

JBIC's Expert Team of Global Analysts and Economists; Analyzing Sovereign Creditworthiness of Foreign Governments, a Vital Process for Overseas Financing

Yutaka Yasui

Deputy Director General &
Senior Economist
Division 2
Country Credit Department
Credit, Assessment and Risk
Management Group (then)



Kenji Hosono

Senior Advisor (then)
Country Credit Department
Credit, Assessment and Risk
Management Group

The Country Credit Department analyzes and evaluates the sovereign risk^(Note) of foreign governments. Evaluating the creditworthiness of the government of a host country is a characteristic function of JBIC, as the credit risk of a foreign government is an important factor to be assessed for the stable implementation of projects in foreign countries such as emerging countries. In this report, Senior Advisor Hosono (then) and Deputy Director General & Senior Economist Yasui (then) of the Country Credit Department talk about the functions and roles of their department.

Note: Sovereign risk: Risk associated with the ability and willingness of a foreign government to make debt repayments. When evaluating sovereign risk, it is necessary to analyze the economic situation of a country, including its fiscal conditions and international balance of payments position, as well as the political situation such as the stability of policy implementation.

Constantly monitoring the creditworthiness of foreign governments from economic and political perspectives

▶ **Hosono** In order to carry out a project in other countries such as emerging countries, it is extremely important to understand the situation of the host country and to evaluate the credit standing of its government. There are two major elements that need to be analyzed for measuring the credit risk of a government. Economic aspects including the real economy, fiscal and financial conditions and international balance of payments position are one element of credit risk assessment for the government. The other elements are political aspects such as the stability of policy implementation. In our department, there are about 20 analysts who constantly monitor the situation of about 100 countries, particularly those where JBIC has already financed a project or may consider financing in future.

▶ **Yasui** Our analysts monitor political and economic trends in foreign countries every day

that may affect their credit conditions, based on information collected from international agencies such as the Asian Development Bank, IMF and World Bank, in addition to information from the governments of countries covered by each analyst, local financial institutions and think-tanks. When our analysts visit foreign countries on business, they conduct interviews and exchange opinions with government officials and private-sector persons who are closely involved in deciding the policy direction of a country, such as officials and persons of the Finance Ministry, central bank and local financial institutions. Furthermore, the analysts organize regular policy dialogues with governments of important countries to discuss macroeconomic policy as well as changes in the business and trade environment.

▶ **Hosono** The situations of emerging countries are changing so dynamically that it is a very exciting aspect of our work to observe those developments. As economic structure and policy differ among countries, we conduct research and monitoring from various perspectives.

▶ **Yasui** When forecasting the trends of emerging countries, our major topics this year are interest rate hikes in the U.S., which affect the international flow of funds, and the trade friction particularly between the U.S. and China. Our attention is also drawn to the trends of presidential elections to be held in Russia, Egypt, Mexico and Brazil. We will keep watching the direction of the new governments of those countries as the development of a policy to achieve fiscal soundness is a major factor for evaluating country creditworthiness.

Building closer relationships with foreign governments helps JBIC increase its ability to provide prompt and flexible responses

▶ **Hosono** The global networking ability of our department helps JBIC strengthen its capability to make a response to changing international situation in a speedy manner. We can quickly observe changes in countries and access emerging countries when the global economy changes. As we are monitoring about 100 countries, we can also compare their present and previous situations in a cross-country manner. This research approach enables us to build broad knowledge of situations in various countries of the world.

▶ **Yasui** When I was working in JBIC's representative office in Brazil, the network of contacts developed by the Country Credit Department was fairly useful in arranging talks with officials of the Brazilian government. In the course of the dialogues with the Brazilian government, we learned what policies and systems will be implemented by the government to respond to the changing global economy. I believe that those dialogues were beneficial to both JBIC and the Brazilian government. Exchanging information and views with JBIC served not only as a catalyst for the Brazilian government to attract investment from Japan, but also as an opportunity for them to learn precedents of Japan and other countries.

▶ **Hosono/Yasui** We at the Country Credit Department will make our efforts to maintain relationships with foreign countries and contribute to JBIC's mission to provide financial support in a proactive manner.



Economists of the Country Credit Department analyzing and evaluating the creditworthiness risk of foreign governments

JBIC Today

Japan Bank for International Cooperation

JBIC Today Special Feature

Global Financial Stability and JBIC's Mission : A Decade after the Global Financial Crisis in 2008



News in Depth

“All Japan” Rantau Dedap Geothermal Power Project in Indonesia

JBIC's Expert Team of Global Analysts and Economists

Causes and responses to changing international financial crises

— Looking back on financial crises and JBIC's responses for the past 30 years

This year marks the tenth year since the Global Financial Crisis in 2008 that was caused by the collapse of the U.S. investment bank Lehman Brothers on September 15 the same year. Having experienced many crises in the past, international financial markets now show concern about a type and timing of possible next crisis in the future. With one of its missions being “Preventing disruptions to international financial order or taking appropriate measures with respect to damages caused by such disruption,” JBIC has been addressing global financial crises since the days of its predecessor, the Export-Import Bank

of Japan. Here, we will classify global financial crises in the past into three different categories based on the cause of the crisis and will focus on four major crises over past 30 years. In this report, Yo Kikuchi, Director General of the Country Credit Department at the time of this interview, conducting analysis of the international finance and economic conditions of each country, explains details of these four financial crises.



Yo Kikuchi

Director General (then)
Country Credit Department
Credit, Assessment and
Risk Management Group

Debt Crisis

Currency depreciation due to inability to repay external debt

Currency Crisis

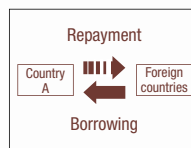
Financial sector instability due to currency depreciation

Financial Crisis

A debt crisis occurs when a government cannot repay its accumulated external debt.

[Main source of crisis: Government of a debtor country]

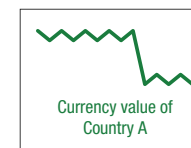
A debt crisis occurs in a situation where a government increases its borrowing from foreign countries more than it can absorb, and becomes unable to sustain their debt repayment. While the external debt-to-GDP ratio is used as an indicator to measure the debt burden of a country, it merely shows the tendency of external debt accumulation. Therefore, it is very difficult to predict the outset of a debt crisis.



A currency crisis occurs when the currency value of a debtor country falls sharply.

[Main source of crisis: Government and financial sector of a debtor country]

A currency crisis is caused by a sharp depreciation of the currency of a country. In general, the government and local companies in a country borrow from other countries in foreign currencies such as U.S. dollars. When they make repayment of those overseas borrowings, they need to convert their local currencies into U.S. dollars. In particular, a country with less creditworthiness in terms of its ability to meet its financial obligations borrows mostly in short-term from abroad. If the currency value of a country declines due to the deterioration

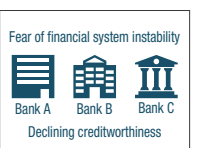


of its economy, the amount to be repaid to overseas lenders in terms of local currency suddenly becomes higher than the amount of repayment expected at the time of borrowing. For this reason, there is a case where a country might not be able to repay its debt to overseas creditors as a result of the plunge in its currency even though the country was considered to have the ability to fulfill its debt obligations at the time of borrowing.

A financial crisis occurs when the financial sector becomes impaired due to a sharp decline in the creditworthiness of financial institutions.

[Main source of crisis: Private financial sector]

The earnings of financial institutions decrease when they have increasing non-performing loans to corporations and other entities due to worsening economic conditions. If financial institutions owe external debt as well, there will be growing concern over their ability to repay. Moreover, an increase in the number of financial institutions in the face of declining business performance would raise fears over the collapse of the domestic financial system. This might provoke depositors to withdraw their deposits from banks and ultimately send the financial market into meltdown in the worst case.



Year 1982

Year 1994

Year 1997

Year 2008

Latin American Debt Crisis

Cause of crisis	Default of governments of Latin American countries
Characteristics	The Latin American debt crisis is a typical example. From the mid-1970s, governments of Latin American countries promoted economic development including infrastructure construction by obtaining huge loans from financial institutions in developed countries. In the early 1980s, however, they struggled to repay their accumulated debt in U.S. dollars as a result of interest rate hikes by the Reagan Administration in the U.S. and were put into default one after another. For about the next 10 years, investments and loans to Latin America by developed countries decreased and the economies of the region continued to face stagnation.
Measures	Developed countries including Japan provided new money (lending) to borrowing countries in Latin America to help them solve their debt problems in the medium-to-long term in their efforts to promote structural reforms and reconstruct their economies. JBIC offered long-term loans to these Latin American countries for them to regain debt sustainability in collaboration with the World Bank. This was a turning point for Japan because the country took a step in committing to the international debt strategy by helping developing countries stabilize and restructure their economies in cooperation with international organizations, while putting its significant trade surplus to use for recovery of the economies in the face of the debt crisis.

Mexican Peso Crisis (also known as the Tequila Crisis)

Cause of crisis	Sudden devaluation of the Mexican peso
Characteristics	The Mexican government increased its short-term borrowings from investors in other countries including the U.S. to cover its current account deficits arising from fiscal expansion. Mexico was also facing domestic political instability, causing investors to be skeptical about the country's ability to keep the fixed exchange rate system. Triggered by rising interest rates in the U.S. from February 1994, funds flowed back into U.S. bond market and Mexico's foreign reserves dwindled. Unable to maintain the fixed exchange rate system, Mexico moved to a floating exchange rate system in December of the same year, which resulted in the sharp depreciation of the peso. The Tequila Crisis, caused by funds outflow from Mexico, was a sort of precursor to the Asian currency crisis.
Measures	The Mexican government asked the IMF for financial assistance, while implementing its emergency economic measures such as reducing the fiscal deficit and holding down wage increases. The U.S. and the IMF provided Mexico with funds totaling 50 billion dollars, which helped ease the currency crisis. This international financial aid package was agreed on February 1, 1995, taking just one month after the Mexican government announced its emergency economic measures on January 3. It was reported as a consequence that the contagion of the Mexican peso crisis into other countries in Latin America was relatively short-lived. This suggested that a currency crisis requires an immediate response. The international financial support provided to Mexico served as an important lesson for responses to the Asian currency crisis, in which Japan played a leading role.

Asian Currency Crisis

Cause of crisis	Sharp depreciation of the Thai Baht
Characteristics	The Asian Currency Crisis is different from other financial crises that happened before because private sectors in addition to the government owed debts to foreign countries. In 1997, overseas investors pulled funds from Thailand on concerns over the overvaluation of the Thai Baht and the continuing large inflow of short-term funds into the country. This caused the country to be unable to maintain the fixed exchange rate system, pushing down the currency sharply in July the same year. The financial sector in Thailand fell into chaos and foreign companies operating in Thailand including Japanese companies had no longer access to foreign currencies. The impact of the crisis spread to other Asian countries including Indonesia, Malaysia and South Korea. The Asian Currency Crisis had aspects of both currency and financial crises.
Measures	Thailand, Indonesia and South Korea that had experienced a rapid outflow of funds received financial assistance under international framework agreements by the IMF, the World Bank, the Asian Development Bank as well as other countries around the world. The agreements to provide international financial support were made on condition that these Asian countries implement their own macroeconomic adjustment program. Japan expressed its intention to provide the largest amount of funds among countries supporting the crisis-affected countries in Asia. The IMF agreed to implement the Stand-by Arrangement for Thailand's macroeconomic adjustment program on August 20, 1997. Following this, JBIC made a rapid response to helping Thailand carry out the adjustment program by providing financing in parallel with the IMF. Throughout the period of the crisis, JBIC offered a financial aid package totaling 3.5 trillion yen to Asian countries as well as Japanese companies operating in the region. In particular, the financial assistance to Asian countries was made under the New Initiative to Overcome the Asian Currency Crisis (also known as the "New Miyazawa Initiative") announced by the Japanese government in October 1998.

Global Financial Crisis of 2008

Cause of crisis	Bankruptcy of Lehman Brothers
Characteristics	The Global Financial Crisis in 2008 was triggered by the burst of the housing bubble in the summer of 2007 in the U.S. and the losses on subprime mortgage securities in the autumn of 2008. The materialization of a huge amount of credit risk that is transferred through credit derivative instruments from one counterparty to another caused many European and American financial institutions to face a difficulty in raising funds and created instability in the financial markets. The "once-in-a-century" financial crisis rapidly engulfed the world economy through the stagnant real economy and slump in the volume of trade transactions.
Measures	The international community first worked urgently to stabilize the financial system. Subsequently, however, as the crisis started to affect the real economy, each country cooperated in implementing fiscal expansion and monetary easing. Amid these global efforts, JBIC provided various financial assistance to help stabilize the global financial system, including: recapitalizing major banks in developing countries through the Bank Recapitalization Fund (to which JBIC contributed two billion dollars); providing guarantee to Samurai bond issuances by governments in developing countries; and making loans totaling 2.4 trillion yen to Japanese companies operating overseas affected by international financial turmoil.

Asian Currency Crisis

Major East Asian countries had continued growing until the Asian Currency Crisis was sparked by the sharp depreciation of the Thai Baht in July 1997. The crisis spread to other Asian countries, causing a decline in their currencies and a severe recession. The Japanese government expressed its intention to offer the largest amount of financial assistance among all developed countries. JBIC, in collaboration with international organizations, extended support to stabilize the macro-economy of Asian countries, while providing financial support to Japanese companies and banks affected by the currency crisis. Here, we will look back on the background and financial responses to the Asian Currency Crisis.

Background and Causes

Short-term funds inflow into and outflow from Thailand



Impact

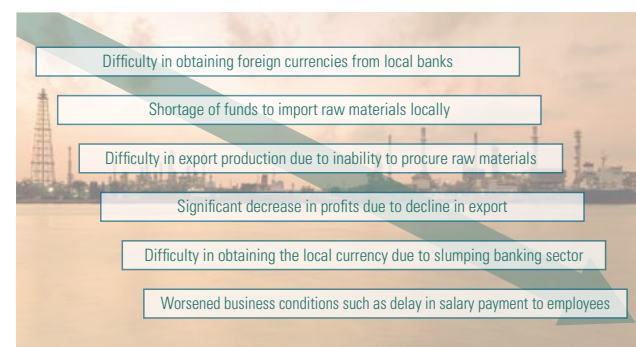
The currency crisis spread to other Asian countries

[Contagion of crisis]



[Impact on Japanese overseas affiliates companies]

Japanese manufacturers were gradually affected



JBIC's Financial Support

JBIC offered large-scale financial support to client companies and Asian countries

Support for client companies

To support Japanese companies affected by the Asian currency crisis, JBIC provided support worth 1,371.9 billion yen in total as part of the economic policy of the Japanese government in February, April and November in 1998. (See the table below for a summary of the amount provided to each country.)

Support Cases

Providing financial support to client companies via Japanese banks

Besides providing direct financing to Japanese companies, JBIC set a dollar-denominated credit line (two-step loans) for Japanese financial institutions that had been forced to shrink their loan business. It provided 10 Japanese private banks with a total of 1,570 million dollars to help them continue to supply dollar-denominated financing to Japanese overseas affiliates.

Support for Asian countries

Emergency support for Thailand (Parallel Financing with IMF)

In August 1997, JBIC provided a loan for the government of Thailand to finance the country's import, in parallel with the IMF which agreed to implement the Stand-by Arrangement (SBA) for supporting the country's macroeconomic adjustment program. JBIC's loan amounted to 480 billion yen (4 billion dollars), which is the same amount provided by the IMF.

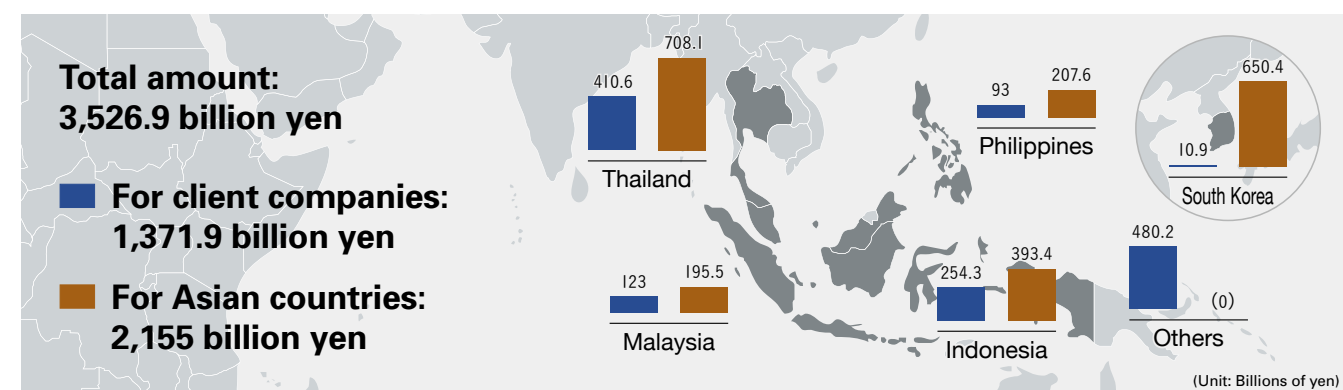
Initial assistance to other Asian countries (February to June 1998)

JBIC offered a loan totaling 40 billion yen (300 million dollars) to The Industrial Finance Corporation of Thailand and Export-Import Bank of Thailand to help local companies in Thailand secure funds for capital expenditure and operating funds required for industrial production and return to their smooth export activities. Additionally, JBIC provided loans to the government of Indonesia and Export-Import Bank of Korea amounting to 170 billion yen and 130 billion yen, respectively, to finance the import of raw materials and parts needed by local exporters.

The New Initiative to Overcome the Asian Currency Crisis (also known as the "New Miyazawa Initiative" (October 1998)

The Japanese government announced to provide a package of financial support measures to Asian nations totaling 30 billion dollars. Of that total, 15 billion dollars were to be used for medium to long-term funding for the recovery of real economies of Asian nations and the remaining 15 billion dollars were to be reserved in case of short-term funding needs arise for implementing their economic reforms. JBIC offered mid- and long-term assistance in the form of loans amounting to 9.4 billion dollars (as of the end of September 1999) to Indonesia, Korea, Malaysia, the Philippines and Thailand. This led the Thai economy with negative growth rate for two consecutive years to return to positive growth of 4.6% in 1999.

Total financial assistance from JBIC



The Role of JBIC

Extending diverse forms of timely support

Immediately after Thailand announced its decision to end the fixed exchange rate system in July 1997, our Country Credit Department staff flew to Thailand to gather information about the situation of the country. In the next month, JBIC decided to provide Thailand with a loan up to 480 billion yen (4 billion dollars) in cooperation with the IMF. It was important to try to minimize the impact of the crisis by making a prompt decision.

Meanwhile, JBIC provided assistance at the microeconomic level to Japanese corporates in Thailand, which required foreign currency funds by assessing the impact on their activities and demand.

The role expected of JBIC was to fully understand the situation of countries affected by the crisis from both macroeconomic and microeconomic perspectives in order to prepare for various forms of support in an integrated manner. I believe that JBIC has the capability to extend appropriate support in a timely and flexible manner in collaboration with international organizations committed to the stability of international finance, identifying the needs of governments in developing countries, private-sector financial institutions lending money to businesses and Japanese companies operating in Asia.



Interview with
Director General
Kikuchi

Global Financial Crisis of 2008

The bankruptcy of the U.S. investment bank Lehman Brothers in September 2008 caused chaos in the market, resulting in serious difficulty in fund raising by financial institutions in the U.S. and Europe, the plunge in stock prices as well as the yen appreciation against the dollar. At the beginning of the crisis, the impact on countries other than the U.S. and European countries was expected to be modest, but the crisis rapidly spread across the globalizing world and Japan was no exception from being affected. The international community accelerated its efforts to secure the stability of the financial system. As part of these global efforts, shortly after the outset of the crisis, JBIC provided financial support to developing countries and Japanese companies with overseas operations. We would like to look at the causes and effects of the Global Financial Crisis in 2008.

Causes

Overheating of the U.S. mortgage loan market



Impact

The crisis spread across the world

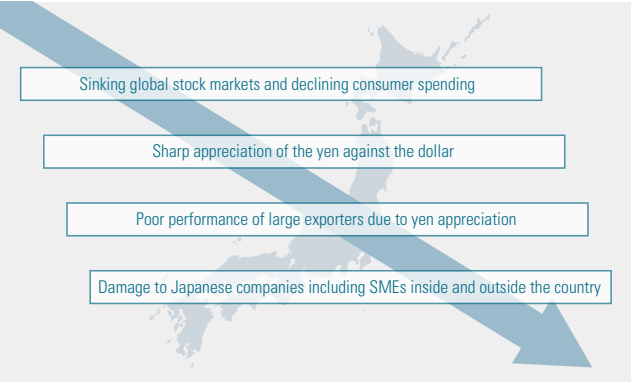
[Impact on the world]

At the beginning of the Global Financial Crisis in 2008, the economies of developing countries were viewed as remaining relatively stable based on the notion of “decoupling”, which discusses that the growth of developing countries is not necessarily influenced by the financial instability in developed countries. In fact, however, both developed countries led by the U.S. and emerging countries have strong links to each other on the real-economy front (exports to the U.S.) as well as on the financial front (global capital flows), which prompted the rapid spread of economic and financial instability to global marketplaces. Japan was no exception from being influenced, although the banking sector in the country did not have a large exposure to U.S. subprime market.



[Impact on Japan]

Japan was also affected by a downturn in the global economy



JBIC's Financial Support

JBIC provided various assistance to stabilize the financial system and support client companies

Support for client companies

Loans for major client companies operating in developing countries (December 2008 to March 2011)

JBIC provided loans directly to major Japanese companies to support their subsidiaries in developing countries, as an exceptional measure to support their overseas business activities during crisis.

Loans and guarantees for client companies operating in developed countries (December 2008 to March 2011)

JBIC launched a financing facility that provides loans and guarantees to Japanese companies including mid-tier enterprises and SMEs operating in developed countries, as a special measure for supporting those companies affected by the turmoil of local bond markets in developed countries.

Two-step loans (TSLs) for client companies operating overseas (April 2009 to March 2011)

JBIC offered TSLs, via Japanese banks, to Japanese companies operating overseas particularly mid-tier enterprises, SMEs and second-tier enterprises in the face of difficulties in raising funds in the U.S. dollars.

Support for developing countries

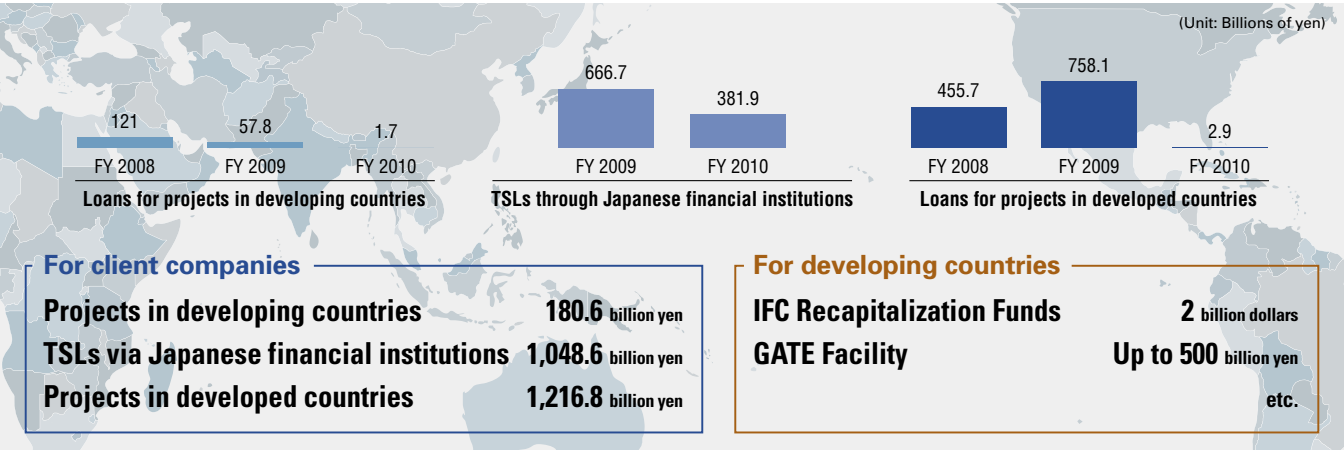
IFC Bank Recapitalization Funds (established in November 2008)

The Funds are a private equity and subordinated debt funds aimed at recapitalizing major local banks in developing countries for their economic and financial stability. JBIC contributed two billion dollars to the Funds, along with the International Finance Corporation (IFC), a member of the World Bank Group.

“Guarantee and Acquisition toward Tokyo market Enhancement (GATE)” facility (announced in May 2009)

JBIC supported Asian developing countries in the face of difficulty in issuing sovereign bonds due to the turbulence in the global financial markets to access sources of financing in the market. Through the launch of the GATE facility, JBIC was set to provide a guarantee up to 500 billion yen to the issuance of yen-denominated foreign bonds (Samurai bonds) by governments in Asian countries. Under the GATE facility, JBIC supported the Samurai bond issuances by the issuers including the government of Indonesia and Philippines.

Total financial assistance from JBIC



The Role of JBIC

Minimizing the impact based on the lessons learnt from the Asian Currency Crisis

To support Japanese companies that struggled with obtaining funds, JBIC financed their overseas businesses via Japanese financial institutions, in addition to direct loans to their projects in both developing and developed countries. Since the Asian Currency Crisis, JBIC has been consistent in assisting Japanese companies to recover their business activity as early as possible, through both direct loans from JBIC and those provided through Japanese banks.

On the other hand, contribution to the IFC Recapitalization Funds in collaboration with IFC was JBIC's new effort to respond to the crisis by investing in a global equity fund instead of providing a loan. The purpose of the Funds is to recapitalize major banks in developing countries by absorbing losses on their non-performing assets and restore their financial soundness.

In addition, JBIC's support for Samurai bond issuance by the Indonesian government was another major assistance. As the crisis spread to developed countries in Europe,

there was concern that even the IMF might run out of funds to assist countries affected by the disruption in the financial markets. After the Asian Currency Crisis, JBIC followed the Japanese government's initiative to develop local bond markets in Asia, which also led to support for governments in Asian countries trying to access to utilize capital markets for raising funds.

The Global Financial Crisis in 2008 was a once-in-a-century event. As described above, JBIC actively provided comprehensive financial support to minimize the impact of the crisis. JBIC established the Strategic Research Department in August 2018. In order to respond to a financial crisis in a timely and appropriate manner, it is also required to recognize signs of the crisis. JBIC will continue to closely watch international economic trends and provide appropriate support in the years to come.



Interview with Director General Kikuchi

The 2008 Global Financial Crisis in Retrospect

The Rabigh Project: maintaining stable operations after weathering the financial crisis, and now looking ahead to its future prospects



Summary of the Rabigh Project

The Rabigh project comprises an integrated oil refinery and petrochemical complex in Saudi Arabia. This oil refinery plant is operated by Petro Rabigh, a joint venture company established by Sumitomo Chemical and Saudi Aramco, a Saudi Arabian national petroleum company. This is a huge project in which Petro Rabigh has received investment totaling about USD 9.8 billion for the first project phase and about another USD 9.1 billion for the second phase. This oil refinery plant manufactures petroleum products such as gasoline and petrochemical products such as polyethylene.

Sumitomo Chemical Co., Ltd. (Sumitomo Chemical) celebrated the 100th anniversary of the commencement of its operations in 2015. One of the company's main business sectors is its Petrochemicals & Plastics Sector, and this business is supported by Rabigh Refining & Petrochemical Company (Petro Rabigh) located in Saudi Arabia. Petro Rabigh is one of the largest integrated oil refinery and petrochemical plants in the world. After construction started in 2006, it had to overcome the global financial crisis in 2008, and production began at its first plant in April 2009. With stable operations, the plant is generating steady profits today. In this report, Kunio Nozaki, senior managing executive officer of Sumitomo Chemical, looks back on those days when he was in charge of obtaining financing for the Rabigh project as the general manager of Sumitomo Chemical's finance and accounting office at the outset of the global financial crisis in 2008.



Kunio Nozaki
Senior Managing Executive Officer
Sumitomo Chemical Co., Ltd.

— Back then, did you foresee a situation like the global financial crisis in 2008?

Nozaki I cannot say I was fully mentally prepared for such a situation, but I started to have a feeling that a financial crisis might happen every time I heard news of investment firms in the US effectively going bankrupt or about the risks of subprime mortgage loans. Canaries are kept at the entrance of coal mines to detect toxic gases and warn miners of danger, and in that sense, I felt I could hear the canary warnings about the financial markets.

— What impact did the global financial crisis have on the business environment?

Nozaki Demand for petrochemical products noticeably declined after November 2008. I reported the business performance and prospects at a board meeting as the executive officer of the finance and accounting office. I had to make downward revisions in the earnings estimates for each month after November 2008. It was winter, and I remember the board meeting was being held in a chilly atmosphere. Hiromasa Yonekura (then Representative Director & President), however, was unperturbed, saying, "Everyone in the petrochemicals business unit is doing their best. There are times when we experience hardships in our business." Fortunately, de-

mand for petrochemical products started to improve after mid-2009, thanks to the effects of the economic stimulus measures implemented in countries around the world.

— What difficulties did you face in obtaining financing?

Nozaki We never had difficulties in obtaining financing after the global financial crisis in 2008. Based on the lessons learned from the Asian financial crisis, we diversified our financing methods, being early among Japanese corporation to arrange committed credit lines^{*1} from both Japanese and foreign banks, and we also increased our issuance of commercial paper.^{*2} We remained highly aware of crisis management after the Asian financial crisis, knowing that anything can happen at any time.

^{*1} An agreement between a bank and a borrower to set a certain credit line in advance

^{*2} A commercial paper is a debt instrument issued by a corporation, particularly for securing short-term financing. The commercial paper is issued as a promissory note at a discount from face value.

— What were the impacts on the Rabigh Project?

Nozaki As this project was a huge long-term investment for the next 30 or 50 years, we were determined to complete it by any means. Fortunately, the operations of the project are now becoming stable, and it is anticipated to generate real profits from now on. We expect this project to generate a source of funds for investing in the business areas that we focus on, such as the environment and energy, ICT (information and communication technologies), and life sciences.

— How would you evaluate JBIC's support?

Nozaki When negotiating with Saudi Aramco regarding the establishment of a joint venture, we felt very secure because JBIC was involved in the negotiations as well. We greatly appreciate JBIC for its support in providing us financing in a prompt manner.

— You presumably built a stronger management structure as a result of surviving this global financial crisis?

Nozaki After the global financial crisis in 2008, we continued to experience a lot of hardships, such as the impact of the prolonged European debt

crisis after 2010 on our other businesses, and the issues and challenges of working with managers from many different countries on the Rabigh project.

We overcame those challenges, however, and were able to maintain a sense of unity as a company. I believe that this was because all of our employees were able to move forward while reflecting on our business philosophy of "Benefit self and benefit others, private and public interests are one and the same," which means striving to benefit not only Sumitomo's own business, but also the country and society as a whole.

When the company did not perform as well as intended, the management team invited the division heads to a meeting to share information about the current situation of the company. During this meeting, again we all reflected on Sumitomo's business philosophy, and then set objectives for each division to resolve the issues facing the company.

In 2015, we celebrated the 100th anniversary of the commencement of Sumitomo Chemical's operations. This ship (Photo 2) was designed to mark the occasion, and it symbolizes our determination to make a new start and address future challenges and growth based on our history over the past 100 years. We will continue to overcome challenges that might come our way in the future, such as financial crises, and will contribute to society by uniting all of our employees to work together under Sumitomo's business philosophy.



Photo 1: Sumitomo Fertilizer Factory, the predecessor of Sumitomo Chemical, established in 1913 to produce fertilizers from sulfur dioxide generated in copper smelting. Sumitomo's business philosophy has been passed down from these origins.

JBIC's support for Petro Rabigh

Fiscal year	Details of support
March 2006	Project finance for Petro Rabigh (up to USD2.5 billion for the first phase of the project)
March 2009	Financing for Sumitomo Chemical (up to USD300 million for the first phase of the project)
March 2009	Financing for Sumitomo Chemical Asia Pte. Ltd., a Singapore-based subsidiary (up to USD80 million for the sales of products manufactured by Petro Rabigh)
March 2015	Project finance for Petro Rabigh (up to USD1,998 million for the second phase of the project)



Photo 2: On the ship are various facilities and products of the Sumitomo Chemical Group, including the Besshi Copper Mine, which was the origin of Sumitomo Chemical's business.

The Asian Currency Crisis and the 2008 Global Financial Crisis in Retrospect Indonesia's Experience with Two Financial Crises

Interview with His Excellency Mr. Arifin Tasrif, Ambassador Extraordinary and Plenipotentiary of the Republic of Indonesia to Japan

Impact of Two Financial Crises on Indonesia

The Asian currency crisis: Started in Thailand in July 1997 and soon engulfed Indonesia and other Asian countries, disrupting their currency valuations and economies. It resulted in exchange rate collapse and serious recession in Indonesia, with the rupiah plummeting at a much faster pace than other Asian currencies.

The 2008 Global Financial Crisis: Affected by the widespread failures of financial institutions in the United States and Europe, the economic growth rate abruptly slid into negative territory in many emerging markets. In contrast, the Indonesian economy has been on a sustained growth track, achieving a growth rate of 4% or higher - albeit experiencing a temporary decline.

Indonesia has experienced two international crises. The first was the Asian currency crisis that arose after a period of sustained strong economic growth in the first half of the 1990s. Then the Global Financial Crisis in 2008 jolted the country and other emerging markets that had growing economic ties with the United States. We spoke with H.E. Arifin Tasrif, Indonesia's Ambassador to Japan, about how the country dealt with these hardships.

Asian Currency Crisis

— How was Indonesia affected by the Asian currency crisis?

Many businesses faced funding problems and went bankrupt. Domestic consumption decelerated and there was a significant decrease in purchasing power. An unprecedented 16 banks were liquidated and a further 48 banks had their operations suspended.

— What caused such extensive damage?

We did not anticipate Asian currency crisis, and were not prepared. The capital outflow occurred quite suddenly. While both the public and the private sectors were eager to borrow large sums of foreign currencies amid a fast-growing economy, the government of Indonesia did not have a system in place to monitor the financial sector and inspect domestic financial institutions.

— How did Indonesia respond to the Asian currency crisis?

Shortly after the crisis, as the rupiah could not maintain the fixed exchange rate system, Indonesia shifted to a floating rate system. Against such a backdrop, we amended the Indonesian Central Bank Act to ensure the independence of the Central Bank, thereby

enhancing the soundness and transparency of monetary policy. At the same time, in order to rebuild private financial institutions, the government took initiative to develop a scheme under which the domestic financial sector is monitored, in addition to consolidating and reorganizing the private financial institutions. To implement reforms in financial and other sectors and fiscal consolidation, we made use of support from such international organizations as the IMF, the World Bank and the ADB as well as those from Japan, including JBIC. Besides, aiming to strengthen international cooperation for preventing and responding to future crises, we have joined the Chiang Mai Initiative¹, which is a set of bilateral currency swap arrangements.

1: Chiang Mai Initiative: Adopted at a May 2000 meeting of ASEAN+3 finance ministers in Chiang Mai, it provides for, among other things, the launch of a network of bilateral currency swap arrangements.

Global Financial Crisis of 2008

— What impact did the 2008 Global Financial Crisis have on Indonesia?

As we consolidated the domestic financial system after the Asian currency crisis to withstand a major upheaval, we have become prepared and ready for economic disruption. Thanks to this financial system reform, only one bank failed due to the Global Financial Crisis

in 2008. We also minimized the impact of the financial crisis, maintaining a growth rate of 4% or higher, although that was lower than the pre-crisis levels (Figure 1). On the other hand, the manufacturers, who perform key functions in the industry, suffered from a sharp rise in crude oil prices which spread globally just before the Global Financial Crisis. At that time, I was CEO of a national fertilizer company, and I had difficulty in securing additional operating funds from financial institutions. Fortunately, we could continue fertilizer production as the crude prices fell back to pre-crisis levels in about four months. From those two crises there are important lessons that Indonesia took in the financial sector. Indonesia is now better at handling a crisis through the regulations and new strategic financial institutions such as the Financial Services Authority (OJK) and the Savings Guarantee Institution (LPS). Additionally, there is also a re-invigorated coordination between those new institutions and the Finance Ministry and the Indonesian Central Bank.

■ Figure 1:
Indonesia's GDP and GDP Growth Rate



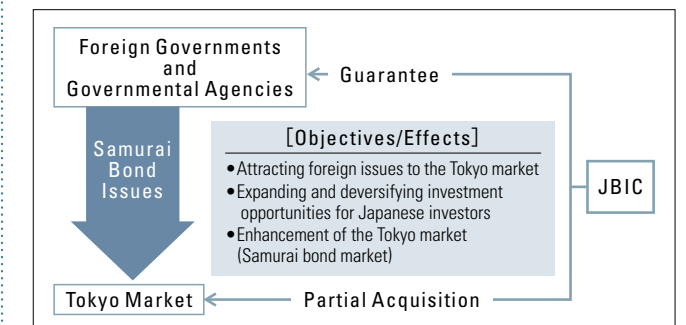
— What were your impressions of raising funds in international financial markets?

After the Global Financial Crisis in 2008, Samurai bond issues have been helpful for our government as a means of raising funds in securities markets (Figure 2). Although we temporarily experienced some difficulty in government bond issuance due to turmoil in international financial markets, we received guarantee support from JBIC for a cumulative sum of 210 billion yen under its Samurai bond issue facilities such as MASF and GATE². Thanks to JBIC's financial support, we could attract investment from overseas investors, enabling us to accumulate foreign reserves. Furthermore, investor confidence has strengthened through our continued presence in Tokyo market and, in August 2015, we successfully issued Samurai bonds without JBIC's guarantee. I believe JBIC has played the part of *sherpa* (mountain guide) who helped us reach a high pinnacle of trust and confidence in international financial markets. JBIC is also playing a crucial role in further solidifying bilateral relations between Japan and Indonesia.

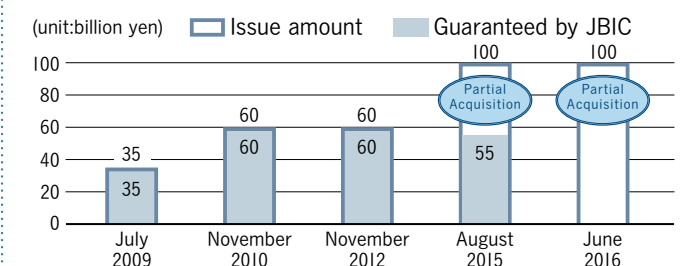
■ Figure 2:
Support for Samurai Bond Issues by JBIC

Samurai bonds are yen-denominated bonds issued in the Japanese financial market by a foreign government or company. Proceeds from these issues are paid in Japanese yen at the time of issuance. Under its financial support facilities, JBIC provides a partial guarantee for and acquires part of the samurai bonds issued.

● Support Scheme for Samurai Bond Issuance



● JBIC's Support for Samurai Bond Issued by Government of Indonesia



JBIC provided continuous support for Indonesia to return to international financial markets. In July 2009, the government of Indonesia issued its first Samurai bond with guarantee from JBIC. After issuances of Samurai bonds guaranteed by JBIC three times, the government of Indonesia successfully issued such bonds without guarantee from JBIC in August 2015.

2. MASF: Market Access Support Facility
GATE: "Guarantee and Acquisition toward Tokyo market Enhancement" facility

— This year marks the 60th anniversary of Japan-Indonesia diplomatic relations. Could you tell us your aspirations and expectations for strengthening bilateral relations?

For Indonesia, Japan is a valued partner because Japan is playing a major part in economic development through investments and trade. On the other hand, Indonesia is increasing its attractiveness as a manufacturing base with a population of 260 million people and a pool of highly skilled workers. Supported by JBIC, we are making steady progress in improving our infrastructure. During the 1980s, I was involved in a fertilizer plant construction project, working closely with Japanese companies. Through this experience, I was impressed by their superior quality, high reliability, the strict observance of delivery schedule, a strong sense of commitment and good teamwork. I truly hope that Indonesia will continue to be a good business partner with Japan. In particular, I would like Japanese manufacturers to tap into Indonesia as a gateway to ASEAN countries. In addition to its support at the time of financial crises, JBIC is performing vital functions in linking Japan and Indonesia in such fields as resource development, infrastructure provision and the expansion of the manufacturing sector. I look forward to seeing the role that JBIC will play with new ideas in the future.



Ryuji Nishisaki

Senior Managing Executive Officer
Sumitomo Mitsui Banking Corporation (SMBC)

Head of Financial Solutions Unit, Deputy Head of International Banking Unit, Served as General Manager, Corporate Banking Dept.-V, Europe Division in London at the time of the Global Financial Crisis of 2008.

The 2008 Global Financial Crisis in Retrospect

Striving to meet expectations of Crisis-hit corporates

Amid the global financial turmoil after the collapse of the U.S. investment firm Lehman Brothers in 2008, Japanese financial institutions proactively supported their customers in providing financing despite the market disruption. We had an interview with Ryuji Nishisaki, Senior Managing Executive Officer of Sumitomo Mitsui Banking Corporation (SMBC), which holds primary customer portfolio of Japanese companies with overseas operations, regarding the situation during this Crisis and how SMBC went through as a Japanese financial institution.

Turbulence in financial markets and corporates rushing to loan requests Overcoming the unprecedented crisis

— Immediately after the outbreak of the Crisis in 2008, how did you see the expanse of financial instability spreading into the market ?

Nishisaki The Crisis had an influence on not only financial institutions in the U.S. which was the epicenter of the Crisis, but also those in Europe. This led to disruption in the inter-bank monetary markets. As a result, banks in Asian countries also suffered from obtaining U.S dollar funds. The impact of the Crisis seemed much more serious than the Asian currency crisis back in 1990s. We really did not know which banks had how much non-performing assets. I remember that we were afraid of the extensive influence and there was some skepticism about global financial markets.

— Your customers might have been badly affected too.

Nishisaki Our customers with overseas operations faced a challenging fund raising environment in those days, because the market situation was not favorable for them to get access commercial pa-

pers (Note), or borrowing from local banks. As the damages on SMBC was less significant than that on financial institutions in Europe and the U.S, we received numerous requests for providing loans from diversified industries, including both Japanese and non-Japanese companies as well as project owners. We felt great expectations to us. However, it was indeed difficult to provide loans unlimitedly because we had also been impacted by the Crisis. It was a very tough situation and we had very prudent discussions, and tried to support especially Japanese customers' financing activities as a Japanese bank. We made our best efforts to respond to as many requests as possible with courtesy.

Note : A commercial paper is a debt instrument issued by a corporation, particularly to secure short-term financing (within 30 days). The commercial paper is issued in form of a promissory note at a discount from face value.

— How did you use the financing instruments offered by JBIC?

Nishisaki As the support we could do alone was limited, JBIC's financial support schemes in U.S. dollars were of great help for us. We built up a task force team inside the bank, and supported customers' overseas business in various industries in collaboration with JBIC. In particular, we received financing from JBIC totaling more than 600 billion yen equivalent in the form of two-step loans provided via us to overseas affiliates of Japanese companies. Additionally JBIC provided direct loans to support our customers' overseas businesses via their headquarters as well as directly to overseas projects

in advanced countries. The amount of co-financing with JBIC was large, so we were very much busy in those days with dealing with the loan requests from various companies in the world.

Continuous support for customers in expansion of overseas business

— How the findings and lessons learned from the Crisis were used?

Nishisaki First of all, we reassessed the level of our tolerance for risks and developed our risk management ability by strengthening the Risk Appetite Framework (RAF). The next countermeasure we took was to establish a system where we can quickly detect any aberrant value in the market based on our increased capability to collect and analyze data through constant market monitoring.

— SMBC has increased its global presence, as evidenced by being ranked high in the project finance league table. What are your prospects for the future?

Nishisaki In recent years, it has been observed that not only large scale companies are advancing to overseas market but tertiary and quaternary parts suppliers especially in the automobile industry are also expanding into foreign markets, and therefore the needs in supporting such customers is increasing drastically. Currently, proportion of SMFG's profit of overseas business accounts for more than 30%, and this figure is expected to grow further. Under such situation, our willingness to engage in support for customers seeking to expand abroad remains unchanged from the time of the Crisis in 2008.

SMBC has strength in the areas of overseas project finance and infrastructure finance e.g. in the area of renewable energy, power generation as well as water desalination, which I am responsible for. On the other hand, competition between companies in those areas becomes fiercer and regulations on the capital adequacy ratio for financial institutions are being tightened as well. Against this backdrop, we wish to further contribute to quality infrastructure exports where Japanese companies have competitive edges, by collaborating with JBIC through appropriate risk allocation.





“All Japan” Rantau Dedap Geothermal Power Project in Indonesia; Successful and Expeditious Launch through Experience and Knowledge of Supporting Geothermal Power Generation Business in the Country

Although Indonesia has the second largest geothermal resources in the world, current geothermal utilization in the country remains at only 5% as development of geothermal power takes long time and requires plenty of funds to explore geothermal resources. There is surging demand for electricity in the country on the back of economic growth. In response to such demand, the Indonesian government plans to expand the share of geothermal energy in total power generation in the country to 21% by 2026.

In the past, JBIC supported two geothermal power projects in Indonesia through project financing, which are the Sarulla project reported in the May 2014 issue of JBIC Today, and the Muara Laboh project reported in the March 2017 issue. The Rantau Dedap geothermal power project is the third project JBIC has supported in Indonesia.

In this report, JBIC's staff members will explain about the details of the project, including how past experience helped bring this project to success, and its characteristics.

An article related to this project was published in the morning edition of The Nikkei on March 28, 2018.

— This is the third geothermal power project in Indonesia where JBIC provides support through project financing. What are the characteristics of this project?

Oishi Marubeni and Tohoku Electric Power participate in this project as sponsors. For Tohoku Electric Power, this is their first geothermal power project overseas. In addition, other Japanese companies such as Fuji Electric and West Japan Engineering Consultants, Inc. are also involved in the project. With the largest global market share of geothermal power generation equipment, Fuji Electric participates as an EPC (Engineering, Procurement and Construction) contractor in this project. West Japan Engineering Consultants, which has world-leading specialized knowledge in the geothermal power generation business, provides technical support for the project. As you see from my explanation, this project is an “all Japan” project.

Another characteristic of this project is the speed of closing the finance documentation. Since JBIC and other lenders joined negotiations for finance documents with sponsors in November 2017, it took less than four months to sign the documents. Most of this project's participants had experience in the recent precedent project, the Muara Laboh geothermal power project, so we shared a common viewpoint and had an effective discussion while negotiating for this project. This is why we could achieve the signing of finance documents within such an extremely short time.

Furthermore, the Indonesian government always dealt with us in good faith. We believe it was because they regarded JBIC as an important partner with a proven track record of supporting numerous projects in Indonesia. We recognized that Japan and Japanese companies have

a strong presence in Indonesia implementing various important projects in the country in the fields of manufacturing, gas power generation and LNG developments.

Anan As for due diligence on geothermal power project, in addition to risk analysis for power plant projects in general, it is necessary to confirm whether the supply of steam and hot water provided from the geothermal reservoir is stable throughout the loan period. I was also in charge of the Muara Laboh project, and I believe that our past experience of supporting geothermal power projects in Indonesia helped to successfully sign the finance documents under such a tight schedule for this project.

— Unlike any other financing schemes that have been supported by JBIC so far, this time, were there any new type of risks taken by JBIC?

Tsuchiya The unique aspect of this project was that the period of guarantee provided by Indonesian Government for PLN's obligations under PPA was shorter than the loan period. This means that, later in the loan period, lenders including JBIC had to take PLN's offtake-risk (such as the risk of PLN's non-payment). Since it was the first time for JBIC to take such an offtake-risk without government guarantee in Indonesian IPP (independent power producer) projects, we frequently flew to Indonesia and had an intensive direct dialogue with Indonesian Government to confirm Indonesian Government's intention to support PLN and conducted due diligence on credit worthiness of PLN.

Oishi JBIC's great strength lies in its ability to take such additional risks in order to support infrastructure projects overseas. We have accumulat-

Project Financing for Rantau Dedap Geothermal Power Project in Indonesia Supporting Japanese Companies in Expanding Renewable Power Generation Business in Collaboration with ADB and Other Financial Institutions

The Japan Bank for International Cooperation signed on March 23, 2018, a loan agreement for project finance amounting up to approximately USD188 million (JBIC portion) with PT Supreme Energy Rantau Dedap (SERD), an Indonesian company invested in by Marubeni Corporation, Tohoku Electric Power Co., Ltd., and other sponsors for the Rantau Dedap Geothermal Power Project in Indonesia.

The loan is co-financed by private-sector banks as well as by the Asian Development Bank (ADB). Nippon Export and Investment Insurance (NEXI) provides insurance for the portion co-financed by the private-sector banks. The total co-financing amount is approximately USD539 million.

In this project, SERD will construct, own and operate a geothermal power plant with a gross capacity of 98.4MW in South Sumatra, Indonesia. The

electricity generated from this plant will be sold to PT PLN (Persero), a state-owned power utility in Indonesia, for a period of 30 years.

This loan supports an overseas infrastructure project in which Japanese companies not only participate as investors, but also operate and maintain a power plant over a long period of time, using advanced Japanese technologies. This loan thereby contributes to maintaining and strengthening the international competitiveness of Japanese industries.

In addition, this loan is expected to contribute to the economic growth of Indonesia through a stable power supply, while helping the country to prevent global warming.

* Press release of JBIC, March 28, 2018



Group photo of the project's participants at the ceremony for the project

ed experience in project financing in various fields not limited to geothermal power projects, and we have strong connections with government agencies of host countries. Taking advantage of such strength, I believe that it is important that JBIC takes risks in providing long-term financing for projects without a government guarantee because it may be challenging for private-sector financial institutions alone to take such risks.

— Please tell us about the future prospects.

Anan Indonesia has high potential of use of geothermal power generation and the Indonesian government plans to utilize geothermal energy as one of the main source of power generation. We will continue to proactively support new projects in the country.

Oishi In its “Export Strategy for Infrastructure System” (revised in FY2018), the Japanese government emphasizes the importance of Japanese companies expanding overseas business for infrastructure systems, including the design, construction, operation and management of infrastructure. The government expressed its intention to strategically promote Japanese companies to expand their business in the field of geothermal energy particularly in Indonesia. The government also announced its “Overseas Deployment Strategy for the Power Sector” in October 2017, stating that it will provide financing support for overseas power generation projects through JBIC. JBIC will continue to proactively support projects that are expected to promote Japanese government's strategies, such as the Export Strategy for Infrastructure System and Actions for Cool Earth: ACE 2.0., an initiative aimed at helping developing countries to address climate change.



Tohori Tsuchiya

Division 3 (then)
New Energy and
Power Finance Department I
Infrastructure and
Environment Finance Group



Yohei Oishi

Deputy Director
Division 2 and Division 3
New Energy and
Power Finance Department I
Infrastructure and
Environment Finance Group



Mayuko Anan

Deputy Director (then)
Division 3
New Energy and
Power Finance Department I
Infrastructure and
Environment Finance Group