

Outside Executives Group Interview

Outside executives share perspectives on ESG as the foundation of JFE's value creation



1
Audit & Supervisory Board Member
Shigeo Ohyagi
Senior Advisor,
Teijin Limited

Mr. Ohyagi joined Teijin in 1971. He assumed his present post in June 2018 after serving as President and Chairman. He is also an outside director of KDDI Corporation and MUFG Bank, Ltd. He became an Audit & Supervisory Board Member of JFE Holdings in June 2014.

2
Audit & Supervisory Board Member
Tsuyoshi Numagami
Professor of the Graduate School of Business Administration,
Hitotsubashi University

Mr. Numagami was appointed Professor of the Graduate School of Commerce and Management at Hitotsubashi University in 2000. He was made Dean in 2011 and a Board Member and Executive Vice President in 2014. He took his present position in 2018. He became an Audit & Supervisory Board Member of JFE Holdings in June 2018.

3
Audit & Supervisory Board Member
Isao Saiki
Partner Lawyer,
Abe, Ikubo & Katayama Law Firm

Mr. Saiki was admitted to the bar in 1989 and joined Ginza Law Office (now Abe, Ikubo & Katayama Law Firm). He has held his current post since January 1998. He became an Audit & Supervisory Board Member of JFE Holdings in June 2017.

4
Director
Nobumasa Kemori
Executive Advisor,
Sumitomo Metal Mining Co., Ltd.

Mr. Kemori joined Sumitomo Metal Mining in 1980 and was appointed to his current post in June 2017 after serving as President and then Chairman. He is also an outside director of Nagase & Co., Ltd. and Sumitomo Realty & Development Co., Ltd. He became a Director of JFE Holdings in June 2018.

5
Director
Masami Yamamoto
Director and Senior Advisor,
Fujitsu Limited

Mr. Yamamoto joined Fujitsu in 1976 and was appointed to his current post in June 2019 after serving as President and then Chairman. He is also an outside director of Mizuho Financial Group, Inc. He became a Director of JFE Holdings in June 2017.

What is your perspective on risks and opportunities regarding climate change?

Kemori The Japanese steel industry is said to have the highest energy efficiency in the world. Japanese heavy and chemical industries basically became world leaders in this respect after having experienced two oil shocks. Japan, however, accounts for around 1.14 billion tons, or 3.4% of the world's annual CO₂ emissions

of 33.0 billion tons, which is more than twice Japan's share (around 1.6%) of the global population. This is certainly an issue that Japan needs to address in earnest. In this context, I regard climate change as a significant risk for the JFE Group, which is a large emitter of CO₂. The cost of research needed to develop innovative processes is substantial, and until now the company has tackled the issue of climate change mainly as a member of the steel industry. Going forward, however, we need to take the initiative in addressing the issue strategically and actively conveying information about these efforts.



Ohyagi Everyone in corporate management is aware of the importance of reducing CO₂ emissions in the contexts of corporate sustainability and achieving a sustainable world. Based on this awareness, the Japanese steel industry and the JFE Group have continued to tackle this issue for some time. The emission of CO₂ has always been an inevitable outcome of the steelmaking process, but we are presently pursuing research and development into the new hydrogen-reduction ironmaking method. At the same time, it is also important for businesses to offset their CO₂ emissions, as in the case of CCU and CCS (see page 53). This has the potential to become a huge industry in the future. The JFE Group, given the technological prowess of its engineering business, is focusing on the important issue of how to create new businesses in this area.

Yamamoto Of course we are developing technologies to reduce CO₂ emissions from JFE's manufacturing processes. At the same time, however, we are also contributing to energy conservation throughout society, such as providing electrical steel sheets for electric vehicles and thin, high-strength steel sheets that make automobiles lighter. JFE is working to expand its manufacturing technologies and supply capacities for environmentally friendly products such as these, which I think will become one of the company's great strengths. In terms of opportunities, it is important that we engage in initiatives across the entire JFE Group. For example, the engineering business is developing a range of environmental businesses, including biomass power generation and food waste power generation, and the trading business is taking initiatives such as supplying fuel to biomass power plants.

What is your assessment of JFE's environmental initiatives, presumably one of the focuses of the Board of Directors?

Ohyagi The Board of Directors discusses JFE's responses to ESG issues both in terms of its CSR activities and its businesses. ESG is also the primary concern of the Audit & Supervisory Board, which monitors JFE's progress in this area.

Saiki The Board of Directors receives such reports whenever appropriate. I can see that JFE is making enormous efforts in this area, but I feel, however, that JFE is not communicating these efforts as well as it might. JFE needs to be more proactive in conveying the fact that steel is absolutely necessary for infrastructure, and that it is making strong efforts in this area as a company. PR materials such as the Integrated Report and CSR Report are important, of course, but I think that there needs to be more active discussion about how to communicate with the general public about what the company is actually doing.

Numagami Steel is a material that is highly recyclable and generally energy efficient, and even contributes to reducing CO₂ emissions. If the manufacturing process is singled out, however, it is impossible to erase the negative impression that the steel industry accounts for as much as 40% of the combined CO₂ emissions of all manufacturing industries. I think it's very important for JFE to market its positive, overall contribution in clear terms. This means, for example, helping the public to understand terms such as "zero-carbon steel."

Last year, JFE disclosed information in accordance with the TCFD's recommendations (see page 55). How important are such disclosures?

Numagami To gain trust, it is vital to disclose information honestly across all issues and under all circumstances. If there is a standardized, accepted way of disclosing information, then all efforts should be made to disclose information accordingly. It is also necessary to be aware of the various recipients and use the most effective method of communication for each recipient.

Ohyagi The TCFD was established with the aim of alleviating climate change through financial markets. It has had a significant effect in terms of guiding society, as can be seen in the recent movement to withdraw loan funding from thermal power plants. The fact that JFE discloses its initiatives on climate change so prominently and in line with the TCFD's recommendations demonstrates the company's awareness of the risks. I would say that JFE has made appropriate and substantial progress thanks to these initiatives, which began in the previous fiscal year.

What is your opinion of JFE's safety record and related initiatives?

Kemori I believe that proper safety measures have been implemented, but regrettably they have not produced corresponding results. We have seen multiple workplace fatalities over the past few years and lost-time injury frequency rate has worsened. Avoiding injury at work and returning home safely every day is a crucial matter for every employee. But workplace accidents occur if established rules are not fully observed. As I said last year, I believe that you cannot improve corporate value without improving the safety record. The performance of the company overall can be gauged from its safety record. How can employees who don't even follow rules involving their own safety be expected to observe rules for manufacturing and quality management? JFE needs thorough measures to drive home this message to every employee. We discussed this matter at today's meeting of the Board of Directors. We set targets and decided to thoroughly implement measures to achieve these targets, not only to totally eliminate workplace fatalities but also in regard to lost-work injuries. I look forward to seeing results soon.

Yamamoto Many employees of JFE partner companies have also been victimized by workplace accidents. The issue is how to establish education that is effective not only for JFE employees, but also those of its partners. JFE has implemented initiatives to achieve zero workplace fatalities and has top managers chair meetings regarding accident countermeasures. The only way to ensure safety is to steadily establish a safety mindset in everyone, from corporate leaders to frontline workers at manufacturing sites. I believe that with further research and deeper investigation from the perspective of data science, as well as accident prevention utilizing information technologies such as AI and robotics, JFE can achieve progress in reducing accidents.

What is your impression of JFE's human resources and corporate culture? Are there any human resource issues that represent a significant future risk?



Saiki I initially imagined that a traditional steelmaker like JFE would be stiff and conventional. In reality, I am inspired by the flexibility with which employees at its manufacturing sites respond to challenges. I am also impressed by the large number of young employees, especially at steelworks. The younger generation of employees has moved up to take responsibility for core operations and assume key positions as the older generation retires. I had a strong impression of the progress of generational change. On the other hand, it is also true that this progress has sometimes proven to be a weakness, as was seen in blast furnace problems the year before last. I think that JFE must appropriately allocate its human resources, not only through the transmission of skills to younger generations, but also by utilizing AI and other technologies to supplement any skill gap.

Kemori I have the impression that internal workplace communication is excellent. At the same time, I've heard that similar problems have occurred in multiple departments. I feel that maybe there is not enough awareness among employees that a problem that occurs at another department may also occur in their own department, meaning that they too must prepare to prevent such problems. I think that employees need to be more sensitive to what is happening in other parts of the company.

Ohyagi JFE has many outstanding employees, both in the head office and at manufacturing sites, and I can say from past experience that JFE's management has access to a range of human resources that would make other corporate managers jealous. Manufacturing companies, however, are structured according to manufacturing processes, with each section engaged in pursuing high-quality, low-cost manufacturing processes. Each section develops its own unique culture, but as a result, there is a natural tendency to build barriers between the various parts of an organization. To overcome this situation, it is necessary to construct whistleblower systems to collect accurate information in the event of an unusual incident. In the case of JFE, I get the

impression that for a company of this size, an exceptionally low number of incidents are submitted through the whistleblower system. I find it difficult to determine if this is because JFE is a really outstanding organization or if information is being withheld somewhere. JFE is making efforts, such as regularly carrying out awareness surveys of all employees, and I think it's crucial that it continues to strive in such ways to increase transparency. As an Audit & Supervisory Board Member, this will be one of my focuses going forward.

Numagami Recently, there has been an increasing tendency among university students to seek work at consulting firms, venture companies and foreign financial institutions. I get the feeling that many people choose these careers regardless of their individual aptitudes or preferences. If JFE were to expand the breadth of its recruitment activities to encompass more people, including mid-career hires and previous employees in addition to new graduates, it would be able to secure more outstanding people who are changing careers. JFE may also have to consider to what extent it could tolerate career paths that do not conform to conventional patterns, such as young employees gradually learning the company's culture through steelworks assignments.

How do you feel about human resources from the IT field?

Yamamoto These days, manufacturing is not as easy as simply setting up equipment to churn out products one after the other. It is necessary to have systems that can respond to changing conditions in order to realize optimal production solutions that keep the company competitive. A key to differentiation, and thus a necessary condition for manufacturers, is how well they use information technology to construct their production systems. Another extremely important question will be how well they utilize the massive data generated during manufacturing. To this end, it is absolutely necessary to nurture people skilled in technologies such as IoT and AI. Also, I think that JFE is leading the steel industry in its adoption of DX (see page 45). JFE is actively studying processes for producing the highest quality steel in the most efficient way based on data collected from sensor systems. JFE has its own IT system company and top management is genuinely committed to utilizing IT, so I am sure that the company will nurture people who will lead the global steel industry in this field.



What about promoting active participation by female employees?

Saiki I think that JFE is really making progress in promoting the participation of female employees at manufacturing sites. Two women also sit on the Board of Directors, the result of appointing a female internal Audit & Supervisory Board Member last year and a female outside director this year. Both provide very frank and outspoken opinions, leading to much more lively debates at Board of Directors meetings. I think that the next step should be the appointment of a female internal director.

Yamamoto It is important that senior corporate management consciously tackles this issue. JFE's senior management is strongly conscious of promoting the participation of women and has set bold, forward-looking targets, so I feel that we can look forward to the increasing participation of female employees in JFE workplaces in the future.

Ohyagi If more women from within JFE were appointed to executive and managerial posts and then achieve success, they would become role models and encourage those around them to strive harder. I really hope that JFE is able to realize this kind of virtuous cycle.

Outside executives share perspectives on ESG as the foundation of JFE's value creation

JFE's steel business announced its restructuring in March. How do you assess these changes and what did the Board of Directors discuss in this regard?

Yamamoto The steel business is facing quite harsh conditions in terms of global steel supply and demand. While it is not always possible to aim for growth, steel is a staple product for industry and will remain a universally essential material in the future. It is vitally important for management to ensure business continuity by adjusting its responses to fit the circumstances, specifically, to endure these hard times and pursue growth when the time comes. The opportunity to pursue growth will surely come. Right now, it is necessary to make the company stronger and more resilient, as well as prepare to make the most of opportunities when they appear.

Saiki In the course of making decisions about restructuring, the challenges faced by each steelworks were a constant topic of discussion at meetings of the Board of Directors. The broad-ranging steel industry has a huge effect on regions. I think the board made the best decisions possible at the time, after spending a substantial amount of time collecting information and thoroughly debating the facts.

Numagami As Mr. Saiki has said, the Board of Directors debated which equipment to suspend and how, including by carefully examining extensive data. I think that the board was able to make extremely rational decisions. The decision to reduce excess production capacity was necessary to help the company appropriately create added value and prepare for the era to come. But the decision was not based solely on economic rationale. Companies play vital roles in society, including in terms of regional economies and employment, so it was an extremely difficult decision that was made after extensive consideration of societal factors as well.

What are your hopes and expectations for JFE in terms of ESG overall, and what kind of company would you like JFE to become?

Kemori Contributing to the earth and to society through business is the basis of ESG. I would like to see JFE promptly pursue initiatives to reduce CO₂ emissions and take the initiative to lead the steel industry in the use of hydrogen-reduction ironmaking, CCU and CCS as these technologies enter full-scale development. Based on such efforts, I would like to see JFE achieve exceptionally low levels of CO₂ emissions for a steelmaker and thereby becoming a company with global appeal.

Saiki After assisting a wide range of companies in my capacity as a lawyer, I have come to firmly believe that manufacturing companies generate the most value. In particular, Japan is one of the top producers of steel, a staple input for industry and one of Japan's strengths. I hope that JFE shapes itself as a company in which employees across the group can take pride in their work and their unique steelmaking technologies. I want JFE to convey these qualities to attract young people who aspire to work for a manufacturer. When I visited a steelworks back when I was a legal apprentice, I remember being deeply impressed by the scene of long pieces of red-hot steel sliding back and forth in the rolling mill. I would like to see JFE actively communicate with the public to encourage more people to experience the joy and excitement of manufacturing, making it one of Japan's biggest strengths.



Ohyagi Regarding ESG, I think that the basic focus should be achieving ESG goals through business. JFE already possesses all of the fundamental qualities necessary to do this. JFE can strive to be the best company in Japan. For example, last year JFE even won first prize in Japan's national corporate baseball competition. This is an outstanding achievement. It was also great to observe so many employees out there supporting the JFE team. In this sense, JFE has the potential to become the best company in Japan. I really want to see JFE become a company capable of developing human resources that are the best in Japan. At the moment, I particularly want to see JFE strive to promote the participation of women. I look forward to seeing female internal directors rise up through the ranks before long.

Numagami Along with the impact of COVID-19, we also need to discuss the spread of 5G. The 5G era will make it possible to conduct surgeries from remote locations and may drastically change the way that people work, both in offices and at manufacturing sites. From the perspective of organizational theory, my area of specialization, changes in information systems have historically gone hand-in-hand with changes in organizational design. COVID-19 has made many people realize that they can do their jobs remotely. I think that Japanese companies will all have to explore new organizational designs and ways of working as the spread of 5G alters relationships between companies and employees, employees and employees, and between companies themselves. With these issues in mind, I want JFE to be a company capable of grasping new business opportunities that emerge in this new era. There are many areas where JFE can compete globally. For example, the engineering business could use its excellent technological expertise to provide a range of services remotely. I would like to see the company advance in terms of both strategy and organizationally.



Yamamoto Steel is necessary for the earth to remain sustainable. I think that steel will probably be a vital part of industry for the next millennium, so JFE will remain valuable for a long time to come. It is therefore necessary to create mechanisms to ensure JFE's continuity as a company that contributes to the world. For example, Mr. Numagami mentioned 5G, which will do away with the concept of distance. How can JFE adapt to the 5G world? The actual fact of manufacturing steel will not be altered by 5G, but it may change the way that the manufactured steel is used and applied. I want JFE to focus closely on these issues and encourage employees to aspire to take initiatives to realize a more sustainable world. I would also like to see JFE capture the hearts of young people with this aspiration and use the opportunity to propel the company's further evolution.

Message from New Executive

Contributing to corporate management by drawing on knowledge and experience in public administration, organizational management and crisis response

Yoshiko Ando
Outside Director



In the summer of the year before last, I retired from my post after 36 years and four months as a civil servant. I started working in 1982, before the Equal Employment Opportunity Act was established. There were almost no job openings at private-sector companies for women with four-year university degrees, so I set my hopes on civil service as a way to support myself. I joined the Ministry of Labour, one of the few ministries at the time that recruited women every year. I did not imagine that employment equality, principally the promotion of active participation in the workforce by women, would become my life's work. My aim was to help creating environments where people from different backgrounds and circumstances could fully utilize their abilities. This has now become an indispensable requirement for the formation of sustainable societies. I was also involved in labor standards inspection and employment security offices during six regional assignments. I was fortunate to gain valuable and unique experience in environmental administration, primarily involving the aquatic environment of Lake Biwa, and welfare for disabled persons in Shiga Prefecture, where I spent three years as vice governor.

My family had a tiny plastics-injection molding factory in Ikebukuro, Tokyo. I spent my childhood watching my father strive to differentiate his factory from competitors through precision work based on the accumulation of many small

innovations. I believe that the small-scale technologies and skills of townspeople such as these supported Japan's high economic growth. My final post as a civil servant was a director-general for human resources development. My job was to administer the development of human resources, primarily vocational training and trade-skill tests. For me, this felt like a return to my roots.

I now have the good fortune to be involved with JFE. I was profoundly impressed by the group's corporate vision of leveraging innovative technology to carry out the vital work of producing steel, the foundation of all economic activity. After retiring from my official post and gaining the opportunity to participate in private-sector companies as an outside officer, I have come to feel that while companies are completely different from public service in some ways, they have a lot in common in terms of organizational management and crisis response. I have joined the board of JFE in an extremely adverse business environment and I am humbled by the responsibility that I now bear. I will maintain my perspective as an outsider, leverage the knowledge and experience I have gained as an administrative official, and strive to the best of my ability to contribute to the sustainable growth of JFE.