2001 Finance & Accounting Dept.  
Apr. 2012 General Manager of Administration Dept., Semiconductor Materials Div.  
Jul. 2012 General Manager of Semiconductor Materials Business Unit, Materials Div.  
Oct. 2014 President and Representative Director of Shinko Co., Ltd.  
Jun. 2016 Audit & Supervisory Board Member (Standing) (Present Position)

### 4 Yuichi Yamada

#### Outside Audit & Supervisory Board Member

Born: 1954  
Mar. 1988 Registered as a certified public accountant  
Aug. 2003 Partner of ASAH & Co. (current KPMG AZSA LLC)  
Jun. 2008 Board Member of KPMG AZSA & Co. (current KPMG AZSA LLC)  
Jun. 2016 Left KPMG AZSA LLC  
Jul. 2016 Established Yuichi Yamada Certified Public Accountant Firm  
Jun. 2017 Audit & Supervisory Board Member of the Company (Present Position)

## Executive Officers

An asterisk indicates the officer is also serving concurrently as a director

### President

### \* Akira Nozaki

#### Senior Managing Executive Officer

### \* Hiroyuki Asai

General Manager of Corporate Planning Dept., in charge of Personnel Dept., Legal Dept.

### Managing Executive Officers

### Masahiro Morimoto

General Manager of Finance & Accounting Dept., in charge of Secretarial Dept., Internal Audit Dept., Purchasing Dept., Information System Dept.

### \* Hiroshi Asahi

General Manager of Mineral Resources Div.

### Atsushi Idegami

General Manager of Technology Div.

### Executive Officers

### Shuichi Yasukawa

General Manager of CSR Dept., in charge of General Affairs Dept., Human Resources Development Dept., Public Relations & Investor Relations Dept.

### Fumio Mizuno

General Manager of Engineering Div.

### Atsushi Kaikake

General Manager of Safety & Environment Control Dept., in charge of Quality Assurance Dept.

### \* Nobuhiro Matsumoto

General Manager of Non-Ferrous Metals Div.

### Fumikazu Oshita

General Manager of Advanced Materials Div.

### Isao Abe

General Manager of Battery Materials Div.

### Toru Higo

Senior Deputy General Manager of Non-Ferrous Metals Div., in charge of Osaka Branch

### Takahiro Kanayama

General Manager of Besshi-Niihama District Div.

### Ryoichi Sato

Senior Deputy General Manager of Mineral Resources Div.

### Kazunori Takizawa

Senior Deputy General Manager of Battery Materials Div.

### Hiroshi Yoshida

Senior Deputy General Manager of Non-Ferrous Metals Div.

### Masaru Tani

Senior Deputy General Manager of Mineral Resources Div.

### Hitofumi Okubo

Senior Deputy General Manager of Engineering Div.

### Kouji Sakamoto

Senior Deputy General Manager of Battery Materials Div.

### Shuichi Ogasawara

Senior Deputy General Manager of Technology Div.



# Sustainability at the SMM Group Management Approach

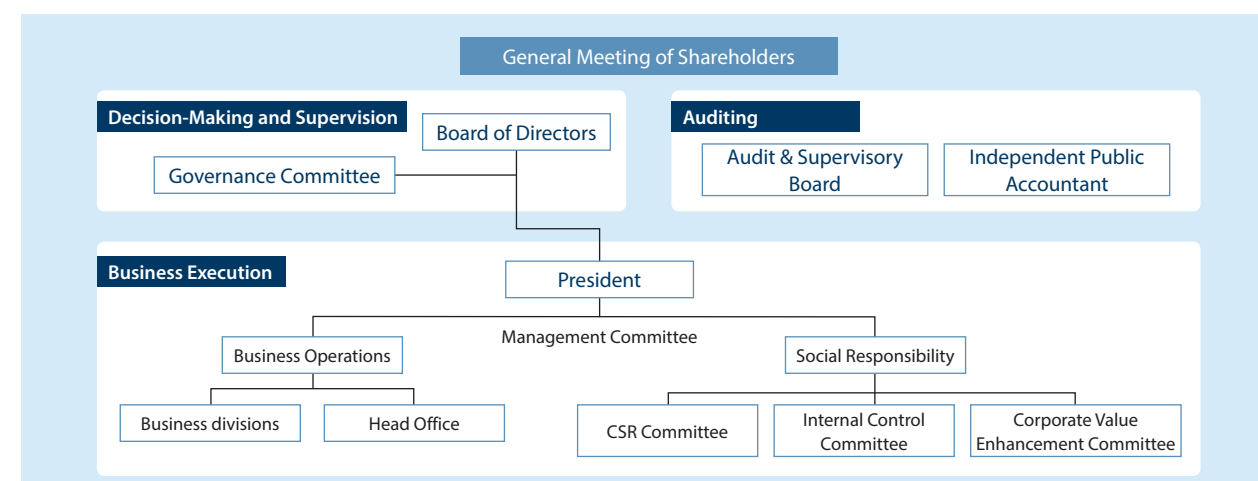
## Our Approach to Business and Sustainability

### The Board of Directors and Social Responsibility at SMM

SMM's Board of Directors oversees activities and progress toward Vision for 2020, the long-term vision that we seek to achieve through the value creation process and our business processes.

In executing our business under the responsibility of our president, we divide business activities into "business operations" that we discuss and execute, and "social responsibility," in which we discuss and respond to issues related to the sustainability of our business and issues related to the growth of our business. In the Management Committee, which serves

directly under the president, deliberations are held from a broad perspective on matters to be resolved by the Board of Directors and matters to be approved by the president, and have been determined to require deliberation, such as key management policies, management strategy, management plans, and capital expenditures. Also, in addition to deciding whether those matters will be referred to the Board of Directors, the committee supports approval granted by the president.



Related information See p. 1, 22, and 23 for information on the long-term vision and Vision for 2020.

### The Social Responsibility of the SMM Group

With the stable supply of mineral resources and materials as our mission, the SMM Group must fulfill its social responsibility, meeting the conditions of an ever-changing society. To do that, it is important that we achieve continuous growth in our business, improve our corporate value, thoroughly enforce

internal control and oversee initiatives for internal control, and promote the SMM Group's social responsibility. In the execution of these activities and our corporate activities, we execute work through balanced business activities, and decide on important work in Board of Directors meetings.

#### Committees and Framework

##### Corporate Value Enhancement Committee

Working primarily through our Corporate Value Enhancement Committee to increase our corporate value, we position projects in excess of a certain investment value and expected return value in our Mineral Resources, Smelting & Refining, and Materials businesses as large-scale projects. We categorize these large-scale projects under the labels "Sowing," which spans from narrowing down projects to selection; "Planting," which covers determination of the project organization to completion of construction for the project; "Nurturing," which ranges from the start of production to achievement of the design capacity; and "Harvesting," which covers ongoing verification of the project through full pro-

duction. For each of these, the committee receives status reports on project progress, and offers on-the-spot counsel and instruction.

The Corporate Value Enhancement Committee is chaired by the president, who appoints a senior managing executive officer who is not a general manager of a business division to serve as vice-chairman. General managers and deputy general managers of business divisions, the General Manager of Technology Div., the General Manager of Engineering Div., and the heads of related operational divisions in the Head Office serve as committee members, holding regular meetings twice a year.

#### Internal Control Committee

To enforce internal control, we work primarily through the Internal Control Committee to build, maintain, and improve internal control systems in our group. The creation of internal control systems for the proper and efficient execution of business leads to enhanced legal compliance, efficiency, and transparency in management. We view internal control systems as vital tools in securing the sustainable growth of our

group, and are working to strengthen initiatives through the Internal Control Committee.

The committee operates with the president as chairman, the executive officer supervising the Internal Audit Dept. as the vice-chairman, and the general manager of the Internal Audit Dept. and other heads of related operational divisions in the Head Office as committee members.

#### CSR Committee

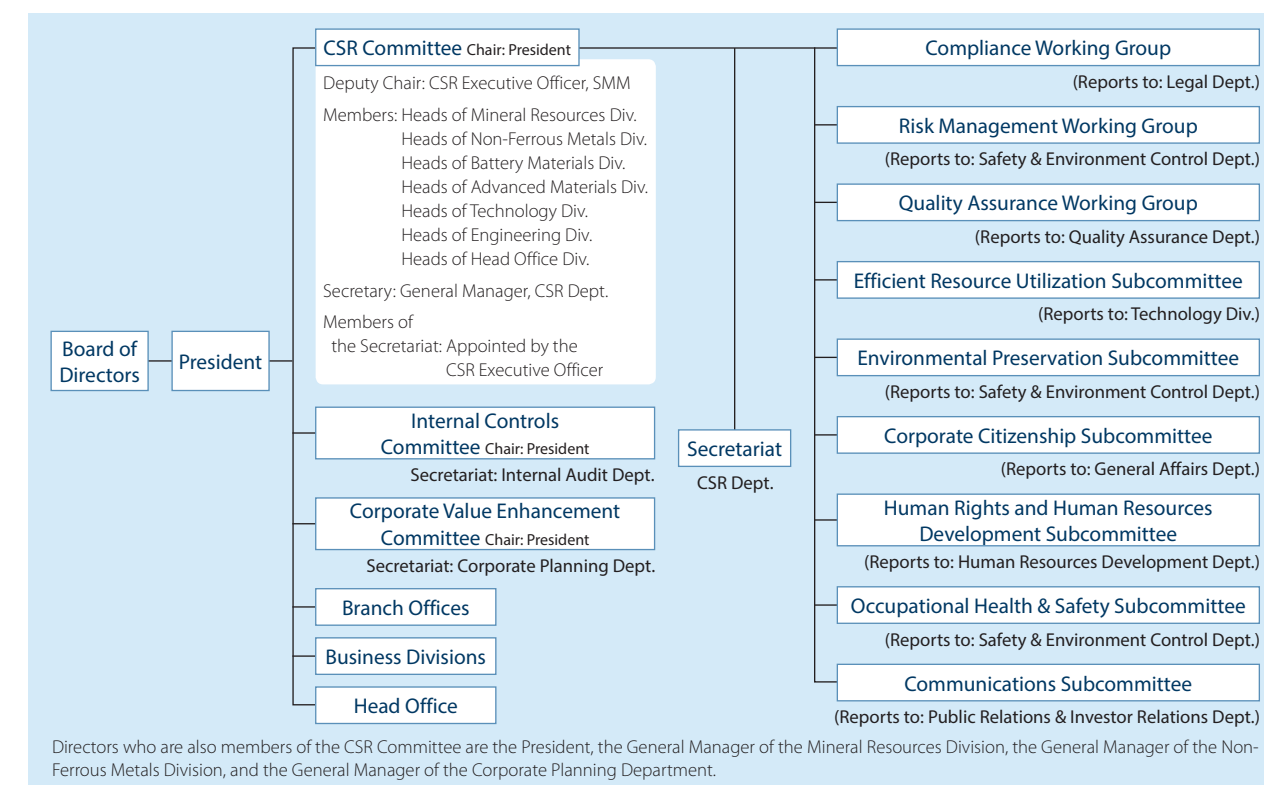
Working primarily through our CSR Committee to carry out our corporate social responsibility, we conduct deliberations on the CSR policy, CSR areas of high priority and proposals to modify the Vision for 2020. We also deliberate and decide on indicators for evaluating our progress towards the Vision for 2020 and important matters regarding CSR activities such as those in our annual CSR activity plans. Other activities include regular evaluations and the launch of corrective measures concerning CSR activities, as well as providing, sharing, explaining (especially important policy measures) and raising knowledge of information concerning our work on CSR activities. Deliberations on major issues concerning CSR activities are ongoing. We continue such initiatives with the goal of sustainable co-existence with the global environment, as set forth in the SMM Group Corporate Philosophy.

Attached to the CSR Committee are three working groups—the Compliance, Risk Management, and Quality Assurance Working Groups—and six subcommittees, including the Efficient Resource Utilization Subcommittee, that address the six CSR areas of high priority.

The six subcommittees and three working groups are under the jurisdiction of the relevant divisions, and draft and execute annual targets and plans in line with the KPIs set for each material issue.

Meeting twice a year, the CSR Committee is chaired by the president, with the CSR executive officer participating as deputy chair, the general managers of divisions, the General Manager of the Technology Div., the General Manager of the Engineering Div., and the heads of operational divisions in the Head Office as committee members, and the CSR Dept. as secretariat.

The CSR Committee reviews the activities of each area based on reports from working groups and subcommittees. Reviews include activity progress reports and activity plans for the next fiscal year, evaluations of the company's environmental, social, and economic performance, the execution of corrective measures where necessary, and the implementation of our PDCA (Plan-Do-Check-Act) cycle.



Directors who are also members of the CSR Committee are the President, the General Manager of the Mineral Resources Division, the General Manager of the Non-Ferrous Metals Division, and the General Manager of the Corporate Planning Department.

## Our Approach to Reducing Environmental Impact

### Reducing the Environmental Impact of Constructing New Plants

Coral Bay Nickel Corporation (CBNC) and Taganito HPAL Nickel Corporation (THPAL) in the Philippines produce electrolytic nickel intermediates. To construct a refinery in the Philippines, we first had to obtain an Environmental Compliance Certificate (ECC) from the Department of Environment and Natural Resources (DENR). This required submitting an Environmental Impact Assessment (EIA).

When constructing the refinery, we sought adequate dialogue with the Philippine government, local authorities and local citizens right from the planning stage. Efforts were made to construct a plant that would have a minimal impact on the environment. For example, a pier used to deliver sulfuric acid and methanol to the plant was made to circle around the coral reef, and wastewater outlets were also positioned to ensure the reef's protection.

CBNC began operations of the refinery in April 2005 based on a design certified by the DENR, and was followed by THPAL in October 2013. The refineries have set up Environmental Management Offices (EMO) as bodies to promote environmental initiatives in operations. Besides environmental surveys by the EMO, the environment is monitored by

a team of representatives from organizations such as the DENR, local authorities and NGOs which carry out regular sampling of the air, water, flora and fauna. With this sort of environmental monitoring, we check that the construction and operation of plants do not have serious impacts on the ecosystem, while keeping environmental impacts from wastewater and other factors to a minimum.



Coral transplanting by CBNC

### Tackling Global Warming Through the Supply of Materials

The SMM Group sees supplying manufacturers in Japan and overseas with specialty materials to support the functions of products with a low environmental impact to be one of its contributions to a more sustainable society. By focusing on energy-related materials, the SMM Group is expanding its business in domains related to the creating, storing, and saving of energy.

In the energy creation domain, we provide nickel oxide powder, which is used in the electrodes of solid oxide fuel cells (SOFC). Fuel cells are clean and highly efficient power generation systems that convert hydrogen and oxygen into electricity and heat, and their use is expected to grow as plans to promote them are being formulated in countries all over the world.

In the energy storage domain, we are contributing to the realization of a mobile society with low environmental impact

by engaging in the supply of high-quality nickel-containing materials for cathodes used in the batteries required by electric-powered vehicles, such as EV and hybrid vehicles. In the auto industry, initiatives to suppress greenhouse gas emissions are being promoted globally, and demand for these kinds of vehicles is growing greatly as a result.

In the energy saving domain, we are manufacturing functional inks, such as cesium tungsten oxide (CWO) to block infrared rays. Films with these inks are applied to glass, or included in an interlayer film or directly in polycarbonates, to block the near-infrared rays contained in sunlight, therefore greatly reducing temperature increases. Currently, these are being widely used in vehicle windows, building windows, and semi-transparent roofs when design or allowing daylight in is an important consideration, and are making a significant contribution to energy efficiency.

## Activities and Achievements for the Six CSR Areas of High Priority

### Effective Use of Resources

Vision for 2020: A company that generates resources using innovative technology

Goals and KPIs	FY2018 Achievements	Issues and Targets	FY2019 Plans
<b>1. Develop and implement technologies to efficiently recover resources (low-grade/hard-to-process ores)</b>			
1) Promote rational use of low-grade nickel ore (make nickel produced from low-grade ores 2/3 of nickel production overall)	Continued to perform processing tests on external ores and advanced the blending of those ores with existing ones and the optimization of processing conditions at CBNC. Conducted dry stacking tests for reducing the volume of tailing at THPAL.	Obtain permissions for new CBNC mining zones	Work to extend life of existing mines, and seek understanding from authorities in the Philippines regarding permissions for new mining zones
2) Achieve profitability in our copper business by developing processing technologies for low-grade/hard-to-process ores	Engaged in the "development of a process for the separation of high arsenic containing ore and the treatment of high arsenic containing copper ore suitable for actual copper ore," one of the programs under the "development of reduction technologies for impurities in copper raw materials" national project by JOGMEC, as part of a consortium of 3 non-ferrous metals companies.	Examine the application of technologies for actual concentrate and process concentrated products containing impurities	Cooperate with other non-ferrous metals companies to continue developing technologies for reducing impurities through pyrometallurgical processing, mineral processing, bioleaching or combinations of these
3) Develop efficient gold mining technologies	Continued to examine the application of mining methods that are even lower-cost than current methods at the Pogo Gold Mine, and proposed improved mining methods	This theme concluded in September 2018 with the sale of the Pogo Gold Mine	
4) Participate in sea-floor resource development projects (contribute to the development of mining technologies and processing solutions)	Continued participation in the massive sulfide deposit development and cobalt-rich ferromanganese crust (CRC) development projects by JOGMEC. Conducted overall evaluation and additional verification for the pilot test of excavating and ore lifting from sea-floor massive sulfide deposits. Advanced the development of metal recovery technologies through concentration processes, smelting and refining for CRC	Optimize overall system for excavating and ore lifting from sea-floor massive sulfide deposits. Verify mineral processing and smelting and refining processes for CRC	Prepare a sea-floor topographic map and analyze topography with an excavation system in mind for sea-floor massive sulfide deposits Continue developing mineral processing and smelting and refining processes for CRC
<b>2. Develop new and effective uses for by-products</b>			
1) Recover and market scandium from nickel oxide ore	Commenced commercial production at scandium recovery plant in January 2019 in spite of delays caused by equipment trouble	Achieve target production volume and cultivate new markets	Improve equipment in order to reach target capacity Develop processes for cultivating new markets
2) Recover raw material for iron and steel manufacturing from nickel oxide ore (commercialize chromite and hematite)	Proceeded with detailed design of chromite recovery plant and selection of building contractors with the aim of completing the plant by the end of April 2020	Stabilize operation of the recovery plant and cultivate new markets	Further the construction of equipment with the aim of commencing operation according to plan
<b>3. Promote recycling</b>			
Improve our effective use of recycled resources	Continued to develop recycling processes for secondary lithium batteries. Established pilot plant and commenced operation there in March 2019	Demonstrate process at pilot plant and make decision to build actual units	Verify the feasibility of process through operation of pilot plant and continue with design of actual units

## Activities and Achievements for the Six CSR Areas of High Priority

### ■ Environmental Preservation

Vision for 2020: A company that uses advanced technologies to reduce environmental burden and contributes to preserving the global environment

Goals and KPIs	FY2018 Achievements	Issues and Targets	FY2019 Plans
<b>1. Advance biodiversity preservation initiatives</b>			
1) Implement global warming counter-measures			
① Expand materials business for products contributing to a low carbon society (creating, storing, and saving energy)	• Sold 11 times more battery material and 9 times more products contributing to a low-carbon society in FY2018 compared to FY2011, surpassing the FY2020 goals, and continuing to grow	• Accommodate expanded demand for rechargeable battery materials	• Start up expanded production of battery materials this fiscal year according to plan
Achieve a 5-fold expansion of revenue (measured against FY2011) from materials for products contributing to a low carbon society			
② Reduce CO <sub>2</sub> emissions from operations			
Continue to reduce CO <sub>2</sub> emissions equivalent to approximately 1% per year	• Made a total of ¥347 million in investments for 46 energy-saving improvements in FY2018. These improvements were effective in reducing CO <sub>2</sub> emissions/year by 2,978 t-CO <sub>2</sub> , resulting in a total reduction of 18,212 t-CO <sub>2</sub> /year when combined with previous improvements	• Invest the planned annual amounts for CO <sub>2</sub> emission reductions every year, without fail	• Continue energy-saving initiatives based on the current fiscal year investment plan to reach the 2020 reduction target of 20,000 t of CO <sub>2</sub> /year.
Contribute to CO <sub>2</sub> emission reductions by constructing a plant using HPAL, etc., which has significant energy saving advantages over other technologies such as nickel pig iron	• Started a Definitive Feasibility Study (DFS) for the HPAL plant being considered for construction in Pomalaa, Indonesia	• Minimize additional GHG emissions	• Complete DFS by the end of FY2019
③ Utilize positively renewable energy to contribute to CO <sub>2</sub> emission reductions	• Installed additional panels at our Kashima Solar Power Plant in March 2018, resulting in a total capacity of 3.78 million kWh for FY2018. Storage batteries, remote monitoring, and AI failure diagnostic systems were introduced on the solar panel reinforcement sections, and we are accumulating operation management knowledge with these new technologies.	• Investment profitability is low for the assumed in-house solar power system	• Confirm the usefulness of accumulated operation management knowledge, storage batteries, remote monitoring, and AI failure diagnostic systems at the Kashima Solar Power Plant.
	• Considered solar power generation to consume in house for 3 locations inside and outside Japan. A solar power generation system was installed at one of these, the Hishikari Mine. A binary power generation system that uses the heat from hot spring water was also considered	• The hot spring water temperature is not high enough to generate binary power at this stage	• Continue to consider introduction of an in-house solar power generation system.
			• Continue to consider introduction of an in-house hot spring water heat binary power generation system.
2) Steadily develop and adopt technologies for reducing environmental impacts			
① Implement a planned approach for reducing the emission of chemical substances	• Reduced emissions of dichloromethane into the atmosphere at the Ome District Division	• Maintain effectiveness of recovery equipment	• Strengthen management of recovery equipment and conduct preventive maintenance
	• Considering a processing method to reduce boron in the hot spring water from Hishikari Mine	• Establish an effective processing method	• Consider a feasible method to fix water-soluble boron
② Promote to environmental preservation through forestation, etc.	• Carried out greening of 2 hectares at CBNC	• Conserve ecosystems with initiatives to plant trees and fertilize soil	• Continue greening at CBNC and THPAL
③ Verify the environmental impacts in our portfolio companies and supply chain companies, and implement measures to reduce risks	• Held periodic meetings between our 2 companies in the Philippines and mine owners who serve as our suppliers to examine measures to improve water quality of rivers particularly during the rainy season	• Continue to implement measures to reduce environmental risk	• Hold periodic meetings between our 2 companies in the Philippines and mine owners who serve as our suppliers in the Philippines to continue improving river water quality
<b>2. Maintain our record of zero significant environmental accidents</b>			
1) Improve strength against earthquake and severe weather at closed mine sites	• Completed construction to improve strength against earthquakes and weather at 2 accumulation sites at closed mines as planned. Completed all planned construction that began in FY2014 at accumulation sites at closed mines.	• Maintain the current status of accumulation sites at closed mines going forward through daily monitoring	• Continue monitoring
2) Prevent significant environmental accidents by strengthening environmental risk management	• Renewed old utilities at closed mines	• Carry out construction according to plan	• Continue identifying risks and implementing countermeasures

### ■ Contribution to Society and Local Communities

Vision for 2020: A company that earns trust and contributes to regional development through our business and social contribution activities rooted in each region

Goals and KPIs	FY2018 Achievements	Issues and Targets	FY2019 Plans
<b>1. Communicate with local communities to recognize social issues in regions where we do business, and implement programs to support solutions to those issues</b>			
	• Continued activities that contribute to society such as supporting infrastructure at CBNC and THPAL	• Need to accurately identify expectations through dialogue with local authorities at each site in Japan	• Continue to make social contributions at CBNC and THPAL
	• Continued aiding with necessary social contributions at each site in Japan through dialogue with local authorities		• Continue to exchange ideas with each of the business sites in Japan and work on further enhanced social contribution activities with roots in the community
	• Bestowed 2 President's CSR Awards		• Build a framework so that each individual employee can engage in social contribution activities
	• Worked on enhancing data tabulation for the ratio of local hiring and local procurement at main business sites		• Continue to receive reports on the status of local hiring and local procurement
<b>2. Provide support for the improvement of educational infrastructure and the maintenance and development of academic activities, culture, tradition, and art in the countries where we do business</b>			
	• Continued to provide scholarships in the areas near overseas mine development sites	• Be continually aware of the status of scholarships being awarded in the areas near overseas mine development sites	• Continue support for current scholarships and overseas NPOs
	• Continued to provide support for NPO Kaibigan, which helps the poor in the Philippines attend school		• Consider establishing a scholarship system for business sites in Japan
	• Relocated the Higurashi Villa from Shisaka Island to Hoshigoe, Niihama, and opened it to the general public as the Higurashi Villa Memorial Museum		
<b>3. Provide support for recovery and reconstruction after large-scale disasters</b>			
1) Provide support taking into consideration the relationship between the affected area and SMM Group's business	• Provided donations to support those affected in the Heavy Rain Event of July 2018 and the 2018 Hokkaido Eastern Iburu Earthquake		• Provide support when there are major disasters inside or outside Japan based on the level of damage and the relationship with SMM Group business operations
	• Streamlined the management system for the Council for Promotion of Measures for Stranded Commuters around Shimbashi Station and proactively participated in drills		• Continue to engage in drills, coordinating with Minato-ku and the council member companies
2) Provide continuous support for the people and areas affected by the Great East Japan Earthquake	• Continued to provide donations to scholarship funds for orphans in the three disaster-affected prefectures (Iwate, Miyagi, and Fukushima), which we have been doing since FY2012	• Identify future support needs through dialogue with local communities	• Continue to provide support to earthquake orphans (until all orphans reach 20 years of age in 2031)



## Activities and Achievements for the Six CSR Areas of High Priority

## ■ Respect for People and Human Rights

Vision for 2020: A company where diverse human resources exercise their ability sufficiently and take a vibrant and active part in each field

A company that works with its stakeholders to strive for a society that actively respects human rights

Goals and KPIs	FY2018 Achievements	Issues and Targets	FY2019 Plans
<b>1. A company where employees can take a vibrant and active part</b>			
1) Work satisfaction Make continual improvements based on the results of employee satisfaction surveys	<ul style="list-style-type: none"> <li>The president held two management information briefings, then made arrangements to further share information at informal workplace discussions</li> <li>Held coaching and facilitation skills training at workplaces that requested such sessions, with the goal of ensuring smoother communication and more efficient meetings at the company</li> </ul>	<ul style="list-style-type: none"> <li>Effort needed to raise the understanding of employees regarding the current business conditions</li> <li>Support a framework for revitalizing the organization through OJT (on-the-job training) that makes use of coaching</li> <li>Support employees in gaining satisfaction from their work</li> </ul>	<ul style="list-style-type: none"> <li>Continue holding management information briefings, and aim to increase the number of employees listening to the meetings by making it possible to listen via the internet and e-learning, and promote understanding of the management situation among employees</li> <li>Cultivate instructors from within the company and aim to roll out to regular employees to assist with better communication</li> </ul>
2) Mental health ① Optimize the work environment through training and the reduction of overly long working hours	<ul style="list-style-type: none"> <li>Understand the work situation by using the monthly working hour data for individual employees, then make improvements to tasks and allocate more employees as necessary</li> </ul>	<ul style="list-style-type: none"> <li>Continue monitoring the work situation and engage in efforts to reduce long working hours</li> <li>Implement initiatives to reduce total actual working hours in line with the work style at each location</li> </ul>	<ul style="list-style-type: none"> <li>Consider and implement measures to ease the burden on specific workplaces and individuals that are not seeing reductions in long working hours</li> <li>Make efforts to increase the rate of paid annual leave taken at the Head Office</li> </ul>
② Reduce mental health afflictions in employees	<ul style="list-style-type: none"> <li>Conducted mental health checks and built a support network using outside organizations</li> <li>Allocated personnel and conducted training based on the results of individual interviews</li> </ul>	<ul style="list-style-type: none"> <li>Use the data from individual interviews to strengthen support for individuals.</li> </ul>	<ul style="list-style-type: none"> <li>Continue using mental health checks and the support system</li> <li>Consider introducing Health and Productivity Management</li> </ul>
<b>2. Respect diversity</b>			
1) Female employees promoted at SMM (domestically) ① Target number of female managers: 10 or more	<ul style="list-style-type: none"> <li>9 female managers as of the end of March 2019</li> </ul>	<ul style="list-style-type: none"> <li>Finely tuned support that can handle life events such as marriage and childbirth</li> </ul>	<ul style="list-style-type: none"> <li>Conduct training for career and life planning for management track employees</li> </ul>
② Target proportion of female employees in the recruitment of management track employees: 1/3	<ul style="list-style-type: none"> <li>Recruitment in FY2019 included 4 female employees out of 35, for a ratio of about 11%</li> <li>Offered female internships and had female employees conduct recruiting interviews to appeal to female students</li> </ul>	<ul style="list-style-type: none"> <li>Arouse interest in the company among female students while strengthening branding to see how much interest can be created among students</li> </ul>	<ul style="list-style-type: none"> <li>Consider and implement activities to appeal to female students, such as continuing female internships, strengthening branding, and visiting colleges and universities</li> </ul>
2) Promote non-Japanese employees as key personnel	<ul style="list-style-type: none"> <li>Made good use of overseas employees at each business site and division</li> </ul>	<ul style="list-style-type: none"> <li>Deal with changes to the business strategy</li> </ul>	<ul style="list-style-type: none"> <li>Further consider the ideal globalization we should aim for as a company</li> </ul>
3) Employ people with disabilities Establish and achieve an internal target for the number of employees with disabilities in the Group domestically	<ul style="list-style-type: none"> <li>The employment rate for people with disabilities as of April 1, 2019 was 2.33%</li> <li>Engaged in efforts to raise the employment rate of people with disabilities based on action plans at each business site and group company</li> <li>Introduced UDTalk, a communication app, in the Head Office district as a way to support people with hearing impairments. Enhanced sign language classes</li> </ul>	<ul style="list-style-type: none"> <li>Maintain and improve planned employment of people with disabilities</li> </ul>	<ul style="list-style-type: none"> <li>Implement and support action plans established at each business site and group company to promote employment of people with disabilities</li> </ul>
4) Establish a strategy and supportive framework as a means to facilitate initiatives 1 to 3 above	<ul style="list-style-type: none"> <li>Provided human rights-related training through a diversity and inclusion workshop (3 times) and training for hotline (Speak Up System) staff</li> </ul>	<ul style="list-style-type: none"> <li>Enhance provision of diversity and inclusion related information</li> </ul>	<ul style="list-style-type: none"> <li>Enhance internal bulletin board</li> </ul>

Goals and KPIs	FY2018 Achievements	Issues and Targets	FY2019 Plans
<b>3. Develop human resources</b>			
1) Continue the program for select employees after confirming the effectiveness of selective training initiatives	<ul style="list-style-type: none"> <li>Implemented the new program which began the previous year and was based on previous evaluations</li> </ul>	<ul style="list-style-type: none"> <li>Improve training content, incorporating points of evaluation and proposals from participating trainees</li> </ul>	<ul style="list-style-type: none"> <li>Continue selective training and dispatching employees to outside training</li> <li>Improve the content of the selective training</li> </ul>
2) Develop broad-based training to boost the level of our workforce Provide training opportunities to all employees: 100% participation in training courses	<ul style="list-style-type: none"> <li>Improved course convenience by incorporating online courses in foreign languages</li> <li>Made courses easier to take by making e-learning available on tablets and smartphones</li> <li>Considered enhancement of correspondence education content based on questionnaires from users</li> </ul>	<ul style="list-style-type: none"> <li>Aim to increase the number of course takers</li> </ul>	<ul style="list-style-type: none"> <li>Aim to increase the number of users by updating e-learning content</li> <li>Expand support for self-development by reviewing the correspondence education system and enhancing content</li> </ul>
3) Enhance training for locally hired executive managers overseas	<ul style="list-style-type: none"> <li>Held overseas executive manager training in October 2018 (5 participants)</li> </ul>	<ul style="list-style-type: none"> <li>Promote understanding of the Sumitomo Business Spirit, history, and corporate culture</li> </ul>	<ul style="list-style-type: none"> <li>Continue to implement training for the executive managers at overseas business sites</li> </ul>
4) Conduct training to promote further support for female employees	<ul style="list-style-type: none"> <li>Five management track female employees were dispatched for training and exchange with women in different industries. Through training and interacting with management track female employees from other companies they worked to build their own career plans</li> <li>Explained the system to those on maternity leave and childcare leave, and conducted follow-ups during leave</li> </ul>	<ul style="list-style-type: none"> <li>Finely tuned support that covers life events needed</li> </ul>	<ul style="list-style-type: none"> <li>Continue implementing external training and exchange and support female employees in their development</li> <li>Consider and implement finely tuned support measures holding regular individual interviews</li> </ul>
<b>4. Human rights</b>			
Prevent major human rights infringements ① Hold regular education on the SMM Group Human Rights Policy: applicable to all workplaces	<ul style="list-style-type: none"> <li>Held human rights education at all workplaces in December 2018</li> </ul>	<ul style="list-style-type: none"> <li>It is difficult to assess the effects of the education quantitatively</li> </ul>	<ul style="list-style-type: none"> <li>Consider and implement measures to eradicate harassment and conduct human rights education at each business site and group company</li> </ul>
② Establish human rights hotline (Speak Up System) (offering multiple means for reporting): applicable to all workplaces	<ul style="list-style-type: none"> <li>Conducted training for human rights and harassment hotline (Speak Up System) staff</li> </ul>	<ul style="list-style-type: none"> <li>Review the framework for promoting diversity and inclusion</li> </ul>	<ul style="list-style-type: none"> <li>Continue training for human rights and harassment hotline (Speak Up System) staff</li> </ul>
③ Make employees aware of the SMM direct hotline (Speak Up System): applicable to all workplaces	<ul style="list-style-type: none"> <li>Notified employees of the SMM Group direct hotline (Speak Up System) through SMM Group Code of Conduct training.</li> <li>Responded appropriately when incidents occurred involving human rights</li> </ul>	<ul style="list-style-type: none"> <li>Make the hotline (Speak Up System) easier to use</li> </ul>	<ul style="list-style-type: none"> <li>Continue various training to notify employees of the SMM Group hotline (Speak Up System)</li> </ul>
④ Implement regular human rights due diligence (human rights DD) in three categories (employees, supply chain, local communities): once every 3 years	<ul style="list-style-type: none"> <li>Held on-site interviews at 4 companies in the supply chain. Also worked with local companies in proceeding to consider implementing surveys of local communities in the Philippines</li> </ul>	<ul style="list-style-type: none"> <li>Conduct due diligence surveys in line with local circumstances</li> </ul>	<ul style="list-style-type: none"> <li>For employees: verify the results of the employment environment survey</li> <li>For local communities: conduct a survey in the Philippines</li> <li>For supply chain: conduct interviews as planned</li> </ul>

Vision for 2020: A company that accords safety the highest priority and provides comfortable working environments

Goals and KPIs	CY2018 Achievements	Issues and Targets	CY2019 Plans
<b>1. Ensure safety</b> 1) Make our final target zero occupational accidents overall 2) Reduce occupational accidents to three or fewer per year by 2020 and establish frameworks for achieving this target (Applicable to all domestic and overseas Group employees) 3) Halve the frequency rate of occupational accidents by 2020 (Applicable to all domestic and overseas Group employees) Reduce the frequency rate from 1.28 (CY2011) to 0.60 (CY2020)	<p><b>Number of injury accidents (CY2018)</b></p> <p>Japan Employees: 9 lost time; 23 in total (Reference—Contractors: 6 lost time; 9 in total)</p> <p>Overseas Employees: 2 lost time; 5 in total (Reference—Contractors: 1 lost time; 6 in total)</p> <p>Note: Pogo Gold Mine was excluded from this data from October, 2018</p> <p><b>Frequency rate for occupational accidents in Japan and overseas (CY2018):</b>            1.70 (Japan: 1.71, overseas: 1.61)</p> <p><b>Status of activities in Japan</b></p> <ul style="list-style-type: none"> <li>Measures in response to equipment identified in the 2017 comprehensive safety checks generally proceeded according to plan. Checks performed to confirm nothing was overlooked during these safety checks</li> <li>Strengthened line management through instructions from divisions and the development and use of guidelines for supervisors</li> <li>Improved hazard simulation leading to more thorough safety rules at business sites</li> <li>Provided instruction and support for initiatives at business sites through various patrols</li> </ul> <p><b>Status of activities overseas (CY2018)</b></p> <ul style="list-style-type: none"> <li>Currently installing hazard simulation equipment at a Philippine business site. Due to start operation in 2019</li> <li>Continued effective application of individual employee hazard prediction activities</li> <li>Provided instruction for initiatives at business sites through divisional patrols</li> </ul>	<p>Japan</p> <ul style="list-style-type: none"> <li>Ensure all employees are prioritizing safety from top management down</li> <li>Implement priority-oriented, intrinsically safe facility measures in a planned manner</li> <li>Improve the effectiveness of risk assessments</li> <li>Clarify and comply with safety rules for each business site</li> <li>Continuously raise hazard awareness through hazard simulations, small group discussions, etc.</li> <li>Ensure all employees are carrying out appropriate actions at appropriate locations through line management</li> </ul> <p>Overseas</p> <ul style="list-style-type: none"> <li>Raise hazard awareness and safety awareness levels</li> <li>Implement safety training tailored to business sites</li> </ul>	<p>Japan</p> <p>Advance measures focused on the key points of preventing critical disasters and communication with employees</p> <ul style="list-style-type: none"> <li>Continue safety instruction through patrols and the education of newly appointed business site top management</li> <li>Establish written safety rules at workplaces and ensure compliance with these rules and education on the reasoning behind them</li> <li>Continue identifying risk through risk assessments and revising assessment methods</li> <li>Teach supervisory skills, including work observation, in order to strengthen line management</li> <li>Support the above activities by raising hazard awareness among all employees through hazard simulation, small group discussions, etc.</li> </ul> <p>Overseas</p> <p>Raise hazard awareness in Philippine business sites.</p> <ul style="list-style-type: none"> <li>Install hazard simulation equipment and implement hazard simulation training</li> <li>Create training materials that incorporate business site rules based on the content of <i>Anzen Dojo</i> and utilize these to educate</li> </ul>
<b>2. Provide comfortable working environments</b> 1) Provide healthy working environments ① Achieve zero new cases of employees with occupational disease (requiring treatment) (Applicable to all domestic and overseas Group employees) ② Achieve zero Control Class 3 workplaces (excluding locations stipulated in guidelines, etc.) and reduce Control Class 2 workplaces (Applicable to all domestic business sites)	<ul style="list-style-type: none"> <li>No new cases of occupational disease</li> <li>Control Class 3 workplaces (figures in parentheses are FY2017 results) in FY2018              Total: 3 (22)              Dust 0 (1), lead 0 (1), nickel compound 0 (8), arsenic, etc. 2 (1), chlorine 0 (1), cobalt, etc. 0 (10), methanol 1 (0)</li> <li>Control Class 2 workplaces (figures in parentheses are FY2017 results) in FY2018              Total: 34 (36)              Dust 6 (5), lead 0 (2), nickel compound 18 (14), arsenic, etc. 0 (3), chlorine 1 (0), cobalt, etc. 9 (12)</li> </ul> <p><b>Status of activities in Japan</b></p> <ul style="list-style-type: none"> <li>Departments and business sites came together to move work environment improvements forward (realization of effective investment)</li> <li>Strengthen progress management of improvement plans by Safety &amp; Environment Control Center of the Besshi-Niihama District Division</li> <li>Provided on-site support through occupational health patrols by the Safety &amp; Environment Control Dept.</li> </ul>	<p>Maintain improved work environments, eliminate the remaining number of Control Class 3 workplaces, and systematically reduce the number of Control Class 2 workplaces</p> <ul style="list-style-type: none"> <li>Prevent worsening of the work environment when increasing volume and establishing new operations</li> <li>Ensure improvements based on visualization of the work environment</li> <li>Enhance abilities and technology for improving work environments</li> </ul>	<ul style="list-style-type: none"> <li>Establish rules for maintaining work environments during changes such as the establishment of new operations</li> <li>Continue strengthening PDCA such as visualization, improvement, and maintenance</li> <li>Gather and implement expertise related to technology for improving work environments, including encouragement to gain qualifications and the use of both internal and external experts</li> <li>Provide on-site support through occupational health patrols by the Safety &amp; Environment Control Dept.</li> </ul>
2) Implement other working environment improvements	<p><b>Achievements (FY2018)</b></p> <ul style="list-style-type: none"> <li>Continued to carry out mental health checks and held report meetings to improve the workplace environment</li> </ul>	<ul style="list-style-type: none"> <li>Bring about open-minded workplaces where workers can work easily and comfortably</li> </ul>	<ul style="list-style-type: none"> <li>Create an atmosphere and spaces within workplaces where workers can speak openly and honestly</li> </ul>

Vision for 2020: A company that works to communicate transparently with all worldwide stakeholders to deepen mutual understanding

Goals and KPIs	FY2018 Achievements	Issues and Targets	FY2019 Plans
<b>1. Encourage deeper mutual understanding with employees</b> 1) Continue conducting employee awareness surveys 2) Hold regular dialogues with workers' unions or representatives from employees	<ul style="list-style-type: none"> <li>Gathered assessments and points for improvements from employees regarding each topic of the in-house bulletin, contributing to the fostering of an open and vibrant organizational climate</li> <li>Added survey items such as compliance and survey business sites to employee awareness surveys and implemented a survey in February 2019</li> </ul>	<ul style="list-style-type: none"> <li>Continue to verify the merits and demerits of the frequency and timing of employee awareness surveys</li> </ul>	<ul style="list-style-type: none"> <li>Report to management at SMM and group companies on the results of the employee awareness survey and discuss a response through workshops</li> <li>Reconsider how to implement the in-house bulletin as an internal communication tool that contributes to the rebuilding of an open and vibrant organizational climate</li> </ul>
<b>2. Encourage mutual understanding with local communities and citizen groups</b> 1) Continue regular meetings with local communities and participate in community activities 2) Carry out cooperative activities with NGOs/NPOs	<ul style="list-style-type: none"> <li>Held training on risk communication for the Besshi-Niihama District Division and Administration Department of each division</li> <li>Held regularly scheduled meetings with environmental NGOs in June and November</li> <li>Invited Keiichi Omoto, emeritus professor of anthropology at the University of Tokyo, and indigenous leaders from the Taganito region of the Philippines to Head Office for discussions</li> </ul>	<ul style="list-style-type: none"> <li>Continue to provide required support for Besshi-Niihama District Division initiatives</li> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Support the creation of a framework for risk communication with the local community in the Besshi district to make it a model case study</li> <li>Continue to hold dialogue with environmental NGOs</li> <li>Encourage understanding of the SMM Group's business among NGOs, NPOs, experts in both Japan and overseas, and others</li> </ul>
<b>3. Encourage mutual understanding with shareholders and investors</b> 1) Publish integrated reports and improve their content 2) Promote dialogue with investors	<p>Japanese printed edition was issued on September 28 and English version was posted on the website on November 1</p> <ul style="list-style-type: none"> <li>Updated from GRI 4.1 to cover GRI Standard</li> <li>Content changed to reflect enhanced explanation of strengths and strategy based on business collaboration, information on our management approach, etc.</li> <li>Continuously selected as a "Company with excellent integrated report" and a "Company most nominated by external asset managers for a most-improved integrated report" by the Government Pension Investment Fund (GPIF) since 2017</li> </ul> <p>In March 2019, following the announcement of the 2018 3-Year Business Plan, briefing sessions for individual investors were held three times, including in regional areas, and these involved lively Q&amp;A sessions</p> <p>As a continuous SR (shareholder relations) initiative, visits and dialogue were carried out with major shareholders and institutional investors in both Japan and overseas, promoting further understanding of the SMM Group's business</p>	<ul style="list-style-type: none"> <li>Further improve the level of information disclosure</li> <li>Improve information disclosure to levels that are appropriate for a world leader in the non-ferrous metals industry</li> <li>Improve our ability to explain our story in a clear manner and raise fairness and appropriateness of timing</li> </ul>	<ul style="list-style-type: none"> <li>Further clarify our competitive edge and use branding techniques to showcase the unique appeal of the SMM Group in the FY2019 report.</li> <li>Increase the number of briefing sessions for individual investors to be held and enhance the content of briefing materials with individual investors in mind</li> <li>Create regular, prioritized opportunities for top management to have dialogue with long-term shareholders</li> </ul>
<b>4. Encourage mutual understanding with other stakeholders</b>	<ul style="list-style-type: none"> <li>Collaborated with business sites and employees to implement the following activities: created and distributed T-shirts with logos in cooperation with relevant internal divisions; implemented business training for Japanese school teachers (Ome); sponsored the Minato City Half Marathon; sponsored the University SDGs ACTION! AWARDS; purchased naming rights in Ome</li> <li>Active PR Held lectures for reporters and worked to strengthen our ability to reach various media.</li> <li>Enhanced information dissemination tools aimed at the internet, various exhibitions, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Need a strategic roadmap to raise awareness and a favorable image of SMM</li> </ul>	<ul style="list-style-type: none"> <li>Advance events in collaboration with relevant internal divisions, business sites and employees, and region-specific PR activities</li> <li>Advance active PR activities through the media</li> <li>Organize a recruitment framework, select advertising media with the aim of raising awareness of SMM, and implement effective publicity and advertising</li> </ul>

# Identification of Material Issues for the SMM Group

## Material Issues for the SMM Group

### SMM Group's Stakeholders

At the SMM Group, the following entities were identified as stakeholders that are affected by the Group, or affect the Group: customers, shareholders, employees, local communities, creditors, business partners, civil society organiza-

tions, and government agencies. The SMM Group aims to maximize its corporate value with a specific target established as the SMM Group's proper objective for each stakeholder.

### Identification of Material Issues

To achieve the continuous creation of value, the SMM Group assesses, categorizes, and organizes the risks and opportunities that affect that value, reflecting them in our medium- to long-term strategies (see p. 18 and 19).

In our sustainability strategies, we identified 26 material issues (see p. 25) in 2015 based on SMM Group's material

issues identification process in Steps 1-4 below, and take a strategic approach toward six CSR areas of high priority: Effective Use of Resources, Environmental Preservation, Contribution to Society and Local Communities, Respect for People and Human Rights, Occupational Health and Safety, and Stakeholder Communication.

#### Step 1 June 2014 Identification of sustainability issues

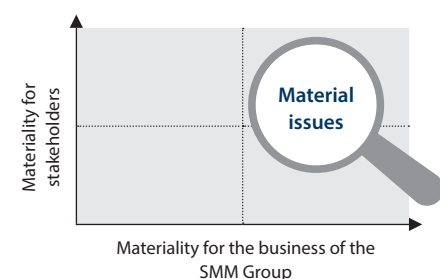
As sustainability issues, we identified a variety of issues that positively or negatively impact the formation of a sustainable society. In doing so, we focused on the guidelines on the right, resulting in the identification of 102 issues. We further consolidated the issues according to their shared qualities, in the end identifying 58 sustainability issues.

##### ■ Guidelines referenced

- Aspects of the GRI Sustainability Reporting Guidelines Version 4 (G4)
- Issues in ISO 26000
- Principles and position statements of the ICMM
- The Ten Principles of the United Nations Global Compact
- Items noted in the DJSI and other corporate assessments

#### Step 2 July 2014–August 2014 Assessment of materiality and identification of material issues

We evaluated these issues on the two axes of materiality for stakeholders and materiality for the business of the SMM Group. We identified 26 material issues for which importance is high on both axes and for which our current initiatives should be strengthened.



##### ■ Main perspectives in evaluation of materiality

###### Materiality for stakeholders

- Degree of impact on stakeholders' immediate rights
- Opinions of stakeholders
- Requests directed at the SMM Group, organizations to which we belong, and our industry
- Social issues in areas where we operate, and the scale of these social issues
- Scale of the potential negative or positive impacts of our business

###### Materiality for the business of the SMM Group

- Degree of impact on our social license to operate
- Degree of relationship with our business policy and business strategy
- International social norms and industry rules
- Opportunities for income and sources of competitiveness in the future

#### Step 3 September 2014–November 2014

#### Consideration of draft revisions to the Vision for 2020 and KPIs

We categorized the identified material issues into our Six CSR Areas of High Priority and formulated draft revisions to the Vision for 2020, in line with our targets and our approaches for addressing the organized material issues as a Group.

We also identified specific targets and KPIs for assessing our degree of achievement toward the Vision for 2020.

(Specific targets and KPIs correspond to the targets of the relevant subcommittee. See Activities and Achievements for the Six CSR Areas of High Priority (p. 91–97) for details)

#### Step 4 December 2014–March 2015

#### Validation

The Chairman, President, and all 24 executive officers took part in 15 hours of deliberations on the considered material issues, the Vision for 2020, the specific targets, and the KPIs, with a focus on verifying consistency with our business policy and business strategy. Validation of the final draft was carried out through confirmation by the CSR Committee and decision by the Board of Directors.

##### ■ Regarding Boundaries

In the process to identify material issues, as a result of analyzing and verifying the effects on our own business activities and in the supply chain, the boundaries for the material issues below were established as follows.

Boundaries other than these apply to the SMM Group (see p. 14 and 15 for the Group's scope).

##### SMM Group & Suppliers

Topic: **Environmental** Emissions (Material issue 8)

Topic: **Environmental** Effluents and Waste (Material issue 8)

Topic: **Human Rights** Human Rights Assessment (Material issue 20)

### Setting Targets for SMM's Material Issues

For information about our thinking, targets, and KPIs concerning material issues in the six CSR areas of high priority (Effective Use of Resources, Environmental Preservation, Contribution to Society and Local Communities, Respect for People and Human Rights, Occupational Health and Safety,

and Stakeholder Communication), as well as our FY2018 performance, issues, and FY2019 plans, see the sections on our thinking and our performance on p. 91 and later.



# Occupational Health and Safety

## Policy and Framework

Realizing safe, comfortable work environments where employees can carry out their work with peace of mind is a crucial managerial factor leading to greater relationships of trust between employees and the company and higher employee motivation. Also, it can create positive effects, such as enhancing recruitment and employee retention rates and reducing turnover. The SMM Group's CSR Policy states, "According to safety the highest priority, SMM shall provide safe, comfortable working environments and seek to eliminate occupational accidents," and we are advancing initiatives that will foster a culture of safety in line with this.

With the president as the person responsible for occupational health and safety, we are building a line management framework in which the general manager of each business site is appointed health and safety manager of that site, operating under the guidance and supervision of the general managers of the relevant divisions. Constructive discussions on ways to improve health and safety in the workplace also take place during meetings of the Occupational Health and Safety Committee comprising representatives from both labor and management. Furthermore, the executive officer responsible for the Safety & Environment Control Department tackles occupational health and safety by providing guidance and advice to each department and each of the Group's business sites, as well as coordinating efficiently with the health and safety officer assigned to each divisions and business site in order to improve health and safety.

## Occupational Health and Safety Management

In order to prevent accidents and illness caused by unsafe circumstances and behavior at business sites, we are advancing occupational health and safety measures based on the concept of hierarchy of controls.<sup>1</sup>

In Japan, we are building an occupational health and safety management framework as stipulated by the Japanese Industrial Safety and Health Act, and are formulating policies, targets, and plans. We are also implementing a one-year PDCA cycle and each level of the company is working to reduce risk in accordance with their role. The business division with jurisdiction and the Safety & Environment Control Department are implementing internal audits at all business sites, patrolling each one, and we are advancing activities based on the Ministry of Health, Labour and Welfare's Occupational Safety and Health Management Systems (OSHMS) guidelines. We also have business sites that have received OSHMS certification through the Japan Industrial Safety and Health Association (JISHA) accreditation method and OHSAS 18001 certification.

At overseas business sites, we are building an occupational health and safety management framework based on local laws and regulations and are implementing initiatives including activities to ensure hazard prediction, risk assessment, and the improvement of equipment are at the same level as in Japan.

1. Hierarchy of controls: An approach for lowering risk to acceptable levels through prioritization as follows – Elimination of source of risk → Substitution of source of risk → Engineering controls → Administrative controls → Personal protective equipment  
Source: The US National Institute for Occupational Safety and Health (NIOSH)

## Initiatives for Achieving Policy and Targets

### Group-Wide Activities

In FY2018, we implemented the following initiatives in order to ensure safety.

#### Japan

- 1 Improved efforts at business sites to provide instruction and support through patrols by individual divisions, the Besshi-Niihama District Division, and the Safety & Environment Control Dept.
- 2 Strengthened line management through instructions from divisions and the development and use of guidelines for supervisors created by the Safety & Environment Control Dept.
- 3 Started hazard simulation training at Oji-kan, the SMM Group's practical training facility, to raise awareness regarding compliance with safety rules at business sites.
- 4 Advanced and reconfirmed measures for preventing employees getting caught in equipment and other issues identified through 2017's comprehensive safety checks and implemented additional measures.

#### Overseas

- 1 Improved initiatives at business sites to provide instruction through patrols by individual divisions, etc.
- 2 Continued the effective application of initiatives such as 10-second hazard prediction activities and activities to reduce risk through work observations and the like.
- 3 Enhanced safety training at Philippine business sites
  - Created and used training materials based on incident case studies.
  - Continued to bring 15 employees a year to Japan for hazard simulation training.
  - Prepared to introduce hazard simulation equipment at business sites and decided on a selection of simulations.

The following occupational health activities were implemented:

- 1 Promoted activities to reduce exposure to nickel and cobalt dust and the like, led by divisions together with business sites (implemented effective investment in areas such as installing booths, improving powder filling methods, strengthening dust collection capabilities, and reinforcing sealing).
- 2 Encouraged improvements by providing on-site instruction and support from the Safety & Environment Control Dept., Besshi-Niihama District Division, and others.

## Initiatives at Individual Sites

### Safety Activities at Philippine Business Sites

At Coral Bay Nickel Corporation (CBNC), we are actively advancing 10-second hazard prediction activities. In addition to existing safety instruction, which is centered around a top-down approach, we are enhancing awareness to ensure that each worker protects their own safety. Specifically, we are advancing activities in which they consider potential hazards for 10 seconds by asking themselves "Is there anything dangerous about the work I'm about to do?" before starting work. Additionally, at Taganito HPAL Nickel Corporation (THPAL), we are focusing on identifying and producing countermeasures for potential risk through onsite work observation. Furthermore, at both business sites we are promoting 3S (putting in order [seiri], keeping in order [seiton], and keeping clean [seisou]). As a result, the cleanliness and 3S of these two business sites are now at the same level as business sites in Japan.

At both CBNC and THPAL, the number of accidents among contractors is high compared to SMM employees, so raising the level of safety management is an important issue. We are working to raise safety awareness and improve behavior through initiatives such as implementing the safety training we have been giving employees, such as 10-second hazard prediction activities and safety expertise tests (which test mindsets and knowledge, etc.), at contractor companies.

Furthermore, in advance of the introduction of hazard simulation training, our Philippine staff have led the process of deciding a selection of hazard simulations.

### Safety Initiatives at Mitsui Sumitomo Metal Mining Brass & Copper Co., Ltd.'s Mie Plant (BC Mie)

At BC Mie, we are tackling the key points of raising hazard awareness, making equipment safer, and facilitating heart-to-heart communication.

In regard to our main campaigns, in 2014-15 we established the name "Let's Change, Mie!" and formed a dedicated safety committee to ensure thorough compliance with 3S and safety rules. We also implemented initiatives such as identifying hazard sources and creating and deploying guidelines for equipment safety.

In 2016-17 we adopted the theme of "thoroughly ensuring the separation of vehicles and pedestrians" and worked to reduce the risk of humans coming into contact with heavy machinery. This involved establishing safety barriers in line with specific situations, including to prevent heavy machinery from encroaching onto walkways and preventing collisions at building entrances and exits, as well as implementing initiatives that ensured heavy machinery operators were aware of the presence of other workers such as installing rotating red lights and making sheet shutters in warehouses transparent.

In 2017-18, we established a Committee for Realizing an Ideal Workplace and worked to identify and improve hazard sources that "supervisors may not be aware of but site workers are." We secured a budget and implemented necessary responses to risk information sharing cards promptly, and by doing this we removed the feeling that "although employees speak up, no action is taken," thereby building a culture of honest communication throughout the business site.

## Work Environment (Occupational Health) Improvement Initiatives at the Isoura Plant

At the Isoura Plant, increases in battery materials production since FY2017 have been accompanied by a significant increase in the volumes of various powders that need to be dealt with, and a change to packaging methods has increased the amount of packing into flexible containers, which generated more dust. These factors have led to a deterioration in the work environment. At the end of FY2017, the material input and packing operations were diagnosed as Control Class 3 workplaces (improvements required) and we focused on implementing the following counter measures.

- Packaging processes: The openings for putting materials into flexible containers were made smaller, controlling the amount of dust released and we strengthened powder collection abilities.
  - Other processes: For processes such as those that could not sufficiently exhaust dust nor those for which it was difficult to prevent dust leaking through openings, within previous methods, against dust volume increases, booths were installed and powder collection capabilities were made more appropriate in accordance with the specific situation for each operation.
  - We strengthened progress management being carried out by various committees. On-site instruction was provided by Head Office, the Besshi-Niihama District Division, and others.
- As a result, as of the end of FY2018 the number of Control Class 3 workplaces is zero and the work environment has greatly improved. Although there are still some Control Class 2 workplaces (improvement efforts should be made), we will utilize past examples of improvements, adjust dust collection pipework, and ensure thorough cleanliness among other initiatives with the aim of realizing an even better work environment.

As shown above, we have been advancing initiatives that are unique to the characteristics of each site, but in March 2019, a fatal accident occurred at the Toyo Smelter & Refinery involving a fall from a high place. To ensure that this kind of accident will not and cannot happen again, we are working to thoroughly identifying risks that could potentially lead to serious accidents, including for non-routine work, and taking countermeasures against these. We are also putting an even greater focus on initiatives that ensure work is carried out following safe procedures.

# Compliance

## Policy and Framework

Compliance is the foundation of corporate activities. The SMM Group goes beyond just complying with laws, regulations, Articles of Incorporation, and its own rules, and works to fulfill the moral and social responsibilities demanded of it as a member of society through corporate activities.

The president is the person responsible for compliance initiatives and he appoints an executive to be in charge. All compliance violations that the Group is aware of are reported to the Board of Directors, which monitors and ensures that the compliance framework is functioning properly.

Compliance is managed according to our internal basic compliance regulations. We have established the Compliance Working Group (WG) under the CSR Committee to promote and improve that management. The Compliance Working Group provides and exchanges information, and discusses policy and key measures concerning the promotion of compliance for the SMM Group.

## Initiatives to Take on Issues and Provide Improvements

The Compliance WG was convened in FY2018, confirming the following.

- The results of checking FY2018 compliance status show that we received a severe warning from the supervising authorities regarding the failure to immediately report the loss of electrical blasting caps at Hishikari Mine in Kagoshima Prefecture. We will take all necessary measures to prevent such a reoccurrence and ensure strict mining safety. Other than this, there were no serious legal or regulatory violations, including Antimonopoly Act, regarding the environment, products, service, or marketing.
- The SMM Group's compliance requires ethics-based conduct and decision-making that go beyond abidance of the laws and regulations, and that key matters related to compliance are made known to employees through a range of various training programs. Also, in order to prevent serious violations of the law from occurring, we have established the following company regulations.

### Company Regulations Concerning Compliance

- Regulations on insider trading prevention and information management
- Regulations on the safeguarding of personal information
- Export administration regulations
- Regulations for the prevention of bribery
- Regulations for observance of competition law, etc.

## Hotline (Speak Up System)

In situations where problems or doubts under the SMM Group Code of Conduct occur, and consultation with superiors fails to bring forth an appropriate response, employees are able to use the hotline (Speak Up System) to directly report the matter to: (i) in-house liaisons which are the general managers of the Legal Department, the Safety & Environment Control Department, and the Internal Audit Department; or (ii) outside liaisons which are designated attorneys. The source of the information is always kept secret and if, for any reason, the informant is treated unfairly, the person who initiated the unfair treatment will be punished appropriately.

In FY2018, there were 12 cases brought up through the SMM Group hotline (Speak Up System). Broken down, these were six cases involving harassment, two cases involving salary and hiring, two cases involving employee management, one case involving workplace relations, and one case involving a product container. Each of these consultations was handled appropriately.

## Response to Complaints and Comments Directed at Our Group

In terms of human rights-related response, our group has established the hotline (Speak Up System) direct hotline for employees, conducts human rights due diligence on employees and suppliers, creates regular opportunities for communication with local communities, and engages with those communities. Each of our domestic and overseas workplaces acts as a point of contact for complaints related to the environment, while the sales department of each business site act as points of contact for complaints about products and services. Our website features a "Contact" page that directs viewers to points of contact for all types of inquiries.

## Anticorruption

The Basic Policies for Anti-Bribery was established April 2017. This policy stipulates the following rules for SMM Group officers and employees: 1. Granting, offering, or promising a bribe either directly or indirectly is forbidden, 2. The prior approval of the department in charge is required as specified elsewhere, when providing entertainment or a gift to public officials, etc., 3. An accurate accounting record must be created and maintained to prove compliance with laws pertaining to the prohibition of bribes to public officials, etc., 4. If a possible violation of laws prohibiting bribery is discovered, it must be immediately reported to one's superior. Also, construction of a framework is under way to identify and analyze any risk of bribery, and to evaluate the possibility of bribery and its effects if bribery has occurred, and to prevent any bribery.

There were no cases of corruption at the SMM Group in FY2018.

## Participants of Compliance Education (FY2018)

Type of seminar	Target	Gender	Participants
Compliance seminar for general managers	Officers	Male	83
		Female	0
SMM Group Code of Conduct Refresher Training and Ethics Training	Employees	Younger than 30	770
		Female	188
JCO Study Center training	30-50 years old	Male	2,325
		Female	500
Introductory training for new employees	51 and older	Male	1,696
		Female	187

Note: Attendees include those belonging to equity-method affiliates. The information in this table covers Japan.

## SMM Group Code of Conduct

All officers (including executive officers) and staff (including fixed-term and temporary employees) shall, in accordance with the corporate philosophy of the SMM Group, comply with the following Code of Conduct. Officers in particular shall, in reflection of their position and responsibilities, exercise strict self-discipline, set an example in carrying out the Code, and educate employees to honor and strictly obey the Code in full.

- 1. Compliance: Abidance by Laws and Rules**
  - We will comply with foreign and domestic laws and rules, and conform to social norms.
  - We will never under any circumstances commit an infraction of the law or act counter to social norms, even if doing so would seem to be in the company's interests.

**2. Respect for Individuals**
  - We will accept diversity and respect the individuality and rights of people.
  - We will never violate human rights, engage in discriminatory conduct, or contribute to such conduct.

**3. Assurance of Health and Safety**
  - We will give highest priority to ensuring the physical health and safety of all persons affected by our operations.

**4. Development of Human Resources**
  - We will strive not only for personal self-improvement, but also to nurture successors through systematic training and by providing various opportunities in the course of work.

**5. Risk Management**
  - We will strive to identify risks, prevent their occurrence, and if risks occur, minimize the effects.

**6. Adherence to a Progressive Stance**
  - We will approach our jobs with a positive and progressive attitude suitable to the creation of technologies and systems in the vanguard of changing times.

**7. Respect for Teamwork, Promotion of Good Communication**
  - We will place high value on teamwork, in the form of cooperation both with other organizations and with fellow workers.

**8. In Harmony with Society and Local Communities**
  - As members of society, we will participate in social contribution activities in accordance with our personal beliefs.
  - We will strive toward a harmonious and mutually beneficial relationship with local communities.

**9. Separation of Corporate Business and Personal Affairs**
  - We will at all times conduct ourselves based on sound judgment, and make a clear distinction between corporate business and our personal affairs.

**10. Collection, Management and Usage of Information**
  - We will collect information swiftly, properly and lawfully, manage it appropriately, and use it effectively.
  - We will utilize information acquired in conjunction with corporate business expressly for that purpose only, and will not leak such information to any third party.

**11. Handling of Intellectual Property**
  - We will nurture and maintain conscious recognition of the importance of intellectual property as a vital asset of the Group, and strive toward the creation of such property.
  - We will strive to properly protect and effectively use all corporate intellectual properties; we will also respect intellectual properties of other parties.

**12. Assurance of Quality**
  - We will continuously improve quality management systems and provide products and services that satisfy customers.
  - We will enhance technologies and seek to engage in manufacturing that takes into account customers' safety and their environment.

**13. Stance toward Performance of Sales and Purchasing**
  - We will comply with competition laws and conduct sales and purchasing activities based on fair competition.

**14. Stance toward Entertainment and Gifts**
  - We will entertain and present gifts to others, and accept entertainment and gifts, within the proper limits of both the law and social acceptability.
  - We will comply with laws against bribery and will maintain healthy and proper relationships with government and political organizations.

**15. Severance of Relationships with Socially Disruptive Forces**
  - We will staunchly eliminate socially disruptive forces and have no relations whatsoever with them.

**16. Concern for the Global Environment**
  - Taking into consideration climate change and biodiversity, we will act in a manner enabling us to contribute to the resolution and/or improvement of resource, energy and environmental problems of global scale.

**17. Attitude in the Performance of Global Business Activities**
  - We will strive to interact with people in the countries or regions where we undertake business and engage in conduct that respects local culture and practices as well as globally accepted norms and their spirit.
- 102
- SUMITOMO METAL MINING CO., LTD. Integrated Report 2019
- SUMITOMO METAL MINING CO., LTD. Integrated Report 2019
- 103
- A Foundation Supporting the Creation of Value

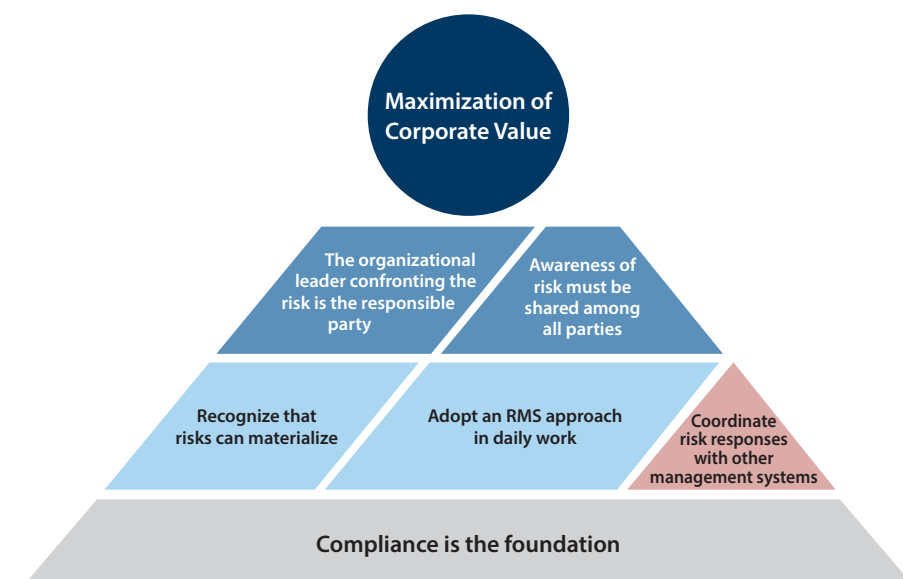
# Risk Management

## Risk Management Framework

The SMM Group engages in risk management under the Six Principles<sup>1</sup> established for Maximizing Corporate Value. The president is the person responsible for risk management (RM) at the SMM Group and he formulates RM policy as a part of his fiscal year policy. based on this policy each business site formulates a fiscal year RM action plan and conducts RM activities. These activities are checked and reviewed by RM internal audits and RM patrols. For major risks that cause serious damage and require treatment across the entire SMM Group (SMM Group-Wide Serious Risks), a group-wide Crisis Management Framework has been built, with training and enhancing our ability to respond to such situations.

These activities are in place as the SMM Group RM system (RMS).

1: (1) Compliance is the foundation, (2) The organizational leader confronting the risk is the responsible party, (3) Awareness of risk must be shared among all parties involved, (4) Adopt an RM approach in daily work, (5) Recognize that risks can materialize, and (6) Coordinate risk responses with other management systems



## Individual Risks and Daily RM Activities

Daily RM activities in each site as part of usual tasks involve identifying and assessing individual risks, according to the change in the circumstances, and taking the appropriate treatment. These activities identify the risks shown below<sup>2</sup> at each site, resulting in more than 1,400 individual risks currently registered in the RM system. In case there are changes to the environment and conditions that serve as prerequisites for identified risks, such as business environments, work environments, people, equipment, work procedures, and quality standards, these registered risks are reviewed and updated, or new risks are added. Also periodical risk review are promoted during the RM Promotion Campaign every September.

2. Compliance violations, environmental accidents, fires and explosions, natural disasters, pandemics or epidemics, loss, leaks and theft, contract or rights infringement, fraud, scandal, human error, water cutoff or power outage, production equipment damage, occupational accident, quality issues, human rights, reputation, and exchange risks, etc.

## The FY2019 RM Policy and Activities

The FY2019 RM policy is prescribed "Identify and address risks that hinder executing the business plan and reaching its goals as usual work." Risks registered in the RM system with small environmental or situational changes are managed by formulated risk treatment. Project-based risks, however, are different as they entail a large number of unexpected and situational changes, making it impossible to maintain risk management effectiveness without a framework that can provide an immediate response.

Top management at the SMM Group leads the way in initiatives, making new businesses and projects successful without compliance violations, environmental accidents, occupational accidents, quality issues and other issues, even in crises, by appropriate risk treatment based on a Crisis Management framework.

## Other RM Activities

Each site enacts measures against natural disasters, such as earthquakes, tsunamis, floods, liquefaction, landslides, and volcanic eruptions, in accordance with each site's hazard level, working to reinforce buildings against earthquakes, maintain embankments, enhance drainage capabilities, add more water storage tanks, stockpile emergency rations, maintain emergency supplies, and engage in drills which are under way to prepare for earthquakes, fires, and environmental accidents, as well as terrorism, riots, and kidnappings at overseas locations. Based on current issue, optimal program of these drills is planned to deal with problems such as lack of experience handling materials and machinery, insufficient understanding of rules and procedures, insufficient manuals, as well as to improve the decision-making abilities of members at countermeasures headquarters. Also, each site engages in drills according to their situations, such as practical skill-up training to learn proper handling, manual check to gain a proper understanding of rules and procedures, workshop to simulate decision-making of various occurrences, as well as blind scenario role-playing drills that test immediate responsiveness.



Emergency response headquarters exercise, assuming the environmental accident of occurrence



## Drills for Establishing a Crisis Management Headquarters and Holding a Press Conference

On December 14, 2018, a crisis management drill was conducted. The drill used the scenario of an accident at one of our business sites, with neighboring residents taking shelter indoors and people involved having lost consciousness. The drill also included the establishment of a crisis management headquarters and company officers explaining the situation at a press conference.

The drill began, with the scenario a secret, by contacting relevant parties to notify them of the accident, and then the establishment of a crisis management headquarters, and collecting information from people in charge and issuing orders while up to the minute situational reports and inquiries overlapping. Then, the drill ended with the president, General Manager of the Materials Division and General Manager of the Safety & Environment Control Department conducting a mock press conference.

Even when there are countermeasure regulations and manuals for emergencies, it is important to evaluate their effectiveness and effect through drills with explanations to neighboring residents and the media. We look forward to maintaining even more effective risk management practices in the future by working together with relevant departments and business divisions in drills and through closer communication with our neighboring communities.



# Human Rights Management

## Policy and Framework

The SMM Group operates on a global scale, necessitating the responsibility to maintain respect for human rights in our business activities at all positions in the value chain. With the president as the responsible person, these initiatives are promoted by the officer in charge of human rights as the executive officer in charge of the Personnel Department and CSR Department. Ensuring that all employees receive the necessary awareness education, establishing a hotline, and due diligence for human rights help to properly monitor the situation, we quickly and appropriately handle problems when they arise.

SMM established the SMM Group Policy on Human Rights in 2010. The SMM Group is constructing a Group-wide human rights management program that incorporates a human rights due diligence framework based on the UN's Guiding Principles on Business and Human Rights. We aim to build and operate a structured system to prevent and avoid complicity in either direct or indirect violations of human rights, and to make possible more appropriate responses, including relief, to concerns that arise.

### SMM Group Policy on Human Rights

The SMM Group's policy on human rights, in accordance with the SMM Group Corporate Philosophy and the SMM Group Code of Conduct, has been established as follows.

- ① The SMM Group will comply with domestic laws and international standards relating to human rights and encourage persons within the Group, as well as outside parties over which the Group has influence, to work toward the realization of a society without human rights infringements.
- ② The SMM Group will not allow harassment or other incidents of a discriminatory nature within the Group and will make efforts to prevent such incidents from occurring among outside parties over which the Group has influence.
- ③ The SMM Group will not engage in child labor or forced labor and will make efforts to prevent child labor or forced labor from occurring among outside parties over which the Group has influence.
- ④ The SMM Group will show other considerations to human rights in addition to items 1-3 above within the Group and in relationships with outside parties over which the Group has influence.
- ⑤ The SMM Group will establish appropriate measures and procedures for responding to human rights problems should they occur.
- ⑥ The SMM Group will identify and stay aware of the current and changing state of human rights in the world, as well as the impact of corporations in the area of human rights, and carry out awareness-raising activities and other necessary measures on an ongoing basis.

## Human Rights Due Diligence

The human rights management program covers SMM Group employees inside and outside Japan, the supply chain that the SMM Group is able to influence, and the local citizens in areas where the group does business (See p. 110: Supply Chain Management).

A human rights management program for employees began full-scale operation in FY2014, and in FY2018 we carried out a basic survey regarding human rights at 10 business sites and group companies in Japan and overseas. With regard to the human rights management program for the supply chain, we carried out questionnaires for suppliers in Japan and overseas and conducted on-site inspections at four suppliers. In FY2018, there were no cases of discrimination, three cases of harassment, and no complaints regarding harm on human rights, but all cases were handled in an appropriate manner.

## Human Rights Seminars

Human rights seminars are held regularly and include lectures, education on human rights risks for employees scheduled to be posted overseas, and human rights education as part of training when promoted. The primary objectives are to deepen awareness of potential human rights issues in the workplace and to prevent problems from occurring. These seminars are held not only for officers and managers, but also for a broader range of employees including regular employees and limited-term employees.

Also, in order to prevent every kind of harassment, each workplace runs human rights education.

In addition to these seminars, we hold education on human rights, including the SMM Group Policy on Human Rights, for all employees—including those at group companies—every December during Japan's Human Rights Week. Going forward, we intend to further enhance human rights education. Education is conducted so that the manager of each business site talks directly to the employees about themes that should be touched upon at that particular site, and so that the management at each business site can communicate their thoughts to all employees.

## Initiatives to Take on Issues and Provide Improvements

An issue in promoting the prevention of human rights violations is the difficulty in quantifying the results of education on the SMM Group Policy on Human Rights, further spreading the diversity promotion framework, and continuing to make employees aware of the SMM direct hotline.

In FY2018, harassment eradication initiatives were considered and put into practice at each business site and group company. With regard to the three categories in human rights due diligence (employees, supply chain, and local communities), surveys were conducted on employees at sites where it was necessary, on-site interviews were held along the supply chain to ensure that all was going according to plan, and overseas business sites considered what direction to take for surveys of local communities.



Diversity workshop—Thinking about LGBT



Training for direct hotline (Speak Up System) operators

# Human Resources Management

## Policy and Framework

Along with carrying forward the Sumitomo Business Spirit, our Group is putting effort into developing human resources and promoting diversity to deal with new business models and adapt to a changing business environment. With the president as the responsible person, an officer is appointed to be in charge of the Personnel Department and these initiatives are promoted. In 2015, in addition to identifying specific targets and KPIs for human resources development, the Human Resources Development Department was established as an independent Head Office organization to strengthen the human resources development function. This organization provides opportunities for all employees to enhance their skills and motivation, with a focus on: training the next generation of management; supporting an active contribution by women; and training global human resources. We aim to strengthen the management base and execute a solid growth strategy by promoting training in line with the image of the type of person needed at the SMM Group. The human resources development program is composed of three components—on-the-job training (OJT) is the base, with self-development, and off-the-job training (OFF-JT)—and works to develop the human resources required to achieve our growth strategies by utilizing a training cycle that involves selection → training → assignment → practical application → evaluation.

## Development of Human Resources

In human resources development, which has OJT by one's supervisor or senior colleagues as the foundation, is not simply the acquisition of job knowledge and skills, but also promotes growth as a person through work. A wealth of training programs, seminars, e-learning, and correspondence education are available to augment OJT, and provided support to improve and transfer skills. Educational efforts to produce SMM's next generation of managerial human resources focus on three keywords: Action, the ability to create and execute plans; Conceptualization, which is the ability to systematically consider, organize, and summarize matters; Cognition, which is the ability to understand the essence of matters and make correct judgments. Also, educational efforts are under way to select management candidates for leadership training at each stage.



Training to improve problem solving skills of office workers



Training for new employees



Middle Management Program

## Working Style Reform and Health Management

Based on the idea that the continual growth of the SMM Group overall is linked to the growth of each individual employee, efforts to promote working style reform began in FY2017. The goal is to have an average of 1,900 hours or less per year for total hours worked by FY2019.

The purpose of the reform is not merely the shortening of working hours, but also the associated creation of new value. Our aim is to recreate a free and open corporate culture in which all employees can use their limited time effectively and engage in work with motivation. We believe that this reform is also extremely important in the development of the next generation of managerial human resources.

As one initiative in improving working environments, in FY2018 a review of health management was carried out.

Specifically, this involves: a more precise management of working hours and a speedy response through the introduction of a new work system; the introduction and promotion of a more flexible style of work; and efforts to review how work is done, such as the substance of meetings, email, and taking an inventory of tasks.

## Promotion of Diversity

Diversity initiatives, which aim for the acceptance of the skills and values of a diverse set of human resources, will play a vital role in the future development of SMM Group's business. The SMM Group promotes diversity with a focus on promoting the active contribution by women and employment of people with disabilities, and has been engaging in various efforts to create frameworks for a more diverse workforce, including establishing the Diversity Promotion Section within the Personnel Department. In 2018, a woman was appointed

as an outside director, resulting in exchanges of diverse viewpoints even among the Board of Directors. Also, efforts are under way to create a support system to help deal with the recent social issue of caring for elderly family while working, along with launching a new in-house training program to help educate employees.

In addition to conducting training related to promoting an active contribution by women, measures were considered and implemented to attract female engineers by creating comfortable working environments, and engaging in PR and hiring activities. Action plans were executed and supported at each business site and group company with regard to the employment of people with disabilities.

Also, the development and administration of a fair human resources system means there is no gender disparity in our compensation system at the SMM Group.

## Initiatives to Take on Issues and Provide Improvements

With respect to employees' satisfaction with work, efforts to raise understanding of the current management environment and support for employees in gaining satisfaction from their work are issues. In FY2018, information sharing methods were expanded, such as making briefing sessions on management information available via e-learning, developing in-house instructors with training on coaching and rolling it out to regular employees, and providing continuous support via workplace support tools (various types of training). With regard to developing human resources, in addition to brushing up and continuously conducting selective training, because attendance at web language learning courses and e-learning courses was low, efforts were made to introduce easy-to-use language learning tools and expand self-development support.



Diversity workshop—Simulated elderly experience



Discussion on female career development by outside director Ishii



# Supply Chain Management

## Policy and Framework

Given its corporate activities around the world, the SMM Group absolutely requires initiatives geared toward sustainability in its overall supply chain. According sufficient consideration to human rights and the environment impacts our ability to conduct our projects and businesses smoothly. After establishing the president as the person responsible for these initiatives, the executive officer in charge of the Safety & Environment Control Department executes initiatives on human rights and the executive officers in charge of the Personnel Department and the CSR Department execute initiatives on human rights. The SMM Group Policy on Human Rights establishes that “the SMM Group will not engage in child labor or forced labor” and that we will “make efforts to prevent child labor or forced labor from occurring among outside parties over which the Group has influence.” We conduct responsible mineral sourcing under this policy.

Consideration of human rights in our regions of operation spans the right to freedom and physical safety, freedom of mobility and residence, the right to property, and more. The SMM Group engages in close exchange of information with our partner companies at mines where we hold interests in addition to the mines and business sites that we operate, and takes due consideration to prevent human-rights violations.

## Responsible Mineral Sourcing

Minerals mined from the Democratic Republic of the Congo and nine surrounding countries (gold, tin, tantalum, and tungsten) are subject to tighter regulations as “conflict minerals” that serve to fund armed groups and child labor, forced labor and other human rights violations, and supply a catalyst for the expansion and prolonging of conflict. To ensure that the smelting and refining of gold in our business does not make use of these conflict minerals, in FY2012, we began operating in accordance with the Responsible Gold Guidance of the London Bullion Market Association (LBMA) and undergo periodic audits by a third-party organization. We have also begun operating in accordance with the Responsible Silver Guidance of the LBMA with respect to silver since FY2018.

In recent years, cobalt has become another target of responsible mineral sourcing for which we must prevent child labor and forced labor, and for which the SMM Group is aiming for transparency in its supply chain.

Moreover, in order to further clarify the stance of the SMM Group regarding these issues, we established and disclosed the SMM Group Responsible Mineral Sourcing Policy on November 1, 2018. Following that establishment, we administered training to our officers and employees on relat-

ed areas such as the background of that establishment and initiatives by SMM, and promoted widespread internal awareness of that policy. Going forward, we will push forward with efforts such as forming mechanisms for due diligence that are capable of accommodating the LME position paper released in Fall 2018 and the RMI standards, among other global standards.



LBMA Responsible Gold Certificate

### SMM Group Responsible Mineral Sourcing Policy

Pursuant to the SMM Group Policy on Human Rights, we do not buy minerals that may be associated with human rights violations such as child labor or forced labor, environmental destruction, illegal mining, or corruption, or minerals that may be used as a source of funding for armed insurgents or other such organizations.

We respect the guidance established by the Organisation for Economic Co-operation and Development (OECD) regarding mineral sourcing, and we exercise appropriate influence over suppliers as we work for responsible mineral sourcing throughout the entire supply chain.

### Reference

#### London Metal Exchange (LME)

The LME specializes in trading of non-ferrous metals such as copper, nickel, aluminum, lead and zinc. The LME trading prices for metals are used as the international pricing benchmarks for sales of refined metal and purchases of refining ores.

#### Responsible Minerals Initiative (RMI)

An international initiative on the responsible sourcing of minerals by the Responsible Business Alliance (RBA), an organization founded in 2004 for the purpose of promoting a common code of conduct in the world's electronic equipment industry.

## Fair Business Practices

As exemplified by the Antimonopoly Act of Japan, the establishment of laws for preserving a sound and fair state of competition has been progressing around the world. In April 2019, the SMM Group established its Basic Policy for the Compliance with Competition Laws, through which has indicated the duty of its officers and employees to prevent acts prohibited under those laws through efforts such as refraining from conducting unfair transactions or making a prompt report to their superior or otherwise taking necessary action when they discover potential violations of those laws. We have also established a framework for compliance with laws on competition that, in addition to ascertaining and analyzing the risk of such acts and assessing their impact, provides thorough associated education through regular training and other means.

## Cooperation with Suppliers

Every three years since 2015, our Mineral Resources, Smelting & Refining, and Materials divisions, in cooperation with the Purchasing Department, ask about 60 of our largest suppliers by annual transaction value to respond to a triennial questionnaire on human rights. Based on the results, the divisions and the Purchasing Department each designate one company, or four total, as a target of inspection, and make visits to survey the companies. The survey we conducted in 2018 turned up no problematic suppliers.

When conducting business with new mining companies that are suppliers to our smelting and refining business, we perform environmental due diligence (environmental DD) to assess how those companies carry out environmental management. In FY2018, there was one new supplier for which we conducted environmental DD.

Furthermore, since the occurrence of accidents at any time during the development of a mine creates the risk of significant environmental impacts, we work with our partners to mitigate environmental risks even at mines we do not operate, such as mines in which we hold an interest.

## Initiatives to Take on Issues and Provide Improvements

In relation to promoting the preservation of biodiversity, we have set forth as targets: the verification of the environmental impact of our portfolio companies and supply chain and the implementation of measures to reduce risks. We are currently facing the issue of implementing those measures on an ongoing basis. In 2018, we had both Coral Bay Nickel Corporation and Taganito HPAL Nickel Corporation encourage suppliers to apply measures towards the stabilization of heavy metal concentrations.

Additionally, we have improved regional living environments through hiring individuals from the communities around our business operations and developing those regions, and are endeavoring to elevate our co-existence and co-prosperity with such local communities and our bonds of trust with them.



Toyo Smelter & Refinery



# Quality Assurance

## Basic Approach

Through collaboration among the SMM Group's three businesses of Mineral Resources, Smelting & Refining and Materials, in addition to manufacturing and selling metal bullion made from excavated and smelted and refined ore in the form of materials, we process metal bullion and other incidental substances in-house into advanced and other materials. In order to improve these products on an ongoing basis and provide our customers with high-quality products, we have established a Company-Wide Quality Policy and set forth SMM Quality Objectives every year. Based on these standards, each business division sets forth and implements division-specific quality targets, and conducts quality activities whose vector is aligned with the entire SMM Group. The president is the person responsible for quality assurance, and as such determines the above Company-Wide Quality Policy.

### Company-Wide Quality Policy

Provide quality to satisfy our customers through continual improvements of quality assurance and control systems.

- 1 Pursue quality levels that stand out from the trends of the time
- 2 Abide by laws and rules and strive to create products incorporating safety and environmental considerations

## SMM Quality Standards

The SMM Group has established and operates quality management systems (QMS) at each of its business sites. In order to effectively operate those QMS, starting in 2016, we have been conducting activities focused on the SMM Quality Standards, which constitute a summary of the ideal form of QMS at our company. Every fiscal year, each business site sets a target level for the SMM Quality Standards prior to engaging in improvement activities, and checks its achievement of quality control levels through self-assessments and quality audits by the Quality Assurance Department.

Over the three-year period since commencing the operation of QMS, the quality control level at our business sites has gone up considerably. We are currently revising our SMM Quality Standards in order to further elevate that level, and will start administering those standards anew in FY2019.

## Strengthening of Our Internal Quality Audits

We will review the internal quality audits performed by our business sites and establish an internal audit system to identify potential internal issues from a third-person point of view and ensure that they are relayed to top management. We will also conduct audits so that they help prevent inappropriate acts that pertain to quality.

## Development of Human Resources

Since 2016, we have held five training sessions for quality control representatives responsible for improving the effectiveness of QMS at our business sites, and have completed the curriculum for that training in full. The content of the training has been implemented at our business sites, and is serving to elevate the target level for our SMM Quality Standards.

Moreover, we are stepping up "minipro" improvement activities and small-group activities to establish a culture of identifying and improving upon on-site issues independently and linking that climate to the growth of our organization. Furthermore, we will also proceed to establish a quality education system so that our employees at all hierarchical levels, from new employees to managers and supervisors, will be able to outfit themselves with the QMS management capability that they need.

## Disclosure of Information on Products and Services

Most items in the SMM Group product lineup are supplied as raw or processed materials for use by customers for manufacturing. Information that customers require in order to handle our products properly from safety and environmental perspectives, as well as information needed to enable them to supply final products, is basically communicated in product specifications at the time of contracting, during technical discussions and via product inspection certificates and SDS,<sup>1</sup> based on prior and the latest information, proprietary knowledge and necessary studies. SMM products supplied as final products to customers are carefully designed, incorporating considerations toward safety and environmental compatibility, and are only delivered after thorough trials and inspections carried out during their manufacture.<sup>2</sup> We make sure that information utilized for the above is always appropriate through management systems, reviewing it based upon the latest technology, laws and regulations and demands from customers.

- 1. SDS (Safety Data Sheet): A document listing information on a chemical, including the chemical substance, the product name, the supplier, hazards, safety precautions and emergency procedures.
- 2. We also conduct surveys linked to life cycle assessments (LCA) for copper, nickel and zinc through substance-specific associations.

## Communication with Customers

As for raising the level of customer satisfaction, first, we will improve methods of measuring and evaluating customer satisfaction and then work to increase customer satisfaction through effective measures after accurately identifying the issues at hand. To that end, accurate and ample communication with customers is crucial. By keeping stakeholders in mind, the SMM Group builds products with quality, improving the yield of its products and contributing to resource and energy reduction efforts.

## Initiatives to Take on Issues and Provide Improvements

All employees are aligned toward our objectives and future direction and actively take part in efforts to reach targets, so we are able to achieve quality that customers trust completely. This requires decisions and implementation based on facts obtained through external and internal communication. To ensure this is done, we will continue to implement initiatives

to effectively utilize our quality management system through various activities focused on the SMM Quality Standards, including various forms of quality management education for business sites.

## Information on SMM Products Requiring Disclosure by Labeling and Applicable Products/Services

Information requiring disclosure	Applicable products/services
The sourcing of components of the product or service	All products/services containing substances requiring management under legislation while no such information requirement is addressed to our main products (raw materials and internally-processed materials).
Content, particularly with regard to substances that might produce environmental or social harm	All products/services containing substances requiring management under legislation
Safe use of the product or service	All products/services containing substances requiring management under legislation
Environmental/social harm from disposal of the products	All products/services containing substances requiring management under legislation

## Methods for Providing Information

### Provision of Information Relating to Specifications

We indicate product specifications requested by the customer on the order received sheet to provide necessary information to them.

### Provision of Information Relating to Chemicals

The SMM Group uses SDS, etc. to provide information on chemical substances contained in products, complying with regulations for chemical substances and usage, regarding health and safety.

### Other Initiatives

The SMM Group also engages in transactions such as the sale of different types of lubricants to general consumers. In line with related laws and regulations, we provide information on products and services in this area through labeling, advertisements and explanations to ensure correct understanding.

# Environmental Management

## 1. Environmental Management System

### ■ Policy and Framework

The SMM Group handles a large number of chemical substances in its corporate activities. For that reason, we face the risk of exerting undesirable effects on the local environment in the event that an accident does occur. On the other hand, we have the ability to contribute to the resolution of social issues such as climate change through the supply of our material products.

At the SMM Group, the president, in whom ultimate accountability resides, sets annual SMM Group Environmental Targets by taking into consideration environmental risks and opportunities for contribution. Acting on these targets, business sites and companies in each business division implement environmental management systems based on the ISO 14001 standard, with the Safety & Environment Control Department as the secretariat providing cooperation, support, and functional direction. Additionally, having positioned environmental preservation as one of its priority CSR areas, the SMM Group has established an Environmental Preservation Subcommittee under the CSR Committee to further initiatives aimed at the Group's Vision for 2020. In FY2018, we got to work on formulating our Vision for 2030, which peers even further into our future.

### ■ Environmental Management Systems

Under the SMM Group Environmental Targets, business sites and companies under each business division effectively operate environmental management systems and implement associated initiatives. For those systems, which form the basis of our environmental preservation and improvement activities, we have acquired ISO 14001 certification at our Head Office, branches, and all of the manufacturing sites and sites responsible for closed mines under the SMM Group. In addition, any new manufacturing sites are required to promptly acquire that certification as well. Also, where risk management is especially concerned, we have linked our Group's own risk management systems to our environmental management systems to tackle the prevention of significant environmental accidents.

## 2. Actions to Address Issues

### ■ Climate Change Measures

The SMM Group recognizes that measures in response to climate change are one of the highest-priority issues for corporations. As such, we are conducting initiatives to reduce greenhouse gases (GHG) emissions in accordance with the measures such as the seven principles for climate change by the International Council on Mining and Metals (ICMM) and the Low-Carbon Society Action Plan by the Japan Mining Industry Association (JMIA). More specifically, we are working toward reducing indirect GHG emissions through expanding our business in battery materials and other products contributing to a low carbon society, reducing energy consumption per units based on the Japanese Energy Conservation Act, and reducing direct GHG emissions largely through the use of renewable energy. With respect to measures against climate change by the SMM Group, every year, we respond to the questionnaire on climate change issued by the CDP.<sup>1</sup>

1. CDP (Carbon Disclosure Project): NGO established in the UK in 2000 that operates a global information-disclosure system for managing environmental impact.

### ■ Reduction of Environmental Impact

For all of our core businesses—mineral resources, smelting and refining, and materials—the direct and indirect impact on biodiversity is unavoidable. However, we are striving to reduce the environmental impact of our development efforts, operations, and product use in order to minimize that undesirable impact on biodiversity.

When developing mines and building smelting and refining plants, we survey the surrounding ecosystems, and carry out activities such as monitoring ecosystems and planting trees when installing roads and facilities.

### ■ Management of Chemical Substances

Given that many of the SMM Group's products are chemicals and that many diverse chemical substances are also handled in the manufacturing processes for these products, all business sites have their own strict system for managing chemical substances. For example, when a business site intends to handle a new chemical, it conducts a preliminary study that covers hazard statements and other applicable information, and deliberates on safety in a meeting at the business site before deciding whether to adopt the handling of the chemical.

Furthermore, advanced materials by the SMM Group are incorporated by our customers into electrical and electronic products and distributed widely to domestic and foreign markets. Therefore, in addition to ascertaining information on the chemical substance content of the SMM Group's chemical products through our supply chain, we provide customers with information on products by the SMM Group using safety data sheets (SDS) regardless of whether or not we are legally obligated to do so. Screenings of development themes for new products also put an emphasis on products with a low environmental impact that can be used more safely by customers.

### ■ Prevention of Significant Environmental Accidents

Accumulation sites for the waste rock, tailing, and deposits produced by mines may cause major damage should they collapse. We evaluated the earthquake resistance of the 56 accumulation sites that the SMM Group manages in Japan, and since FY2014, we have been pushing forward with stabilization work for facilities judged to require countermeasures. In FY2018, we completed that stabilization work for all of the facilities that we scheduled it for.

Significant environmental accidents not only impact the environment, they also have a direct link to the lifestyles and interests of communities, and potentially cause us to lose the trust that forms the premise of our business continuity. Through means such as examining the environmental risk of new businesses and regularly revising the significant risks involved, methodically updating old equipment and bolstering our monitoring and emergency response efforts, we are endeavoring to prevent significant environmental accidents and alleviating their impact in the event that they occur.

Moreover, in FY2018, we experienced no significant leakage accidents that resulted in administrative punishment or guidance.

### ■ Effective Use of Water Resources (Water Stewardship)

The manufacturing processes in the SMM Group, particularly its smelting and refining business, necessitate large quantities of water. At the same time, being that it is a shared local resource, water is closely intertwined with the lifestyles of local residents and the community, and also bears a relationship on the ecosystems of the area. We are therefore called upon to be considerate of the local communities and environment in the water areas that we use, and to use that water

responsibly and effectively. We also have the ability to contribute to local communities through water-associated means. In this manner, we are promoting a number of initiatives that regard water.

- Prevention of overdraw of water by keeping track of the volume of water withdrawn at each water source
- Reduction of water withdrawal volume and discharge volume through promoting use of recycled and reused water
- Promotion of effective use of water through ascertaining water balance and optimizing usage volume
- Reduction of environmental burden through reducing volume of hazardous chemical substances contained in effluent that are discharged into water areas
- Promotion of preservation of biodiversity through performing monitoring surveys on aquatic life in areas surrounding business sites
- Promotion of infrastructure development in regions where access to water is limited

With respect to water management in the SMM Group, every year, we respond to the CDP water security questionnaire.

### ■ Enforcement of Compliance

The SMM Group implements various measures for the purpose of raising its level of compliance.

In addition to study efforts independently conducted by our employees through two e-learning courses pertaining to environmental laws, we hold seminars on laws and regulations every year for personnel in charge of the environment at business sites in our endeavors to further their knowledge of associated laws and regulations.

We also gather information in a range of areas such as legal amendments, including those for overseas regulations covering areas like the RoHS Directive<sup>2</sup> and the REACH Regulation,<sup>3</sup> to form a grasp of the most recent requirements under such laws and regulations.

2. RoHS Directive: The Restriction of Hazardous Substances Directive.

3. REACH Regulation: The Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals.

# Stakeholder Communication

## Policy and Framework

At the SMM Group, the following entities were identified as stakeholders that are affected by the Group, or affect the Group: customers, shareholders, employees, local communities, creditors, business partners, civil society

organizations, and government agencies. A specific target has been established as the SMM Group's proper objective for each stakeholder and we are advancing various initiatives in order to realize these targets.

### The SMM Group's Stakeholders and Proper Objectives Regarding Each Stakeholder

To Customers	Be a company that accurately understands customer needs and has comprehensive competitiveness with an edge over other firms with respect to technology, quality, delivery and costs.
To Shareholders	Be an excellent entity in which to invest: one that pursues maximum corporate value through efficient management and sound governance, disburses dividends matching its business performance, and discloses information as appropriate.
To Employees	Be a company that provides a favorable work environment, clearly defines the roles of all individuals within the organization, and makes employees proud to work for it.
To Local Communities	Be a company that coexists well with its local communities and that makes positive contributions to those regions' development
To Creditors	Be a company that has earning capacity, outstanding financial strength, and trustworthiness.
To Business Partners	Be a company that possesses outstanding technological strength, places importance on integrity and trust, and is capable of co-prosperity.
To Civil Society Organizations	Be a company that is keenly alert to its social responsibilities and undertakes appropriate communication.
To Government Agencies	Be a company that implements compliance fully and makes positive contributions for the benefit of the countries and local communities where it is undertaking its projects.



Briefing on the progress of business strategy



A business site observation tour for the media

## Communication with Customers

One of the SMM Group's greatest strengths is our relationships of trust with our customers. As nearly all of the products handled by the SMM Group are various kinds of materials, they have a significant effect on the performance and quality of the products manufactured by our customers, so it is crucial we maintain appropriate communication in a timely manner from the time of taking an order, through to manufacture, delivery, and follow-up after the customer has received the product. We are responding to changes in the market environment, including globalization, while also taking a long-term perspective to sincerely meet our customers' needs. In regard to new product development, we maintain close communication, not only between market-leading customers and our business divisions, but also between different organizations and employee ranks, in order to build relationships of trust.

On the other hand, recently companies in our supply chain have been showing growing interest in CSR activities and where materials and raw materials are derived from, particularly in regard to conflict minerals. We strive to communicate with our customers in an appropriate manner by disclosing information through our website and Integrated Report.

## Communication with Shareholders

The SMM Group strives to provide our shareholders and people who are considering purchasing shares with the information we think they need in a timely, appropriate, fair, and easy-to-understand manner.

On our website, we share our growth strategy, primarily through business descriptions, business results, financial information, and 3-year business plans, as well as the progress being made on this strategy. We deliver reports to shareholder twice a year and report on financial results and the progress of management strategies.

We have also formulated an IR Policy to ensure IR activities are implemented appropriately, which is publicly available on our website. Twice a year, after the announcements of our yearly financial results and financial results for the second quarter, the president briefs institutional investors and securities analysts directly, and he also held a briefing on February 2018 timed to coincide with the announcement of our 3-year business plan. We also strive to actively disclose IR information for individual investors through our website. We will continue working to win the trust and meet the expectations of all stakeholders, including our shareholders.

## Communication with Local Communities and NGOs

When the SMM Group starts and continues businesses in specific areas, we think a major prerequisite to the continuation of said business is co-existence with the local community through the building of relationships of trust. A contributing factor to this is mutual understanding achieved through communication and contributions that benefit the local community. We work to raise the direct contribution we make to the local economy through measures such as recruiting from areas surrounding our business site and procuring from local suppliers, and we also contribute to improving the lifestyles of these communities, particularly in emerging nations, by providing infrastructure such as roads and ports, and building and operating public facilities such as schools, hospitals, and marketplaces. When implementing these measures, we establish opportunities for regular communication with local communities and move forward while also checking the requirements of local citizens. Additionally, twice a year we hold exchanges of opinion with the international environmental NGO Friends of the Earth Japan (FoE Japan) regarding their findings on topics such as the water quality of rivers around Coral Bay Nickel Corporation and Taganito HPAL Nickel Corporation plants in the Philippines, and we implement necessary improvement measures that reference the group's opinions and recommendations.

## Initiatives to Take on Issues and Provide Improvements

The SMM Group will continue striving to share information in a fair manner with all stakeholders through transparent, timely and appropriate information disclosure carried out by releasing various reports, holding briefings, and issuing press releases. Furthermore, issues addressed in our 2018 3-Year Business Plan include rebuilding an open and vibrant organizational climate, strengthening our response to globalization, and developing and make the most of human resources. We are actively tackling these with the recognition that good communication within the company is crucial for achieving each one. Also, in regard to our involvement in the international community, as a member of the International Council on Mining and Metals (ICMM), we comply with the ICMM 10 Principles and we also agree with the purpose of the Extractive Industries Transparency Initiative (EITI), which aims to encourage the development of countries from which mineral resources are extracted, and we support its activities (see p. 140).



# Sustainability Data



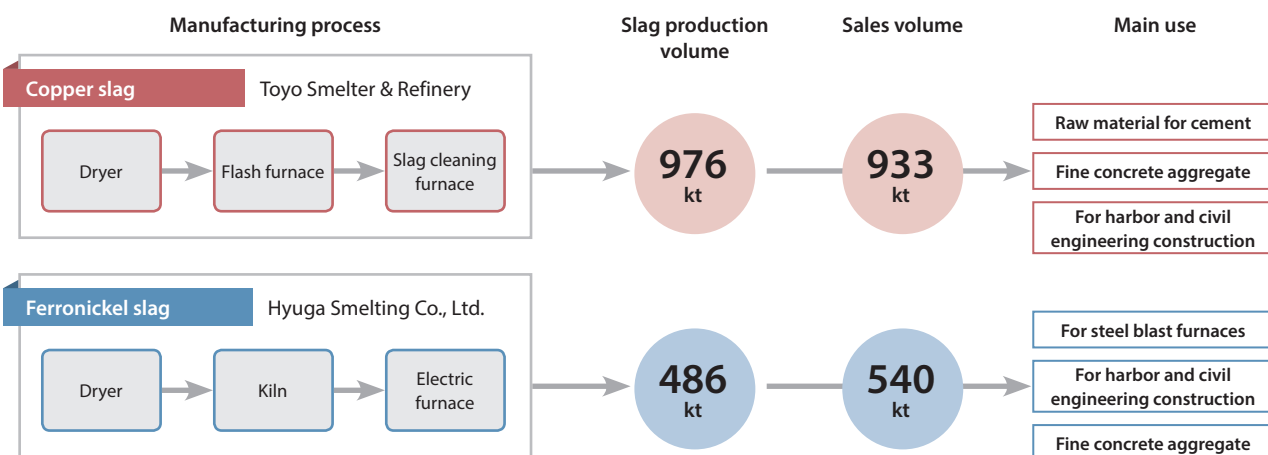
## Effective Use of Resources

### Percentage of Recycled Input Materials Scrapped ☒

FY	2016	2017	2018
Total volume of materials used (kt)	11,041	10,427	11,228
Recycled materials (kt)	222	221	249
Percentage of recycled input materials used (%)	2.0	2.1	2.22

The SMM Group procures copper and precious metal scrap from the market and recovers valuable and precious metals from electric arc furnace dust and used printed circuit boards, among other sources. Similar to the previous fiscal year, the ratio of recycled materials increased slightly at 24.5% (23.9% in FY2017) as production of electrolytic copper from recycled copper materials was approximately 111 kilotons in FY2018.

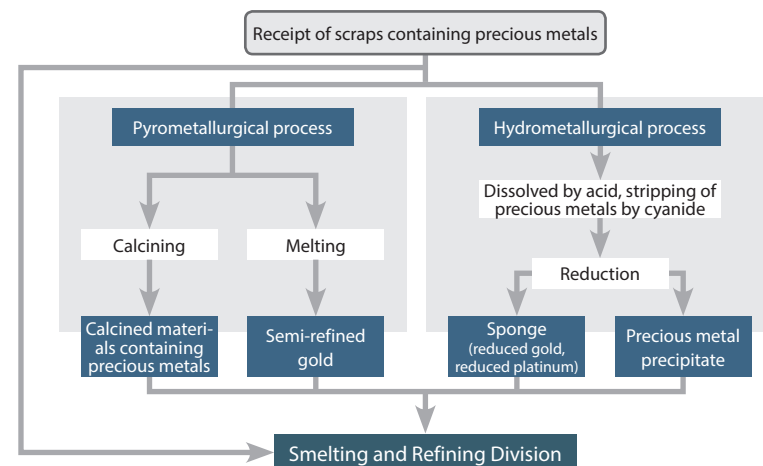
### Slag as a Recycled Material



Copper slag is a by-product produced during smelting at the Toyo Smelter & Refinery, which manufactures electrolytic copper. The main use for copper slag (70% of the total volume) is cement production in Japan and overseas. With an iron content of about 40%, copper slag is widely used as a source of iron for cement.

The ferronickel slag at Hyuga Smelting Co., Ltd., which manufactures ferronickel used as a raw material for stainless steel, is mainly used at steel blast furnaces. With a magnesia content of about 30%, ferronickel slag is used as a source of magnesia for blast furnace flux.

### Precious Metal Retrieval: Flow Diagram



Collecting the likes of discarded household appliances and discarded electronic parts, as well as scrap created in the manufacturing process of those articles, from across Japan, SMM uses them as raw materials to recover and recycle precious metals (gold, silver, platinum, etc.).

After sorting the collected raw materials into parts that contain precious metals and those that do not, SMM uses the pyrometallurgical or hydrometallurgical process, depending on the composition and other aspects of the parts, to condense them, then transports them to the Toyo Smelter & Refinery.

The Toyo Smelter & Refinery smelts and refines those condensed raw materials along with other copper and precious metal raw materials, then recycles them into high-grade precious metals.



## Global Environmental Considerations

### Environmental Management System and Education

#### Environmental Education

Name of activity	Targeted employees	Purpose, contents (simple overview)
EMS Internal Auditor Training Course	New internal environmental auditors	Training of new internal auditors for the EMS conforming to ISO 14001 (2015)
EMS Internal Auditor Course for updating to the ISO 14001 (2015) standard	Internal environmental auditors	Updating internal auditors with qualifications conforming to ISO 14001 (2004) to the 2015 version
Environmental e-learning (Environmental Laws)	Managers and supervisors, internal environmental auditors	Explanation of Japan's mandatory standards
Environmental e-learning (Environmental Laws, Basic)	Managers and supervisors, internal environmental auditors	Promote understanding of the spirit and idea of Japan's laws
Education of newly-appointed business site general managers	Newly-appointed business site general managers	Promote understanding of the importance of the relationship between corporations and the environment and raise self-awareness and environmental awareness as the business site general manager
Conference for environment managers	Environment managers of each of the business sites	Improve knowledge of Japan's environmental laws and regulations, enhance environmental management capabilities, raise self-awareness
Periodically send out information	Business site general managers	Periodically provide information about revisions of laws and important precedents via an e-mail magazine
Compliance training	Business site general managers	Provide information about environment-related compliance and raise self-awareness
Education about environmental preservation for mid-career hires	Mid-career hires at the Head Office	Impart knowledge about the SMM Group's environmental preservation initiatives
Education about environmental preservation for new employees	Newly hired management track employees at the Head Office	Impart knowledge about the SMM Group's environmental preservation initiatives and raise self-awareness
Education about environmental preservation for newly-promoted section managers	Newly-promoted section managers	Provide information about the SMM Group's environmental preservation initiatives and raise self-awareness
Periodic education about the Chemical Substances Control Law	Division environment managers	Overview of the Chemical Substances Control Law, checking for revision information, and preventing omissions of notification
Explanatory meeting: overseas chemical substance regulations	Head Office sales representatives	Impart knowledge to sales representatives about overseas chemical substance regulations and raise their self-awareness

#### Laws Covered in the Environmental e-learning Courses

Environmental Laws	Environmental Laws, Basic	Environmental Laws	Environmental Laws, Basic
Basic Environment Act	Basic Environment Act	Water Pollution Control Act	Water Pollution Control Act
—	Basic Act on Biodiversity	Soil Contamination Countermeasures Act	—
Basic Act on Establishing a Sound Material-Cycle Society	Basic Act on Establishing a Sound Material-Cycle Society	PRTR Law	PRTR Law
—	Act on the Promotion of Environmental Conservation Activities through Environmental Education	Poisonous and Deleterious Substances Control Act	—
—	Law Concerning the Promotion of Business Activities with Environmental Consideration	Waste Management and Public Cleansing Act	Waste Management and Public Cleansing Act
—	Act on the Promotion of Global Warming Countermeasures	PCB Special Measures Law	—
—	Act on the Rational Use, etc. of Energy	—	Act on Promoting Green Purchasing
Act on the Rational Use, etc. of Energy	Act on the Rational Use, etc. of Energy	—	—
Air Pollution Control Act (including the content of the Act on Pollution Prevention Systems in Specified Factories)	Air Pollution Control Act	—	—

The SMM Group has established two e-learning courses on environmental laws with the objective of raising levels of compliance. Employees, especially managers and supervisors involved in environmental management and internal environmental auditors, are taking part in those courses.

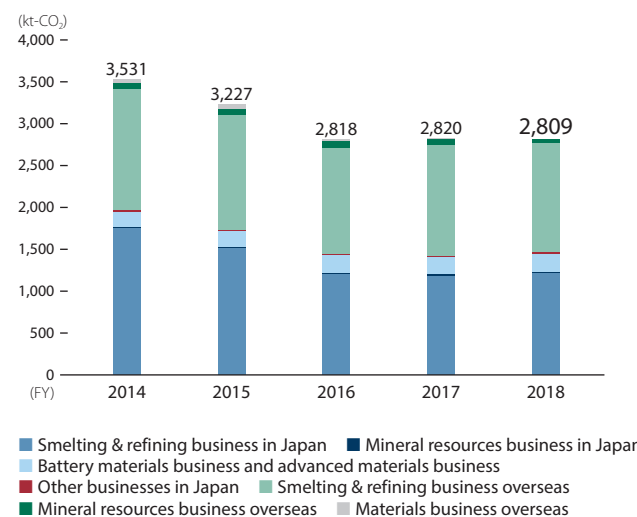
The e-learning course on Japan's main environmental laws covers ten laws that are deeply related to the businesses of the SMM Group and provides explanations of mandatory standards and notification procedures. As failing to comply with these requirements constitutes a violation of the law, employees must be certain to keep them in mind when conducting business.

Given not only compliance with regulations and obligations, but also the voluntary risk management and information disclosure demanded of businesses today, the Group offers an e-learning course called Environmental Laws, Basic that serves as a stepping stone for properly conducting business. This course covers 12 laws, including the Basic Environment Act and the Basic Act on Biodiversity.

## Sustainability Data

### Prevention of Global Warming

#### CO<sub>2</sub> Emissions ☒



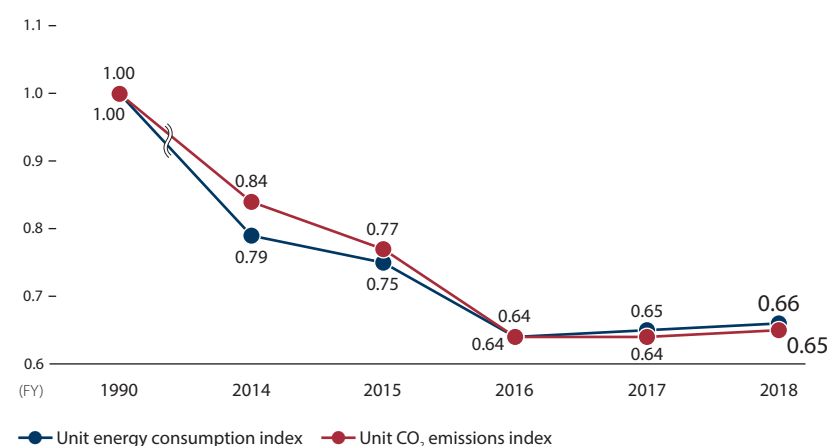
With regard to CO<sub>2</sub> emissions by the SMM Group in FY2018, although the Group reduced those emissions through energy-saving activities and other endeavors as well as through the sale of the Pogo Gold Mine, the increase in its production of copper and battery materials in Japan was largely responsible for an increase in emissions that kept CO<sub>2</sub> emissions for the year on par with those in FY2017 at 2,809 kt-CO<sub>2</sub>. Additionally, CO<sub>2</sub> emissions pertaining to transport in Japan, which constitutes indirect emissions, came to 25 kt-CO<sub>2</sub>.

The SMM Group will continue to promote energy-saving activities in FY2019 as well, and anticipates reductions of 10 kt-CO<sub>2</sub> for the year.

CO<sub>2</sub> emissions reduced due to solar power generated at the solar power plant operated by the Group in Kashima, Ibaraki Prefecture came to approximately 1.8 kt-CO<sub>2</sub> in FY2018.

Figures for both Japan and overseas were calculated using emission factors derived in a manner conforming to the "Act on Promotion of Global Warming Countermeasures" of Japan. Figures include non-energy-derived CO<sub>2</sub> emissions (378 kt-CO<sub>2</sub>), which are not subject to the Act on Promotion of Global Warming Countermeasures, in addition to CO<sub>2</sub> emissions that accompany emissions activities, which are subject to said Act. CO<sub>2</sub> emissions derived from purchased electricity in Japan were calculated in a manner conforming to the market-based methods using emission factors of electric power suppliers. For overseas emission factors, the most recent per-country emission factors disclosed by the International Energy Agency (IEA) were used.

#### Unit Energy and CO<sub>2</sub> Emissions Index<sup>1</sup> (Scope: Smelting and refining business in Japan) ☒



In the SMM Group's smelting and refining business in Japan, unit energy for FY2018 was on a par with that for FY2017. This is likely due to the fact that a degradation in unit energy resulting from decreases in the production volumes of nickel and ferronickel was offset by an increase in the production of nickel sulfate and the effects of improvements from energy-saving activities, which served to curb the increase in unit energy.

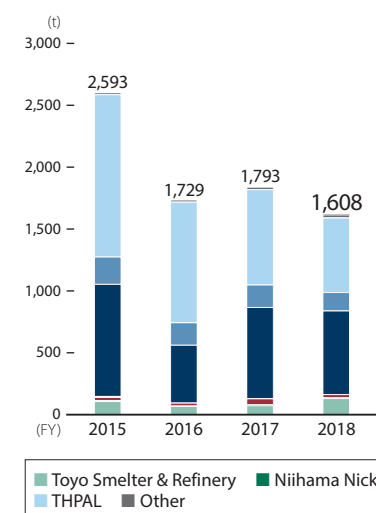
SMM is a member of the Japan Mining Industry Association (JMIA), an organization of nonferrous metal smelters, as well as a participant in The Commitment to a Low Carbon Society led by the Japan Business Federation (Keidanren).

The SMM Group will also continue to proactively tackle thorough energy management, the promotion of energy-saving activities, the introduction of renewable energy, the use of unutilized heat and other endeavors as it aims to reduce unit energy by an average of at least 1% per year and further lower CO<sub>2</sub> emissions over the medium to long term.

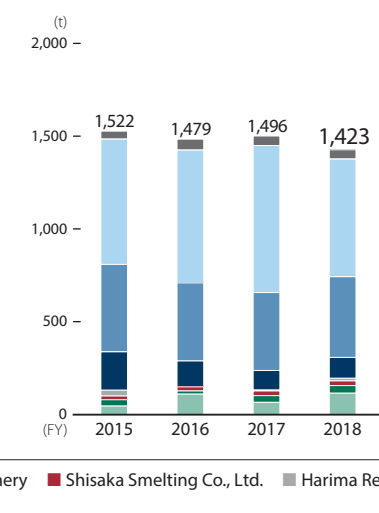
1. Unit energy and CO<sub>2</sub> emissions index: The amount of energy consumed and CO<sub>2</sub> emitted during the production of 1 ton of product, assuming the FY1990 value to be 1 (including fuels used as reducing agents).

#### Emissions into the Atmosphere

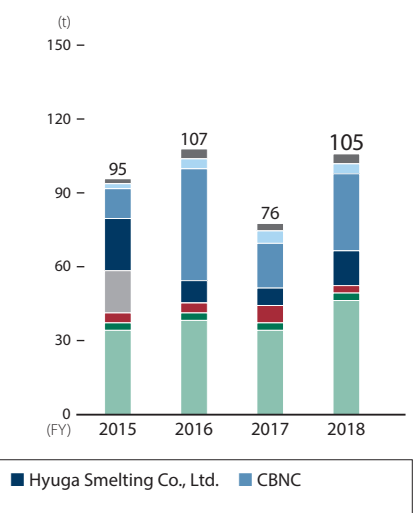
##### Volume of SOx Emissions ☒



##### Volume of NOx Emissions ☒



##### Volume of Soot and Dust Emissions ☒

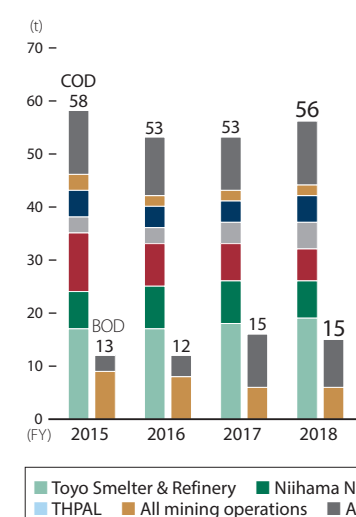


The volume of SOx emissions during FY2018 decreased by about 10% year-on-year. Hyuga Smelting Co., Ltd. saw a decrease of about 8% largely due to the grade of raw materials. Taganito HPAL Nickel Corporation saw a decrease of 22% due to the grade of coal and the state of operation, among other factors. Changes in the volume of NOx emissions remained flat with a decrease of about 5% year-on-year. The volume of soot and dust emissions increased by about 39% year-on-year. At Coral Bay Nickel Corporation, that figure increased by about 75% due to the status of exhaust system equipment.

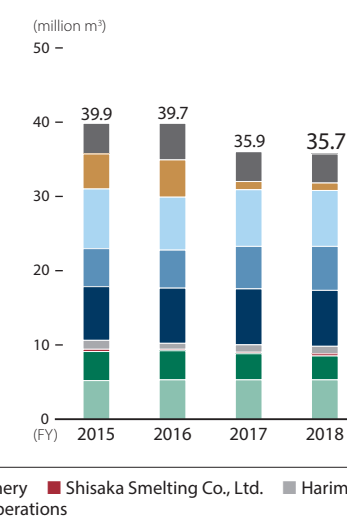
Each emissions figure was calculated based on the measurement of flue gas.

#### Emissions into Water

##### COD and BOD Pollutant Loads ☒



##### Freshwater Withdrawal Volume ☒



##### Seawater Withdrawal Volume ☒



The COD<sup>1</sup> pollutant load in FY2018 increased by about 6% over FY2017, while the BOD<sup>2</sup> pollutant load was very much the same year-on-year. Many SMM Group business sites face onto Japan's Seto Inland Sea and are subject to controls on the total amounts of COD, nitrogen and phosphorous emissions under the Act on Special Measures Concerning Conservation of the Environment of the Seto Inland Sea.

The volume of freshwater consumption was very much the same year-on-year at approximately 36 million m<sup>3</sup>. In this calculation, diversion water<sup>3</sup>, which is unrelated to production, is excluded from withdrawal and release at mines. The volume of seawater consumption increased by about 8% year-on-year. This was attributable to the increase in production volume at the Toyo Smelter & Refinery.

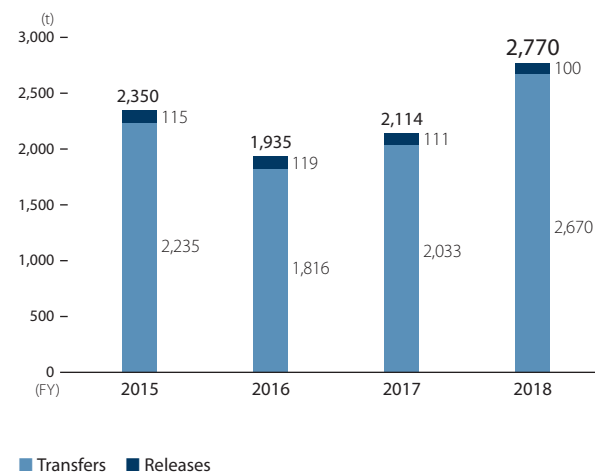
1. COD (Chemical Oxygen Demand): Measured for emissions into seas, including emissions into rivers flowing into enclosed seas.

2. BOD (Biochemical Oxygen Demand): Measured for emissions into rivers, excluding emissions flowing into enclosed seas.

3. Diversion water: Water that flows into the site as an input and flows out of the site as an output without being used for production purposes. Included starting with data for FY2017.

## Sustainability Data

### Release Control for Chemical Substances

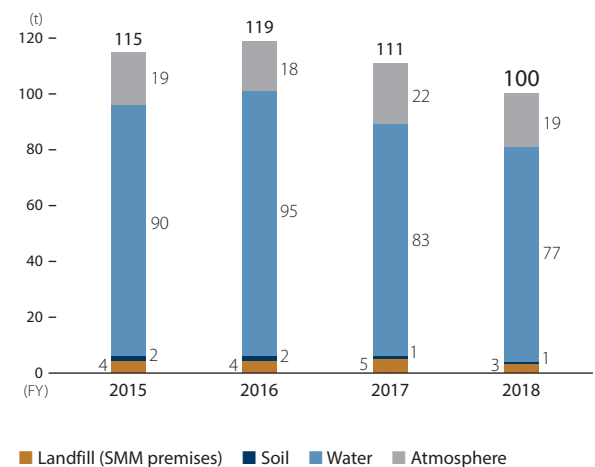
Release and Transfer Volume of PRTR Substances ☒


An overview of releases and transfers of chemical substances based on Japan's Pollutant Release and Transfer Register (PRTR) system in FY2018 is as follows.

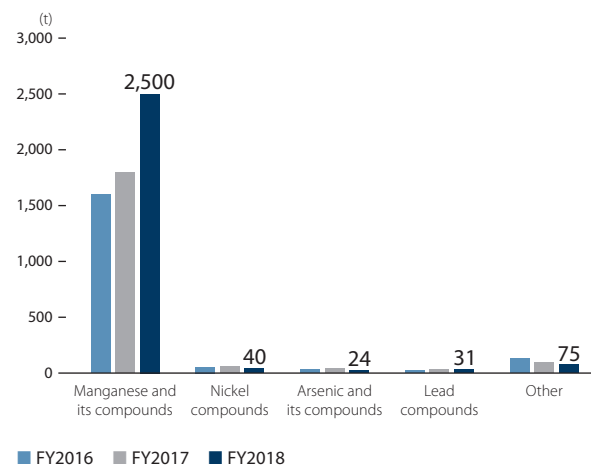
The number of data-submitting sites in the SMM Group was 25 (27 in FY2017). The Group has 43 substances requiring registration (45 in FY2017). The total release and transfer volume (releases + transfers) came to 2,770 t, an increase of about 31% year-on-year, due to an increase in manganese transferred outside of business sites resulting from an increase in the volume of iron clinker<sup>1</sup> to undergo final disposal as industrial waste after being generated as a byproduct at Shisaka Smelting Co., Ltd.

For release volume, discharges into the atmosphere decreased by about 14%. The main factor behind this was a decrease in releases of dichloromethane at the Ome District Division. In addition, there are no discharges zone-depleting substances. Discharges into water decreased by about 7%. The main factor behind this is likely decreases in both the concentration of boron in eruptions of water and in eruption volume at Hishikari Mine.

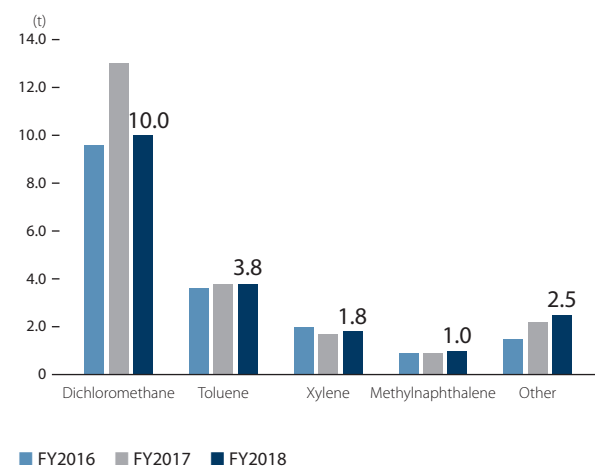
1. Iron clinker: The residue remaining during the processing of electric arc furnace dust after recovering zinc. The residue able to be sold is called "iron pellets," and the residue to be disposed of is called "iron clinker."

Breakdown of Releases, by Destination ☒


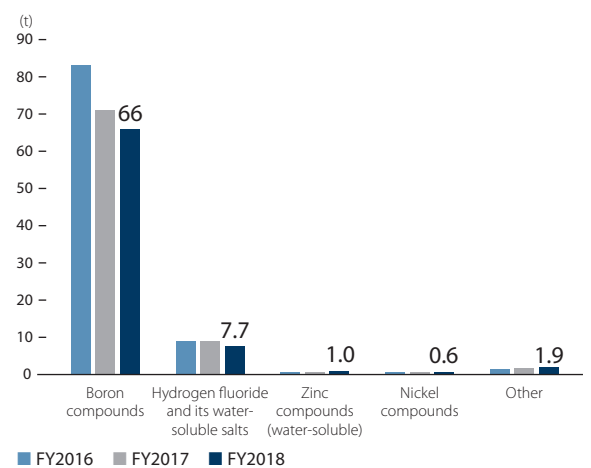
Breakdown of Transfers



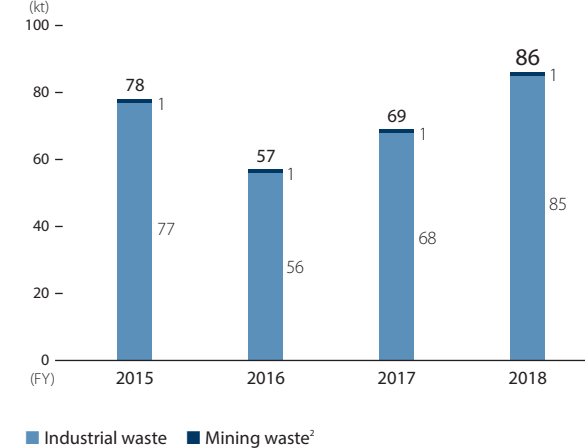
Breakdown of Releases into the Atmosphere



Breakdown of Releases into Water



### Final Disposal Volumes of Industrial and Mining Waste in Japan

Final Disposal Volumes<sup>1</sup> of Industrial and Mining Waste in Japan ☒


The SMM Group has long been making efforts to reduce industrial waste in Japan and the amount of wastewater sludge (mining waste) that undergoes final disposal from the mine-affiliated Toyo Smelter & Refinery. The total final disposal volume in FY2018 was 86 kt, which was an increase of about 17 kt from FY2017. The main factor behind this increase was an increase in the final disposal volume of iron clinker at Shisaka Smelting Co., Ltd.

1. Includes waste destined for landfills and incineration without heat recovery.  
2. Mining waste in the form of wastewater sludge generated by mine-affiliated Toyo Smelter & Refinery that is landfilled within the business site.

### Waste by Type and Treatment Method (FY2018)

Volume of Waste (Hazardous<sup>3</sup>/Non-hazardous<sup>4</sup>) ☒

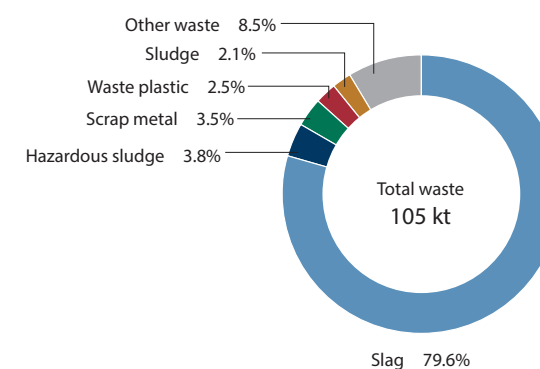
		(kt)		
		Total	Hazardous	Non-hazardous
Treatment method <sup>5</sup>	Recycling	19	5	14
	Landfill	7,655	83	7,572
	Incineration	1	0	1
	Volume reduction, etc.	2	1	1
	Total	7,677	89	7,588

3. In general, this depends upon definitions in the countries concerned. Since Japan does not have such laws or regulations, SMM applies the following definition: "Specially controlled industrial waste and waste delivered to controlled landfill sites (excluding designated inert waste that should have been delivered to landfill sites for inert industrial waste, but was disposed of at controlled landfill sites due to the distance limitation)."

4. Waste other than hazardous waste.

5. Treatment methods outside of the company were verified based on the written agreement with the disposal company and the manifest.

Breakdown of Industrial Waste (in Japan) by Type of Waste





Sustainability Data

Material Flows within Business Activity (FY2018)

INPUTS (Resources & Energy) ☒

Raw Materials		Recycled Materials <sup>1</sup>		Materials	
Gold and silver ore	730 kt	Copper scrap	146 kt	Silica sand (for copper smelting)	154 kt
Copper concentrates	1,472 kt	Secondary zinc	17 kt	Chemicals (lime-based)	1,149 kt
Nickel oxide ore	8,409 kt	Secondary precious metals	2 kt	Chemicals (sodium-based)	107 kt
Nickel matte, etc.	40 kt	Scrap for metalworking	0.0 kt	Chemicals (magnesium-based)	15 kt
Raw material for batteries	77 kt	Electric arc furnace dust	84 kt	Sulfuric acid	557 kt
ALC raw material, incl. silica rock	196 kt	ALC waste	189 t	Cement, etc.	123 kt
Raw material for metalworking	0.1 kt	Percentage of recycled input materials used			
Hydrotreating catalyst raw material	55 kt	2.22%			

Energy <sup>2</sup>	Consumption	Energy Value
Non-renewable sources		
Heavy oil	51,155 kL	2,093 TJ
Coal/coke	511,058 t	13,193 TJ
Diesel/gasoline/kerosene	19,950 kL	748 TJ
LPG	9,037 t	459 TJ
City gas/natural gas	9,221 ML	418 TJ
Purchased electricity	1,598,914 MWh	15,578 TJ
Purchased steam	68,016 GJ	69 TJ
Sub-total	32,558 TJ	
Renewable sources		
Wood pellets	1,469 t	28 TJ
Total energy consumption	—	32,586 TJ

Water <sup>3</sup>	
Total volume of fresh water withdrawn	35,672 ML
Surface water (rivers)	13,902 ML
Rain water	79 ML
Groundwater	6,843 ML
Industrial water (water from another organization)	14,444 ML
Tap water (water from another organization)	404 ML
Volume of seawater withdrawn	156,686 ML
Total volume of water consumed from all areas <sup>4</sup>	8,615 ML

- Does not include materials recycled within plants.
- Calorific values for both Japan and overseas are calculated using coefficients conforming to the Japanese Act on the Rational Use, etc. of Energy for fuel, heat, electricity, etc. that were consumed in business activities both in Japan and overseas. Fuels used as reducing agents are also included. Energy value indicates the energy input in the case of purchased electricity and purchased steam, and calorific value for all others.
- SMM uses the WWF/DEG Water Risk Filter to determine regions with high water stress. As a result of this, there are no areas of high water stress at SMM Group's production sites.
- The total water consumption is estimated by subtracting the total amount of water discharged from the total amount of water withdrawn.

Consideration of Biodiversity

Business Activities in Areas of High Biodiversity Value<sup>1</sup> (FY2018) ☒

Area	Size of production site (hectares)	Details
Seto Inland Sea	62 (Minoshima & Ienoshima islands)	Shisaka Smelting Co., Ltd. operates on Minoshima and Ienoshima islands, neighboring Setonaikai National Park (IUCN Category 2)
The Philippines	428	Coral Bay Nickel Corporation operates on Palawan Island (in hunting-prohibited and bird protection areas (IUCN Category 4))

Currently, there are no projects in any region requiring the preparation of a management plan.

- Protected areas classified as Category 4 and above by the International Union for Conservation of Nature (IUCN) and neighboring areas (SMM research). Areas classified as Category 1 are of highest priority.

OUTPUTS (Products & Emissions) ☒

Products		Emissions into the Atmosphere		Emissions into Water	
Electrolytic copper	454 kt	CO <sub>2</sub>	2,835 kt	Total wastewater	183,977 ML
Gold	21 t	Direct emissions <sup>2</sup>	1,839 kt (Decrease of 20 kt compared to the previous fiscal year)	Discharges into seas <sup>5</sup>	183,060 ML
Dore <sup>1</sup>	5 t			Discharges into rivers	867 ML
Silver	233 t			Underground seepage	0 ML
Electrolytic nickel	57 kt	Indirect emissions <sup>3</sup>	971 kt (Increase of 9 kt compared to the previous fiscal year)	Sewerage, etc.	50 ML
Nickel sulfate	14 kt	Emissions during transportation (Japan) <sup>4</sup>	25 kt (Increase of 2 kt compared to the previous fiscal year)	COD (chemical oxygen demand)	56 t
Electrolytic cobalt	4 kt			BOD (biochemical oxygen demand)	15 t
Crude zinc oxide	35 kt			Total phosphorus	2 t
Ferronickel	73 kt	SOx	1,608 t	Total nitrogen	102 t
Battery materials	43 kt	NOx	1,423 t	PRTR substances (discharged into public water areas)	77 t
Sulfuric acid	505 kt	Soot and dust	105 t	PRTR substances (discharged into the soil or in landfills within business premises)	4 t
Slag	1,461 kt	PRTR substances	19 t		

Waste (including Items of Value)	
Total waste	7,677 kt
Breakdown of total waste	
Spoil	448 kt
Flotation tailings	444 kt
Wastewater sludge from CBNC, THPAL, etc.	6,678 kt
Industrial waste (Japan)	105 kt
Other	2 kt
Landfill on company premises	7,571 kt
PRTR substances <sup>6</sup>	2,770 t

Percentage of products from recycled input  
4.85%

- Ingots of rough gold, before refining.
- Direct emissions for both Japan and overseas are calculated using emission factors conforming to the Japanese Act on Promotion of Global Warming Countermeasures. This includes non-energy-derived CO<sub>2</sub> emissions (378 kt-CO<sub>2</sub>) that are outside the scope of the law. CO<sub>2</sub> from wood pellets is not included.
- The amount of CO<sub>2</sub> emissions from electric power purchased in Japan is calculated with the market-based method using emission factors of electric suppliers. For overseas emission factors, we used the latest emission factors for each country as published by the IEA. The amount of indirect emissions was 860 kt-CO<sub>2</sub>, when calculating both Japan and overseas with the location-based method using IEA country-specific emission factors.
- Emissions during transportation in Japan are calculated in line with the Act on the Rational Use, etc. of Energy and the Act on Promotion of Global Warming Countermeasures.
- Discharges into rivers flowing into enclosed seas are included as "discharges into seas."
- Total transfers to sewerage and off-site transfers.

Amount of Land Developed or Rehabilitated (FY2018) ☒

	A: Total area of land not rehabilitated (as of the end of FY2017)	B: Area of land newly developed in FY2018	C: Area of land newly rehabilitated in FY2018	D: Total area of land developed but not rehabilitated (A+B-C)
Hishikari Mine	22 <sup>1</sup>	0	0	22
Coral Bay Nickel Corporation	276	0	2	274
Taganito HPAL Nickel Corporation	429	0	-3 <sup>2</sup>	432

- The value has been revised as a result of carefully inspecting the total area of land as of the end of FY2017.
- Following remeasurement conducted under an audit by local authorities, the area excluded from certification as rehabilitated, because of destruction by fire or mountain withering as of FY2018, has been subtracted. In addition to the rehabilitated area within the above development site, Taganito HPAL Nickel Corporation is also advancing rehabilitation activities in nearby regions outside of the site. As of FY2018, 355 hectares have been certified as rehabilitated area in total.

## Sustainability Data



### Contribution to Society and Local Communities

#### ■ Presence in the Local Economy

Number of Locally-Hired Senior Managers (General Managers and above) and Employees at Overseas Affiliates (March 31, 2019) ☒

Name of company (Country or region)	Senior managers		Percentage <sup>1</sup>	Locally-hired employees <sup>2</sup>
	Male	Female		
Sumitomo Metal Mining Philippine Holdings Corporation (Philippines)	1	1	3%	67
Taganito HPAL Nickel Corporation (Philippines)	1	0	0.2%	624
Coral Bay Nickel Corporation (Philippines)	2	0	0.4%	558
Sumitomo Metal Mining Management (Shanghai) Co., Ltd. (China)	0	0	—	9
Sumitomo Metal Mining Peru S.A. (Peru)	2	0	9%	23
SMM KOREA Co., Ltd. (South Korea)	1	0	25%	4
Shanghai Sumiko Electronic Paste Co., Ltd. (China)	2	0	5%	39
Taiwan Sumiko Materials Co., Ltd. (Taiwan)	1	0	4%	25
Dongguan Sumiko Electronic Paste Co., Ltd. (China)	1	1	13%	15

1. Percentage: number of senior managers ÷ locally hired employees x 100.

2. Employees hired directly by overseas affiliated companies and excluding workers on loan and transferred workers.

#### Percentage of Payments to Local Suppliers and Local Employment

Name of company or business site <sup>1</sup> (payment area)	Local procurement (FY2018) <input checked="" type="checkbox"/>		Local employment, percentage <sup>2</sup> (March 31, 2019)
	Payment to the area	Percentage <sup>3</sup>	
Niihama District <sup>4</sup> (Ehime Prefecture)	¥12.8 billion	46%	82%
Coral Bay Nickel Corporation (Philippines)	\$61 million	43%	58%
Taganito HPAL Nickel Corporation (Philippines)	\$99 million	44%	43%
Hishikari Mine (Kagoshima Prefecture)	¥1,138 million	57%	88%
Sumiko Energy Materials Co., Ltd. (Fukushima Prefecture)	¥421 million	32%	78%
Shanghai Sumiko Electronic Paste Co., Ltd. (China)	CNY 132 million	28%	93%

1. Totaled for the three core segments (Mineral Resources, Smelting & Refining, and Materials), business sites that are not only necessary for the business, but are also relatively large-scale (one domestic, one overseas site for each segment).

2. Percentage of local hiring: number of employees from the payment area ÷ total employees x 100.

3. Percentage of payments: amount of payments to payment area ÷ amount of total procurement payments x 100.

4. Sumitomo Metal Mining Co., Ltd.'s Besshi-Niihama District Division, Toyo Smelter & Refinery, Niihama Nickel Refinery, Isoura Plant and Niihama Research Laboratories.

#### ■ Indirect Economic Impact

Closure Plans for Mines and Smelting Plants

Business site	Details	Amount	Time period
Hishikari Mine	Mine pollution control reserve	¥23.09 million	From 1984
Coral Bay Nickel Corporation	Closure and cleanup for the refinery and mineral processing plant	Total approx. 110 million pesos <sup>1</sup>	8 years starting from 2012 (accumulating every year)
Taganito HPAL Nickel Corporation	Expenses required for the closure plan	Total approx. 120 million pesos	11 years starting from 2016 (accumulating every year)

1. Expenses according to the closure plan Coral Bay Nickel Corporation submitted to the Department of Environmental and Natural Resources.

#### Investment in Infrastructure and Support Services

Region	Details	Amount (FY2018)
Japan	<ul style="list-style-type: none"> <li>Donations to scholarship funds for orphans in Iwate, Miyagi, and Fukushima Prefectures, which were hit by the Great East Japan Earthquake (making donations every year since 2012)</li> <li>Undertaking activities for various types of social contribution, such as support and contributions for healthcare groups and sports organizations, culture and art such as historic and archaeological site preservation activities, and contributions to the Keidanren Nature Conservation Fund</li> </ul>	¥100 million
The Philippines	<ul style="list-style-type: none"> <li>Supporting measures to prevent dengue fever in communities neighboring the plant (awareness activities, spraying insecticide, cleaning activities, etc.)</li> <li>Undertaking Operation Smile, a program to provide treatment for cleft palates for children, covering all of Palawan, which is where the plant is located (from 2016)</li> <li>Undertaking a water supply equipment installation project for communities neighboring the plant</li> <li>Popularizing organic rice cultivation among communities neighboring the plant with the help of technical experts</li> </ul> <p>In the Philippines we are continuing to provide support through SDMP<sup>1</sup> even after closure of the business site, so the residents can make a living.</p>	¥900 million

1. SDMP: Social Development Management Program, conducted by a company for the welfare of residents living in the vicinity of its operating area.

## Sustainability Data



### Respect for People and Human Rights

#### Education and Training

##### ■ Total Time Spent on Employee Education (FY2018)

	Officers		General managers		Section managers		Regular employees		Occasional employees and temporary employees		Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
SMM non-consolidated	79	0	1,561	0	5,005	152	23,997	4,177	484	596	36,051
Consolidated subsidiaries in Japan	429	0	787	0	3,660	12	15,190	2,162	2,018	1,386	25,643
Consolidated subsidiaries overseas	168	0	212	43	832	334	12,585	5,066	64	14	19,316

(hours)

	Officers		Managers		Regular employees		Occasional employees and temporary employees	Total
	Male	Female	Male	Female	Male	Female		
Annual hours of education per employee (average) <input checked="" type="checkbox"/>	6.1	0.0	11.8	6.6	11.4	11.0	4.2	10.3
Number of officers and employees at the end of the fiscal year	110	0	1,025	82	4,541	1,038	1,093	7,889

##### ■ Employee Skill Improvement and Transition Support Program

SMM Human Resources Development Program

	Officers	General managers	Section managers	E-class	S-class	F-class, J-class
Duty-based program						
Development of global human resources						
3-yr. program for management track employees						
Seminar for newly promoted employees						
Development of next generation of management						
Mid-career hires						
Project leaders						
Specialized education						
Step up						
Women's career support						
Compliance, governance, RM						
Safety, skills						
Self-development						
Pre-retirement support						

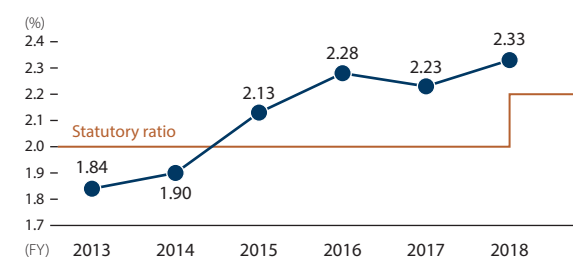
#### Diversity and Equal Opportunity

##### ■ Priority Issues and Main Initiatives Regarding Diversity (FY2018)

Target	Initiative	Specific content
Systems	Introduced various work systems as parts of working style reform	Tested and introduced optional staggered working hours, flextime, and a system for working remotely
	Revised regulations regarding childcare and nursing care leave	Reviewed regulations regarding childcare and nursing care leave in accordance with revisions to the Child Care and Caregiver Leave Act
Promotion	Enhanced the "Shining Employee" diversity-related internal bulletin board	Newly created a page on "support for balancing work and nursing care" in addition to the existing pages on "promoting employment of people with disabilities," and "support for participation by women"
Awareness	Held diversity workshops (deepening understanding of diversity through experience-based learning)	Diversity Workshops July 2018: Facing the Project of Nursing Parents August 2018: Let's Learn About LGBT and Consider Workplaces Where Anyone Can Work Comfortably March 2019: Experience Old Age—Meet Yourself from the Future
	Held sign language classes and experience events	Held sign language classes within the company to improve understanding and promote the employment of people with hearing disabilities
Support	Child-raising support lunch meetings	Employees currently raising children met during their lunch break to discuss problems and concerns (held four times)
	Lectures for women by industrial physicians	Held lectures on women's health for female employees

##### ■ Employment Ratio of Disabled People Over the Past Six Years

(SMM non-consolidated, average employment ratio over each fiscal year) ☒



Through initiatives such as expanding work areas in which people with disabilities can participate and accepting interns from special-needs schools, we have continuously worked to recruit new employees with disabilities. Since FY2015, we have maintained an employment ratio above the statutory ratio for Japan (2.2% since April 2018).

#### Human Rights Assessment

##### ■ Current Status of the Implementation of the Basic Survey into Employee Human Rights

	Number of business sites for which human rights due diligence was performed in FY2016	Number of business sites eligible for the basic survey into employee human rights	Implementation ratio
Japan	39	40	98%
China	4	7	57%
U.S.A.	2	6	33%
Chile	1	4	25%
Philippines	3	3	100%
Peru	1	2	50%
Canada	0	2	0%
Netherlands	0	2	0%
Australia	1	1	100%
Malaysia	1	1	100%
Taiwan	1	1	100%
Brazil	1	1	100%
Solomon Islands	1	1	100%
South Korea	1	1	100%
Singapore	0	1	0%
Total	56	73	77%



Sustainability Data

Social and Environmental Assessment Initiatives

Target	Specifics	FY2018 results
Employees	<b>Human rights management program</b> • We started operating a human rights management program for employees <sup>2</sup> in FY2014. On-site inspections are conducted, as required, at sites where issues have been identified. <b>Human rights seminars</b> • Every year, we conduct education on human rights, including the SMM Group Policy on Human Rights, for all Group employees in December, which has World Human Rights Week. Attendance: 100% • We hold lectures, education for employees scheduled to be posted overseas and promoted individuals, and periodic human rights seminars. Total time devoted to training: 6,014 hours <b>Preventing harassment</b> • We have established a contact person for sexual harassment and other incidents concerning human rights, as well as appointing a harassment prevention personnel, at each business facility. <b>Fact-finding surveys</b> • We conduct surveys into the work environment at each business site to understand the actual situation regarding harassment, compliance, and communication, and identify any demand. • We commission an external specialized organization to conduct an Employee Satisfaction Survey every three years, to understand employees' demands and satisfaction regarding the Company.	In FY2018, <sup>1</sup> the following incidents occurred and were dealt with appropriately: Incidents involving discrimination: 0 Incidents involving harassment: 3 Complaints regarding harm on human rights: 0  There were no reports of cases involving child labor or forced labor.  There were no serious infringements upon freedom of association.  There were no reports across the entire Group, in Japan and overseas, of plants closing due to actions such as strikes.
Suppliers and business partners	<b>Human rights management program</b> For our human rights management program, every three years we conduct a questionnaire-based survey on human rights, <sup>3</sup> targeting around 40 of the biggest suppliers to the Mineral Resources, Non-Ferrous Metals, and Materials Divisions, and the Purchasing Department, in terms of annual transactions. Last conducted in 2018. Since 2015, we have implemented an initiative in which every year, the Purchasing Department and the Mineral Resources, Non-Ferrous Metals, and Materials Divisions, each select one company for an on-site inspection. In FY2018, we inspected four companies (16 total since the initiative began). <b>Environmental assessment</b> When the smelting and refining business selects a new mine as a supplier, we assess how that mine carries out environmental management, including water management and tailings dams. In FY2018, we selected one new supplier through the environmental due diligence process stated above. <b>Starting/ceasing operations</b> When making investments or equity contributions, we use a project risk check sheet for committees, primarily the Management Committee, to carry out deliberations regarding human rights issues such as discrimination, forced labor, and child labor, and also the political system, economy, law and order, locally-specific diseases, labor issues, religious restrictions, and the impact on the local community.	In FY2018, there were no suppliers identified as having current or potential problems or issues.  There were also no reports of cases involving child labor or forced labor.  In FY2018, there were two new investment agreements proposed to the Management Committee, and both of these were screened for human rights issues <input checked="" type="checkbox"/> . Currently, no issues have been identified at either company, but we are continuing to monitor regularly. There was also one case of the company withdrawing from a business. Screening for human rights issues was conducted in this case, but no issues were identified.
Indigenous people and local citizens in areas where the Company does business <sup>1</sup>	<b>Relocation of local citizens for development</b> There are occasions when we inevitably have to ask local citizens to relocate to make way for development of the mine or the construction of associated facilities. On such occasions, we seek the understanding of local citizens and offer alternative land. For the Hishikari Mine, from 1983 to 1989 three households in total were asked to relocate. For Taganito HPAL Nickel Corporation, we asked 41 households in areas to be affected by the plant's construction to relocate. <sup>4</sup> <b>Human rights management program</b> Preparations are underway to implement a human rights due diligence process covering local citizens in regions around our overseas business sites. <b>Impact assessment</b> During the approval and authorization process for operations at the Hishikari Mine, we provide explanations regarding development to citizens living in areas around the mine and have concluded a pollution prevention agreement under which we report and make revisions as appropriate. <b>Consideration in biodiversity</b> To preserve the ecosystems as well as the foundation of life for communities in the area around the Hishikari Mine, SMM conducts annual environmental monitoring surveys checking 18 items and analyzing water quality, as well as rice paddy soil, unpolished rice, straw, and other natural elements to check that there are no abnormalities. Every other year, we catch and analyze fish to check for abnormal levels of heavy metals.	As a result of human rights due diligence, there have been no matters for concern, such as complaints from indigenous people, reported regarding any of the mines or smelters and refineries in which SMM has more than a 50% interest.  As of July 2018, there were no cases of artisanal and small-scale mining (ASM) with work environment issues in regions where SMM operates, nor did SMM have any programs for involvement in ASM.

1. Agreements are entered into with communities in line with the law at all of the mines and smelters and refineries in which the SMM Group has more than a 50% interest.  
2. A group-wide human rights management program that incorporates a human rights due diligence framework based on the UN's Guiding Principles on Business and Human Rights. We aim to build a structured system to prevent and avoid complicity in either direct or indirect violations of human rights, and to make possible more appropriate responses, including relief, to concerns that arise.  
3. Questionnaire-based survey on human rights: Includes content investigating forced labor, child labor, discrimination, employee working hours, the appropriateness of compensation, health and safety measures, and labor-management relations.  
4. A relocation plan was formulated in line with the World Bank's Operational Policy on Involuntary Resettlement. With the agreement of all citizens, the relocation was completed by December 2010. Furthermore, we have continued to provide support since the relocation, including for home repair and maintenance, and programs to help restore livelihoods that encourage getting skills and know-how so the citizens can get income for the rest of their lives.  
5. This does not include information provided through the SMM Group direct hotlines (see p.102: Compliance—Speak Up System)

Diversity and Employment Opportunities

Information Regarding Employees and Other Workers

Number of Employees & Officers Worldwide (Consolidated) (March 31, 2019) ☒

	Employees														Total	Temporary employees		
	Permanent employees												Occasional employees					
	Full-time officers		Managers						Regular employees								Non-regular/limited-term employees	
			Younger than 30		30–49 years old		50 and older		Younger than 30		30–49 years old		50 and older					
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female			
SMM nonconsolidated	21	0	0	0	175	4	304	4	349	78	754	166	508	52	201	35	2,651	175
Consolidated subsidiaries in Japan	62	0	0	0	95	2	209	0	350	71	1,225	278	465	67	198	171	3,193	274
Consolidated subsidiaries overseas	27	0	49	14	176	51	17	7	306	153	538	164	46	9	4	3	1,564	32
Total	110	0	49	14	446	57	530	11	1,005	302	2,517	608	1,019	128	403	209	7,408	481

In Japan, 70% of employees belonged to workers' unions. Overseas, two companies ☒ have workers' unions (excluding Chinese labor unions) resulting in a workers' union membership ratio at overseas consolidated subsidiaries of 53% ☒.

• The number of all employees excluding officers is used as the denominator of the workers' union membership ratio.

Number of Employees & Officers by Country and Region (March 31, 2019) ☒

	Japan	U.S.A.	Canada	Netherlands	Peru	Chile	China	South Korea	Philippines	Taiwan	Australia	Brazil	Thailand	Total
Male	4,916	4	12	1	22	21	61	2	1,006	13	6	14	1	6,079
Female	928	5	1	0	3	7	40	2	321	15	2	2	3	1,329

Excluding temporary employees

Current Situation Regarding Childcare Leave (FY2018) (SMM non-consolidated)

	Total	Male	Female
Employees with the right to take childcare leave <sup>1</sup>	119	104	15
Employees who took childcare leave	16	1	15
Employees who took childcare leave during FY2018 and have since returned to work	13	0	13
Employees who were still working at the company 12 months after returning from childcare leave <sup>2</sup>	11	0	11
Ratio of workers who returned after childcare leave and retention rate <sup>3</sup>	Return ratio 67% Retention rate 100%	Return ratio — Retention rate —	Return ratio 67% Retention rate 100%

1. Out of employees who have notified the company of a birth:  
Male employees—From the day of birth until the day before the child turns one year old.  
Female employees—From 56 days before the expected delivery date until the last day of the April immediately following the fiscal year (ending March 31) the child becomes one year old (the day before their birthday), or the day the child becomes one and a half years old, whichever is longer.  
2. The number of employees who returned to work in FY2017 and were still working at the company 12 months later.  
3. Return ratio: number of people who returned to work in FY2018 ÷ number of people who intended to return to work in FY2018 x 100.  
Retention rate: number of employees who returned to work in FY2017 and were still working at the company 12 months later ÷ number of employees who returned to work in FY2017 x 100.

## Sustainability Data

### ■ New Hires and Departures (FY2018)

Location		Younger than 30		30–49 years old		50 and older		Total
		Male	Female	Male	Female	Male	Female	
Japan	New employees	128	20	79	16	3	1	247
	New employee ratio (%)	18.3	13.4	3.5	3.6	0.2	0.8	4.8
	Departures	40	6	42	7	15	2	112
	Turnover (%)	5.7	4.0	1.9	1.6	1.0	1.6	2.2
	Total employees	699	149	2,249	450	1,486	123	5,156
U.S.A.	New employees	0	0	0	0	0	0	0
	New employee ratio (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	0	1	3	3	0	1	8
Canada	New employees	0	0	0	0	0	0	0
	New employee ratio (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	0	0	8	1	1	0	10
South Korea	New employees	0	0	0	0	0	0	0
	New employee ratio (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	0	0	1	2	0	0	3
Peru	New employees	2	2	8	0	3	0	15
	New employee ratio (%)	100.0	200.0	53.3	0.0	75.0	0.0	62.5
	Departures	1	0	2	2	1	0	6
	Turnover (%)	50.0	0.0	13.3	100.0	25.0	0.0	25.0
	Total employees	2	1	15	2	4	0	24
Chile	New employees	0	0	0	0	0	0	0
	New employee ratio (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	3	1	11	3	4	3	25
China	New employees	0	0	0	0	0	0	0
	New employee ratio (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	13	10	31	27	10	3	94

Location		Younger than 30		30–49 years old		50 and older		Total
		Male	Female	Male	Female	Male	Female	
Philippines	New employees	45	20	14	3	0	0	82
	New employee ratio (%)	13.6	13.3	2.2	1.9	0.0	0.0	6.2
	Departures	40	9	15	1	2	0	67
	Turnover (%)	12.0	6.0	2.4	0.6	5.3	0.0	5.1
	Total employees	332	150	628	162	38	6	1,316
Taiwan	New employees	0	0	0	0	0	0	0
	New employee ratio (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	3	1	6	11	2	3	26
Australia	New employees	0	0	1	0	0	0	1
	New employee ratio (%)	0.0	0.0	33.3	0.0	0.0	0.0	16.7
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	1	0	3	2	0	0	6
Brazil	New employees	0	0	0	0	0	0	0
	New employee ratio (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	1	0	8	2	4	0	15
Netherlands	New employees	0	0	0	0	0	0	0
	New employee ratio (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	0	0	0	0	0	0	0
Thailand	New employees	0	3	0	0	0	0	3
	New employee ratio (%)	0.0	100	0.0	0.0	0.0	0.0	100
	Departures	0	0	0	0	0	0	0
	Turnover (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total employees	0	3	0	0	0	0	3
Total <input checked="" type="checkbox"/>	New employees	175	45	102	19	6	1	348
	New employee ratio (%)	16.6	14.2	3.4	2.9	0.4	0.7	5.2
	Departures	81	15	59	10	18	2	185
	Turnover (%)	7.7	4.7	2.0	1.5	1.2	1.4	2.8
	Total employees	1,054	316	2,963	665	1,549	139	6,686

Total employees: number of employees as of March 31, 2019.  
Officers, non-regular and limited-term employees, and temporary employees are not included in the figures for new employees, departures, and total employees.  
New employee ratio: number of new employees ÷ total employees x 100.  
Turnover: number of departures ÷ total employees x 100.

Sustainability Data



Occupational Health and Safety (2018)

Occupational Health and Safety Management System

(SMM Group companies)

	SMM Group employees in Japan		SMM Group employees overseas	
	Ratio	Number of employees <sup>1</sup>	Ratio	Number of employees <sup>1</sup>
Workers covered by an Occupational Health and Safety Management System	100% <sup>2</sup>	6,763	100% <sup>2</sup>	1,355 <sup>4</sup>
Workers covered by an Occupational Health and Safety Management System subject to internal audits <sup>3</sup>	100%	6,763	100%	1,355
Workers covered by an Occupational Health and Safety Management System subject to third party audits and certification	24%	1,620	3%	45
Business sites with third party certification	Japan		Overseas	
	Certified business sites OHSAS18001: Nippon Ketjen Co., Ltd.; Hishikari Mine; Hishikari Office, Mining Dept., Sumiko Resources Exploration & Development Co., Ltd. JISHA method OSHMS: Numazu Office and Tsukuba Office of N.E. Chemcat Corporation; Shinko Co., Ltd.; Ome District Division Business sites preparing for ISO 45001 certification Toyo Smelter & Refinery, Niihama Nickel Refinery		Safety and production standardization (State Administration of Work Safety): DEP Third party audit implemented by the Ministry of Labor: TSM	

(Regular contractors)

	Japan Business Sites		Overseas Business Sites	
	Ratio	Number of employees <sup>1</sup>	Ratio	Number of employees <sup>1</sup>
Workers covered by an Occupational Health and Safety Management System	100% <sup>2</sup>	1,367	100% <sup>2</sup>	2,904
Workers covered by an Occupational Health and Safety Management System subject to internal audits <sup>3</sup>	95%	1,297	77%	2,233
Workers covered by an Occupational Health and Safety Management System subject to third party audits and certification	2%	21	0%	0
Business sites with third party certification	Japan		Overseas	
	Certification acquired by one contractor of Hyuga Smelting Co., Ltd. (JISHA method OSHMS)		None	

1. Includes temporary employees covered by SMM Group occupational health and safety administration.
2. Japan: We have built an occupational health and safety management framework as stipulated by the Japanese Industrial Safety and Health Act, formulated policies, targets, and plans, and implement a one-year PDCA cycle. Activities are carried out for each level of the organization and cover 100% of employees.
- Overseas: We are building in accordance with the occupational health and safety laws and regulations of each country.
3. Japan: Internal audits are carried out at all business sites and are implemented at each business site in turn by the business division with jurisdiction and the Safety & Environment Control Department. The audits confirm each business site's policy, targets, activity plan, and implementation status and ensure a PDCA cycle is being carried out.
- Overseas: The business division with jurisdiction carries out audits around twice a year in the form of patrols.
4. Workers at business sites covered by safety statistics.

Risk Assessment and Accident Investigation

(SMM Group companies)

	Japan Business Sites	Overseas Business Sites
Overview of risk assessment (RA) and accident investigation	RA has been introduced and we continuously make improvements in regard to risk at business sites. The effectiveness of whether they contribute to reducing serious accidents is reviewed as appropriate under the leadership of the Safety & Environment Control Department.	RA is being introduced and we continuously make improvements in regard to risk at business sites. The effectiveness of these is reviewed as appropriate. Introduction has not yet been completed at one site.
Processes for employees to report hazards and employee protection methods	We receive reports of hazards from employees through near-miss reports, morning meetings, etc., and take necessary measures.	We receive reports of hazards from employees through near-miss report forms, oral reports, etc. and take necessary measures.
Removing workers from work situations that might lead to illness or injury	In addition to RA, we reduce risk through methods including various patrols, work observation, hazard prediction training, and mutual attention. <sup>1</sup>	In addition to RA and hazard prediction activities, we reduce risk through methods including patrols by the business site and patrols by the relevant business division. <sup>1</sup>
Accident investigation and countermeasures and system improvement processes	When accidents occur, we consider and deal with each case through the accident reporting database which stipulates a process that includes, investigating whether RA was implemented, the characteristics of the hazard source, and any background factors, and formulating countermeasures. Measures tackling the hazard source are handled according to the hierarchy of controls, which prioritizes measures targeting equipment.	Investigations and countermeasures are implemented in accordance with systems at each business site. Measures tackling the hazard source are handled according to the hierarchy of controls, which prioritizes measures targeting equipment.

(Regular contractors)

	Japan Business Sites	Overseas Business Sites
Overview of risk assessment (RA) and accident investigation	A similar in-house process as the contracting organization is used. (In some cases, using the contracting organization's process.)	At Coral Bay Nickel Corporation, some contractors are introducing RA initiatives such as 10-second employee hazard prediction, and at Taganito HPAL, some are introducing RA.
Processes for employees to report hazards and employee protection methods	A framework is in place in which near misses, points to take note of, and the like are reported to the contracting organization.	A framework is in place so that if either the contracting organization or contractor discovers information such as a near miss, they will contact each other.
Removing workers from work situations that might lead to illness or injury	In addition to RA, various patrols are implemented by the contracting organization and measures are taken as necessary. <sup>1</sup>	Measures implemented center on hazard prediction activities. Measures such as patrols by the contracting organization are also implemented. <sup>1</sup>
Accident investigation and countermeasures and system improvement processes	A similar process as the contracting organization is used. (Also using the accident reporting database of the contracting organization.)	Either checks are made by the contracting organization following consideration of the case by the contractor, or the contracting organization works with the contractor to implement an investigation, counter measures, and improvements. Measures tackling the hazard source are handled according to the hierarchy of controls, which prioritizes measures targeting equipment.

1. In emergency situations where there is a risk of death, injury, or ill health, workers are to prioritize their own safety and evacuate.

Provision of Occupational Health and Safety Services

	Japan Business Sites	Overseas Business Sites
• Hazard simulations	An experience simulating a hazardous situation. Repeated training is being held based on actual conditions at business sites.	Once a year a total of about 15 employees from Coral Bay Nickel Corporation, and THPAL receive hazard simulation training in Japan. Preparations are currently underway to install hazard simulation facilities at THPAL.
• Anzen Dojo	Held twice a year, once in spring and once in fall (up to spring 2018). A plan for 2019 onward is still under discussion. Employees are taught the mechanisms that lead to disasters, and then contribute to activities at their business sites. Over 100 employees have completed this training.	At Coral Bay Nickel Corporation, and THPAL, Japanese employees receive safety training that incorporates Anzen Dojo content twice a year when the relevant business division implements safety patrols.
• An organizational structure and regulations, including safety managers, qualified personnel, and training plan	Required by Japanese laws and regulations. Managed by each business site.	A person responsible for health-related matters is employed in accordance with the occupational health and safety laws and regulations of each country.
• A working environment management framework	Required by Japanese laws and regulations. Managed by each business site.	Required by the occupational health and safety laws and regulations of each country.
• Medical examinations (general, specific, specialized), radiation exposure management, action on results of health checkups, and an insurance guidance framework	Required by Japanese laws and regulations. Managed by each business site.	Required by the occupational health and safety laws and regulations of each country.
• Mental health-related checkups, consultations	Required by Japanese laws and regulations. Managed by each business site.	Japanese employees use systems provided by SMM.
• Industrial doctors, health advisors, nurses, etc. (including health consultations)	Implemented in accordance with the Japanese Industrial Safety and Health Act or agreements are arranged with industrial doctors accordingly. Managed by each business site.	At Coral Bay Nickel Corporation, and THPAL, industrial doctors are commissioned in accordance with Japanese laws and regulations.
• Internal workshops, small group activities	Small group activities are held for all employees with Anzen Dojo as a theme and have the aim of improving hazard awareness. Enhancing communication is also included. Managed by each business site.	Initiatives are implemented accordingly by each business site.
• Lectures from external instructors (life-saving and first aid, traffic accident prevention, etc.)	Red Cross first aid courses, life-saving courses by the fire department, traffic safety training by the police, etc. Managed by each business site.	Employees are sent out to first aid and other seminars.
• Emergency rooms and equipment (life-saving and first aid, including AEDs, measures for pandemics or infectious diseases, etc.), an emergency contact network	There is also an emergency contact network covering the entire company. Managed by each business site.	Each business site implements measures such as the installation of emergency rooms, AED, and first-aid kits, and the maintenance of an emergency contact network.
• Break rooms	Provided at business sites as needed, in line with policies related to measures to create a comfortable work environment.	Managed by each business site.
• Dining halls (nutritionists)	Can be used by all employees at business sites where they are available.	Dining halls installed at each business site.
• Laundry rooms	Can be used by all employees at business sites where they are available.	Installed at Coral Bay Nickel Corporation, and Taganito HPAL.
• Bath/shower facilities	Can be used by all employees at business sites where they are available.	Installed at Coral Bay Nickel Corporation, and Taganito HPAL.
• Company housing and dormitories	Can be used by all employees at business sites where they are available.	Installed at Coral Bay Nickel Corporation, and Taganito HPAL.
• Suggestion boxes	Can be posted through the SMM bulletin board. Internal reporting phone lines are also available.	Managed by each business site.
• Management of personal information	Required by Japanese laws and regulations.	Managed by each business site.
Other: Non-occupational medical and healthcare services		
• Tackling lifestyle-related disease and promotion of health	Thorough medical checkups (health insurance union subsidies available), other. Can be used by all employees at business sites where they are available. Health promotion activities are also implemented at each business site.	Managed by each business site.
• Medical and healthcare services not directly connected to operations	Mental health (external, eMe), guidance for procuring medication, guidance regarding test kits (external organization)	At Coral Bay Nickel Corporation, and Taganito HPAL, we have installed on-site medical offices where treatment can be received free of charge. We also have a subsidy system covering visits to external medical facilities.
• Voluntary health promotion services and programs provided to tackle major health risks not directly connected to operations	Workers have access to occupational health services and health guidance is provided by industrial doctors	Individual programs are being arranged at Coral Bay Nickel Corporation, and Taganito HPAL.



Sustainability Data

Labor-Management Discussion concerning Occupational Health and Safety  
(Status of Occupational Health and Safety Committees)

	Japan Business Sites	Overseas Business Sites
SMM Group companies	Occupational Health and Safety Committee meetings are held every month (with over half of representatives from the labor side at each business site in cases where said business site has more than 50 people, in accordance with stipulations in the Japanese Industrial Safety and Health Act). These provide opportunities to share information and hold discussions concerning occupational health and safety, while decision making is implemented by the people with overall responsibility on the management side (top management), and PDCA cycles are implemented.	Meetings are held once a month at Coral Bay Nickel Corporation, and Taganito HPAL, while at other sites, meetings of bodies comprising both labor and management, such as Occupational Health and Safety Committees, are held every quarter. Management of progress toward safety management targets is implemented.
Regular contractors	Occupational Health and Safety Committee meetings and informal gatherings are held every month by contracting organizations in which contractors and others participate and information is shared. This information is taken back to the company where it is shared and used to make notifications.	Coral Bay Nickel Corporation, and Taganito HPAL only: Contractor safety meetings are held once a month. Progress toward safety management targets by contractors is managed and information is shared.

General Education and Training Regarding Occupational Health and Safety

	Japan Business Sites	Overseas Business Sites
SMM Group companies	Education is provided as stipulated in the Japanese Industrial Safety and Health Act (new employee training, special education, training when starting hazardous or potentially harmful operations, etc.) and places for gaining qualifications are provided. Risk response training, such as accident response, is also provided.	Implemented and managed accordingly by each business site.
Regular contractors	Education is provided as stipulated in the Japanese Industrial Safety and Health Act (new employee training, special education, training when starting hazardous or potentially harmful operations, etc.) and places for gaining qualifications are provided. Risk response training, such as accident response, is also provided.	Coral Bay Nickel Corporation, and Taganito HPAL only: Education is provided during operation halts, etc.

Work-Related Incidents

	Japan				Overseas <sup>1</sup>			
	Employees		Non-employee workers		Employees		Non-employee workers	
	Accidents	Rate	Accidents	Rate	Accidents	Rate	Accidents	Rate
Number of work-related accidents resulting in fatality and frequency rate (Calculated per 1,000,000 hours, same applies below) <input checked="" type="checkbox"/>	0	0	0	0	0	0	0	— <sup>6</sup>
Number of work-related accidents resulting in disability and frequency rate <input checked="" type="checkbox"/>	0	0	0	0	0	0	0	— <sup>6</sup>
Number of work-related accidents requiring reporting and frequency rate <sup>2</sup> <input checked="" type="checkbox"/>	23	1.71	9	3.29 <sup>7</sup>	5	1.61	6	— <sup>6</sup>
Main types of work-related incidents	Getting caught between objects, getting tangled in objects, lacerations, contact with harmful substances, results of movements or unreasonable actions, falls, stumble, tumbles, impact injuries				Getting caught between objects, getting tangled in objects, lacerations, stumble, contact with harmful substances			
Cumulative hours worked	13,417,350 hours		2,734,000 hours <sup>3</sup>		3,098,667 hours <sup>3</sup>		— <sup>6</sup>	
Number of potential incidents <sup>4</sup>	25		8		7		5	
Sources of work-related hazards that lead to disability, and method of determination	1) Heavy loads, 2) chemicals, 3) high-temperature objects, 4) rotating objects, 5) electricity, 6) high places, 7) heavy machinery, 8) cylinders, 9) hand tools Classified based on analysis of past incidents				1) Heavy loads, 2) chemicals, 3) high-temperature objects, 4) rotating objects, 5) electricity, 6) high places, 7) heavy machinery, 8) cylinders, 9) hand tools Applied based on the results of analysis of incidents in Japan			
Incidents leading to disabilities and resulting from sources of work-related hazards, and actions taken or underway to eliminate these hazards using the hierarchy of controls <sup>5</sup>	<ul style="list-style-type: none"><li>• High place (resulting in absence from work): Improve the management of wear and tear of attachable safety equipment and inspect measures to prevent falls from high places</li><li>• Rotating object (resulting in absence from work): Improve any lockout and interlock deficiencies and attach covers</li><li>• Cylinder (not resulting in absence from work): Visualize and eliminate residual pressure through equipment improvements</li><li>• Stumble (resulting in absence from work): Standardize safe working practices for loading platforms (including physical measures)</li><li>• Chemicals (resulting in absence from work): Ensure safe platforms (in relation to openings), strengthen education regarding harmful properties of chemicals</li></ul>				N/A			
Incidents resulting from other sources of workplace hazards and actions taken or underway to eliminate these hazards using the hierarchy of controls <sup>5</sup>	<ul style="list-style-type: none"><li>• Flying objects (resulting in absence from work): Make inspections of grease gun nozzles and hoses regular, review the way they are being held and personal protective equipment</li></ul>				N/A			

1. Hierarchy of controls: An approach for lowering risk to acceptable levels through prioritization as follows:  
Elimination of source of risk → Substitution of source of risk → Engineering controls → Administrative controls → Personal protective equipment  
Source: The US National Institute for Occupational Safety and Health (NIOSH)  
2. “Workplace accidents requiring reporting” is the total of injuries that required hospital treatment and resulted in absence from work and injuries not resulting in absence from work.  
3. The number of minor incidents (visited the hospital but no treatment needed).  
4. The Pogo Gold Mine business was transferred to another company in September 2018, so it is only included in these statistics up to August 31.  
5. Estimated based on one person working 2,000 hours per year.  
6. Not calculated, as contractor work hours tend to be fluid.  
7. This indicator is outside the scope of independent assurance.

Work-Related Ill Health

\*Employees\* includes employees and part-time workers from group companies

	Japan		Overseas	
	Employees	Non-employee workers	Employees	Non-employee workers
Number of fatalities as a result of work-related ill health	0	— <sup>2</sup>	0	0
Number of cases of recordable work-related ill health	0	— <sup>2</sup>	0	0
Primary types of work-related ill health and method of determination	As stated in the Japanese occupational health and safety laws and regulations • Pneumoconiosis • Ionizing radiation injury • Organic solvent poisoning • Damage caused by specified chemical substances (occupational cancer, skin damage, etc.) • Lead poisoning • Vibration-induced damage • Noise-induced hearing loss • Occupational dental problems (dental erosion, etc.)		As stated in occupational health and safety laws and regulations of each country <sup>3</sup>	
Sources of work-related hazards that lead to ill health	• Dust • Ionizing radiation • Organic solvents • Lead • Vibrating tools • Noise • Substances that erode the teeth (acids)		— <sup>3</sup>	
Incidents resulting from sources of work-related hazards leading to illness and actions taken or underway to eliminate these hazards using the hierarchy of controls <sup>1</sup>	• No work-related ill health occurred that required treatment • Implementing improvements to working environments at business sites, with Control Class 3 workplaces as a priority • Using a risk assessment database of chemical substances to prevent illness		No work-related ill health occurred that required treatment	

1. Hierarchy of controls: An approach for lowering risk to acceptable levels through prioritization as follows:  
Elimination of source of risk → Substitution of source of risk → Engineering controls → Administrative controls → Personal protective equipment  
Source: The US National Institute for Occupational Safety and Health (NIOSH)  
2. Under Japanese laws and regulations, for workers other than employees, this falls under the responsibility and management of the businesses that hire them, so while we provide leadership, we are unable to disclose information.  
3. For overseas business sites, depending on the laws and regulations of each country, we investigate whether work-related ill health certification is present and the names of relevant laws and regulations, but we do not investigate details.  
4. Regarding employees in Japan, we also record the number of workers who receive abnormal findings but do not require treatment (as this is personal information, it is not disclosed).

Sustainability Data

Stakeholder Communication

Stakeholder Engagement

Stakeholders <sup>1</sup>	Stance on initiatives	Specific initiatives
Customers	We engage in communication primarily through sales personnel. Comments received are handled at the management level through the management systems of the individual businesses.	<ul style="list-style-type: none"><li>Introduce products on our website and post contact information along with them.</li></ul>
Shareholders and Investors	To carry out appropriate IR activities, we have established an IR Policy that has standards and methods of information disclosure and is on our website. Comments received are regularly reported to management and are put to use in administration of the company.	For institutional investors and analysts: <ul style="list-style-type: none"><li>Hold Business Strategy Progress Briefing Sessions (2 times/year)</li><li>Hold telephone conferences on the content of financial reports (4 times/year, with simultaneous Japanese to English interpretation)</li></ul> For individual investors: <ul style="list-style-type: none"><li>Publish The Report for Shareholders (2 times/year)</li><li>Hold a briefing (3 time/year)</li></ul>
Employees	We regularly give explanations and have meetings with labor unions in Japan and employee representatives overseas to hear their requests and opinions. We also have a system for discussions with individual employees and conduct an employment awareness survey.  If there will be changes to work that significantly impact employees, we set an appropriate notification period in advance. (Example: At a subsidiary slated for a transfer of business, we briefed employees one month before the transfer was completed and ensured their continued employment.)	Japan: <ul style="list-style-type: none"><li>Hold labor-management council meetings, labor-management discussions (1 time/month)</li><li>Hold a Central Labor Management Conference (1 time/year)</li><li>Set individual job targets at the start of the fiscal year, and hold talks between individual employees and their supervisors to ascertain the progress being made toward the targets (2 times/year)</li></ul> Overseas: <ul style="list-style-type: none"><li>Establish opportunities for regularly explaining management status to employee representative organizations, and for hearing the opinions and requests of employees</li></ul> In response to requests for safety and work environment improvements put forth in labor-management discussions, we confirm the conditions and enact the necessary improvement measures. (Examples: Measures to combat heat stroke in summer and measures to prevent contact accidents; use of machines for work with high physical burdens)
Local Communities	We establish opportunities for regular communication with local communities, prepare environments that facilitate mutual understanding, and actively undertake a variety of activities for becoming a part of the communities.	<ul style="list-style-type: none"><li>Hishikari Mine: Hold Pollution Prevention Council meetings (2 times/year)</li><li>CBNC: Hold regular information exchanges with 22 barangays,<sup>3</sup> including 11 "impact barangays" near Rio Tuba.</li><li>THPAL: Hold regular information exchanges with 14 barangays, including 4 neighboring "impact barangays."</li></ul> <ul style="list-style-type: none"><li>CBNC: Construct facilities required by each barangay, support schools by providing educational supplies and materials required for operation, offer free medical support for local communities, and promote livelihood support activities that facilitate self-sufficiency.<sup>2</sup></li><li>THPAL: Spread organic rice cultivation methods with the help of technical experts, help elderly in the area with daily necessities, and support educational advancement through scholarships, etc.<sup>2</sup></li></ul>
Business Partners	Based on our excellent relationships with business partners, each of our departments actively engages in everyday communication and exchanges of ideas.	<ul style="list-style-type: none"><li>Hold safety training for subcontractors so they can work safely</li><li>Have patrols that evaluate the construction status of buildings, to improve the skills of construction firms handling SMM Group products</li></ul>
Civil Society Organizations	While gaining the understanding and cooperation of citizens groups toward the construction and operation of plants, we keep impact to the local environment to a minimum and work toward co-existence with the natural environment.	<ul style="list-style-type: none"><li>Hold regular exchanges of opinion with the international environmental NGO Friends of the Earth Japan regarding their findings on topics such as the water quality of rivers around the CBNC and THPAL plants, both in the Philippines. Implement necessary improvement measures that reference the group's opinions and recommendations. (2 times/year)</li></ul>
Government Agencies	We conduct regular exchanges of information and discussions with local government administrative agencies, industry bodies, and other organizations in regions where we have business sites and affiliated companies.	Hold regular information exchange meetings with the public security sections of police stations near our workplaces (1 time/month)

There were no complaints to the SMM Group regarding society, and 17 complaints concerning the environment. These are being handled appropriately.

1. Stakeholders on which SMM has an impact and which have an impact on SMM are defined as customers, shareholders, employees, local communities, creditors, business partners, civil society organizations, and government agencies.

2. Part of our SDMP (Social Development and Management Program) initiative.

3. Barangay: the smallest administrative division that makes up cities and towns in the Philippines, and denotes a village, district, or ward.

Main Organizations in Which SMM Has Membership

Organization	Responsibilities of SMM officers and employees	Initiatives relating to public policy
Japan Business Federation (Keidanren)	Executive member; participation in the following committees: New Industry and Technology, Canada, Environment and Safety, Oceanic Resources, International Cooperation, China, South Asia, Japan-Myanmar Economic, Japan-Brazil Economic, Gender Diversity, National Resilience, the Tokyo 2020 Olympic and Paralympic Games, Energy and Resources (Planning sub-committee), Labor Legislation (Occupational Health and Safety subcommittee)	As a unified business organization with the goal of making improvements to the autonomous growth of the domestic economy and to public life, we act reliably and swiftly after gathering opinions from the business world with regards to various internal and external economic challenges
Japan Mining Industry Association	Director; participation in the following committees and others: Mining Reserves (chairman and deputy chairman), Planning and Coordination, Energy, Overseas Development, Environmental Management, Customs Duties, Funds, Supply and Demand, Taxation, Exploration and Development, Sulfide Ore and Sulfuric Acid, the Special Committee for Depletion Allowance Measures and Safety Promotion	Submission of mining industry policy requests to relevant government agencies regarding electricity fee issues, taxation, resource development, smelting and recycling technology, mine safety, and development of employee training. Members to be sent to government-sponsored investigative committees to present industry viewpoint.
The Sulphuric Acid Association of Japan	One director; participation in the General Affairs Committee, Business Affairs Committee, Technical Committee, and Editorial Committee	Communicating policy and information from the Manufacturing Industries Bureau of the Ministry of Economy, Trade and Industry to member companies and compiling and presenting requests from member companies
International Council on Mining and Metals (ICMM)	Practice the ICMM 10 Basic Principles. Promote ICMM activities and participate in each of the following programme committees: Communications, Environment, and Social & Economic Development Committee, and the Health & Safety Committee.	<ul style="list-style-type: none"><li>Environment</li><li>Initiatives for biodiversity, climate change, and water management</li><li>Health and safety</li><li>Initiatives for sharing information on health and safety and the elimination of accidents</li><li>Materials stewardship</li><li>Initiatives for science-based chemical substance management and supply chain management</li><li>Society and economy</li><li>Initiatives to contribute to the economic development of society by the mining industry</li></ul>
Japan Electronics and Information Technology Industries Association (JEITA)	Participate in Electronic Components Board and Dielectric Ceramics Committee	Collection of various statistics, and participation in reviews of regulations, standards, environmental measures and other issues
Battery Association of Japan	Associate member	Promotion of measures related to recycling, quality performance, and product safety that will be required in the future as demand for secondary batteries increases.

## Sustainability Data

### Partnerships with Outside Organizations

SMM participates in the international organizations listed below, issues declarations of support, complies with the organizations' rules, and supports their activities. As a company in the mining and metal refining industries, we undertake initiatives for the sustainable development demanded of us.

- International Council on Mining and Metals (ICMM) <https://www.icmm.com/>
- Extractive Industries Transparency Initiative (EITI) <https://eiti.org/>

### Involvement with the International Community

#### The 10 Principles of the ICMM

- Principle 1:** Apply ethical business practices and sound, transparent systems of corporate governance to support sustainable development
- Principle 2:** Integrate sustainable development in corporate strategy and decision-making processes
- Principle 3:** Respect human rights and the interests, cultures, customs and values of employees and communities affected by our activities
- Principle 4:** Implement effective risk-management strategies and systems based on sound science and which account for stakeholder perceptions of risks
- Principle 5:** Pursue continual improvement in health and safety performance with the ultimate goal of zero harm
- Principle 6:** Pursue continual improvement in environmental performance issues, such as water stewardship, energy use and climate change
- Principle 7:** Contribute to the conservation of biodiversity and integrated approaches to land-use planning
- Principle 8:** Facilitate and support the knowledge-base and systems for responsible design, use, re-use, recycling and disposal of products containing metals and minerals
- Principle 9:** Pursue continual improvement in social performance and contribute to the social, economic and institutional development of host countries and communities
- Principle 10:** Proactively engage key stakeholders on sustainable development challenges and opportunities in an open and transparent manner. Effectively report and independently verify progress and performance

The SMM Group reflects the ICMM 10 Principles in our CSR and other policies, and publishes reports in line with GRI guidelines, as mandated for ICMM member companies. In addition, we comply with the ICMM Position Statements that embody the 10 Principles, and otherwise engage in a variety of actions as a member company.

ICMM has set forth the following position statements to supplement its 10 Principles. The SMM Group is committed to complying with these initiatives.

- Transparency of mineral revenues
- Principles for climate change policy design
- Mercury risk management
- Mining and protected areas
- Indigenous peoples & mining
- Mining partnerships for development
- Water stewardship
- Tailings governance

#### The EITI Principles

1. We share a belief that the prudent use of natural resource wealth should be an important engine for sustainable economic growth that contributes to sustainable development and poverty reduction, but if not managed properly, can create negative economic and social impacts.
2. We affirm that management of natural resource wealth for the benefit of a country's citizens is in the domain of sovereign governments to be exercised in the interests of their national development.
3. We recognise that the benefits of resource extraction occur as revenue streams over many years and can be highly price dependent.
4. We recognise that a public understanding of government revenues and expenditure over time could help public debate and inform choice of appropriate and realistic options for sustainable development.
5. We underline the importance of transparency by governments and companies in the extractive industries and the need to enhance public financial management and accountability.
6. We recognise that achievement of greater transparency must be set in the context of respect for contracts and laws.
7. We recognise the enhanced environment for domestic and foreign direct investment that financial transparency may bring.
8. We believe in the principle and practice of accountability by government to all citizens for the stewardship of revenue streams and public expenditure.
9. We are committed to encouraging high standards of transparency and accountability in public life, government operations and in business.
10. We believe that a broadly consistent and workable approach to the disclosure of payments and revenues is required, which is simple to undertake and to use.
11. We believe that payments' disclosure in a given country should involve all extractive industry companies operating in that country.
12. In seeking solutions, we believe that all stakeholders have important and relevant contributions to make— including governments and their agencies, extractive industry companies, service companies, multilateral organisations, financial organisations, investors, and non-governmental organisations.



## Other

### Economic Performance

#### Distribution of Economic Value to Stakeholders (FY2018) ☒

Stakeholder	Amount (billions of yen)	Details
Suppliers	786.7	Payments to suppliers
Employees	65.4	Payments to employees
Shareholders/Creditors	39.6	Payments of dividends/ interest
Government	11.9	Taxes paid
Society* <sup>1</sup>	1.0	Donations

Other than the above, there is retained value of ¥30.9 billion. Rent for use of land is minimal and therefore included in "Payments to suppliers."

\*<sup>1</sup> Society: In the Philippines (CBNC, THPAL), the ¥0.9 billion expended through the social development management program (SDMP) and other contributions in the same country is included.

#### Financial Assistance from the Government (FY2018) ☒

Stakeholder	Amount (billions of yen)	Details
Government	0.3	Subsidies, grants, etc.

No governments have an equity stake in SMM

#### Projected Benefit Obligation

The SMM Group has adopted both funded and unfunded defined benefit plans and defined contribution plans for allocating retirement benefits to its employees. Its defined benefit obligations as of March 31, 2019 were ¥73.8 billion, which include funded defined benefit obligations of ¥71.9 billion ☒, and pension assets available for allocation to those funded defined benefit obligations were ¥68.0 billion ☒.

### External Recognition

#### List of Main External Awards (FY2018)

Recognition (awarding party)	Date	Recipients	Award received for
The Prize for Creativity in the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology	April 10, 2018	Three employees of Quality Control Section at Ohkuchi Materials Co., Ltd.	Tackled the issue of "mitigating sampling burden in advance inspection process" through small-group activities. Eliminated inspector tasks involving heavy objects by introducing the use of automatic sampling devices. Also realized considerable cost reductions and the mitigation of tasks by cutting back on inspection man-hours.
Japan Business Federation Chairman's Special Award (Invention and Innovation Awards)	June 12, 2018	Sumitomo Metal Mining Co., Ltd.	Received this award for superior scientific and technological progress in hydrometallurgical refining for nickel oxide ore and for the contribution that the remarkable effect of implementing that method made toward the enhancement of science and technology and the advancement of the industry.
Health, Labour and Welfare Minister's Award for Outstanding Offices for the Employment of Persons with Disabilities	September 4, 2018	Ohkuchi Materials Co., Ltd.	The objective of this award is to stimulate the motivation of persons with disabilities to have vocational independence and to further the concern and understanding of citizens and employers regarding the employment of disabled persons. Won by employees in Ohkuchi Materials Co., Ltd. technical division.
The Japan Society for Analytical Chemistry Medal of Merit	September 3, 2018	Sumitomo Metal Mining Co., Ltd., Harima Refinery	This award is granted to individuals who make special contributions in the course of their practical work in analysis, etc. over a number of years. Won by two employees involved with practical analysis duties.
Mine Safety Promotion Council Chairman's Award	October 11, 2018	Sumitomo Metal Mining Co., Ltd., Hishikari Mine	Recognized for remarkable record of efforts to prevent accidents and incidents in mining and other operations.
Award for Rightful Service in Hazardous Materials Engineer Operations	November 9, 2018	Sumitomo Metal Mining Co., Ltd., Ome District Division	Was awarded from Tokyo Metropolitan Ome City Fire Station for proactively promoting safety management operations for many years.
2018 Presidential Mineral Industry Environmental Award (Department of Environment and Natural Resources of the Philippines)	November 23, 2018	Coral Bay Nickel Corporation	Was awarded the 2018 Presidential Mineral Industry Environmental Award which is the highest in the nation's mining industry, by the Department of Environmental and Natural Resources of the Philippines for the fifth consecutive year.
2018 Platinum Award of the Presidential Mineral Industry Environmental Award (Department of Environment and Natural Resources of the Philippines)	November 23, 2018	Taganito HPAL Nickel Corporation	Was awarded the 2018 Platinum Award of the Presidential Mineral Industry Environmental Award (second place) by the Department of Environmental and Natural Resources of the Philippines. Simultaneously received Hall of Fame Award from the Philippine Department of Trade and Industry for being the Top Export Performer in the Mineral Sector for the past three consecutive years.



# Independent Assurance Report



## Independent Assurance Report

To the President and Representative Director of Sumitomo Metal Mining Co., Ltd.

We were engaged by Sumitomo Metal Mining Co., Ltd. (the “Company”) to undertake a limited assurance engagement of the environmental, social and economic performance indicators marked with ☑ (the “Indicators”) for the period from April 1, 2018 to March 31, 2019 included in its Integrated Report 2019 (the “Report”) for the fiscal year ended March 31, 2019; the Company’s self-declaration that the Report is prepared in accordance with the Global Sustainability Standards Board’s GRI Sustainability Reporting Standards (the “GRI Standards”) at a core level; the alignment of the Company’s policies to the International Council on Mining and Metals (“ICMM”)’s 10 Sustainable Development (“SD”) Principles and the applicable mandatory requirements set out in ICMM position statements; the Company’s identification and prioritization of material issues; and the Company’s approach and management of its material issues.

### 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; self-declaring that the Report is prepared in accordance with the criteria stipulated in the GRI Standards; reporting on the alignment of the Company’s policies to the ICMM’s 10 SD Principles and the applicable mandatory requirements set out in ICMM position statements; reporting on the Company’s identification and prioritization of material issues; and for reporting on the Company’s approach and management of its material issues.

### 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’ and ‘ISAE 3410, Assurance Engagements on Greenhouse Gas Statements’, issued by the International Auditing and Assurance Standards Board. 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 the Company’s responsible personnel to obtain an understanding of its policy for preparing 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 procedures on 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 recalculating the Indicators.
- Visiting the Company’s Isoura Plant selected on the basis of a risk analysis.
- Evaluating the overall presentation of the Indicators.
- Evaluating the Company’s self-declaration that the Report is prepared in accordance with the GRI Standards at a core level against the criteria stipulated in the GRI Standards.
- Assessing the alignment of the Company’s policies to the ICMM’s 10 SD Principles and the applicable mandatory requirements set out in ICMM position statements through documentation reviews and interviews.
- Interviewing the Company’s responsible personnel and reviewing documents with respect to the Company’s process of identifying and prioritizing its material issues and its approach to and management of its material issues.



### Conclusion

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;
- the Company’s self-declaration that the Report is prepared in accordance with the GRI Standards at a core level does not conform to the criteria stipulated in the GRI Standards;
- the Company’s policies are not aligned to the ICMM’s 10 SD Principles and the applicable mandatory requirements set out in ICMM position statements as described on pages 117 and 140;
- the Company has not identified and prioritized its material issues as described on pages 98 and 99; and
- the Company has not approached and managed its material issues as described on pages 91 to 97.

### 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 Sustainability Co., Ltd.*

KPMG AZSA Sustainability Co., Ltd.

Tokyo, Japan

October 23, 2019

# Glossary

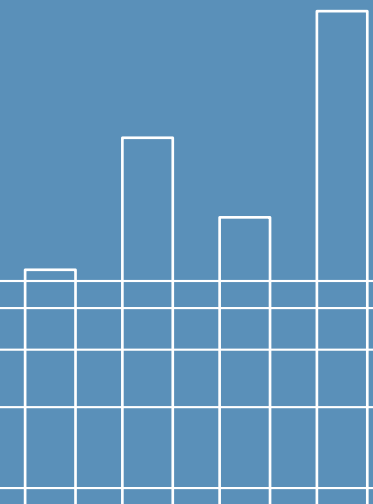
Term	Explanation	Pages
CASE	An acronym for Connected, Autonomous, Shared/Service, and Electric. The term is becoming increasingly recognized as a key word indicating major trends in the automobile industry.	68, 70, 74
Copper concentrates	A raw material used in copper smelting, consisting of about 30% copper content with sulfur and iron as most of the remainder. Copper concentrates are produced mainly from sulfide ores. At present, ores extracted from overseas mines generally have a grade of about 1%. The ores are then “dressed” at the mine to enhance the grade and produce concentrate. The raw materials imported by copper smelting and refining plants in Japan are primarily copper concentrates.	6, 15, 47, 124
Coral Bay Nickel Corporation (CBNC)	The SMM Group's first HPAL plant. Located in the Province of Palawan in the Philippines, CBNC produces mixed nickel-cobalt sulfides (MS) using HPAL technology for export to the Group's Niihama Nickel Refinery and Harima Refinery.	3, 14, 26, 32, 46, 52, 63, 64, 66, 67, 90-93, 101, 111, 117, 121, 124-127, 135, 136, 138, 141
EITI	An acronym for Extractive Industries Transparency Initiative. EITI is a framework for multinational cooperation that enhances transparency in the flow of funds from the so-called extractive industries, those that are involved in oil, gas, and mineral resources, to the governments of resource-producing countries, to prevent corruption and conflict and thereby promote responsible resource development that leads to growth and the reduction of poverty.	117, 140
Electrolytic copper	A high-purity copper material produced through electrolytic refining in a solution (electrolysis). At our Group's Toyo Smelter & Refinery, we dissolve copper concentrate in a flash furnace, pass it through a converter and a refining furnace, cast anodes in plate form, and produce electrolytic copper through electrolytic refining. Electrolytic nickel and electrolytic cobalt are also produced through electrolytic refining.	6, 35, 62, 63, 65, 72, 118, 125
HPAL	An acronym for High Pressure Acid Leach. This technology enables the recovery of nickel from nickel oxide ores that had been conventionally difficult to process. The SMM Group was the first company in the world to apply it successfully on a commercial scale. HPAL causes oxide ores to react stably with sulfuric acid under high-temperature and high-pressure conditions, to produce a high-grade nickel raw material.	2, 3, 12, 14, 16, 18, 19, 26, 32, 35, 37, 42, 43, 46, 52, 53, 55, 62-67, 90-93, 101, 111, 117, 121, 125-127, 130, 135, 136, 138, 141
Human rights due diligence	An approach to human rights protection based on the United Nations Guiding Principles on Business and Human Rights approved by the United Nations Human Rights Council in 2011, this is a series of processes for performing preventive investigations to avoid and mitigate the negative effects that organizations have on human rights, and for taking appropriate corrective action based on the findings. The SMM Group built system for human rights due diligence in FY2014 and has followed it since then.	26, 27, 95, 102, 106, 107, 129, 130
Hydrometallurgical refining	A refining method in which metals and impurities are dissolved in a solution, and chemical reactions are used to separate them. The method is stable and enables continuous processing, but incurs the costs of chemical reagents.	72, 141

Term	Explanation	Pages
ICMM	An acronym for International Council on Mining and Metals. This is an organization composed of worldwide metal and mining companies and related industry bodies. Its mission is “In collaboration with others, we will strengthen the social and environmental performance of the mining and metals industry and build recognition of its contribution to local communities and society at large.”	27, 98, 114, 117, 139, 140
LME	An acronym for London Metal Exchange. The LME specializes in the trading of non-ferrous metals such as copper, nickel, aluminum, lead, and zinc. Metal trading prices determined at the LME are used as international benchmarks for metal sales prices and raw material purchase prices.	110
LT/LN	Lithium Tantalate and Lithium Niobate. These are used in chips for information and communication terminal SAW filters.	3, 43, 55, 68, 69, 71-73, 76
Matte	A term for metal sulfides. Niihama Nickel Refinery produces electrolytic nickel using nickel matte (of about 75–80% purity) sourced from P.T. Vale Indonesia.	64, 66, 124
MCLE	An acronym for Matte Chlorine Leach Electrowinning. This is a manufacturing process adopted at the SMM Group's Niihama Nickel Refinery. Matte and mixed nickel-cobalt sulfides (MS) are dissolved in chlorine at high temperature, then electrolysis is used to produce high-purity nickel. MCLE is more competitive than other methods in terms of cost, but poses significant operational challenges, and only two other producers outside of SMM have commercialized it using similar technology.	2, 3, 35, 64, 66
MLCC	An acronym for multi-layer ceramic capacitor. These are capacitors made of multiple layers of ceramic dielectric bodies for greater capacity. In addition to consumer applications, in recent years they are being used often in electric automobiles so demand is expected to increase. The nickel paste produced by our Group is used in the internal electrodes of MLCCs.	36, 70, 75
MS	An acronym for mixed sulfides of nickel and cobalt. CBNC and THPAL produce a mixed nickel-cobalt sulfide intermediate containing about 55–60% nickel by weight. It is used as a raw material in the production of electrolytic nickel, nickel sulfate, and other products.	46, 63, 66
Nanban-buki	A smelting and refining method that uses lead to remove silver and impurities contained in crude copper. An alloy made by melting and rapidly cooling lead and crude copper containing silver is heated, and silver-containing lead, which melts out at a melting point below that of copper, is heated atop ash. The lead is absorbed by the ash and only the silver remains. This allows the collection of silver while obtaining high-purity refined copper.	2, 3, 12, 16
NCA	An acronym for a type of secondary battery cathode material composed primarily of N (nickel), C (cobalt), and A (aluminum).	46, 53, 55, 68, 69, 71, 76

## Glossary

Term	Explanation	Pages
Nickel oxide ores (laterite ore)	While predominantly higher-grade sulfide ores are used in nickel refining, nickel oxide ores are more prevalent than nickel sulfides. High refining costs and technical issues have limited the use of oxide ores in nickel refining to date, but the SMM Group has succeeded in refining nickel from low-grade oxide ores based on HPAL technology.	3, 9, 66, 67, 91, 124, 141
NMC	An acronym for a type of secondary battery cathode material composed primarily of N (nickel), M (manganese), and C (cobalt).	46, 76
Off-JT	A method of training conducted away from the workplace or separate from normal work. Its aim is the acquisition of advanced work capabilities or other knowledge and skills not directly connected to normal work based on systematic knowledge and theory.	50, 108
OJT	An acronym for On-the-Job Training, this is a method of training for the acquisition of knowledge and skills through the performance of actual work in the workplace under the guidance of superiors or senior colleagues. Its aim is the fast acquisition of work execution capabilities.	50, 61, 94, 108
Pyrometallurgical smelting	A refining method in which precursor ore is smelted at high temperature in a furnace and metals are separated in a molten state. While this technique allows processing large volumes of ore at once, it also requires periodic repair of the heatproofing equipment.	72
Secondary battery cathode materials	Materials used in the cathodes of batteries (secondary batteries) that can be charged and reused. The constituent components of secondary batteries break down roughly into cathode material, anode material, a separator, and electrolytic solution. The SMM Group produces the cathode materials used in electric and hybrid automobiles, as well as lithium-ion secondary battery cathode materials.	3, 21, 70-72, 74-76
Smelting & Refining	This refers to the extraction of valuable metals from ore and other raw materials, and is mainly divided into pyrometallurgical refining and hydrometallurgical refining. The SMM Group's Toyo Smelter & Refinery in Saijo, Ehime Prefecture uses pyrometallurgical refining in its upstream processes (treatment processes), while Niihama Nickel Refinery in Niihama, Ehime Prefecture uses only hydrometallurgical refining throughout.	2, 3, 10-16, 18-21, 24, 27, 34-36, 41, 43, 45-47, 51-55, 62-67, 69, 72, 74-76, 84, 85, 88, 90, 91, 110-112, 114, 115, 118, 120-124, 126-128, 130, 134, 139-141
Taganito HPAL Nickel Corporation (THPAL)	The SMM Group's second HPAL plant. Located in the Province of Surigao del Norte in the Philippines, THPAL produces mixed nickel-cobalt sulfides (MS) using HPAL technology for export to the Group's Niihama Nickel Refinery and Harima Refinery.	3, 14, 26, 32, 42, 43, 46, 52, 53, 55, 62-67, 90-93, 101, 111, 117, 121, 125-127, 130, 135, 136, 138, 141
TC/RC	An acronym for treatment charge and refining charge. These are costs that make up a part of the terms of purchase of metal raw materials (copper concentrate, nickel ore, etc.). As an example, the LME price at a given point in time, minus the TC/ RC used in the transaction (plus other terms) is used as the purchase price of copper concentrates.	65

# Financial Data/ Corporate Data





# Eleven-Year Financial Summary

SUMITOMO METAL MINING CO., LTD. AND CONSOLIDATED SUBSIDIARIES

IFRS			J-GAAP										
Years ended March 31			Years ended March 31										
	2019	2018		2018	2017	2016	2015	2014	2013	2012*2	2011	2010	2009
<b>Results for the year:</b>			<b>Results for the year:</b>										
Net sales	¥ 912,208	¥ 929,746	Net sales	¥ 933,517	¥ 786,146	¥ 855,407	¥ 921,334	¥ 830,546	¥ 808,540	¥ 847,897	¥ 864,077	¥ 725,827	¥ 793,797
Gross profit	126,637	149,015	Gross profit	157,089	122,296	113,862	174,257	124,822	140,650	132,421	138,810	105,956	56,887
			Operating income	110,203	76,390	59,720	125,779	75,418	95,785	88,577	96,038	66,265	10,534
			Other income (expenses)	124,853	(1,565)	(12,764)	174,226	114,352	115,034	108,829	123,701	87,791	32,572
Profit before tax	89,371	108,286	Profit (loss) before income taxes	105,795	(5,999)	559	123,261	111,006	122,455	87,962	123,394	82,776	22,942
Profit attributable to owners of parent	66,790	90,227	Profit (loss) attributable to owners of parent	91,648	(18,540)	(309)	91,113	80,258	86,640	65,286	83,962	53,952	21,974
Capital expenditures	47,445	74,675	Capital expenditures	74,589	125,950	51,013	55,232	66,441	59,291	73,143	53,105	26,414	47,723
Depreciation	43,541	46,762	Depreciation	46,865	44,232	46,141	38,125	32,426	27,578	31,132	34,625	34,746	34,268
			Financial revenue (expenses)	10,804	10,546	8,927	6,250	3,530	(144)	663	257	(654)	(271)
Net cash provided by (used in) operating activities	114,744	78,552	Net cash provided by (used in) operating activities	79,405	43,796	119,704	120,003	80,014	114,665	144,999	102,458	44,153	128,000
Net cash provided by (used in) investing activities	(142,354)	(22,787)	Net cash provided by (used in) investing activities	(22,994)	(143,219)	(92,876)	(105,024)	(126,937)	(88,745)	(135,932)	(75,735)	(75,443)	(28,386)
Net cash provided by (used in) financing activities	(29,047)	(89,797)	Net cash provided by (used in) financing activities	(90,095)	70,392	(4,003)	(39,047)	81	21,549	50,314	7,379	(19,322)	(74,086)
Free cash flows	(27,610)	55,765	Free cash flows	56,411	(99,423)	26,828	14,979	(46,923)	25,920	9,067	26,723	(31,290)	99,614
<b>Financial position at year-end:</b>			<b>Financial position at year-end:</b>										
Total assets	¥ 1,797,701	¥ 1,732,333	Total assets	¥ 1,699,037	¥ 1,685,018	¥ 1,630,800	¥ 1,740,246	¥ 1,572,367	¥ 1,351,153	¥ 1,146,759	¥ 1,052,353	¥ 981,458	¥ 880,001
Equity	1,151,280	1,113,349	Net assets	1,120,008	1,024,121	1,075,995	1,158,945	1,019,053	844,547	726,039	684,103	629,684	547,251
Non-current liabilities	388,943	378,438	Long-term loans payable after one year	257,409	358,564	248,036	245,000	243,130	212,323	157,119	135,128	132,311	141,716
Interest-bearing liabilities	349,798	361,775	Interest-bearing liabilities	362,297	495,504	400,559	394,094	383,580	330,073	265,951	210,969	200,939	218,534
			Working capital	369,668	382,810	313,812	307,436	314,198	338,866	312,542	267,072	229,259	206,123
<b>Amounts per share (Yen)*3:</b>			<b>Amounts per share (Yen)*3:</b>										
Equity attributable to owners of parent per share	¥ 3,812	¥ 3,746	Net income (loss)										
Basic earnings per share	243	327	—Basic	¥ 332.42	¥ (33.61)	¥ (0.56)	¥ 165.11	¥ 145.35	¥ 155.58	¥ 116.17	¥ 149.38	¥ 96.26	¥ 38.87
Diluted earnings per share	243	295	—Diluted	299.94	—	—	149.44	129.71	142.40	106.84	136.98	88.75	36.18
			Shareholders' equity*1	3,771.69	1,743.46	1,781.91	1,905.50	1,653.83	1,393.02	1,173.97	1,121.19	1,043.50	913.92
Dividends	73	100	Cash dividends	100.0	11.0	31.0	48.0	37.0	34.0	28.0	32.0	20.0	13.0
<b>Key ratios:</b>			<b>Key ratios:</b>										
ROA (%)	3.8	5.2	ROA (%)	5.42	(1.12)	(0.02)	5.50	5.49	6.94	5.94	8.26	5.80	2.23
ROE (%)	6.4	9.1	ROE (%)*1	9.17	(1.93)	(0.03)	9.28	9.54	12.13	10.12	13.80	9.89	4.02
Equity ratio (%)	58.3	59.4	Equity ratio (%)*1	61.0	57.1	60.3	60.4	58.1	56.9	57.5	59.9	59.8	57.3
Interest-bearing liabilities to total asset ratio (%)	19.5	20.9	Interest-bearing debt to total asset ratio (%)	21.3	29.4	24.6	22.6	24.4	24.4	23.2	20.0	20.5	24.8
Debt-to-equity ratio (times)	0.33	0.35	Debt-to-equity ratio (times)*1	0.35	0.52	0.41	0.37	0.42	0.43	0.40	0.33	0.34	0.43
Current ratio (times)	2.1	2.6	Current ratio (times)	2.70	2.82	2.39	2.29	2.40	2.60	2.67	2.30	2.19	2.17

\*1 Shareholders' equity is defined by the following equation.

Shareholders' equity = Total shareholders' equity + Accumulated other comprehensive income

\*2 The Company applied the new accounting method retrospectively and restated the consolidated financial statements for the year ended March 31, 2012.

\*3 The Company consolidated its shares at a rate of one share for every two shares of its common stock with October 1, 2017 as the effective date.

"Amounts per share" is calculated on the assumption that the consolidation of its shares was conducted at the beginning of the current year.

# 1 Consolidated Financial Statements

## (1) Consolidated Financial Statements

### 1) Consolidated Statement of Financial Position

	Notes	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
		Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
<b>Assets</b>					
Current assets					
Cash and cash equivalents	8	172,907	137,330	81,261	732,081
Trade and other receivables	9, 35	163,971	155,964	151,598	1,365,748
Other financial assets	16, 35	2,382	18,162	9,493	85,523
Inventories	10	255,065	278,112	288,918	2,602,865
Other current assets	17	20,165	25,562	19,945	179,685
Subtotal		614,490	615,130	551,215	4,965,901
Assets held for sale	18	2,430	—	—	—
Total current assets		616,920	615,130	551,215	4,965,901
Non-current assets					
Property, plant and equipment	11	480,063	461,888	458,802	4,133,351
Intangible assets and goodwill	12	47,048	65,695	61,207	551,414
Investment property	14	3,427	3,427	3,428	30,883
Investments accounted for using equity method	15	292,449	300,032	363,165	3,271,757
Other financial assets	16, 35	251,715	255,209	330,212	2,974,883
Deferred tax assets	19	7,469	15,663	11,276	101,586
Other non-current assets	17, 24	15,888	15,289	18,396	165,730
Total non-current assets		1,098,059	1,117,203	1,246,486	11,229,604
Total assets	6	1,714,979	1,732,333	1,797,701	16,195,505

	Notes	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
		Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
<b>Liabilities and equity</b>					
Liabilities					
Current liabilities					
Trade and other payables	20, 35	101,402	125,494	165,823	1,493,901
Bonds and borrowings	21, 35	95,007	94,879	75,282	678,216
Other financial liabilities	21	1,496	509	2,225	20,045
Income taxes payable		17,268	3,978	2,724	24,541
Provisions	23	4,843	4,896	4,753	42,820
Other current liabilities	25	8,520	10,790	6,671	60,099
Subtotal		228,536	240,546	257,478	2,319,622
Liabilities directly associated with assets held for sale	18	3,440	—	—	—
Total current liabilities		231,976	240,546	257,478	2,319,622
Non-current liabilities					
Bonds and borrowings	21, 35	395,930	296,261	304,009	2,738,820
Other financial liabilities	21, 35	2,217	2,704	3,502	31,550
Provisions	23	22,260	28,546	22,362	201,459
Retirement benefit liability	24	9,479	7,491	10,391	93,613
Deferred tax liabilities	19	31,612	42,288	47,791	430,550
Other non-current liabilities	25	1,147	1,148	888	8,000
Total non-current liabilities		462,645	378,438	388,943	3,503,991
Total liabilities		694,621	618,984	646,421	5,823,613
Equity					
Share capital	26	93,242	93,242	93,242	840,018
Capital surplus	26	86,840	87,598	87,598	789,171
Treasury shares	26	(32,877)	(37,959)	(37,983)	(342,189)
Other components of equity		41,450	38,415	25,756	232,036
Retained earnings	26	768,847	848,089	878,948	7,918,450
Total equity attributable to owners of parent		957,502	1,029,385	1,047,561	9,437,486
Non-controlling interests		62,856	83,964	103,719	934,405
Total equity		1,020,358	1,113,349	1,151,280	10,371,892
Total liabilities and equity		1,714,979	1,732,333	1,797,701	16,195,505

## 2) Consolidated Statement of Profit or Loss and Consolidated Statement of Comprehensive Income

## Consolidated Statement of Profit or Loss

	Notes	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
		Millions of yen	Millions of yen	Thousands of U.S. dollars
Net sales	28	929,746	912,208	8,218,090
Cost of sales	29	(780,731)	(785,571)	(7,077,216)
Gross profit		149,015	126,637	1,140,874
Selling, general and administrative expenses	29	(45,820)	(49,329)	(444,405)
Finance income	30	17,364	20,967	188,892
Finance costs	30	(14,251)	(8,862)	(79,838)
Share of profit (loss) of investments accounted for using equity method	15, 38	12,338	(4,901)	(44,153)
Other income	31	5,685	13,011	117,216
Other expenses	31	(16,045)	(8,152)	(73,441)
Profit before tax	6	108,286	89,371	805,144
Income tax expense	19	(13,384)	(22,130)	(199,369)
Profit		94,902	67,241	605,775
Profit attributable to:				
Owners of parent		90,227	66,790	601,712
Non-controlling interests		4,675	451	4,063
Profit		94,902	67,241	605,775
Earnings per share				
Basic earnings per share (Yen)	33	327.26	243.06	2.19
Diluted earnings per share (Yen)	33	295.31	243.06	2.19

## Consolidated Statement of Comprehensive Income

	Notes	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
		Millions of yen	Millions of yen	Thousands of U.S. dollars
Profit		94,902	67,241	605,775
Other comprehensive income	32			
Items that will not be reclassified to profit or loss:				
Net change in fair value of equity instruments designated as measured at fair value through other comprehensive income		8,914	(6,969)	(62,784)
Remeasurements of defined benefit plans		1,641	(3,036)	(27,351)
Share of other comprehensive income of investments accounted for using equity method	15	148	(205)	(1,847)
Total of items that will not be reclassified to profit or loss		10,703	(10,210)	(91,982)
Items that will be reclassified to profit or loss:				
Cash flow hedges		(106)	466	4,198
Exchange differences on transition of foreign operations		(10,287)	475	4,279
Share of other comprehensive income of investments accounted for using equity method	15	(5,024)	(6,323)	(56,964)
Total of items that will be reclassified to profit or loss		(15,417)	(5,382)	(48,486)
Other comprehensive income, net of tax		(4,714)	(15,592)	(140,468)
Comprehensive income		90,188	51,649	465,306
Comprehensive income attributable to:				
Owners of parent		88,893	50,351	453,613
Non-controlling interests		1,295	1,298	11,694
Comprehensive income		90,188	51,649	465,306



3) Consolidated Statement of Changes in Equity  
FY2017 (From April 1, 2017 to March 31, 2018)

Notes	Equity attributable to owners of parent					
	Share capital	Capital surplus	Treasury shares	Other components of equity		
				Exchange differences on transition of foreign operations	Cash flow hedges	Financial assets measured at fair value through other comprehensive income
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	93,242	86,840	(32,877)	—	292	41,158
Profit	—	—	—	—	—	—
Other comprehensive income	32	—	—	(11,944)	(51)	9,006
Total comprehensive income	—	—	—	(11,944)	(51)	9,006
Purchase of treasury shares	26	—	(5,084)	—	—	—
Disposal of treasury shares	26	—	1	—	—	—
Dividends	27	—	—	—	—	—
Increase (decrease) by business combination	7	—	—	—	—	—
Changes in ownership interests	—	25	—	—	—	0
Changes from loss of control of subsidiaries	—	—	—	—	—	—
Transfer to retained earnings	16	—	—	—	—	(46)
Other	—	732	—	—	—	—
Transactions with owners - total	—	758	(5,082)	—	—	(46)
As of March 31, 2018	93,242	87,598	(37,959)	(11,944)	241	50,118

		Equity attributable to owners of parent				Non-controlling interests	Total equity
Notes	Other components of equity		Retained earnings	Total			
	Remeasurements of defined benefit plans	Total					
	Millions of yen	Millions of yen					
		Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	
As of April 1, 2017		—	41,450	768,847	957,502	62,856	1,020,358
Profit		—	—	90,227	90,227	4,675	94,902
Other comprehensive income	32	1,655	(1,334)	—	(1,334)	(3,380)	(4,714)
Total comprehensive income		1,655	(1,334)	90,227	88,893	1,295	90,188
Purchase of treasury shares	26	—	—	—	(5,084)	—	(5,084)
Disposal of treasury shares	26	—	—	—	3	—	3
Dividends	27	—	—	(12,686)	(12,686)	(4,448)	(17,134)
Increase (decrease) by business combination	7	—	—	—	—	1,713	1,713
Changes in ownership interests		—	0	—	25	22,654	22,679
Changes from loss of control of subsidiaries		—	—	—	—	(106)	(106)
Transfer to retained earnings	16	(1,655)	(1,701)	1,701	—	—	—
Other		—	—	—	732	—	732
Transactions with owners - total		(1,655)	(1,701)	(10,985)	(17,010)	19,813	2,803
As of March 31, 2018		—	38,415	848,089	1,029,385	83,964	1,113,349

FY2018 (From April 1, 2018 to March 31, 2019)

Notes	Equity attributable to owners of parent					
	Share capital	Capital surplus	Treasury shares	Other components of equity		
				Exchange differences on transition of foreign operations	Cash flow hedges	Financial assets measured at fair value through other comprehensive income
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2018	93,242	87,598	(37,959)	(11,944)	241	50,118
Profit	—	—	—	—	—	—
Other comprehensive income	32	—	—	(6,629)	390	(7,120)
Total comprehensive income	—	—	—	(6,629)	390	(7,120)
Purchase of treasury shares	26	—	(25)	—	—	—
Disposal of treasury shares	26	—	0	—	—	—
Dividends	27	—	—	—	—	—
Establishment of subsidiaries with non-controlling interests	—	—	—	—	—	—
Changes in ownership interests	—	—	—	—	—	—
Transfer to retained earnings	16	—	—	—	—	700
Transactions with owners - total	—	0	(24)	—	—	700
As of March 31, 2019	93,242	87,598	(37,983)	(18,573)	631	43,698

		Equity attributable to owners of parent					
		Other components of equity				Non-controlling interests	Total equity
Notes	Remeasurements of defined benefit plans	Total	Retained earnings	Total			
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	
As of April 1, 2018	—	38,415	848,089	1,029,385	83,964	1,113,349	
Profit	—	—	66,790	66,790	451	67,241	
Other comprehensive income	32	(3,080)	(16,439)	(16,439)	847	(15,592)	
Total comprehensive income		(3,080)	(16,439)	66,790	50,351	51,649	
Purchase of treasury shares	26	—	—	(25)	—	(25)	
Disposal of treasury shares	26	—	—	1	—	1	
Dividends	27	—	—	(32,151)	(32,151)	(37,200)	
Establishment of subsidiaries with non-controlling interests		—	—	—	17,976	17,976	
Changes in ownership interests		—	—	—	5,530	5,530	
Transfer to retained earnings	16	3,080	3,780	(3,780)	—	—	
Transactions with owners - total		3,080	3,780	(35,931)	18,457	(13,718)	
As of March 31, 2019		—	25,756	878,948	1,047,561	1,151,280	

Equity attributable to owners of parent							
Notes	Share capital	Capital surplus	Treasury shares	Other components of equity			
				Exchange differences on transition of foreign operations	Cash flow hedges	Financial assets measured at fair value through other comprehensive income	
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	
As of April 1, 2018		840,018	789,171	(341,973)	(107,604)	2,171	451,514
Profit		—	—	—	—	—	—
Other comprehensive income	32	—	—	—	(59,721)	3,514	(64,144)
Total comprehensive income		—	—	—	(59,721)	3,514	(64,144)
Purchase of treasury shares	26	—	—	(225)	—	—	—
Disposal of treasury shares	26	—	0	9	—	—	—
Dividends	27	—	—	—	—	—	—
Establishment of subsidiaries with non-controlling interests		—	—	—	—	—	—
Changes in ownership interests		—	—	—	—	—	—
Transfer to retained earnings	16	—	—	—	—	—	6,306
Transactions with owners - total		—	0	(216)	—	—	6,306
As of March 31, 2019		840,018	789,171	(342,189)	(167,324)	5,685	393,676

Equity attributable to owners of parent							
Notes	Other components of equity		Retained earnings	Total	Non-controlling interests	Total equity	
	Remeasurements of defined benefit plans	Total					
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	
As of April 1, 2018		—	346,081	7,640,441	9,273,739	756,432	10,030,171
Profit		—	—	601,712	601,712	4,063	605,775
Other comprehensive income	32	(27,748)	(148,099)	—	(148,099)	7,631	(140,468)
Total comprehensive income		(27,748)	(148,099)	601,712	453,613	11,694	465,306
Purchase of treasury shares	26	—	—	—	(225)	—	(225)
Disposal of treasury shares	26	—	—	—	9	—	9
Dividends	27	—	—	(289,649)	(289,649)	(45,486)	(335,135)
Establishment of subsidiaries with non-controlling interests		—	—	—	—	161,946	161,946
Changes in ownership interests		—	—	—	—	49,820	49,820
Transfer to retained earnings	16	27,748	34,054	(34,054)	—	—	—
Transactions with owners - total		27,748	34,054	(323,703)	(289,865)	166,279	(123,586)
As of March 31, 2019		—	232,036	7,918,450	9,437,486	934,405	10,371,892

#### 4) Consolidated Statement of Cash Flows

	Notes	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
		Millions of yen	Millions of yen	Thousands of U.S. dollars
Cash flows from operating activities				
Profit before tax		108,286	89,371	805,144
Depreciation and amortization expense		46,762	43,541	392,261
Impairment losses		10,103	—	—
Share of loss (profit) of investments accounted for using equity method		(12,338)	4,901	44,153
Loss (gain) on sale of subsidiaries		67	(9,512)	(85,694)
Increase or decrease in retirement benefit asset or liability		(1,973)	(1,438)	(12,955)
Increase (decrease) in provisions		6,050	(2,930)	(26,396)
Finance income		(17,364)	(20,967)	(188,892)
Finance costs		14,251	8,862	79,838
Decrease (increase) in trade and other receivables		(30,232)	3,941	35,505
Decrease (increase) in inventories		(25,204)	(14,573)	(131,288)
Increase (decrease) in trade and other payables		5,630	12,849	115,757
Increase (decrease) in accrued consumption taxes		2,657	1,451	13,072
Other		(7,606)	(3,664)	(33,009)
Subtotal		99,089	111,832	1,007,495
Interest received		1,950	2,607	23,486
Dividends received		15,927	14,662	132,090
Interest paid		(6,076)	(6,737)	(60,694)
Income taxes paid		(34,694)	(12,701)	(114,423)
Income taxes refund		2,356	5,081	45,775
Net cash provided by (used in) operating activities		78,552	114,744	1,033,730
Cash flows from investing activities				
Payments into time deposits		(34,901)	(32,300)	(290,991)
Proceeds from withdrawal of time deposits		33,307	28,674	258,324
Purchase of investments		(10,610)	—	—
Proceeds from redemption of investments		—	10,610	95,586
Purchase of property, plant and equipment		(42,196)	(49,657)	(447,360)
Purchase of intangible assets		(595)	(1,527)	(13,757)
Proceeds from sale of investment securities		15,393	740	6,667
Purchase of shares of subsidiaries and associates		(11,856)	(49,169)	(442,964)
Payments for short-term loans receivable		(225)	(969)	(8,730)
Collection of short-term loans receivable		565	3,698	33,315
Payments for long-term loans receivable		(47)	(75,408)	(679,351)
Collection of long-term loans receivable		39,589	27	243
Proceeds from sale of interests in subsidiaries resulting in change in scope of consolidation	34	490	24,531	221,000
Payment for purchase of mining rights	34	(11,122)	—	—
Other	7	(579)	(1,604)	(14,450)
Net cash provided by (used in) investing activities		(22,787)	(142,354)	(1,282,468)

		FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
		Millions of yen	Millions of yen	Thousands of U.S. dollars
Cash flows from financing activities				
Proceeds from short-term borrowings	34	70,172	78,577	707,901
Repayments of short-term borrowings	34	(104,333)	(75,816)	(683,027)
Proceeds from long-term borrowings	34	30,795	15,928	143,495
Repayments of long-term borrowings	34	(117,459)	(23,985)	(216,081)
Proceeds from issuance of bonds	34	30,150	19,917	179,432
Redemption of bonds	34	—	(30,000)	(270,270)
Proceeds from share issuance to non-controlling shareholders		26,239	23,556	212,216
Repayments to non-controlling shareholders		(3,032)	—	—
Purchase of treasury shares		(5,082)	(25)	(225)
Dividends paid		(12,686)	(32,151)	(289,649)
Dividends paid to non-controlling shareholders		(4,553)	(5,049)	(45,486)
Other		(8)	1	9
Net cash provided by (used in) financing activities		(89,797)	(29,047)	(261,685)
Net increase (decrease) in cash and cash equivalents		(34,032)	(56,657)	(510,423)
Cash and cash equivalents at beginning of period	8	172,907	137,330	1,237,207
Effect of exchange rate changes on cash and cash equivalents		(1,545)	588	5,297
Cash and cash equivalents at end of period	8	137,330	81,261	732,081

## Notes to Consolidated Financial Statements

### 1. Reporting Entity

Sumitomo Metal Mining Co., Ltd. (hereinafter the “Company”) is a company based in Japan, and its shares are listed on the Tokyo Stock Exchange. The address of its registered head office is 11-3, Shimbashi 5-chome Minato-ku, Tokyo. The Company’s consolidated financial statements, which were prepared with the end of the fiscal year on March 31, 2019, represent the Company and its subsidiaries (hereinafter the “SMM Group”) as well as the Company’s interests in its associates and joint ventures.

The ultimate parent of the SMM Group is the Company. Description of the SMM Group’s main businesses and activities is included in operating segments section (6. Operating Segments).

### 2. Basis of Preparation

#### (1) Statement of compliance with International Financial Reporting Standards and matters related to the first-time adoption

The consolidated financial statements of the SMM Group meet the requirements for a “Specified Company Complying with Designated International Accounting Standards” as prescribed in Article 1-2 of the Regulation on Terminology, Forms, and Preparation Methods of Consolidated Financial Statements (Ministry of Finance Order No. 28 of 1976), and thus are prepared in accordance with International Financial Reporting Standards (hereinafter “IFRS”) pursuant to the provisions of Article 93 of the aforementioned Ministry of Finance Order.

These consolidated financial statements are the first consolidated financial statements prepared by the Company in accordance with IFRS, and the date of transition to IFRS was April 1, 2017. The SMM Group also applied IFRS 1 “First-time Adoption of International Financial Reporting Standards” (hereinafter “IFRS 1”). Effects of the transition to IFRS on the SMM Group’s consolidated financial position, financial results and cash flows are stated in the first-time adoption section (40. First-time Adoption).

#### (2) Approval of the consolidated financial statements

The consolidated financial statements of the SMM Group were approved on June 25, 2019, by Akira Nozaki, President and Representative Director.

#### (3) Basis of measurement

The consolidated financial statements of the SMM Group are prepared based on acquisition cost, except for the financial instruments stated in the significant accounting policies section (3. Significant Accounting Policies).

#### (4) Presentation currency

The consolidated financial statements of the SMM Group are presented in Japanese yen, which is the functional currency adopted by the Company, and figures less than one million yen are rounded to the nearest million yen. The totals of the related items in Japanese yen in the notes may not match the corresponding line items in the financial statements due to rounding.

The translations of the Japanese yen amounts into U.S. dollars are included solely for the convenience of readers outside Japan, using the prevailing exchange rate as of March 29, 2019, which was ¥111 to U.S. \$1.00. The convenience translations should not be construed as representations that the Japanese yen amounts have been, could have been, or could in the future be, converted into U.S. dollars at this or any other rate of exchange. The totals of U.S. dollars conversions of the Japanese yen item amounts may not match the totals due to rounding.



### 3. Summary of Significant Accounting Policies

Unless otherwise specified, significant accounting policies applied in the consolidated financial statements are the same as those applied in all the periods stated in these consolidated financial statements (including the consolidated statement of financial position on the date of transition to IFRS).

#### (1) Basis for consolidation

These consolidated financial statements are prepared based on the financial statements of the Company, its subsidiaries, associates and joint ventures.

##### 1) Subsidiaries

Subsidiaries refer to the companies under the control of the SMM Group. Financial statements of subsidiaries are included in the SMM Group's consolidated financial statements in the period between the date when control commences and the date when control ends. Some of the subsidiaries use financial statements based on the provisional settlement conducted at the end of the reporting period of the parent. The aforementioned subsidiaries include those unable to adopt the parent's closing date in practice due to the requirement to use specific closing dates other than the parent's under the local laws and regulations, or those unable to conduct provisional settlement in practice due to the environment surrounding their local accounting systems or their business characteristics. The gap between the end of the reporting period of such subsidiaries and that of the parent does not exceed three months, while adjustments are made as appropriate for the significant transactions or events during such gap period. Changes in ownership interests in subsidiaries that do not result in loss of control are accounted for as equity transactions. The difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received are directly recognized in equity attributable to owners of parent. Balances of receivables and payables and transactions within the SMM Group, as well as the unrealized gains or losses arising from the transactions within the SMM Group, are eliminated at the time when the consolidated financial statements are prepared.

##### 2) Associates and joint agreement

Associates refer to the companies over which the SMM Group does not have control or joint control, but exerts significant influence on their financial affairs and operating policies.

Joint control exists only when decisions about the relevant activities require, by prior contractual arrangements, the unanimous consent of the parties sharing control. Joint arrangements are classified, depending on the rights and obligations of the parties that have joint control, into either joint operations or joint ventures. A joint operation refers to an arrangement in which parties that have joint control have rights to the assets, and obligations to the liabilities arising under the arrangement, while a joint venture is a joint arrangement in which parties that have joint control of the arrangement have rights to the net assets of the arrangement.

Investments in associates or joint ventures are recognized at cost at the time of acquisition, and accounted for by using equity method. The consolidated financial statements of the SMM Group include investments in equity-method associate with various closing dates, as it is impracticable to unify closing date due to the consideration for the relationship with other shareholders. The gap between the end of the reporting period of such equity method companies and that of the SMM Group does not exceed three months, while adjustments are made as appropriate for the significant transactions or events during such gap period.

Unrealized gains derived from the transactions with such equity method companies are deducted from the investments to the extent of the SMM Group's interest in the investee. Unrealized losses are deducted from the investments in the same way as unrealized gains, subject to absence of evidence of impairment.

For investments in joint operations, the SMM Group recognizes its assets, including its share of any assets held jointly, its liabilities, including its share of any liabilities incurred jointly, its revenue from the sale of its share of the output arising from the joint operation, its share of revenue from the sale of the output by the joint operation, and its expenses, including its share of any expenses incurred jointly.

#### 3) Business combinations and goodwill

Business combinations are accounted for by the acquisition method. Identifiable assets and liabilities of the acquiree are measured at fair value as of the acquisition date. Goodwill is measured as the excess, if any, of the aggregate of the consideration transferred in a business combination, the amount of non-controlling interest in the acquiree, and the fair value of the acquirer's previously-held equity interest in the acquiree, over the net of the identifiable assets and liabilities as of the acquisition date. The consideration transferred in a business combination is calculated as the sum of the fair values of the assets transferred by the acquirer, liabilities incurred by the acquirer to former owners of the acquiree and equity interests issued by the acquirer as of the acquisition date.

The SMM Group decides whether to measure the non-controlling interest at fair value or at the non-controlling interest's proportional share of identifiable net assets of the acquiree for each business combination on a case-by-case basis. Acquisition-related costs are accounted for as expenses in the period in which the costs are incurred.

Additional acquisition of non-controlling interest after the acquisition of control is accounted for as equity transaction, for which no goodwill is recognized. The SMM Group has adopted the optional exemption under IFRS 1, whereby IFRS 3 "Business Combinations" has not retroactively been adopted for the business combinations prior to the transition date.

#### (2) Foreign currency translation

##### 1) Foreign currency denominated transactions

Foreign currency denominated transactions are translated into the functional currency by the exchange rate on the transaction date or the exchange rate approximate thereto. Foreign currency denominated monetary items on the closing date are translated into the functional currency by the exchange rate on the closing date, while the non-monetary items measured at fair value are translated into the functional currency by the exchange rate on the date when such fair value is calculated. Exchange differences arising from such translation or settlement are recognized in profit or loss, provided, however, that equity instruments measured at fair value through other comprehensive income and the effective portion of hedging in the exchange difference arising from the hedging instrument for cash flow hedges against foreign currency risks are recognized in other comprehensive income.

##### 2) Foreign operations

Assets and liabilities in the statement of financial position at foreign operations are translated by the exchange rate on the date of such statement, while revenues and costs of respective statements presenting profit or loss and other comprehensive income are translated by the average exchange rate during the period unless exposed to significant exchange rate fluctuations. Exchange differences resulting from such translation are recognized in other comprehensive income. In the event of disposal of a foreign operation, the cumulative amount of exchange differences related to such foreign operation is reclassified to profit or loss for the period in which such disposal is carried out.

The SMM Group has adopted the optional exemption under IFRS 1, whereby the cumulative amount of exchange differences prior to the transition date was reclassified in its entirety to retained earnings.

#### (3) Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, demand deposit, and short-term investments with maturities not exceeding three months from the purchase date, that are readily convertible into cash and subject to an insignificant risk of changes in value.

#### (4) Financial instruments

##### 1) Non-derivative financial assets

##### (i) Initial recognition and measurement

The SMM Group classifies non-derivative financial assets into financial assets measured at fair value through profit or loss, or other comprehensive income, and financial assets measured at amortized cost. The SMM Group determines such classification at the time of initial recognition. A

regular way purchase or sale of financial assets is recognized or derecognized on the date of transaction.

Unless classified into those measured at fair value through profit or loss, all financial assets are measured at fair value added with transaction costs directly attributable thereto, provided, however, that trade receivables not containing a significant financing component are subject to initial measurement at transaction price.

(a) Financial assets measured at amortized cost

Financial assets that meet both of the following conditions are classified into financial assets measured at amortized cost.

- Financial assets are held based on the business model whose objective is to hold financial assets in order to collect contractual cash flows.
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

(b) Financial assets measured at fair value

Financial assets other than those measured at amortized cost are classified into financial assets measured at fair value.

Of the financial assets measured at fair value, equity instruments are individually measured at fair value through profit or loss, unless the SMM Group makes an irrevocable election to present subsequent changes in fair value in other comprehensive income.

(ii) Subsequent measurement

Measurement of financial assets after the initial recognition are as follows, depending on respective classifications.

(a) Financial assets measured at amortized cost

Financial assets measured at amortized cost are, subsequent to initial recognition, measured at amortized cost by using the effective interest method. Amortization by using the effective interest method, as well as gains and losses associated with derecognition, are recognized as part of finance income through profit or loss in the current period.

(b) Financial assets measured at fair value

Financial assets other than those measured at amortized cost are measured at fair value, where changes in fair value are recognized in profit or loss, or in other comprehensive income, depending on the classification of such financial assets. Dividends from such financial assets are recognized as part of finance income through profit or loss in the current period.

(iii) Impairment of financial assets

To determine the recoverability of financial assets measured at amortized cost, expected credit loss is estimated at the end of each period

For the financial assets with no significant increase in credit risk associated therewith since initial recognition, an amount equal to the expected credit loss in the next 12 months is recognized as allowance for doubtful accounts, while for the financial assets with significant increase in credit risk associated therewith since initial recognition, an amount equal to the lifetime expected credit loss is recognized as allowance for doubtful accounts. On the other hand, for trade receivables, etc., allowance for doubtful accounts is measured at an amount equal to the lifetime expected credit loss without exception. Expected credit loss is measured based on the present value of the difference between all contractual cash flows payable to a company, and all contractual cash flows expected to be received by a company.

In determining whether there has been a significant increase in credit risk as a result of a change in default risk, considerations include information concerning the deterioration of the obligor's business performance, etc., apart from past due information.

Any situation in which recovery of a financial asset is wholly or partially impossible, or is deemed to be extremely difficult, is considered as default.

If the asset is deemed as default or if the issuer or obligor meets with extreme financial difficulty, it is judged to be a credit-impaired financial asset.

For the financial assets with evidence of impairment of credit thereof, interest revenue is measured at an amount calculated by subtracting allowance for doubtful accounts from gross carrying amount, then multiplying by the effective interest rate.

In the event of a decrease in credit risk in later period, which can be associated objectively with an actual event that occurred subsequent to the recognition of impairment, reversal of the previously recognized impairment loss is recognized in profit or loss.

Allowance for doubtful accounts is directly deducted from financial assets measured at amortized cost.

(iv) Derecognition of financial assets

The SMM Group derecognizes financial assets if the contractual rights to cash flows arising from the financial assets expire, or if the SMM Group transfers the rights to receive cash flows from the financial assets and substantially all the risks and rewards of ownership of the financial assets.

2) Non-derivative financial liabilities

(i) Initial recognition and measurement

The SMM Group classifies non-derivative financial liabilities into financial liabilities measured at amortized cost. The SMM Group determines such classification at the time of initial recognition of the financial liabilities. Financial liabilities measured at amortized cost are measured at an amount after deduction of transaction costs directly attributable thereto.

(ii) Subsequent measurement

Financial liabilities measured at amortized cost are, subsequent to initial recognition, measured at amortized cost by using the effective interest method. Amortization by using the effective interest method, as well as gains and losses associated with derecognition, are recognized as part of finance costs through profit or loss in the current period.

(iii) Derecognition

The SMM Group derecognizes financial liabilities when they are extinguished, namely when the obligation specified in the contract is discharged or cancelled or expires.

3) Derivatives and hedge accounting

In order to hedge foreign currency risk, interest rate risk, and commodity price risk, the SMM Group uses derivatives including forward exchange contract, interest rate swap contract, and commodity futures contract. Documentation regarding the relationship between hedging instruments and hedged items, and the SMM Group's risk management objective and strategy for undertaking the hedge is provided at the start of trading. Evaluation is carried out at the commencement of hedging and then on a continual basis thereafter to determine whether the derivative used for the hedging transactions meets the hedge accounting requirements in offsetting the fluctuations in the fair value or the cash flows of the hedged items.

Derivatives are subjected to initial recognition at fair value. For some of the derivatives that do not meet the requirements of hedge accounting, fluctuations in fair value subsequent to their initial recognition are recognized in profit or loss. For the derivatives that meet the requirements of hedge accounting, changes in fair value are accounted for as follows.

(i) Fair value hedges

Changes in fair value of the derivatives designated as fair value hedges, thus meeting the requirements thereof, along with the changes in fair value of the hedged assets or liabilities corresponding to the hedged risks, are recognized in profit or loss.

(ii) Cash flow hedges

Changes in fair value of the derivatives designated as cash flow hedges, thus meeting the requirements thereof, are recognized in other comprehensive income, provided, however, that the

ineffective portion of hedging in changes in fair value of such derivatives is recognized in profit or loss.

The amount accumulated in other components of equity is reclassified into profit or loss in the period in which hedged items affect profit or loss.

In either case of fair value hedges or cash flow hedges, if the derivatives no longer meet the hedge accounting requirements, or when hedging instruments are lapsed, sold, terminated or exercised, adoption of hedge accounting is discontinued thereafter.

#### 4) Embedded derivatives

Sales contracts for copper concentrates include provisional price terms at the time of shipment, and the final prices are determined based on the monthly average price of copper on the London Metal Exchange (LME) over certain future period. Such sales based on provisional price is considered as sales contracts with a nature of commodity futures contract, where delivery month is the month in which price is determined, and thus deemed to contain embedded derivatives with sales of copper concentrates, etc., as a host. In the case of such embedded derivatives involving a post-shipment price adjustment process, the host (non-derivative component) of the host contract is a financial asset, and therefore such embedded derivatives are accounted for as an integral part of the whole pursuant to IFRS 9 “Financial Instruments” (hereinafter “IFRS 9”).

Revenues from provisional price-based sales are recognized at estimated fair value of the consideration received, and are re-estimated at the end of the reporting period. The difference between the fair value at the time of shipment and that at the end of the reporting period is recognized as adjustment to revenues.

#### (5) Inventories

Inventories are measured at the lower of cost and net realizable value. Cost of inventories includes purchase cost and conversion cost, and is calculated by using primarily the first-in first-out method, except for some of the foreign subsidiaries where the gross average method is used. Net realizable value is determined at the estimated selling price in the ordinary course of business, less estimated costs required up to the completion of the conversion and estimated selling expenses.

#### (6) Property, plant and equipment

Property, plant and equipment are measured by using cost model, and presented at the value calculated by subtracting accumulated depreciation and accumulated impairment from acquisition cost. Acquisition cost includes costs directly associated with the acquisition of assets, and any costs for dismantlement, removal, and site restoration, as well as borrowing costs to be capitalized. Depreciation of property, plant and equipment (excluding mining sites and tunnels) is calculated by mainly using the straight-line method, while mining sites and tunnels are depreciated by using the units-of-production method. Depreciation of these assets commences when they become available for their intended use.

Estimated useful lives of the main assets by category are as follows.

Buildings and structures:	From two to sixty (60) years
Machinery, equipment and vehicles:	From two to thirty five (35) years

Estimated useful lives, residual values, and depreciation method are reviewed at the end of each fiscal year, and any change therein is applicable thereafter as changes in accounting estimates.

#### (7) Intangible assets and goodwill

##### 1) Goodwill

Goodwill arising from business combinations is presented at acquisition cost less accumulated impairment. Goodwill is not amortized, but allocated to cash-generating units or cash-generating unit groups and subjected to impairment test on an annual basis, or as appropriate if there is an indication of impairment. Impairment loss of goodwill is recognized in profit or loss, involving no subsequent reversal. Measurement of goodwill at initial recognition is described in “(1) Basis for consolidation, 3) Business combinations and goodwill.”

##### 2) Other intangible assets

Intangible assets are measured subsequent to recognition by using cost model, and presented at the value calculated by subtracting accumulated amortization and accumulated impairment from acquisition cost. Mining rights (mineral rights) are amortized by using the units-of-production method, while mining rights (exploration rights) by the straight-line method. Software is also amortized by using the straight-line method. Amortization of these assets commences when they become available for their intended use.

Estimated useful lives of the main intangible assets are as follows.

Mining rights (mineral rights):	By the units-of-production method
Mining rights (exploration rights):	Five years
Software:	Five years

Estimated useful lives, residual values, and amortization method are reviewed at the end of each fiscal year, and any change therein is applicable thereafter as changes in accounting estimates.

#### (8) Investment property

Investment property refers to property held for the purpose of rental income or capital gain, or both. Investment property is measured subsequent to recognition by using cost model.

#### (9) Exploration and evaluation of mining resources

Expenditures concerning the exploration for and evaluation of mining resources are divided into stages comprising acquisition of legal rights, completion of feasibility study and start of commercial production. Expenditures incurred before completion of feasibility study are charged to expenses in principle, provided, however, that exploration rights and other rights obtained from the outside parties are recognized as intangible asset, while mining machinery and vehicles as property, plant and equipment.

#### (10) Stripping costs

Stripping costs refer to expenditures associated with the stripping activities for removing mine waste materials to reach mining resources, incurred in development as well as production phase at surface mines. Since stripping activities in the development phase are meant to gain access to mining resources, such stripping costs are recognized in assets. Stripping costs in the production phase include costs for producing mining resources, and those for improving access to the future mining resources. Stripping costs associated with the production of mining resources therefore comprise part of the SMM Group’s inventories, while those for improving access to the future mining resources are classified as stripping activity asset insofar as they meet certain criteria, and capitalized by component. Such stripping activity asset is depreciated by using the units-of-production method based on the reserves, etc. of the associated component.

#### (11) Leases

Leasing arrangements are classified as finance lease if it transfers substantially all the risks and economic benefits incidental to ownership of an asset to the SMM Group. Lease assets are measured at initial recognition at the lower of fair value or present value of minimum lease payments amounts. Lease assets are, subsequent to initial recognition, depreciated over the shorter of lease term and economic useful lives, and expenses associated therewith are recognized in profit or loss. All leases other than finance lease are classified as operating lease, where lease payment is recognized in profit or loss over the lease term by using the straight-line method.

#### (12) Impairment of non-financial assets

The SMM Group assesses whether there is an indication of impairment as of the end of the fiscal year in the non-financial assets excluding inventories, deferred tax assets, assets held for sale, and retirement benefit asset. If any such indication exists, the SMM Group estimates the recoverable amount of each asset. Where it is impossible to estimate the recoverable amount of individual asset, the recoverable amount of the cash-generating unit to which the asset belongs is estimated. The recoverable amount of the asset or the cash-generating unit is measured at the higher of fair value less cost to dispose and value in use. Value in use is calculated by discounting the estimated future cash



flows into present value, using the discount rate reflecting time value of money as well as the risks specific to the concerned asset. Only if the recoverable amount of the asset or that of the cash-generating unit is lower than their carrying amount, the carrying amount of such asset is reduced to the recoverable amount and recognized in profit or loss. As for the asset or cash-generating unit other than the goodwill for which impairment was recognized in prior years, test is conducted on the end of the fiscal year, to see if there is indication of likely decrease or elimination of such impairment loss recognized in prior years. If such indication exists, the recoverable amount of the asset or the cash-generating unit is estimated, where if the recoverable amount exceeds the carrying amount, the impairment loss is reversed to the extent not exceeding the lower of calculated recoverable amount and the carrying amount less depreciation/amortization if the impairment loss had not been recognized for the asset in prior years. Reversal of impairment loss is immediately recognized in profit or loss.

#### (13) Assets held for sale

If the carrying amount of non-current assets or disposal group is expected to be recovered mainly from their sale transactions rather than continuous use, they are classified as assets held for sale. Such classification involves requirements that they are likely to be sold within one year, and that they are readily available for sale.

Non-current assets or disposal group classified as held for sale are measured at the lower of carrying amount and fair value less cost to sell. Of the assets classified as held for sale, property, plant and equipment, and intangible assets are neither depreciated nor amortized.

#### (14) Employee benefits

##### 1) Defined benefit plan

The present value of defined benefit obligation and the related current and past service cost are calculated for each plan by using the projected unit credit method. Discount rate is determined by reference to market yields on high quality corporate bonds at the end of the fiscal year. Liability or asset associated with a defined benefit plan is calculated by subtracting the fair value of the plan assets from the present value of defined benefit obligation. However, if the defined benefit plan has a surplus, a net defined benefit asset is limited to the asset ceiling, which is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Remeasurements of the net amount of liability or asset associated with a defined benefit plan are recognized collectively through other comprehensive income in the period in which such assets or liabilities arise, and reclassified as retained earnings.

##### 2) Defined contribution plan

Post-employment benefit expense associated with a defined contribution plan is recognized as expenses in the period in which the employee renders service.

#### (15) Provisions

Provisions are recognized when there exists present legal or constructive obligation as a result of a past event, when it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and when a reliable estimate can be made of the amount of the obligation.

#### (16) Government grants

Government grants are recognized when there is reasonable assurance that the SMM Group will comply with the conditions for such grant and that the grant will be received. Grant that covers the incurred cost is recorded as revenue in the fiscal year that such cost is incurred. Grant that covers an asset is recorded at the carrying amount of the concerned asset, which is determined at the cost to acquire such asset less the amount of grant.

#### (17) Equity

##### 1) Ordinary shares

As for ordinary shares, issue price is recorded in share capital and Capital surplus.

##### 2) Treasury shares

When treasury shares are acquired, consideration paid is recognized in equity as a deduction item. When treasury shares are sold, the difference between the carrying amount and the consideration thereof at the time of sale is recognized as capital surplus.

#### (18) Revenue

The SMM Group recognizes revenue through the following five steps, except for interest and dividend income based on IFRS 9.

Step 1: Identify contract(s) with a customer

Step 2: Identify the performance obligations in the contract

Step 3: Determine the transaction price

Step 4: Allocate the transaction price to performance obligations in the contract

Step 5: Recognize revenue when (or as) the performance obligation is satisfied.

Revenue is recognized at one point in time or over a period, when or as the performance obligations in the contract with a customer are satisfied. With regard to revenue from the sale of goods in the regular course of trading activities, a performance obligation is satisfied by transferring control over the goods to the customer and the revenue is recorded at the time of delivery of the goods.

#### (19) Finance income and finance costs

Finance income and finance costs consist mainly of interest income, dividend income, interest expense, changes in fair value of derivative financial instruments, and foreign exchange gains and losses.

Interest income, interest expense and interest on bonds are recognized at the time of occurrence by using the effective interest method.

#### (20) Income taxes

Income taxes are the sum of current and deferred tax.

##### 1) Current tax

Current tax is measured at an amount of tax paid to, or expected amount of refund from the tax authorities. The amount of tax is calculated based on the tax rates and the tax laws that have been established or enacted, or substantially established or enacted by the closing date. Current tax recognized in profit or loss includes neither tax arising from the items directly recognized in other comprehensive income or in equity, nor tax arising from business combinations.

##### 2) Deferred tax

Deferred tax is recognized to the extent of taxable profit expected to be generated to recover the temporary differences between the carrying amount of assets and liabilities for accounting purposes and their tax bases, unused tax credits, and unused tax losses as of the closing date, while deferred tax liabilities are recognized in principle for taxable temporary differences.

Neither deferred tax assets nor deferred tax liabilities are recorded in the following cases.

- Temporary differences arising from the initial recognition of goodwill, unless the carrying amount of goodwill arising from a business combination is lower than its tax base.
- Temporary differences arising from the initial recognition of assets or liabilities in the transactions outside business combinations, which affect, at the time of transaction, neither accounting profit nor taxable profit (loss).
- Deductible temporary differences arising from investments in subsidiaries and associates, when such deductible temporary differences are unlikely to be reversed, or when taxable profit for which such deductible temporary differences is used, is unlikely to be earned, in either case in the foreseeable future.

- Taxable temporary differences arising from investments in subsidiaries and associates, when the Company retains control over the timing of reversal of such taxable temporary differences, and such taxable temporary differences are unlikely to be reversed in the foreseeable future.

Deferred tax assets and deferred tax liabilities are calculated by using the tax rate expected to be applicable in the period in which the temporary differences are reversed, based on the statutory tax rate or effective statutory tax rate as well as the prevailing tax law as of the closing date. Deferred tax assets and deferred tax liabilities are offset, when the SMM Group has legally enforceable rights to offset the current tax liabilities and the current tax assets, and when they are imposed by the same taxation authorities on the same taxable entity.

(21) Earnings per share

Basic earnings per share are calculated by dividing profit or loss attributable to ordinary equity holders of parent entity by the weighted average number of ordinary shares outstanding after adjustment to treasury shares during the period. Diluted earnings per share are calculated taking into consideration the effect of all dilutive shares.

4. Significant Accounting Estimates and Judgments Involving Estimates

The consolidated financial statements of the SMM Group are prepared by using judgments, estimates, and assumptions that affect the application of accounting policies and the reported amount of assets, liabilities, revenue, and expenses. Actual results could differ from those accounting estimates. The estimates and the underlying assumptions are reviewed on an ongoing basis, and the effect of any changes in accounting estimates is recognized in the reporting period in which the change was made and in future periods.

The items involving estimates and judgments that significantly affect the amounts in the consolidated financial statements are listed as follows:

- Recoverability of deferred tax assets (Note 19. Income Taxes)
- Accounting for and measurement of provisions (Note 23. Provisions)
- Measurement of defined benefit obligations (Note 24. Employee Benefits)
- Fair value measurement of financial instruments (Note 35. Financial Instruments)

5. Standards and Interpretations Newly Issued or Amended but Not Yet Adopted

Of major standards and interpretations that were newly issued or amended prior to the date of approval of the consolidated financial statements, the SMM Group does not early adopt the following standards.

IFRS		Mandatory effective date (from the fiscal year beginning on or after)	Scheduled adoption by the SMM Group	Summary of new or amended standards
IFRS 16	Leases	January 1, 2019	Year ending March 31, 2020	The new standard amends accounting treatment for lease contracts
IAS 28	Investments in Associates and Joint Ventures	January 1, 2019	Year ending March 31, 2020	The amended standard clarifies accounting treatment for long-term interests in an associate or joint venture.

(1) IFRS 16 Leases

Whereas the currently applicable IAS 17 Leases requires an entity to classify certain lease contracts as operating leases by lessee and recognize expenses when the lease payments are made, IFRS 16 Leases requires an entity to recognize at the commencement date a right-of-use asset and a lease liability reflecting the lease term in its consolidated statement of financial position for such operating lease contracts and recognize expenses over the lease term. The SMM Group plans to adopt the method of recognizing the cumulative effect of applying IFRS 16 as of the effective date. The balances of the consolidated statement of financial position as of April 1, 2019 is expected to be a ¥9,300 million (U.S. \$83,784 thousand) increase in both assets and liabilities.

(2) IAS 28 Investments in Associates and Joint Ventures

The amendment of IAS 28 Investments in Associates and Joint Ventures clarifies accounting treatment for long-term interests in an associate or joint venture. The cumulative effect of applying the amendment of IAS 28 on the balances of the consolidated statement of financial position as of April 1, 2019 is expected to be a ¥57,400 million (U.S. \$517,117 thousand) decrease in assets and equity.

## 6. Operating Segments

### (1) Summary of reportable segments

#### 1) Decision method of the reportable segments

The reportable segments of the Company refer to constitutional units, for which separate financial information is available and that are subject to periodic reviews by the Board of Directors as the supreme, managerial decision-making organ to determine the allocation of management resources and assess their respective operating results.

The Company currently has three business divisions—Mineral Resources Div., Non-Ferrous Metals Div., Materials Div.—in the pursuit of effective business operations by products and services. Each of these business divisions plans its own comprehensive strategies to be carried out in Japan and overseas for its own product and service lines and engages in diverse business activities within the Company and through the consolidated subsidiaries and equity-method associates over which it holds jurisdiction. The three aforementioned businesses are classified as “Operating Segments” of the Company.

The Company has classified these operating segments into three core reportable segments of Mineral Resources, Smelting & Refining, and Materials by integrating the mineral resource businesses into Mineral Resources, the non-ferrous metals businesses into Smelting & Refining, and materials businesses into Materials based on their similarities of product/service characteristics and economic characteristics represented primarily by the segment income margin.

#### 2) Types of products and services that belong to each reportable segment

In the Mineral Resources segment, the SMM Group mainly engages in the exploration, development and production of non-ferrous metal resources in Japan and overseas, as well as sales of ores and products.

In the Smelting & Refining segment, the SMM Group mainly engages in smelting and sales of copper, nickel, ferronickel and zinc, as well as smelting and sales of precious metals such as gold, silver and platinum.

In the Materials segment, the Company mainly engages in manufacturing, processing and sales of semiconductor materials including tape materials, advanced materials including battery materials (e.g., nickel hydroxide, lithium nickel oxide), pastes, powder materials (e.g., nickel powder) and crystal materials (e.g., lithium tantalate substrates, lithium niobate substrates); and manufacturing and sales of automotive exhaust processing catalysts, chemical catalysts, petroleum refinery and desulfurization catalysts and autoclaved lightweight concrete (ALC) products.

#### (2) Information on net sales, income (loss), assets and other items by reportable segments

The accounting methods employed for the reported operating segments are almost the same as those set forth in the (3. Significant Accounting Policies), with the exception of the reporting by each reported segment of amounts corresponding to interest on internal loans, as determined in the statement of financial position of each segment.

The inter-segment net sales are calculated based on arm’s length transaction prices.

### FY2017 (From April 1, 2017 to March 31, 2018)

	Reportable Segments				Other Businesses <sup>1</sup>	Adjustments <sup>2</sup>	Consolidated Statement of Profit or Loss
	Mineral Resources	Smelting & Refining	Materials	Total			
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Net sales:							
Outside customers	120,648	636,025	167,619	924,292	5,454	—	929,746
Inter-segment	34,078	32,669	17,173	83,920	4,865	(88,785)	—
Total	154,726	668,694	184,792	1,008,212	10,319	(88,785)	929,746
Segment income (loss) (Profit before tax)	57,994	47,763	7,087	112,844	(7,390)	2,832	108,286
Segmental assets	493,026	680,061	236,868	1,409,955	27,807	294,571	1,732,333
Other items:							
Depreciation and amortization expense	(20,003)	(18,274)	(7,270)	(45,547)	(437)	(778)	(46,762)
Finance income	2,207	4,303	1,045	7,555	—	9,809	17,364
Finance costs	(2,496)	(3,620)	(276)	(6,392)	(9)	(7,850)	(14,251)
Share of profit (loss) of investments accounted for using equity method	3,716	6,016	3,262	12,994	—	(656)	12,338
Impairment losses on non-financial assets	—	(596)	(9,259)	(9,855)	(248)	—	(10,103)
Other gain (loss)	530	(4,194)	167	(3,497)	(5,938)	(925)	(10,360)
Capital expenditures	32,499	19,168	18,970	70,637	809	3,229	74,675
Investments accounted for using equity method	178,343	101,869	24,660	304,872	—	(4,840)	300,032

### FY2018 (From April 1, 2018 to March 31, 2019)

	Reportable Segments				Other Businesses <sup>1</sup>	Adjustments <sup>2</sup>	Consolidated Statement of Profit or Loss
	Mineral Resources	Smelting & Refining	Materials	Total			
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Net sales:							
Outside customers	100,099	605,393	203,008	908,500	3,708	—	912,208
Inter-segment	29,979	32,386	16,388	78,753	5,156	(83,909)	—
Total	130,078	637,779	219,396	987,253	8,864	(83,909)	912,208
Segment income (loss) (Profit before tax)	36,465	40,935	13,780	91,180	(2,007)	198	89,371
Segmental assets	611,084	693,126	256,389	1,560,599	28,211	208,891	1,797,701
Other items:							
Depreciation and amortization expense	(15,390)	(18,945)	(7,817)	(42,152)	(427)	(962)	(43,541)
Finance income	2,579	3,923	1,079	7,581	3	13,383	20,967
Finance costs	(2,494)	(4,888)	(346)	(7,728)	(5)	(1,129)	(8,862)
Share of profit (loss) of investments accounted for using equity method	(14,021)	5,989	3,217	(4,815)	—	(86)	(4,901)
Impairment losses on non-financial assets	—	—	—	—	—	—	—
Other gain (loss)	10,549	(2,619)	348	8,278	(2,317)	(1,102)	4,859
Capital expenditures	13,573	13,688	14,308	41,569	854	5,022	47,445
Investments accounted for using equity method	241,210	104,285	24,715	370,210	—	(7,045)	363,165



	Reportable Segments				Other Businesses <sup>1</sup>	Adjustments <sup>2</sup>	Consolidated Statement of Profit or Loss
	Mineral Resources	Smelting & Refining	Materials	Total			
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
Net sales:							
Outside customers	901,793	5,453,991	1,828,901	8,184,685	33,405	—	8,218,090
Inter-segment	270,081	291,766	147,640	709,486	46,450	(755,937)	—
Total	1,171,874	5,745,757	1,976,541	8,894,171	79,856	(755,937)	8,218,090
Segment income (loss) (Profit before tax)	328,514	368,784	124,144	821,441	(18,081)	1,784	805,144
Segmental assets	5,505,261	6,244,378	2,309,811	14,059,450	254,153	1,881,901	16,195,505
Other items:							
Depreciation and amortization expense	(138,649)	(170,676)	(70,423)	(379,748)	(3,847)	(8,667)	(392,261)
Finance income	23,234	35,342	9,721	68,297	27	120,568	188,892
Finance costs	(22,468)	(44,036)	(3,117)	(69,622)	(45)	(10,171)	(79,838)
Share of profit (loss) of entities accounted for using equity method	(126,315)	53,955	28,982	(43,378)	—	(775)	(44,153)
Impairment losses on non-financial assets	—	—	—	—	—	—	—
Other gain (loss)	95,036	(23,595)	3,135	74,577	(20,874)	(9,928)	43,775
Capital expenditures	122,279	123,315	128,901	374,495	7,694	45,243	427,432
Investments accounted for using equity method	2,173,063	939,505	222,658	3,335,225	—	(63,468)	3,271,757

Notes: 1. The Other Businesses segment refers to the operating segments and other income-seeking business activities that are under the control of the Head Office divisions/departments and are engaged in by business segments other than those included in the reportable segments. Other Businesses include real estate and technical engineering businesses.

2. The adjustments are as follows:  
1) The adjustments for segment income (loss) are as follows:

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Head Office expenses not allocated to each reportable segment *1	(1,684)	(3,731)	(33,613)
Internal interest rate	378	794	7,153
Eliminations of inter-segmental transactions among the reportable segments	(660)	(7,734)	(69,676)
Profit or loss not allocated to each reportable segment *2	4,798	10,869	97,919
Adjustments for segment income (loss)	2,832	198	1,784

\*1 The Head Office expenses not allocated to each reportable segment consist of general and administrative expenses, which are not attributable to the reportable segments.

\*2 Profit or loss not allocated to each reportable segment consists primarily of finance income and costs, which are not attributable to the reportable segments.

- 2) The adjustments on segmental assets are as follows:

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Corporate assets not allocated to each reportable segment *1	549,225	628,576	5,662,847
Offsets and eliminations of inter-segmental receivables among the reportable segments, including those toward Head Office divisions/departments, etc.	(254,654)	(419,685)	(3,780,946)
Adjustments on segmental assets	294,571	208,891	1,881,901

\*1 The corporate assets not allocated to each reportable segment refer to the assets under the control of the Head Office, which are not attributable to the reportable segments.

- 3) The adjustments on depreciation and amortization expense refer to depreciation and amortization expense at the Head Office divisions/departments, which are not allocated to the reportable segments.
- 4) The adjustments on finance income and costs consist of interest income and interest expense at the Head Office divisions/departments, which are not allocated to the reportable segments, and eliminations of transactions among the reportable segments.
- 5) The adjustments on share of profit (loss) of investments accounted for using equity method refer to the deduction of unrealized income relating to the inter-segmental transactions among the reportable segments.
- 6) The adjustments on other gain (loss) consist of other income and expenses at the Head Office divisions/departments, which are not allocated to the reportable segments, and eliminations of transactions among the reportable segments.
- 7) The adjustments on capital expenditures refer to an increase thereof at the Head Office divisions/departments, which is not allocated to the reportable segments.
- 8) The adjustments on investments accounted for using equity method refer to exchange differences on transition of foreign operations

(3) Information by region

The breakdown of net sales by region is as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Domestic	526,291	502,496	4,526,991
United States	145,440	152,526	1,374,108
Other	258,015	257,186	2,316,991
Total	929,746	912,208	8,218,090

Note: Net sales are broken down by location of shipping destination.

The breakdown of non-current assets by region is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Domestic	162,976	170,234	182,102	1,640,559
The Philippines	216,440	203,205	210,859	1,899,631
United States	160,562	144,381	120,955	1,089,685
Other	6,448	28,479	27,917	251,505
Total	546,426	546,299	541,833	4,881,378

Note: Non-current assets are broken down by location of each asset and do not include financial instruments, investments accounted for using equity method and deferred tax assets.

(4) Information about major customers

Net sales to the major external customers are as follows.

	Relevant reportable segment	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
		Millions of yen	Millions of yen	Thousands of U.S. dollars
Panasonic Corporation	Materials and Smelting & Refining	127,128	179,529	1,617,378
Sumitomo Corporation	Smelting & Refining and Materials	124,029	90,048	811,243

7. Business Combinations and Acquisition of Non-controlling Interests

FY2017 (From April 1, 2017 to March 31, 2018)

(Business combinations through acquisition)

The Company additionally acquired the shares of GRANOPT Co., Ltd., which had been a joint venture of the Company, making it a consolidated subsidiary. The outline of the business combination is described as follows.

(1) Outline of the business combination

1) Name and description of business of the acquired company

Name of the acquired company: GRANOPT Co., Ltd.

Description of business: Manufacture and sales of Rare-earth Iron Garnet single crystals (RIG)

2) Primary reasons for the business combination

In the Company's communication device business, GRANOPT Co., Ltd. manufactures and sells RIG, and SMM Precision Co., Ltd., a consolidated subsidiary of the Company, manufactures and sells Optical Isolators for communication (OI), utilizing RIG as its main raw material.

The Company has decided to acquire additional shares of GRANOPT Co., Ltd. with a view to improving the efficiency of the communication device business and strengthening competitiveness by building a unified structure between RIG and OI.

3) Date of the business combination

June 23, 2017

4) Legal form of the business combination

Acquisition of shares

5) Name of the company after the business combination

There is no change in the name of the company

6) Percentage of voting rights acquired

Percentage of voting rights owned before acquisition 50.00%

Percentage of voting rights additionally acquired on the date of the business combination 1.00%

Percentage of voting rights owned after acquisition 51.00%

7) Main grounds for determining which company to acquire

Due to the Company acquiring GRANOPT Co., Ltd. through a share acquisition by cash consideration

(2) Acquisition cost, fair value of assets acquired and liabilities assumed, and goodwill

	(Millions of yen)
	Amount
Acquisition cost	
Cash and cash equivalents	110
Fair value of equity interests held immediately before the acquisition date	2,367
Total	2,477
Assets acquired and liabilities assumed	
Cash and cash equivalents	1,275
Trade and other receivables	223
Inventories	393
Property, plant and equipment	1,779
Intangible assets	14
Other assets	79
Trade and other payables	(136)
Income taxes payable	(143)
Provisions	(21)
Other liabilities	(119)
Total	3,344
Non-controlling interests	(1,639)
Goodwill	772

- Notes:
1. Goodwill that arose from the business combination represents excess earning power of GRANOPT Co., Ltd. that would be expected through its future business development, and is not tax-deductible.
  2. Fair value of trade and other receivables is ¥223 million. The aggregate amount of accounts receivable-other arising from contracts is ¥223 million, of which no contractual cash flows are estimated to be uncollectible.
  3. Non-controlling interests are measured at the non-controlling shareholders' proportionate share of the fair value of the acquiree's identifiable net assets.

(3) Cash flows arising from acquisition

	(Millions of yen)
	Amount
Cash and cash equivalents paid for the acquisition	110
Cash and cash equivalents held by the acquiree at the time of acquisition	(1,275)
Net cash and cash equivalents paid (received)	(1,165)

(4) Difference between acquisition cost of the acquiree and total acquisition cost of individual transactions leading to acquisition

The Company remeasured equity interests of the acquiree held immediately before the acquisition date at fair value on the acquisition date. Consequently, gain on step acquisitions of ¥693 million was recognized in "other income" of the consolidated statement of profit or loss.

(5) Other

The disclosure of the following items is omitted due to their insignificant effect on the consolidated financial statements:

- Net sales and profit of the acquiree for the period from the acquisition date recognized in the consolidated statement of profit or loss,
- Net sales and profit of the acquiree assuming that the acquisition date had been the beginning of FY2018, and
- Acquisition-related cost for the business combination.

FY2018 (From April 1, 2018 to March 31, 2019)

There are no pertinent items.

8. Cash and Cash Equivalents

The breakdown of cash and cash equivalents is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Cash and cash equivalents				
Cash and deposits	83,907	74,205	81,261	732,081
Negotiable certificates of deposit	89,000	63,125	—	—
Total	172,907	137,330	81,261	732,081

Cash and cash equivalents are classified into financial assets measured at amortized cost.

9. Trade and Other Receivables

The breakdown of trade and other receivables is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Notes receivable – trade	4,357	6,128	5,485	49,414
Accounts receivable – trade	99,729	140,493	114,763	1,033,901
Accounts receivable – other	59,885	9,343	31,350	282,432
Total	163,971	155,964	151,598	1,365,748

The above amounts of accounts receivable – trade include trade receivables with embedded derivatives (¥3,590 million at the date of transition, ¥4,826 million as of March 31, 2018, and ¥11,892 million (U.S. \$107,135 thousand) as of March 31, 2019). The SMM Group classifies such trade receivables as financial instruments measured at fair value through profit or loss and the others as financial instruments measured at amortized cost.

10. Inventories

The breakdown of inventories is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Merchandise and finished goods	56,959	59,798	62,371	561,901
Work in process	99,225	108,238	104,158	938,360
Raw materials and supplies	98,881	110,076	122,389	1,102,604
Total	255,065	278,112	288,918	2,602,865

The amounts of inventories recognized as an expense for FY 2017 and FY2018 are ¥761,428 million and ¥775,620 million (U.S. \$6,987,568 thousand), respectively.



The amounts of inventories written down and recognized as an expense for FY2017 and FY2018 are ¥2,995 million and ¥3,913 million (U.S. \$35,252 thousand), respectively.

# 11. Property, Plant and Equipment

## (1) Changes in acquisition cost, accumulated depreciation and accumulated impairment losses of property, plant and equipment; and carrying amount thereof are as follows.

Acquisition cost	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	313,166	595,197	20,105	25,884	25,535	979,887
Acquisition	2,190	4,128	72	—	48,814	55,204
Increase due to business combinations	476	826	1,242	—	22	2,566
Decrease due to deconsolidation	(1,577)	(1,368)	(93)	—	(73)	(3,111)
Transfer	5,053	16,518	645	4	(22,220)	—
Disposal	(1,630)	(13,101)	(1,074)	—	(5,088)	(20,893)
Exchange differences on translation	(6,303)	(13,704)	(41)	(99)	(1,104)	(21,251)
Other	—	—	(1)	—	(5)	(6)
As of March 31, 2018	311,375	588,496	20,855	25,789	45,881	992,396
Acquisition	814	2,484	315	3,751	43,144	50,508
Increase due to business combinations	—	—	—	—	—	—
Decrease due to deconsolidation	(23,632)	(40,557)	—	(9)	(284)	(64,482)
Transfer	10,381	33,208	1,023	115	(44,727)	—
Disposal	(2,238)	(22,946)	(1,760)	(308)	(2,638)	(29,890)
Exchange differences on translation	3,215	7,771	(11)	(77)	781	11,679
Other	—	(3)	—	(17)	(37)	(57)
As of March 31, 2019	299,915	568,453	20,422	29,244	42,120	960,154

Acquisition cost	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of March 31, 2018	2,805,180	5,301,766	187,883	232,333	413,342	8,940,505
Acquisition	7,333	22,378	2,838	33,793	388,685	455,027
Increase due to business combinations	—	—	—	—	—	—
Decrease due to deconsolidation	(212,901)	(365,378)	—	(81)	(2,559)	(580,919)
Transfer	93,523	299,171	9,216	1,036	(402,946)	—
Disposal	(20,162)	(206,721)	(15,856)	(2,775)	(23,766)	(269,279)
Exchange differences on translation	28,964	70,009	(99)	(694)	7,036	105,216
Other	—	(27)	—	(153)	(333)	(514)
As of March 31, 2019	2,701,937	5,121,198	183,982	263,459	379,459	8,650,036

Note: The amounts of borrowing costs included in the acquisition cost of property, plant and equipment for FY2017 and FY2018 are ¥45 million and ¥168 million (U.S. \$1,514 thousand), respectively. The capitalization rates applied for FY2017 and FY2018 are 0.93% and 1.16%, respectively.

Accumulated depreciation and impairment losses	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	(134,843)	(344,513)	(17,754)	(2,714)	—	(499,824)
Depreciation	(13,476)	(28,807)	(851)	(137)	—	(43,271)
Impairment losses	(3,177)	(5,879)	(63)	—	(428)	(9,547)
Decrease due to deconsolidation	1,284	560	62	—	—	1,906
Disposal	1,273	11,485	1,070	—	—	13,828
Exchange differences on translation	1,715	4,979	34	77	—	6,805
Other	(102)	(238)	(65)	—	—	(405)
As of March 31, 2018	(147,326)	(362,413)	(17,567)	(2,774)	(428)	(530,508)
Depreciation	(11,829)	(28,153)	(795)	(70)	—	(40,847)
Impairment losses	—	—	—	—	—	—
Decrease due to deconsolidation	17,861	33,263	—	—	—	51,124
Disposal	1,525	19,140	1,721	—	61	22,447
Exchange differences on translation	(1,032)	(2,706)	6	47	—	(3,685)
Other	7	90	20	—	—	117
As of March 31, 2019	(140,794)	(340,779)	(16,615)	(2,797)	(367)	(501,352)

Accumulated depreciation and impairment losses	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of March 31, 2018	(1,327,261)	(3,264,982)	(158,261)	(24,991)	(3,856)	(4,779,351)
Depreciation	(106,568)	(253,631)	(7,162)	(631)	—	(367,991)
Impairment losses	—	—	—	—	—	—
Decrease due to deconsolidation	160,910	299,667	—	—	—	460,577
Disposal	13,739	172,432	15,505	—	550	202,225
Exchange differences on translation	(9,297)	(24,378)	54	423	—	(33,198)
Other	63	811	180	—	—	1,054
As of March 31, 2019	(1,268,414)	(3,070,081)	(149,685)	(25,198)	(3,306)	(4,516,685)

Note: Depreciation is included in “cost of sales” and “selling, general and administrative expenses” of the consolidated statement of profit or loss.

Carrying amount	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	178,323	250,684	2,351	23,170	25,535	480,063
As of March 31, 2018	164,049	226,083	3,288	23,015	45,453	461,888
As of March 31, 2019	159,121	227,674	3,807	26,447	41,753	458,802
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of March 31, 2019	1,433,523	2,051,117	34,297	238,261	376,153	4,133,351

## (2) Assets held under finance leases

The carrying amounts of assets held under finance leases included in property, plant and equipment are as follows.

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	6	227	—	233
As of March 31, 2018	2	898	—	900
As of March 31, 2019	—	1,869	—	1,869
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of March 31, 2019	—	16,838	—	16,838

## (3) Impairment losses

For the purpose of determining impairment losses, the grouping of assets is based on the smallest identifiable group of assets that generates largely independent cash inflows.

Impairment losses are included in “cost of sales” of the consolidated statement of profit or loss.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Mineral Resources	—	—	—
Smelting & Refining	592	—	—
Materials	8,767	—	—
Other	188	—	—
Total	9,547	—	—

### FY2017 (From April 1, 2017 to March 31, 2018)

The Smelting & Refining segment reported an impairment loss of ¥592 million. This is because the book value of manufacturing facilities for cast products was reduced to the recoverable amount as a result of the SMM Group’s decision to withdraw from this business. As the recoverable amount is measured at value in use and the estimated value in use based on future cash flows is negative, the recoverable amount is assessed to be zero.

The Materials segment reported an impairment loss of ¥8,767 million. This is because the book value of manufacturing facilities for crystal substrates was reduced to the recoverable amount as a result of a sharp deterioration of the business environment. The recoverable amount, which is measured at fair value less costs of disposal, is assessed to be ¥5,415 million. The assessed amount reflects the appraisal value by a third party of precious metals contained in the facilities.

The Other Businesses segment reported an impairment loss of ¥188 million. This is because the book value of the facilities for technical engineering was reduced to the recoverable amount due to a decrease in engineering-related business commissioned by nuclear energy-related companies. The recoverable amount, which is measured at fair value less costs of disposal, is assessed to be zero because sale of the facilities will be difficult.

The fair value less costs of disposal is classified as Level 3 in the fair value hierarchy.

### FY2018 (From April 1, 2018 to March 31, 2019)

There are no pertinent items.

## (4) Commitments

Commitments to purchase property, plant and equipment as of April 1, 2017, March 31, 2018 and March 31, 2019 are ¥17,036 million, ¥12,359 million and ¥26,034 million (U.S. \$234,541 thousand), respectively.

## 12. Intangible Assets and Goodwill

The breakdown of the carrying amounts of intangible assets and goodwill is as follows.

Carrying amount	Goodwill	Mining rights	Software	Other	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	–	43,679	1,677	1,692	47,048
As of March 31, 2018	772	61,284	1,513	2,126	65,695
As of March 31, 2019	772	55,884	2,268	2,283	61,207
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of March 31, 2019	6,955	503,459	20,432	20,568	551,414

Note: There were no material internally generated intangible assets at each reporting date.

The changes in acquisition cost, accumulated amortization and accumulated impairment losses; and carrying amount of mining rights, the SMM Group's major intangible assets, are as follows.

Acquisition cost	Mining rights
	Millions of yen
As of April 1, 2017	55,431
Acquisition	21,424
Exchange differences on translation	(1,528)
As of March 31, 2018	75,327
Decrease due to deconsolidation	(12,636)
Exchange differences on translation	(1,073)
As of March 31, 2019	61,618
Acquisition cost	Mining rights
	Thousands of U.S. dollars
As of March 31, 2018	678,622
Decrease due to deconsolidation	(113,838)
Exchange differences on translation	(9,667)
As of March 31, 2019	555,117
Accumulated amortization and accumulated impairment losses	Mining rights
	Millions of yen
As of April 1, 2017	(11,752)
Amortization expense	(2,856)
Exchange differences on translation	565
As of March 31, 2018	(14,043)
Amortization expense	(2,235)
Decrease due to deconsolidation	10,501
Exchange differences on translation	43
As of March 31, 2019	(5,734)

Accumulated amortization and accumulated impairment losses

Mining rights

	Thousands of U.S. dollars
As of March 31, 2018	(126,514)
Amortization expense	(20,135)
Decrease due to deconsolidation	94,604
Exchange differences on translation	387
As of March 31, 2019	(51,658)

Note: Amortization expense is included in "cost of sales" of the consolidated statement of profit or loss.

The breakdown of carrying amount of the above mining rights is as follows.

Carrying amount	SMM Morenci Inc.	SMM Gold Cote Inc.	Other	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	39,618	–	4,061	43,679
As of March 31, 2018	36,529	21,821	2,934	61,284
As of March 31, 2019	34,158	21,439	287	55,884
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of March 31, 2019	307,730	193,144	2,586	503,459

## 13. Expenditures Concerning Exploration for and Evaluation of Mining Resources

Expenses incurred during the stage of exploration for and evaluation of mining resources are as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Exploration and evaluation expenses	2,060	2,861	25,775
Net cash provided by (used in) operating activities	(2,011)	(2,842)	(25,604)

Exploration and evaluation expenses are included in "selling, general and administrative expenses" of the consolidated statement of profit or loss.



#### 14. Investment Property

##### (1) Changes in carrying amount of investment properties

All the investment properties held by the SMM Group are land and the fluctuations in the carrying amount are as follows.

Carrying amount	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Balance at beginning of period	3,427	3,427	30,874
Acquisition	—	1	9
Disposal	—	—	—
Transfer between accounts	—	—	—
Exchange differences on translation	—	—	—
Other	—	—	—
Balance at end of period	3,427	3,428	30,883

The grouping of the investment properties is based on the smallest identifiable group of assets that generates largely independent cash inflows.

The carrying amount and fair value of the investment properties are as follows.

Carrying amount and fair value	Date of transition (As of April 1, 2017)		FY2017 (As of March 31, 2018)		FY2018 (As of March 31, 2019)	
	Carrying amount	Fair value	Carrying amount	Fair value	Carrying amount	Fair value
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
	3,427	7,666	3,427	7,633	3,428	7,743

Carrying amount and fair value	FY2018 (As of March 31, 2019)	
	Carrying amount	Fair value
	Thousands of U.S. dollars	Thousands of U.S. dollars
	30,883	69,757

The fair value of the investment properties is based primarily on real estate appraisal evaluated by outside licensed real estate appraisers. The valuations conform to the relevant valuation standards of the countries where the properties are located and are based on market evidence reflecting transaction prices for similar assets.

The fair value of the investment properties is classified as Level 3 (fair value that is determined using a valuation technique with unobservable inputs) in the fair value hierarchy.

##### (2) Income and expenses arising from investment properties

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Lease income	563	506	4,559
Direct operating expenses	256	267	2,405

Lease income and direct operating expenses incurred to earn lease income are included in “net sales” and “cost of sales” of the consolidated statement of profit or loss, respectively.

#### 15. Investments Accounted for Using Equity Method

##### (1) Investments in associates

###### 1) Significant associates

Associates individually material to the SMM Group are as follows:

Name	Description of main businesses	Location	Voting rights held by the Company		
			Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)
			%	%	%
Sociedad Minera Cerro Verde S.A.A.	Development and mining of copper mines	Arequipa, Peru	21.0	21.0	21.0
Sierra Gorda S.C.M.	Development and mining of copper mines	Santiago, Chile	45.0	45.0	45.0

Investments in these associates are accounted for using the equity method. The condensed financial statements, the carrying amounts of the SMM Group’s share of equity in these associates, and the SMM Group’s share of comprehensive income of these associates under the equity method are as follows.

Date of transition (As of April 1, 2017)

	Sociedad Minera Cerro Verde S.A.A.	Sierra Gorda S.C.M.
	Millions of yen	Millions of yen
Current assets	141,945	37,685
Non-current assets	747,530	427,810
Total assets	889,475	465,495
Current liabilities	34,205	68,403
Non-current liabilities	291,541	584,349
Total liabilities	325,746	652,752
Total equity	563,729	(187,257)
The SMM Group’s share of total equity	118,383	(84,266)
Consolidation adjustment	6,626	84,266
Carrying amount of investments	125,009	—

## FY2017 (As of March 31, 2018)

	Sociedad Minera Cerro Verde S.A.A.	Sierra Gorda S.C.M.
	Millions of yen	Millions of yen
Current assets	176,717	39,855
Non-current assets	692,368	439,027
Total assets	869,085	478,882
Current liabilities	57,720	81,428
Non-current liabilities	224,989	581,929
Total liabilities	282,709	663,357
Total equity	586,376	(184,475)
The SMM Group's share of total equity	123,139	(83,014)
Consolidation adjustment	6,253	83,014
Carrying amount of investments	129,392	—

## FY2018 (As of March 31, 2019)

	Sociedad Minera Cerro Verde S.A.A.	Sierra Gorda S.C.M.
	Millions of yen	Millions of yen
Current assets	164,925	42,643
Non-current assets	673,798	432,577
Total assets	838,723	475,220
Current liabilities	45,379	87,962
Non-current liabilities	226,157	574,584
Total liabilities	271,536	662,546
Total equity	567,187	(187,326)
The SMM Group's share of total equity	119,109	(84,297)
Consolidation adjustment	6,141	84,297
Carrying amount of investments	125,250	—

	Sociedad Minera Cerro Verde S.A.A.	Sierra Gorda S.C.M.
	Thousands of U.S. dollars	Thousands of U.S. dollars
Current assets	1,485,811	384,171
Non-current assets	6,070,252	3,897,090
Total assets	7,556,063	4,281,261
Current liabilities	408,820	792,450
Non-current liabilities	2,037,450	5,176,432
Total liabilities	2,446,270	5,968,883
Total equity	5,109,793	(1,687,622)
The SMM Group's share of total equity	1,073,054	(759,432)
Consolidation adjustment	55,324	759,432
Carrying amount of investments	1,128,378	—

FY2017  
(From April 1, 2017  
to March 31, 2018)

	Sociedad Minera Cerro Verde S.A.A.	Sierra Gorda S.C.M.	Sociedad Minera Cerro Verde S.A.A.	Sierra Gorda S.C.M.
	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Net sales	359,273	108,547	337,317	107,998
Profit (loss)	37,652	(28,113)	13,029	(41,144)
Other comprehensive income	(17,686)	—	(10,857)	—
Total comprehensive income	19,966	(28,113)	2,172	(41,144)

## The SMM Group's share:

Net sales	75,447	48,846	70,837	48,599
Profit (loss)	7,907	(12,651)	2,736	(18,515)
Other comprehensive income	(3,714)	—	(2,280)	—
Total comprehensive income	4,193	(12,651)	456	(18,515)
Dividends received by the SMM Group	—	—	4,639	—

FY2018  
(From April 1, 2018  
to March 31, 2019)

	Sociedad Minera Cerro Verde S.A.A.	Sierra Gorda S.C.M.
	Thousands of U.S. dollars	Thousands of U.S. dollars
Net sales	3,038,892	972,955
Profit (loss)	117,378	(370,667)
Other comprehensive income	(97,811)	—
Total comprehensive income	19,568	(370,667)

## The SMM Group's share:

Net sales	638,171	437,829
Profit (loss)	24,649	(166,802)
Other comprehensive income	(20,541)	—
Total comprehensive income	4,108	(166,802)
Dividends received by the SMM Group	41,793	—

2) Associates individually immaterial to the SMM Group

The total carrying amount of investments in associates individually immaterial to the SMM Group are as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Total carrying amount	130,099	135,444	202,719	1,826,297

The SMM Group's share of total comprehensive income of associates individually immaterial to the SMM Group are as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Share of profit of the associates	12,432	7,174	64,631
Share of other comprehensive income of the associates	(1,163)	(4,208)	(37,910)
Share of total comprehensive income of the associates	11,269	2,966	26,721

SMM Quebrada Blanca SpA, a consolidated subsidiary of the Company, acquired 33% interests in Quebrada Blanca Holdings SpA, which has 90 percent ownership of the Quebrada Blanca Copper Mine, effective March 30, 2019 (with ¥67,433 million consideration for the acquisition). As the SMM Group has significant influence over the financial and operating policy decisions of Quebrada Blanca Holdings SpA, the investment was accounted for by applying the equity method.

The consideration paid for the investment includes contingent consideration, which is an estimated amount to be paid to Teck Resources Chile Ltd. determined based primarily on the production level and other factors at the mine over a certain period of time in the future.

As the fair values of the investee's assets and liabilities and contingent consideration are the amounts provisionally recognized at the acquisition date, they may be adjusted during the measurement period (one year from the acquisition date).

(2) Investments in joint ventures

The total carrying amounts of investments in joint ventures individually immaterial to the SMM Group are as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Total carrying amount	37,341	35,196	35,196	317,081

The SMM Group's share of total comprehensive income of joint ventures individually immaterial to the SMM Group are as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Share of profit of the joint ventures	4,650	3,704	33,369
Share of other comprehensive income of the joint ventures	1	(40)	(360)
Share of total comprehensive income of the joint ventures	4,651	3,664	33,009

16. Other Financial Assets

(1) Breakdown of other financial assets

The breakdown of other financial assets is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Equity securities	146,626	159,220	150,183	1,353,000
Loans receivable	102,432	96,404	177,756	1,601,405
Bonds payable	—	10,625	—	—
Time deposits	24	1,667	5,293	47,685
Derivative assets	2,756	2,670	2,927	26,369
Other	2,259	2,785	3,546	31,946
Total	254,097	273,371	339,705	3,060,405
Current assets	2,382	18,162	9,493	85,523
Non-current assets	251,715	255,209	330,212	2,974,883
Total	254,097	273,371	339,705	3,060,405

Derivative assets are classified as financial assets measured at fair value through profit or loss; equity securities as financial assets measured at fair value through other comprehensive income; and loans receivable, corporate bonds and time deposits as financial assets measured at amortized cost. Loans receivable mainly consist of long-term investments of the SMM Group from associates and joint ventures.



(2) Equity financial assets measured at fair value through other comprehensive income

Equity securities are held primarily for the purpose of maintaining and enhancing business relationships, and therefore, designated as financial assets measured at fair value through other comprehensive income.

The fair value of major issues of equity financial assets measured at fair value through other comprehensive income held by the SMM Group as of the fiscal year-end and dividend income from these financial assets are as follows.

Issue	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Toyota Motor Corporation	33,125	37,418	35,565	320,405
Sumitomo Realty & Development Co., Ltd.	13,501	18,408	21,453	193,270
Sumitomo Forestry Co., Ltd.	17,086	17,248	15,540	140,000
Teck Resources Limited	10,805	11,560	10,817	97,450
MS&AD Insurance Group Holdings, Inc.	6,053	5,736	5,762	51,910
Other	66,056	68,850	61,046	549,964
Total	146,626	159,220	150,183	1,353,000

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Dividend income from financial assets held by the SMM Group as of the fiscal year-end	3,593	3,778	34,036

(3) Derecognition of financial assets measured at fair value through other comprehensive income

The financial assets measured at fair value through other comprehensive income disposed of during the period are as follows.

FY2017 (From April 1, 2017 to March 31, 2018)			FY2018 (From April 1, 2018 to March 31, 2019)		
Fair value at time of sale	Accumulated gains (losses)	Dividend income	Fair value at time of sale	Accumulated gains (losses)	Dividend income
Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
246	65	3	321	264	25

FY2018 (From April 1, 2018 to March 31, 2019)		
Fair value at time of sale	Accumulated gains (losses)	Dividend income
Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
2,892	2,378	225

These assets were sold primarily due to the reconsideration of business relationships. Accumulated gains net of tax were reclassified from other components of equity into retained earnings at the time

of sale. The amounts of such reclassification for FY2017 and FY2018 are ¥46 million and ¥185 million (U.S. \$1,667 thousand), respectively.

Furthermore, for the financial assets measured at fair value through other comprehensive income, those whose fair value declined significantly when compared with their cost, accumulated losses net of tax were reclassified from other components of equity into retained earnings if the decline is deemed other-than-temporary. The amounts of such reclassification for FY2018 are ¥(885) million (U.S. \$(7,973) thousand).

17. Other Assets

The breakdown of other assets is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Other current assets				
Prepaid expenses	4,945	5,377	7,371	66,405
Advance payments to suppliers	2,024	2,761	4,619	41,613
Bullion in storage	59	2,742	4,041	36,405
Consumption taxes receivable	5,259	3,818	1,282	11,550
Other	7,878	10,864	2,632	23,712
Total	20,165	25,562	19,945	179,685
Other non-current assets				
Long-term prepaid expenses	10,337	10,519	9,630	86,757
Net defined benefit asset	220	242	4,592	41,369
Other	5,331	4,528	4,174	37,604
Total	15,888	15,289	18,396	165,730

18. Assets Held for Sale

The SMM Group decided to transfer all the shares of Suzhou SH Precision Co., Ltd., Malaysian SH Precision Sdn. Bhd. and SH Precision Co., Ltd. held by SH Materials Co., Ltd., the Company's consolidated subsidiaries, to JIHLIN TECHNOLOGY CO., LTD. as part of the process to withdraw from the lead frame business in the materials business. Assets and liabilities held for sale as of the date of transition were associated with these three subsidiaries.

The assets held for sale of ¥2,430 million (U.S. \$21,892 thousand) include inventories of ¥1,017 million (U.S. \$9,162 thousand) and trade and other receivables of ¥931 million (U.S. \$8,387 thousand). Liabilities directly associated with assets held for sale of ¥3,440 million (U.S. \$30,991 thousand) include short-term borrowings of ¥1,957 million (U.S. \$17,631 thousand) and trade and other payables of ¥1,413 million (U.S. \$12,730 thousand).

The share transfer above completed in the previous fiscal year (on June 1, 2017), resulting in the exclusion of these three subsidiaries from the scope of consolidation.

## 19. Income Taxes

### (1) Deferred tax assets and deferred tax liabilities

The breakdown of major factors giving rise to deferred tax assets and deferred tax liabilities and the changes therein are as follows.

FY2017 (From April 1, 2017 to March 31, 2018)

	As of April 1, 2017	Recognized through profit or loss	Recognized in other comprehensive income	Other	As of March 31, 2018
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Deferred tax assets					
Exploration costs	5,251	(1,672)	—	(170)	3,409
Inventories	2,980	754	—	—	3,734
Property, plant and equipment	1,713	(735)	—	—	978
Provisions	6,519	116	—	—	6,635
Retirement benefit liability	4,662	394	(674)	—	4,382
Unused tax losses	214	8,063	—	—	8,277
Other	4,732	729	—	370	5,831
Total	26,071	7,649	(674)	200	33,246
Deferred tax liabilities					
Property, plant and equipment	(12,883)	2,921	—	342	(9,620)
Other financial assets	(15,353)	208	(3,427)	25	(18,547)
Retained earnings at subsidiaries and associates	(11,091)	(8,208)	—	68	(19,231)
Reserves	(6,602)	373	—	—	(6,229)
Other	(4,285)	(2,337)	378	—	(6,244)
Total	(50,214)	(7,043)	(3,049)	435	(59,871)

FY2018 (From April 1, 2018 to March 31, 2019)

	As of April 1, 2018	Recognized through profit or loss	Recognized in other comprehensive income	Other	As of March 31, 2019
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Deferred tax assets					
Exploration costs	3,409	(3,091)	—	(76)	242
Inventories	3,734	(551)	—	—	3,183
Property, plant and equipment	978	333	—	—	1,311
Provisions	6,635	2,349	—	(1,915)	7,069
Retirement benefit liability	4,382	(1,641)	1,345	—	4,086
Unused tax losses	8,277	235	—	(139)	8,373
Other	5,831	(1,390)	—	817	5,258
Total	33,246	(3,756)	1,345	(1,313)	29,522
Deferred tax liabilities					
Property, plant and equipment	(9,620)	(133)	—	92	(9,661)
Other financial assets	(18,547)	(4,930)	2,132	(7)	(21,352)
Retained earnings at subsidiaries and associates	(19,231)	(874)	—	106	(19,999)
Reserves	(6,229)	(5,056)	—	—	(11,285)
Other	(6,244)	2,655	(151)	—	(3,740)
Total	(59,871)	(8,338)	1,981	191	(66,037)

	As of April 1, 2018	Recognized through profit or loss	Recognized in other comprehensive income	Other	As of March 31, 2019
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
Deferred tax assets					
Exploration costs	30,712	(27,847)	—	(685)	2,180
Inventories	33,640	(4,964)	—	—	28,676
Property, plant and equipment	8,811	3,000	—	—	11,811
Provisions	59,775	21,162	—	(17,252)	63,685
Retirement benefit liability	39,477	(14,784)	12,117	—	36,811
Unused tax losses	74,568	2,117	—	(1,252)	75,432
Other	52,532	(12,523)	—	7,360	47,369
Total	299,514	(33,838)	12,117	(11,829)	265,964
Deferred tax liabilities					
Property, plant and equipment	(86,667)	(1,198)	—	829	(87,036)
Other financial assets	(167,090)	(44,414)	19,207	(63)	(192,360)
Retained earnings at subsidiaries and associates	(173,252)	(7,874)	—	955	(180,171)
Reserves	(56,117)	(45,550)	—	—	(101,667)
Other	(56,252)	23,919	(1,360)	—	(33,694)
Total	(539,378)	(75,117)	17,847	1,721	(594,928)

The SMM Group considers the possibility that a portion or all of the deductible temporary differences or unused tax losses can be utilized against future taxable profits upon recognition of deferred tax assets. In assessing the recoverability of deferred tax assets, the SMM Group considers the scheduled reversal of deferred tax liabilities, projected future taxable profits, and tax planning strategies. Based on the level of historical taxable profits and projected future taxable profits for the periods in which the deferred tax assets can be recognized, the SMM Group has determined that it is probable that the tax benefits can be utilized.

The unused tax losses and deductible temporary differences for which deferred tax assets were not recognized are as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Unused tax losses	4,830	11,487	16,114	145,171
Deductible temporary differences	49,768	19,560	9,569	86,207
Total	54,598	31,047	25,683	231,378

The unused tax losses for which deferred tax assets were not recognized will expire as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
1st year	44	139	274	2,468
2nd year	274	291	122	1,099
3rd year	502	127	137	1,234
4th year	124	144	320	2,883
5th year and after	3,886	10,786	15,261	137,486
Total	4,830	11,487	16,114	145,171

Deferred tax liabilities related to the temporary differences are not recognized in cases where the SMM Group is able to control the timing of the reversal of the temporary differences and it is probable that they will not reverse in the foreseeable future. Taxable temporary differences related to investments in consolidated subsidiaries and other entities, for which deferred tax liabilities were not recognized, as of April 1, 2017, March 31, 2018 and March 31, 2019 totaled ¥194,583 million, ¥208,817 million and ¥203,159 million (U.S. \$1,830,261 thousand), respectively.

(2) Income tax expense

The breakdown of income tax expense is as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Current tax expense	13,990	10,036	90,414
Deferred tax expense			
Origination and reversal of temporary differences	1,313	12,122	109,207
Assessed recoverability of deferred tax assets	(4,796)	(1,758)	(15,838)
Changes in applicable tax rates and other factors	2,877	1,730	15,586
Total	13,384	22,130	199,369

The tax reforms were implemented in the United States and the Netherlands during FY2017 and FY2018, respectively. Accordingly, the SMM Group has revised the valuation of deferred tax assets and deferred tax liabilities.

Current tax expense includes the benefits that arose from previously unrecognized unused tax losses or temporary differences for prior periods. Such benefits helped decrease current tax expense by ¥9,179 million and ¥583 million (U.S. \$5,252 thousand) for FY2017 and FY2018, respectively.

Deferred tax expense includes the benefits that arose from previously unrecognized unused tax losses or temporary differences for prior periods. Such benefits helped decrease deferred tax expenses by ¥8,035 million and ¥2,374 million (U.S. \$21,387 thousand) for FY2017 and FY2018, respectively.

The following shows the reconciliation of differences between the Japanese statutory tax rates and the average effective tax rates for the SMM Group for FY2017 and FY2018.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)
	%	%
Japanese statutory tax rates	30.9	30.6
Changes in unrecognized deferred tax assets	(12.1)	(0.9)
Non-taxable revenues	(3.0)	(1.8)
Income taxes for prior years	(6.3)	0.0
Differences in applicable tax rates of consolidated subsidiaries	1.2	(3.2)
Changes in tax effects of undistributed profit of consolidated subsidiaries	4.9	1.0
Share of profit (loss) of investments accounted for using equity method	(2.1)	0.5
Other	(1.1)	(1.4)
Average effective tax rates	12.4	24.8

Effective tax rates represent the rate of income tax on profit before taxes.

The SMM Group is subject to the Japanese corporate tax, inhabitant tax and business tax. The SMM Group's statutory income tax rates calculated based on these taxes for FY2017 and FY2018 are 30.9% and 30.6%, respectively. Overseas consolidated subsidiaries, however, are subject to local corporate and other taxes.

20. Trade and Other Payables

The breakdown of trade and other payables is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Accounts payable - trade	65,286	67,600	92,900	836,937
Accounts payable	23,111	43,689	57,350	516,667
Other	13,005	14,205	15,573	140,297
Total	101,402	125,494	165,823	1,493,901

Trade and other payables are classified as financial liabilities measured at amortized cost.



## 21. Other Financial Liabilities (Including Bonds and Borrowings)

### (1) Breakdown of financial liabilities

The breakdown of “bonds and borrowings” and “other financial liabilities” is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)		Average interest rate (Note)	Due date
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars	%	
Short-term borrowings	77,580	41,362	44,760	403,243	1.42	—
Current portion of long-term borrowings	17,427	23,526	30,522	274,973	3.19	—
Current portion of bonds	—	29,991	—	—	—	—
Long-term borrowings	355,992	256,922	244,604	2,203,640	2.26	From August 20, 2020 to June 15, 2031
Bonds payable	39,938	9,974	29,912	269,477	0.43	From August 31, 2021 to September 17, 2021
Convertible bond-type bonds with share acquisition rights	—	29,365	29,493	265,703	—	March 15, 2023
Derivative liabilities	1,599	510	1,849	16,658	—	—
Other	2,114	2,703	3,878	34,937	—	—
Total	494,650	394,353	385,018	3,468,631		
Current liabilities	96,503	95,388	77,507	698,261		
Non-current liabilities	398,147	298,965	307,511	2,770,369		
Total	494,650	394,353	385,018	3,468,631		

Note: The item “average interest rate” represents the weighted average nominal interest rates for the balances as of the end of FY2018.

Restrictive financial covenants have been attached to some of the SMM Group’s borrowings; the covenants require, for example, that the SMM Group maintains a certain level of net assets. No events resulting in a breach of the covenants have occurred during FY2017 and FY2018.

Short-term borrowings, current portion of long-term borrowings, current portion of bonds, long-term borrowings, bonds payable, and the bond portion of convertible bond-type bonds with share acquisition rights are classified as financial liabilities measured at amortized cost. Derivative liabilities are classified as financial liabilities measured at fair value through profit or loss.

Terms and conditions for bond issuance are summarized below.

Company name	Issue	Issuance date	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	Thousands of U.S. dollars
			Millions of yen	Millions of yen	Millions of yen	
Sumitomo Metal Mining Co., Ltd.	28th series straight bonds	August 31, 2011	29,970	29,991 (29,991)	—	—
Sumitomo Metal Mining Co., Ltd.	29th series straight bonds	August 31, 2011	9,968	9,974	9,981	89,919
Sumitomo Metal Mining Co., Ltd.	30th series straight bonds	September 18, 2018	—	—	19,931	179,559
Sumitomo Metal Mining Co., Ltd.	Euro-yen denominated convertible bond-type bonds with share acquisition rights due 2023	March 15, 2018	—	29,365	29,493	265,703
<b>Total</b>			<b>39,938</b>	<b>69,330</b>	<b>59,405</b>	<b>535,180</b>

Company name	Coupon rate	Collateral	Redemption date
	%		
Sumitomo Metal Mining Co., Ltd.	—	—	—
Sumitomo Metal Mining Co., Ltd.	1.26	None	August 31, 2021
Sumitomo Metal Mining Co., Ltd.	0.02	None	September 17, 2021
Sumitomo Metal Mining Co., Ltd.	—	None	March 15, 2023
<b>Total</b>			

Note: The figure in a parenthesis represents the amount to be redeemed within one year.

### (2) Assets pledged as collateral

Assets pledged as collateral are as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	Thousands of U.S. dollars
	Millions of yen	Millions of yen	Millions of yen	
Cash and deposits (Note 1)	1	—	—	—
Investments accounted for using equity method (Note 2)	0	0	0	0
Long-term loans receivable (Note 1)	26,094	—	—	—
Other	343	244	—	—
<b>Total</b>	<b>26,438</b>	<b>244</b>	<b>0</b>	<b>0</b>

Liabilities with collateral are as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Long-term borrowings (including current portion)	88,686	53,227	45,492	409,838
Total	88,686	53,227	45,492	409,838

- Notes:
1. The assets pledged as collateral for the borrowings that SMM Holland B.V. borrowed from financial institutions. In the case of a default in the repayment of principal and/or payment of interest of the loans that became due or a failure to comply with the representations and warranties or financial covenants, the guarantee institution can exercise its right to dispose of the assets pledged as collateral and appropriate the proceeds from such disposal for repaying or offsetting the loan amount.
  2. The assets pledged as collateral for the borrowings that Sierra Gorda S.C.M. borrowed from financial institutions. In the case of a default in the repayment of principal and/or payment of interest of the loans that became due or a failure to comply with the representations and warranties or financial covenants, the financial institution can exercise its right to dispose of the assets pledged as collateral and appropriate the proceeds from such disposal for repaying or offsetting the loan amount.

Aside from the above, shares of consolidated subsidiaries (the amount before inter-company eliminations) are also pledged as collateral as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Shares of consolidated subsidiaries (amount before inter-company eliminations)	28,032	28,032	28,032	252,541
Total	28,032	28,032	28,032	252,541

## 22. Leases

### Operating lease

The breakdown by due date of future minimum lease payments under noncancelable operating leases is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Due within one year	445	370	431	3,883
Due after one year through five years	1,235	1,148	1,477	13,306
Due after five years	979	993	1,351	12,171
Total	2,659	2,511	3,259	29,360

The minimum lease payments and variable lease payments under operating lease contracts recognized as expense are as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Minimum lease payments	1,900	1,925	17,342
Variable lease payments	—	—	—
Total	1,900	1,925	17,342

The SMM Group, as a lessee, leases assets including machinery and equipment.

Some contracts include a renewal option. There are no restrictions imposed by lease contracts such as significant renewal or purchase options, or escalation clauses.

## 23. Provisions

The breakdown of provisions and their changes during the period are as follows.

	Provision for decommission- ing preparations	Asset retirement obligations	Provision for bonuses	Other	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of March 31, 2018	13,418	13,389	3,630	3,005	33,442
Increases	350	3,814	3,548	801	8,513
Effect of changes in the discount rate	—	(694)	—	—	(694)
Unwinding of discount	—	122	—	—	122
Decreases (utilized)	(2,423)	(48)	(3,630)	(865)	(6,966)
Decreases (reversed)	—	(1,054)	—	(699)	(1,753)
Decreases due to deconsolidation	—	(5,460)	—	(153)	(5,613)
Exchange differences on translation	—	79	(4)	(11)	64
As of March 31, 2019	11,345	10,148	3,544	2,078	27,115
Current liabilities	—	1	3,630	1,265	4,896
Non-current liabilities	13,418	13,388	—	1,740	28,546
Total (as of March 31, 2018)	13,418	13,389	3,630	3,005	33,442
Current liabilities	—	2	3,544	1,207	4,753
Non-current liabilities	11,345	10,146	—	871	22,362
Total (as of March 31, 2019)	11,345	10,148	3,544	2,078	27,115

	Provision for decommission- ing preparations	Asset retirement obligations	Provision for bonuses	Other	Total
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of March 31, 2018	120,883	120,622	32,703	27,072	301,279
Increases	3,153	34,360	31,964	7,216	76,694
Effect of changes in the discount rate	—	(6,252)	—	—	(6,252)
Unwinding of discount	—	1,099	—	—	1,099
Decreases (utilized)	(21,829)	(432)	(32,703)	(7,793)	(62,757)
Decreases (reversed)	—	(9,495)	—	(6,297)	(15,793)
Decreases due to deconsolidation	—	(49,189)	—	(1,378)	(50,568)
Exchange differences on translation	—	712	(36)	(99)	577
As of March 31, 2019	102,207	91,423	31,928	18,721	244,279
Current liabilities	—	18	31,928	10,874	42,820
Non-current liabilities	102,207	91,405	—	7,847	201,459
Total (as of March 31, 2019)	102,207	91,423	31,928	18,721	244,279

## (1) Provision for decommissioning preparations

JCO Co., Ltd., a domestic consolidated subsidiary of the Company, is advancing measures to promote facility dismantlement and decontamination to prepare for the decommissioning of its facilities. As certain losses are anticipated to be incurred depending on the conditions of dismantlement and decontamination of its facilities in the future, the Company will post a provision for decommissioning preparations for losses that can be reasonably estimated.

An outflow of economic benefits is expected to take place mostly after one year from the end of each fiscal year, which, however, can vary depending on future business plans and other factors.

## (2) Asset retirement obligations

The amount of asset retirement obligations is the reasonable estimate of the expenses required for the Company under the business plan and its consolidated subsidiaries to fulfill their obligations under individual leasing contracts and restoration obligations under mining laws and regulations of each jurisdiction. Furthermore, for the SMM Group's business establishments, subsidiaries and associates in Japan, the amount of asset retirement obligations is based on the reasonable estimate of retirement, research and other expenses required to fulfill their obligations, for example to retire assets and conduct environmental researches in a special manner provided by asbestos related laws and regulations (such as the Ordinance on Prevention of Asbestos Hazards) and dioxins related laws and regulations (such as the Ordinance on Industrial Safety and Health).

An outflow of economic benefits is expected to take place mostly after one year from the end of each fiscal year, which, however, can vary depending on future business plans and other factors.

## (3) Provision for bonuses

Regarding payment of bonuses to employees and executive officers, the amount that is expected to be paid is calculated and stated at that amount.

An outflow of economic benefits is expected to take place within a year from the end of each fiscal year.

## 24. Employee Benefits

The SMM Group has adopted both funded and unfunded defined benefit plans and defined contribution plans as retirement benefits for its employees, which cover substantially all of the employees. Although the SMM Group's defined benefit plans are exposed to the following risks, we believe that none of these risks are material.

## (i) Investment risk

The present value of the defined benefit obligations is calculated based on a discount rate that is determined by reference to market yields on high quality corporate bonds at the fiscal year-end. In the event the investment yields for plan assets fall below the discount rate, worsened funded status may lead to a reduction in equity.

## (ii) Interest rate risk

In case the discount rate is lowered due to a decline in market yields on high quality corporate bonds, the present value of the defined benefit obligations increases, and as a result, worsened funded status may lead to a reduction in equity.

## (iii) Inflation risk

Some of the SMM Group's defined benefit plan is linked to inflation. In case the inflation rate keeps rising, the present value of the defined benefit obligations increases, and as a result, worsened funded status may lead to a reduction in equity.

## (iv) Longevity risk

If the average life expectancy of the participants in the plans rises, the present value of the defined benefit obligations increases, and as a result, worsened funded status may lead to a reduction in equity.

The funded defined benefit plans are run by pension funds legally isolated from the SMM Group. Institutions undertaking the investment of pension funds are required by laws and regulations to act in the best interest of participants in the pension plans, and are responsible for managing the plan assets in accordance with established policies.

The present value of defined benefit obligation and the related current and past service cost are calculated by using the projected unit credit method.

The discount rate is determined by reference to market yields on high quality corporate bonds as of the fiscal year-end, corresponding to the discount period, which is set based on the period up to the expected benefit payment date for each fiscal year in the future.

Liability or asset associated with a defined benefit plan is calculated by subtracting the fair value of the plan assets from the present value of defined benefit obligation.

Remeasurements of the defined benefit plans is recognized in full as other comprehensive income when such remeasurements occur, and transferred immediately from other components of equity to retained earnings.

Past service cost is recognized as an expense on a straight-line basis over the average period until the benefits are vested. In the event the benefits are already vested immediately after introduction of or amendment to the defined benefit plan, past service cost is recognized as profit or loss for the period when they occur.

Retirement benefit expenses associated with the defined contribution plans are recognized when the contribution is made.

## (1) Retirement benefits

## 1) Defined benefit plan

## (i) Reconciliation of defined benefit obligations and plan assets

The relation between defined benefit obligations and plan assets and net defined benefit liability (asset) on the consolidated statement of financial position is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	(Thousands of U.S. dollars)	
			(Millions of yen)	
			FY2018 (As of March 31, 2019)	
Present value of funded defined benefit obligations	68,069	68,678	71,892	647,676
Fair value of plan assets	(60,554)	(63,241)	(67,986)	(612,486)
Subtotal	7,515	5,437	3,906	35,189
Present value of unfunded defined benefit obligations	1,744	1,812	1,893	17,054
Net defined benefit liability (asset)	9,259	7,249	5,799	52,243
Amounts on the consolidated statement of financial position				
Retirement benefit liability	9,479	7,491	10,391	93,613
Retirement benefit asset (Note)	(220)	(242)	(4,592)	(41,369)
Net liability (asset) on the consolidated statement of financial position	9,259	7,249	5,799	52,243

Note: Retirement benefit asset is included in "other non-current assets" on the consolidated statement of financial position.



(ii) Reconciliation of present value of defined benefit obligations

Changes in the present value of defined benefit obligations are as follows.

	(Millions of yen)		(Thousands of U.S. dollars)
	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
Defined benefit obligation at beginning of period	69,813	70,490	635,045
Service cost	2,428	1,736	15,640
Interest expenses	355	360	3,243
Remeasurements			
Actuarial gains and losses arising from changes in demographic assumptions	21	2,574	23,189
Actuarial gains and losses arising from changes in financial assumptions	619	665	5,991
Past service cost	–	707	6,369
Benefits paid	(2,784)	(2,844)	(25,622)
Exchange differences on translation	(53)	(10)	(90)
Other	91	107	964
Defined benefit obligation at end of period	70,490	73,785	664,730

The weighted-average duration of the defined benefit obligations was 12 years for both of FY2017 and FY2018.

(iii) Reconciliation of fair value of plan assets

Changes in the fair value of the plan assets are as follows.

	(Millions of yen)		(Thousands of U.S. dollars)
	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
Fair value of the plan assets at beginning of period	60,554	63,241	569,739
Interest revenue	172	181	1,631
Remeasurements			
Return on plan assets	2,955	(1,142)	(10,288)
Contribution to the plan			
Contribution from employers	688	6,963	62,730
Contribution from participants in the plan	90	90	811
Benefits paid	(1,429)	(1,553)	(13,991)
Other	211	206	1,856
Fair value of the plan assets at end of period	63,241	67,986	612,486

The SMM Group plans to make contributions of ¥4,070 million (U.S. \$36,667 thousand) in the next fiscal year (ending March 31, 2020).

(iv) Breakdown of plan assets by item

Major components of the plan assets are as follows.

Breakdown of fair value by asset class

	(Millions of yen)		
	Date of transition (As of April 1, 2017)		
	With quoted prices in active markets	With no quoted prices in active markets	Total
Japanese equity securities	24,432	–	24,432
Foreign equity securities	10,306	–	10,306
Japanese debt securities	12,309	5,768	18,077
Foreign debt securities	2,010	131	2,141
General accounts of insurance companies	–	1,028	1,028
Other	3,170	1,400	4,570
Total plan assets	52,227	8,327	60,554

	(Thousands of U.S. dollars)		
	FY2018 (As of March 31, 2019)		
	With quoted prices in active markets	With no quoted prices in active markets	Total
Japanese equity securities	205,351	–	205,351
Foreign equity securities	101,910	–	101,910
Japanese debt securities	104,757	74,279	179,036
Foreign debt securities	21,568	315	21,883
General accounts of insurance companies	–	9,856	9,856
Other	82,874	11,577	94,450
Total plan assets	516,459	96,027	612,486

The SMM Group's policy for managing plan assets is to secure stable returns over the medium to long term so that it can ensure the payment of defined benefit obligations in the future, in accordance with company regulations. More specifically, the SMM Group sets a target return and defines asset allocation within the range of tolerable risk defined annually, and seeks to maintain such target return and asset allocation in managing the plan assets. Each time the SMM Group reviews the asset allocation, it examines whether it should introduce the type of plan assets linked closely to changes in defined benefit obligations.

Also, based on the Defined Benefit Corporate Pension Act, the SMM Group regularly reviews the amount of contributions. Specifically, the SMM Group recalculates the amount of contributions every five years to maintain a well-balanced financial position.

In addition, the SMM Group has adopted an investment policy to minimize any mismatch between assets and liabilities so that it can secure stable investment returns over the medium to long term. Specifically, the SMM Group has invested primarily in low-risk long-term debt securities to suppress fluctuations in investment returns and stabilize funding ratios.

(v) Major actuarial assumptions

Major assumptions used for the actuarial calculation are as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)
Discount rate	0.60%	0.50%	0.40%

(vi) Sensitivity analysis

The impact of 0.5% changes in the discount rates used for actuarial calculations on the present value of the defined benefit obligations is as follows. Although the analysis assumes that all the other variables remain constant, changes in other assumptions may actually affect the results of the sensitivity analysis.

		(Millions of yen)		(Thousands of U.S. dollars)	
		Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
Discount rate	0.5% increase	(3,474)	(3,383)	(3,659)	(32,964)
	0.5% decrease	3,844	3,900	3,977	35,829

2) Defined contribution plan

The amounts recognized as expenses associated with a defined contribution plan are ¥491 million and ¥386 million (U.S. \$3,477 thousand) for FY2017 and FY2018, respectively.

25. Other Liabilities

The breakdown of other liabilities is as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Other current liabilities				
Borrowed bullion	6,430	6,959	4,041	36,405
Deposits received	382	1,256	744	6,703
Other	1,708	2,575	1,886	16,991
Total	8,520	10,790	6,671	60,099
Other non-current liabilities				
Other	1,147	1,148	888	8,000
Total	1,147	1,148	888	8,000

26. Equity and Other Components of Equity

(1) Share capital and Capital surplus

Changes in the numbers of authorized shares and issued shares are as follows.

	Number of authorized shares	Number of issued shares
	Shares	Shares
Date of transition (As of April 1, 2017)	1,000,000,000	581,628,031
Increase (decrease) during the period (Note 2)	(500,000,000)	(290,814,016)
FY2017 (As of March 31, 2018)	500,000,000	290,814,015
Increase (decrease) during the period	—	—
FY2018 (As of March 31, 2019)	500,000,000	290,814,015

Notes: 1. The shares issued by the Company are ordinary shares with no par value that have no restrictions on any rights. The issued shares have been fully paid up.  
2. The Company carried out a consolidation of share at the ratio of 2 shares to 1 share on October 1, 2017. Decreases in the numbers of authorized shares and issued shares are attributable to the consolidation of share.

(2) Treasury shares

Changes in the number of treasury shares are as follows.

	Number of shares	Amount
	Shares	Millions of yen
Date of transition (As of April 1, 2017)	30,030,086	32,877
Increase (decrease) during the period (Notes 1 and 2)	(14,009,987)	5,082
FY2017 (As of March 31, 2018)	16,020,099	37,959
Increase (decrease) during the period (Note 3)	6,171	24
FY2018 (As of March 31, 2019)	16,026,270	37,983

	Amount
	Thousands of U.S. dollars
FY2017 (As of March 31, 2018)	341,973
Increase (decrease) during the period (Note 3)	216
FY2018 (As of March 31, 2019)	342,189

Notes: 1. The Company carried out a consolidation of share at the ratio of 2 shares to 1 share on October 1, 2017.  
2. The number of treasury shares increased by 1,019,416 shares during the period. The increase is attributable to the purchase of fractional shares of 35,816 shares (27,169 shares and 8,647 shares before and after the share consolidation, respectively) and the purchase of treasury shares of 983,600 shares on February 28, 2018 pursuant to the resolution by the Board of Directors.

The number of treasury shares decreased by 15,029,403 shares during the period. The decrease is attributable to a decrease by 15,028,076 shares due to the share consolidation and a decrease by 1,327 shares due to sale of fractional shares to meet the demand for sale of shares less than one unit (1,103 shares and 224 shares before and after the share consolidation, respectively).

3. The number of treasury shares increased by 6,632 shares during the period. The increase is attributable to the purchase of fractional shares.

The number of treasury shares decreased by 461 shares during the period. The decrease is attributable to sale of fractional shares to meet the demand for sale of shares less than one unit.

(3) Capital surplus

The Companies Act of Japan (hereinafter the “Companies Act”) provides that at least half the amount of money paid in for issuance of shares or the amount of properties other than money delivered be credited to the share capital, and the remainder be credited to legal capital reserve, which is part of

Capital surplus. The Companies Act also provides that legal capital reserve may be credited to share capital pursuant to a resolution at the general meeting of shareholders.

(4) Retained earnings

The Companies Act provides that an amount equal to 10% of the dividends paid from surplus be transferred to legal capital reserve and legal retained earnings until the aggregate amount of legal capital reserve and legal retained earnings equals 25% of share capital. The amount accumulated in legal retained earnings may be used to offset deficit. Further, the Act provides that legal retained earnings may be reversed pursuant to a resolution at the general meeting of shareholders.

27. Dividends

(1) Dividends paid

FY2017 (From April 1, 2017 to March 31, 2018)

Date of resolution	Total dividend amount	Dividend per share	Record date	Effective date
	Millions of yen	Yen		
Ordinary General Meeting of Shareholders held on June 27, 2017	3,310	6	March 31, 2017	June 28, 2017
Board of Directors meeting held on November 9, 2017	9,377	17	September 30, 2017	December 6, 2017

Note: The Company carried out a consolidation of share at the ratio of 2 shares to 1 share on October 1, 2017.

Dividend per share shows the amount before the said consolidation of share.

FY2018 (From April 1, 2018 to March 31, 2019)

Date of resolution	Total dividend amount		Dividend per share		Record date	Effective date
	Millions of yen	Thousands of U.S. dollars	Yen	U.S. dollars		
Ordinary General Meeting of Shareholders held on June 26, 2018	18,136	163,387	66	0.59	March 31, 2018	June 27, 2018
Board of Directors meeting held on November 8, 2018	14,014	126,252	51	0.46	September 30, 2018	December 5, 2018

(2) Dividends with effective date falling in the following fiscal year are as follows.

FY2017 (From April 1, 2017 to March 31, 2018)

Date of resolution	Total dividend amount	Dividend per share	Record date	Effective date
	Millions of yen	Yen		
Ordinary General Meeting of Shareholders on June 26, 2018	18,136	66	March 31, 2018	June 27, 2018

FY2018 (From April 1, 2018 to March 31, 2019)

Date of resolution	Total dividend amount		Dividend per share		Record date	Effective date
	Millions of yen	Thousands of U.S. dollars	Yen	U.S. dollars		
Ordinary General Meeting of Shareholders on June 25, 2019	6,045	54,459	22	0.20	March 31, 2019	June 26, 2019

28. Net Sales

(1) Disaggregation of revenue and relationship with each reportable segment

FY2017 (From April 1, 2017 to March 31, 2018)

	Reportable segments				Other businesses	Total
	Mineral Resources	Smelting & Refining	Materials	Total		
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Major products/services						
Ore	154,726	—	—	154,726	—	154,726
Metals						
Copper and precious metals	—	491,118	—	491,118	—	491,118
Nickel	—	156,698	—	156,698	—	156,698
Zinc and lead	—	16,963	—	16,963	—	16,963
Materials						
Powder materials	—	—	31,893	31,893	—	31,893
Battery materials	—	—	72,674	72,674	—	72,674
Package materials	—	—	23,888	23,888	—	23,888
Other	—	3,915	56,337	60,252	10,319	70,571
Subtotal	154,726	668,694	184,792	1,008,212	10,319	1,018,531
Adjustments	(34,078)	(32,669)	(17,173)	(83,920)	(4,865)	(88,785)
Outside customers	120,648	636,025	167,619	924,292	5,454	929,746

FY2018 (From April 1, 2018 to March 31, 2019)

	Reportable segments				Other businesses	Total
	Mineral Resources	Smelting & Refining	Materials	Total		
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Major products/services						
Ore	130,078	—	—	130,078	—	130,078
Metals						
Copper and precious metals	—	462,243	—	462,243	—	462,243
Nickel	—	158,833	—	158,833	—	158,833
Zinc and lead	—	13,970	—	13,970	—	13,970
Materials						
Powder materials	—	—	33,233	33,233	—	33,233
Battery materials	—	—	113,547	113,547	—	113,547
Package materials	—	—	18,193	18,193	—	18,193
Other	—	2,733	54,423	57,156	8,864	66,020
Subtotal	130,078	637,779	219,396	987,253	8,864	996,117
Adjustments	(29,979)	(32,386)	(16,388)	(78,753)	(5,156)	(83,909)
Outside customers	100,099	605,393	203,008	908,500	3,708	912,208



	Reportable segments				Other businesses	Total
	Mineral Resources	Smelting & Refining	Materials	Total		
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
Major products/services						
Ore	1,171,874	—	—	1,171,874	—	1,171,874
Metals						
Copper and precious metals	—	4,164,351	—	4,164,351	—	4,164,351
Nickel	—	1,430,928	—	1,430,928	—	1,430,928
Zinc and lead	—	125,856	—	125,856	—	125,856
Materials						
Powder materials	—	—	299,396	299,396	—	299,396
Battery materials	—	—	1,022,946	1,022,946	—	1,022,946
Package materials	—	—	163,901	163,901	—	163,901
Other	—	24,622	490,297	514,919	79,856	594,775
Subtotal	1,171,874	5,745,757	1,976,541	8,894,171	79,856	8,974,027
Adjustments	(270,081)	(291,766)	(147,640)	(709,486)	(46,450)	(755,937)
Outside customers	901,793	5,453,991	1,828,901	8,184,685	33,405	8,218,090

#### 1) Mineral Resources

In the Mineral Resources segment, the SMM Group mainly engages in sales of gold and silver ores, copper concentrates and copper produced by the SX-EW method. Regarding the timing of revenue recognition, the SMM Group records revenue at the time of delivery of the goods because a performance obligation is satisfied by transferring control over the goods to the customer. Revenue from sale of these products are measured at the transaction price in contracts with customers. The contracts do not contain a significant financing component as the consideration for most transactions is received within one year after the performance obligation is satisfied.

#### 2) Smelting & Refining

In the Smelting & Refining business, the SMM Group mainly engages in sales of copper, nickel, ferronickel and zinc, as well as sales of precious metals such as gold, silver and platinum. Regarding the timing of revenue recognition, the SMM Group records revenue at the time of delivery of the goods because a performance obligation is satisfied by transferring control over the goods to the customer. Revenue from sale of these products are measured at the transaction price in contracts with customers. The contracts do not contain a significant financing component as the consideration for most transactions is received within one year after the performance obligation is satisfied.

#### 3) Materials

In the Materials business, the SMM Group mainly engages in sales of semiconductor materials such as tape materials, as well as sales of advanced materials such as battery materials, pastes, powder materials, crystal materials and thin film materials. Regarding the timing of revenue recognition, the SMM Group records revenue at the time of delivery of the goods because a performance obligation is satisfied by transferring control over the goods to the customer. Revenue from sale of these products are measured at the transaction price in contracts with customers. The contracts do not contain a significant financing component as the consideration for most transactions is received within one year after the performance obligation is satisfied.

#### (2) Contract balances

Contract balances consist primarily of receivables (notes and accounts receivable-trade) arising from contracts with customers. The balances are presented in “Note 9. Trade and Other Receivables.”

#### (3) Transaction price allocated to the remaining performance obligations

There are no significant transactions with the individual contract period exceeding one year. The SMM Group has applied the practical expedient provided in paragraph 121 of IFRS 15 and omitted disclosure of the information about the remaining performance obligations with an individual expected contract period of one year or less.

There are no significant considerations from contracts with customers that were not included in the transaction price.

#### (4) Assets recognized from the costs to obtain or fulfil a contract with a customer

There are no incremental costs to obtain a contract and significant costs to fulfill a contract with a customer that the SMM Group shall recognize as an asset.

### 29. Breakdown of Expenses by Nature

The breakdown of cost of sales and selling, general and administrative expenses is as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	Thousands of U.S. dollars
	Millions of yen	Millions of yen	
Material cost and cost of merchandise sold	613,986	634,465	5,715,901
Personnel expenses	66,667	65,373	588,946
Depreciation	44,754	40,541	365,234
Subcontract expenses	21,975	22,107	199,162
Repair expenses	18,929	20,397	183,757
Research and development expenses	5,109	6,298	56,739
Other	55,131	45,719	411,883
Total	826,551	834,900	7,521,622

### 30. Finance Income and Costs

#### (1) Finance income

The breakdown of finance income is as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	Thousands of U.S. dollars
	Millions of yen	Millions of yen	
Interest income			
Financial assets measured at amortized cost	13,433	14,319	129,000
Dividend income			
Equity financial assets measured at fair value through other comprehensive income	3,596	3,803	34,261
Foreign exchange gains	—	2,845	25,631
Other	335	—	—
Total	17,364	20,967	188,892

(2) Finance costs

The breakdown of finance costs is as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Interest expense			
Financial liabilities measured at amortized cost	8,300	6,887	62,045
Foreign exchange losses	5,710	—	—
Other	241	1,975	17,793
<b>Total</b>	<b>14,251</b>	<b>8,862</b>	<b>79,838</b>

31. Other Income and Expenses

(1) The breakdown of other income is as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Gain on sale of subsidiaries	—	9,512	85,694
Gain on sale of fixed assets	83	262	2,360
Foreign exchange gains	3,269	6	54
Gain on step acquisitions	693	—	—
Other	1,640	3,231	29,108
<b>Total</b>	<b>5,685</b>	<b>13,011</b>	<b>117,216</b>

During FY2018 the SMM Group recorded gain on sale of subsidiaries of ¥9,512 million (U.S. \$85,694 thousand) as a result of selling Sumitomo Metal Mining Pogo LLC, a consolidated subsidiary of the Company, which belonged to the Mineral Resources segment.

The share transfer transaction was completed on September 28, 2018.

(2) The breakdown of other expenses is as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Provision for decommissioning preparations	6,361	350	3,153
Loss on sales and retirement of fixed assets	729	1,079	9,721
Suspended business management expense	646	794	7,153
Maintenance expense of suspended or abandoned mines	640	700	6,306
Other	7,669	5,229	47,108
<b>Total</b>	<b>16,045</b>	<b>8,152</b>	<b>73,441</b>

32. Other Comprehensive Income

The following table shows the analysis of other comprehensive income by item in terms of the amount that occurred during the period, the amount reclassified to profit or loss, and the effect of income taxes.

FY2017 (From April 1, 2017 to March 31, 2018)

	Amount that occurred during the period	Reclassification adjustment	Amount before tax	Income taxes	Amount after tax
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Items that will not be reclassified to profit or loss:					
Net change in fair value of equity instruments designated as measured at fair value through other comprehensive income	12,360	—	12,360	(3,446)	8,914
Remeasurements of defined benefit plans	2,315	—	2,315	(674)	1,641
Share of other comprehensive income of investments accounted for using equity method	148	—	148	—	148
<b>Total of items that will not be reclassified to profit or loss</b>	<b>14,823</b>	<b>—</b>	<b>14,823</b>	<b>(4,120)</b>	<b>10,703</b>
Items that will be reclassified to profit or loss:					
Cash flow hedges	(649)	166	(483)	378	(106)
Exchange differences on transition of foreign operations	(12,074)	1,787	(10,287)	—	(10,287)
Share of other comprehensive income of investments accounted for using equity method	(5,024)	—	(5,024)	—	(5,024)
<b>Total of items that will be reclassified to profit or loss</b>	<b>(17,747)</b>	<b>1,953</b>	<b>(15,794)</b>	<b>378</b>	<b>(15,417)</b>
<b>Total</b>	<b>(2,924)</b>	<b>1,953</b>	<b>(971)</b>	<b>(3,742)</b>	<b>(4,714)</b>

FY2018 (From April 1, 2018 to March 31, 2019)

	Amount that occurred during the period	Reclassification adjustment	Amount before tax	Income taxes	Amount after tax
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Items that will not be reclassified to profit or loss:					
Net change in fair value of equity instruments designated as measured at fair value through other comprehensive income	(9,022)	—	(9,022)	2,053	(6,969)
Remeasurements of defined benefit plans	(4,381)	—	(4,381)	1,345	(3,036)
Share of other comprehensive income of investments accounted for using equity method	(205)	—	(205)	—	(205)
<b>Total of items that will not be reclassified to profit or loss</b>	<b>(13,608)</b>	<b>—</b>	<b>(13,608)</b>	<b>3,398</b>	<b>(10,210)</b>
Items that will be reclassified to profit or loss:					
Cash flow hedges	721	(105)	616	(151)	466
Exchange differences on transition of foreign operations	475	—	475	—	475
Share of other comprehensive income of investments accounted for using equity method	(6,323)	—	(6,323)	—	(6,323)
<b>Total of items that will be reclassified to profit or loss</b>	<b>(5,127)</b>	<b>(105)</b>	<b>(5,232)</b>	<b>(151)</b>	<b>(5,382)</b>
<b>Total</b>	<b>(18,735)</b>	<b>(105)</b>	<b>(18,840)</b>	<b>3,247</b>	<b>(15,592)</b>

	Amount that occurred during the period	Reclassification adjustment	Amount before tax	Income taxes	Amount after tax
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
Items that will not be reclassified to profit or loss:					
Net change in fair value of equity instruments designated as measured at fair value through other comprehensive income	(81,279)	–	(81,279)	18,495	(62,784)
Remeasurements of defined benefit plans	(39,468)	–	(39,468)	12,117	(27,351)
Share of other comprehensive income of investments accounted for using equity method	(1,847)	–	(1,847)	–	(1,847)
Total of items that will not be reclassified to profit or loss	(122,595)	–	(122,595)	30,613	(91,982)
Items that will be reclassified to profit or loss:					
Cash flow hedges	6,495	(946)	5,550	(1,360)	4,198
Exchange differences on transition of foreign operations	4,279	–	4,279	–	4,279
Share of other comprehensive income of investments accounted for using equity method	(56,964)	–	(56,964)	–	(56,964)
Total of items that will be reclassified to profit or loss	(46,189)	(946)	(47,135)	(1,360)	(48,486)
Total	(168,784)	(946)	(169,730)	29,252	(140,468)

### 33. Earnings per Share

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)
Profit attributable to owners of parent (Millions of yen)	90,227	66,790
Adjustment of profit attributable to owners of parent (Millions of yen)	272	–
Profit used to calculate diluted earnings per share (Millions of yen)	90,499	66,790
Weighted average number of ordinary shares outstanding (Thousands of shares)	275,703	274,790
Increase in ordinary shares (Thousands of shares)	30,755	–
Weighted average number of diluted ordinary shares (Thousands of shares)	306,458	274,790
Basic earnings per share (Yen)	327.26	243.06
Diluted earnings per share (Yen)	295.31	243.06
	FY2018 (From April 1, 2018 to March 31, 2019)	
Profit attributable to owners of parent (Thousands of U.S. dollars)	601,712	
Adjustment of profit attributable to owners of parent (Thousands of U.S. dollars)	–	
Profit used to calculate diluted earnings per share (Thousands of U.S. dollars)	601,712	
Basic earnings per share (U.S. dollars)	2.19	
Diluted earnings per share (U.S. dollars)	2.19	

Note: The Company carried out a consolidation of share at the ratio of 2 shares to 1 share on October 1, 2017. Basic earnings per share and diluted earnings per share have been calculated on the assumption that the said consolidation of share was carried out at the beginning of the previous fiscal year.

### 34. Cash Flow Information

#### (1) Cash inflows and outflows for acquisition or sale of subsidiaries, etc.

The breakdown of assets acquired and liabilities assumed by SMM Gold Cote Inc., the Company's consolidated subsidiary, in FY2017, as a result of the purchase of mining rights in the Côte Gold Project, and the relations between the acquisition amount of mining rights and payments for purchase of mining rights are listed as follows.

(Millions of yen)	
	FY2017 (From April 1, 2017 to March 31, 2018)
Breakdown of assets at time of purchase of mining rights	
Current assets	8
Non-current assets	21,490
Breakdown of liabilities at time of purchase of mining rights	
Current liabilities	(10,342)
Non-current liabilities	(33)

(Millions of yen)	
	FY2017 (From April 1, 2017 to March 31, 2018)
Consideration paid	11,123
Cash and cash equivalents	(1)
Payments for purchase of mining rights	11,122

During FY2018, the Company sold the shares of Sumitomo Metal Mining Pogo LLC., which had been a consolidated subsidiary. The breakdown of assets and liabilities of the subsidiary at the time of the sale, as well as considerations received and proceeds from sale of the shares, are as follows.

	(Thousands of U.S. dollars)	
	(Millions of yen)	
	FY2018 (From April 1, 2018 to March 31, 2019)	
Breakdown of assets at time of loss of control		
Current assets	5,355	48,243
Non-current assets	17,619	158,730
Breakdown of liabilities at time of loss of control		
Current liabilities	(2,440)	(21,982)
Non-current liabilities	(5,743)	(51,739)

	(Thousands of U.S. dollars)	
	(Millions of yen)	
	FY2018 (From April 1, 2018 to March 31, 2019)	
Consideration received	(25,101)	(226,135)
Cash and cash equivalents	570	5,135
Proceeds from sale of interests in subsidiaries resulting in change in scope of consolidation (received)	(24,531)	(221,000)



(2) Changes in liabilities arising from financing activities

Changes in liabilities arising from financing activities are as follows.

FY2017 (From April 1, 2017 to March 31, 2018)

	As of April 1, 2017	Changes with cash flows	Changes without cash flows				As of March 31, 2018
			Exchange differences on transition of foreign operations	Changes under amortized cost method	Changes in fair value	Other	
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Short-term borrowings	77,580	(34,161)	(2,057)	–	–	–	41,362
Long-term borrowings	373,419	(86,664)	(6,331)	24	–	–	280,448
Bonds payable	39,938	30,150	–	33	–	(791)	69,330
Total	490,937	(90,675)	(8,388)	57	–	(791)	391,140

FY2018 (From April 1, 2018 to March 31, 2019)

	As of April 1, 2018	Changes with cash flows	Changes without cash flows				As of March 31, 2019
			Exchange differences on transition of foreign operations	Changes under amortized cost method	Changes in fair value	Other	
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Short-term borrowings	41,362	2,761	637	–	–	–	44,760
Long-term borrowings	280,448	(8,057)	2,682	53	–	–	275,126
Bonds payable	69,330	(10,083)	–	158	–	–	59,405
Total	391,140	(15,379)	3,319	211	–	–	379,291

	As of April 1, 2018	Changes with cash flows	Changes without cash flows				As of March 31, 2019
			Exchange differences on transition of foreign operations	Changes under amortized cost method	Changes in fair value	Other	
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
Short-term borrowings	372,631	24,874	5,739	–	–	–	403,243
Long-term borrowings	2,526,559	(72,586)	24,162	477	–	–	2,478,613
Bonds payable	624,595	(90,838)	–	1,423	–	–	535,180
Total	3,523,784	(138,550)	29,901	1,901	–	–	3,417,036

35. Financial Instruments

(1) Management of capital risk

In order to sustainably enhance its corporate value, the SMM Group regularly sets out policies for the level of shareholders' equity and its debt/equity structure, and then verifies the status of their implementation under the capital policy in view of capital efficiency and stability related to financing. In addition, in "2018 3-Year Business Plan," the SMM Group has determined to maintain a consolidated equity ratio of 50% or more as a financial indicator to prove its sound financial strength.

Changes in consolidated equity ratio are as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Total equity attributable to owners of parent	957,502	1,029,385	1,047,561	9,437,486
Total liabilities and equity	1,714,979	1,732,333	1,797,701	16,195,505
Consolidated equity ratio (Equity attributable to owners of parent ratio)	55.8%	59.4%	58.3%	58.3%

(2) Management of financial risk

The SMM Group is exposed to various risks, such as credit risk, liquidity risk and market risks (comprising foreign currency risk, interest rate risk, commodity price fluctuation risk and equity price fluctuation risk), and performs risk management as described below.

1) Credit risk

Credit risk is the risk that customers and other counterparties will default on their contractual obligations, resulting in financial loss to the SMM Group.

With respect to trade receivables (notes and accounts receivable-trade), each business division within the SMM Group establishes its own set of credit control regulations. Pursuant to these regulations, sales and other relevant departments regularly monitor the status of counterparties, managing due dates and balances on an individual counterparty basis. In this manner, every effort is made to ensure early detection and mitigation of concerns regarding collection due to deterioration in financial standing or other factors.

As for other receivables (accounts receivable-other, etc.) and other financial assets (loans receivable, etc.), the SMM Group goes through an internal approval process regarding counterparties' credit status at the start of transaction. The SMM Group also monitors counterparties to check their credit status on a regular basis even after the start of transaction. The SMM Group's long-term interests in its associates and joint ventures are excluded from the scope of disclosure on credit risk management.

With respect to the use of derivative transactions, steps are taken to engage in transactions with highly rated financial institutions only. These steps are taken with the aim of mitigating counterparty risk; therefore, such transactions have only limited impact on the SMM Group's credit risk. The SMM Group does not expose itself to significant concentrations of credit risk from specific counterparties as its receivables are due from a number of counterparties across a wide range of industries and geographies.

The maximum amount of the credit risk as of the consolidated closing date equals to the carrying amount of financial assets subject to credit risk that are presented in the consolidated statement of financial position. The following is the balance of guarantee obligations, which is the maximum exposure related to the SMM Group's credit risk.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Guarantee obligations	84,223	73,988	63,918	575,838

No provision for loss on guarantees that could arise from the performance of the said guarantee contracts is recorded as it is monetarily immaterial.

With respect to allowance for doubtful accounts for trade receivables, lifetime expected credit losses (ECL) are measured on a collective basis. The SMM Group calculates said allowance by first grouping receivables according to the similarity in characteristics of credit risks; and then by multiplying such receivables by a provision rate, determined based on the historical credit loss experience taking into account factors such as expected future economic conditions. A financial asset is considered to be credit-impaired when one or more events occur that have a detrimental impact on all the future cash flows that the SMM Group expects to receive; such events include an increase in probability that a counterparty will go into bankruptcy or other financial reorganization. On the occurrence of such events, the SMM Group measures ECL for credit-impaired financial assets on an individual receivable basis.

Allowance for doubtful accounts for other receivables and other financial assets is measured at an amount equal to 12-month ECL if credit risk for them is deemed not to have increased significantly in accordance with the general approach. If otherwise, allowance for doubtful accounts is measured at an amount equal to lifetime ECL.

(i) Trade receivables

Changes in allowance for doubtful accounts for trade receivables are as follows:

FY2017 (From April 1, 2017 to March 31, 2018)

Allowance for doubtful accounts for	Financial assets recorded at an amount equal to 12-month ECL	Financial assets recorded at an amount equal to lifetime ECL			Total
		Financial assets to which the simplified approach is applied	Financial assets whose credit risk has increased significantly since initial recognition	Credit-impaired financial assets	
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	–	105	–	–	105
Increase	–	2	–	–	2
Decrease (utilized)	–	(103)	–	–	(103)
Decrease (reversed)	–	(1)	–	–	(1)
Other	–	–	–	–	–
As of March 31, 2018	–	3	–	–	3

FY2018 (From April 1, 2018 to March 31, 2019)

Allowance for doubtful accounts for	Financial assets recorded at an amount equal to 12-month ECL	Financial assets recorded at an amount equal to lifetime ECL			Total
		Financial assets to which the simplified approach is applied	Financial assets whose credit risk has increased significantly since initial recognition	Credit-impaired financial assets	
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2018	–	3	–	–	3
Increase	–	–	–	–	–
Decrease (utilized)	–	(2)	–	–	(2)
Decrease (reversed)	–	–	–	–	–
Other	–	–	–	–	–
As of March 31, 2019	–	1	–	–	1

Allowance for doubtful accounts for	Financial assets recorded at an amount equal to 12-month ECL	Financial assets recorded at an amount equal to lifetime ECL			Total
		Financial assets to which the simplified approach is applied	Financial assets whose credit risk has increased significantly since initial recognition	Credit-impaired financial assets	
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of April 1, 2018	–	27	–	–	27
Increase	–	–	–	–	–
Decrease (utilized)	–	(18)	–	–	(18)
Decrease (reversed)	–	–	–	–	–
Other	–	–	–	–	–
As of March 31, 2019	–	9	–	–	9

The aggregate carrying amount of financial assets subject to allowance for doubtful accounts is as follows.

Carrying amount	Financial assets recorded at an amount equal to 12-month ECL	Financial assets to which the simplified approach is applied	Financial assets whose credit risk has increased significantly since initial recognition	Credit-impaired financial assets
	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	–	100,601	–	–
As of March 31, 2018	–	141,798	–	–
As of March 31, 2019	–	108,357	–	–
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of March 31, 2019	–	976,189	–	–

(ii) Other receivables and other financial assets

Changes in allowance for doubtful accounts for other receivables and other financial assets is as follows.

FY2017 (From April 1, 2017 to March 31, 2018)

Allowance for doubtful accounts for	Financial assets recorded at an amount equal to 12-month ECL	Financial assets recorded at an amount equal to lifetime ECL			Total
		Financial assets to which the simplified approach is applied	Financial assets whose credit risk has increased significantly since initial recognition	Credit-impaired financial assets	
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	–	–	–	827	827
Increase	–	–	–	28	28
Decrease (utilized)	–	–	–	(4)	(4)
Decrease (reversed)	–	–	–	(4)	(4)
Other	–	–	–	–	–
As of March 31, 2018	–	–	–	847	847

FY2018 (From April 1, 2018 to March 31, 2019)

Allowance for doubtful accounts for	Financial assets recorded at an amount equal to 12-month ECL	Financial assets recorded at an amount equal to lifetime ECL			Total
		Financial assets to which the simplified approach is applied	Financial assets whose credit risk has increased significantly since initial recognition	Credit-impaired financial assets	
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2018	–	–	–	847	847
Increase	–	–	–	29	29
Decrease (utilized)	–	–	–	(676)	(676)
Decrease (reversed)	–	–	–	–	–
Other	–	–	–	–	–
As of March 31, 2019	–	–	–	200	200

Allowance for doubtful accounts for	Financial assets recorded at an amount equal to 12-month ECL	Financial assets recorded at an amount equal to lifetime ECL			Total
		Financial assets to which the simplified approach is applied	Financial assets whose credit risk has increased significantly since initial recognition	Credit-impaired financial assets	
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of April 1, 2018	–	–	–	7,631	7,631
Increase	–	–	–	261	261
Decrease (utilized)	–	–	–	(6,090)	(6,090)
Decrease (reversed)	–	–	–	–	–
Other	–	–	–	–	–
As of March 31, 2019	–	–	–	1,802	1,802

The aggregate carrying amount of financial assets subject to allowance for doubtful accounts is as follows.

Carrying amount	Financial assets recorded at an amount equal to 12-month ECL	Financial assets to which the simplified approach is applied	Financial assets whose credit risk has increased significantly since initial recognition	Credit-impaired financial assets
	Millions of yen	Millions of yen	Millions of yen	Millions of yen
As of April 1, 2017	64,631	–	–	1,001
As of March 31, 2018	26,029	–	–	1,025
As of March 31, 2019	34,761	–	–	380
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
As of March 31, 2019	313,162	–	–	3,423



## 2) Liquidity risk

Liquidity risk is the risk of being unable to make payments on due dates in situations where the SMM Group is required to fulfill its repayment obligations for financial liabilities due.

The SMM Group manages liquidity risk by preparing and updating a cash management plan six months in advance based on reports from each department and division. Certain consolidated subsidiaries have adopted a cash management system and are efficiently maintaining appropriate levels of liquidity and cash on hand.

While maintaining an appropriate level of funds for repayment, the SMM Group has established a commitment line in case of emergencies such as unexpected funding needs and significant decline in market liquidity.

The amount of non-derivative financial liabilities by remaining term to maturity is as follows.

Date of transition (As of April 1, 2017)

	Carrying amount	Contractual cash flows	Due within one year	Due after one year through two years	Due after two years through three years	Due after three years through four years	Due after four years through five years	Due after five years
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Non-derivative financial liabilities								
Trade and other payables	101,402	101,402	101,402	—	—	—	—	—
Bonds and borrowings	490,937	549,198	99,753	58,957	132,762	33,118	48,477	176,131
Total	592,339	650,600	201,155	58,957	132,762	33,118	48,477	176,131

FY2017 (As of March 31, 2018)

	Carrying amount	Contractual cash flows	Due within one year	Due after one year through two years	Due after two years through three years	Due after three years through four years	Due after four years through five years	Due after five years
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Non-derivative financial liabilities								
Trade and other payables	125,494	125,494	125,494	—	—	—	—	—
Bonds and borrowings	391,140	417,016	99,827	32,240	32,919	47,768	69,589	134,673
Total	516,634	542,510	225,321	32,240	32,919	47,768	69,589	134,673

FY2018 (As of March 31, 2019)

	Carrying amount	Contractual cash flows	Due within one year	Due after one year through two years	Due after two years through three years	Due after three years through four years	Due after four years through five years	Due after five years
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen
Non-derivative financial liabilities								
Trade and other payables	165,823	165,823	165,823	—	—	—	—	—
Bonds and borrowings	379,291	406,992	81,041	39,257	74,152	75,471	26,864	110,207
Total	545,114	572,815	246,864	39,257	74,152	75,471	26,864	110,207

	Carrying amount	Contractual cash flows	Due within one year	Due after one year through two years	Due after two years through three years	Due after three years through four years	Due after four years through five years	Due after five years
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
Non-derivative financial liabilities								
Trade and other payables	1,493,901	1,493,901	1,493,901	—	—	—	—	—
Bonds and borrowings	3,417,036	3,666,595	730,099	353,667	668,036	679,919	242,018	992,856
Total	4,910,937	5,160,495	2,224,000	353,667	668,036	679,919	242,018	992,856

## 3) Market risks

### (i) Foreign currency risk

The SMM Group uses forward exchange contracts and currency option contracts in an effort to offset the risks of movements in foreign currency exchange rates in connection with recognized receivables and payables as well as forecast transactions denominated in foreign currencies.

#### Exposure to foreign currency risk

The SMM Group is exposed to foreign currency risk mainly arising from U.S. dollar fluctuations.

The SMM Group's exposure to the U.S. dollar exchange risk is as follows. The following figures are after deduction of the amount of exposures to foreign currency risk that is hedged with derivative transactions.

	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)
	Thousands of U.S. dollars	Thousands of U.S. dollars
Net exposure (liability)	257,273	(320,088)

#### Sensitivity analysis of foreign exchange

As for the SMM Group's foreign-currency-denominated financial instruments to which hedge accounting is not applied, the impact of weakening of the yen against the U.S. dollar by 1% on profit in the consolidated statement of profit or loss in each reporting period is as follows.

The figures below do not include the impact of translation of financial instruments denominated in functional currencies, as well as assets and liabilities and revenues and costs of foreign operations into yen. This analysis is based on the assumption that other variable factors are constant.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Profit	+192	(246)	(2,216)

(ii) Interest rate risk

The SMM Group uses interest rate swap contracts and interest rate option contracts aiming at hedging the risks of hikes in interest rates for floating-rate borrowings.

**Exposure to interest rate risk**

The SMM Group's exposure to interest rate risk is as follows. The following figures are after deduction of the amount of exposures to interest rate risk that is hedged with derivative transactions.

	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Net exposure (liability)	(190,625)	(183,919)	(1,656,928)

**Sensitivity analysis of interest rate**

As for the SMM Group's floating-rate borrowings to which hedge accounting is not applied, the impact of interest rate hikes by 1% on profit in the consolidated statement of profit or loss in each reporting period is as follows. However, this analysis is based on the assumption that other variable factors (balance, exchange rate, etc.) are constant.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Profit	(1,558)	(1,477)	(13,306)

(iii) Commodity price risk

The SMM Group engages in sales of metal and other products and purchases of copper concentrates and other materials that are used as raw materials for such products. As sales and purchase prices of such commodities are affected by fluctuations in commodity prices, the SMM Group is exposed to risk of price fluctuations. Therefore, the SMM Group employs commodity forward contracts and commodity option contracts, which seek to provide hedges for the risk of price fluctuations.

**Sensitivity analysis of commodity prices**

As for the SMM Group's commodity forward and other contracts, the impact of commodity price changes on profit in the consolidated statement of profit or loss is immaterial for FY2017 and FY2018.

(iv) Risks associated with fluctuations in prices of equity instruments

With respect to equity instruments, the SMM Group regularly monitors fair values as well as the financial status of issuers; when such issuers are the SMM Group's counterparties, the SMM Group also reviews its holdings on a continuous basis taking into consideration its relationships with them.

**Sensitivity analysis of risks associated with fluctuations in prices of equity instruments**

The impact of drops in market prices of the SMM Group's equity instruments by 10% on other comprehensive income (net of tax effect) in each reporting period is as follows. This analysis is based on the assumption that all other variable factors are constant.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Other comprehensive income (net of tax effect)	(10,869)	(10,433)	(93,991)

(3) Fair value of financial instruments

1) Financial instruments measured at amortized cost

Carrying amount and fair value of financial instruments measured at amortized cost are as follows.

The table below does not include financial instruments whose carrying amounts reasonably approximate fair values and those that are immaterial, except for floating-rate long-term loans receivable and payable.

	Date of transition (As of April 1, 2017)		FY2017 (As of March 31, 2018)		FY2018 (As of March 31, 2019)		
	Carrying amount	Fair value	Carrying amount	Fair value	Carrying amount		Fair value
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars	Thousands of U.S. dollars
Long-term loans receivable	101,366	104,297	93,626	94,762	177,738	1,601,243	1,594,658
Bonds payable	39,938	40,780	39,965	40,457	29,912	269,477	272,838
Convertible bond-type bonds with share acquisition rights	—	—	29,365	29,973	29,493	265,703	271,405
Long-term borrowings	373,419	377,263	280,448	282,319	275,126	2,478,613	2,499,027

The method to measure fair value is as follows.

**Long-term loans receivable**

The fair values of floating-rate long-term loans receivable are based on their carrying amounts because their fair values reflect market interest rates within a short period of time and closely approximate their carrying amounts.

Fixed-rate long-term loans receivable are classified into Level 3 of fair value hierarchy, and their fair values are measured based on a method whereby the total principal and interest are discounted at an interest rate reflecting difference between market interest rates at inception of loan and those at the end of the period.

Long-term loans receivable are included and presented in other financial assets in the consolidated statement of financial position.

**Bonds payable**

Bonds payable are classified into Level 2 of fair value hierarchy, and their fair values are measured based on market prices and others.

Bonds payables are included and presented in bonds and borrowings in the consolidated statement of financial position.

**Convertible bond-type bonds with share acquisition rights**

Bond portion of convertible bond-type bonds with share acquisition rights is classified into Level 3 of fair value hierarchy, and its fair value is measured based on risk-free rates, credit spreads of discount bonds and others.

Bond portion of convertible bond-type bonds with share acquisition rights is included and presented in bonds and borrowings in the consolidated statement of financial position.

### Long-term borrowings

The fair values of floating-rate long-term borrowings are based on their carrying amounts because their fair values reflect market interest rates within a short period of time and closely approximate their carrying amounts.

Fixed-rate long-term borrowings are classified into Level 3 of fair value hierarchy, and their fair values are measured based on a method whereby the total principal and interest are discounted at an estimated interest rate that is assumed to be applied to a new similar borrowing.

Long-term borrowings are included and presented in bonds and borrowings in the consolidated statement of financial position.

### 2) Financial instruments measured at fair value

The fair value hierarchy is categorized into the following three levels based on observability in market of inputs used to measure fair value.

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities

Level 2: Inputs other than quoted prices included within Level 1 that are observable either directly or indirectly

Level 3: Unobservable inputs

The breakdown of financial instruments measured at fair value by fair value hierarchy level is as follows.

Date of transition (As of April 1, 2017)

	Level 1	Level 2	Level 3	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen
<b>Assets:</b>				
Financial assets measured at fair value through profit or loss				
Trade receivables with embedded derivatives	–	3,590	–	3,590
Derivatives to which hedge accounting is not applied	–	1,214	–	1,214
Derivatives to which hedge accounting is applied	–	1,542	–	1,542
Financial assets measured at fair value through other comprehensive income				
Equity instruments	137,758	–	8,868	146,626
<b>Total</b>	<b>137,758</b>	<b>6,346</b>	<b>8,868</b>	<b>152,972</b>
<b>Liabilities:</b>				
Financial liabilities measured at fair value through profit or loss				
Derivatives to which hedge accounting is not applied	–	1,270	–	1,270
Derivatives to which hedge accounting is applied	–	329	–	329
<b>Total</b>	<b>–</b>	<b>1,599</b>	<b>–</b>	<b>1,599</b>

FY2017 (As of March 31, 2018)

	Level 1	Level 2	Level 3	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen
<b>Assets:</b>				
Financial assets measured at fair value through profit or loss				
Trade receivables with embedded derivatives	–	4,826	–	4,826
Derivatives to which hedge accounting is not applied	–	802	33	835
Derivatives to which hedge accounting is applied	–	1,835	–	1,835
Financial assets measured at fair value through other comprehensive income				
Equity instruments	152,788	–	6,432	159,220
<b>Total</b>	<b>152,788</b>	<b>7,463</b>	<b>6,465</b>	<b>166,716</b>
<b>Liabilities:</b>				
Financial liabilities measured at fair value through profit or loss				
Derivatives to which hedge accounting is not applied	–	294	–	294
Derivatives to which hedge accounting is applied	–	216	–	216
<b>Total</b>	<b>–</b>	<b>510</b>	<b>–</b>	<b>510</b>

FY2018 (As of March 31, 2019)

	Level 1	Level 2	Level 3	Total
	Millions of yen	Millions of yen	Millions of yen	Millions of yen
<b>Assets:</b>				
Financial assets measured at fair value through profit or loss				
Trade receivables with embedded derivatives	–	11,892	–	11,892
Derivatives to which hedge accounting is not applied	–	1,528	9	1,537
Derivatives to which hedge accounting is applied	–	1,390	–	1,390
Financial assets measured at fair value through other comprehensive income				
Equity instruments	143,711	–	6,472	150,183
<b>Total</b>	<b>143,711</b>	<b>14,810</b>	<b>6,481</b>	<b>165,002</b>
<b>Liabilities:</b>				
Financial liabilities measured at fair value through profit or loss				
Derivatives to which hedge accounting is not applied	–	1,068	–	1,068
Derivatives to which hedge accounting is applied	–	781	–	781
<b>Total</b>	<b>–</b>	<b>1,849</b>	<b>–</b>	<b>1,849</b>



	Level 1	Level 2	Level 3	Total
	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars	Thousands of U.S. dollars
<b>Assets:</b>				
Financial assets measured at fair value through profit or loss				
Trade receivables with embedded derivatives	–	107,135	–	107,135
Derivatives to which hedge accounting is not applied	–	13,766	81	13,847
Derivatives to which hedge accounting is applied	–	12,523	–	12,523
Financial assets measured at fair value through other comprehensive income				
Equity instruments	1,294,694	–	58,306	1,353,000
<b>Total</b>	<b>1,294,694</b>	<b>133,423</b>	<b>58,387</b>	<b>1,486,505</b>
<b>Liabilities:</b>				
Financial liabilities measured at fair value through profit or loss				
Derivatives to which hedge accounting is not applied	–	9,622	–	9,622
Derivatives to which hedge accounting is applied	–	7,036	–	7,036
<b>Total</b>	<b>–</b>	<b>16,658</b>	<b>–</b>	<b>16,658</b>

The SMM Group recognizes transfers between fair value hierarchy levels as of the date of the event or change in circumstances that is the reason for the transfer.

There was no material transfer between Level 1 and Level 2 during each reporting period.

In addition, at derecognition of equity instruments or when the significant decline in fair value below acquisition cost is not temporary, the balance of other components of equity is transferred directly into retained earnings and not recognized in profit or loss.

The method to measure fair value is as follows.

#### Trade receivables with embedded derivatives

Trade receivables that include embedded derivatives and are accounted for in combination are classified into Level 2 of fair value hierarchy, and their fair values are measured based on the market price of copper on the LME for a certain period of time in the future.

Trade receivables with embedded derivatives are included and presented in trade and other receivables in the consolidated statement of financial position.

#### Derivatives

Derivatives are classified into Level 2 of fair value hierarchy, and their fair values are measured based on market prices and others.

Derivatives are included and presented in either other financial assets or other financial liabilities in the consolidated statement of financial position.

Derivatives embedded in convertible bond-type bonds with share acquisition rights are classified into Level 3 of fair value hierarchy, and their fair values are measured using valuation techniques such as one based on discounted future cash flows.

#### Equity instruments

Marketable securities are classified into Level 1 of fair value hierarchy, and their fair values are measured based on market prices.

Unlisted shares are classified into Level 3 of fair value hierarchy, and their fair values are measured using valuation techniques such as one based on discounted future cash flows.

Unlisted shares are included and presented in other financial assets in the consolidated statement of financial position.

### 3) Reconciliation of financial instruments classified into Level 3 from the beginning to the end of period

Changes in the balance of financial instruments classified into Level 3 from the beginning to the end of period are as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Balance at beginning of period	8,868	6,465	58,243
Total gains and losses			
Profit or loss (Note 1)	33	(24)	(216)
Other comprehensive income (Note 2)	(2,334)	35	315
Purchases	–	5	45
Sales	(19)	–	–
Transfers out of Level 3 (Note 3)	(83)	–	–
Other	–	–	–
Balance at end of period	6,465	6,481	58,387

- Notes:
1. Gains and losses included in profit or loss relate to financial assets measured at fair value through profit or loss as of the end of the reporting period. These gains and losses are included in “finance income” and “finance costs” in the consolidated statement of profit or loss, respectively.
  2. Gains and losses included in other comprehensive income relate to financial assets measured at fair value through other comprehensive income as of the end of the reporting period. These gains and losses are included in “financial assets measured at fair value through other comprehensive income” in the consolidated statement of comprehensive income.
  3. Transfers out of Level 3 recognized for FY2017 are due to listing of portfolio companies on stock exchanges.

Financial instruments classified into Level 3 consist of non-listed shares and derivatives embedded in convertible bond-type bonds with share acquisition rights.

In accordance with the SMM Group’s accounting policy, their fair values are measured on a quarterly basis using the latest available data and reported to the superior; the SMM Group also constantly validates their appropriateness.

Significant unobservable inputs used in the measurement of fair value of unlisted shares classified into Level 3 are the discount rate used in the calculation of discounted future cash flows as well as the assumptions used for illiquidity discount. The SMM Group uses an approximately 11% discount rate and estimates the illiquidity discount at 30%. If the discount rate rises, the fair value decreases.

### (4) Derivatives and hedge accounting

When applying hedge accounting, the SMM Group confirms whether an economic relationship between a hedged item and hedging instrument exists through qualitative and quantitative assessments. The qualitative assessments show whether the critical terms of hedged items and hedging instruments match exactly or are closely aligned, while the quantitative assessments show fluctuations in value of hedged items and hedging instruments offset each other because of the same risk. The purpose of these assessments is to confirm whether there is an economic relationship in which changes in fair value or cash flow of a hedged item attributable to the hedged risk shall be offset by changes in fair value or cash flow of a hedging instrument. The SMM Group also determines appropriate hedge ratios in light of economic relationships between hedging instruments and hedged items as well as the risk management strategy. The expected ineffective portion of hedge including cases affected by credit risk is immaterial.

#### 1) Derivative transactions to which hedge accounting is applied

Floating-rate borrowings are exposed to risk of future interest rate hikes. The SMM Group enters into interest rate swap contracts and interest rate option contracts in order to hedge such risk, and designates these contracts as cash flow hedges.

The SMM Group is also subject to commodity price risk arising from the fact that the timing of price-setting for copper raw materials does not coincide with that for copper products. The SMM Group enters into short commodity futures contracts or long commodity futures contracts both with inventories and purchase contracts as hedged items in order to hedge such risk, and designates these contracts as fair value hedges.

Notional amount and average price are as follows.

Date of transition (As of April 1, 2017)

Type of hedge	Category of risk	Type of transaction	Notional amount (Total)	Notional amount (Mature within one year)	Notional amount (Mature after one year through two years)	Notional amount (Mature after two years)	Rate / price
Cash flow hedges	Interest rate risk	Interest rate swaps (Millions of U.S. dollars)	187	12	7	168	Average fixed interest rate 1.96%
		Interest rate options (Millions of U.S. dollars)	175	—	7	168	Interest rate cap 3.0%
	Commodity price risk	Commodity options (Toz)	89,396	89,396	—	—	Price cap 1,410\$/Toz Price floor 1,100\$/Toz
			120,628	30,159	90,469	—	Price cap 1,430\$/Toz Price floor 1,100\$/Toz
Fair value hedges	Commodity price risk	Short copper futures contracts (T)	31,379	31,379	—	—	Average price ¥655 thousand/T
		Long copper futures contracts (T)	2,766	2,766	—	—	Average price ¥653 thousand/T

FY2017 (As of March 31, 2018)

Type of hedge	Category of risk	Type of transaction	Notional amount (Total)	Notional amount (Mature within one year)	Notional amount (Mature after one year through two years)	Notional amount (Mature after two years)	Rate / price
Cash flow hedges	Foreign currency risk	Forward exchange contracts (Millions of U.S. dollars)	3	3	—	—	¥105.82/U.S. \$
	Interest rate risk	Interest rate swaps (Millions of U.S. dollars)	175	7	13	155	Fixed interest rate 2.019%
		Interest rate options (Millions of U.S. dollars)	175	7	13	155	Interest rate cap 3.0%
	Commodity price risk	Commodity options (Toz)	90,469	90,469	—	—	Price cap 1,430\$/Toz Price floor 1,100\$/Toz
			53,550	13,389	40,161	—	Price cap 1,450\$/Toz Price floor 1,200\$/Toz
Fair value hedges	Commodity price risk	Short copper futures contracts (T)	34,475	34,475	—	—	Average price ¥733 thousand/T
		Long copper futures contracts (T)	5,610	5,610	—	—	Average price ¥722 thousand/T

FY2018 (As of March 31, 2019)

Type of hedge	Category of risk	Type of transaction	Notional amount (Total)	Notional amount (Mature within one year)	Notional amount (Mature after one year through two years)	Notional amount (Mature after two years)	Rate / price
Cash flow hedges	Foreign currency risk	Forward exchange contracts (Millions of U.S. dollars)	0	0	—	—	¥107.85/U.S. \$
	Interest rate risk	Interest rate swaps (Millions of U.S. dollars)	168	13	13	142	Fixed interest rate 2.019%
		Interest rate options (Millions of U.S. dollars)	168	13	13	142	Interest rate cap 3.0%
	Commodity price risk	Commodity options	—	—	—	—	—
			—	—	—	—	—
Fair value hedges	Commodity price risk	Short copper futures contracts (T)	31,189	31,189	—	—	Average price ¥694 thousand/T (U.S. \$6,252.25 /T)
		Long copper futures contracts (T)	4,937	4,937	—	—	Average price ¥716 thousand/T (U.S. \$6,450.45 /T)

Contract amount and fair value are as follows.

(Millions of yen)

	Date of transition (As of April 1, 2017)			FY2017 (As of March 31, 2018)			FY2018 (As of March 31, 2019)		
	Contract amount and others	o/w Mature after one year	Fair value	Contract amount and others	o/w Mature after one year	Fair value	Contract amount and others	o/w Mature after one year	Fair value
Forward exchange contracts	–	–	–	320	–	(1)	30	–	1
Interest rate swap / option contracts	22,270	20,979	1,452	20,351	19,583	1,002	19,240	17,722	1,389
Commodity option / futures contracts	49,418	11,165	(239)	47,776	5,121	618	25,191	–	(781)
Total	71,688	32,144	1,213	68,447	24,704	1,619	44,461	17,722	609

(Thousands of U.S. dollars)

	FY2018 (As of March 31, 2019)		
	Contract amount and others	o/w Mature after one year	Fair value
Forward exchange contracts	270	–	9
Interest rate swap / option contracts	173,333	159,658	12,514
Commodity option / futures contracts	226,946	–	(7,036)
Total	400,550	159,658	5,486

Changes in fair values of hedging instruments and those used as the basis for recognizing ineffective portion are as follows.

FY2017 (As of March 31, 2018)

(Millions of yen)

Type of hedge	Category of risk	Assets	Liabilities	Line items in the consolidated statement of financial position	Changes in fair value used as the basis for recognizing ineffective portion
Cash flow hedges	Foreign currency risk	–	1	Other financial liabilities	1
	Interest rate risk	1,002	–	Other financial assets	(614)
	Commodity price risk	–	215	Other financial liabilities	51
Fair value hedges	Commodity price risk	833	–	Other financial assets	732

FY2018 (As of March 31, 2019)

(Millions of yen)

Type of hedge	Category of risk	Assets	Liabilities	Line items in the consolidated statement of financial position	Changes in fair value used as the basis for recognizing ineffective portion
Cash flow hedges	Foreign currency risk	1	–	Other financial assets	1
	Interest rate risk	1,389	–	Other financial assets	409
	Commodity price risk	–	–	–	132
Fair value hedges	Commodity price risk	–	781	Other financial liabilities	781

(Thousands of U.S. dollars)

Type of hedge	Category of risk	Assets	Liabilities	Line items in the consolidated statement of financial position	Changes in fair value used as the basis for recognizing ineffective portion
Cash flow hedges	Foreign currency risk	9	–	Other financial assets	9
	Interest rate risk	12,514	–	Other financial assets	3,685
	Commodity price risk	–	–	–	1,189
Fair value hedges	Commodity price risk	–	7,036	Other financial liabilities	7,036

Carrying amount of hedged items, financial impacts of hedges included in carrying amounts and changes in fair value used as the basis for recognizing ineffective portion related to fair value hedges are as follows.

FY2017 (As of March 31, 2018)

(Millions of yen)

Category of risk	Line items in the consolidated statement of financial position	Carrying amount	Cumulative adjustment for fair value hedges	Changes in fair value used as the basis for recognizing ineffective portion
Commodity price risk	Other current assets	70	70	70
	Inventories	24,466	(802)	(802)

FY2018 (As of March 31, 2019)

(Millions of yen)

Category of risk	Line items in the consolidated statement of financial position	Carrying amount	Cumulative adjustment for fair value hedges	Changes in fair value used as the basis for recognizing ineffective portion
Commodity price risk	Other current liabilities	19	19	19
	Inventories	22,456	800	800

(Thousands of U.S. dollars)

Category of risk	Line items in the consolidated statement of financial position	Carrying amount	Cumulative adjustment for fair value hedges	Changes in fair value used as the basis for recognizing ineffective portion
Commodity price risk	Other current liabilities	171	171	171
	Inventories	202,306	7,207	7,207



The amount recorded in other components of equity related to cash flow hedges is as follows.

Date of transition (As of April 1, 2017)

(Millions of yen)

Category of risk	Amount recorded in other components of equity related to continuing hedging relationships	Amount recorded in other components of equity related to discontinued hedging relationships
Interest rate risk	528	-
Commodity price risk	(258)	-

FY2017 (As of March 31, 2018)

(Millions of yen)

Category of risk	Amount recorded in other components of equity related to continuing hedging relationships	Amount recorded in other components of equity related to discontinued hedging relationships
Foreign currency risk	(1)	-
Interest rate risk	319	-
Commodity price risk	(154)	-

FY2018 (As of March 31, 2019)

(Millions of yen)

Category of risk	Amount recorded in other components of equity related to continuing hedging relationships	Amount recorded in other components of equity related to discontinued hedging relationships
Foreign currency risk	0	-
Interest rate risk	630	-
Commodity price risk	-	-

(Thousands of U.S. dollars)

Category of risk	Amount recorded in other components of equity related to continuing hedging relationships	Amount recorded in other components of equity related to discontinued hedging relationships
Foreign currency risk	0	-
Interest rate risk	5,676	-
Commodity price risk	-	-

Changes in fair value of hedged items used as the basis for recognizing ineffective portion related to cash flow hedges are as follows.

FY2017 (As of March 31, 2018)

(Millions of yen)

Category of risk	Changes in fair value used as the basis for recognizing ineffective portion
Foreign currency risk	(1)
Interest rate risk	(614)
Commodity price risk	(53)

FY2018 (As of March 31, 2019)

(Millions of yen)

(Thousands of U.S. dollars)

Category of risk	Changes in fair value used as the basis for recognizing ineffective portion	Changes in fair value used as the basis for recognizing ineffective portion
Foreign currency risk	1	9
Interest rate risk	409	3,685
Commodity price risk	132	1,189

The amount recorded in gains or losses and line items in the consolidated statement of profit or loss related to cash flow hedges are as follows.

FY2017 (As of March 31, 2018)

(Millions of yen)

Category of risk	Gains or losses on hedge recorded in other comprehensive income during the reporting period	Ineffective portion of hedge recorded in profit or loss	Line items in which ineffective portion of hedge is recorded in the consolidated statement of profit or loss	Amount reclassified (recycled) from cash flow hedges to profit or loss	Line items in which reclassification adjustment is recorded in the consolidated statement of comprehensive income
Foreign currency risk	(1)	-	-	-	-
Interest rate risk	(595)	-	-	164	Finance costs
Commodity price risk	(53)	2	Finance costs	-	-

FY2018 (As of March 31, 2019)

(Millions of yen)

Category of risk	Gains or losses on hedge recorded in other comprehensive income during the reporting period	Ineffective portion of hedge recorded in profit or loss	Line items in which ineffective portion of hedge is recorded in the consolidated statement of profit or loss	Amount reclassified (recycled) from cash flow hedges to profit or loss	Line items in which reclassification adjustment is recorded in the consolidated statement of comprehensive income
Foreign currency risk	1	-	-	-	-
Interest rate risk	425	-	-	22	Finance income
Commodity price risk	295	-	-	83	Finance income

(Thousands of U.S. dollars)

Category of risk	Gains or losses on hedge recorded in other comprehensive income during the reporting period	Ineffective portion of hedge recorded in profit or loss	Line items in which ineffective portion of hedge is recorded in the consolidated statement of profit or loss	Amount reclassified (recycled) from cash flow hedges to profit or loss	Line items in which reclassification adjustment is recorded in the consolidated statement of comprehensive income
Foreign currency risk	9	-	-	-	-
Interest rate risk	3,829	-	-	198	Finance income
Commodity price risk	2,658	-	-	748	Finance income

2) Derivative transactions to which hedge accounting is not applied

Date of transition (As of April 1, 2017)

Category of risk	Type of transaction	Notional amount (Total)	Notional amount (Mature within one year)	Notional amount (Mature after one year through two years)	Notional amount (Mature after two years)	Rate / price
Foreign currency risk	Forward exchange contracts (Millions of U.S. dollars)	44	44	-	-	Average ¥113.18/U.S. \$
	Forward exchange contracts (Millions of pounds sterling)	31	6	9	16	Average ¥136.73/GBP
Interest rate risk	Interest rate options (Millions of yen)	100,000	100,000	-	-	Interest rate cap 0.50%
Commodity price risk	Short copper futures contracts (T)	8,300	7,300	1,000	-	Average price ¥658 thousand/T
	Long copper futures contracts (T)	28,450	27,500	950	-	Average price ¥613 thousand/T
	Short gold futures contracts (Toz)	8,120	8,120	-	-	Average price ¥140 thousand/Toz

FY2017 (As of March 31, 2018)

Category of risk	Type of transaction	Notional amount (Total)	Notional amount (Mature within one year)	Notional amount (Mature after one year through two years)	Notional amount (Mature after two years)	Rate / price
Foreign currency risk	Forward exchange contracts (Millions of U.S. dollars)	26	26	-	-	Average ¥105.87/U.S. \$
	Forward exchange contracts (Millions of pounds sterling)	42	12	13	17	Average ¥137.69/GBP
	Forward exchange contracts (Millions of yen)	545	545	-	-	Average ¥109.58/U.S. \$
	Forward exchange contracts (Millions of Philippine pesos)	170	170	-	-	Average PHP 50.83/U.S. \$
Commodity price risk	Short copper futures contracts (T)	8,000	8,000	-	-	Average price ¥748 thousand/T
	Long copper futures contracts (T)	20,600	19,600	1,000	-	Average price ¥728 thousand/T
	Long gold futures contracts (Toz)	14,702	14,702	-	-	Average price ¥141 thousand/Toz

FY2018 (As of March 31, 2019)

Category of risk	Type of transaction	Notional amount (Total)	Notional amount (Mature within one year)	Notional amount (Mature after one year through two years)	Notional amount (Mature after two years)	Rate / price
Foreign currency risk	Forward exchange contracts (Millions of U.S. dollars)	70	70	-	-	Average ¥111.10/U.S. \$
	Forward exchange contracts (Millions of pounds sterling)	51	12	3	36	Average ¥137.14/GBP
	Forward exchange contracts (Millions of yen)	1,488	726	753	9	Average ¥108.55/U.S. \$
	Forward exchange contracts (Millions of Philippine pesos)	518	228	223	67	Average PHP 55.74/U.S. \$
	Currency options (Millions of U.S. dollars)	525	195	234	96	Exercise price CLP 625/U.S. \$
Commodity price risk	Short copper futures contracts (T)	9,100	9,100	-	-	Average price ¥678 thousand/T (U.S. \$6,108.11/T)
	Long copper futures contracts (T)	19,875	19,450	425	-	Average price ¥688 thousand/T (U.S. \$6,198.20/T)
	Long nickel futures contracts (T)	30	30	-	-	Average price ¥1,399 thousand/T (U.S. \$12,603.60/T)
	Short gold futures contracts (Toz)	24,030	24,030	-	-	Average price ¥144 thousand/Toz (U.S. \$1,297.30/Toz)

Contract amount and fair value are as follows.

(Millions of yen)

	Date of transition (As of April 1, 2017)			FY2017 (As of March 31, 2018)			FY2018 (As of March 31, 2019)		
	Contract amount and others	o/w Mature after one year	Fair value	Contract amount and others	o/w Mature after one year	Fair value	Contract amount and others	o/w Mature after one year	Fair value
Forward exchange contracts	9,251	3,441	(60)	9,529	4,150	263	19,297	8,268	849
Interest rate option contracts	1,350	-	1	-	-	-	-	-	-
Commodity futures contracts	24,026	1,265	3	23,053	721	245	23,439	263	(389)
Total	34,627	4,706	(56)	32,582	4,871	508	42,736	8,531	460

(Thousands of U.S. dollars)

	FY2018 (As of March 31, 2019)		
	Contract amount and others	o/w Mature after one year	Fair value
Forward exchange contracts	173,847	74,486	7,649
Interest rate option contracts	-	-	-
Commodity futures contracts	211,162	2,369	(3,505)
Total	385,009	76,856	4,144

### 36. Significant Subsidiaries

The status of the Company's major consolidated subsidiaries is as follows.

Company name	Location	Reportable segments	Voting rights held by the Company (%)		
			Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)
Sumitomo Metal Mining America Inc.	U.S.A.	Mineral Resources	100	100	100
Sumitomo Metal Mining Arizona Inc.	U.S.A.	Mineral Resources	80	80	80
SMM Morenci Inc.	U.S.A.	Mineral Resources	100	100	100
Sumitomo Metal Mining Pogo LLC	U.S.A.	Mineral Resources	100	100	-
Sumitomo Metal Mining Oceania Pty. Ltd.	Australia	Mineral Resources	100	100	100
Hyuga Smelting Co., Ltd.	Japan	Smelting & Refining	60	60	60
Coral Bay Nickel Corporation	The Philippines	Smelting & Refining	54	54	54
Taganito HPAL Nickel Corporation	The Philippines	Smelting & Refining	75	75	75
Ohkuchi Electronics Co., Ltd.	Japan	Materials	100	100	100
Shinko Co., Ltd.	Japan	Materials	99	99	99
Sumitomo Metal Mining Siporex Co., Ltd.	Japan	Materials	100	100	100
JCO Co., Ltd.	Japan	Materials	100	100	100

### 37. Related Parties

#### (1) Related party transactions

The SMM Group conducts transactions with the following related parties.

FY2017 (From April 1, 2017 to March 31, 2018)

Type	Name of the company or person	Location	Capital (Thousands of U.S. dollars)	Segment	Voting rights held by the Company	Description of the business relationship	Transaction detail	Transaction amount	Account item	Ending balance
					(%)			Millions of yen		Millions of yen
						Debt guarantee and pledge as security for loans, etc., from financial institutions, etc.	Debt guarantee Debt guarantee fee Pledge as security	72,138 (Note 1) 681 (Note 1) 52,806 (Note 2)	- Other financial assets -	- 2,572 -
Associate	Sierra Gorda S.C.M.	Santiago, Chile	2,189,400	Mineral resources	Indirectly 45.0		Providing loans Financing support	- (Note 3) 11,054 (Note 3)	Other financial assets Other financial assets	39,984 46,504

- Notes:
1. The SMM Group guarantees for loans, etc., from financial institutions, etc.
  2. The SMM Group pledges as security for the loan from the financial institution. The amounts of security are the debt balance as of March 31, 2018.
  3. Terms and conditions of loan are determined based on the market interest rates, etc.



FY2018 (From April 1, 2018 to March 31, 2019)

Type	Name of the company or person	Location	Capital (Thousands of U.S. dollars)	Segment	Voting rights held by the Company (%)	Description of the business relationship	Transaction detail	Transaction amount		Account item	Ending balance	
								Millions of yen	Thousands of U.S. dollars		Millions of yen	Thousands of U.S. dollars
Associate	Sierra Gorda S.C.M.	Santiago, Chile	2,519,400	Mineral resources	Indirectly 45.0	Debt guarantee and pledge as security for loans, etc., from financial institutions, etc.	Debt guarantee	61,825 (Note 1)	556,982	—	—	—
							Debt guarantee fee	614 (Note 1)	5,532	Other financial assets	3,294	29,676
							Pledge as security	42,735 (Note 2)	385,000	—	—	—
						Financing support	Providing loans	— (Note 3)	—	Other financial assets	37,884	341,297
							Interest on loans	11,084 (Note 3)	99,856	Other financial assets	56,831	511,991
Associate	Quebrada Blanca Holdings SpA	Santiago, Chile	881,460	Mineral resources	Indirectly 27.7	Financing support	Subscription to capital increase	67,433 (Note 4)	607,505	Trade and other payables	35,065 (Note 4)	315,901
Subsidiary of an associate	Compañía Minera Teck Quebrada Blanca S.A.	Santiago, Chile	360,112	Mineral resources	—	Financing support	Providing loans	75,352 (Note 5)	678,847	Other financial assets	75,352 (Note 5)	678,847

- Notes:
1. The SMM Group guarantees for loans, etc., from financial institutions, etc.
  2. The SMM Group pledges as security for the loan from the financial institution. The amounts of security are the debt balance as of March 31, 2019.
  3. Terms and conditions of loan are determined based on the market interest rates, etc.
  4. The SMM Group subscribed to the capital increase of Quebrada Blanca Holdings SpA. Stock subscription payable is included in trade and other payables.
  5. The SMM Group provided loans to Compañía Minera Teck Quebrada Blanca S.A.

(2) Compensation for key management personnel

The compensation for key management personnel is as follows.

	FY2017 (From April 1, 2017 to March 31, 2018)	FY2018 (From April 1, 2018 to March 31, 2019)	
	Millions of yen	Millions of yen	Thousands of U.S. dollars
Compensations and bonuses	365	425	3,829
Total	365	425	3,829

38. Contingencies

Contingent liabilities are as follows.

	Date of transition (As of April 1, 2017)	FY2017 (As of March 31, 2018)	FY2018 (As of March 31, 2019)	
	Millions of yen	Millions of yen	Millions of yen	Thousands of U.S. dollars
Payment for Sociedad Minera Cerro Verde S.A.A., including taxes, in the amount corresponding to the Company's equity, in case the revocation of exemption measures for prior year taxes is finalized	2,857 (Note 1)	7,309 (Note 2)	— (Note 3)	— (Note 3)
Total	2,857	7,309	—	—

- Notes:
1. Sociedad Minera Cerro Verde S.A.A. (hereinafter "Cerro Verde"), an equity-method associate of the Company, had been making tax payments, assuming exemption from royalties levied on mining companies (enacted 2004), based on a tax rate stabilization agreement with the Peruvian government (valid from 1999 to 2013). However, Cerro Verde was given notice by the Peruvian national tax authorities in October 2013 to the effect that the said agreement did not apply to the copper mine development project (commenced in 2006), and was demanded payment for the amount corresponding to prior royalties (from 2006 to 2008) and interest on overdue royalties. The Company has reported, as per the above, the amount of payment corresponding to the equity interest of the Company, in case the demand for payment becomes finalized.
  2. Although Cerro Verde made appeals to Peruvian government agencies claiming the validity of the tax rate stabilization agreement, in October 2017, the Peruvian Supreme Court rejected Cerro Verde's claims for exemption regarding the payment of royalties for 2008. Subsequently, Cerro Verde received notification of judgment to the effect that the decision by the Peruvian national tax authorities was valid.  
  
In light of this decision, Cerro Verde posted a total of U.S. \$393 million for royalties, penalties, and interest on overdue royalties for the period from December 2006 to 2008, which it had been disputing with the Peruvian national tax authorities through judicial bodies, as well as royalties and other payments for the period from 2009 to 2013, which had similarly been disputed. Consequently, the Company posted ¥9,257 million (approximately U.S. \$83 million), which is equivalent to its interests, as share of profit (loss) of investments accounted for using equity method in FY2017. As a result, profit before tax decreased by ¥9,257 million.  
  
Additionally, Cerro Verde has a total of U.S. \$385 million in potentially unpaid penalties and interest on overdue royalties. The Company has reported, as per the above, the amount of payment corresponding to the equity interest of the Company, in case these additional amounts become finalized.
  3. In December 2018, Cerro Verde decided not to appeal against the decision by the Peruvian national tax authorities, and posted the potentially unpaid penalties and interest on overdue royalties. Consequently, the Company posted ¥8,846 million (approximately U.S. \$80 million), which is equivalent to its interests, as share of profit (loss) of investments accounted for using equity method in FY2018. As a result, profit before tax decreased by ¥8,846 million.

39. Subsequent Event

There are no pertinent items.

40. First-time Adoption

The SMM Group has started to disclose IFRS-compliant consolidated financial statements from the fiscal year ending March 31, 2019. The latest J-GAAP-compliant consolidated financial statements were prepared for the fiscal year ended March 31, 2018, and the transition date to IFRS was April 1, 2017.

## (1) Exemption under IFRS 1

A company adopting IFRS for the first time (hereinafter “first-time adopter”) is required to apply the standards imposed under IFRS on a retroactive basis, provided, however, that IFRS 1 “First-time Adoption of International Financial Reporting Standards” (hereinafter “IFRS 1”) defines standards subjected to mandatory application of exemption (from the aforementioned retroactive application), in contrast to those subjected to optional application of exemption. Impacts from the application of these exemptions are adjusted by retained earnings, or other components of equity on the date of transition to IFRS. In the process of transition to IFRS from J-GAAP, the SMM Group applied the following exemptions.

- Business combinations

A first-time adopter is allowed to opt not to retroactively apply IFRS 3 “Business Combinations” (hereinafter “IFRS 3”) to the business combinations that took place before the date of transition to IFRS. The SMM Group opted, by applying this exemption, not to retroactively apply IFRS 3 to the business combinations that took place before the date of transition. As a result, the amount of goodwill arising from the business combinations prior to the transition date is recognized at carrying amount at the transition date based on the J-GAAP.

Incidentally, goodwill is subjected to impairment test on the transition date, regardless of whether there is an indication of impairment.

- Exchange differences on transition of foreign operations

Under IFRS 1, entities are allowed to opt for an approach whereby it may assume the cumulative amount of exchange differences on transition of foreign operations at the date of transition to IFRS to be zero. The SMM Group opted for assuming such cumulative exchange differences on transition of foreign operations to be zero at the transition date.

- Leases

IFRS 1 allows a first-time adopter to determine whether a contract contains a lease at the date of transition to IFRS. The SMM Group applied this exemption and determined whether contracts contain lease, based on the facts and circumstance existing at the transition date.

- Decommissioning liabilities included in the cost of property, plant and equipment

With respect to the measurement of liabilities associated with decommissioning, etc. (hereinafter “decommissioning liabilities”) which are included in the cost of property, plant and equipment, IFRS 1 allows entities to choose either a method in which decommissioning liabilities are measured retroactively from the point in time when such liabilities first arose, or a method in which decommissioning liabilities are measured at the transition date. The SMM Group opted for the latter in measuring decommissioning liabilities which are included in the cost of property, plant and equipment.

- Borrowing costs

IFRS 1 allows entities to commence capitalizing the borrowing costs associated with qualifying assets on the date of the transition to IFRS. The SMM Group capitalizes the borrowing costs associated with qualifying assets that arise on or after the transition date.

- Designation of previously recognized financial instruments

With respect to classification in IFRS 9 “Financial Instruments” (hereinafter “IFRS 9”), IFRS 1 allows entities to determine such classification based on the facts and circumstance existing at the transition date, rather than those existing at the initial recognition. Furthermore, it allows entities to designate changes in fair value of equity instruments as financial assets measured through other comprehensive income, subject to the facts and circumstance existing at the transition date.

The SMM Group determines the classification under IFRS 9, based on the facts and circumstance existing at the transition date, while designating equity instruments as financial assets measured through other comprehensive income.

## (2) Mandatory exemption under IFRS 1

IFRS 1 prohibits retroactive application of IFRS with respect to “estimates,” “derecognition of financial assets and financial liabilities,” “hedge accounting,” “non-controlling interests,” and “classification and measurement of financial assets.” Thus the SMM Group applies IFRS with respect to these items for the period subsequent to the transition date.

### (3) Reconciliation

The reconciliation required to disclose at the first-time adoption of IFRS is as follows.

“Effects of changes in closing dates” in this reconciliation include effects of the changes under IFRS at consolidated subsidiaries adopting different closing dates. In the meantime, “Reclassification” includes items that have no effects on retained earnings and comprehensive income, while “difference in recognition and measurement” includes items that have effects on retained earnings and comprehensive income.

Reconciliation of equity as of April 1, 2017 (transition date)

Line items presented under J-GAAP	J-GAAP	Effects of changes in closing dates	Reclassification	Difference in recognition and measurement	IFRS	Notes	Line items presented under IFRS
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen		
Assets							Assets
Current assets							Current assets
Cash and deposits	81,317	2,972	88,618	–	172,907	A	Cash and cash equivalents
Notes and accounts receivable-trade	103,886	(921)	58,886	2,120	163,971	A	Trade and other receivables
Securities	89,000	(261)	(86,357)	–	2,382	A	Other financial assets
Inventories	218,535	(112)	(1,017)	37,659	255,065	A	Inventories
Deferred tax assets	1,225	–	(1,225)	–	–	C	
Other	100,425	(63)	(63,145)	(17,052)	20,165	A	Other current assets
Allowance for doubtful accounts	(735)	–	735	–	–	A	
Total current assets	593,653	1,615	(3,505)	22,727	614,490		Subtotal
	–	–	2,430	–	2,430	A	Assets held for sale
	593,653	1,615	(1,075)	22,727	616,920		Total current assets
Non-current assets							Non-current assets
Property, plant and equipment	483,456	(1,819)	(3,427)	1,853	480,063	B	Property, plant and equipment
Intangible assets	47,590	(381)	–	(161)	47,048		Intangible assets and goodwill
	–	–	3,427	–	3,427	B	Investment property
Investment securities	422,226	–	(129,520)	(257)	292,449	C	Investments accounted for using equity method
Long-term loans receivable	61,000	–	(61,000)	–	–	C	
	–	(433)	245,974	6,174	251,715	C	Other financial assets
Deferred tax assets	5,666	971	1,225	(393)	7,469	C	Deferred tax assets
Net defined benefit asset	263	–	(263)	–	–		
Other	71,361	(6)	(55,538)	71	15,888	C	Other non-current assets
Allowance for doubtful accounts	(197)	–	197	–	–	C	
Total non-current assets	1,091,365	(1,668)	1,075	7,287	1,098,059		Total non-current assets
Total assets	1,685,018	(53)	–	30,014	1,714,979		Total assets

Line items presented under J-GAAP	J-GAAP	Effects of changes in closing dates	Reclassification	Difference in recognition and measurement	IFRS	Notes	Line items presented under IFRS
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen		
Liabilities							Liabilities and equity
Current liabilities							Liabilities
Notes and accounts payable-trade	47,306	(283)	32,742	21,637	101,402	D	Current liabilities
Short-term loans payable	96,940	–	(1,957)	24	95,007	D	Trade and other payables
Income taxes payable	17,274	–	(6)	–	17,268		Bonds and borrowings
Deferred tax liabilities	842	–	(842)	–	–	E	Income taxes payable
Provision for bonuses	3,435	–	(3,435)	–	–	D	
	–	32	230	1,234	1,496	D	Other financial liabilities
Provision for furnace repair works	1,117	–	–	(1,117)	–	D	
Other provision	943	–	(943)	–	–	D	
Other	42,986	38	(34,390)	(114)	8,520	D	Other current liabilities
	–	–	4,319	524	4,843	D	Provisions
Total current liabilities	210,843	(213)	(4,282)	22,188	228,536		Subtotal
	–	–	3,440	–	3,440	D	Liabilities directly associated with assets held for sale
	210,843	(213)	(842)	22,188	231,976		Total current liabilities
Non-current liabilities							Non-current liabilities
Bonds payable	40,000	–	(40,000)	–	–	E	
Long-term loans payable	358,564	–	40,000	(2,634)	395,930	E	Bonds and borrowings
Deferred tax liabilities	21,807	418	842	8,545	31,612	E	Deferred tax liabilities
Provision for loss on business restructuring	1,004	–	(1,004)	–	–	E	
Allowance for decommissioning preparations	7,799	–	(7,799)	–	–	E	
Other provision	486	–	(486)	–	–	E	
	–	–	18,251	4,009	22,260	E	Provisions
Net defined benefit liability	9,118	–	23	338	9,479		Retirement benefit liability
Asset retirement obligations	8,985	–	(8,985)	–	–	E	
Other	2,291	–	(1,144)	–	1,147		Other non-current liabilities
	–	125	1,144	948	2,217	E	Other financial liabilities
Total non-current liabilities	450,054	543	842	11,206	462,645		Total non-current liabilities
Total liabilities	660,897	330	–	33,394	694,621		Total liabilities



Net assets						Equity
Capital stock	93,242	–	–	–	93,242	Share capital
Capital surplus	86,504	–	–	336	86,840	Capital surplus
Treasury shares	(32,877)	–	–	–	(32,877)	Treasury shares
Total accumulated other comprehensive income	96,749	(818)	–	(54,481)	41,450	F Other components of equity
Retained earnings	718,072	435	–	50,340	768,847	F Retained earnings
	961,690	(383)	–	(3,805)	957,502	Total equity attributable to owners of parent
Non-controlling interests	62,431	–	–	425	62,856	Non-controlling interests
Total net assets	1,024,121	(383)	–	(3,380)	1,020,358	Total equity
Total liabilities and net assets	1,685,018	(53)	–	30,014	1,714,979	Total liabilities and equity

<Notes to the reconciliation of equity at the date of transition to IFRS (as of April 1, 2017)>

- A) Cash and cash equivalents, trade and other receivables, other financial assets, inventories, other current assets, and assets held for sale

Reclassification:

Term deposits with over three months maturity which were included in “cash and deposits” under J-GAAP are reclassified into “other financial assets” (current) under IFRS, while negotiable certificates of deposit that were included in “securities” under J-GAAP have been reclassified as “cash and cash equivalents” under IFRS.

Accounts receivable – other which were included in “other” under J-GAAP have been reclassified into “trade and other receivables” under IFRS, while “allowance for doubtful accounts” (current) under J-GAAP is directly deducted from “trade and other receivables” under IFRS.

Assets of subsidiaries covered under the stock purchase and sale agreement valid at the transition date have been reclassified into “assets held for sale.”

Recognition and measurement:

[Trade and other receivables]

Under J-GAAP, revenue from some of the transactions of sales of goods was recognized upon customer acceptance, while under IFRS, it is recognized at the time when control over the goods is transferred. As a result, “trade and other receivables” increased by ¥2,120 million.

[Inventories and other current assets]

Under J-GAAP, some of the raw materials were recognized based on acceptance criteria, while under IFRS, they are recognized at the time when control over the asset is acquired. As a result, “inventories” increased by ¥37,659 million. Following the above change, advance payments for such raw materials were offset by “trade and other payables,” resulting in ¥17,052 million decrease in “other current assets.”

- B) Property, plant and equipment, and investment property

Reclassification:

“Investment property” that was included in “property, plant and equipment” under J-GAAP has been reclassified and separately presented under IFRS.

Recognition and measurement:

[Property, plant and equipment]

Under J-GAAP, asset retirement obligations were recognized continuously at an amount measured by using the discount rate at initial recognition, whereas under IFRS such amount was remeasured by using the discount rate adjusted at the end of the reporting period, resulting in ¥1,853 million increase in “property, plant and equipment.”

- C) Investments accounted for using equity method, other financial assets, and deferred tax assets

Reclassification:

Shares of subsidiaries and associates that were included in “investment securities” under J-GAAP, have been separately presented as “investments accounted for using equity method” under IFRS, while “investment securities” other than the aforementioned, and long-term accounts receivables that were included in “other” (non-current) under J-GAAP have been reclassified into “other financial assets” (non-current) under IFRS. “Long-term loans receivable,” etc. under J-GAAP have been reclassified into “other financial assets” (non-current) under IFRS, while “allowance for doubtful accounts” (non-current) under J-GAAP is directly deducted from “other financial assets” (non-current) under IFRS. Meanwhile, “deferred tax assets” (current) have been reclassified as “deferred tax assets” (non-current) under IFRS.

Recognition and measurement:

[Other financial assets]

Financial instruments such as unlisted shares considered to pose extreme difficulty in determining fair value were recognized at cost under J-GAAP, whereas fair value of such financial instruments is estimated by using appropriate valuation techniques under IFRS, resulting in ¥6,174 million increase in “other financial assets” (non-current).

D) Trade and other payables, other financial liabilities, provisions, and liabilities directly associated with assets held for sale

Reclassification:

Accounts payable and accrued expenses, etc. that were included in “other” under J-GAAP have been reclassified into “trade and other payables” under IFRS, while “provision for bonuses” and “other provision” (current) that were separately presented in current liabilities under J-GAAP have been reclassified into “provisions” (current) under IFRS.

Liabilities directly associated with assets of subsidiaries covered under the stock purchase and sale agreement valid at the transition date have been reclassified into “liabilities directly associated with assets held for sale.”

Recognition and measurement:

[Trade and other payables]

Under J-GAAP, some of the raw materials were recognized based on acceptance criteria, while under IFRS, they are recognized at the time when control over the asset is acquired. Also fixed asset tax, which under J-GAAP was recognized over the fiscal year in which such tax was paid, started to be wholly charged to expense on the base date for assessment under IFRS, while corresponding liabilities are recognized. As a result of the aforementioned, “trade and other payables” increased by ¥21,637 million.

[Provision for furnace repair works]

“Provision for furnace repair works” which was recognized as a provision under J-GAAP has been reversed for not qualifying for provision under IFRS, resulting in ¥1,117 million decrease in provisions.

[Other financial liabilities]

Some of the financial instruments (forward sales agreement) which were subjected to hedge accounting under J-GAAP started to be subjected to fair value option under IFRS with its futures portion valued at fair value, resulting in ¥1,234 million increase in “other financial liabilities.”

[Provisions]

Unused paid leave for which no provision was recognized under J-GAAP started to be treated as labor cost involving recognition of provision under IFRS, resulting in ¥524 million increase in “provisions” (current).

E) Bonds and borrowings, deferred tax liabilities, provisions and other financial liabilities

Reclassification:

“Bonds payable” and “long-term loans payable” under J-GAAP have been combined into “bonds and borrowings” (non-current) under IFRS, while provisions such as “provision for loss on business restructuring” and “allowance for decommissioning preparations” as well as “asset retirement obligations” under J-GAAP have been reclassified into “provisions” (non-current) under IFRS. Meanwhile, “deferred tax liabilities” (current) under J-GAAP have been reclassified as “deferred tax liabilities” (non-current) under IFRS.

Recognition and measurement:

[Bonds and borrowings]

Loans with share acquisition rights classified as “long-term loans payable” under J-GAAP are treated as compound financial instruments, and partially recognized in “retained earnings” under IFRS,

resulting in ¥2,634 million decrease in “bonds and borrowings” (non-current).

[Deferred tax liabilities]

Since deferred tax liabilities started to be recognized in principle under IFRS for the taxable temporary differences arising from retained earnings and foreign currency translation adjustment at associates, “deferred tax liabilities” increased by ¥8,545 million.

[Provisions]

Under J-GAAP, asset retirement obligations were recognized continuously at an amount measured by using the discount rate used at initial recognition, whereas under IFRS such amount was remeasured by using the discount rate adjusted at the end of the reporting period, resulting in ¥4,009 million increase in “provisions” (non-current).

[Other financial liabilities]

For the leasing arrangements that did not take legal forms under J-GAAP, those effectively considered as leasing arrangement have started to involve recognition of lease obligations under IFRS, resulting in ¥948 million increase in “other financial liabilities” (non-current).

F) Retained earnings, and other components of equity

Recognition and measurement:

Main items of the reconciliation concerning retained earnings are as follows.

	Date of transition to IFRS (As of April 1, 2017) Millions of yen
Reclassification of cumulative exchange differences at foreign subsidiaries	57,272
Adjustment of trade receivables and inventories	1,799
Adjustment to compound financial instruments	1,599
Adjustment by tax effect	(6,531)
Adjustment to asset retirement obligations	(1,509)
Adjustment to liabilities on levies	(1,338)
Other	(952)
Total	50,340

[Reclassification of cumulative exchange differences at foreign subsidiaries]

As IFRS 1 allows entities to assume the cumulative exchange differences associated with investments in foreign operations to be zero at the date of transition to IFRS, such cumulative exchange differences were reclassified at the date of transition to IFRS from “other components of equity” into “retained earnings.” As a result, “other components of equity” decreased by ¥57,272 million, while “retained earnings” increased by the same amount.

[Adjustment of trade receivables and inventories]

As IFRS requires use of the same cost formula for all inventories with similar nature and use, it was necessary to change cost formula for part of inventories, resulting in ¥1,799 million increase in “retained earnings.”

[Adjustment to compound financial instruments]

As IFRS requires compound financial instruments to be classified into liabilities and equity as a basis for further accounting treatment, some compound financial instruments started to be treated as “retained earnings,” resulting in ¥1,599 million increase in “retained earnings.”

[Adjustment by tax effect]

Since deferred tax liabilities started to be recognized in principle under IFRS for the taxable temporary differences arising from retained earnings at associates, “retained earnings” decreased by ¥6,531 million.

[Adjustment to asset retirement obligations]

Under J-GAAP, asset retirement obligations were recognized continuously at an amount measured by using the discount rate at initial recognition, whereas under IFRS such amount was remeasured by using the discount rate adjusted at the end of the reporting period, resulting in ¥1,509 million decrease in “retained earnings.”

[Adjustment to liabilities on levies]

Fixed asset tax, which under J-GAAP was recognized over the fiscal year in which such tax was paid, started to be wholly charged to expense on the base date for assessment under IFRS, while corresponding liabilities are recognized. As a result, “retained earnings” decreased by ¥1,338 million.

# Reconciliation of equity as of March 31, 2018 (at the end of the previous fiscal year)

Line items presented under J-GAAP	J-GAAP	Effects of changes in closing dates	Reclassification	Difference in recognition and measurement	IFRS	Notes	Line items presented under IFRS
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen		
Assets							Assets
Current assets							Current assets
Cash and deposits	73,589	2,285	61,456	–	137,330	A	Cash and cash equivalents
Notes and accounts receivable-trade	148,761	(1,655)	9,346	(488)	155,964	A	Trade and other receivables
Securities	63,125	(2)	(45,268)	307	18,162	A	Other financial assets
Inventories	233,184	173	–	44,755	278,112	A	Inventories
Deferred tax assets	1,424	–	(1,424)	–	–	C	
Other	68,005	(64)	(26,191)	(16,188)	25,562	A	Other current assets
Allowance for doubtful accounts	(657)	–	657	–	–	A	
Total current assets	587,431	737	(1,424)	28,386	615,130		Total current assets
Non-current assets							Non-current assets
Property, plant and equipment	464,414	(1,728)	(3,427)	2,629	461,888	B	Property, plant and equipment
Intangible assets	65,950	(379)	–	124	65,695		Intangible assets and goodwill
	–	–	3,427	–	3,427	B	Investment property
Investment securities	441,583	–	(142,322)	771	300,032	C	Investments accounted for using equity method
Long-term loans receivable	43,231	–	(43,231)	–	–	C	
	–	(986)	251,620	4,575	255,209	C	Other financial assets
Deferred tax assets	14,597	132	1,424	(490)	15,663	C	Deferred tax assets
Net defined benefit asset	242	–	(242)	–	–		
Other	81,782	(6)	(66,018)	(469)	15,289	C	Other non-current assets
Allowance for doubtful accounts	(193)	–	193	–	–	C	
Total non-current assets	1,111,606	(2,967)	1,424	7,140	1,117,203		Total non-current assets
Total assets	1,699,037	(2,230)	–	35,526	1,732,333		Total assets



Line items presented under J-GAAP	J-GAAP	Effects of changes in closing dates	Reclassification	Difference in recognition and measurement	IFRS	Notes	Line items presented under IFRS
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen		
Liabilities							Liabilities and equity
Current liabilities							Liabilities
Notes and accounts payable-trade	45,756	(67)	55,719	24,086	125,494	D	Current liabilities
Short-term loans payable	64,888	—	30,000	(9)	94,879	E	Trade and other payables
Current portion of bonds	30,000	—	(30,000)	—	—	E	Bonds and borrowings
Income taxes payable	4,022	—	—	(44)	3,978		Income taxes payable
Deferred tax liabilities	1,342	—	(1,342)	—	—	E	
Provision for bonuses	3,630	—	(3,630)	—	—	D	
	—	(26)	418	117	509		Other financial liabilities
Provision for furnace repair works	341	—	—	(341)	—		
Other provision	745	—	(745)	—	—	D	
Other	67,039	18	(56,138)	(129)	10,790	D	Other current liabilities
	—	—	4,376	520	4,896	D	Provisions
Total current liabilities	217,763	(75)	(1,342)	24,200	240,546		Total current liabilities
Non-current liabilities							Non-current liabilities
Bonds payable	40,150	—	(40,150)	—	—	E	
Long-term loans payable	257,409	—	40,150	(1,298)	296,261	E	Bonds and borrowings
Deferred tax liabilities	29,039	39	1,342	11,868	42,288	E	Deferred tax liabilities
Provision for loss on business restructuring	1,346	—	(1,346)	—	—	E	
Allowance for decommissioning preparations	13,418	—	(13,418)	—	—	E	
Other provision	424	—	(424)	—	—	E	
	—	(254)	24,476	4,324	28,546	E	Provisions
Net defined benefit liability	7,461	—	30	—	7,491		Retirement benefit liability
Asset retirement obligations	9,318	—	(9,318)	—	—	E	
Other	2,701	—	(1,553)	—	1,148		Other non-current liabilities
	—	(3)	1,553	1,154	2,704	E	Other financial liabilities
Total non-current liabilities	361,266	(218)	1,342	16,048	378,438		Total non-current liabilities
Total liabilities	579,029	(293)	—	40,248	618,984		Total liabilities
Net assets							Equity
Capital stock	93,242	—	—	—	93,242		Share capital
Capital surplus	86,530	—	—	1,068	87,598	E	Capital surplus
Treasury shares	(37,959)	—	—	—	(37,959)		Treasury shares
Total accumulated other comprehensive income	97,590	(2,466)	—	(56,709)	38,415	F	Other components of equity
Retained earnings	797,034	529	—	50,526	848,089	F	Retained earnings
	1,036,437	(1,937)	—	(5,115)	1,029,385		Total equity attributable to owners of parent
Non-controlling interests	83,571	—	—	393	83,964		Non-controlling interests
Total net assets	1,120,008	(1,937)	—	(4,722)	1,113,349		Total equity
Total liabilities and net assets	1,699,037	(2,230)	—	35,526	1,732,333		Total liabilities and equity

<Notes to the reconciliation of equity for the previous fiscal year (as of March 31, 2018)>

A) Cash and cash equivalents, trade and other receivables, other financial assets, inventories, and other current assets

Reclassification:

Term deposits with over three months maturity which were included in “cash and deposits” under J-GAAP are reclassified into “other financial assets” (current) under IFRS, while negotiable certificates of deposit that were included in “securities” under J-GAAP have been reclassified as “cash and cash equivalents” under IFRS. Accounts receivable – other which were included in “other” of current assets under J-GAAP have been reclassified into “trade and other receivables” under IFRS, while “allowance for doubtful accounts” (current) under J-GAAP is directly deducted from “trade and other receivables” under IFRS.

Recognition and measurement:

[Trade and other receivables]

Revenue from some of the transactions of sales of goods which was recognized on a delivery basis under J-GAAP, is recognized at the time when control over the goods is transferred under IFRS, resulting in ¥488 million decrease in “trade and other receivables.”

[Inventories and other current assets]

Under J-GAAP, some of the raw materials were recognized based on acceptance criteria, while under IFRS, they are recognized at the time when control over the asset is transferred. As a result, “inventories” increased by ¥44,755 million. Following the above change, advance payments for such raw materials were offset by “trade and other payables,” resulting in ¥16,188 million decrease in “other current assets.”

B) Property, plant and equipment, and investment property

Reclassification:

“Investment property” that was included in “property, plant and equipment” under J-GAAP has been reclassified and separately presented under IFRS.

Recognition and measurement:

[Property, plant and equipment]

Under J-GAAP, asset retirement obligations were recognized continuously at an amount measured by using the discount rate at initial recognition, whereas under IFRS such amount was remeasured by using the discount rate adjusted at the end of the reporting period, resulting in ¥2,629 million increase in “property, plant and equipment.”

C) Investments accounted for using equity method, other financial assets, and deferred tax assets

Reclassification:

Shares of subsidiaries and associates that were included in “investment securities” under J-GAAP, have been separately presented as “investments accounted for using equity method” under IFRS, while “investment securities” other than the aforementioned, and long-term accounts receivables that were included in “other” (non-current) under J-GAAP have been reclassified into “other financial assets” (non-current) under IFRS. “Long-term loans receivable,” etc. under J-GAAP have been reclassified into “other financial assets” (non-current) under IFRS, while “allowance for doubtful accounts” (non-current) under J-GAAP is directly deducted from “other financial assets” (non-current) under IFRS. Meanwhile, “deferred tax assets” (current) have been reclassified as “deferred tax assets” (non-current) under IFRS.

Recognition and measurement:

[Other financial assets]

Financial instruments such as unlisted shares considered to pose extreme difficulty in determining fair value were recognized at cost under J-GAAP, whereas fair value of such financial instruments is

estimated by using appropriate valuation techniques under IFRS, resulting in ¥4,575 million increase in “other financial assets” (non-current).

D) Trade and other payables, and provisions

Reclassification:

Accounts payable and accrued expenses, etc. that were included in “other” of current liabilities under J-GAAP, have been reclassified into “trade and other payables” under IFRS, while “provision for bonuses” and “other provision” (current) that were separately presented in current liabilities under J-GAAP have been reclassified into “provisions” (current) under IFRS.

Recognition and measurement:

[Trade and other payables]

Under J-GAAP, some of the raw materials were recognized based on acceptance criteria, while under IFRS they are recognized at the time when control over the asset is acquired. Also fixed asset tax, which under J-GAAP was recognized over the fiscal year in which such tax was paid, started to be wholly charged to expense on the base date for assessment under IFRS, while corresponding liabilities are recognized. As a result of the aforementioned, “trade and other payables” increased by ¥24,086 million.

[Provisions]

Unused paid leave for which no provision was recognized under J-GAAP started to be treated as labor cost involving recognition of provision under IFRS, resulting in ¥520 million increase in “provisions” (current).

E) Bonds and borrowings, deferred tax liabilities, provisions and other financial liabilities

Reclassification:

“Short-term loans payable” and “current portion of bonds” under J-GAAP have been combined into “bonds and borrowings” (current) under IFRS, while “bonds payable” and “long-term loans payable” under J-GAAP have been combined into “bonds and borrowings” (non-current) under IFRS. Provisions such as “provision for loss on business restructuring” and “allowance for decommissioning preparations” as well as “asset retirement obligations” under J-GAAP have been reclassified into “provisions” (non-current) under IFRS. Meanwhile, “deferred tax liabilities” (current) under J-GAAP have been reclassified as “deferred tax liabilities” (non-current) under IFRS.

Recognition and measurement:

[Bonds and borrowings]

Convertible bond-type bonds with share acquisition rights included in “bonds payable” under J-GAAP are treated as compound financial instruments, and partially recognized in “capital surplus” under IFRS, resulting in ¥1,298 million decrease in “bonds and borrowings” (non-current).

[Deferred tax liabilities]

Since deferred tax liabilities started to be recognized under IFRS for the whole amount of taxable temporary differences arising from retained earnings and foreign currency translation adjustment at associates, “deferred tax liabilities” (non-current) increased by ¥11,868 million.

[Provisions]

Under J-GAAP, asset retirement obligations were recognized continuously at an amount measured by using the discount rate at initial recognition, whereas under IFRS such amount was remeasured by using the discount rate adjusted at the end of the reporting period, resulting in ¥4,324 million increase in “provisions” (non-current).

[Other financial liabilities]

For the leasing arrangements that did not take legal forms under J-GAAP, those effectively considered as leasing arrangement have started to involve recognition of lease obligations under IFRS, resulting in ¥1,154 million increase in “other financial liabilities” (non-current).

F) Retained earnings, and other components of equity

Recognition and measurement:

Main items of the reconciliation concerning retained earnings are as follows.

	FY2017 (As of March 31, 2018)
	Millions of yen
Reclassification of cumulative exchange differences at foreign subsidiaries	57,272
Adjustment of trade receivables and inventories	5,190
Adjustment to remeasurements of defined benefit plans	2,500
Adjustment by tax effect	(10,724)
Adjustment to asset retirement obligations	(1,776)
Adjustment to liabilities on levies	(1,345)
Other	(591)
Total	50,526

[Reclassification of cumulative exchange differences at foreign subsidiaries]

As IFRS 1 allows entities to assume the cumulative exchange differences associated with investments in foreign operations to be zero at the date of transition to IFRS, such cumulative exchange differences were reclassified at the date of transition to IFRS from “other components of equity” into “retained earnings.” As a result, “other components of equity” decreased by ¥57,272 million, while “retained earnings” increased by the same amount.

[Adjustment of trade receivables and inventories]

As IFRS requires use of the same cost formula for all inventories with similar nature and use, it was necessary to change cost formula for part of inventories, resulting in ¥5,190 million increase in “retained earnings.”

[Adjustment to remeasurements of defined benefit plans]

Actuarial gains and losses under J-GAAP were recognized in other comprehensive income at the time of occurrence, and then were evenly amortized over the period within the average remaining years of service of the eligible employees from the fiscal year following such occurrence, whereas under IFRS, actuarial gains and losses are recognized in other comprehensive income at the time of occurrence, and then immediately recognized in “retained earnings,” resulting in ¥2,500 million increase in “retained earnings.”

[Adjustment by tax effect]

Since deferred tax liabilities started to be recognized in principle under IFRS for the taxable temporary differences arising from retained earnings at associates, “retained earnings” decreased by ¥10,724 million.

[Adjustment to asset retirement obligations]

Under J-GAAP, asset retirement obligations were recognized continuously at an amount measured by using the discount rate at initial recognition, whereas under IFRS such amount was remeasured by using the discount rate adjusted at the end of the reporting period, resulting in ¥1,776 million decrease in “retained earnings.”

[Adjustment to liabilities on levies]

Fixed asset tax, which under J-GAAP was recognized over the fiscal year in which such tax was paid, started to be wholly charged to expense on the base date for assessment under IFRS, while corresponding liabilities are recognized. As a result, “retained earnings” decreased by ¥1,345 million.

Reconciliation to profit or loss and comprehensive income for the previous fiscal year (from April 1, 2017 to March 31, 2018)

Line items presented under J-GAAP	J-GAAP	Effects of changes in closing dates	Reclassification	Difference in recognition and measurement	IFRS	Notes	Line items presented under IFRS
	Millions of yen	Millions of yen	Millions of yen	Millions of yen	Millions of yen		
Net sales	933,517	(1,188)	—	(2,583)	929,746	A	Net sales
Cost of sales	(776,428)	637	(9,622)	4,682	(780,731)	A	Cost of sales
Gross profit	157,089	(551)	(9,622)	2,099	149,015		Gross profit
	—	—	5,280	405	5,685	B	Other income
Selling, general and administrative expenses	(46,886)	50	—	1,016	(45,820)		Selling, general and administrative expenses
	—	9	(16,488)	434	(16,045)	B	Other expenses
Non-operating income	30,198	—	(30,198)	—	—	B	
Non-operating expenses	(15,548)	—	15,548	—	—	B	
Extraordinary income	1,315	—	(1,315)	—	—	B	
Extraordinary losses	(20,373)	—	20,373	—	—	A, B	
	—	(9)	16,997	376	17,364	B	Finance income
	—	—	(11,942)	(2,309)	(14,251)	B	Finance costs
	—	—	11,367	971	12,338	B	Share of profit of entities accounted for using equity method
Profit before income taxes	105,795	(501)	—	2,992	108,286		Profit before tax
Income taxes - current	(14,069)	—	14,069	—	—	B	
Income taxes - deferred	4,603	—	(4,603)	—	—	B	
	—	10	(9,466)	(3,928)	(13,384)	B	Income tax expense
Profit	96,329	(491)	—	(936)	94,902		Profit
Other comprehensive income							Other comprehensive income
							Items that will not be reclassified to profit or loss:
							Net change in fair value of equity instruments designated as measured at fair value through other comprehensive income
Valuation difference on available-for-sale securities	10,810	(333)	—	(1,563)	8,914	C	
Remeasurements of defined benefit plans, net of tax	1,954	—	—	(313)	1,641	C	Remeasurements of defined benefit plans
	—	—	94	54	148		Share of other comprehensive income of investments accounted for using equity method
	12,764	(333)	94	(1,822)	10,703		Total of items
							Items that will be reclassified to profit or loss
Deferred gains or losses on hedges	(1,124)	433	—	585	(106)	C	Cash flow hedges
Foreign currency translation adjustment	(9,568)	(796)	—	77	(10,287)		Exchange differences on transition of foreign operations
Share of other comprehensive income of entities accounted for using equity method	(4,590)	—	(94)	(340)	(5,024)		Share of other comprehensive income of investments accounted for using equity method
	(15,282)	(363)	(94)	322	(15,417)		Total of items
Total other comprehensive income	(2,518)	(696)	—	(1,500)	(4,714)		Other comprehensive income, net of tax
Comprehensive income	93,811	(1,187)	—	(2,436)	90,188		Comprehensive income

A) Net sales and cost of sales

Reclassification:

Impairment loss presented in “extraordinary losses” under J-GAAP has been reclassified in “cost of sales” under IFRS.

Recognition and measurement:

Revenue from some of the transactions of sales of goods which was recognized on a delivery basis under J-GAAP, is recognized at the time when control is transferred under IFRS, resulting in ¥2,583 million decrease in “net sales.” For the similar reason coupled with a change in cost formula, “cost of sales” decreased by ¥4,682 million.

B) Other income, other expenses, finance income, finance costs, share of profit of entities accounted for using equity method, and income tax expense

Reclassification:

Of the items presented in “non-operating income,” “non-operating expenses,” “extraordinary income,” and “extraordinary losses” under J-GAAP, those concerning profit or loss related to finance are reclassified into “finance income” and “finance costs,” while all other items into “other income,” “other expenses,” and “share of profit of entities accounted for using equity method” under IFRS. Meanwhile, “income taxes – current,” and “income taxes – deferred” that were separately presented under J-GAAP are now wholly presented in “income tax expense” under IFRS.

Recognition and measurement:

[Finance costs]

Following the repayment of borrowings, expenses associated with such borrowings were amortized at once, resulting in ¥2,309 million increase in “finance costs.”

C) Other comprehensive income, net of tax

Recognition and measurement:

[Net change in fair value of equity instruments designated as measured at fair value through other comprehensive income]

Financial instruments such as unlisted shares considered to pose extreme difficulty in determining fair value were recognized at cost under J-GAAP, whereas fair value of such financial instruments is estimated by using appropriate valuation techniques under IFRS, resulting in ¥1,563 million decrease in “net change in fair value of equity instruments designated as measured at fair value through other comprehensive income.”

[Remeasurements of defined benefit plans]

Actuarial gains and losses under J-GAAP were recognized in “other comprehensive income” at the time of occurrence, and then were evenly amortized over the period within the average remaining years of service of the eligible employees from the fiscal year following such occurrence, whereas under IFRS, actuarial gains and losses are recognized in “other comprehensive income” at the time of occurrence, and then immediately recognized in “retained earnings,” resulting in ¥313 million decrease in “remeasurements of defined benefit plans.”

[Cash flow hedges]

Derivatives that met the hedge accounting requirements were recognized by deferred hedge accounting under J-GAAP, whereas some of derivatives are subjected to fair value hedges accounting under IFRS, resulting in ¥585 million increase in “cash flow hedges.”

Reconciliation to cash flows for the previous fiscal year (from April 1, 2017 to March 31, 2018)

There is no material difference between the consolidated statement of cash flows disclosed under J-GAAP and that under IFRS.





## Independent Auditor's Report

To the Board of Directors of Sumitomo Metal Mining Co., Ltd.:

We have audited the accompanying consolidated financial statements of Sumitomo Metal Mining Co., Ltd. and its consolidated subsidiaries, which comprise the consolidated financial statement of financial position as at March 31, 2019, and the consolidated statement of profit or loss, statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

### 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 International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of 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 comply with ethical requirements and 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 our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control 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, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. 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.

### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Sumitomo Metal Mining Co., Ltd. and its consolidated subsidiaries as at March 31, 2019, and their financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards.

### Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2019 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 2 to the consolidated financial statements.

July 31, 2019  
Tokyo, Japan

KPMG AZSA LLC

KPMG AZSA LLC, a limited liability audit corporation incorporated under the Japanese Certified Public Accountants Law and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity.

## (2) Other

Quarterly information for FY2018.

	Three months ended June 30, 2018	Six months ended September 30, 2018	Nine months ended December 31, 2018	FY2018
Net sales (Millions of yen)	241,980	466,657	703,485	912,208
Profit before tax (Millions of yen)	37,865	73,208	86,697	89,371
Profit attributable to owners of parent (Millions of yen)	28,910	58,058	66,867	66,790
Basic earnings per share (Yen)	105.21	211.28	243.34	243.06

	First quarter	Second quarter	Third quarter	Fourth quarter
Basic earnings (loss) per share (yen)	105.21	106.07	32.06	(0.28)

# Corporate Data and Investor Information (As of March 31, 2019)

## Corporate Data

Founded	1590
Incorporated	1950
Paid-In Capital	¥93.2 billion
Number of Employees	6,776 (Consolidated)
Head Office	11-3, Shimbashi 5-chome, Minato-ku, Tokyo 105-8716, Japan

## Contact Information

### Public Relations & Investor Relations Department

11-3, Shimbashi 5-chome, Minato-ku, Tokyo  
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URL <http://www.smm.co.jp/E/>

## Investor Information

Closing Date	March 31
Ordinary General Meeting of Shareholders	June
Common Stock	Number of authorized shares 500,000,000 Number of issued and outstanding shares 290,814,015 Number of shareholders 42,651 Listing of shares Tokyo Stock transaction unit 100 shares

Note: SMM consolidated its common stock at a rate of one share for every two shares with October 1, 2017 as the effective date.

## Registrar of Shareholders

### Sumitomo Mitsui Trust Bank, Limited

4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8233, Japan

Stock Transfer Agency Department:

### Sumitomo Mitsui Trust Bank, Limited

4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8233, Japan

## Method of Public Notice

Electronic notification (However, if electronic notification is not available due to unavoidable circumstances, notice will be published in the Nihon Keizai Shimbun newspaper.)

## Independent Public Accountant

KPMG AZSA LLC 1-2, Tsukudo-cho, Shinjuku-ku, Tokyo

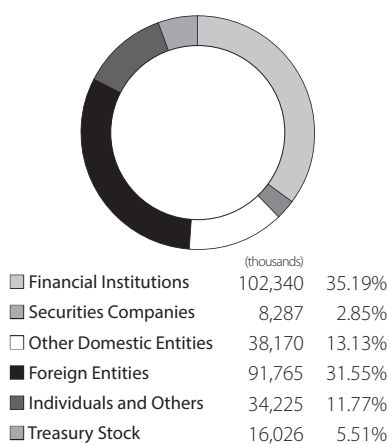
## Major Shareholders

	Number of shares held (thousands)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	24,914	9.1
Japan Trustee Services Bank, Ltd. (Trust Account)	19,578	7.1
Toyota Motor Corporation	11,058	4.0
JPMORGAN CHASE BANK, 385632	6,171	2.2
Japan Trustee Services Bank, Ltd. (Trust Account 5)	5,314	1.9
STATE STREET BANK CLIENT OMNIBUS OM04	3,871	1.4
Sumitomo Mitsui Banking Corporation	3,825	1.4
Sumitomo Realty & Development Co., Ltd.	3,745	1.4
STATE STREET BANK WEST CLIENT - TREATY 505234	3,744	1.4
Sumitomo Life Insurance Company	3,737	1.4

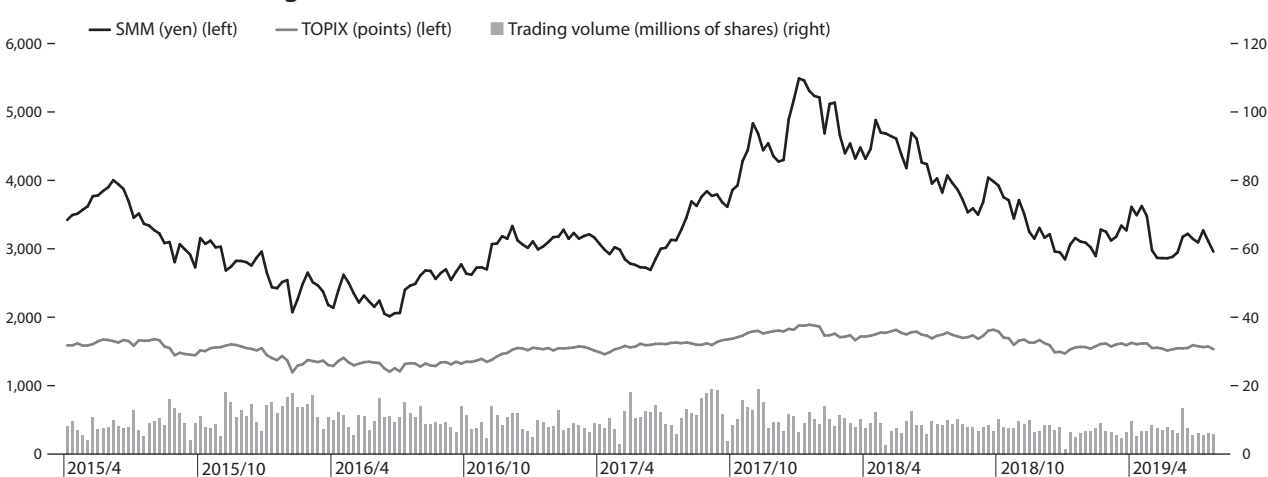
Notes: 1. We own 16.026 million shares of treasury stock.

2. The shareholding ratios were calculated based on the total number of issued shares less treasury stock.

## Breakdown of Shareholders



## Stock Price and Trading Volume



Note: SMM reduced the number of shares in a trading unit of stock and consolidated its common stock at a rate of one share for every two shares with October 1, 2017 as the effective date. Because of this, in the graph, the pre-September 2017 stock price is shown as double, and the trading volume is shown as half.

## Sumitomo Metal Mining Co., Ltd.

### Publicity Relations & Investor Relations Dept.

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