

Future Outlook of Japan-US Strategic Alliance

Part II: Economic Issues

This is Part II of the report commissioned by the Japan Economic Foundation on the future of the Japan-US strategic alliance. The second and final piece of the report deals with economic issues following Part I (political issues) carried in the Sept./Oct. issue of *Japan SPOTLIGHT*.

By Kazumasa IWATA President, Economic & Social Research Institute
Shujiro URATA Professor, International Economics, Graduate School of Asia-Pacific Studies, Waseda University
Sahoko KAJI Professor, Faculty of Economics, Keio University
Kyoji FUKAO Professor, Institute of Economic Research, Hitotsubashi University
Masakazu TOYODA Advisor, Japan Economic Foundation

Policies for Expanding Domestic Demand

(1) Perception of Current State

The latest 14th cycle of economic expansion (from February 2002 to October 2007) represents an export-led growth pattern. Specifically, consumption, which had accounted for 60% of Japan's gross domestic product (GDP), contributed only 30% of GDP growth while 60% of the growth was brought about by exports.

It is only natural that the Japanese economy was adversely affected to an unprecedented degree by steeply sagging exports amid the global economic downturn because it had of late relied excessively on exports as mentioned above. The unusually sharp production cut-back, which started late last year, reflects the Japanese economy's overdependence on exports (*Chart 1*). Such a production plunge is not seen in the United States and European nations where the financial crisis emerged, but it has become a common phenomenon among export-led Asian economies such as South Korea and Taiwan as well as Japan.

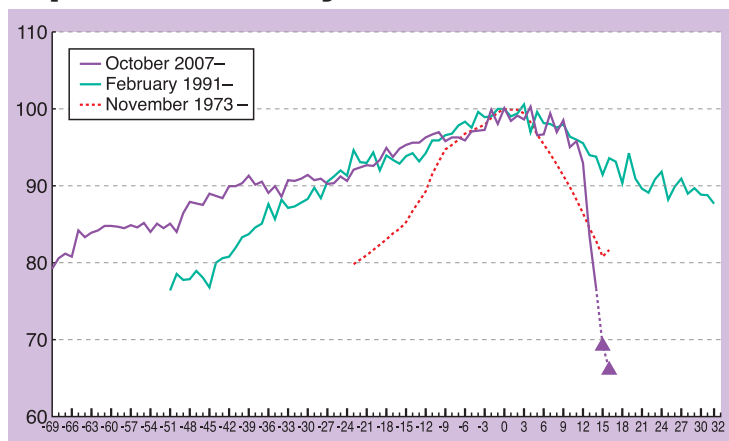
(2) Short-term Response

Given that consumption represents a decisive factor for national welfare, expansion of domestic demand should be driven primarily by expansion of consumption.

On how to boost consumption, two factors should be taken into account: (1) It seems that many households are tightening their purse strings amid persistent concern about the future (anxiety about employment and old age), and (2) demand for numerous goods and services available today has become saturated while demand in new areas has not fully blossomed.

Based on the viewpoint above, among what should be construed as strategically important areas where consumption should be boosted is the health and long-life area aimed at creating a bright society where the elderly will be able to enjoy their

CHART 1
Trends of production index in past business cycles

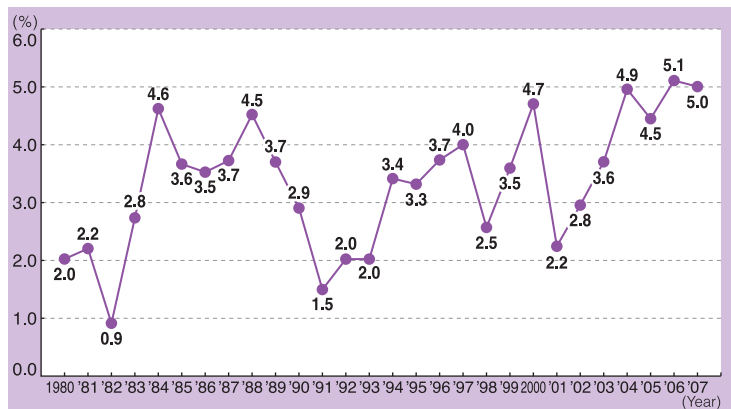


Source: Compiled from "World Economic Outlook," IMF

lives in hope and safety. Moreover, growing awareness of the global environmental issue indicates the growth potential of an area related to the low-carbon revolution. Other strategically important areas include agriculture, in which Japan needs to show its hidden strength for the revival of the moribund sector, and fashion and other cultural fields. These areas have already helped create demand for new products and services, ease concern about the future among Japanese citizens and boost employment opportunities. They have thus contributed to removing the bottlenecks in Japanese economic society as mentioned above. Furthermore, all of these areas are viewed as necessary for Japan's future economic growth and for its contribution to the world economy. They are essential not only to tide over the current recession in the near future but also to attain goals under a long-term growth strategy. On top of that, all these areas represent domestic demand-led industrial sectors. Hence, growth in these areas helps smoothly convert Japan's industrial structure to a domestic demand-oriented one. Specific policy measures include:

CHART 2

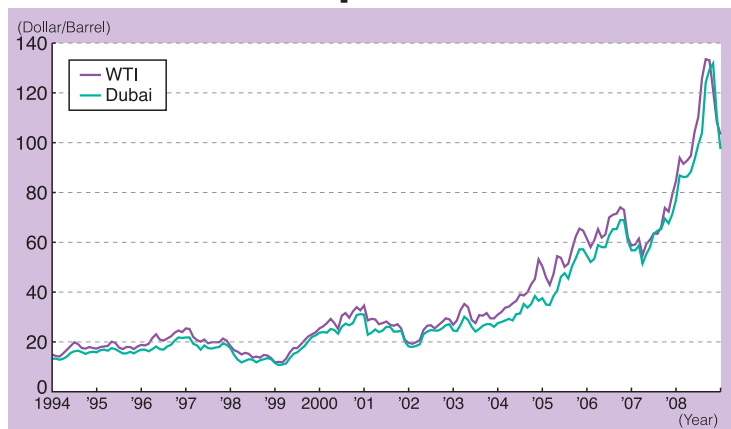
Trends of inflation-adjusted world economic growth rates



Source: Compiled from "World Economic Outlook," IMF

CHART 3

Trends of crude oil prices



Source: METI

- a** Health/long-life area – Exploitation of iPS cells and other regenerative medical techniques; development of innovative pharmaceutical products and medical equipment; development/spread of information technology (IT)-based services such as remote care of solitary old people and life-support robots; improvement of earthquake-resistant structures that can withstand quakes for as long as 100 years; construction/spread of homes equipped with solar panels (proposed last year by then Japanese Prime Minister Yasuo Fukuda).
- b** Areas related to the low-carbon revolution – Spread of electric vehicles; introduction/expansion of photovoltaic power generation; development of technology for rechargeable batteries, an intelligent transport system (ITS), etc.
- c** Agriculture/culture and other fields where Japan is expected to show its underlying strength – Revitalization of agriculture and creation of regional job opportunities through region-wise collaboration among the agricultural, commercial and manufacturing sectors; planning of events for dispatching "Japan-brand" content, animation, food and fashion to overseas markets.

(3) Long-term Response

The implementation of policy measures for expanding domestic demand is projected to result in further expansion of fiscal deficits. For this reason, it is an urgent task to consider how to deal with it. What is necessary is to consider reforming the taxation system. Specifically, a raise in the consumption tax after economic recovery may be considered in this context. What is more, technological innovation and reinforced international competitiveness are seen as essential for long-term economic growth. Therefore, Japan needs to develop new products and nurture new industries as noted in (2) and at the same time ease corporate tax burdens, which are regarded as heavy relative to those in other countries and as impeding technological innovation and international competitiveness.

Response to Financial Aspects, Including Course of Action for Tighter Financial Regulations & Scrutiny

(1) Perception of Current State

The accelerated growth of the world economy since the turn of the 21st century (Chart 2), combined with accommodative monetary policy adopted in and after 2000, generated excessive liquidity, with surplus funds flowing in mortgage loans into the housing market (emergence of the bubble). In 2007, the housing bubble collapsed with the result that house prices tumbled, prompting hot money to head for primary commodities. In the first half of 2008, crude oil prices soared (Chart 3) as a consequence, reflecting the bubble economy worldwide. The current financial and economic crisis stems specifically from a combination of financial imbalance, global imbalance and nothing less than a failure of micro- and macroeconomic policies.

The financial imbalance came up especially as an increase in US debts. In the United States, the ratio of private-sector debt to GDP doubled in the last 25 years to reach as high as 300%. The overheating of the housing market was fueled by the appearance of new financial products such as collateralized debt obligations (CDOs).

The global imbalance is inextricably linked to the money flow mentioned above. The United States, Britain and other industrialized nations were borrowers while not only Japan and China but lower-income countries were lenders as well. These imbalances were created and spurred by a failure of both micro- and macroeconomic policies.

- a** The failure of microeconomic policy is attributable to inadequate financial scrutiny by regulatory authorities. Bank for International Settlements (BIS) regulations helped boost so-

called off-balance deals. The expansion of such transactions was spurred in part by the misperception that the diversification of risks based on securitization helps stabilize financial markets and in part by inadequate regulations arising from overconfidence in market functions. The housing boom gathered steam partly due to the fact that no licenses are required for selling home mortgages. The financial crisis highlights the need for regulations prompting the private sector to disclose information and manage risks. Economic activities will shrink should economic entities take no risk. But if economic entities do not precisely grasp risks with the result that they take too many risks, then a financial and economic crisis similar to the current one would emerge. The disclosure of information and assessment of disclosed information with the aim of precisely grasping risks turned out to be inadequate this time.

- b** On macroeconomic aspects, the United States did not take effective policy measures aimed at reducing its current account deficit. To cut back on current account deficits, a weaker US dollar is desirable. Meanwhile, a strong US dollar is desirable for the United States to maintain a surplus in the capital account, which is the opposite side of the current account deficit. Assuming the United States judges that its economy should be led mainly by the manufacturing sector, the current account deficit then should be whittled down. If the United States thinks its economy should be driven largely by the financial sector, the capital account surplus should be maintained. US policymaking authorities adopted the latter judgment.

The failure of monetary policy can be explained by either of the following two interpretations. One is that financial markets became unstable because financial authorities did not tighten their grip on credit in light of stable prices. Theoretically, it is impossible for monetary authorities to achieve multiple policy goals such as stabilizing both commodity prices and financial markets simultaneously with monetary policy alone. The other is that the authorities eased credit to keep financial markets buoyant and that the excessive easing of credit resulted in a loss of price stability (and led to deflation).

Since the collapse of Lehman Brothers in September 2008, “contraction” has been seen in financial intermediation, including trade financing, which provides blood to the economy. As a result, world trade has dwindled. The stagnation in economic activity, coupled with the downturn in stock prices, exacerbated balance sheets at financial institutions, leading to further contraction in financial intermediation in a vicious cycle.

(2) Short-term Response

The scope of both monetary and fiscal policies should be expanded, with the role of financial regulatory authorities to be reinforced.

- a** On monetary policy, what is needed first and foremost is the recovery of the function of financial intermediation. Monetary authorities should not only keep interest rates at extremely low levels but also urge banks to expand lending. Currently, interest rates are so low that they have lost the function of signaling commodity price trends. The most urgent task facing the authorities is to precisely grasp the balance of “toxic” assets at banks and remove them from their balance sheets as quickly as possible.
- b** As for fiscal policy, its role should be expanded with an eye to rebuilding debt-ridden public finances after developing a policy outlook in a medium-term perspective.
- c** One point of contention in reinforcing the role of financial regulatory authorities is to establish a clearing house aimed primarily at sorting out the current state of credit default swap (CDS) deals, which are not subject to any regulations because such deals are done through negotiations. It is necessary to ensure that prices of financial instruments will correctly reflect their value when they are settled. Subprime loans and many other debt obligations have been incorporated into financial products in a complicated mixture. Since the emergence of the financial crisis, markets for these products have virtually disappeared. Hence, it may be no easy task to set prices that precisely reflect their value in the absence of their markets. But there is no choice other than to have deals resumed by pricing such financial instruments at levels that are convincing enough to reopen transactions. This will not be realized without intervention or support from public organizations.

In order for private economic entities to manage risks, it is necessary to give them enough incentives to disclose information and at the same time create an environment in which disclosure is possible. For this reason, it is seen as constructive for monetary authorities to establish a clearing house. What is of prime importance is how best to correctly assess risks. In this context, what to do with the question of supervising credit-rating agencies should be discussed.

(3) Long-term Response

In the long term, the global imbalance should be rectified. While it is desirable for Japan and China to expand domestic demand, it is a different matter whether it is desirable or achievable for US savings and investment rates to change so drastically that the United States becomes a country with current account surpluses (a net capital-exporting country) while Japan and China become countries with current account deficits (net capital-importing countries). Theoretically, expansion of fiscal deficits has the effect of expanding current account deficits in a country if other economic conditions remain intact.

The rectification or change of the global imbalance can mean a

shift of industrial structure.

During the current financial and economic crisis, domestic demand-oriented industries have hired increased numbers of people fresh from school, with dismissed temporary workers reemployed in such industries as agriculture and nursing care. This indicates things are moving in the right direction in the aspect of shifting industrial structure. But wages need to go up in order to boost not only supply but also demand. To this end, productivity in those industries needs to be improved.

It is indeed important to implement short-term, specific policy measures so as to move out of the crisis. In the longer term, however, it is also a matter of importance to avoid recurrence of crises. Seeds of a next crisis are already in place in the process of recovering from the crisis since expansionary fiscal and monetary policies themselves involve the danger of inviting a fresh crisis. Therefore, the authorities should always bear in mind the need to improve the country's fiscal balance and also to nip in the bud inflationary pressure stemming from unprecedentedly large-scale credit expansion worldwide. Credit is expanding on a global scale, with barriers to fund flows posed by national borders on the decline. Under such circumstances, monetary authorities will find it all the more essential to promote international cooperation when they try to bring monetary policy back to normal.

What should be done by all means is to keep countries around the world from resorting to protectionist actions in disarray.

Building Regional Economic Frameworks (APEC, East Asia)

(1) Perception of Current State

East Asian countries have sharply expanded their trade volume and direct inward investment since the mid-1980s. Behind the move was the buildup of regional production networks in East Asia by multinational corporations. In concrete terms, a number of electronics firms have begun to produce parts in Japan and newly industrializing economies (NIEs), send them to China and ASEAN countries for assembly into products, and export them to the United States and Europe. As a result of such a business strategy, the flow of trade has come to assume a triangular structure – components are exported from Japan and NIEs to China and ASEAN countries while final products are exported from China and ASEAN countries to the United States and Europe. This triangular trade was the driving force behind the region's economic growth.

The yen's sharp appreciation in the latter half of the 1980s and the global economy's steady growth after that contributed to a sharp expansion in trade and investment. On the other hand, products made in East Asian countries have come to assume a competitive edge over those manufactured in the rest of the

world. This led to an expansion in exports. Meanwhile, Japanese businesses, faced with deterioration in competitiveness of their domestically produced goods due to the yen's appreciation, expanded direct overseas investment and shifted their production bases to East Asian countries.

The market mechanism gained importance after East Asian countries liberalized trade and investment. In response, multinational corporations strengthened their business activities. (Market-led regionalization)

Many free trade agreements (FTAs) and economic partnership agreements (EPAs) have been concluded actively, mainly due to a failure of multilateral talks for freer trade. In East Asia, ASEAN members established the ASEAN Free Trade Area (AFTA), a regional free trade agreement, in 1992. Japan and Singapore concluded an FTA shortly after the world moved into the 21st century. Many bilateral and multilateral FTAs were concluded later. A wider-scale FTA covering the whole of East Asia or the Asia-Pacific region is still in a conceptual stage, however. Specifically, there are currently several proposals to conclude regional FTAs or EPAs. One is an East Asian FTA covering the 10 ASEAN members, Japan, China and South Korea. Among other proposals are a Comprehensive Economic Partnership in East Asia (CEPEA), which encompasses the 10 ASEAN members, Japan, China, South Korea, India, Australia and New Zealand, and a Free Trade Area of the Asia-Pacific (FTAAP) to be formed by member states of APEC. Feasibility studies on those proposals are currently under way. Under such circumstances, some APEC member countries have come to conclude FTAs that aim for a greater level of trade liberalization than that of conventional ones. At present, the Trans-Pacific Strategic Economic Partnership Agreement (TPP), popularly called P-4 and signed by Singapore, Brunei, New Zealand and Chile, has come into force. Some other countries, such as the United States, Australia and Peru, have expressed intentions to join it.

Japan has failed to take a leading role in concluding FTAs or EPAs due mainly to its difficulties to liberalize the agricultural sector. As the WTO talks have hit a snag, trade liberalization through FTAs encompassing broader regions, coupled with farm-sector reform, will contribute to Japan's economic prosperity in the future and also expand the country's presence and influence in Asia and in the Asia-Pacific region. (Institution-induced regionalization)

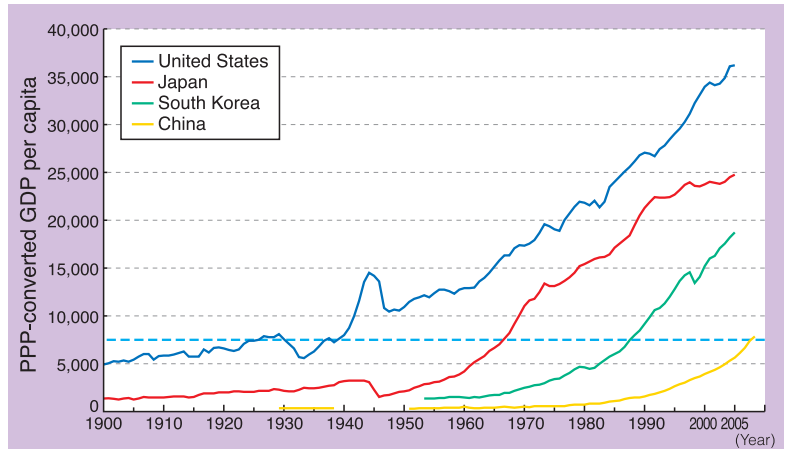
(2) Long-term Response

What is important in building up a regional economic framework is, among other things, to take a long-range perspective. An FTA or an EPA is the next best to WTO-led liberalization to promote trade and direct investment that will help achieve long-term high economic growth in East Asian and Asia-Pacific countries and eventually in the rest of the world as well. It is possible

CHART 4

Per-capita real GDP in purchasing power parity

(US dollar in 2000 constant prices)



Notes: South Korea joined OECD in 1996. Japan joined OECD in 1964, and accepted terms of Article 8 of IMF Agreement to liberalize trade and capital transactions.

Source: Data before 1950s inserted upon calculations from growth rates from Angus Maddison (2003) and "The World Economy: Historical Statistics" (Paris, OECD). Penn World Table 6.2 for data since 1950s. Data for China since 2005 inserted upon calculations from per-capita real growth rates.

for Japan to step up East Asia's economic prosperity not only by promoting the CEPEA scheme by the ASEAN-plus-six states to facilitate East Asia's trade and investment liberalization but also by making use of its economic cooperation programs effectively.

Trade and investment liberalization should be realized under the lead of cooperation with the United States in the Asia-Pacific region. Japan should contribute itself to building up a framework that will lead to expansion of the productive flow of human resources, products and capital.

Liberalization of Japan's agricultural sector is the key to materializing free trade and investment in Asia and the Asia-Pacific region. Liberalization of the farm sector will, in a medium- to long-term perspective, help promote effective utilization of limited resources, such as labor, capital and land. Then, it would produce benefits in the form of economic growth. Notably, given the shrinking population of children and rapidly aging society in Japan, the importance of effective utilization of resources must be emphasized. Japan should take time to liberalize its farm sector in order to minimize short-term damage from liberalization. Japan is allowed to spend 10 years, under WTO rules, to gradually liberalize its farm sector. However, Japan needs to work out a time schedule for farm-sector liberalization to make sure it is implemented. In the event of damage to employment from a sharp increase in imports of farm produce, Japan should take safeguard measures that are permitted under WTO rules. It is also important to provide temporary income guarantees and offer capacity-developing education and training programs for those who are adversely affected by liberalization of the farm sector. A swift structural reform of the agricultural sector is also important. In so doing, a full picture of reform should be painted before implementing it because reform will cover a wide variety of fields, such as land and taxation.

After taking the steps mentioned above, Japan will be able to play a leading role in concluding an FTA or EPA framework in East Asia and APEC.

(3) Short-term Response

The following is a short-term approach consistent with the long-term response:

- a Conclusion of a Japan-Australia FTA currently under negotiation.
- b Resumption of talks on a Japan-South Korea FTA.
- c Launch of talks on a Japan-US FTA.
- d Japan-US cooperation to reactivate APEC (Japan to assume the chair in 2010 and the United States in 2011).
- e Introduction of the US Trade Adjustment Assistance measure to Japan's agricultural sector to activate FTA talks with its

trading partners; shift in Japan's agricultural protection from border measures to fiscal ones.

Buildup of Asia-Pacific Standards & China's Participation

(1) Perception of Current State

In the course of rapid economic globalization, developing countries and former East-bloc countries are not asked to adapt their economic and social systems to international standards immediately when they seek to enter the global market, even though there are some exceptions. (IMF and WTO rules functioned to some extent, however.) This served as a driving force to promote economic globalization rapidly, but at the same time brought about the so-called "multi-polar" phenomenon in which a number of economic powers with different economic and social systems have emerged.

(In the pre-globalization world, middle-income countries were asked to adapt their economic and social systems to international standards in accordance with the levels of their economic development. Japan, for example, joined the OECD in 1964, pushed ahead with capital and trade liberalization, and strengthened international cooperation in various fields, such as energy and overseas assistance.)

China's per-capita GDP has already risen close to the \$8,000 mark (at 2000 prices) in terms of purchasing power parity, topping Japan's 1964 level of \$6,500 (Chart 4). But China is relatively slow in undertaking international cooperation. (China, for example, is not an OECD member, and has not participated in programs to share macroeconomic projections or economic policy information, stockpile oil under the IEA's initiative, and achieve international collaboration for high-quality overseas assistance through the OECD Development Assistance Committee.)

(2) Long-term Response (a long-term approach is the focal point because of the nature of the theme)

Japan and the United States, working together with other advanced Pacific-rim countries such as South Korea, Singapore, Canada, Australia and New Zealand, should take leading roles in establishing new international standards, mainly in the Asia-Pacific region, and also urge newly emerging economies to participate in that process in order to prevent possible international friction or conflict caused by the “multi-polarization” phenomenon.

Not only the economic aspect, but a wider range of fields should be covered, such as the environment, health and sanitary affairs, food safety, human movements, prevention of crime and terrorism, and information disclosure by governments and businesses. (Europe’s experience will be a useful example.)

To showcase benefits of such regional assimilation, it is important to establish, for example, a new system which will allow a country to freely export to giant markets in advanced countries if it clears tight food safety standards.

Participation in such Asian or Asia-Pacific standards will bring about major benefits to China. The country is currently in tough times in that it needs to break away from the old growth model (peculiar to a developing country) that uses rural human resources and plays down the reality of limited resources and environmental problems and shift to an advanced-country type of growth that is based on effective distribution of resources and technological innovation. For a successful transition, China will be required to ensure the independence of its legislature, implement laws strictly, disclose and share information, make sharp distinctions between government and private-sector activities, set up criteria for environmental, sanitary and food safety matters and implement them strictly, materialize a well-balanced combination of regulations and proper competition in the financial market, and build up safety nets. China’s participation in the Asia-Pacific standards will pave the way for the country to achieve these reforms.

(3) Short-term Response (consistent with the long-term approach to short-term issues involving China)

China has found it difficult to maintain export-led growth due to slumping exports amid the global economic recession. China needs to maintain employment by expanding private-sector consumption through fiscal policies and improvement in social security schemes. Such a shift from export-led to domestic demand-led growth will be accompanied by a switchover of a vast amount of resources, from the manufacturing sector to non-tradable fields such as construction and services. It could cause major friction to hit mainly the manufacturing sector. However, it is essential to wipe out global imbalances. China

should not take such policies as strengthening import barriers, increasing export subsidies, or intervening in the foreign exchange market to keep the yuan weak against other currencies. It is important for both Japan and the United States to urge China to achieve a shift to domestic demand-led growth as mentioned earlier.

Work on Japan-US FTA

(1) Perception of Current State

There have long been calls in Japan, mainly from the industrial sector, to conclude a free trade agreement with the United States. Advocates of such an FTA single out the following as main reasons: (1) a bilateral arrangement is necessary in line with the importance of Japan-US relations; (2) a new framework is necessary to settle various economic issues between them in package deals, such as the US Free and Secure Trade (FAST) program and visa acquisition; (3) South Korea has already concluded an FTA with the United States and Japan needs to avoid disadvantages coming from the absence of a Japan-US FTA; (4) the two countries should set out model norms toward the rest of the world in such fields as patent cooperation exemplified by the so-called Patent Prosecution Highway; and (5) Japan and the United States are outside a network of FTAs governing the supply chain in the Asia-Pacific region.

Japan and the United States should both display greater leadership to reject protectionism and maintain the free trade mechanism under the present dire global economic situation. Therefore, the two countries should strengthen cooperation for early conclusion to the WTO Doha Round and at the same time push forward their FTA talks more proactively. Agriculture poses a major bottleneck in the Japan-US FTA talks. Japan should seek to establish an agricultural structure capable of coping with progress in internationalization while pursuing sweeping reform of its farm sector from the viewpoint of agriculture as an industry, national food security, and regional policies. Japan should promote the FTA talks with the United States from that perspective.

(2) Short-term Response

The FTA arrangements that Japan and the United States are both committed to currently are the FTAAP and the TPP. The two governments should take an active initiative to materialize those schemes.

As far as the Japan-US FTA is concerned, one idea is to study concluding an individual FTA that targets particular categories only, say services and investment. This could pave the way for the two countries to avoid clashes over agriculture and at the same time promote talks on a wider-based FTA arrangement.

(3) Long-term Response

In the medium to long term, Japan should aim at concluding a high-level FTA with the United States that can be a global model while trying to strengthen its agriculture and make it capable of coping with progress in internationalization through sweeping reform of its agricultural administration.

It is a good idea to (1) incorporate national security-linked affairs into such a high-level Japan-US FTA and to (2) aim at concluding an economic integration agreement that will cover a broad range of institutional and regulatory coordination in such fields as innovation, the environment and safety that go beyond a conventional EPA or WTO framework.

Response to Global Warming & Resource/Energy Shortage

(1) Perception of Current State

(i) Global Warming

UN-led anti-global warming talks are currently in confusion. The reasons are mentioned below. As the United States has joined the talks in earnest under the new Obama administration, debate in the anti-global warming talks is expected to get into full swing.

There are three factors behind the confusion.

- a** Advanced countries have differed over two major methodological approaches, leaving no prospect of convergence between them in sight.

One is an EU-advocated top-down approach calling for a uniform target to be set for 2020 to cut greenhouse gas emissions without taking account of each country's specific situation or technological availability. This approach calls for a 25%-40% reduction from 1990 levels, based on an IPCC scenario to stabilize atmospheric concentrations of greenhouse gases at 450 ppm.

The other group argues for a bottom-up approach under which maximum emission cuts made possible by the spread of applicable technology are added up. Japan proposes this approach, with Russia, Canada and Australia taking a similar stance.

- b** Developing countries are reluctant to commit themselves to cutting emissions.

Developing countries argue that it is the advanced countries that have so far accumulated greenhouse gases and that they should first discharge their responsibilities. They refuse to join an agreement reached by advanced countries to set a target of halving emissions by 2050.

- c** Countries have a different understanding of the "cap and trade" program to reduce greenhouse gas emissions, "sleeping in the same bed and having different dreams."

The biggest difference between the bottom-up and top-down approaches is how to set a cap on the amount of greenhouse gases that can be emitted, and not trading in emission credits, which is no more than a means. The EU proposes an auction of emission credits. While the EU proposal relies on the pricing mechanism, there are calls in the United States for an auction system with a safety valve – a cap on the price of emission credits rather than on the amount of emissions. This is close to something like a carbon tax. Many in Japan argue that voluntary goals are enough and that emission credit trading is not necessarily essential.

(ii) Resource/Energy Shortage

Prices of natural resources and energy are unstable, continuing to skyrocket until the summer of 2008 before plummeting in the fall following the collapse of Lehman Brothers. Crude oil prices plunged to around \$40 per barrel from more than \$140.

Stability in the supply and pricing of natural resources and energy is essential to achieve healthy economic development and resolve the global warming issue.

(2) Long-term Response

Neither global warming nor resource/energy shortfalls can be resolved in a few years. While pursuing a long-term scenario of solutions to these problems, we should seek to put short-term measures in perspective. Long-term response should therefore be mentioned here.

(i) Global Warming

The Obama administration has pledged an 80% reduction in US greenhouse gas emissions by 2050. But it is definitely clear that a cut of 50% or 80% cannot be achieved with the current level of technology available.

It is important to work out, through cooperation between Japan and the United States, a scenario for technological development as listed below, realize it, map out another scenario for distribution of the technologies developed to other advanced countries and developing nations, calculate necessary costs, establish technological transfer and fundraising schemes, and implement them.

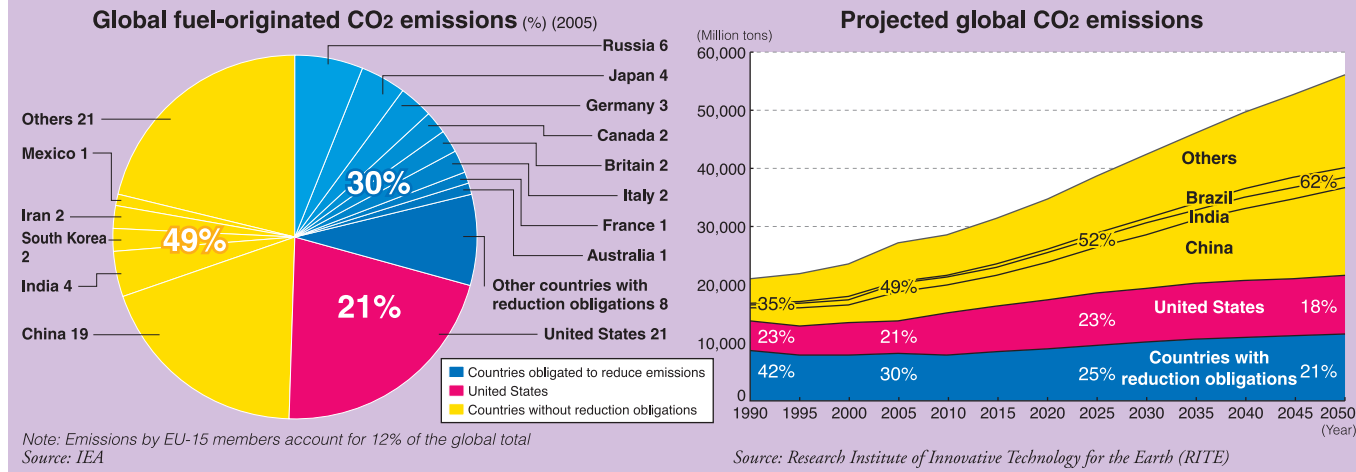
Priority should preferably be placed on the following technological projects.

- a** Highly efficient energy-saving technologies.
- b** Safe and highly efficient advanced nuclear energy.
- c** Innovative new energy sources such as solar/wind power and biomass.
- d** Clean energy-powered motor vehicles, including electric cars.
- e** Technologies to recover and stock CO₂ such as CO₂ capture and storage (CCS).

CHART 5

Coverage by Kyoto Protocol

- The combined amount of CO₂ emitted by countries obligated to reduce greenhouse gas emissions under the Kyoto Protocol accounts for only 30% of all CO₂ emissions in the world.
- The United States, China and India, all major CO₂ emitters, are not obligated to reduce emissions.
- The protocol is ineffective because no obligations are imposed on emissions by developing countries, and global emissions would increase by 40% even if advanced countries required to reduce emissions cleared their targets.



(ii) Resource/Energy Shortage

Japan and the United States are required to cooperate in pursuing the following agenda in addition to developing and implementing clean energy technologies:

- Promoting development of traditional natural resources and energy sources.
- Using multilateral frameworks such as the Joint Oil Data Initiative (JODI) concerning energy prices and promoting dialogue between energy-producing and -consuming nations.
- Tightening and utilizing antitrust legislation to prevent the natural resource/energy industry from building up oligopoly and resorting to useless price hikes.

(3) Short-term Response

(i) Global Warming

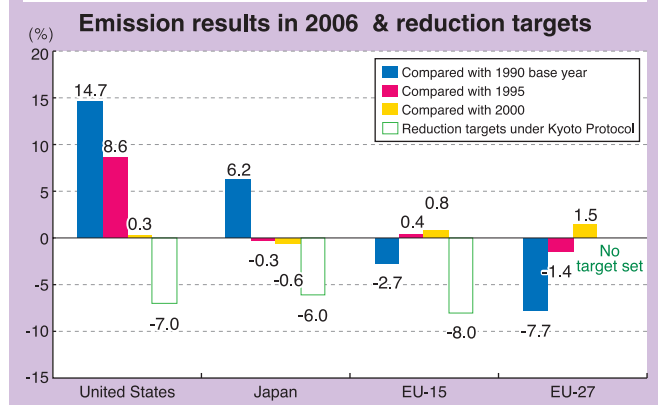
What is most important in building the next framework of anti-global warming action is to ensure the participation of all major economies, including the United States, China and India.

There remain only a little more than 10 years until 2020. In light of this tough reality, Japan and the United States need to cooperate in projecting industry- and country-wise amounts of greenhouse gas emissions which may be reduced through the spread of technologies that can be put into practical use in the coming five years or so. Such projections are expected to help calm the present turmoil in emission reduction talks. It is constructive for the two countries to cooperate, based on the projections, in working out emission reduction targets for advanced countries and also helping major developing countries such as

CHART 6

Effects of base-year selection

- A shift in the base year from 1990 to 1995/2000 would bring about major changes to each country's reduction target. (The 1990 base year is markedly advantageous to the EU.)



Source: United States = "United States Inventory of GHG emissions & sinks," EPA
Japan = Emission results in 2005, Environment Ministry
EU = GHG inventory 1990-2005, European Environment Agency

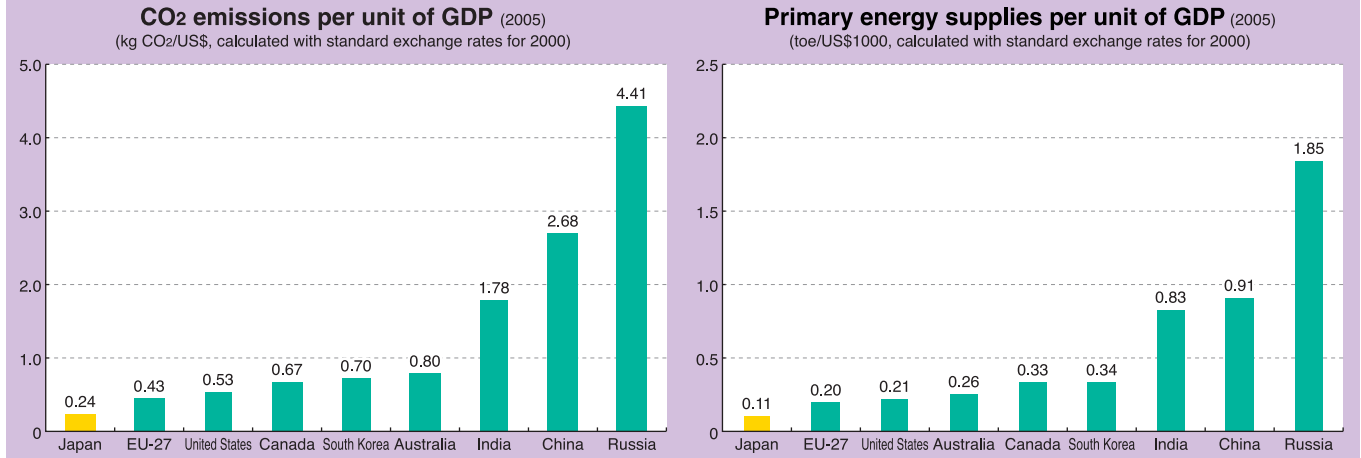
China set targets to improve their basic units of emissions. Japan and the United States are required to cooperate in making use of the sectoral or bottom-up approach. In particular, they need to cooperate in laying out schemes of technological transfer and financial support for developing countries.

It is indispensable to ensure that these actions based on the common but differentiated responsibilities of advanced and developing countries are on course toward achieving the target of

CHART 7

Fairness of targets set under Kyoto Protocol

- Japan has achieved the world's top-level energy-efficient, low-carbon economy.
- The Kyoto Protocol did not take account of past energy-saving efforts or potential reductions, setting targets in a top-down formula of 6% for Japan, 7% for the United States and 8% for the EU.

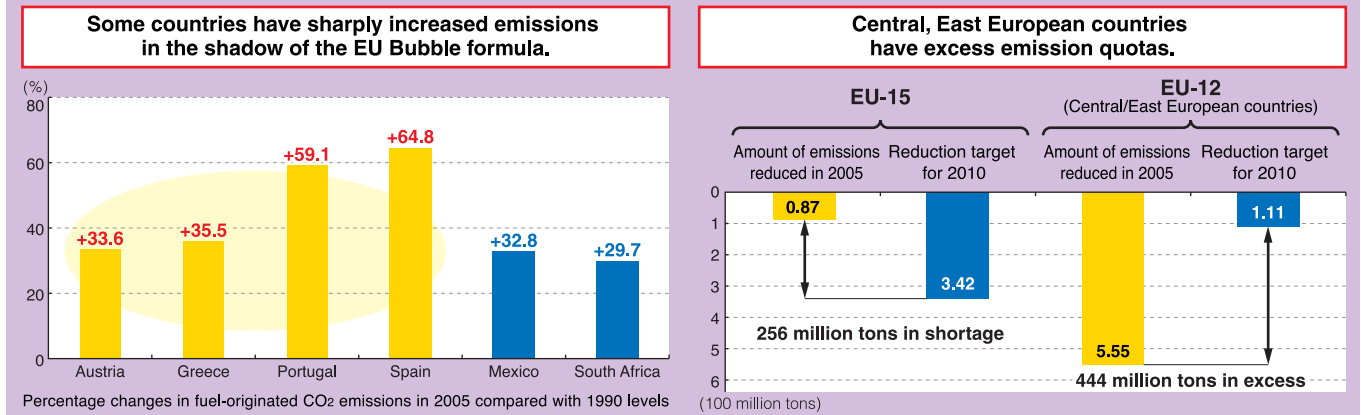


Source: "CO₂ emissions from fuel combustion 1971-2005," IEA (2007)

CHART 8

Effects of "EU Bubble"

- The European Union (EU-15) committed itself to reducing the bloc's overall emissions under the Kyoto Protocol, which allows its members to fulfill the EU target jointly through differentiated commitments by member states. This is referred to as the "EU Bubble." Under the EU formula, Germany and Britain reduced emissions taking advantage of special economic factors in the former East Germany and fuel conversion from coal to natural gas while some other EU members increased emissions sharply.
- In addition, new EU members from Central and Eastern Europe (EU-12) have excess emission quotas that effectively do not require them to make efforts to reduce emissions. The EU is expected to receive more benefits if the bubble formula is accepted in the next anti-global warming framework.



Source: METI

halving emissions by 2050.

As a rough guide to the sectoral/bottom-up approach, it will be one option to take into account the size of the present basic emission units (reduction potential), marginal abatement costs, GDP and national shares in the global population.

(ii) Resource/Energy Shortage

Japan and the United States need to pick feasible items from among the above-mentioned measures and launch cooperation as early as possible.

It is necessary to implement short-term measures steadily from a long-term perspective based on the perception that anti-global warming measures and response to resource/energy shortfalls represent two sides of the same coin. (Charts 5-8) JS