

## The future of technology is limitless

JFE GROUP TODAY 2016

# Challenging Spirit, Flexibility & Sincerity

The JFE Group — Contributing to Society with the World's Most Innovative Technology

## JFE GROUP TODAY 2016

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50th Anniversary of Fukuyama District in West Japan Works West Japan Works, the core steelworks of JFE Steel, sits on an enormous site boasting one of the world's largest blast furnaces. In February 2015, its Fukuyama District facility celebrated 50 years of operation. Going forward, JFE aims to make this one of the world's leading steelworks boasting highly advanced technology and extra-efficient production.





## Continuing Investment in JFE's Manufacturing Base in Japan

JFE is steadily strengthening its manufacturing base in Japan by renewing facilities at domestic production sites. Highreturn investments are being accelerated, such as upgrading coke ovens to further enhance JFE's global competitiveness.

#### (Photo)

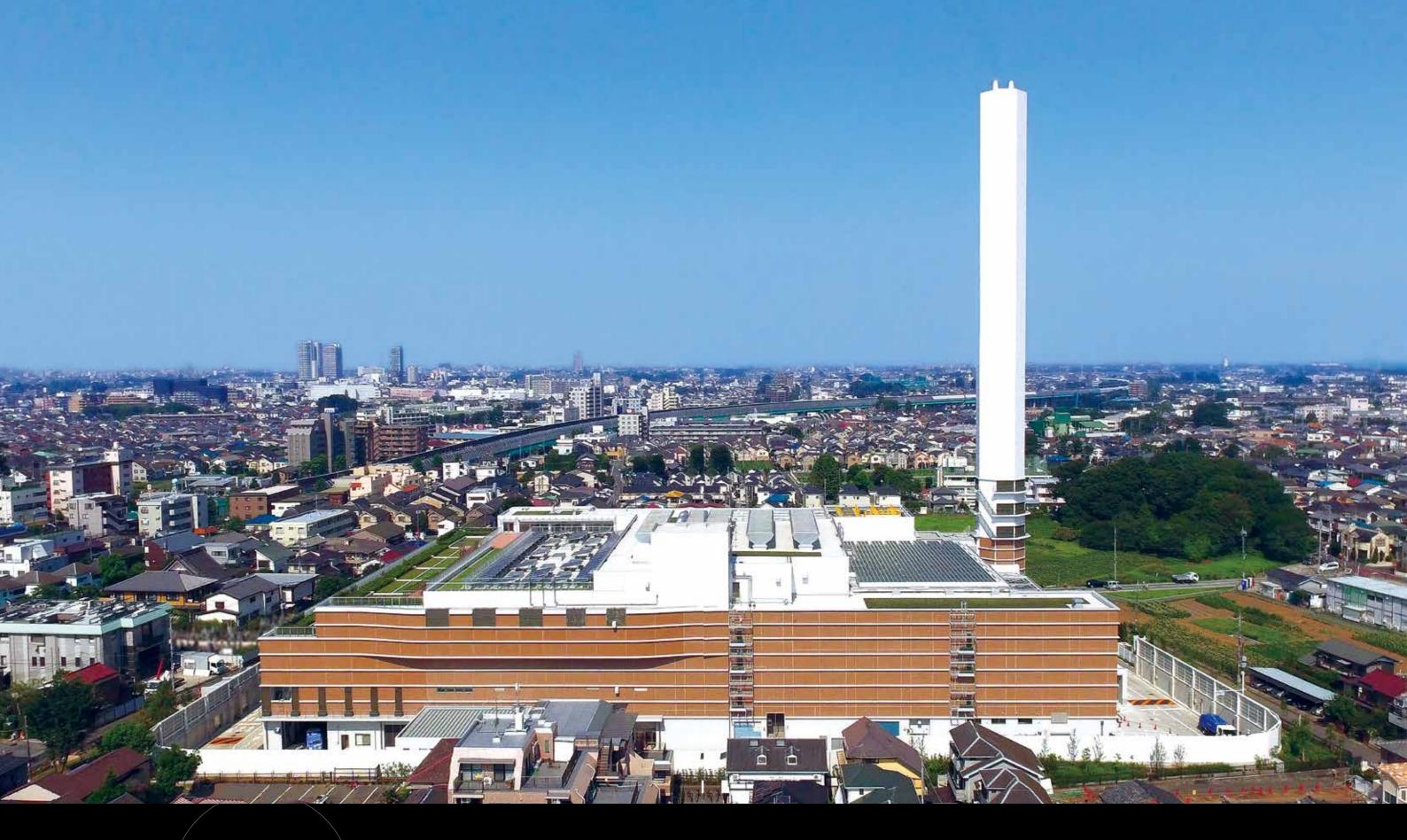
Chiba District of East Japan Works

To renew Battery A of the Works' No. 6 coke oven, 40 skilled bricklayers were organized to lay 15,000 tons of bricks by hand in 160 days. Construction is scheduled to end in 2016.

## Passing down Crucial Steel-making Know-how

Amid a rapid generational shift due to the mass retirement of baby-boomers, JFE has taken resolute steps to ensure that its steel-making know-how is soundly passed down to the company's next generation. Specific measures have included education and training in crucial technical skills and diversification of the workforce.

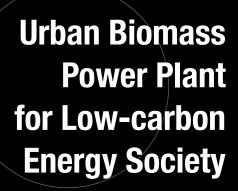




# Waste-to-energy Plants Harmonized with Communities

JFE Engineering fully redesigned and rebuilt the Nerima Incineration Plant in Tokyo, which resumed operation in December 2015. The new plant coexists harmoniously with its surrounding residential community thanks to its compact layout and use of advanced technologies to satisfy all emissions standards.





JFE Engineering built a power plant that runs exclusively on wood biomass fuel, one of the largest such power plants in Japan, on the site of a former refinery in Kawasaki.

The plant uses biomass power-generation technology to turn wooden pellets and coconut shells into a clean source of renewable energy amounting to 49 MW of electricity.



Local Employees Help Pave Way for Business Overseas

Amid a dramatic upswing in Vietnam's steel demand due to rapid economic growth, JFE Shoji Group's local staffers are hard at work selling JFE steel products and raw materials, including steel scrap. JFE Shoji is opening up avenues to new business by harnessing the talents of some 3,500 local employees in a global network spanning 56 locations in 19 countries.

## **Building Large, Extra-efficient Ships** to Save Energy

The NYK BLUE JAY, the first in a series of 14,000 TEU energy-saving container ships, was built at the Kure Shipyard of Japan Marine United (JMU). The ship boasts class-leading container capacity thanks to innovations including the use of YP460, an ultra-thick, high-tensile steel developed with JFE Steel. JMU's proprietary energy-saving equipment and its computer-controlled main engine save energy and strengthen

operational flexibility.



# Improving Corporate Value in a Rapidly Changing Environment

## Eiji Hayashida

President and CEO JFE Holdings, Inc.

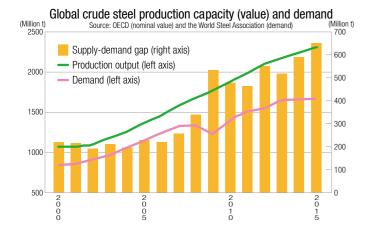
JFE is engaged in engineering, trade and related businesses centered on the company's core steel business.

Since JFE's founding in 2002, the company has undertaken various restructurings to ensure its sustainable long-term growth while striving to serve society beneficially. JFE employees are trained to enhance our coexistence with the global environment and to rigorously uphold ethical business practices. Through such efforts, we work to increase our corporate value for all stakeholders.

JFE is currently targeting sustainable growth and improved corporate value under its Fifth Medium-term Business Plan. This plan was introduced in the spring of 2015 to lay out core business strategies from FY2015 to FY2017. The major strategies include strengthening the profit base in Japan, increasing overseas business profitability by leveraging technical superiority, and diversifying human resources and the Group's combined strengths in wide-ranging fields. But since the summer of 2015, the environment surrounding the steel business has grown increasingly harsh, particularly because of the stagnant Chinese economy. Herein, I would like to report on such circumstances and explain how we intend to respond. Soundly pursuing our plan by strengthening our technical prowess, human resources, and the group's combined strengths

### Slow recovery in steel business due to a weakening international market

Up to the end of the 20th century, global crude steel production hovered at around 700 to 800 million tons per year. But the start of the 21st century witnessed a surge in demand from developing countries like China, ushering in a period of strong earnings for the global steel industry. Although demand plummeted following the Lehman shock in 2008, the falloff was soon offset by the robust Chinese economy. However, this eventually led to instability in the international steel market, where minor fluctuations in demand from China resulted in wild fluctuations in raw material prices. In 2014, China experienced its first negative growth in steel demand, which precipitated an oversupply that substantially depressed the international market. Our earnings were supported somewhat by the decline in raw material prices, but once Chinese demand started falling further in 2015, the country's steel industry began to export aggressively. Steel product prices quickly plummeted and the international market now finds itself in the worst shape it has been in a dozen or so years. Notably, difficult conditions persist for highly value-added steel products, such as those in which we specialize.



### **Recent conditions for each group** business reflecting domestic and foreign trends

Earnings also were tepid in our trading business, which is strongly tied to our steel business. The Chinese government had been planning to scrap small, inefficient steel production facilities, but then not much was done because it would have cut jobs. While more muscle has been put into pursuing the plan this year, there is little hope that it will produce results quickly. A realistic expectation is that it will take several years to restore a supply/demand balance, so I feel we must work on the premise that harsh conditions will persist for some time in both our steel and trade businesses.

With regard to our engineering business, we were anticipating a decline in Japanese demand, so for the past few years we have been proactively expanding businesses overseas. We have narrowed our pursuit of new orders to focus mainly on Southeast Asia, but this area also has been impacted by the sluggish Chinese economy, so the value of overseas orders fell short of our target. In Japan, however, we leveraged our competitiveness to beef up sales. As a result, the values of the orders we received in FY2015 came to a record 509.4 billion yen, which was ahead of our medium-term target.

Japan Marine United, our equity-method shipbuilding affiliate, had a good year. Despite a global slowdown in orders for bulk carriers and tankers, it won a number of orders for new ship models, such as large-scale container ships, gas tankers and warships, so it will maintain a solid construction volume for the coming two and a half years. The costs of development and design for new ship models is by no means small, but we are forging ahead with this business by staying in the black in both the past and current fiscal years.

#### Hot-rolled steel prices in China



### **Responding to harsh environment** with growth measures

Global market conditions for steel should gradually recover as China responds to the situation and other factors take hold. If the global economic recession is prolonged, however, the recovery could be drawn out, so we intend to work under the assumption that an upturn may not come, even while remaining hopeful. Under almost any scenario, harsh conditions are likely to persist for the time being, but we remain determined to make our utmost efforts to increase earnings in our flagship steel business.

Specifically, we intend to boost our share of the high-end steel market, which differs from the heavily price-competitive market for generic products. We also will cut costs by improving production efficiency, and by upgrading and repairing facilities for increased product and cost competitiveness over the medium to long term. In addition, we will engage in further hiring and training to rejuvenate our workforce. While current conditions differ from what we originally envisioned when fashioning our current medium-term business plan, what we need to do remains relatively unchanged. It might take us somewhat longer to achieve our profit targets, but we will resolutely forge ahead nonetheless.

In addition to improving earnings in each business sector, we intend to support investment by improving cash flow through efforts like asset compression, thereby striking a balance between earnings and the financial footing of our group as a whole

### **Corporate structure that enhances** governance

In Japan, numerous measures have been taken in recent years to improve corporate governance, including implementation of the Tokyo Stock Exchange's Corporate Governance Code. Also, in advance of such measures, JFE Holdings proactively introduced outside directors, established new internal structures and enhanced training to improve governance. In FY2015, corporate transparency was upgraded by establishing the Nominating Committee and the Remuneration Committee. Outside executives hold a majority of the seats on the two committees. After a string of corporate scandals in the business worlds of Japan and overseas beginning last year, JFE Group members have committed to collectively and individually review their understanding of ethical needs and requirements as members of society and as professionals.

We plan to return to our core principles to ensure thorough compliance.

### Meeting the expectations of stakeholders

While my conjecture is that business conditions will remain harsh, as the CEO I am determined to lead JFE in meeting the expectations of stakeholders in every way possible. In working toward this goal, I intend to inspire progress and remain both positive and enthusiastic, and I would greatly appreciate your support.





# Human Resources Underpin JFE's Future

## Human Resources Efforts by the "JFE Generation"

For JFE's broad range of businesses centered on steel, the quality of each business is underpinned by the efforts of every employee. Some 14 years since being launched in 2002, JFE is now undergoing a major internal change as the workforce shifts to the "JFE generation," or employees who joined the company after JFE was formed. How will these employees make their mark on the company going forward?



# Knowledge Transfer

As a leader with a sense of heritage, strive to transmit machine maintenance skills to our next generation.

Ensuring stable cold rolling

The Chiba District of JFE Steel's East Japan Works mainly produces thin steel sheets for cans and sinks. The production operations use a technique called cold rolling, in which steel measuring approximately 3 mm thick is processed until it is one-tenth this thickness.

According to Takuya Furukawa, 29, who is in charge of maintaining the plant's cold-rolling equipment (2TCM): "In cold rolling, errors of a mere 0.1 mm can affect the quality. My role is to inspect and repair the equipment so that it can continue to produce high-quality products stably."

Maintenance is handled by a three-person team. Furukawa, the leader, thoroughly inspects all inspection documents filled out by his two subordinates, one of whom is a 19-year-old who just joined the company.

"Our 2TCM is the world's fastest cold-rolling machine. Because of its rapid rotating speed, it tends to wear out quickly, so it must be maintained frequently. Malfunctions could bring the plant's entire production process to a halt, so we have to diagnose problems and fix them rapidly.

Misidentifying a malfunction also could lead to a work stoppage and have a significant impact on operations, so the maintenance personnel are tasked with an enormous responsibility.

"When I make a diagnosis, I start by examining past maintenance records. If a particular malfunction has never occurred before, I confer with subordinates and superiors to figure out a solution. The more difficult the problem is, the happier I am when we solve it!"

## Young leaders take charge of passing down technical skills

## Takuya Furukawa

Leader, Cold-Rolling Equipment Section, Equipment Division Chiba District of East Japan Works JFE Steel

### From conveying skills to devising allnew methods

Furukawa became a leader in his eighth year. Like other manufacturers, steelmakers are experiencing a rapid generational shift. In JFE's case, the company has been actively appointing young people as new leaders.

"This is the first time that I have been responsible for junior employees I cannot just keep my knowledge bottled up inside myself if I want to make this a better plant. I'm working to ensure that lessons which took me five years to learn can be mastered by my juniors in just one year.'

Furukawa, who is young for a worksite manager, first learned about technical skills from a superior. The large number of malfunctions that he handled firsthand were instrumental in his fast rise.

"Whenever a problem occurred, my superior would come to me and put me at ease by saying, 'We can solve this problem.' After the problem was fixed, my superior would show me detailed drawings of the machine and explain the cause of the problem. By showing the whole picture, he instilled in me the ability to think on my own."

As time goes by, new malfunctions crop up with machinery Furukawa discusses how this makes it so important to be able to find a solution regardless of the situation.

"It has been more than 50 years since the 2TCM went into operation, and all records of its maintenance have been saved. This gives me a strong sense of this heritage, so as I go about my job, I feel that I must make my

### Training engineers to lead JFE into the future

Leader in the Cold-Rolling Equipment Section, Equipment

Division, Chiba District of East Japan Works, JFE Steel. Joined the company in 2007 and later was assigned to the Cold-Rolling Equipment Section, Equipment Division. In

charge of maintaining rolling equipment since 2015.

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## Teruo Yoshida

PROFILE

Takuya Furukawa

Supervisor, Cold-Rolling Equipment Section, Equipment Division Chiba District of East Japan Works JFE Steel



"Our job as supervisors is to place the right person in each position. Leaders are required to have comprehensive capabilities, so in the case of worksite leaders this means people who can deal with a broad range of people, as well as machines, while also managing safety, quality, costs and deadlines. Narrow-minded people can't handle such roles. A leader's worth is not determined by how well they themselves work, but by how well their entire worksite functions. People such as Mr. Furukawa, who consider the big picture when making decisions, will

underpin the plant as it moves forward.

"As veterans, we instruct young employees with the understanding that they will play central roles someday. So, rather than focus just on short-term solutions by asking them 'what should we do?', we help them understand causal relationships by asking 'Why should we do that?' I like to take the time to discuss things, because the innovative ideas that people can come up with when they are trained this way have the possibility to become new standards for us. Developing

a future generation of such people will be an indispensable asset for JFE.

"We have instituted test programs, such as the Technical Expert Program, in which veteran and even retired engineers serve as expert instructors at each workplace. We also involve young employees in problems that ordinarily they would not encounter. Going forward, we intend to pass on technical skills even more vigorously as part of the fostering of outstanding human resources to ensure our long-term survival."



Human Resources

own contribution to this legacy. And I must foster people who can write a new and even better chapter in our history. This is how JFE will continue to accumulate technology."





# Development

Connecting Japan and the world: A key role for our foreign staffers

## Rapidly delivering products and building trust

JFE is increasingly employing foreign (non-Japanese) personnel to help develop business in markets outside Japan. The Hanoi Branch of JFE Shoji Trade Vietnam Co., Ltd., for example, employs four locals for sales or administrative work. One of them, Pham Truc Quynh, is in charge of raw materials sales.

"Our major commodity is steel scrap from Japan, which we sell to steel manufacturers in Vietnam. Since the construction of buildings and apartments is proceeding apace in Vietnam, the demand for steel scrap is growing."

Developed countries have large reserves of steel scrap left over from the dismantling of old buildings and so on. Most of the scrap imported into Vietnam is from Japan.

"My job is to assess the buyer and supplier's respective situations and then offer them a proposal. The amount of steel scrap available for supply is very volatile, so this leads to significant price fluctuations from one day to the next. I always need to have the latest information to negotiate transactions, so I stay in contact with supply centers throughout Japan, checking in with them every 15 minutes through an online chat. I must offer the buyer the absolute best materials at the absolute best price, so it is incredibly rewarding to be able to satisfy them and then convey the good news to my Japanese colleagues."

Employees like Quynh, who speaks fluent Japanese, are opening up



### PROFILE

Pham Truc Quynh

Sales representative at the Hanoi Branch of JFE Shoji Trade Vietnam Co., Ltd. Did a short-term study in Japan and interpreted at a Japanese company before joining JFE in 2011. After working in a clerical position as a sales assistant, became a sales representative. Mainly handles steel scrap and alloy iron.

### Foreign personnel help JFE prevail internationally

## Isao Sumiyoshi

(Former) Branch Manager Hanoi Branch, JFE Shoji Trade Vietnam Co., Ltd.



"Foreign employees are indispensable to the effort to expand our Asian markets. When we compete with local companies, the fact that we can communicate on a native level creates a big advantage for us. In meetings, for example, our local employees can elicit people's true intentions and feelings based on their understanding of local culture and language. They can pick up subtle sensibilities expressed in person and through direct dialog, which is not possible through written or translated communication or other indirect means. This is how we differentiate JFE's

## Global personnel helping to expand our global business

## Pham Truc Quynh

Sales representative Hanoi Branch, JFE Shoji Trade Vietnam Co., Ltd.

avenues to new business for JFE by leveraging their deep familiarity with circumstances, culture and language in local markets.

## Harnessing the power of raw materials to develop her home country

After working as an interpreter at a Japanese IT company, Quynh joined JFE Shoji Trade Vietnam Co., Ltd. out of a desire to broaden her horizons.

"I entered JFE in a clerical position, but I was hand-picked for promotion by the branch manager, who could see that I enjoy communicating with people. I was able to grow because everyone participated in teaching me how to logically analyze market conditions and indicators. In fact, everyone in the office would help one another out, which made for a very pleasant work environment."

The local hires in the Hanoi Branch and its affiliate companies are all women. They support one another not only in work but also in family matters, such as childcare. So, as a local employee, how does Quynh view a foreign company such as JFE Shoji Trade?

"It used to be that steel scrap in Vietnam mainly came from Africa or South America. JFE Shoji Trade Vietnam was a pioneer in bringing in high-quality Japanese products. When I see bridges or buildings being constructed with materials that I purchased, I feel a deep sense of pride that I am contributing to my home country. The market is still growing, so I intend to continue helping it develop."

strengths to attract orders.

"At the same time, we must thoroughly train local staffers in Japanese business customs. Compared to Vietnam, the tendency in Japan is to do things more deliberately over a longer period. While non-Japanese employees may feel that certain processes are largely formalities, I help them understand the importance of these processes.

"Quynh excels at communication, so I am helping her leverage this strength. Also, I have asked her to reach beyond her expertise in steel scrap to handle raw materials and steel products, which is helping her to upgrade her overall negotiating skills.

"In Vietnam's fast-developing society, where young people are incredibly motivated to advance their careers, I am trying to create a workplace where such people can improve their skills and feel a sense of satisfaction with their achievements. Being stationed in Vietnam, I also take satisfaction in the country's progress, so I would like to expand JFE's business in ways that enable local employees to play even more active roles."



Inderpinning the JFE of Tomorrow Human Resources



As one who likes to take on challenges, Quynh has a big future goal. "My current job is to purchase raw materials, but someday I would like to market technical capabilities to Vietnamese customers. Steel manufacturers in the market here mainly sell products such as building materials, but if I could offer them JFE's extensive technical capabilities, they would be able to produce higher-quality, higher-performance products. I also would like help to forge increasingly warm relations between people from Japan and Vietnam to support further growth in my country."



## Strengthening project management through teamwork

## Tsutomu Oyama

Project Manager Yangon Waste Incineration Power Plant Project JFE Engineering

### **First waste-incineration power plant** in Myanmar

Rapid economic growth in Yangon, the largest city in Myanmar, is creating problems in areas such as increased waste and chronic power outages. Such challenges are being met head-on by a JFE project team led by Tsutomu Oyama.

"JFE Engineering has an extensive track record in the construction of waste-incineration power plants in Japan, as well as various projects within Myanmar. Based on this strong reputation, the city of Yangon asked for our assistance. In return, we were absolutely determined to honor their confidence in us."

Mr. Oyama, the project manager, embarked upon a plan for a wasteincineration power plant that would be the first of its kind within Myanmar.



The plant was designed to generate approximately 5,200 MWh of power per year and cut CO<sub>2</sub> emissions by roughly 2,400 tons. It was the culmination of JFE's research abilities and a strong local network backed by JFE's technical prowess.

"The biggest obstacle was the construction cost of about 2 billion ven (19.95 million USD), a sum that could not be covered solely by Yangon. We needed to involve Japan's Ministry of the Environment and Myanmar's central government, which required us to go back and forth between the two countries numerous times to explain the significance of our plant."

After two years of liaison and negotiation, the Myanmar government finally granted a special allocation, and the project eventually got under way.

### Mutual trust and respect allowed the team to grow

The project team supporting Mr. Oyama comprises experts in different areas, including design, procurement and construction, all of whom are stationed locally. Backup is being provided by JFE personnel in Japan, including retirees who possess a wealth of experience. Their collective strengths have been combined in a top-notch team to tackle this unprecedented project.

"Once the project got under way, we could hire skilled local personnel because many expert engineers have returned home to Myanmar as a result of the country's democratization. As such, we were

Nyo Yi Thant



Myo Min

Ingvin Ko Ko

Swe Zin Thant



#### PROFILE Tsutomu Oyama

Overseas Business Division, Environmental Solutions Sector, JFE Engineering. Joined the company in 2002. Appointed project manager of the Yangon Waste Incineration Power Plant Project in October 2015.

Mr. Oyama kindly instructed us, the technical members, in basic things like documentation. schedule management and business etiquette. He also held frequent meetings so that we could share and discuss any problems that we were facing

Whereas we tended to get fixated on a single idea, Mr. Oyama would propose several ideas and flexibly guide us towards a solution. A top-down style of business predominates in Myanmar, and workplaces are often shrouded in an insular atmosphere, but the JFE staff

members took the approach of granting us the discretion to make decisions. Also, they worked together with us, which allowed us to go about our work with a sense of satisfaction.

Our greatest happiness is contributing to the development of Myanmar through this project, so it pleases us to know that the completed plant will add to the Yangon cityscape. We all aspire to be project managers like Mr. Oyama someday, and to boost our skills so that we can take on even bigger jobs in the field of infrastructure development



Human Resources

# Solidarity

### Leveraging transnational solidarity to carry out projects

able to hire people with extensive international experience, including in building and running waste-incineration power plants. These local staffers are now playing active roles not only in technical matters, but communication matters such as meetings and local documentation."

It's said that the people of Myanmar, after living for many years under a military regime, remain guarded when speaking with foreigners. So having local personnel to participate in meetings helped negotiations proceed smoothly.

"We met with the team countless times to familiarize them with the plan and overall objectives, which helped they move ahead with negotiations. Meanwhile, I learned a lot from them, considering how industrious and ambitious they were. Our relationship was not one of a Japanese manager and local staff. I worked with them as an engineer."

Mr. Oyama says that the team's solidarity has increased dramatically since the project began. Looking ahead, their challenge now is to help ensure that construction finishes on schedule in 2017.

"If this project is a success, then it's possible that we'll be entrusted with even greater projects in Myanmar. This would surely stand as a major accomplishment for JFE, especially at a time when the company is expanding into other countries. Everyone on the team is working together, ultimately to help broaden JFE's overall business scope."



### **OVERVIEW**

# JFE Group

Harnessing of possibilities of steel and other materials for the good of society



The JFE Group was formed with the establishment of JFE Holdings, Inc. by NKK and Kawasaki Steel in 2002. Since then, JFE has aspired to become an increasingly excellent corporate group for the 21st century under a corporate vision of contributing to society with the world's most innovative technology.





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**Group Sales** Breakdown



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JFE Engineering develops technologies for effective resource use and clean energy in environmental infrastructure and power generation. In addition to these core businesses, JFE Engineering offers specialized expertise in fields including industrial machinery and steel structures, such as bridges.

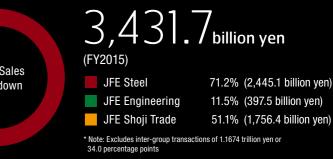




### JFE Holdings, Inc.

### **Maximizing Corporate Value**

JFE Holdings formulates strategy and manages funding for the JFE Group as its holding company. It also handles information disclosure as a listed company.



### JFE Steel Corporation

### **Highly Functional Steel Products Tailored to Customer Needs**

JFE Steel is one of the world's leading integrated steel producers. A strong international player with a sophisticated production system consisting of two major steelworks, one each in eastern and western Japan, JFE Steel leverages its cutting-edge technologies and developmental know-how to manufacture and market a wide range of highly functional steel products, which it finely tunes to the diverse needs of its customers.

### JFE Engineering Corporation

#### **Innovative Technologies for Energy Savings** and the Environmental Protection

### JFE Shoji Trade Corporation

### **Creating Value as the Group's Core Trading Company**

JFE Shoji Trade engages in trading JFE products in Japan and the import/export of JFE products centering on steel materials but also including steel raw materials, nonferrous metals, chemicals, fuels, materials and machinery and marine vessels. The company also is expanding its involvement with foodstuffs and electronics.

### Japan Marine United Corporation

### **Energy-saving Technologies for Ocean Transportation**

Japan Marine United, which operates seven shipyards or works and two technical research centers, is a leader in the construction and repair of large merchant ships, including tankers, bulk carriers and container ships, and specialty vessels such as destroyers, minesweepers and ice-breakers.



## JFE Steel



JFE Steel has developed world-leading technical prowess and highly efficient production centers to meet the growing demands for highgrade steel. In the face of a very harsh business environment, we are steadily implementing a variety of initiatives to enhance our manufacturing capabilities towards the future, including:

- Strengthening manufacturing bases in Japan through capital investment and human resource development
- Investing overseas in sectors and regions that show a strong potential for growth
- Intensifying research and development aimed at boosting technical advantages.

Moving forward, we will continue to meet the challenge of supplying value-added, high-performance products that satisfy the many needs of our global customers.

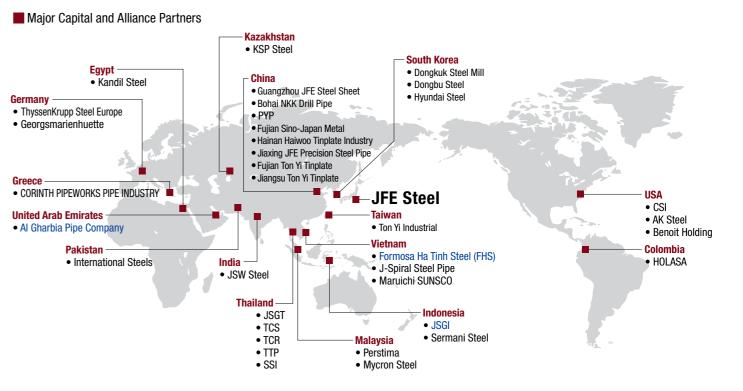
### Strengthening manufacturing bases in Japan

JFE Steel is steadily reinforcing its domestic manufacturing bases in terms of facilities and personnel for increasingly stable operations and improved cost competitiveness. Proactive repairs and renewals of facilities are helping to bolster competitiveness. For example, we are moving ahead with intensive repairs of our material loading/unloading and transport equipment, and upgrading facilities such as coke ovens.



### Expanding our access to the growing global market

JFE Steel is taking a number of measures to adapt to the current and future global steel market, which is expected to expand. To supply plate steel for vehicles, we are establishing a manufacturing and sales network for high-grade steel, involving our manufacturing bases in China, Thailand and Indonesia, and an alliance partner in India. In addition, we are setting up a steel-pipe supply system for the energy sector, which is expected to see medium to long-term



Koji Kakigi

President & CEO

### JFE Steel

With respect to personnel, we are emphasizing the passing down of technical skills to younger workers. Initiatives include recruiting diverse human resources and implementing our Technical Expert Program to station full-time trainers in each workplace for strengthened humanresource development.



demand. Together with Marubeni-Itochu Steel Inc. and SENAAT, a general holding company wholly owned by the Emirate of Abu Dhabi, we have established a manufacturing and sales company in Abu Dhabi for large-diameter welded steel pipes. The plant is now under construction. We have also decided to take a stake in FHS, an integrated steelworks in Vietnam, to serve as an overseas manufacturing base that we will support with technical assistance.

### Participating in a Vietnamese integrated steelworks

We have decided to take a stake in an integrated steelworks project that is being carried out in Vietnam by the Formosa Plastics Group. JFE will provide technical support. Formosa Ha Tinh Steel (FHS), the joint venture that is executing the project, is building Vietnam's first large-scale integrated steelworks, which will sequentially bring its facilities online. JFE Steel will support the project to help ensure that FHS starts operating as soon as possible. JFE Steel also will sell FHS products as a future growth opportunity.



FHS's blast furnace, the iconic core facility at this integrated steelworks



## Groundbreaking ceremony in Abu Dhabi

Al Gharbia Pipe Company held a groundbreaking ceremony for a large-diameter welded steel pipe plant in Abu Dhabi in April 2016. The company is a joint venture established by JFE Steel, Marubeniltochu Steel and SENAAT, an investment company wholly owned by the Emirate of Abu Dhabi. Some 80 people took part, including the president of each company, government officials and people involved in the construction work. The guests expressed their strong wishes for the safe completion of construction and the success of the project.

## CGL begins operating in Indonesia

PT. JFE STEEL GALVANIZING INDONESIA (JSGI), a wholly owned subsidiary of JFE Steel, began operating Indonesia's first continuous galvanizing line (CGL) for vehicles. The line is scheduled to begin full-scale commercial production once test runs are approved by its customers. JSGI gives JFE Steel a third Asian base with a CGL to serve automakers, joining lines already in operation in China and Thailand.



JSGI facility for galvanizing substrate that JFE Steel manufactured in Japan

### Upgrading coke ovens in Japan

As part of JFE Steel's efforts to strengthen its manufacturing bases in Japan, the company is sequentially upgrading its coke ovens in the country. Once they become operational, JFE Steel will attain selfsufficiency in supplying the entire company with coke, which will substantially reduce costs and enhance competitiveness.



The No. 3 Coke Oven in the Kurashiki District of West Japan Works

### New cold-rolled, high-tensile strength steel and molding technique for hard-to-machine parts

JFE Steel's new 980-Mpa high-tensile, cold-rolled steel plate strikes a practical balance between outstanding elongation characteristics and hole expansibility. Compared to conventional materials, this advanced steel improves elongation by 20% and doubles its hole-expansion rate. By increasing the strength of parts with complicated shapes, it boosts the impact performance of vehicle frames while reducing weight for

improved fuel economy. We have also developed a new molding technique for parts that previously could not be machined with conventional steel. Applicable for everything from mild (low-carbon) steel to ultra-high-tensile strength steel materials, regardless of strength, it contributes to improved part performance and design, as well as lower weight.



Automotive rear hatch machined with JFE Steel's new molding technique

### Newly developed accumulators for hydrogen filling stations

JFE Steel and subsidiary JFE Container have developed accumulators that reduce the construction costs of hydrogen filling stations. Designed by JFE Container, the accumulators store hydrogen in special liner units, made with steel pipes wound with carbon fiber, and featuring a simple, straight shape to lower both material and maintenance costs.



Prototype measuring about 1.6 meters

### Highlights 2015

2015	
April	Developed a world-leading 100-Mpa high-pressure hydrogen gas permeation test device
	Minister of Education, Culture, Sports, Science and Technology Award received for anti-seismic technology
Мау	JFE Western Japan baseball team won first JABA Babe Ruth Cup Tournament
	<ul> <li>Festivals held in Fukuyama and Keihin districts</li> </ul>
June	East Japan Works' cumulative production reached 100 million tons of crude steel
	National Commendation for Invention Award received for HOP-HIPER®
July	World's first adoption of structural crack arrest technology for large container ships
	West Power Plant No. 4 began operating at the Chiba District
	JFE Western Japan baseball team played in the National Intercity Nonpro Baseball Championship Series
August	<ul> <li>First JFE Family Day held</li> </ul>
eptember	Agreement reached to participate in integrated steelworks project in Vietnam
	Merger of JFE Mechanical with JFE Electrical & Control Systems announced
October	Upgrade begun on Battery A of No. 6 Coke Oven in Chiba District
	<ul> <li>Festival held in the Chiba District</li> </ul>
	Opening ceremony held for Jiaxing JFE Precision Steel Pipe in China
November	<ul> <li>Festival held in the Kurashiki District</li> </ul>
	<ul> <li>Monodzukuri Nippon Grand Award received for JFE-TF1</li> </ul>
	Festival held at the Chita Works
	JFE East and West Japan works' baseball teams played in 41st National Championship
	80th anniversary of Keihin District research laboratory commemorated
	Accumulator developed to cut costs and extend lifespans of hydrogen filling stations
December	Environment Minister's Award for Global Warming Prevention Activity received for Super-SINTER®
	<ul> <li>Molding technique developed for hard-to-machine parts</li> </ul>
2016	High-tensile strength steel developed for excellent elongation and hole expansivity properties
	• Denne constitute e 001 in la denovia
January	Began operating a CGL in Indonesia Decided to open childcare centers at our plants in the
	Chiba District Decided to upgrade Battery B of No. 6 Coke Oven in Chiba
February	District Completed upgrades and began operating No. 3 coke oven
	in Kurashiki District Charles Ndirangu of JFE Steel won Japan Industrial Track
	& Field Association half marathon
March	New Machinery Promotion Award received for NEO Press Announced investment in Egypt-based Kandil
Watch	Iwatani Naoji Memorial Award received for chromium-ore
	heating burner
	Ichimura Industrial Award received for Super-CR Okochi Memorial Award received for Mighty Seam®
	oncommonian manara roccived for mighty ocall

JFE Engineering built Kumamoto city's New West Environmental Plant, which began operating in March. It is designed to serve as a temporary emergency evacuation shelter at the time of disasters. During the 2016 Kumamoto Earthquake, it served as an evacuation shelter for as many as 300 local residents.

## JFE Engineering

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## Hisanori Kanou

<image>

As an engineering company, we aim to adapt in step with the changing times and serve as a trusted global leader in the provision of products and services based on cutting-edge technical capabilities

JFE Engineering carries out projects that underpin both industries and individuals. The company has an extensive record of accomplishment in developing and applying cutting-edge technologies for the production of energy using natural gas, waste or sewage sludge. In recent years, we have built numerous power plants that run on renewable energies, such as biomass, solar power or geothermal power. By leveraging our advanced technical capabilities to build infrastructure for transport, logistics, water supply and sewage systems, we continue to make significant contributions to global development. JFE Engineering is dedicated to providing society with optimal solutions as a company that "creates the foundations for life."

## Integrated solutions for new facilities, existing operations and more

The role that engineering companies must play is changing. In addition to conventional construction work, JFE Engineering now engages in proposals for new facilities, construction and management of new facilities, and much more, often on an integrated basis. In the

#### Project scope



## One-stop services for power generation

We are engaged in wide-ranging business involving biomass power, solar power and geothermal power, all of which will be used to generate new power under Japan's policy to deregulate electricity. We offer one-stop engineering services for everything from business planning to plant design/construction and operational management, which are presenting us with new opportunities to strengthen and grow our revenue base.



urban and marine fields, for example, the company is involved in comprehensive projects based on schemes such as private finance initiatives (PFIs) or design/build/operate (DBO) projects.

## Global network for expanded engineering business overseas

JFE Engineering is increasingly leveraging its global network and the sales, procurement, design and manufacturing capabilities that we offer through our bases overseas. Headway is being made with efforts to expand overseas business primarily in the environmental and energy sectors, such as waste-disposal and water-treatment plants, and the infrastructure sector with projects involving bridges and other structures.

Major engineering bases
Overseas

bases

DongJie Environmental Technology comprehensive engineering for environmental plants)



Commemorating the 20th anniversary of JFE Techno Manila and our Manila Branch



## Renewable energy demonstrated in Kawasaki

We carried out the first demonstration in Japan to use electricity generated at a waste incineration plant to power electric garbage trucks. The aim was to demonstrate a practical system for collecting garbage with electric garbage trucks fitted with replaceable batteries.



## Sludge conversion project planned in Yokohama

In this PFI project, sewage sludge will be converted to fuel and backfill soil. The practical and effective use of sludge generated through sewage treatment will help to reduce emissions of greenhouse gases by roughly 30% compared with conventional processes.



### Fabrication of a large-scale pier jacket completed

We shipped a jacket for an LNG intake pier from our Tsu Works to Toyama. JFE Engineering is handling all construction of major facilities for an LNG base at Toyama Shinko, Japan. Completion is scheduled for 2018.

### JFE BallastAce<sup>®</sup> training center opened

JFE BallastAce<sup>®</sup> is a ballast-water treatment system that has been ordered for more than 1,000 ships. While conducting trial runs of the system, the center is being used to train maintenance personnel who eventually will be part of a global service system.



## Order received for a large-scale food complex in Kurashiki

JFE Engineering received an order from the JA Nishinihon Kumiai Shiryou Corporation, a subsidiary of the National Federation of Agricultural Cooperative Associations, and J-Oil Mills for a food complex to be built on Tamashima Harbou Island in Kurashiki, Japan. The company was involved in the project from the conceptual stage, and received high praise for its expert consultation.



### Flyover bridge completed in Yangon, Myanmar

J&M Steel Solutions completed construction of a flyover bridge in the Kokkine area of Yangon, Myanmar. The company, a joint venture established by Myanmar's Ministry of Construction and JFE Engineering, has been operating a plant at full capacity since 2014 and doubled annual capacity to 20,000 tons as of April 2016.



## Large waste-to-energy plant completed in UK

Baumgarte Boiler Systems, a German subsidiary of JFE Engineering, completed a waste-to-energy plant in Plymouth, UK. The plant uses about 800 tons of waste per day in a single furnace and achieves net energy efficiency of about 49% to supply electricity and heat to a naval base.



## Order received for Myanmar's first waste incineration power plant

This waste incineration power plant project was the first to use the Joint Crediting Mechanism to reduce CO<sub>2</sub> emissions. Once completed in 2017, it will be operated by Yangon city to dispose of waste from around the country, as well as to alleviate power shortages.



### Highlights 2015

2015	(all locations in Japan unless stated otherwise)
April	JFE BallastAce <sup>®</sup> adopted on ships operating in North
	American sea channels Received order for construction of gas pipeline between
	Soma and Iwanuma
Мау	<ul> <li>Received multiple orders for hybrid tide embankments in Miyako and Kesennuma</li> </ul>
	<ul> <li>Agreed on business merger for production of tunnel shield machines</li> </ul>
	<ul> <li>Completed solar power plants in Kushiro (21.7 MW) and Saijo (33.8 MW)</li> </ul>
	<ul> <li>Began operating Arc Yokohama prefab station</li> </ul>
June	Seismic diagnostic system for pipelines received technical award from Japan Gas Association
July	Water main, incorporating steel pipes designed for seismic-risk areas, deployed in Kobe
	<ul> <li>Hybrid tide embankments won Infrastructure Technology Development Award</li> </ul>
August	Received order for urban environmental plant in Iwakuni
August	Overpass completed in Insein, Myanmar Received order to construct and operate a stoker furnace
September	in Naraha to incinerate waste Atomization Mixing System (AtoMS) adopted for Ishikari
	<ul> <li>LNG base</li> <li>Received order for three container cranes at new terminal</li> </ul>
October	in Port of Tokyo Completed large waste-to-energy plant in UK
0010001	<ul> <li>Developed inexpensive, compact BOG reliquefaction</li> </ul>
	machine together with Toho Gas Manila Branch opened
November	JFE BallastAce <sup>®</sup> training center opened
	<ul> <li>Received order for Myanmar's first waste incineration power plant</li> </ul>
	Completed Nerima Waste Incineration Plant Completed Keihin Biomass Power Plant for Showa Shell
	Sekiyu
	<ul> <li>Received order to construct three bridges and repair three other bridges in Bangladesh</li> </ul>
	<ul> <li>Began operating binary power generation system for Tsuchiyu Hot Spring in Fukushima</li> </ul>
December	<ul> <li>Received order for PET scan system for imaging tests at Kofu Neurosurgical Hospital</li> </ul>
	<ul> <li>Received order for jacket pier for Myanmar's Thilawa Special Economic Zone</li> </ul>
2016	
January	<ul> <li>Surpassed 100,000 kW in retail power supply through deal with Ikea</li> </ul>
February	<ul> <li>Received order for PFI project to use sewage sludge for power generation in Yokohama</li> </ul>
	Completed flyover bridge at Kokkine, Myanmar Researched smart water meters with Kanagawa
	Prefectural Public Enterprises Agency
	<ul> <li>Began selling explosion-proof smartphone (LANEX<sup>®</sup>- Phone)</li> </ul>
	<ul> <li>Began operating Cycle Tree parking facility underneath Dai Nagoya Building</li> </ul>
March	Completed and began operating New West Environment Plant in Kumamoto
	<ul> <li>Began demonstration of garbage trucks running on waste power in Kawasaki</li> </ul>
	<ul> <li>Received order to construct large food complex in Kurashiki</li> </ul>
	<ul> <li>Completed No. 2 plant for Higashi-Saitama Resources and Environment Association</li> </ul>
	Completed southern plant for refuse-based power generation in Fukuoka Prefecture
	Completed Toyonaka Itami Cleanland
	<ul> <li>Began drinking water test demonstration with Yangon, Myanmar</li> </ul>





## JFE Shoji Trade

## Naosuke Oda



Steadily evolving as JFE's core trading firm to strengthen our dynamic corporate group's presence in both daily society and industrial markets

JFE Shoji Trade handles both domestic trade within Japan and global importing/exporting, mainly involving steel products. We also handle raw materials for steel, and related equipment and are deepening our footholds the food and electronics fields.

In Japan, we are buttressing our sales structure through strengthened inter-Group cooperation. Outside Japan, we are leveraging JFE's export strategies through our network of bases in 19 countries.

We are steadily evolving as a unique trade firm, in particular by strengthening those functions that will enable us to grow our business together with those of our customers. This includes developing new initiatives for our steel processing centers, expanding our processing functions and establishing new joint ventures for manufacturing and selling steel.

As JFE's core trading firm, we will continue to pursue bold initiatives in partnership with our Group companies, while steadily securing stable supplies of cost-competitive raw materials and equipment for the Group.

### Cold drawn tubes joint venture in Mexico

We established a joint venture with Productos Laminados de Monterrey S.A. de C.V., a large manufacturer of steel pipes in Mexico, and Osakabased Sankin Corporation, which manufactures and sells cold drawn tubes. Our new company will manufacture and sell cold drawn tubes primarily for use in automobiles. Numerous Western and Japanese auto companies are operating in Mexico, so there is a growing need for these companies to procure cold drawn tubes locally. Based in Monterrey and slated to begin manufacturing and sales in the fall of 2016, the company aims to capture local demand for cold drawn tubes for automobiles, estimated at 60,000 to 80,000 tons per year.

📩 Mexico Cit



### **Expanding production base for** automotive steel sheet in Indonesia

P.T. JFE Shoji Steel Indonesia (JSSI), our thin-sheet processing center in Indonesia, plans to augment its No. 2 plant specialized in processing automotive steel sheet. The current plant building will be expanded roughly 30% and a large-scale slitter will be installed to handle the processing of high-tensile steel sheet and wide-width coils for automobiles. In partnership with an adjacent company run by JFE Steel for automotive thin steel sheet, JSSI aims to capture Indonesia's growing demand for such products.



### Highlights 2015

2015	
April	Steel bar business integrated into the JFE Shoji Group
	Automotive Steel Division newly established
	<ul> <li>Automotive Steel Overseas Section No. 1 received Best Partner Prize from P.T. Suzuki Indomobil Motor</li> </ul>
	<ul> <li>Electric Appliance Steel Section named Premier Partner by Fuji Xerox (4th time)</li> </ul>
Мау	<ul> <li>JFE Shoji Pipe &amp; Fitting Trade dispatched Japanese personnel to Indonesia long-term</li> </ul>
	Central Metals (Thailand) Ltd. won Outstanding Supplier Award from Kang Yong Electric Public Co., Ltd.
June	Central Metals (Thailand) Ltd. won Outstanding Supplier Award from Tohoku Pioneer (Thailand) Co., Ltd.
August	<ul> <li>Second round of foreign employee management training held in Tokyo</li> </ul>
eptember	<ul> <li>ASEAN steel processing centers held meeting for foreign salespersons</li> </ul>
October	<ul> <li>JFE Shoji Buriki Center created (JFE Shoji Osaka Buriki Center / Shin Kiyoi Kogyo merger)</li> </ul>
	<ul> <li>Fuel Department and JFE Shoji Electronics jointly exhibited at METALEX Vietnam 2015</li> </ul>
December	<ul> <li>Steel processor Mizushima Steel Corporation installed solar panels on plant rooftop</li> </ul>
2016	
January	<ul> <li>JFE Shoji Coil Center named most outstanding contributor by Ogura Clutch</li> </ul>
February	<ul> <li>JFE Shoji Steel India Private Limited exhibited at World Electricity Forum in Bangalore</li> </ul>
	<ul> <li>Real Estate Department's facilitates construction of Tsuchura Kyodo General Hospital in Tsuchura</li> </ul>

**OVERVIEW** 

## **Japan Marine United**



### Supporting society with technology and manufacturing to be a leading shipbuilder.

As a Japanese shipbuilding company, we offer a diverse array of products with our large expertise in research, development, technology and sales. We were an early developer of energy-saving and low-impact technologies for advanced solutions that have been praised highly by customers. Our ships satisfy evolving needs in the maritime industry by offering superlative performance and high quality. As a member of Japan's maritime cluster, we are dedicated to the advancement of maritime logistics and safety.

### Advanced PCTC offering achieves excellent fuel consumption and low CO<sub>2</sub> emissions

We now build strategic products at each of our shipyards to take advantage of our special capabilities in development and design, which were enhanced by our merger. In the first half of 2016, we delivered our first pure car/truck carrier (PCTC) and then a 14,000 TEU container ship. M/V DRIVE GREEN HIGHWAY. built for Kawasaki Kisen Kaisha ("K" Line) at our Ariake Shipyard, is a next-generation PCTC with an



extra-wide berth suited to the expanded Panama Canal, enabling a substantial increase in cars carried by one ship. Furthermore, fuel-saving technologies reduce CO<sub>2</sub> emissions per vehicle by approximately 25% compared to existing ships. The deck structure accommodates not only passenger vehicles, but also heavy-duty and construction machinery, railway cars and more. It now serves as the flagship of "K" Line's Drive Green Project promoting enhanced environmental performance in shipping.

### Sea-Navi<sup>®</sup> wins efficiency award from Natural Resources and **Energy Agency**

Sea-Navi<sup>®</sup>, a voyage support system developed by Japan Marine United, won the Agency of Natural Resources and Energy Director's Award in the FY2015 Energy-Efficient Machinery Awards program. Sea-Navi<sup>®</sup> increases energy savings during voyages by searching for courses of least resistance in terms of wind, swells and currents. Optimizing routes by accurately estimating fuel consumption

### Highlights 2015

#### 2015

- June Received order for 10 multipurpose vessels for Republic of Philippines
- July Koichiro Matsumoto presented the National Maritime Award by Japanese Prime Minister
  - Masanobu Toyoda and Takuma Shinya presented the Maritime Industry Award by Japanese Minister of Land. Infrastructure, Transport and Tourism
- Launched JS Kaga helicopter August destrover (DDH)
- Order received from Japan's Maritime September Self-defense Force for guided missile destrover (27DDG)
- November Takuma Shinya won Monodzukuri Nippon Grand Award
- NIVAGA III cargo/passenger ship December delivered to Tuvalu
  - 2016
- DRIVE GREEN HIGHWAY low-fuel. February low-emissions PCTC christened and delivered
  - NYK BLUE JAY 14,000 TEU energysaving container ship delivered
  - Sea-Navi® won Energy-Efficient Machinery Award

and performance with an original route search technique, it can significantly reduce the amount of fuel consumption when navigating any ocean. Already installed in a large number of ships built by Japan Marine United, it has been verified to reduce fuel consumption by an average of two to five percent compared to conventional navigation methods, and it helps cut harmful emissions of CO<sub>2</sub>, NOx and SOx.



## April 1878

Shozo Kawasaki established Kawasaki Tsukiji Shipyard in Tsukiji, Tokyo

### October 1896

Kawasaki Dockyard Company, Ltd. established (later renamed Kawasaki Heavy Industries, Ltd.)



May 1917 Fukiai Works established in Kobe, Hyogo Prefecture

#### August 1943 Chita Works established in Handa City, Aichi Prefecture

### August 1950



Steel division of Kawasaki Heavy Industries spun off as independent Kawasaki Steel Corporation (with Yataro Nishiyama as its first president)

### February 1951

Chiba Works established as first modern integrated iron and steel works in postwar

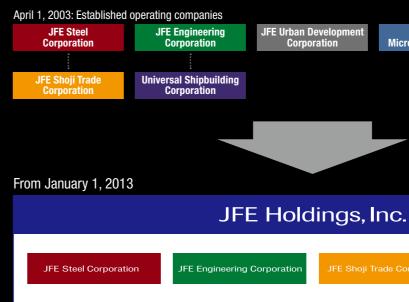
### July 1961

Mizushima Works established in Kurashiki City, Okayama Prefecture

#### July 1969

Landfill operations commenced at West Plant, Chiba Works

### September 27, 2002: Inaugurated JFE Holdings, Inc.





### June 1912

Nippon Kokan K.K. established (Motojiro Shiraishi first president)

April 1916 Yokohama Shipyard launched (later renamed Asano Shipyard Co., Ltd.)

#### June 1936 First blast furnace blown in and integrated steel production started

### October 1940

Tsurumi Steelmaking and Shipbuilding Company (formerly Asano Shipyard) acquired and absorbed

February 1965 Fukuyama Works established



April 1968 Keihin Steel Works established (consolidation of Kawasaki, Tsurumi, and Mizue works)



January 1969 Tsu Shipyard inaugurated operations



### December 1971

Construction of Ohgishima commenced at Keihin Steel Works



JFE R&D Corporation

Equity-method affiliate Japan Marine United Corporation roup His

## **Contributing to Sustainable Societies** —

### **Customers and business partners**

JFE delivers top-quality products and services that enable customers to strengthen the competitiveness of their businesses. To satisfy customer needs, the Group acquires diverse certifications, deploys wide-ranging quality-management systems and operates product-development facilities where JFE and customers work together.



Customer Center Fukuvama

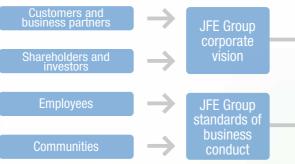
#### **Shareholders and investors**

JFE places a high priority on the timely and appropriate disclosure of corporate information, including by harnessing the instantaneous nature of its website and announcing financial results promptly. Plant tours and investor briefings are organized to deepen society's understanding of JFE activities.



Plant tours for sharehold

## **Social** progress



JFE works to preserve the global environment, aiming to develop as a company in harmony with the Earth. The company also strives to earn the trust of its stakeholders by sincerely meeting the needs of society.

### **Eco-friendly manufacturing processes**

Our steel manufacturing processes boast world-class energy efficiency thanks to our energy-saving facilities and technologies. Going forward, we will continue to reduce our consumption of resources and energy, as well as lower the environmental impact of our operations.



Harmony with nature

JFE Group environmental philosophy
JFE Group environmental policy

### **Employees**

JFE actively hires new recruits and nurtures healthy labormanagement relations. It maintains safe work environments, is an equal-opportunity employer for people with physical disabilities and encourages respect for human rights. JFE underlines these policies with a commitment to providing dynamic working environments for its increasingly

diverse workforce.



Female employees are actively involved in manufacturing

#### JFE makes a point of contributing to host communities where it operates facilities, as well as society in general. JFE supports university research, educational opportunities, cultural events, CSR activities, social welfare undertakings and natural disaster-related

Local communities and their residents

reconstruction.



Manufacturing workshop

### Initiatives to meet societal needs

JFE transfers and disseminates world-leading technologies and products around the world, but primarily in developing countries, to help reduce resource and energy consumption on a global basis.



Eco-Products 2015

#### 43 JFE GROUP TODAY 2016

### **Providing eco-friendly products and services**

JFE products and services are helping to realize eco-societies. Specific efforts include JEF's supply of highly functional steel materials needed in low-carbon societies, recycling programs throughout the Group, and diverse initiatives for renewable energy use



Photovolta power generatio

### JFE Group CSR Report

cholders and other intereste JFE initiatives concerning globa



http://www.ife-holdings.co.jp/environment/

### JFE Holdings, Inc. and Consolidated Subsidiaries

					(Millions of
	FY2011	FY2012	FY2013	FY2014	FY2015
▶ Operating results (for the year)					
Net sales	31,665	31,891	36,668	38,503	34,317
Operating income	447	398	1,533	2,225	906
Ordinary income before interest and discount expenses*1	680	665	1,876	2,455	765
Ordinary income	529	522	1,736	2,310	642
Net income attributable to owners of parent	(366)	395	1,023	1,393	336
▶ Cash flows (for the year)					
Cash flows from operating activities	1,100	2,870	2,548	2,973	2,671
Cash flows from investment activities	(2,054)	(1,636)	(1,640)	(2,163)	(1,373)
Free cash flows*2	(954)	1,234	907	810	1,297
Cash flows from financial activities	960	(1,475)	(1,055)	(782)	(1,445)
Financial position (at the year end)					
Total assets	40,072	41,075	42,417	46,394	42,348
Property, plant and equipment, net	16,448	16,068	15,991	16,295	16,271
Net assets	14,563	15,967	17,459	19,900	18,579
Debt outstanding	15,936	15,963	15,340	15,017	13,793
Capital investment and others					
Capital investment	1,974	1,796	1,757	2,259	2,125
Depreciation and amortization	2,383	1,940	1,813	1,760	1,779
R&D expenses	342	336	311	324	351
Crude steel output (10,000 tons)	2,923	3,068	3,158	3,104	2,975
Consolidated employees	54,133	57,044	57,210	58,856	59,460
▶ Ratio					
Return on sales (ROS)*3	1.7%	1.6%	4.7%	6.0%	1.9%
Return on assets (ROA)*4	1.7%	1.6%	4.5%	5.5%	1.7%
Return on equity (ROE) <sup>*5</sup>	(2.6%)	2.7%	6.3%	7.7%	1.8%
Equity capital ratio	35.3%	37.9%	40.1%	41.8%	42.6%
Debt-to-equity ratio*6	83.5%	76.9%	67.9%	59.0%	56.9%
▶ Per share data					
Net income	(68.71)	71.20	177.44	241.60	58.36
Net assets	2,627.63	2,700.83	2,950.61	3,362.22	3,128.36
Cash dividends	20	20	40	60	30

\*1 Ordinary income before interest and discount expenses = Ordinary income + interest and discount expenses

\*2 Free cash flows = Cash flows from operating activities + cash flows from investment activities

\*3 Return on sales (ROS) = Ordinary income / net sales ×100

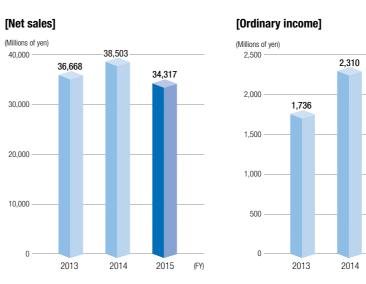
\*4 Return on assets (ROA) = (Ordinary income + interest and discount expenses) / Average total assets ×100

\*5 Return on equity (ROE) = Net income / total shareholders' equity ×100

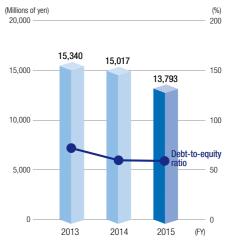
\*6 Debt-to-equity ratio = Debt outstanding / total shareholders' equity  $\times 100$ 

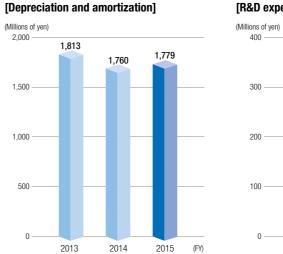
Debt-to-equity ratio in the rating of debt having a capital component, with 75% of this 300 billion yen in debt deemed to be capital, as assessed by rating agencies.

[Financial Information] for Shareholders and Investors http://www.jfe-holdings.co.jp/investor/index.html

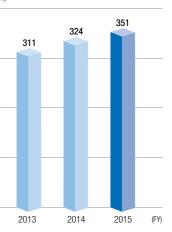






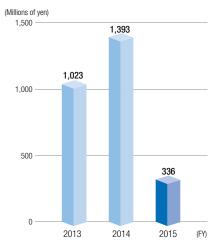


#### [R&D expenses]



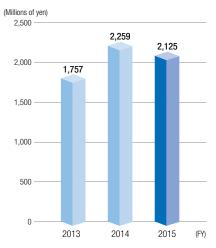


#### [Net income attributable to owners of parent]

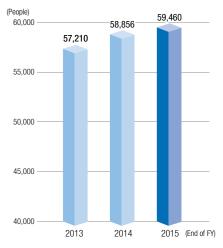


#### [Debt outstanding / Debt-to-equity ratio<sup>\*6</sup>]

#### [Capital investment]



#### [Consolidated employees]



#### ► Holding Company (as of April 1, 2016)



JFE Holdings, Inc.

Operating and Main Group Companies (as of April 1, 2016)

#### Steel Business

#### JFE Steel Corporation

Head office: Chiyoda-ku, Tokyo Net sales: 2,445.1 billion yen Employees: 43,874

#### Domestic group companies

JFE Mineral Company, Ltd. Mizushima Ferroalloy Co., Ltd. JFE Material Co., Ltd. Chiba Riverment and Cement Corporation Mizushima Riverment Corporation JFE Precision Co., Ltd. JFE Plastic Resource Corporation JFE Bars & Shapes Corporation JFE Metal Products & Engineering, Inc. JFE Galvanizing & Coating Co., Ltd. JFE Container Co., Ltd. JFE Welded Pipe Manufacturing Co., l td JFE Steel Pipe Co., Ltd. Galvatex Corporation Kawasaki Kokan Co., Ltd. JFE Pipe Fitting Mfg. Co., Ltd. JFE Tubic Corporation JFE Techno-Wire Corporation River Steel Co., Ltd. JFE Kozai Corporation JFE Electrical Steel Co., Ltd. Daiwa Kohtai Co., Ltd. **GECOSS** Corporation JFE Plant Engineering Co., Ltd. JFE Advantech Co., Ltd. JFE Civil Corporation JFE Sekkei Ltd. JFE Logistics Corporation JFE West Technology Corporation JFE Wing Corporation JFE Techno-Research Corporation JFE Systems, Inc. JFE Chemical Corporation JFE Life Corporation JFE East Japan GS Co., Ltd JFE West Japan GS Co., Ltd. JFE Apple East Corporation JFE Apple West Corporation Shinagawa Refractories Co., Ltd. Nippon Chuzo K.K. Nippon Chutetsukan K.K. EXA Corporation Setouchi Joint Thermal Power Co., Ltd. K.K. JFE Sanso Center Mizushima Eco-Works Co., Ltd. Chiba D.H.C. Co., Ltd. NKK Seamless Steel Pipe K.K.

## **Overseas group companies**

Nova Era Silicon S.A. Thai Coated Steel Sheet Co., Ltd. Thai Tinplate Manufacturing Co., Ltd.\* JFE Steel Galvanizing (Thailand) Ltd. Philippine Sinter Corporation PT.JFE Steel Galvanizing Indonesia JFE Steel Australia Resources Pty. Ltd. California Steel Industries, Inc.\* Hojalata Y Laminados S.A.\* Dongkuk Steel Mill Co., Ltd.<sup>3</sup> Fujian Sino-Japan Metal Co., Ltd.\* Bohai NKK Drill Pipe Co., Ltd.\* Pancheng Yihong Pipe Co., Ltd.\* Guangzhou JFE Steel Sheet Co., Ltd.\* Inner Mongolia Erdos EJM Manganese Alloys Co., I td.\* Jiaxing JFE Precision Steel Pipe Co. Ltd.\* JSW Steel Ltd.\* Thai Cold Rolled Steel Sheet Public Co., Ltd.\* P.T. Sermani Steel\* Perusahaan Sadur Malaysia (Perstima) Bhd.\* JFE Steel Tubular Technical Center Pte. Ltd.\* J-Spiral Steel Pipe Co., Ltd.\* Al Gharbia Pipe Company\*

#### Engineering Business

#### JFE Engineering Corporation

Head office: Chiyoda-ku, Tokyo Yokohama head office: Yokohama Net sales: 397.5 billion yen Employees: 8,967

#### Domestic group companies

Urban Energy Corporation Asuka Soken Co., Ltd. Japan Pipeline Engineering Corporation JFE Urban Recycle Corporation Japan Recycling Corporation Recycling Management Japan, Inc. JFE Environmental Service Corporation JFE Aqua Machine and Service Corporation Kitanippon Industrial Co., Ltd. JFE Rail Link Co., Ltd. JFE Kankyo Corporation JFE Technos Corporation Fujikako Inc. Tohoku Dock Tekko K.K. JFE Business Support Yokohama Corporation Mie Data Craft Co., Ltd. JFE Career Navi Corporation J Farm Corporation\* Japan Tunnel Systems Corporation\* JP Steel Plantech Co.\*

#### Overseas group companies

JFE Techno Manila, Inc. JFE Engineering (M) SDN. Bhd. PT. JFE Engineering Indonesia JFE Engineering India Private Limited Standardkessel Power Systems Holding GmbH J&M Steel Solutions Company Limited PT Erraenersi Konstruksindo (Enerkon)

Head Office: 2-2-3 Uchisaiwaicho, Chiyoda-ku, Tokyo 100-0011 Phone: +81-3-3597-4321 (main)

#### Trading Business

#### JFE Shoji Trade Corporation

Head office: Osaka City Tokyo head office: Chiyoda-ku, Tokyo Net sales: 1,756.4 billion yen Employees: 6,579

#### Domestic group companies

Kawasho Foods Corporation JFE Shoii Electronics Corporation JFE Shoii Trade Steel Construction Materials Corporation JFE Shoji Pipe & Fitting Trade Corporation JFE Shoii Usuitakenzai Corporation Tochigi Shearing Corporation Hokuriku Steel Co., Ltd. **Osaka Steel Corporation** JFE Shoji Coil Center Corporation Niigata Steel Corporation Taisei Kogyo Corporation JFE Shoji Kohnan Steel Center Co., Ltd. Naigai Steel Corporation Mizushima Steel Corporation Mizushima Metal Products Corporation Kyushu-Tech Corporation JFE Shoji Buriki Center Co., Ltd. JFE Shoji Business Support, Inc. JFE Shoji Service Corporation Nagano Can Corporation Toyo Kinzoku Corporation K&I Tubular Corporation Kadota Kozai Corporation JFE Shoji Terre One Corporation JFE Shoji Oil Co., Ltd JFE Shoji Trade Matech Inc. JFE Shoji Machinery & Materials Corporation JFE Shoji Zosen Kako Corporation JFE ComService Co., Ltd.\* JKW Co., Ltd.\* Hokuchokin Nichibei Kenzai\* Osaka Kowaz Co., Ltd.\* Kanemitsu Corporation\* Kita-Kanto Steel Corporation\* MOBY Corporation\* Hanwa Kozai Co., Ltd.

Overseas group companies Guangzhou JFE Shoji Steel Products Co., Ltd. Meridian Capital Limited Dongguan JFE Shoji Steel Products Co., Ltd. Zhejiang JFE Shoji Steel Products Co., Ltd. Jiangsu JFE Shoji Steel Products Co., Ltd. JFE Shoji Steel Philippines, Inc. Central Metals (Thailand) Ltd. Steel Alliance Service Center Co., Ltd. New Bangpoo Manufacturing Co., Ltd. JFE Shoji Steel Vietnam Co., Ltd. JFE Shoji Steel Hai Phong Co., Ltd. JFE Shoji Steel Malaysia Sdn. Bhd. PT. JFE Shoji Steel Indonesia JFE Shoji Steel India Private Limited Vest Inc. JFE Shoji Steel America Inc. Kelly Pipe Co., LLC JFE Shoji Steel De Mexico, S.A. De C.V. JS Biomass Resources Sdn. Bhd. Kawarin Enterprise Pte. Ltd.\* Kuroda Precision Industries Malaysia Sdn, Shanghai Huacang Metal Products Co.,

r.bourgeois JFE Shoji Magnetic Lamination, Inc \*

A4C Sankin Tuberia de Precision, S.A.P.I de C.V.\*

Establis	shment:
Paid-in	Capital:
URL:	

September 27, 2002 147.1 billion yen www.jfe-holdings.co.jp

#### Shipbuilding Business

#### **Japan Marine United Corporation**

Head office: Minato-ku, Tokyo Net sales: 350.5 billion yen Employees: 6,172

Domestic group companies JMU AMTEC Co., Ltd. IMC Co., Ltd. JMU Defense Systems Co., Ltd.

\*Affiliated company accounted for using equity method \*Net sales: Fiscal 2015 (ended March 31, 2016) \*Employees: As of March 31, 2016

Members of the Board, Corporate Officers and Corporate Auditors of JFE Holdings



Masafumi Maeda Member of the Board Koji Kakigi Member of the Board

Eiji Hayashida President & CEO

Shinichi Okada Member of the Board

> —Full-time Auditor -Corporate Auditor

-Corporate Auditor

Corporate Auditors

Shotaro Tsumura-

Hiroyuki Itami-Shigeo Oyagi-

Yasushi Kurokawa—Full-time Auditor

Masao Yoshida Member of the Board

Corporate Officers	
Eiji Hayashida ———	President & CEO
Shinichi Okada ——	Executive Vice President & CFO, Supervision of General Administration Dept., Investor Relations Dept., and Finance Dept. and in charge of Corporate Planning Dep
Masashi Terahata —	Vice President, In charge of General Administration Dep
Tetsuo Ohki	Vice President, In charge of Investor Relations Dept. an Finance Dept.

\*Masafumi Maeda and Masao Yoshida are external \*Hiroyuki Itami and Shigeo Oyagi are external corporate auditors

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Note:Fiscal Year(FY) 20

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April 1, 2015 and ended March 31, 2016

### Financial information URL **www.jfe-holdings.co.jp/en/investor**

### **Consolidated Balance Sheets**

JFE Holdings, Inc. and Subsidiaries March 31, 2016 and 2015

	Millions of yen		Thousands of U.S. dollars (Note 1)	
	FY2015	FY2014	FY2015	
Assets Current assets:				
Cash and deposits (Notes 5 and 13)	¥ 64,654	¥ 85,889	\$ 573,784	
Notes and accounts receivable (Notes 8 and 13)	720,639	771,574	6,395,447	
Allowance for doubtful accounts	(1,434)	(2,326)	(12,726)	
Merchandise and finished goods	311,234	357,733	2,762,105	
Work in process	43,657	45,798	387,442	
Raw materials and supplies	402,406	408,871	3,571,228	
Other current assets (Note 8)	166,672	203,739	1,479,162	
Total current assets	1,707,829	1,871,280	15,156,451	

#### Property, plant and equipment (Note 8):

Land (Note 9)	497,285	499,512	4,413,249
Buildings and structures	1,806,573	1,790,227	16,032,774
Machinery and equipment	5,719,146	5,678,123	50,755,644
Construction in progress	85,981	80,664	763,054
Subtotal	8,108,986	8,048,528	71,964,731
Accumulated depreciation	(6,481,800)	(6,418,937)	(57,523,961)
Property, plant and equipment, net	1,627,186	1,629,591	14,440,770

#### Investments and other assets:

Investments in unconsolidated subsidiaries and affiliates (Note 13)	354,639	437,199	3,147,310
Investments in securities (Notes 6, 8 and 13)	394,538	533,051	3,501,402
Allowance for doubtful accounts	(4,521)	(6,152)	(40,122)
Net defined benefit asset (Note 10)	9,103	13,231	80,786
Other assets (Note 8)	146,108	161,211	1,296,663
Total investments and other assets	899,868	1,138,540	7,986,048
Total assets	¥ 4,234,884	¥ 4,639,412	\$ 37,583,280

#### Liabilities Current liabilities:

current habilities:
Short-term borrowings (Note 13)
Current portion of long-term debt (Notes 7 and 13)
Commercial paper (Note 13)
Notes and accounts payable (Note 13)
Other current liabilities
Total current liabilities

#### Long-term liabilities:

\_

\_

Long-term debt (Notes 7 and 13) ·····
Deferred tax liabilities on revaluation reserve for land (Note 9)
Allowance for losses on specific waste disposal business
Net defined benefit liability (Note 10)
Other long-term liabilities
Total long-term liabilities
Total liabilities

Contingencie	s (Note 11)
Net assets	
Shareholders	a' equity:
Common s	tock:
Authoriz	ed 2,298,000,000 shares
Issued 6	614,438,399 shares as of March 31, 2016
	614,438,399 shares as of March 31, 2015
Capital sur	plus ·····
Retained e	arnings
Treasury st	ock, at cost:
37,714,	629 shares as of March 31, 2016
37,754,	166 shares as of March 31, 2015
Total	shareholders' equity

#### Accumulated other comprehensive income:

Total accumulated other comprehensive income
Remeasurements of defined benefit plans (Note 10)
Translation adjustments ·····
Revaluation reserve for land, net of tax (Note 9)
Net unrealized gains and losses on hedges
Net unrealized gains and losses on securities

Noncontrolling interests (Note 9)
Total net assets
Total liabilities and net assets
The accompanying notes are an integral part of these statements.

	Millions of yen		Thousands of U.S. dollars (Note 1)	
	FY2015	FY2014	FY2015	
	¥ 116,759	¥ 128,761	\$ 1,036,199	
	256,623	239,243	2,277,449	
	36,000		319,488	
	422,331	469,107	3,748,056	
	326,471	378,540	2,897,328	
	1,158,185	1,215,653	10,278,532	
	969,990	1,133,756	8,608,359	
	9,121	9,774	80,946	
	21,402	24,112	189,936	
	125,283	119,331	1,111,847	
	92,979	146,760	825,159	
	1,218,776	1,433,735	10,816,258	
•••••	2,376,962	2,649,388	21,094,799	
	1 47 1 40	1 47 1 40	1 005 040	
••••••••••••••••	147,143	147,143	1,305,848	
	646,380	647,121	5,736,421	
	1,065,037	1,066,517	9,451,872	
	(1=0,0=4)	(170,100)	(1 = 2 = 1 = 2)	
	(178,654)	(179,430)	(1,585,498)	
• • • • • • • • • • • • • • • • • • • •	1,679,906	1,681,350	14,908,643	
	101,709	194,733	902,635	
	(3,119)	(535)	(27,680)	
	16,328	15,654	144,905	
•••••	14,503	41,107	128,709	
	(5,130)	6,626	(45,527)	
••••••	124,290	257,587	1,103,035	
	53,724	51,085	476,783	
	1,857,921	1,990,023	16,488,471	
	¥ 4,234,884	¥ 4,639,412	\$ 37,583,280	
	,,oo .	,:00,112	+ == ,000,200	

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### **Consolidated Statements of Income**

JFE Holdings, Inc. and Subsidiaries Years ended March 31, 2016 and 2015

	Millions of yen		Thousands of U.S. dollars (Note 1)
	FY2015	FY2014	FY2015
Net sales	¥ 3,431,740	¥ 3,850,355	\$ 30,455,626
Cost of sales ····	3,017,757	3,312,981	26,781,656
Gross profit	413,982	537,373	3,673,961
Selling, general and administrative expenses	323,343	314,774	2,869,568
Operating income	90,638	222,599	804,384
Non-operating income (expenses):			
Interest income	1,190	1,078	10,560
Interest expense	(12,279)	(14,532)	(108,972)
Dividends received	10,438	10,544	92,634
Foreign exchange gains		12,267	
Equity in earnings (losses) of affiliates	(8,821)	18,280	(78,283)
Other, net	(16,927)	(19,235)	(150,221)
Ordinary income	64,239	231,001	570,101
Extraordinary income (loss) (Note 20)	10,097	(4,309)	89,607
Income before income taxes	74,337	226,692	659,717
Income taxes (Note 16):			
Current	21,629	34,936	191,950
Deferred	15,054	47,642	133,599
	36,684	82,579	325,559
Net income	37,652	144,112	334,149
Net income attributable to noncontrolling interests	(3,995)	(4,754)	(35,454)
Net income attributable to shareholders of the parent	¥ 33,657	¥ 139,357	\$ 298,695

### **Consolidated Statements of Comprehensive Income**

JFE Holdings, Inc. and Subsidiaries Years ended March 31, 2016 and 2015

	Millions of yen		Thousands of U.S. dollars (Note 1)
	FY2015	FY2014	FY2015
Net income	¥ 37,652	¥144,112	\$ 334,149
Other comprehensive income (Note 17):			
Net unrealized gains and losses on securities	(90,438)	90,808	(802,609)
Net unrealized gains and losses on hedges	(2,429)	(232)	(21,556)
Revaluation reserve for land	648	1,012	5,750
Translation adjustments	(12,208)	12,712	(108,342)
Remeasurements of defined benefit plans	(11,967)	11,905	(106,203)
Share of other comprehensive income of affiliates accounted for using equity method	(18,418)	21,617	(163,454)
Total other comprehensive income	(134,814)	137,823	(1,196,432)
Comprehensive income	¥ (97,161)	¥281,936	\$ (862,273)
Total comprehensive income attributable to:			
Shareholders of the parent	¥ (99,629)	¥275,304	\$ (884,176)
Noncontrolling interests	2,467	6,631	21,893

The accompanying notes are an integral part of these statements.

	yen		U.S. dollars (Note 1)
	FY2015	FY2014	FY2015
Net income per share	¥ 58.36	¥ 241.60	\$ 0.51
Cash dividends per share	30	60	0.26

The accompanying notes are an integral part of these statements.

### **Consolidated Statements of Changes in Net Assets**

JFE Holdings, Inc. and Subsidiaries Years ended March 31, 2016 and 2015

			Millions of yen		
			Shareholders' equi	ty	
(	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders' equity
Balance at April 1, 2014 ····· ¥	147,143	¥ 647,121	¥ 965,204	¥ (178,977)	¥ 1,580,491
Cumulative effects of changes in accounting policies			(14,867)		(14,867)
Restated balance at April 1, 2014 ·····	147,143	647,121	950,337	(178,977)	1,565,623
Cash dividends			(23,086)		(23,086)
Net income attributable to shareholders of the parent			139,357		139,357
Acquisition of treasury stock ·····				(498)	(498)
Disposal of treasury stock			(16)	45	29
Decrease by change of scope of consolidation			(63)		(63)
Transfer from land revaluation account			(11)		(11)
Net changes in items other than shareholders' equity					
Total changes in items during the year			116,179	(452)	115,727
Balance at March 31, 2015 ····· ¥	147,143	¥ 647,121	¥ 1,066,517	¥ (179,430)	¥ 1,681,350

_			Millions of yen Shareholders' equi	ty	
C	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders equity
Balance at April 1, 2015 ····· ¥	147,143	¥ 647,121	¥ 1,066,517	¥ (179,430)	¥ 1,681,350
Cash dividends			(34,619)		(34,619)
Net income attributable to shareholders of the parent			33,657		33,657
Acquisition of treasury stock				(273)	(273)
Disposal of treasury stock			(527)	1,049	521
Change in shares of parent arising from transactions					
with noncontrolling shareholders		(740)			(740)
Transfer from land revaluation account			10		10
Net changes in items other than shareholders' equity					-
Total changes in items during the year ·····		(740)	(1,479)	775	(1,444)
Balance at March 31, 2016 ····· ¥	147,143	¥ 646,380	¥ 1,065,037	¥ (178,654)	¥ 1,679,906

				Mil	lions of yen			
			Accı	umulated othe	er comprehensiv	/e income		
	Net unrealized gains and losses on securities	Net unrealized gains and losses on hedges	Revaluation reserve for land, net of tax	Translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Noncontrolling interests	Total net assets
Balance at April 1, 2014 ·····	¥ 102,574	¥ (411)	¥ 14,541	¥ 9,949	¥ (5,024)	¥ 121,628	¥ 43,810	¥ 1,745,930
Cumulative effects of changes in accounting policies								(14,867)
Restated balance at April 1, 2014	102,574	(411)	14,541	9,949	(5,024)	121,628	43,810	1,731,063
Cash dividends								(23,086)
Net income attributable to shareholders of the parent								139,357
Acquisition of treasury stock								(498)
Disposal of treasury stock								29
Decrease by change of scope of consolidation								(63)
Transfer from land revaluation account								(11)
Net changes in items other than shareholders' equity	92,159	(123)	1,113	31,157	11,651	135,958	7,275	143,233
Total changes in items during the year	92,159	(123)	1,113	31,157	11,651	135,958	7,275	258,960
Balance at March 31, 2015	¥ 194,733	¥ (535)	¥ 15,654	¥ 41,107	¥ 6,626	¥ 257,587	¥ 51,085	¥ 1,990,023

				Mil	ions of yen			
			Accu	umulated othe	er comprehensiv	/e income		
	Net unrealized gains and losses on securities	Net unrealized gains and losses on hedges	Revaluation reserve for land, net of tax	Translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Noncontrolling interests	Total net assets
Balance at April 1, 2015 ·····	¥ 194,733	¥ (535)	¥ 15,654	¥ 41,107	¥ 6,626	¥ 257,587	¥ 51,085	¥ 1,990,023
Cash dividends								(34,619)
Net income attributable to shareholders of the parent								33,657
Acquisition of treasury stock								(273)
Disposal of treasury stock								521
Change in shares of parent arising from transactions								
with noncontrolling shareholders ·····								(740)
Transfer from land revaluation account ·····								10
Net changes in items other than shareholders' equity	(93,023)	(2,584)	673	(26,604)	(11,757)	(133,296)	2,639	(130,657)
Total changes in items during the year ·····	(93,023)	(2,584)	673	(26,604)	(11,757)	(133,296)	2,639	(132,102)
Balance at March 31, 2016 ·····	¥ 101,709	¥ (3,119)	¥ 16,328	¥ 14,503	¥ (5,130)	¥ 124,290	¥ 53,724	¥ 1,857,921

The accompanying notes are an integral part of these statements.

	Th	nousands of U.S. dollars	(Note 1)			
	Shareholders' equity					
Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders equity		
Balance at April 1, 2015 \$ 1,305,848	\$ 5,742,997	\$ 9,465,007	\$ (1,592,385)	\$ 14,921,458		
Cash dividends		(307,232)		(307,232)		
Net income attributable to shareholders of the parent		298,695		298,695		
Acquisition of treasury stock ·····			(2,422)	(2,422)		
Disposal of treasury stock		(4,676)	9,309	4,623		
Change in shares of parent arising						
from transactions with noncontrolling shareholders	(6,567)			(6,567)		
Transfer from land revaluation account ·····		88		88		
Net changes in items other than shareholders' equity						
Total changes in items during the year ·····	(6,567)	(13,125)	6,877	(12,815)		
Balance at March 31, 2016 \$ 1,305,848	\$ 5,736,421	\$ 9,451,872	\$ (1,585,498)	\$ 14,908,643		

Not uproalized		Accu	mulated other	comprehensi	in a in a a ma		
Not uproalized		Accumulated other comprehensive income					
gains and losses on securities	Net unrealized gains and losses on hedges	Revaluation reserve for land, net of tax	Translation adjustments	Remeasurements of defined benefit plans	Total accumulated s other comprehensive income	Noncontrolling interests	Total net assets
\$ 1,728,194	\$ (4,747)	\$ 138,924	\$ 364,811	\$ 58,803	\$ 2,286,004	\$ 453,363	\$ 17,660,835
							(307,232)
							298,695
							(2,422)
							4,623
							(6,567)
							88
(825,550)	(22,932)	5,972	(236,102)	(104,339)	(1,182,960)	23,420	(1,159,540)
(825,550)	(22,932)	5,972	(236,102)	(104,339)	(1,182,960)	23,420	(1,172,364)
\$ 902,635	\$ (27,680)	\$ 144,905	\$ 128,709	\$ (45,527)	\$ 1,103,035	\$ 476,783	\$ 16,488,471
•	and losses on securities \$ 1,728,194 - - - - - (825,550) - (825,550)	gains and losses on securities and losses on hedges \$ 1,728,194 \$ (4,747) • • • • • • • • • • • • •	gains and losses on securities         gains and losses on hedges         reserve for land, net of tax           \$ 1,728,194         \$ (4,747)         \$ 138,924           .         .         .           .         <	gains and losses on securities         gains and losses on hedges         reserve for land, net of tax         Translation adjustments           \$ 1,728,194         \$ (4,747)         \$ 138,924         \$ 364,811           .         .         .         .           .         .         .         .           .         .         .         .           .         .         .         .           .         .         .         .           .         .         .         .           .         .         .         .           .         .         .         .           .         .         .         .           .     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  •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •<!--</td--><td>gains and losses on securities         gains and losses on hedges         reserve for land, net of tax         Translation adjustments         Remeasurements of defined benefit plans         other comprehensive income           •         \$1,728,194         \$(4,747)         \$138,924         \$364,811         \$58,803         \$2,286,004           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •</td><td>gains and losses on securities         gains and losses on hedges         reserve for land, net of tax         Translation adjustments         Remeasurements of defined benefit plans         other comprehensive benefit plans         Noncontrolling interests           •         \$ 1,728,194         \$ (4,747)         \$ 138,924         \$ 364,811         \$ 58,803         \$ 2,286,004         \$ 453,363           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •</td></td></tr<>	gains and losses on securities         gains and losses on hedges         reserve for land, net of tax         Translation adjustments         Remeasurements of defined benefit plans           •         \$1,728,194         \$(4,747)         \$138,924         \$364,811         \$58,803           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           •         •         •         •         •         •           • </td <td>gains and losses on securities         gains and losses on hedges         reserve for land, net of tax         Translation adjustments         Remeasurements of defined benefit plans         other comprehensive income           •         \$1,728,194         \$(4,747)         \$138,924         \$364,811         \$58,803         \$2,286,004           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •</td> <td>gains and losses on securities         gains and losses on hedges         reserve for land, net of tax         Translation adjustments         Remeasurements of defined benefit plans         other comprehensive benefit plans         Noncontrolling interests           •         \$ 1,728,194         \$ (4,747)         \$ 138,924         \$ 364,811         \$ 58,803         \$ 2,286,004         \$ 453,363           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •</td>	gains and losses on securities         gains and losses on hedges         reserve for land, net of tax         Translation adjustments         Remeasurements of defined benefit plans         other comprehensive income           •         \$1,728,194         \$(4,747)         \$138,924         \$364,811         \$58,803         \$2,286,004           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •	gains and losses on securities         gains and losses on hedges         reserve for land, net of tax         Translation adjustments         Remeasurements of defined benefit plans         other comprehensive benefit plans         Noncontrolling interests           •         \$ 1,728,194         \$ (4,747)         \$ 138,924         \$ 364,811         \$ 58,803         \$ 2,286,004         \$ 453,363           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •         •         •         •         •         •         •           •

The accompanying notes are an integral part of these statements.

### **Consolidated Statements of Cash Flows**

JFE Holdings, Inc. and Subsidiaries Years ended March 31, 2016 and 2015

FY2015	FY2014	FY2015
¥ 74,337	¥ 226,692	\$ 659,717
177,946	176,017	1,579,215
(15,142)	(2,772)	(134,380
(11,628)	(11,623)	(103,194
12,279	14,532	108,972
50,355	(105,365)	446,884
-		470,003
		(213,560
,		(150,772
,	,	2,662,877
		153,035
-		(112,468
		(332,987
		2,370,447
201,102	201,000	2,010,111
(205,992)	(220,809)	(1,828,115
4,155	17,239	36,874
(29,874)	(5,491)	(265,122
50,051	23,655	444,187
30,240		268,370
14,097	(30,908)	125,106
(137,321)	(216,313)	(1,218,681
29,105	(16,771)	258,297
115,249	226,429	1,022,799
(262,428)	(262,113)	(2,328,966
,		(2,289
		(306,629
		73,85
(144,561)	(78,247)	(1,282,933
		i
(6,038)	15,247	(53,585
(20,819)	18,066	(184,762
83,542	62,318	741,409
1,150	3,157	10,205
	177,946 (15,142) (11,628) 12,279 50,355 52,960 (24,064) (16,989) 300,053 17,244 (12,673) (37,521) 267,102 (205,992) 4,155 (29,874) 50,051 30,240 14,097 (137,321) 29,105 115,249 (262,428) (262,428) (262,428) (258) (34,551) 8,322 (144,561) (6,038) (20,819)	177,946       176,017         (15,142)       (2,772)         (11,628)       (11,623)         12,279       14,532         50,355       (105,365)         52,960       (27,866)         (24,064)       61,020         (16,989)       (2,111)         300,053       328,524         17,244       18,396         (12,673)       (14,684)         (37,521)       (34,856)         267,102       297,380         (205,992)       (220,809)         4,155       17,239         (29,874)       (5,491)         50,051       23,655         30,240          14,097       (30,908)         (137,321)       (216,313)         29,105       (16,771)         115,249       226,429         (262,428)       (262,113)         (258)       (483)         (34,551)       (23,034)         8,322       (2,275)         (144,561)       (78,247)         (6,038)       15,247         (20,819)       18,066

Payments for purchases of property, plant and equipment
Proceeds from sales of property, plant and equipment
Payments for purchases of investments in securities
Proceeds from sales of investments in securities
Proceeds from capital reduction of investments
Other, net
Net cash used in investing activities

Increase (decrease) in short-term borrowings, net
Increase in long-term debt
Repayments of long-term debt
Payments for purchases of treasury stock
Payments for dividends by parent company
Other, net
Net cash used in financing activities

The accompanying notes are an integral part of these statements.

### **Notes to Consolidated Financial Statements**

JFE Holdings, Inc. and Subsidiaries Years ended March 31, 2016 and 2015

#### **1. Basis of Presentation**

The accompanying consolidated financial statements of JFE Holdings, Inc. (the "Company" hereinafter) and consolidated subsidiaries are prepared on the basis of accounting principles generally accepted in Japan, which are different in certain respects as to application and disclosure requirements of International Financial Reporting Standards, and are compiled from the consolidated financial statements prepared by the Company as required by the Financial Instruments and Exchange Act of Japan.

The Company's overseas subsidiaries maintain their accounts and records in conformity with generally accepted accounting principles and practices prevailing in their respective countries of domicile.

The notes to the consolidated financial statements include information that is not required under the Japanese GAAP but is presented herein as additional information.

As permitted by the Financial Instruments and Exchange Act, amounts of less than one million yen have been omitted. Consequently, the totals shown in the accompanying consolidated financial statements (both in yen and U.S. dollars) do not necessarily agree with the sums of the individual amounts.

Certain amounts in the prior years' financial statements have been reclassified to conform to the 2016 presentation.

The translation of the Japanese yen amounts into U.S. dollars is included solely for the convenience of the reader, using the approximate exchange rate at March 31, 2016, which was ¥112.68 to US\$1.00. These convenient 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.

#### 2. Summary of Significant Accounting Policies

#### (a) Consolidation principles

The consolidated financial statements include the accounts of the Company's 322 domestic and foreign subsidiaries (the "Group" as JFE Holdings, Inc. consolidated group, hereinafter). All significant inter-company transactions and accounts are eliminated in consolidation.

62 affiliates are accounted for by the equity method whereby the Group includes in net income its share of income or losses of these companies, and records its investments at cost adjusted for its share of income, losses or dividends received.

#### (b) Translation of foreign currencies

Revenues and expenses are translated at the rates of exchange prevailing when transactions are made, and assets and liabilities are translated into Japanese yen at the exchange rates in effect on the respective balance sheet date.

The balance sheet accounts of the foreign subsidiaries are translated into Japanese yen at the current exchange rates at the balance sheet dates except for shareholders' equity, which is translated at historical rates. Differences arising from such translation are shown as "translation adjustments" in a separate component of net assets in the balance sheets.

#### (c) Valuation of securities

#### Available-for-sale securities

#### Marketable:

Valued primarily at market based on an average of the market prices for a period of one month prior to the settlement date. (Valuation differences are recorded as net unrealized gains and losses on securities, net of tax, in net assets in the balance sheets by the direct capitalization method, with the costs of sales calculated primarily by the moving average method.) Non-marketable:

Valued primarily at cost by the moving average method.

#### (d) Valuation of inventories

Inventories are stated at cost determined by the weighted average method. These inventories with lower profitability are written down to their net realizable value.

### (e) Depreciation method for property, plant and equipment (except for leased assets)

Depreciation is calculated primarily by the declining balance method.

#### (f) Intangible assets (except for leased assets)

Amortization of intangible assets is calculated primarily by the straight-line method.

Amortization of the software for internal use is computed by the straight-line method based on the estimated useful lives (primarily 5 years).

#### (g) Allowance for doubtful accounts

The projected uncollectible amount is provided as the allowance using historical default rates in the past for ordinary credits and individual collectability assessments for credits deemed to have high likelihood of default and for other specific credits.

#### (h) Allowance for losses on specific waste disposal business

Allowance for losses on specific waste disposal business is provided based on the estimated amount sufficient to cover probable loss that will be incurred in the following fiscal years.

#### (i) Retirement benefits

The straight-line method is used to attribute expected retirement benefits to each period through the end of the year in calculating retirement benefit obligation.

Prior service cost is primarily amortized in projected average years of service of the employees.

Actuarial losses are primarily amortized in projected average years of service of the employees from the following fiscal year after the year in which they occurred.

#### (j) Leases

Leased assets under finance leases that do not transfer ownership to the lessees are capitalized and depreciated to a residual value of zero using the straight-line method with useful life defined by the terms of the contract.

#### (k) Revenue recognition for long-term construction-type contracts

The percentage-of-completion method (cost-comparison method to estimate the percentage of completion) is applied for construction contracts where the percentage of completion can be reliably estimated. For other contracts, the completed-contract method is applied.

#### (I) Consolidated tax return

The Company files a consolidated tax return with certain domestic subsidiaries.

#### (m) Per share information

Basic net income per share is computed by dividing net income attributable to shareholders of the parent available to common shareholders by the weighted average number of shares of common stock outstanding during the period. Net income attributable to shareholders of the parent used in the computation was ¥33,657 million (\$298,695 thousand) and ¥139,357 million, and the average number of shares used in the computation was 576,740 thousand and 576,806 thousand for the years ended March 31, 2016 and 2015, respectively.

Cash dividends per share shown in the consolidated statements of income are the amounts applicable to the respective year.

#### 3. Changes in Accounting Policies and Adoption of New Accounting Standards

#### Accounting standards for business combinations

Effective from the year ended March 31, 2016, the Company has adopted "Accounting Standard for Business Combinations" (the Accounting Standards Board of Japan ("ASBJ") Statement No. 21, issued on September 13, 2013 (hereinafter, "Statement No.21")), "Accounting Standard for Consolidated Financial Statements" (ASBJ Statement No. 22, issued on September 13, 2013 (hereinafter, "Statement No.22")) and "Accounting Standard for Business Divestitures" (ASBJ Statement No. 7, issued on September 13, 2013 (hereinafter, "Statement No.7")) (together, the "Business Combination Accounting Standards"). As a result, the difference relating to change in the parent's ownership interest in its subsidiary while the parent retains its controlling interest in its subsidiary is recorded in "capital surplus" and acquisition-related costs are accounted for as expenses in the year in which the costs are incurred. In addition, the Company changed its accounting policy for the reallocation of acquisition costs due to the completion following provisional accounting to reflect such reallocation in the consolidated financial statements for the fiscal year in which the business combination took place. The Company also changed the presentation of net income and the term "noncontrolling interests" is used instead of "minority interests". Certain amounts in the prior year comparative information were reclassified to conform to such changes in

the current year presentation.

The Company followed the transitional treatments in article 58-2 (4) of Statement No.21, article 44-5 (4) of Statement No.22 and article 57-4 (4) of Statement No.7 to apply the Business Combination Accounting Standards from the beginning of the current fiscal year prospectively.

As a result, ordinary income and income before income taxes increased by ¥740 million (\$6,567 thousand) for the year ended March 31, 2016 and capital surplus decreased by ¥740 million (\$6,567 thousand) at March 31, 2016.

In the consolidated statement of cash flows, cash flows from acquisition or disposal of shares of subsidiaries with no changes in the scope of consolidation are included in "Cash flows from financing activities" and cash flows from acquisition related costs for shares of subsidiaries with changes in the scope of consolidation or costs related to acquisition or disposal of shares of subsidiaries with no changes in the scope of consolidation are included in "Cash flows from operating activities".

Capital surplus on the consolidated statement of changes in net assets decreased by ¥740 million (\$6,567 thousand) at March 31, 2016. Also, net income per share increased by ¥1.28 (\$0.01) for the year ended March 31, 2016.

#### 4. Accounting Standard Issued But Not Yet Adopted

#### Implementation Guidance on Recoverability of Deferred Tax Assets

On March 28, 2016, the ASBJ issued "Implementation Guidance on Recoverability of Deferred Tax Assets" (ASBJ Guidance No. 26).

#### (1) Overview

Implementation Guidance on Recoverability of Deferred Tax Assets stipulates guidance for the treatment of the recoverability of deferred tax assets when applying "Standards for Tax Effect Accounting" issued by Business Accounting Council. When transferring such guidance from Japanese Institute of Certified Public Accountants ("JICPA") to ASBJ, while ASBJ followed the framework of JICPA Audit Committee Report No. 66 "Audit Treatment on Determining the Recoverability of Deferred Tax Assets", whereby companies are categorized into five categories and deferred tax assets are calculated based on each of these categories, certain necessary revisions were made for category requirements and treatment of amounts recorded as deferred tax assets.

#### (2) Expected adoption date

The Company expects to adopt the revised implementation guidance from the beginning of the fiscal year ending March 31, 2017.

#### (3) Effects of the adoption of these standard and related guidance

The Company is currently evaluating the effect that these revisions will have on its consolidated results of operations and financial position.

### 5. Cash and Cash Equivalents and Nonmonetary Transactions

Cash and cash equivalents at March 31, 2016 and 2015 consisted of the following:

	Millions	of yen	Thousands of U.S. dollars (Note 1)
	FY2015	FY2014	FY2015
Cash and deposits	¥ 64,654	¥ 85,889	\$ 573,784
Time deposits with a maturity of more than three months	(780)	(2,346)	(6,922)
	¥ 63,873	¥ 83,542	\$ 566,853

#### 6. Securities

The following is a summary of available-for-sale securities at March 31, 2016 and 2015:

Marketable:

	Millions of yen							
	Available-for-sale securities							
		FY2015			FY2014			
	Book value (Estimated fair value)	Cost, net of accumulated impairment losses	Unrealized gain (loss)	Book value (Estimated fair value)	Cost, net of accumulated impairment losses	Unrealized gain (loss)		
Cost lower than book value:								
Equity securities	¥ 319,016	¥ 159,513	¥ 159,502	¥ 486,045	¥ 195,741	¥ 290,304		
Bonds	-	-	-	20	19	0		
Sub total	319,016	159,513	159,502	486,065	195,761	290,304		
Cost exceeding book value:								
Equity securities	33,994	40,927	(6,933)	18,048	19,584	(1,535)		
Other	-	-	-	594	602	(8)		
Sub total	33,994	40,927	(6,933)	18,643	20,187	(1,543)		
Total	¥ 353,010	¥ 200,440	¥ 152,569	¥ 504,709	¥ 215,949	¥ 288,760		

		Thousands of U.S. dollars	
		Available-for-sale securities	
_		FY2015	
	Book value (Estimated fair value)	Cost, net of accumulated impairment losses	Unrealized gain (loss)
Cost lower than book value:			
Equity securities	\$ 2,831,167	\$ 1,415,628	\$ 1,415,530
Bonds ·····	-	-	-
Sub total	2,831,167	1,415,628	1,415,530
Cost exceeding book value:			
Equity securities	301,686	363,214	(61,528)
Other ·····	-	-	-
Sub total	301,686	363,214	(61,528)
Total ····	\$ 3,132,854	\$ 1,778,842	\$ 1,354,002

The impairment losses on available-for-sale securities for the years ended March 31, 2016 and 2015 were ¥1,429 million (\$12,681 thousand) and ¥237 million, respectively.

#### 7. Long-term Debt

Long-term debt at March 31, 2016 and 2015 consisted of the following:

_	
	1.351% yen bonds, due September 2015
(	0.572% yen bonds, due May 2015 ·····
(	0.858% yen bonds, due May 2017 ·····
	1.326% yen bonds, due June 2021 ·····
(	0.455% yen bonds, due September 2016
(	0.686% yen bonds, due September 2018 ·····
(	0.453% yen bonds, due April 2017
(	0.804% yen bonds, due March 2024 ·····
(	0.703% yen bonds, due September 2024 ·····
l	Loans, principally from banks and insurance companies, due 2017-2073
_	Less current portion
	Total long-term debt

#### 8. Pledged Assets

At March 31, 2016 and 2015, pledged assets were as follows:

	Millions of	f yen	Thousands of U.S. dollars (Note 1)
	FY2015	FY2014	FY2015
Notes receivable	¥ —	¥ 945	\$ -
Property, plant and equipment ·····	3,359	4,649	29,810
Investments in securities	334	713	2,964
Other assets	354	288	3,141

The Company sets pledges as collateral on the consolidated subsidiaries' short-term loans receivable from the Company related to warranty for equipment performance (book value of ¥7,300 million on the financial statements of individual consolidated subsidiaries at March 31, 2015). There was no such collateral at March 31, 2016.

#### 9. Revaluation of Land for Business

In the years ended March 31, 2001 and 2002, part of the subsidiaries and affiliates revaluated the land for business purposes based on the Law Concerning Revaluation of Land and its amendment issued on March 31, 2001 and 2002, respectively. Revaluation differences, net of the portion charged to "deferred tax liabilities on revaluation reserve for land" and "noncontrolling interests," were recorded as "revaluation reserve for land, net of tax" in net assets. The fair value of these lands is lower than the revaluated book value, and the difference was ¥16,772 million (\$148,846 thousand) and ¥16,630 million on March 31, 2016 and 2015, respectively.

	Millions of	of yen	Thousands of U.S. dollars
	FY2015	FY2014	FY2015
	¥	¥ 20,000	\$
•••	-	60,000	-
•••	20,000	20,000	177,493
•••	30,000	30,000	266,240
•••	20,000	20,000	177,493
•••	15,000	15,000	133,120
•••	30,000	30,000	266,240
•••	10,000	10,000	88,746
•••	20,000	20,000	177,493
•••	1,081,613	1,147,999	9,598,979
•••	(256,623)	(239,243)	(2,277,449)
•••	¥ 969,990	¥ 1,133,756	\$ 8,608,359

#### **10. Retirement Benefits**

#### **Defined benefit plans**

The changes in retirement benefit obligation for the years ended March 31, 2016 and 2015 were as follows:

	Million	Millions of yen	
	FY2015	FY2014	FY2015
Balance at beginning of year	¥ 284,702	¥ 271,032	\$ 2,526,641
Cumulative effects of changes			
in accounting policies ····	-	22,080	-
Restated balance at beginning of year ··	¥ 284,702	¥ 293,112	\$ 2,526,641
Service cost	13,907	14,074	123,420
Interest cost	1,522	1,629	13,507
Actuarial losses	3,824	3,543	33,936
Retirement benefits paid	(27,007)	(30,386)	(239,678)
Prior service cost	307	283	2,724
Other	(136)	2,445	(1,206)
Balance at end of year	¥ 277,121	¥ 284,702	\$ 2,459,362

The changes in plan assets for the years ended March 31, 2016 and 2015 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2015	FY2014	FY2015
Balance at beginning of year	¥ 178,601	¥ 167,626	\$ 1,585,028
Expected return on plan assets	3,025	2,777	26,845
Actuarial losses ·····	(13,748)	18,721	(122,009)
Contributions from the employer	6,405	3,629	56,842
Retirement benefits paid	(13,149)	(13,846)	(116,693)
Other	(193)	(306)	(1,712)
Balance at end of year	¥ 160,941	¥ 178,601	\$ 1,428,301

Reconciliation between the balances of retirement benefit obligation and plan assets and net defined benefit liability and net defined benefit asset recorded on the consolidated balance sheets at March 31, 2016 and 2015 was as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2015	FY2014	FY2015
Funded retirement benefit obligation ···	¥ 231,854	¥ 240,996	\$ 2,057,632
Fair value of plan assets	(160,941)	(178,601)	(1,428,301)
	70,912	62,394	629,321
Unfunded retirement benefit			
obligation	45,266	43,706	401,721
Net liability and asset recorded			
on the consolidated balance sheet **	¥ 116,179	¥ 106,100	\$ 1,031,052

	Millions of yen		Thousands of U.S. dollars
	FY2015	FY2014	FY2015
Net defined benefit liability	¥ 125,283	¥ 119,331	\$ 1,111,847
Net defined benefit asset ·····	(9,103)	(13,231)	(80,786)
Net liability and asset recorded			
on the consolidated balance sheet ··	¥ 116,179	¥ 106,100	\$ 1,031,052

The components of retirement and pension costs for the years ended March 31, 2016 and 2015 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2015	FY2014	FY2015
Service cost ·····	¥ 13,907	¥ 14,074	\$ 123,420
Interest cost	1,522	1,629	13,507
Expected return on plan assets	(3,025)	(2,777)	(26,845)
Recognized actuarial losses	554	2,938	4,916
Amortization of prior service cost ······	169	(52)	1,499
Other	655	415	5,812
Total	¥ 13,783	¥ 16,226	\$ 122,319

The components of remeasurements of defined benefit plans (before income tax effect) in other comprehensive income for the years ended March 31, 2016 and 2015 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2015	FY2014	FY2015
Prior service cost	¥ 132	¥ 144	\$ 1,171
Actuarial losses (gains)	17,566	(17,959)	155,892
Other ·····	-	20	-
Total ·····	¥ 17,698	¥ (17,795)	\$ 157,064

The components of remeasurements of defined benefit plans (before income tax effect) in accumulated other comprehensive income at March 31, 2016 and 2015 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2015	FY2014	FY2015
Unrecognized prior service cost	¥ 10	¥ 27	\$ 88
Unrecognized actuarial losses (gains) · ·	7,194	(10,151)	63,844
Total ·····	¥ 7,204	¥ (10,123)	\$ 63,933

The components of plan assets at March 31, 2016 and 2015 were as follows:

	FY2015	FY2014
General account	37%	37%
Equity securities	44	46
Bonds	16	15
Cash and deposits	2	1
Others ·····	1	1
Total	100%	100%

36% and 37% of the total plan assets is retirement benefit trust at March 31, 2016 and 2015, respectively.

The expected long-term rate of return on plan assets is determined considering current and expected distribution of plan assets and current and expected long-term rate of return derived from various components of the plan assets.

Principal assumptions used for the actuarial calculation for the years ended March 31, 2016 and 2015 were as follows:

	FY2015	FY2014
Discount rate	Primarily 0.3%	Primarily 0.3%
Expected long-term rate of return	Primarily 1.5%	Primarily 1.5%
on plan assets		
Expected rate of salary increase ····· F	Primarily 0.9 - 3.0%	Primarily 0.9 - 3.0%

#### **Defined contribution plans**

The required contribution amount to the defined contribution plan by the Group was ¥3,412 million (\$30,280 thousand) and ¥3,652 million for the years ended March 31, 2016 and 2015, respectively.

#### **11. Contingencies**

At March 31, 2016 and 2015, the Group was contingently liable as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2015	FY2014	FY2015
Guarantees of debt	¥ 25,895	¥ 27,399	\$ 229,810
Trade notes discounted	2,132	2,171	18,920
Trade notes endorsed	466	751	4,135

At March 31, 2016 and 2015, commitments outstanding for loan commitments were ¥601 million (\$5,333 thousand).

#### 12. Leases

The Group leases certain buildings and structures, machinery and equipment, office space and other assets.

As discussed in Note 2 (j), lease assets under finance leases that do not transfer ownership to lessees are capitalized and depreciated to residual value of zero using the straight-line method with useful life defined by the terms of the contract.

Future minimum lease payments subsequent to March 31, 2016 and 2015 for non-cancelable operating leases are summarized as follows:

	Millions of yen	Thousands of U.S. dollars
2016		
2017	¥ 2,384	\$ 21,157
2018 and thereafter	15,370	136,403
Total	¥ 17,754	\$ 157,561
2015		
2016	¥ 3,282	
2017 and thereafter	11,990	
Total	¥ 15,272	

(Year ending March 31)

#### **13. Financial Instruments**

#### (a) Overview

#### (1) Group policy for financial instruments

The Group raises funds mainly through the bank loans or by commercial paper/ bond issues based on the capital investment plans considering the stability of the fund and financing costs. Temporary surplus of funds are operated only for short-term investments. Derivative transactions are only utilized to hedge the following risks and the Group does not enter into derivative transactions for trading or speculative purposes.

#### (2) Types of financial instruments and related risk and risk management

Trade receivables such as notes and accounts receivable are exposed to credit risk. The Group manages this risk by monitoring the financial conditions of its customers periodically. Some trade receivables are sold before their maturities.

Trade payables such as notes and accounts payable are due within one year. Some accounts receivable and accounts payable are denominated in foreign currency and exposed to foreign currency risk. Foreign exchange forward contracts are utilized in a timely manner to hedge the net balance of foreign currencies received from export and foreign currencies paid for raw material purchase.

Stocks as investment securities are exposed to market fluctuation risk. Investment securities denominated in foreign currencies are exposed to foreign currency risk. Investment securities mainly consist of securities of companies with which a business relationship has been established and the Group reviews these fair values periodically.

Debts and bonds are managed so as not to concentrate the maturities

considering the liquidity risk. Variable interest rate debts are exposed to interest fluctuation risk. Some of the debts and bonds, which are exposed to interest fluctuation risk, are hedged by the interest rate swap agreements to correspond with and to decrease interest payments.

Derivative transactions are exposed to market fluctuation risk of future foreign exchange and interest rates. However, the Group utilizes the derivative transactions to correspond with the actual demands of imports and exports, debts and bonds, and thus the risk is limited to the extent of opportunity loss. The Group enters into derivative transactions only with financial institutions with high credit ratings, and thus there is almost no credit risk, which is the risk of default by the counterparties' bankruptcy, etc. The Group implemented the internal rules of derivative transactions and transactions are operated based on these rules. Derivative transactions are executed based on the above internal rules, which require getting the approval from the financial operating officer. The balances, fair values and valuation differences are reported to the management meetings periodically. Consolidated subsidiaries operate the derivative transactions based on the internal rules.

#### (3) Supplemental information on fair value of financial instruments

As well as the values based on market prices, fair values of financial instruments include values, which are reasonably calculated in cases where market prices do not exist. As the calculation of those values uses certain assumptions, those values may vary in cases where different assumptions are applied. Also, for the contract amount regarding derivative transactions described in Note 14. "Derivatives and Hedging Activities," the contract amount itself does not indicate market risk related to derivative transactions.

#### (b) Fair value of financial instruments

Carrying value on the consolidated balance sheets, fair value and difference at March 31, 2016 and 2015 are as follows. The financial instruments whose fair value is extremely difficult to determine are not included below.

Millione of use

	Millions of yen								
		FY2015		FY2014					
	Carrying value	Fair value	Difference	Carrying value	Fair value	Difference			
Cash and deposits	¥ 64,654	¥ 64,654	¥ –	¥ 85,889	¥ 85,889	¥-			
Notes and accounts receivable	720,639	720,639	-	771,574	771,574	-			
Investments in securities:									
Available-for-sale securities	353,010	353,010	-	504,709	504,709	-			
Total assets	¥ 1,138,303	¥ 1,138,303	¥ –	¥ 1,362,173	¥ 1,362,173	¥–			
Notes and accounts payable ·····	¥ 422,331	¥ 422,331	¥ –	¥ 469,107	¥ 469,107	¥ —			
Short-term borrowings	116,759	116,759	-	128,761	128,761	-			
Commercial paper ·····	36,000	36,000	-	_	-	-			
Current portion of long-term debt	256,623	256,795	172	239,243	239,279	36			
Long-term debt:									
Bonds	125,000	125,938	938	145,000	146,170	1,170			
Long-term borrowings	844,990	853,404	8,413	988,756	991,697	2,941			
Total liabilities	¥ 1,801,705	¥ 1,811,229	¥ 9,524	¥ 1,970,868	¥ 1,975,015	¥ 4,147			
Derivative transactions*1:									
Hedge accounting not applied	¥ 403	¥ 403	¥ –	¥ (184)	¥ (184)	¥-			
Hedge accounting applied	(3,708)	(3,708)	-	(286)	(286)	-			
Total derivative transactions	¥ (3,305)	¥ (3,305)	¥ –	¥ (470)	¥ (470)	¥-			

Cash and deposits
Notes and accounts receivable
Investments in securities:
Available-for-sale securities
Total assets
Notes and accounts payable
Short-term borrowings
Commercial paper
Current portion of long-term debt
Long-term debt:
Bonds ·····
Long-term borrowings
Total liabilities
Derivative transactions*1:
Hedge accounting not applied
Hedge accounting applied
Total derivative transactions

\*1 Derivative transactions are presented on a net basis and net liability position is shown in parenthesis

	Thousands of U.S. dollars								
		FY2015							
	Carrying value	Fair value	Difference						
	\$ 573,784	\$ 573,784	\$ -						
••	6,395,447	6,395,447	-						
	3,132,854	3,132,854	_						
•	\$ 10,102,085	\$ 10,102,085	\$						
•	\$ 3,748,056	\$ 3,748,056	\$ -						
•	1,036,199	1,036,199	-						
•	319,488	319,488	-						
•	2,277,449	2,278,975	1,526						
	1,109,336	1,117,660	8,324						
	7,499,023	7,573,695	74,662						
•	\$ 15,989,572	\$ 16,074,094	\$ 84,522						
	¢ 2 576	¢ 2 576	\$ -						
	\$ 3,576 (32,907)	\$ 3,576 (32,907)	φ- -						
•	\$ (29,330)	\$ (29,330)	\$ -						

Note 1. Valuation method for financial instruments and information of investments in securities and derivative transaction

#### Assets:

Cash and deposits and Notes and accounts receivable

These are paid in short-term and the fair value approximates carrying value. Some accounts receivable are subject to the allocation treatment of the foreign exchange forward contracts.

#### Securities

Fair value of stocks is based on the quoted price on stock exchanges and that of bonds is based on the quoted price on bond markets or price presented by the counter party financial institutions. Please see Note 6. "Securities" regarding the information of the fair value for the investment in securities by classification.

#### Liabilities:

Notes and accounts payable, Short-term borrowings, Current portion of long-term debt (except for bonds due within one year) and Commercial paper These are paid in short-term and the fair value approximates the equivalent of carrying value. Some accounts payable are subject to the allocation treatment of the foreign exchange forward contracts.

Bonds and bonds due within one year (included in current portion of long-term <u>debt)</u>

Fair value of bonds is based on the quoted market price. Fair value of the bonds subject to the special treatment of the interest rate swaps are calculated by discounting the sum of principal and interest including the interest swap, using the reasonable interest rate applied to the same kind of bond issues. Long-term borrowings

Fair value of long-term borrowings is estimated by discounting the sum of principal and interest, using the reasonable interest rate applied to the same kind of new borrowings. Fair value of the long-term borrowings subject to the special treatment of the interest rate swaps is calculated by discounting the sum of principal and interest including the interest swap, using the reasonable interest rate applied to the same kind of long-term debt.

#### Derivative transactions

Please see Note 14. "Derivatives and Hedging Activities."

Note 2. Financial instruments whose fair value cannot be reliably determined	Million	Thousands of U.S. dollars (Note 1)	
	FY2015	FY2014	FY2015
Unlisted stock	¥ 41,281	¥ 28,118	\$ 366,356
Subscription certificates	246	223	2,183

Financial instruments above are not included in securities on the table in (b) "Fair value of financial instruments" because there are no market prices available and it is extremely difficult to determine the fair value.

#### Note 3. The redemption schedule for financial instruments and securities with maturities

	Millions of yen								
		FY20	15				FY2014	2014	
	Due in one year or less	Due after one year through five years	Due after five years through ten years	Due after ten years	Due in one year or less	Due after one year through five years	Due after five years through ten years	Due after ten years	
Cash and deposits	¥ 64,654	¥–	¥-	¥–	¥ 85,889	¥-	¥ –	¥ –	
Notes and accounts receivable ·····	565,478	-	-	-	616,505	-	-	-	
Securities:									
Available-for-sale securities with maturities	-	-	-	-	20	-	-	-	
Total	¥ 630,132	¥ –	¥ –	¥–	¥ 702,415	¥ –	¥ –	¥ –	

_	Thousands of U.S. dollars							
	FY2015							
	Due in one year or less	Due after one year through five years	Due after five years through ten years	Due after ten years				
Cash and deposits	\$ 573,784	\$	\$ -	\$ -				
Notes and accounts receivable ·····	5,018,441	-	-	-				
Securities:								
Available-for-sale securities with maturities	-	-	-	-				
Total ·····	\$ 5,592,225	\$ -	\$ -	\$ -				

Note 4. Scheduled maturities of short-term borrowings, current portion of long-term debt and long-term deb

			Millions	of yen				
	FY2015							
	Due in one year or less	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		
Short-term borrowings	¥ 116,759	¥ –	¥ –	¥-	¥-	¥ –		
Commercial paper	36,000	-	-	-	-	-		
Current portion of long-term debt	256,623	-	-	-	-	-		
Long-term debt:								
Bonds ·····	-	50,000	15,000	-	-	60,000		
Long-term borrowings	-	97,402	169,594	13,888	64,468	499,636		
Total	¥ 409,382	¥ 147,402	¥ 184,594	¥ 13,888	¥ 64,468	¥ 559,636		

			Millions	of yen					
	FY2014								
	Due in one year or less	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			
Short-term borrowings	¥ 128,761	¥-	¥-	¥-	¥-	¥-			
Commercial paper	-	-	-	-	_	-			
Current portion of long-term debt	239,243	-	-	-	-	-			
Long-term debt:									
Bonds ·····	-	20,000	50,000	15,000	-	60,000			
Long-term borrowings	-	238,395	98,390	118,326	7,368	526,275			
Total ·····	¥ 368,004	¥ 258,395	¥ 148,390	¥ 133,326	¥ 7,368	¥ 586,275			

	FY2015							
	Due in one year or less	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		
Short-term borrowings	\$ 1,036,199	\$ -	\$	\$ -	\$ -	\$ -		
Commercial paper	319,488	-	-	-	-	-		
Current portion of long-term debt	2,277.449	-	-	-	-	-		
Long-term debt:								
Bonds ·····	-	443,734	133,120	-	-	532,481		
Long-term borrowings	-	864,412	1,505,094	123,251	572,133	4,434,114		
Total ····	\$ 3,633,138	\$ 1,308,146	\$ 1,638,214	\$ 123,251	\$ 572,133	\$ 4,966,595		

#### Thousands of U.S. dollars

### 14. Derivatives and Hedging Activities

Derivative transactions for which hedge accounting is not applied for the years ended March 31, 2016 and 2015 were as follows:

		Million	Thousands of U.S. dollars			
	FY2015		FY2014		FY	2015
	Contracted amount	Recognized gain (loss)	Contracted amount	Recognized gain (loss)	Contracted amount	Recognized gain (loss)
Foreign exchange forward contracts:						
USD (Selling)	¥ 11,044	¥ 446	¥ 10,781	¥ (342)	\$ 98,012	\$ 3,958
EUR (Selling)	123	0	125	3	1,091	0
THB (Selling)	2	0	6	(0)	17	0
MYR (Selling) ·····	588	17	191	(1)	5,218	150
USD (Buying) ·····	6,292	(19)	1,673	44	55,839	(168)
EUR (Buying)	1,006	(41)	67	(0)	8,927	(363)
GBP (Buying) ·····	6	0	2	(0)	53	0
CHF (Buying) ····	3	0	_	-	26	0
THB (Buying) ·····	2	(0)	24	0	17	(0)
JPY (Buying)	9	(0)	5	(0)	79	(0)
Total ·····		¥404		¥ (296)		\$ 3,585
Interest rate swap agreements:						
To receive floating and pay fixed rates	¥ –	¥ –	¥ 20,000	¥ (6)	\$	\$
To receive fixed rates and pay floating	-	_	20,000	112	-	-
Total ····		¥ –		¥ 105		\$
"Commodity forward contracts:						
Nonferrous metal (Selling)	¥148	¥ (0)	¥213	¥ 9	\$ 1,313	\$ (0)
Nonferrous metal (Buying) ·····	50	0	142	(3)	443	0
Total ·····		¥(0)		¥ 6		\$ (0)

Derivative transactions for which hedge accounting is applied for the years ended March 31, 2016 and 2015 were as follows:

(a)Currency related

				Million	Thousands of U.S. dollars			
			FY2015 FY2015			015	FY2	015
		Hedged item	Contract amount	Fair value	Contract amount	Fair value	Contract amount	Fair valu
Benchmark me	thod							
Foreign exchan	ge forward contracts:							
USD (Selling)		Accounts receivable (forecasted transactions)	¥ 2,413	¥ 106	¥ 1,613	¥ (59)	\$ 21,414	\$ 940
EUR (Selling)		Accounts receivable (forecasted transactions)	222	14	298	15	1,970	124
GBP (Selling)		Accounts receivable (forecasted transactions)	522	(53)	4,292	(136)	4,632	(470)
CAD (Selling)		Accounts receivable (forecasted transactions)	-	-	44	(1)	-	-
SAR (Selling)		Accounts receivable (forecasted transactions)	1,796	(311)	2,698	(139)	15,938	(2,760)
KWD (Selling)		Accounts receivable (forecasted transactions)	661	(65)	859	(52)	5,866	(576)
USD (Buying)		Accounts payable (forecasted transactions)	85,512	(2,489)	120,573	564	758,892	(22,089)
EUR (Buying)		Accounts payable (forecasted transactions)	656	(28)	446	(25)	5,821	(248)
GBP (Buying)		Accounts payable (Forecasted transactions)	1,092	(24)	620	9	9,691	(212)
CNY (Buying)		Accounts payable (forecasted transactions)	215	0	300	12	1,908	C
THB (Buying)		Accounts payable (forecasted transactions)	58	(0)	62	0	514	(0)
JPY (Buying)		Accounts payable (forecasted transactions)	-	-	33	0	-	-
KRW (Buying)		Accounts payable (forecasted transactions)	297	10	-	-	2,635	88
SEK (Buying)		Accounts payable (forecasted transactions)	8	0	-	-	70	C
Allocation meth	lod							
Foreign exchan	ge forward contracts:							
USD (Selling)		Accounts receivable	635	Note 1	291	Note 1	5,635	Note 1
EUR (Selling)		Accounts receivable	3	Note 1	5	Note 1	26	Note 1
THB (Selling)		Accounts receivable	5	Note 1	7	Note 1	44	Note 1
USD (Buying)		Accounts payable and deposits received	25,597	Note 1	44,816	Note 1	227,165	Note 1
EUR (Buying)			38	Note 1	21	Note 1	337	Note 1
THB (Buying)		Accounts payable and deposits received	-	-	12	Note 1	-	-
Cross currencv	swap contracts:	20000000000000						
To receive USD	-	Long-term Debt	60,997 6,000	Note 1 Note 1	56,527 6,000	Note 1 Note 1	541,329 53,248	Note 1 Note 1

Fair value of derivative transactions is measured at the quoted price obtained from financial institutions.

Note 1. Fair value of the foreign exchange forward contracts to which allocation treatment has been applied is included in the fair value of corresponding accounts receivable, accounts payable and long-term debt as hedged item.

#### (b) Interest rate related

			Million	s of yen		Thousands of	f U.S. dollars
	-	FY2015		FY2014		FY2015	
		Contract amount	Fair value	Contract amount	Fair value	Contract amount	Fair value
Benchmark method							
Interest rate swap agreements:							
To receive floating and pay fixed rates	Long-term debt	¥ 110,669	¥ (866)	¥ 123,719	¥ (473)	\$ 982,152	\$ (7,685)
Special treatment							
Interest rate swap agreements:							
To receive floating and pay fixed rates	Bonds and long-term debt	234,050	Note 1	235,000	Note 1	2,077,121	Note 1
To receive fixed rates and pay floating	•••••	60,000	Note 1	100,727	Note 1	532,481	Note 1

Fair value of derivative transactions is measured at the quoted price obtained from financial institutions.

Note 1. Fair value of the interest rate swap agreements to which special treatment method has been applied is included in the fair value of corresponding bonds and long-term debt as hedged item.

#### **15. Research and Development Expenses**

Research and development expenses charged to income were ¥35,153 million (\$311,971 thousand) and ¥32,488 million for the years ended March 31, 2016 and 2015, respectively.

#### 16. Income Taxes

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets at March 31, 2016 and 2015 are presented below:

	Millions of yen		Thousands of U.S. dollars	
	FY2015	FY2014	FY2015	
Deferred tax assets:				
Loss carry-forwards	¥ 46,547	¥ 55,485	\$ 413,090	
Net defined benefit liability	32,784	32,426	290,947	
Loss on impairment of property, plant and equipment	16,604	18,442	147,355	
Accrued bonuses	11,432	14,072	101,455	
Elimination of unrealized gains on property, plant and equipment	7,951	8,042	70,562	
Others ·····	46,379	57,586	411,599	
Total deferred tax assets	161,699	186,056	1,435,028	
Valuation allowance	(59,859)	(65,858)	(531,230)	
Deferred tax assets net of valuation allowances	101,840	120,198	903,798	
Deferred tax liabilities:				
Net unrealized gains and losses on securities	(46,191)	(93,577)	(409,930)	
Reserve for advanced depreciation of property, plant and equipment	(6,659)	(7,148)	(59,096)	
Others ·····	(13,336)	(21,194)	(118,352)	
Total deferred tax liabilities	(66,187)	(121,920)	(587,389)	
Net deferred tax assets (liabilities)	¥ 35,652	¥ (1,722)	\$ 316,400	

Reconciliation of the statutory tax rate to the effective tax rate for the year ended March 31, 2016 was as follows:

	FY2015
Statutory tax rate	 33.0%
Valuation allowance	 16.3
Effective tax rate	 49.3%

The reconciliation of the difference between the statutory tax rate and the effective tax rate for the year ended March 31, 2015 was not presented since the difference was less than 5% of the statutory tax rate.

The "Act on Partial Revision of the Income Tax Act" (Act No. 15 of 2016) and the "Act on Partial Revision of the Local Income Tax Act" (Act No. 13 of 2016) were passed by the National Diet on March 29, 2016. Accordingly, the statutory tax rate used to calculate deferred tax assets and liabilities was changed from 32.0% to 31.0% and 30.0% for temporary differences which are expected to reverse in the years beginning on April 1, 2016 and temporary differences

#### **17. Comprehensive Income**

Reclassification adjustments and income tax effects attributable to other comprehensive income for the years ended March 31, 2016 and 2015 were as follows:

	Millions of yen		Thousands of U.S. dollars	
	FY2015	FY2014	FY2015	
Net unrealized gains and losses on securities:				
Gains and losses arising during the year	¥ (124,398)	¥ 135,075	\$ (1,103,993)	
Reclassification adjustments	(12,505)	(8,327)	(110,977)	
Amounts before income tax effects	(136,903)	126,748	(1,214,971)	
Income tax effects	46,465	(35,939)	412,362	
Net unrealized gains and losses on securities	(90,438)	90,808	(802,609)	
Net unrealized gains and losses on hedges:				
Gains and losses arising during the year	(3,042)	158	(26,996)	
Reclassification adjustments	(518)	(514)	(4,597)	
Amounts before income tax effects	(3,561)	(356)	(31,602)	
Income tax effects	1,132	123	10,046	
Net unrealized gains and losses on hedges ·····	(2,429)	(232)	(21,556)	
Revaluation reserve for land:				
Income tax effects	648	1,012	5,750	
Revaluation reserve for land	648	1,012	5,750	
Translation adjustments:				
Adjustments arising during the year	(12,241)	13,482	(108,635)	
Reclassification adjustments	32	(770)	283	
Amounts before income tax effects	(12,208)	12,712	(108,342)	
Income tax effects	_	-	-	
Translation adjustments	(12,208)	12,712	(108,342)	
Remeasurements of defined benefit plans:				
Adjustments arising during the year	(18,267)	15,422	(162,113)	
Reclassification adjustments	568	2,372	5,040	
Amounts before income tax effects	(17,698)	17,795	(157,064)	
Income tax effects	5,731	(5,890)	50,860	
Remeasurements of defined benefit plans	(11,967)	11,905	(106,203)	
Share of other comprehensive income of affiliates accounted for using equity method:				
Gains and losses arising during the year	(18,186)	21,067	(161,395)	
Reclassification adjustments	(231)	549	(2,050)	
Share of other comprehensive income of affiliates accounted for using equity method	(18,418)	21,617	(163,454)	
Total other comprehensive income	¥ (134,814)	¥ 137,823	\$ (1,196,432)	

which are expected to reverse from the years beginning on April 1, 2018, respectively. As a result, deferred tax assets, net of deferred tax liabilities, income taxes – deferred and net unrealized gains and losses on securities increased by ¥1,427 million (\$12,664 thousand), ¥1,560 million (\$13,844 thousand) and ¥3,096 million (\$27,476 thousand), respectively, and net unrealized gains and losses on hedges and remeasurements of defined benefit plans decreased by ¥15 million (\$133 thousand), and ¥92 million (\$816 thousand), respectively, at and for the year ended March 31, 2016. Also, deferred tax liabilities on revaluation reserve for land decreased by ¥648 million (\$5,750 thousand) and revaluation reserve for land, net of tax, increased by the same amount at March 31, 2016.

#### **18. Segment Information**

#### (a) Overview of reportable segments

The Group places three operating companies, JFE Steel Corporation, JFE Engineering Corporation and JFE Shoji, and executes business based on an operating system specifically designed for its industry under the Company as a holding company. The reportable segments are identified by products and services belonging to the operating companies.

Products and services for each reportable segment are as follows:

"Steel" produces and sells a wide range of steel products, steel processed products and raw materials and operates peripheral business, such as transporting, and maintenance and construction of equipment.

"Engineering" provides engineering services for energy, urban environment, steel construction, industrial machines and systems, recycle service and electric

#### power retail service.

"Trading" purchases, processes and sells steel products, raw materials for steel production, nonferrous metal products, food, etc.

#### (b) Method of calculating net sales, income (loss), assets, liabilities and other items by reportable segment

Accounting policies of the reportable segments are consistent with those described in Note 2. "Summary of Significant Accounting Policies." Income by reportable segment is based on ordinary income. Intersegment transactions are based on prevailing market price.

	Millions of yen		
	FY2015	FY2014	
Segment income:			
Steel	¥ 27,817	¥ 188,574	
Engineering	20,030	18,025	
Trading	15,760	24,668	
Total ·····	63,608	231,267	
Adjustments	630	(266)	
Consolidated	¥ 64,239	¥ 231,001	

Millions of yen		
FY2015	FY2014	
¥ 3,596,123	¥ 3,911,913	
370,767	396,075	
619,783	701,768	
4,586,674	5,009,757	
(351,790)	(370,345)	
¥ 4,234,884	¥ 4,639,412	
	FY2015 ¥ 3,596,123 370,767 619,783 4,586,674 (351,790)	

	Millions of yen		
	FY2015	FY2014	
Depreciation:			
Steel ·····	¥ 164,952	¥ 164,738	
Engineering	7,037	6,104	
Trading ·····	5,950	5,167	
Total ····	177,940	176,010	
Adjustments	5	6	
Consolidated	¥ 177,946	¥ 176,017	

	Millions of yen		
	FY2015	FY2014	
Amortization of goodwill:			
Steel	¥ 119	¥ 124	
Engineering ·····	1,876	507	
Trading ·····	1,728	155	
Total ·····	3,724	788	
Adjustments	15	-	
Consolidated	¥ 3,739	¥ 788	

	Millions of yen		
	FY2015	FY2014	
Interest income:			
Steel ·····	¥ 1,051	¥ 1,043	
Engineering	127	120	
Trading	467	403	
Total ·····	1,646	1,567	
Adjustments	(455)	(489)	
Consolidated	¥ 1,190	¥ 1,078	

#### (c) Net sales, income (loss), assets, liabilities and other items by reportable segment

	Millions of yen		Thousands of U.S. dollars	
	FY2015	FY2014	FY2015	
Sales:				
Steel				
Sales to customers	¥ 1,569,518	¥ 1,857,878	\$ 13,928,984	
Intersegment sales or transfers	875,655	1,015,961	7,771,166	
Total	¥ 2,445,173	¥ 2,873,839	\$ 21,700,150	
Engineering				
Sales to customers	¥ 387,750	¥ 359,007	\$ 3,441,160	
Intersegment sales or transfers	9,826	8,380	87,202	
Total	¥ 397,577	¥ 367,388	\$ 3,528,372	
Trading				
Sales to customers	¥ 1,474,471	¥ 1,633,469	\$ 13,085,472	
Intersegment sales or transfers	281,973	301,001	2,502,422	
Total	¥ 1,756,445	¥ 1,934,470	\$ 15,587,903	
Total				
Sales to customers	¥ 3,431,740	¥ 3,850,355	\$ 30,455,626	
Intersegment sales or transfers	1,167,455	1,325,343	10,360,800	
Total	¥ 4,599,195	¥ 5,175,698	\$ 40,816,427	
Adjustments				
Sales to customers	¥ –	¥-	\$	
Intersegment sales or transfers	(1,167,455)	(1,325,343)	(10,360,800)	
Total	¥ (1,167,455)	¥ (1,325,343)	\$ (10,360,800)	
Consolidated				
Sales to customers	¥ 3,431,740	¥ 3,850,355	\$ 30,455,626	
Intersegment sales or transfers	-	_	-	
Total	¥ 3,431,740	¥ 3,850,355	\$ 30,455,626	

Thousands of U.S. dollars
\$ 246,867
177,760
139,865
564,501
5,591
\$ 570,101
Thousands of U.S. dollars
FY2015
112010
\$ 31,914,474
3,290,441
5,500,381
40,705,307
(3,122,026)
\$ 37,583,280
Thousands of U.S. dollars
FY2015
\$ 1,463,897
62,451
52,804
1,579,162
44
\$ 1,579,215
Thousands of U.S. dollars
FY2015
\$ 1,056
16,648
15,335
33,049
133
\$ 33,182
Thousands of U.S. dollars
FY2015
* * * ***
\$ 9,327
1,127
4,144
14,607
(4,037)
\$ 10,560

	Millions	Thousands of U.S. dollars	
	FY2015	FY2014	FY2015
Interest expense:			
Steel ·····	¥ 11,132	¥ 13,130	\$ 98,793
Engineering ·····	320	207	2,839
Trading	1,783	2,258	15,823
Total ·····	13,236	15,595	117,465
Adjustments	(957)	(1,063)	(8,493)
Consolidated	¥ 12,279	¥ 14,532	\$ 108,972

	Millions of yen		Thousands of U.S. dollars
-	FY2015	FY2014	FY2015
Equity in earnings and loss of affiliates:			
Steel ·····	¥ (10,923)	¥ 14,586	\$ (96,938)
Engineering ·····	295	16	2,618
Trading	890	539	7,898
Total ····	(9,737)	15,142	(86,412)
Adjustments	915	3,137	8,120
Consolidated	¥ (8,821)	¥ 18,280	\$ (78,283)

	Millions	of yen	Thousands of U.S. dollars	
	FY2015	FY2014	FY2015	
Investment in affiliates accounted for using eq	uity method:			
Steel ·····	¥ 272,123	¥ 355,458	\$ 2,415,007	
Engineering ·····	7,028	6,709	62,371	
Trading ·····	11,874	12,779	105,378	
Total ·····	291,027	374,947	2,582,774	
Adjustments	60,765	59,764	539,270	
Consolidated	¥ 351,792	¥ 434,712	\$ 3,122,044	

	Millions	of yen	Thousands of U.S. dollars			
	FY2015	FY2014	FY2015			
Increase in property, plant and equipment and intangible assets:						
Steel ····	¥ 197,786	¥ 207,286	\$ 1,755,289			
Engineering ·····	9,001	12,366	79,881			
Trading ·····	5,727	6,249	50,825			
Total ·····	212,514	225,902	1,885,995			
Adjustments	0	0	0			
Consolidated	¥ 212,515	¥ 225,902	\$ 1,886,004			

#### (d) Information about products and services

Information about products and services has not been disclosed since the classification by products and services is the same as the reportable segment.

#### (e) Information by geographical area

(1) Sales	Millions of yen			Thou	isands of U.S. doll	ars			
		FY2015			FY2014			FY2015	
	Japan	Others	Total	Japan	Others	Total	Japan	Others	Total
Sales	¥ 2,252,169	¥ 1,179,570	¥ 3,431,740	¥ 2,499,854	¥ 1,350,500	¥ 3,850,355	\$ 19,987,300	\$ 10,468,317	\$ 30,455,626

(2) Property, plant and equipment

Information about property, plant and equipment has not been disclosed since property, plant, and equipment in Japan constituted more than 90% of property, plant and equipment on the consolidated balance sheets.

#### (f) Information about major customers

statements of income.

#### (g) Information about impairment loss by reportable segment

		Million	s of yen		
		FY2	015		
	Steel	Engineering	Trading	Total	
Impairment loss	¥ 3,115	¥ 197	¥ 1,680	¥ 4,993	
		Million	s of yen		
	FY2014				
	Steel	Engineering	Trading	Total	
Impairment loss	¥ 3,234	¥-	¥ 8,928	¥ 12,162	
		Thousands	of U.S. dollars		
		FY2	015		
-	Steel	Engineering	Trading	Total	
Impairment loss	\$ 27,644	\$ 1,748	\$ 14,909	\$ 44,311	

#### (h) Information on unamortized balance of goodwill by reportable segment

		Millior	ns of yen	
_	FY2015			
_	Steel	Engineering	Trading	Total
Unamortized balance	¥ 1	¥ 7,139	¥ 6,374	¥ 13,515
-		Millior	ns of yen	
	FY2014			
	Steel	Engineering	Trading	Total
Unamortized balance	¥ 189	¥ 12,196	¥ 17,009	¥ 29,395
		Thousands	of U.S. dollars	
-	FY2015			
_	Steel	Engineering	Trading	Total
Unamortized balance	\$8	\$ 63,356	\$ 56,567	\$ 119,941

#### Information about major customer has not been disclosed since there were no external customers who constituted more than 10% of net sales on the consolidated

#### (i) Information about gain on negative goodwill by reportable segment

No gain on negative goodwill was recognized for the years ended March 31, 2016 and 2015.

#### **19. Impairment Loss**

The Company classified long-lived assets as idle assets, leased assets, project-oriented assets and business-oriented assets and grouped each of those classified assets into the minimum unit which will generate cash flows independent of other assets or group of assets.

For the year ended March 31, 2016, primarily the book value of the interest in natural resources in Australia and the business assets, etc. in China were reduced to the recoverable amount because of the deteriorated business environment. The Company recognized loss on impairments of long-lived assets totaling ¥4,993 million (\$44,311 thousand), including ¥1,638 million (\$14,536

thousand) for investments and other assets, ¥1,195 million (\$10,605 thousand) for land, ¥1,034 million (\$9,176 thousand) for machinery and equipment and ¥1,125 million (\$9,984 thousand) for buildings and structures. The recoverable amounts for the interest in natural resources and the business assets, etc. are principally measured at their values in use, which were calculated by discounting the future cash flows at discount rates of 6.4% and 6.0%, respectively.

For the year ended March 31, 2015, primarily the book value of the interest in natural resources in Australia was reduced to the recoverable amount due to the decision to withdraw the project because of the deteriorated business environment. The Company recognized loss on impairments of long-lived assets totaling ¥12,162 million, including ¥8,708 million for investments and other assets, ¥1,554 million for machinery and equipment, ¥770 million for land and ¥1,128 million for buildings and structures. The recoverable amount is principally based on the estimated value of disposition.

#### 20. Extraordinary Loss

For the years ended March 31, 2016 and 2015, extraordinary loss consisted of the following:

	Millions of yen		Thousands of U.S. dollars	
	FY2015	FY2014	FY2015	
Gain on sales of property, plant and equipment	¥ –	¥ 4,134	\$	
Gain on sales of investments in securities	15,090	8,495	133,919	
Loss on impairment of property, plant and equipment	(4,993)	(12,162)	(44,311)	
Loss on valuation of investments in capital	-	(4,776)	-	

#### 21. Net Income per Share

Diluted net income per share is not shown due to no dilutive stocks for the years ended March 31, 2016 and 2015.

(Year ended March 31, 2016)	Millions of yen	Thousands of shares	Yen	U.S. Dollars
	Net Income attributable to shareholders of the parent	Weighted average shares	Net income pe	er share
Net income attributable to shareholders				
of the parent available to common shareholders	¥ 33,657	576,740	¥ 58.36	\$ 0.51
(Year ended March 31, 2015)	Millions of yen	Thousands of shares	Yen	
	Net Income attributable to shareholders of the parent	Weighted average shares	Net income per share	
Net income attributable to shareholders				
of the parent available to common shareholders	¥ 139,357	576,806	¥ 241.60	

#### 22. Subsequent Event

The Company entered into agreements related to fund procurement of ¥200,000 million (\$1,774,937 thousand) by subordinated loan (the "Loan") at June 15, 2016.

#### (a) Purpose and background of the fund procurement

While classified as a debt on the consolidated balance sheets, the loan has characteristics similar to capital and is eligible for equity treatment by rating agencies. Accordingly, the Loan contributes to substantial enhancement of the Company's finance structure without dilutive effects of stock.

The Company strengthens its earnings platform by steadily executing investments in domestic manufacturing base and overseas growing which is set out in the fifth mid-term business plan. On this occasion, fund procurement by the Loan is determined to achieve both growth strategy and financial soundness with maintaining the capital efficiency.

#### (b) Overview of the Loan

(1) Amount of the Loan	: ¥200,000 million (\$1,774,937 thousand)
(2) Date of the agreement	: June 15, 2016
(3) Date of loan execution	: June 30, 2016
(4) Date of loan maturity	: June 30, 2076
	However, the Company may repay all or part
	of the principal before the date of loan maturity
	on or after 5 or 10 years from the date
	of loan execution.
(5) Purpose of the Loan	: Capital investment
(6) Equity content rating	: Moody's Investors Service, Inc. : 50%
	Rating and Investment Information, Inc. : 30%
	Japan Credit Rating Agency, Ltd. : 25%
(7) Terms regarding the eq	uity content
Terms regarding the eq	uity content are as follows:
a. Subordination c	lause:
If decisions are	made on commencement of liquidation proceedings,
bankruptcy proc	ceedings, reorganization proceedings or rehabilitation
proceedings ag	ainst the Company, the lender of the Loan has the
right to receive	repayment after all claims except for the Loan and
	ted loans which have the same priority as the Loan
are repaid.	
Ũ	ding the Loan should not be changed in any sense
	disadvantages to creditors of the Company other
	r of the subordinated loans.
b. Restrictions on	
•	al of interest payments is available.
	refinance clause (*): None
	expresses intention to procure funds that have
	uivalent to or higher than the Loan at the premature
repayment.	

(8) Lenders : Mizuho Bank, Ltd., Sumitomo Mitsui Banking Corporation, The Bank of Tokyo-Mitsubishi UFJ, Ltd., Mizuho Trust & Banking Co., Ltd., Development Bank of Japan Inc., Sumitomo Mitsui Trust Bank, Limited,
Mitsubishi UFJ Trust and Banking Corporation, Nippon Life Insurance Company,
The Dai-ichi Life Insurance Company, Limited, Meiji Yasuda Life Insurance Company

#### (c) Effects on the operating results

The effect of the fund procurement by the Loan on the Company's operating results is immaterial.



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#### Independent Auditor's Report

The Board of Directors JFE Holdings, Inc.

We have audited the accompanying consolidated financial statements of JFE Holdings, Inc. and its consolidated subsidiaries, which comprise the consolidated balance sheet as at March 31, 2016, and the consolidated statements of income, comprehensive income, changes in net assets, and cash flows for the year then ended and a summary of significant accounting policies and other explanatory information, all expressed in Japanese yen.

#### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for designing and operating such internal control as management determines is necessary to enable the preparation and fair presentation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. The purpose of an audit of the consolidated financial statements is not to express an opinion on the effectiveness of the entity's internal control, but in making these risk assessments the auditor considers internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting 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 referred to above present fairly, in all material respects, the consolidated financial position of JFE Holdings, Inc. and its consolidated subsidiaries as at March 31, 2016, and their consolidated financial performance and cash flows for the year then ended in conformity with accounting principles generally accepted in Japan.

#### Emphasis of Matter

We draw attention to Note 22 to the consolidated financial statements, which describes that the Company entered into agreement related to fund procurement by subordinated loan at June 15, 2016. Our opinion is not qualified in respect of this matter.

#### Convenience Translation

We have reviewed the translation of these consolidated financial statements into U.S. dollars, presented for the convenience of readers, and, in our opinion, the accompanying consolidated financial statements have been properly translated on the basis described in Note 1.

June 23, 2016

Ernst & Young Shinnihon LLC

A member firm of Ernst & Young Global Limited





### JFE Holdings, Inc.

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## Our commitment to the future is limitless