

# The Environment Surrounding 2 JBIC and Its Challenges

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1 Energy and Natural Resources Finance Group .....	24
2 Infrastructure and Environment Finance Group .....	28
3 Industry Finance Group .....	32
4 Equity Finance Group .....	36



## ● Message from the Global Head of the Group



As Japan depends on overseas sources for most of its natural resources, the stable procurement of energy resources, such as oil and natural gas and mineral resources from overseas is indispensable in order to maintain and strengthen the stable lives of Japanese citizens and the country's industrial infrastructure. The Energy and Natural Resources Finance Group is responsible for promoting the development and acquisition of overseas natural resources which are essential for Japan.

In the global environment surrounding energy and natural resources, JBIC is facing important challenges such as: i) development of financing schemes to respond to the turning point in the liquefied natural gas (LNG) market, for example, by diversifying LNG pricing structures and contracts, ii) establishment of an energy value chain especially in Asia, and iii) securing of strategic natural resources to be used for innovation and of new energy sources to facilitate the transition to a low-carbon society.

JBIC focuses on creating an environment which enables the smooth implementation of projects through active engagement in dialogues with the governments of resource countries and major resource companies in the world. JBIC will continue to contribute to securing a stable supply of natural resources essential for Japan by providing long-term funds, while supplementing private-sector funds.

### Masaaki Yamada

Managing Executive Officer

Global Head of Energy and Natural Resources Finance Group

## Business Environment and Key Challenges

Global energy supply and demand balance is affected by macroeconomic trends and various other factors. In recent years, the global energy supply and demand balance has temporarily loosened due to increased shale oil production in the U.S. However, the OPEC's production cut agreement and regional conflicts have pushed oil prices higher, increasing uncertainty over energy supply in the world. On the other hand, energy demand in Asia continues to grow steadily. In particular, Indonesia—one of the leading oil and gas producers in Asia—is exporting less energy resources due to its increasing domestic demand for energy as a result of rapid economic growth. As demonstrated by this, demand for oil and natural gas is increasing across the entire Asian region. There is growing concern about global warming, as evidenced by the adoption of the Paris Agreement at the 21st annual session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change. Under this agreement on climate change, all participating countries are required to submit greenhouse gas reduction targets. Against this backdrop, there has been increased attention to the use of natural gas, which produces less CO<sub>2</sub> compared with other thermal power-generating fuels.

Over 80% of Japan's crude oil imports come from the Middle East and such imports remain highly exposed to geopolitical risks in the region. Therefore, from the perspective of Japan's energy security, it is important to diversify its crude oil procurement sources to areas other than the Middle East, while maintaining and strengthening

its relationship with oil-producing countries in the region.

The LNG market will continue to have an excess supply over the short and medium terms as the large-scale LNG projects, which have started in the U.S. and Australia, are expected to boost production of LNG. In contrast, on the demand side, China and India are increasing their imports of LNG, and other Asian countries are also moving to commence or increase LNG imports. In view of this, Japan is required to create its strategic initiatives which are aligned with global trends in LNG supply and demand, including the trends in Asia, in order to ensure Japan's medium- and long-term LNG supply security.

As for mineral resources, which are used for various purposes in Japanese industries, it is increasingly needed to secure a stable supply of the resources amid growing demand in emerging countries such as China and India and increasing new needs for the transition to a low-carbon society and next-generation industries. With regards to iron ore, along with securing the required quantities of iron ore, it is important to secure high-quality iron ore amid the deteriorating quality of that obtained from existing mines. Furthermore, it is an important challenge to mine high-quality copper ore under current worsening mining conditions such as the development of mining areas which are located in remote, high altitude ranges and deeper underground. While the global supply and demand balance in energy and mineral resources is changing, there is growing uncertainty about the environment surrounding energy supply such as intensifying trade frictions and

increasing geopolitical risks. Under such circumstances, in order to secure a stable supply of resources to Japan, it is highly necessary to support Japanese companies not only in acquiring interests in and long-term off-take

agreements of energy and mineral resources, but also in making additional investments including infrastructure for resource development, with aim of eliminating major bottlenecks in existing mine operations.

## JBIC's Activities

In FY2017, JBIC made the following efforts to secure a stable supply of energy and mineral resources from overseas.

### Oil and Natural Gas

The Japanese government set a goal of increasing its self-development ratio of oil and natural gas to 40% or more by 2030 in the Basic Energy Plan approved by the Cabinet on July 3, 2018. To this end, JBIC is providing financial support for securing Japan's stable energy supply.

For example, in the Emirate of Abu Dhabi (Abu Dhabi), the United Arab Emirates (UAE), which is a vital country in Japan's resource strategy, JBIC provided a loan to finance necessary funds for the acquisition of interests in onshore oilfields by a Japanese company. These oilfields, in which the Japanese company acquired a 40-year concession (5% participating interest) in April 2015, produce about 1.6 million barrels a day, making it one of the world's largest oilfields. Additionally, JBIC agreed to provide a credit facility to Abu Dhabi National Oil Company (ADNOC), with the aim of providing support for a Japanese company with plans to renew existing concessions in offshore oilfields in the UAE that were scheduled to expire in March 2018. This facility is cofinanced by private-sector banks, bringing the total cofinancing amount to \$3 billion. In addition to international major oil companies, Chinese and Indian companies were also interested in this renewal of concessions, which intensify global competition to secure concessions. Thanks to collaborative public-private resource diplomacy including financing from JBIC, Japanese company INPEX CORPORATION successfully renewed existing concessions and acquired additional concessions in the oilfield in Abu Dhabi.

Turning to the LNG field, at the LNG Producer-Consumer Conference, which is held annually to bring together both LNG producers and consumers, JBIC gave a presentation to LNG consumers in Asia about the following three main points regarding the establishment of a natural gas and LNG value chain in Asia. These points consisted of "L: Logistics: provide financing for logistics development

and raise bankability in cooperation with private-sector financial institutions and international organizations"; "N: New Entrants: promote the participation of new LNG consumers in LNG projects under JBIC's Special Operations which enables it to assume risk in projects with relatively high risk profiles"; and "G: Government Policy and Commitment: support governments of countries planning to use LNG." During the conference, JBIC also expressed its intention to utilize the knowledge and experience gained through its activities in the area of resources and infrastructure development.

### Mineral Resources

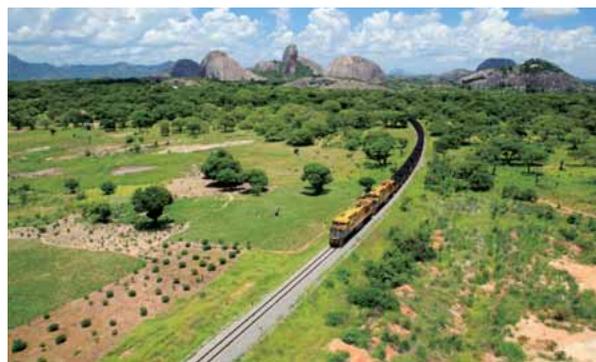
The Japanese government formulated the Strategy for Securing Natural Resources in June 2012 based on the Guidelines for Securing Natural Resources (approved by the Cabinet on March 28, 2008). This strategy aims to make strategic efforts to secure mineral resources by maximizing the use of public-private resources based on the recognition that securing the stable supply of low-cost mineral resources is necessary for Japan's high added-value and sophisticated manufacturing technology that is expected to create national wealth.

JBIC provided project finance for construction and maintenance of the Nacala railway and port infrastructure in Mozambique and Malawi as the project is expected to contribute to the diversification of the supply of coking coal needed for the production of steel. This project finance will support this natural resource infrastructure project undertaken by a Japanese company and Vale S.A. (VALE), a Brazilian major resource company. The aim of this project is to secure a stable supply of high-quality coking coal produced at the Moatize coal mine in Mozambique. This is JBIC's largest-ever financial commitment to Africa.

Furthermore, JBIC provided a loan for the Escondida copper mine expansion project in Chile to maintain the production of high-quality copper concentrate at the Escondida copper mine, where Japanese companies hold interests. Copper is required in Japanese industries because it can be used for various products including



Signing ceremony with ADNOC



Mozambique/Malawi Nacala railway and port infrastructure project (provided by Vale S.A.)

electric cables and automobile equipment. Meanwhile, on a global basis, the number of projects for the development of new high-quality copper mines is decreasing and the quality of copper extracted from existing mines is further deteriorating. Under such circumstances, JBIC's financing to expanding the Escondida copper mine, the world's largest copper mine, will help Japan to secure its long-term, stable supply of copper concentrate.

JBIC also provided a loan to finance the zinc and silver mine development project called Los Gatos in Mexico undertaken by DOWA METALS & MINING CO., LTD. This loan is intended to provide finance for securing a long-term, stable supply of zinc and silver, which are important metallic resources for Japan. Zinc is used for various purposes, including corrosion-resistant galvanization of automobile steel sheets, construction materials, and household electric appliances, as well as for corrosion-resistant parts of ships and bridges.



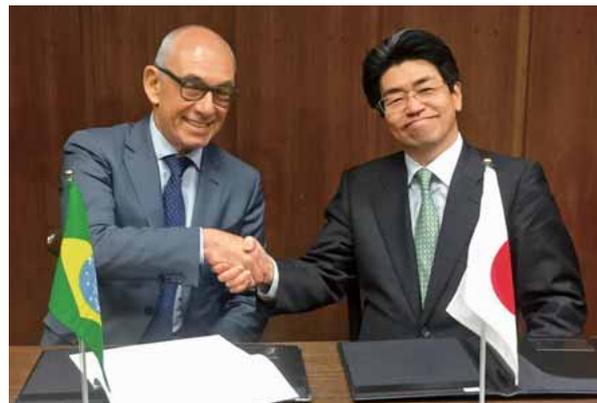
Escondida copper mine expansion project in Chile (provided by Minera Escondida Limitada)

### ■ Strengthening Ties with Resource Countries and Major Global Resource Companies

JBIC continues to hold consultations and dialogues with the governments and agencies of resource countries as well as with major global resource companies in order to encourage Japanese companies to acquire interests in and develop resources in those countries.

As one of its efforts to strengthen bilateral ties with important resource countries for Japan, JBIC signed memoranda of understanding (MOUs) with the governmental institutions of Russia and Russian oil and gas companies in an effort to support the initiatives for the "eight-point cooperation plan"<sup>1</sup> proposed by Japanese Prime Minister Shinzo Abe to Russian President Vladimir Putin during the Japan-Russia Summit in May 2016. The purpose of these MOUs is to reinforce the relationships with the Russian government and companies, with a view to creating future projects which are expected to accelerate business between Japan and Russia.

Regarding financing to ADNOC which is mentioned earlier, JBIC and ADNOC signed an MOU for business cooperation prior to concluding a loan agreement. This MOU aims at strengthening the strategic cooperation between Japan and Abu Dhabi. Under the MOU, JBIC and ADNOC have built a mutual understanding of the significance of expanding such cooperation to projects in the midstream and downstream oil sector. Abu Dhabi shows its interest in adding value to products and services in the oil sector. Through dialogue with the Abu Dhabi government, JBIC also engaged in discussions about the possibility of participating in high-quality infrastructure



Signing of MOU for business cooperation with Vale S.A.

projects, which is Japan's strength, in sectors other than natural resources and energy, with the intention of further enhancing its relationship between Japan and Abu Dhabi.

In Argentina, JBIC provided a buyer's credit to finance the purchase of a set of railway signal systems from Japanese companies in order for State Company of Administration of Railway Infrastructure (Administración de Infraestructuras Ferroviarias Sociedad del Estado) to carry out the installation of automatic railway stop systems for eight Buenos Aires suburban rail lines. In the future, Argentina is expected to make large-scale investments in the resource and infrastructure sectors. Furthermore, this financing from JBIC was mentioned at the Japan-Argentina Summit Meeting held in May 2017, which is expected to further enhance the relationship between the two countries.

JBIC signed an MOU for business cooperation with VALE, a Brazilian company, in April 2018. VALE is a world-leading supplier of mineral resources such as high-quality iron ore, nickel, and cobalt. VALE has also established excellent and long-standing business relationships with Japanese companies. JBIC has so far provided several loans for projects involving VALE, including the previously mentioned Nacala railway and port infrastructure project in Africa. JBIC has regular discussions with VALE to exchange opinions about their projects. VALE continues to develop iron ore and non-ferrous metal mines, and promotes business in the field of infrastructure development in the mineral resources and rail freight transportation sectors. In light of such continued development, Japanese companies are expected to expand and diversify opportunities to collaborate with VALE in those business areas. With the signing of this MOU, JBIC will further develop a closer relationship and alliance with VALE. Furthermore, JBIC will contribute to a stable supply of mineral resources to Japan, as well as create opportunities for Japanese companies to make overseas investments or export infrastructure from Japan.

1. This is a bilateral economic cooperation plan between Japan and Russia, aimed at: (1) extending healthy life expectancies, (2) developing comfortable and clean cities easy to reside and live in, (3) fundamentally expanding medium-sized and small companies exchange and cooperation, (4) energy, (5) promoting industrial diversification and enhancing productivity in Russia, (6) developing industries and export bases in the Far East, (7) cooperation on cutting-edge technologies, and (8) fundamentally expanding people-to-people interaction.

## ■ Future Business Strategy

In the natural resources sector, which is approaching a turning point, there is concern about a tightening supply and demand balance of resources in the medium to long term. As resource countries are faced with national financial difficulties, they expect foreign companies to make investment in resources. On the other hand, there is rising uncertainty such as an increase in geopolitical risk. Under these circumstances, capitalizing on its status as Japan's policy-based financial institution, JBIC will contribute to the stable supply of natural resources by proactively supporting Japanese companies which plan to acquire interests in and develop resources overseas.

### Structuring Financing Schemes to Respond to the Changing LNG Market

Global supply and demand balance of LNG is forecast to remain loosened for the time being. Also, there is uncertainty over the outlook for LNG demand due to the mix of energy sources in the future and the deregulation of electricity and gas markets. In light of these situations, Japanese electric power and gas companies are seeking flexibility in the process to secure the supply of LNG and also liquidity in the LNG market, such as by diversifying LNG supply sources and the pricing structures, as well as by removing destination clauses from LNG contracts.

Under these conditions, the Japanese government released the Strategy for LNG Market Development in May 2016, highlighting the creation of the LNG market with high liquidity. The Basic Energy Plan approved by the Cabinet on July 3, 2018 also emphasizes the continuing effort to create high liquidity in the LNG market. Against these backdrops, Japan's electric power and gas companies have started new businesses to spur LNG demand in Asian countries. JBIC will consider providing financial support to not only upstream investments and LNG projects by Japanese companies, but also their new businesses to boost LNG demand in Asia.

### Building an Energy Value Chain and Securing New Resources and Energy Sources

To promote resource projects in response to the new market environment, it is important to make investment in growth areas and new fields. In particular, JBIC will support infrastructure development projects, including construction of Gas-to-Power and LNG terminals in order to ensure energy security mainly for the entire Asian region. In addition to conventional resources such as oil,

natural gas, and mineral resources, JBIC will also support the activities of Japanese companies for securing strategic natural resources to be used for innovation, as well as new energy sources to transform into a low-carbon society. Looking ahead, the Fourth Industrial Revolution driven by robotics and AI, as well as innovation derived from next-generation vehicles, are expected to spur a realignment of the global manufacturing industry and a transformation of the industrial structure. Under such circumstances, JBIC will consider financing projects which can increase productivity through the use of cloud services for data and automated in mining operations, or which can secure new strategic resources to support innovation.

### Strengthening Strategies on Economic Frontiers

To diversify resource supply sources, JBIC will proactively provide financial support to natural resource development projects particularly in Africa, with the participation of Japanese companies, which is viewed as "The Last Frontier" for foreign exploration as the region is expected to be a source of extraction of oil, natural gas, and minerals, while there are countries which have started investing in resource development projects in Africa. Resource development projects in Africa play an important role not only in contributing to job creation and acquisition of foreign currencies in African countries where those projects are implemented, but also in advancing the initiatives to promote infrastructure and industrial development in Africa, to which the Japanese government expressed its commitment at the 6th Tokyo International Conference on African Development (TICAD VI). In light of the discussions at TICAD VI, JBIC will support resource projects in Africa by proactively assuming risk in projects as well as in collaboration with international organizations and third countries.

The key to strengthening the relationship with resource countries lies not only in the cooperation in resource development projects, but also in the establishment of comprehensive and sustained cooperative relationships that meet the needs of these countries in various fields, including infrastructure development, industrial advances, employment creation, technology transfer, and reduced environmental burden through the use of renewable energy and energy saving. JBIC will maintain and strengthen the multi-layered and positive relationships with the governments of resource countries through its comprehensive efforts to support projects in the areas of infrastructure development and manufacturing in the resource countries.



TICAD VI (Provided by Cabinet Public Relations Office, Cabinet Secretariat)

# 2 Infrastructure and Environment Finance Group

## ● Message from the Global Head of the Group



There is still a significant gap between global supply and demand in infrastructure investment. In order to reduce the gap in global infrastructure investment, it is essential to provide a stable and efficient supply of long-term funds. To this end, JBIC strives to proactively offer long-term financing to infrastructure projects, while further mobilizing private-sector funds. It is expected to develop high-quality projects, especially in a public-private partnership (PPP) framework, that attract private-sector investors to participate. JBIC will make efforts to be involved in such projects from the early stage of the project development process in cooperation with the governments of countries where those projects will be implemented, as well as public financial institutions around the world.

Under its Third Medium-term Business Plan (FY2018–2020), JBIC will further strengthen its efforts in the area of infrastructure development, focusing particularly on support for projects to establish social infrastructure and an energy value chain such as Gas to Power, as well as to help protect the global environment such as low-carbon infrastructure. Regionally, JBIC will proactively work toward formulating projects in frontier countries, such as in Africa.

### Kazuhisa Yumikura

Managing Executive Officer

Global Head of Infrastructure and Environment Finance Group

## Business Environment and Key Challenges

### ■ Toward Enhancing International Competitiveness of Japanese Companies

Having formulated existing policies aimed at promoting quality infrastructure, the Japanese government announced in May 2016 an additional initiative called the “Expanded Partnership for Quality Infrastructure” ahead of the G7 Ise-Shima Summit meeting. The G7 leaders expressed, in the G7 Ise-Shima Leaders’ Declaration, their agreement to align infrastructure investment with the G7 Ise-Shima Principles for Promoting Quality Infrastructure Investment (see table below). Also, at the 51st Asian Development Bank (ADB) Annual Meeting, Japanese Deputy Prime Minister and Finance Minister Taro Aso announced the government’s intention to support various infrastructure projects that contribute to global environmental protection, including

renewable energy projects, amid increasing environmental, social, and governance (ESG) investment across the world.

In line with these Japanese government policies, JBIC will continue its efforts to maintain and increase the international competitiveness of Japanese companies by promoting the export of high-quality infrastructure contributing to global environmental protection backed by Japan’s advanced technology. Furthermore, JBIC will strive to address the challenges, as discussed more in detail below, in supporting Japanese companies to find more opportunities to invest in overseas infrastructure business and to participate in infrastructure development projects amid increasingly fierce international competition in the infrastructure field.

#### G7 Ise-Shima Principles for Promoting Quality Infrastructure Investment

Principle 1: Ensuring effective governance, reliable operation and economic efficiency in view of life-cycle cost as well as safety and resilience against natural disaster, terrorism and cyber-attack risks

Principle 2: Ensuring job creation, capacity building and transfer of expertise and know-how for local communities

Principle 3: Addressing social and environmental impacts

Principle 4: Ensuring alignment with economic and development strategies including aspect of climate change and environment at the national and regional levels

Principle 5: Enhancing effective resource mobilization including through PPP

Source: Prepared by JBIC based on MOFA’s G7 Ise-Shima Principles for Promoting Quality Infrastructure Investment

### (1) Responding to various risks

Infrastructure projects are considered to be exposed to various risks as the projects are, in general, large in size and also require a long time span from the planning and bidding phases of the project to construction and the recovery of invested funds. For example, if the counter party risk of the national or local governments of developing countries with low credit ratings is high due to the risk of failure to perform their contractual obligations, or if the future demand or sales of products or services to be delivered by the infrastructure operators are uncertain, the investment appetite of parties who are interested in the project might decline, or long-term funds enough to implement the project might not be available from financial institutions. Profits generated by infrastructure projects are, in principle, denominated in local currencies. On the other hand, while there is a need especially by developing countries to import leading-edge technologies and management know-how from overseas, those developing countries might need to depend on private-sector funds from overseas sources in foreign currencies due to the immature domestic financial systems. Given these situations, it is also important to find a solution to how currency risks are shared among parties involved in infrastructure projects, including the governments of projects' host countries.

### (2) Promoting to develop bankable projects<sup>1</sup>

When it comes to the development of public-private collaboration such as PPP projects and the Build-Operate-Transfer (BOT) model, especially in developing countries, there are cases where risks associated with those PPP projects might not be properly assessed and shared among project participants, including the government of a project's host country. This results in private-sector participants being exposed to excessive risk. This situation occurs due to: i) a lack of integrity and clarity in the legal system in the project's host country, ii) a lack of ability and experience in the government agencies or organizations of the project's host country to organize a PPP project, or iii) an absence of proper feasibility studies on the project. Under these circumstances, PPP projects face difficulty in obtaining investment from the private sector, and those projects do not progress in the way the host country's government expects. It is pointed out that it is important to share risks among all parties involved in PPP projects in a way that enables them to manage and control those risks on their own.

### (3) Mobilizing a wide range of private-sector funds

Global demand for infrastructure is expected to continue growing at a faster pace than actual investments amid

economic and population growth and rapid urbanization, especially in emerging countries. To reduce the global demand-supply gap in infrastructure investment, it is indispensable not only to address the above-mentioned challenges, but also to mobilize a wide range of private-sector funds, such as from life insurance companies, pension funds, or investment funds. This is because financing by Multilateral Development Banks (MDBs) and public financial institutions alone in each country such as JBIC is not sufficient to meet the global demand for infrastructure investment in terms of quantity.

### ■ Commitment to Low-Carbonization and Protecting the Global Environment

Economic development while protecting the global environment is now recognized as an international common issue, as highlighted by the adoption of the Paris Agreement in 2015. Against this backdrop, there is a global hope for implementation of projects that will contribute to protecting and improving the global environment. In this area, JBIC provides support to environment projects through its operations called "Global action for Reconciling Economic growth and ENvironmental preservation (GREEN)" (refer to page 57 for details). JBIC has established these GREEN operations in line with "Actions for Cool Earth: ACE 2.0," an initiative announced by the Japanese government in November 2015, aimed at supporting action in developing countries and the advancement of innovative technologies to address climate change. Following the announcement by Japanese Deputy Prime Minister and Finance Minister Taro Aso at the ADB Annual Meeting, JBIC launched its new global financing facility called "Global Facility to Promote Quality Infrastructure Investment for Environmental Preservation and Sustainable Growth (QI-ESG)" in July 2018. The aim of this facility is to provide a wide range of financing support for infrastructure development which is expected to help to preserve the global environment by utilizing the knowledge and technologies of Japanese companies.

Under these operations, JBIC will contribute to promote economic growth in developing countries and tackle various global environmental issues that affect the global economy by implementing measures for greenhouse gas reduction and climate change.

1. Projects in which the feasibility, economic performance, and the risk burden of involved parties in the relevant project have been confirmed and assured, and the project participation of private-sector companies and long-term funding by financial institutions can be expected

## JBIC's Activities

### ■ Toward Enhancing International Competitiveness of Japanese Companies

In FY2017, the Infrastructure and Environment Finance Group approved nine financial commitments particularly in the field of electric power, totaling ¥209.0 billion. JBIC provided its first project finance for a solar power generation project in India. Additionally, JBIC provided project finance

for an onshore wind power generation project in Egypt, which is also JBIC's first project finance for a wind power generation project in Africa. In Indonesia, JBIC financed a geothermal power project, the third geothermal project in the country funded by JBIC.

In regards to international competitive bidding on investment projects, JBIC supported Japanese companies

in bidding for the projects and acquiring operation rights in the projects. During business negotiations with related parties not only in Asia, but also in the Middle East and North Africa, JBIC explained its capability to assume risk in projects and its various financial instruments for structuring projects.

Our activities to address the three key challenges mentioned earlier are as follows.

**(1) Responding to various risks**

As part of efforts to strengthen risk-taking capabilities, JBIC established its new financing operation called the “Special Operations” in accordance with the enactment of the Amendment Act of the JBIC Act in May 2016. This enabled JBIC to take further risk in projects in foreign countries. The scope of sectors in developed countries which are eligible for financing from JBIC has also been expanded through amendment of the cabinet order.

JBIC is also promoting consultations with local governments and companies in order to coordinate risk sharing in various projects. JBIC intends to proactively draw on its financial tools, such as acquisition of project bonds and Islamic finance, that have become diverse through the implementation of the Amendment Act of the JBIC Act.

**(2) Promoting the formulation of bankable projects**

JBIC works toward the formulation of bankable projects through policy dialogues, consultations, and negotiations with the projects’ host country governments, their related parties, and project operators, and also through collaboration with MDBs.

In the policy dialogues, JBIC discusses various aspects, including: i) the macroeconomic conditions and investment environment, and financial systems in projects’ host countries, which are crucial for the stable operations of infrastructure projects, and ii) regulations for infrastructure business, PPP schemes, and project formulation in infrastructure development in key sectors and major identified issues. In addition to regular discussions with

the governments of Indonesia, Mexico, and Vietnam, JBIC responds to individual business negotiations and engages in discussions with a variety of countries considering various aspects such as the host country’s legal system and risk sharing of involved parties for business concession contracts.

Furthermore, JBIC utilizes the knowledge of outside experts in implementing feasibility studies which are essential for realizing individual projects that will help maintain and improve the international competitiveness of Japanese industry.

In addition, JBIC cooperates with MDBs for promoting the formulation of bankable projects by participating as an Advisory Partner in the Global Infrastructure Facility (GIF)<sup>2</sup> led by the World Bank and joining the Business 20<sup>3</sup> task force for the infrastructure field.

**(3) Mobilizing a wide range of private-sector funds**

JBIC makes various efforts to execute its functions as a catalyst for further mobilizing private sector finance.

In FY2017, JBIC acquired part of privately placed Samurai bonds issued by the government of Turkey under JBIC’s financing facility called “Guarantee and Acquisition toward Tokyo market Enhancement (GATE).” JBIC’s support for the issuance of Samurai bonds in the Tokyo market helped provide broader investment opportunities for Japanese investors.

JBIC provides guarantees to private-sector financial institutions which support infrastructure projects in the form of cofinancing with JBIC, depending on the requirements of individual projects. For example, JBIC encourages private-sector financial institutions to participate in long-term financing, by providing risk guarantees to projects where the private-sector financial institutions might face high political and counterparty risk of host country governments and their agencies.

JBIC also holds seminars about project finance and GREEN projects for Japanese regional banks and life insurance companies. In recent years, JBIC has been



Scenes from the policy dialogue with the government of Indonesia

expanding the base of financial institutions which intend to offer financing in collaboration with JBIC. JBIC also promotes credit securitization of its loan portfolio with the aim of mobilizing private sector finance.

### ■ Commitment to Protecting the Global Environment

Under the GREEN operations, JBIC provides financing to environmental projects, in the form of loans, equity participations, and guarantees, while mobilizing private-sector funds. The environmental projects in which JBIC considers participating include: i) projects for solar power plants and energy-efficient power plants that utilize advanced environmental technologies, and ii) projects that ensure significant environmental preservation effects by introducing energy-efficient equipment. JBIC has so far made 31 financial commitments<sup>4</sup> particularly for projects aimed at renewable energy and energy efficiency.

Going forward, under its new global financing facility for QI-ESG established in July 2018, JBIC will also promote the use of the advanced environmental technologies of Japanese companies while supporting projects that will help protect the global environment.



Geothermal power project in Iceland in which Japanese companies are participating

2. A platform set up and led by the World Bank Group aimed at the formulation of infrastructure projects utilizing PPPs  
 3. Business 20 (B20) is the official G20 dialogue with the global business community.  
 4. As of March 2018

# 3 Industry Finance Group

## ● Message from the Global Head of the Group



The Industry Finance Group (the Group) is composed of four departments and offices namely the Corporate Finance Department, Finance Office for SMEs, Marine and Aerospace Finance Department, and West Japan Office. The Group makes efforts to maintain and increase the international competitiveness of Japanese industries by capitalizing on various financial instruments for financing projects overseas.

Foreign investment by Japanese companies continues to remain stable. In FY2017, the Group made 102 financial commitments in loans, equity participations, and guarantees, amounting to ¥468.1 billion.

Under JBIC's Third Medium-term Business Plan (FY2018–2020) commenced in FY2018, the Group will strive to support Japanese companies including mid-tier enterprises and SMEs in expanding overseas, and to maintain and increase the international competitiveness of Japanese industries through its efforts to: i) take strategic action to promote innovation, ii) support Japanese companies in expanding into frontier markets, iii) support overseas M&As, and iv) enhance its risk-taking capability for financing various projects.

**Kazuhiko Tanaka**

Managing Executive Officer  
Global Head of Industry Finance Group

## Business Environment and Key Challenges

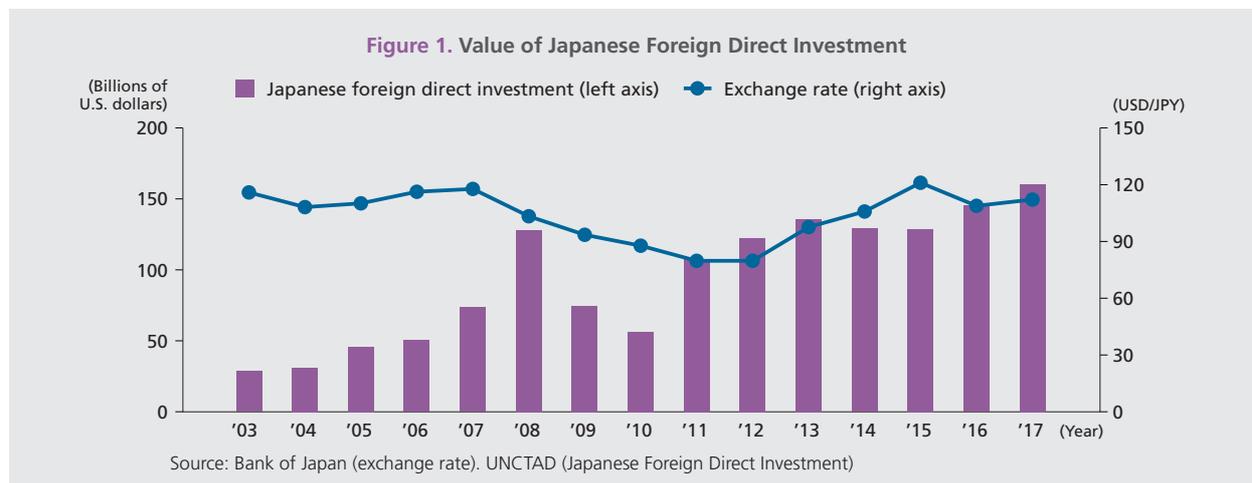
### ■ Overseas Business Deployment of Diverse Industries

Despite the slowdown sparked by the global financial crisis in 2008, foreign direct investment by Japanese companies returned to growth at a level exceeding \$100 billion in 2011 thanks in part to a rapidly appreciating yen. Subsequently, the yen depreciated but foreign direct investment by Japanese companies remained stable, reaching \$160.4 billion in 2017 (Figure 1).

Amid favorable growth in foreign direct investment by Japanese companies, it should be particularly noted that foreign direct investment by non-manufacturers has been on an upward trend in recent years, while the growth in

investment by manufacturers has remained flat (Figure 2). Moreover, it has recently been observed that Japanese companies moved to expand business to the industries in which overseas investment has not been made so far, such as the healthcare services industry, which is the key focus area in the Japanese government's Future Investment Strategy 2018 (Cabinet decision in June, 2018).

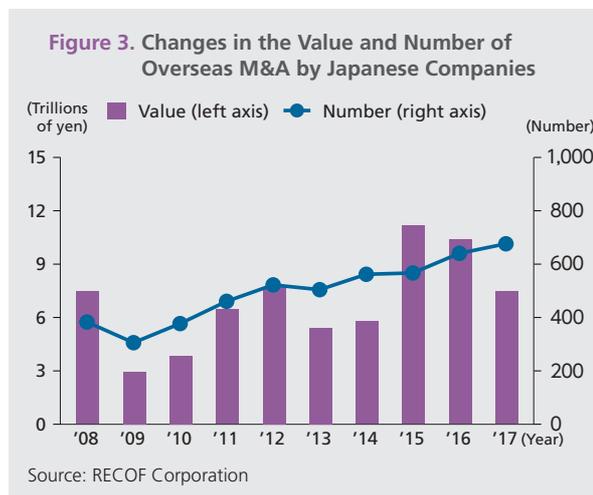
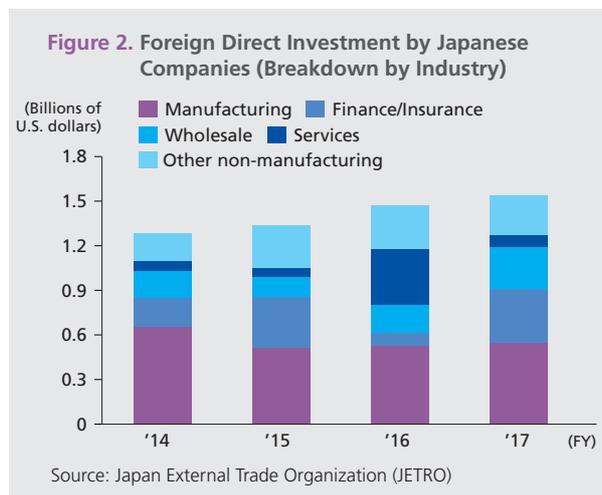
Looking at overseas M&A activities by Japanese companies, the value of M&A deals declined in 2017, falling below ¥8 trillion, compared with the levels of 2015 and 2016 when values exceeded ¥10 trillion on the back of large-scale M&A transactions. On the other hand, the number of M&A deals continues to grow steadily,



increasing from 636 in 2016 to 672 in 2017 (Figure 3). This suggests that Japanese companies emphasize overseas M&A activities as their important business strategy for acquiring new markets replacing the shrinking domestic market and for expanding the scale of their business to prevail in global competition.

In order to put the Japanese economy back on a

growth trajectory amid structural issues such as a shrinking population and an aging society with a falling birthrate and to create a much more affluent society, it is indispensable to increase the productivity of the entire economy and strengthen earning power. To this end, it is increasingly necessary to proactively encourage Japanese companies to enter overseas markets for new businesses.

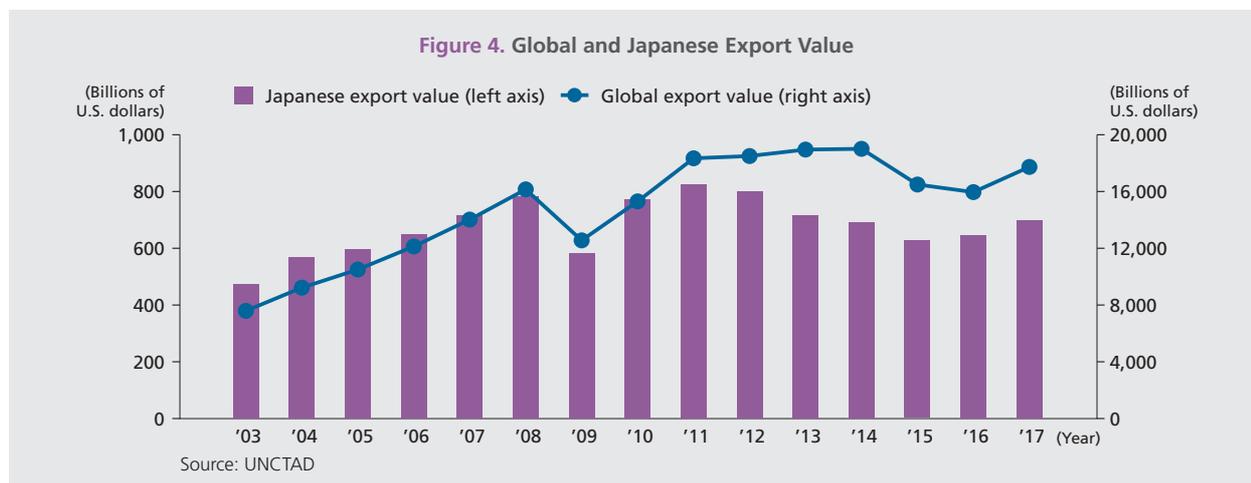


**Value of Japan's Exports in a Recovery Trend**

Although the value of global export transactions declined in 2015 and 2016, reflecting stagnant demand in emerging markets and weak natural resource prices, global export transactions in 2017 rebounded to \$17.7 trillion, up from \$16.0 trillion in 2016, marking the first year-on-year increase in three years. This increase was due in part to economic expansions driven by monetary easing policies in developed countries. The value of Japan's export transactions declined from 2012 to 2015 despite the progressing yen depreciation. This is because the establishment of local production systems by Japanese companies and the development of their own supply chain systems abroad placed downward pressure on export growth. Nonetheless, Japan's export transactions recovered to \$644.9 billion in 2016 thanks to increased demand for automobile-related goods in developed countries and for information-related products in Asian emerging countries.

The value of exports in 2017 remained stable, rising 8.3% year-on-year to \$698.1 billion (Figure 4).

On the other hand, Asian emerging countries particularly China increased their global export share while that of Japanese industries declined. Amid growing diversification of Japanese companies' sales destinations, evaluation of creditworthiness of importers in foreign countries and uncertainties about their business transactions are becoming major concerns for Japanese companies which plan to expand into overseas markets. To ensure that Japanese companies can cope with increasing business risk in an appropriate manner, JBIC is increasingly required to participate in projects from the early project stage and to supply funding for projects with relatively high risk profiles by capitalizing on its diverse financial instruments.



### ■ Overseas Business Deployment of Mid-tier Enterprises and SMEs

Mid-tier enterprises and SMEs are accelerating their move to expand business opportunities by capturing demand in overseas markets in addition to responding to local procurement needs of major Japanese companies. According to the *Survey Report on Overseas Business Operations by Japanese Manufacturing Companies*, implemented by JBIC annually as a survey of medium-term prospects for overseas operations, a majority of mid-tier enterprises and SMEs continued to respond that they will “strengthen/expand” their overseas business operations. This suggests they continue to have a strong desire to roll out overseas operations (Figure 5). By region, a high proportion of responses indicated they will “strengthen/expand” business in the Mekong region countries excluding Thailand (refer to the frontier countries defined in JBIC’s Third Medium-term Business Plan (FY2018–2020)<sup>1)</sup>, due to the growth potential of local markets and a low-cost workforce (Figure 6).

Diversification has been seen in the fields of business invested by Japanese mid-tier enterprises and SMEs, their investment destinations, and funding needs. Meanwhile, compared with larger companies, the mid-tier enterprises and SMEs might face greater constraints on various

fronts, such as fund procurement and the collection of information about overseas investment. Due to this, it is important to provide detailed support to those companies.

1. The frontier countries in the Mekong region which are used in JBIC’s Third Medium-term Business Plan (FY2018–2020) refer to the following four countries: Laos, Cambodia, Myanmar, and Vietnam.

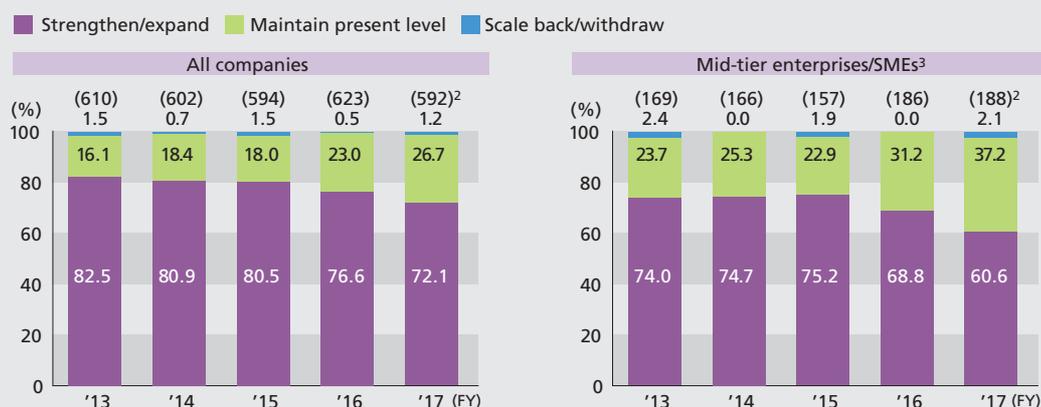
**Figure 6.**  
Business Prospects (in the Mekong Region) of Mid-tier Enterprises and SMEs (in the manufacturing sector)  
Proportion of response indicating “strengthen/expand” overseas business

	Mid-tier enterprises and SMEs
Laos (4)	75.0%
Cambodia (11)	81.8%
Myanmar (13)	84.6%
Vietnam (45)	77.8%

Note: FY2017 response rate. The numbers in parentheses on the right side of country names are the number of mid-tier enterprises and SMEs which responded to the question.

Source: Results of the JBIC FY2017 Survey Report on Overseas Business Operations by Japanese Manufacturing Companies

**Figure 5. Medium-term Prospects (Next Three Years, or So) for Overseas Operations<sup>1</sup>**



Notes 1. “Overseas Operations” is defined as production, sales, and R&D activities at overseas bases, as well as the outsourcing of manufacturing and procurement overseas.

2. The numbers in the parentheses above the bar graphs indicate the numbers of responses.

3. Mid-tier enterprises/SMEs are companies whose paid-in capital is less than ¥1 billion.

Source: Results of the JBIC FY2017 Survey Report on Overseas Business Operations by Japanese Manufacturing Companies

## JBIC’s Activities

### ■ Supporting Overseas Business Expansion Using Various Financial Instruments

JBIC worked to support the overseas business deployment of Japanese companies by providing long-term funding for overseas M&A activities, overseas infrastructure, and natural resource-related sectors. Led by the Industry Finance Group, JBIC continues to provide support for meeting the high needs for overseas M&A. JBIC provides a flexible form of long-term funding required for the M&A activities of Japanese companies in various fields, including the financial, automotive parts, precision equipment parts, real estate, apparel, mining machinery, and food industries.

This funding is provided through direct financing from JBIC or indirect financing (two-step loans (TSLs)) utilizing M&A credit lines (credit facilities) established with Japanese private financial institutions. In FY2017, JBIC approved financial commitments totaling ¥361.1 billion for overseas M&A transactions. In addition to this, JBIC provided support through project finance for long-term FPSO (floating production, storage, and offloading) vessel chartering services for developing an offshore oilfield. This also helped strengthen the international competitiveness of Japanese companies in offshore resource development.

As an effort to assist Japanese companies in



FPSO project

infrastructure export, which is also promoted by the Japanese government's Future Investment Strategy 2017 and the Healthcare Policy, JBIC provided project finance and a political risk guarantee for the largest hospital

project in Turkey involving a Japanese trading company. In this project, JBIC took the lead in structuring a project on a Public-Private Partnership (PPP) basis by engaging in numerous discussions and negotiations with the government of Turkey and making proposals for financial instruments.

JBIC also supported Japanese companies in acquiring local currencies through loans denominated in Russian rubles and Indian rupees.



Hospital PPP project in Turkey

### ■ Supporting Ship Exports of Japanese Companies

JBIC actively supported the ship exports of Japanese companies. The shipbuilding industry, which situates its main shipyards in Japan, plays a significant role in creating business for regional economies and mid-tier enterprises and SMEs, including industries related to the manufacturing of materials and components for ships. In supporting ship exports, JBIC provides funds usually through a buyer's credit on a corporate finance basis depending on the creditworthiness of a foreign importer of the ship built by a Japanese company. On the other hand, JBIC supported the Japanese shipbuilding industry by assuming risk that varies according to the creditworthiness of a foreign importer. This financial support includes the first project finance for a bulk carrier and a bank loan via a local financial institution.

### ■ Supporting Overseas Business Deployment of Mid-tier Enterprises and SMEs

Since FY2012, JBIC has enhanced its capability to support Japanese mid-tier enterprises and SMEs in expanding abroad through business units dedicated to this purpose at its Head Office and West Japan Office. In FY2017, the number of financial commitments to mid-tier enterprises and SMEs totaled 74. By region, 42 commitments were made to the Mekong region, where mid-tier enterprises and SMEs indicate they will expand operations as cited in JBIC's annual survey of medium-term prospects for overseas operations. Commitments to the Mekong region accounted for more than half of total commitments to the regions invested by mid-tier enterprises and SMEs, reflecting their willingness to expand into the region.

To facilitate the support of mid-tier enterprises and SMEs, JBIC has strengthened cooperation with Japanese regional financial institutions and overseas subsidiaries of lease companies by establishing investment credit lines through private financial institutions. In addition to seamless funding in the form of loans denominated in hard currencies (U.S. dollars and Euros), JBIC responded to the local currency needs of overseas subsidiaries of mid-

tier enterprises and SMEs by providing loans denominated in local currencies such as the Mexican peso and Thai baht.

Besides support in raising funds, JBIC held the High-level Workshop on International Finance for Regional Financial Institutions in April 2017, inviting the presidents and executive officers of over 60 regional financial institutions. The Workshop was organized with the aim of further enhancing mutual cooperative relationships between Japanese regional financial institutions and JBIC. Additional efforts to support mid-tier enterprises and SMEs included holding meetings for exchanging views to strengthen collaboration between: i) governments and local financial institutions of developing countries with which JBIC signed memoranda of understanding (MOUs) to support the overseas advancement of mid-tier enterprises and SMEs and ii) Japanese regional financial institutions participating in the MOUs. JBIC encouraged mid-tier enterprises and SMEs to expand their sales channels by utilizing its broad network of contacts around the world, for example, providing business matching opportunities to automotive parts manufacturers and overseas automotive parts suppliers in cooperation with Japanese regional financial institutions and foreign embassies in Japan.



JBIC held business matchings for mid-tier enterprises and SMEs.

### ■ Meeting the Needs of Japanese Companies

The international economic conditions surrounding Japan, such as political conditions in each country and economic trends in emerging countries, are constantly changing. JBIC continues to provide support to maintain and increase the international competitiveness of Japanese industries, while considering the directions of Japanese government's policies.

JBIC offers various financing instruments such as project finance, subordinated loans, and loans denominated in local currencies.

Capitalizing on these financial instruments, the Industry Finance Group will provide further support to Japanese companies which plan to expand overseas. On top of this, the Group will strive to explore and create new business opportunities that can lead to Japan's sustainable growth particularly in growth areas and new fields, as defined by JBIC's Third Medium-term Business Plan (FY2018–2020), and will continue to play a role in connecting Japan to the world by enhancing its risk-taking capability for financing various projects and responding to the needs of customers in a timely and accurate manner.

# 4 Equity Finance Group

## ● Message from the Global Head of the Group



FY2017 was the first full year of operations for the Equity Finance Group since its establishment in October 2016. One of the growth strategies of the Japanese government aims to benefit from overseas growth markets. To achieve the government's growth strategy, it is becoming increasingly significant to supply funding through strengthening risk-taking capability. For this purpose, JBIC enhanced the JBIC Group's capability in the area of equity financing, for example, by establishing JBIC IG Partners (JBIC IG) to provide advisory services regarding overseas investment funds. The first investment fund where JBIC IG provides investment advisory services was established in September 2017. JBIC also financed overseas M&A by a Japanese company in the form of an equity participation. As demonstrated by this, FY2017 was a year in which the Equity Finance Group built the foundations for supporting Japanese companies in expanding overseas by utilizing its various financial methods. Under its Third Medium-term Business Plan (FY2018–FY2020), JBIC will continue to provide proactive support to Japanese companies which plan to expand their business to overseas markets, while considering new trends in Japanese industries such as the adoption of innovation and creation of new businesses.

### Shinji Fujino

Managing Executive Officer  
Global Head of Equity Finance Group

## Business Environment and Key Challenges

### ■ Overseas M&A and Technology Innovation

JBIC has encouraged Japanese companies to expand their business overseas by supplying funding under its equity financing operations. Through these operations, JBIC strives to help Japanese companies further expand their business activities to overseas countries and enable Japan to benefit from the growth potential of the global economy.

For Japan, which is facing structural problems such as a declining birthrate, an aging population, and a shrinking labor force, it is increasingly important to acquire rapidly growing markets in overseas countries, especially emerging countries. Amid intense competition for acquiring foreign markets, overseas M&A activities are firmly positioned as a key option for Japanese companies as a means of accelerating growth. Against this backdrop, overseas M&A activities by Japanese companies became more vigorous in 2017, marking a record high of 672 deals.

One of the major characteristics of recent overseas M&A activities by Japanese companies is their intention to acquire new markets and meet demand in foreign countries amid a decreasing birthrate and an aging population in Japan. In addition, there has been a pronounced move by Japanese companies to emphasize the use of open innovation in their growth strategy and push forward overseas M&A activity as a way to obtain new technologies and technical know-how. Japanese industries are going through a major structural shift to the Fourth Industrial Revolution which is driven by technological innovation

such as AI, IoT, and other new technologies. The Japanese government's Future Investment Strategy 2018 (Cabinet decision on June 15, 2018) also states that it is indispensable for Japan's future growth to promote social change through open innovation such as collaboration in the use of technologies, human resources, and data across different organizations and industries. Looking at overseas markets, as evidenced by the emergence of IT platformers in the U.S. and China, competition across different industries and for access to new innovative technologies is expected to intensify further. Under such circumstances, Japanese industries are also required to make strategic efforts towards promoting innovation.

In light of these changes in the external environment, JBIC will assist Japanese companies in expanding into overseas markets by increasing the supply of funding through its risk-taking capability.

## JBIC's Activities

### ■ Strengthening JBIC's Capability of Equity Financing

In an effort to enhance its capability in the area of equity financing, JBIC established JBIC IG in June 2017 in collaboration with Industrial Growth Platform, Inc. (IGPI) to provide investment advisory services regarding overseas investment funds. The purpose of JBIC IG is to provide these investment advisory services by applying the respective strengths of JBIC and IGPI. JBIC executes business in international financial markets as Japan's policy-based financial institution. In addition to the knowledge of investment business, IGPI has significant experience in providing companies with hands-on support for long-term, sustainable growth in corporate and business value.

### ■ Promoting Open Innovation and Acquiring Overseas Technologies by Japanese Companies

JBIC signed an agreement in March 2018 to make an equity investment in the Geodesic Capital Fund I-S, L.P., which invests in advanced IT companies mainly in the U.S. Japanese companies are responding to the Fourth Industrial Revolution by creating new added value through open innovation, in which they can combine external resources and companies' own internal strengths in technology and experience. The aim of the fund, in which Japanese companies participate as strategic investors, is not only to invest in advanced IT companies, mainly in the U.S., but also to provide those Japanese investors with strategic services, such as offering opportunities to invest in or form business alliances with advanced IT companies. This fund is expected to promote the growth of Japanese companies through open innovation.

JBIC also supported an overseas M&A transaction by a Japanese company, specifically, the acquisition of Germany-based H.C. Starck Tantalum and Niobium GmbH (HCS TaNb) by JX Nippon Mining & Metals Corporation (JXNMM). JBIC supported JXNMM in purchasing all shares in HCS TaNb from H.C. Starck GmbH of Germany. JBIC's equity participation was undertaken through JX Metals Deutschland GmbH (JXMD), a special-purpose company of JXNMM. HCS TaNb is one of the world's leading companies in the development, production, and distribution of tantalum and niobium products (high-purity metal powder), which are widely used in the Japanese electronics industry. HCS TaNb has a strong product lineup backed by its technological and marketing capabilities. Through this financing, JBIC supports JXNMM in strengthening its revenue base and creating synergy effects by bringing together the management resources of JXNMM Group and HCS TaNb.

### ■ Future Business Strategy

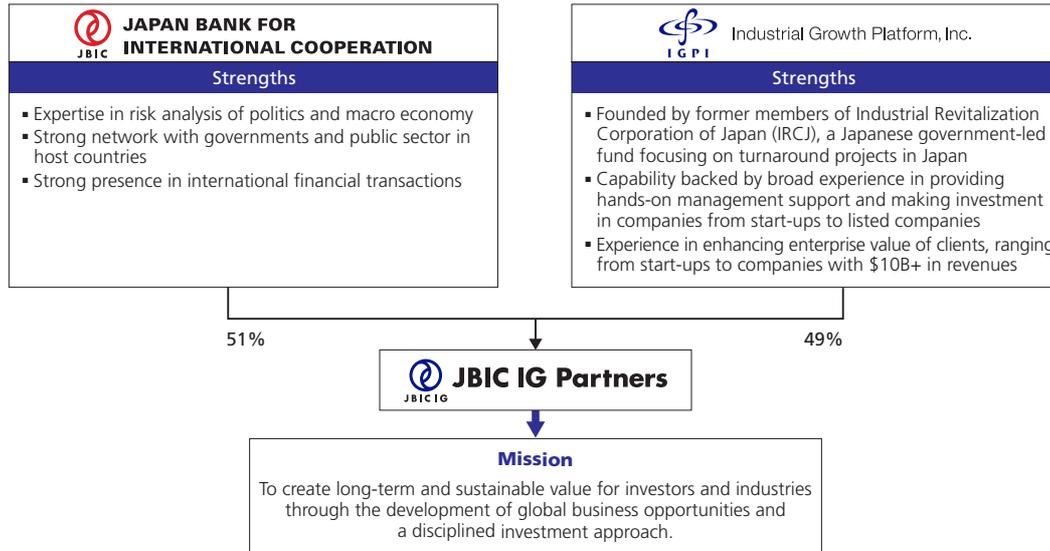
Japanese industries are urgently required to boost productivity across sectors, obtain advanced technologies, and promote innovation. Japanese industries also continue and accelerate their move to benefit from growing overseas markets, while coping with increasing business risk. Recognizing such circumstances in Japan and abroad, JBIC's Third Medium-term Business Plan (FY2018–2020) strives to provide support that responds to needs in growth fields and new areas of industry. As Japan's policy-based financial institution, JBIC will continue to support Japanese companies in expanding overseas by drawing on its diverse financial instruments, including equity financing, and by enhancing its risk-taking capability. As part of these efforts, the Equity Finance Group will actively provide support across the entire JBIC Group, including JBIC IG, to Japanese companies which plan to conduct M&As overseas with the intention of promoting open innovation and creating new businesses.

## Establishment of JBIC IG Partners (JBIC IG)

JBIC IG is an investment advisory services company established by JBIC and IGPI in June 2017. JBIC IG applies the respective strengths of JBIC and IGPI as follows: JBIC has knowledge and experience of financing international projects as Japan's policy-based financial institution; IGPI has the knowledge of investment business and

broad experience in providing companies with hands-on support for long-term, sustainable growth in corporate and business value. JBIC IG aims to create long-term, sustainable value for Japanese investors and industries through the development of global business opportunities and a disciplined investment approach.

### About JBIC IG Partners



### Business Model of JBIC IG

JBIC IG composes overseas funds by partnering with foreign sovereign wealth funds (SWF) and international investors, through investment advisory services to overseas funds. Through investment advice to overseas funds, JBIC IG aims to catalyze co-investments in overseas

companies to share risks with Japanese companies, as well as to expand transactions with overseas companies and Japanese companies.

Going forward, JBIC IG will continue to provide added value to Japanese industry through the creation of new funds.

### Overview of JBIC IG Partners' Investment Structure

