R&I's Analytical Approach to Sovereigns

(This report is an English translation of the original report in Japanese.)

What are sovereign ratings?

Repayment certainty of a central government's financial obligations

The term "sovereign" is derived from the concept of sovereignty, and in the international financial market usually refers to central governments or central banks that exercise control over the economy on the government's behalf. While R&I assigns an Issuer Rating to the government of each country including Japan, the Issuer Rating indicates the level of certainty that a central government will repay its government bonds or other obligations, and constitutes a system consistent with R&I's ratings of Japanese firms, municipal governments, educational corporations and other entities. Until the latter half of the 1990s, numerous examples could be noted of central banks that raised funds in other countries on behalf of their government, and R&I recognizes such debt as sovereign debt.

Issuer Ratings and individual debt ratings

R&I assigns a rating to sovereigns for the direct financial obligations of a central government including government bonds, government borrowings, short-term government securities and government-guaranteed bonds, and its financial obligations for payment guarantees. The Issuer Rating, which is used as a base, indicates an issuer's overall capacity to repay its entire financial obligation for all of a country's sovereign debt, before factors such the repayment priority of individual obligations are considered. R&I evaluates an issuer by analyzing the country's political and social systems as well as its economic fundamentals, and by also carefully examining the composition of the obligations and previous debt restructurings (rescheduling). Future projections form the basis of the evaluation, which R&I prepares and analyzes from a medium to long-term perspective. For sovereign issuers, ascertaining repayment willingness, by referring to factors such as whether the government has rescheduled its obligations in the past, becomes important when a sovereign's repayment capacity has become extremely weak.

On the other hand, R&I assigns long-term issue ratings for individual sovereign debt issues by evaluating both the probability of default and the level of recovery when a default has occurred. Even though the Issuer Rating is used as a base, when the order of repayment among each obligation is subordinated based on a written agreement or when R&I recognizes distinct differences in the repayment willingness towards individual obligations, R&I may assign a rating that is lower than the Issuer Rating in some cases.

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Ratings for foreign and domestic-Currency denominated debt

Central governments procure funds in order to cover their budget deficits or to refinance borrowings. In the domestic market, funds are normally raised in the domestic currency, but in overseas capital markets governments must sometimes procure funds denominated in foreign currencies. In addition to its power to levy taxes, a country's government has the right to issue currency (seigniorage), and compared to its foreign currency-denominated debt a government's ability to repay domestic currency-denominated debt is generally strong. Since foreign currency-denominated debt cannot be repaid if the domestic currency is not converted into foreign currency, frequently the uncertainty of repayment increases depending on fluctuations in the exchange rate and trends in overseas capital markets.

While R&I assigns ratings to both domestic currency-denominated and foreign currency-denominated debt, as a rule the rating for foreign currency-denominated debt will not exceed the domestic currency-denominated debt rating. Moreover, the difference between the two is rarely large. When the domestic currency is accepted as a means of international settlement, such as the U.S. dollar, Euro or Yen, for countries with an Issuer Rating of AA or higher there is little significance in assigning rating differences according to currency. For countries rated in the A range or lower, in some cases R&I will assign a different rating to reflect, for example, the fact the country might easily be subject to restrictions and faces foreign currency acquisition risk because of exchange system problems or market confidence. A difference larger than two notches, however, is not very practical.

Rating methodology regarding Sovereigns: Evaluation components

Fundamentally, R&I's evaluations are centered on a government's fiscal position and the level of its public debt burden. While a country's fiscal policies are supported by taxes collected from firms, various economic entities and individuals, its economic strength is its tax basin. Based on the cornerstone of the political and social systems, and economic fundamentals (fundamental conditions), future revenues and expenditures are determined by an ability to execute policies, including fiscal and monetary policies in response to economic and business trends in each period,

In its rating process, R&I first closely examines the rudimentary components, then ascertains the certainty of government debt repayment by evaluating the government's economic management skills, fiscal balance and ability to raise funds (refer to concept diagram).

(1) Political and social stability

Political and social stability provides the foundation for a government to conduct appropriate policy operations. R&I will ascertain the existence of systems that ensure a smooth transition of political administrations, the degree of political stability and the certainty of debt succession, irrespective of differences in political and social systems. In this case, the extent to which rule based on law has penetrated the political and social systems is an important factor. If there is

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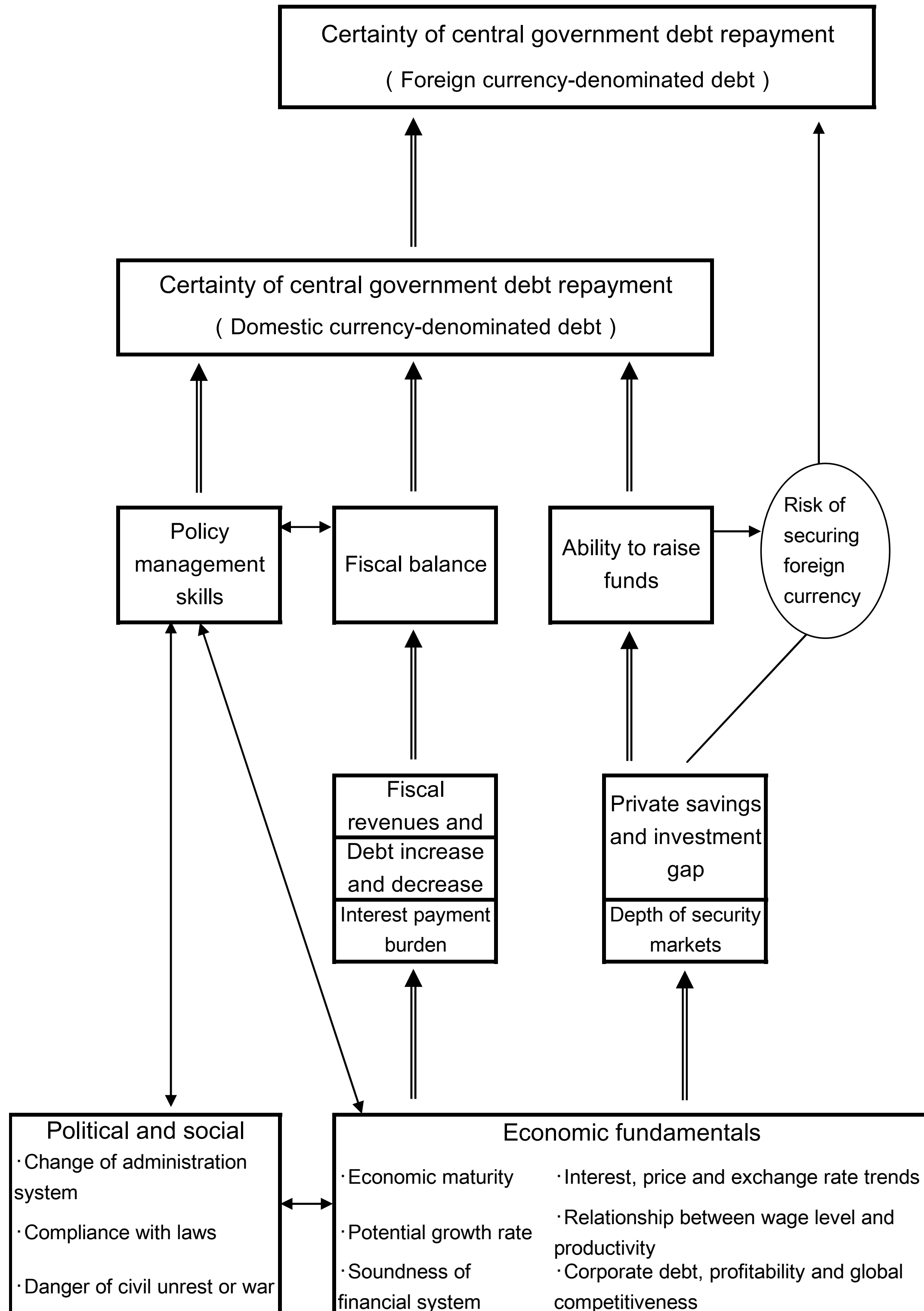
significant danger of domestic disturbances, riots or revolts, this can easily cause economic disruption and a deterioration in government finances and lead to precarious debt service.

Concept diagram of rating methodology regarding Sovereigns



A country in which the processes for transition of political administrations are clearly defined by law and governments are replaced without upheaval based on legal, free elections provides a sense of security. Conversely, a one-party totalitarian state system where leadership succession is uncertain casts a long shadow of uneasiness over a country. Because economic activity is conducted vigorously and the tax collection base is enhanced if the maintenance of a stable business environment and public safety are ensured and a fair court system is in place, the certainty of budget execution increases. Extreme anti-government actions in the form of riots and revolts tend to decrease as well.

R&I also takes into account potential factors such as religious, ethnic or racial conflicts and disparities in wealth that can breed civil unrest and terrorism.

(2) Economic fundamentals

R&I's economic analysis encompasses considerations such as the maturity level and growth potential of the economy, and the health of the financial system.

As an economy develops, industry evolves from primary industries such as agriculture to secondary (mining, manufacturing, construction) and tertiary industries (finance, commerce, real estate), and industries characterized by high added value and a high level of employment emerge. Because these latter industries generate high added value and productivity, the maturity level of an economy is typically reflected in the level of per capita gross domestic product (GDP). Other yardsticks R&I incorporates into its evaluations include the extent to which public services are developed and the creation of a social safety net, the elementary and secondary education enrollment rate, the percentage of students pursuing higher education and the extent to which women play an active role in society.

For growth potential, R&I also looks at the size of the country, its human and natural resources, wealth and its research and development capabilities and technological prowess. To a large extent, these are supported not only by corporate efforts but by high-quality human resources, cooperative relationships among industry, government and academia, and government assistance. These parameters enable a country to maintain its global competitiveness and develop new industries.

Another essential parameter that must be checked is whether a country has been able to create a sound, efficient financial system. As the "blood" of the economy, when money does not circulate smoothly, economic activity is hobbled. In order to provide relief during periods when it appears that the financial system may become unable to fulfill its functions because of a bank management crisis, the government must adopt measures that include an injection of public funds and nationalization, which increase the fiscal burden. Globalization of the financial and capital markets has made it possible for a financial crisis that occurred in one country to spread instantaneously, and the growing number of countries where the financial system has become bloated compared with the scale of the economy has heightened the need to perform comprehensive and more thorough analyses that encompass financial institution capital adequacy

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levels, the supervisory system of financial authorities and the stability of fund procurement structures, including the loan-to-deposit ratio, the proportion of long-term to short-term borrowing and the foreign currency procurement ratio.

(3) Policy management skills

R&I evaluates the ability of a government to simultaneously achieve economic growth and price stability - its ability to ensure stable economic development, so to speak – through skillful use of fiscal and monetary policies as well as industrial adjustment policies. Industrial development policies that strengthen economic fundamentals, and labor and social policies that ensure employment while increasing labor market flexibility, are also indispensable elements for boosting potential growth ability, and R&I checks for the existence of such policies and the status of their implementation.

When inflation takes off, sustained economic growth suffers because it becomes difficult for manufacturers to set appropriate prices for their products or predict demand. On the other hand deflation is also dangerous. Deflation hampers economic activity, depresses tax revenue and produces a real increase in the public debt repayment burden. R&I focuses on whether an appropriate policy that prevents both inflation and deflation, in cooperation with the central bank, has been adopted. In the case of newly developing countries, during periods when savings, capital and technology are insufficient, it is essential to determine whether the government is playing a leading role in economic development through measures such as aggressively allocating resources to promising industries and actively attracting foreign capital, and to verify the status of tax system and investment environment development and improvement.

Labor and social policies have become more important from the standpoint of ensuring national and corporate competitiveness in the face of globalization of markets as well. Specifically, R&I looks at whether legal measures to make labor cost more flexible have been adopted, and whether steps have been taken to provide a social safety net to respond to an increase in unemployed workers. R&I checks to see whether a wage negotiation system comprising labor, the government and management is in place to keep the increase in real wages within the range of productivity improvements.

(4) Fiscal balance

R&I examines issues such as the existence of an effective tax collection system, adherence to fiscal discipline and potential fiscal burden factors by expanding the scope of its analysis to include not only the central government, but also local governments and the social security system. Each country has to some extent a system to transfer funds from the central government to local governments, and to have local governments shoulder their own debt. Basically the government has an obligation to make up the shortfall if public funds are inadequate to maintain the medical, pension and nursing care system.

While the ratio of fiscal expenditures to GDP serves as a yardstick for the scale of

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government spending, it does not always indicate the magnitude of the tax collection base. The tax collection base in countries such as the United States and Japan, for example, is certainly not narrow, despite the relatively small scale of government finance. The level of tax collection efficiency and the flexibility to raise taxes if necessary are also important. Whether a government can gain consent for a tax increase from the public through a bill in the legislature is determined by the parliamentary skills and policy execution abilities of the governing party. Therefore one rating factor R&I verifies is whether there is a mechanism to impose fiscal discipline, such as the rules applied by the European Union (EU). The potential fiscal burden is small if a country has invested sufficiently in its social infrastructure and has nearly completed reforms to its social security system to prepare for the aging of its society, and this can ease further upward pressure on the public debt ratio.

(5) Ability to raise funds

R&I looks at the domestic bond market depth and efficiency, market confidence and the debt management capability of authorities. For a country with a current balance surplus, selling government bonds domestically is not very difficult if the domestic bond market is developed adequately, because there is room to supplement a shortfall with the excess savings of the private sector if government sector savings are insufficient. If a country accumulates a current account surplus and becomes a net creditor, it can maintain domestic long-term interest rates at a low level and keep its government funding costs low because its currency will tend to appreciate. Re-finance risk at maturity also will be minimal.

If domestic savings are inadequate, borrowing funds from foreign countries is the only alternative. Compared with domestic investors, however, foreign investors tend to find it difficult to obtain adequate information. Consequently investors are likely to demand a large risk premium if a country does not continually strive to maintain a dialogue with the market and earn the market's confidence, by actively disclosing information and demonstrating a stance of maintaining fiscal discipline. A country with a history of default, such as a past debt rescheduling, cannot neglect such an effort even less. This demands the creation of a functional treasury management organization, including continuous monitoring of market trends and preparations to raise funds when conditions are advantageous, in order to avoid being shut out from the markets by a sharp rise in the risk premium because of rumors.

If a credit crunch becomes painful, a country can accept emergency funding from the International Monetary Fund (IMF) as a stopgap measure. Like a suddenly ill patient whose life is saved by being rushed into the intensive care unit, this becomes an underpinning factor for a rating. Usually restrictive fiscal management is demanded as a quid pro quo for financing, however, and this sometimes will cause the economy to deteriorate further, R&I must evaluate such borrowers by taking this effect into account.

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Rating methodology regarding Sovereigns: Critical indicators

R&I refers to several statistical indicators to understand a country's economic fundamentals and fiscal balance. Although a number of correlated indicators are included, and the extent to which each indicator is reflected in R&I's ratings vary, the main indicators are described below. R&I also prepares future projections for these indicators.

(1) Gross domestic product (GDP)

This indicator shows the size of the economy. R&I looks at GDP together with the GDP growth rate – in other words, the economic growth rate. Countries with a large economy generally possess diversified, advanced industries, and their economies are stable and have a superior ability to respond to changes in the external environment. By comparison, even if they possess a potent engine (economic fundamentals), countries with a small GDP are subject to large fluctuations during rough economic periods if they are not guided by very skillful maneuvering (policy management), and depending on the circumstances, their economies can be disrupted completely.

(2) Per capita GDP

Per capita GDP indicates the level of economic maturity. If countries with a small population and extensive natural resources are excluded, this indicator rises as industrial structure is upgraded and labor productivity increases. High-income countries enjoy an advanced social security system and well-developed infrastructure, and exhibit a high level of political and social stability. Because of their broadly developed capital markets and sound financial sector, high-income countries have an excellent ability to respond to economic difficulties by flexibly procuring funds from domestic and foreign sources. Many countries that defaulted on their debt in the past were countries with a low national income.

(3) Inflation rate

R&I has adopted the CPI (consumer price index) as an indicator. Consumer prices reflect the real condition of the economy to such an extent that they have been likened to a "thermometer" for economic activity. When a country grapples with a high inflation rate, the political situation can become unstable and the tendency to choose default grows stronger. If a government tightens its monetary and fiscal policies, it can temporarily slow the progress of inflation, but this will depress consumption and investment and impede economic growth. If the gap between economic supply and demand becomes too large, the danger of deflation will increase. As deflationary conditions are prolonged, growth is obstructed and the substantive debt burden increases.

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(4) Current account balance/GDP (%)

This ratio indicates the ability to earn foreign exchange. R&I analyzes the balance of trade showing the import and export of goods, the balance on services such as transportation, travel and insurance, and the balance of income and transfers. Countries with a large deficit include developed countries with excessive consumption, and developing countries that lack natural resources or competitive industries. Even if the current account balance is in deficit, a country can limit the immediate growth of its external debt if the deficit is financed by foreign countries through equity investments or direct investment such as business acquisitions and plant construction. Unlike securities investments, direct investment is less subject to sudden, rapid capital flight, and R&I evaluates such investments positively as a factor supplementing the current balance to a certain extent.

(5) Net external investment position/GDP (%)

A sustained current account deficit means an increase in external debt. A country's net foreign investment position is the value of its total foreign assets minus its total foreign liabilities. A large negative net external investment/GDP ratio indicates susceptibility to changes in exchange rates and overseas financial markets. A rising trend is a warning sign.

(6) Broadly defined money supply (M3) /GDP (%)

The broadly defined money supply is the total amount of bank deposits, and the ratio to gross domestic product indicates the abundance of individual financial assets centered on deposits. Because countries with a high ratio can absorb government bonds directly and indirectly in the domestic market, financing fiscal deficits is easy. Even if this indicator is high, however, a country with extensive deposits from foreign countries cannot rest easily. When necessary, R&I will look at supplementary indicators to determine whether there is a concern banks will experience a liquidity shortage if hit by a sudden flight of capital.

(7) General government fiscal balance/GDP (%)

R&I defines the general government sector as the central government plus local governments and the social security system, and uses this indicator to examine a government's financial position on a consolidated basis. While a high ratio to gross domestic product is a negative factor in R&I's evaluation when a government has a fiscal deficit, it is necessary to ascertain how much of the fiscal deficit is the result of structural factors, and how much is caused by business cycles. R&I verifies whether the government can limit the influence of economic fluctuations on fiscal administration by modifying the proportions of direct and indirect taxes, taking the size of the tax collection base and tax collection efficiency into account as well. R&I also seeks to understand a government's philosophy concerning increases in civil servant salaries, social welfare programs and investment in infrastructure.

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(8) General government debt/GDP (%)

This ratio indicates the weight of the debt burden. A low ratio is always preferable, but even if the ratio is low, however, a country hampered by weak market confidence and a limited ability to borrow will face an elevated danger of default. While debt burden ability can be said to vary depending on the country, caution naturally is required when a country has a heavy burden that is exhibiting a rising trend. R&I will project the future trend based on factors such as the GDP growth rate, the level of interest rates, debt structure including the proportions of foreign currency-denominated and domestic currency-denominated debt and the exchange rate trend.

(9) Net interest payment /GDP (%)

When the interest payment burden is heavy, fiscal inflexibility can become entrenched. In addition to the budget, which is connected to the improvement of citizens' lives, coming under pressure, the government finds itself unable to implement flexible economic stimulus measures. When this ratio rises remarkably, fiscal collapse will become unavoidable. Even when debt ratios are identical, the interest payment burden will differ if the level of interest rates is different. Countries grappling with chronic high interest rates are nearly always countries experiencing strong inflationary pressure, where buyers of long-term debt are scarce and debt repayment terms tend to shorten. As a result, the interest payment burden is heavy, the re-financing amount grows and the country is more easily exposed to market risk.

Rating methodology regarding sovereigns: Comprehensive judgment

As we have already seen, when assigning a rating to sovereigns R&I utilizes a methodology that encompasses a qualitative analysis of several evaluation components, combined with a quantitative evaluation employing statistical indicators. There is a consistent relationship between the evaluation components and statistical indicators, which represent two sides of the same coin, and a strong aspect in which the former are supported by the latter. Merely reflecting several indicators in the evaluation according to a set proportion is not sufficient, however, because the size of each country, including the scale of its economy, and the stage of political and social system development, varies with each case. In some instances the evaluation will differ even though identical indicators are used, depending on the country. Therefore it is necessary for R&I to make a comprehensive judgment, including projections of the future, from both a qualitative and quantitative perspective.

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