

VIEWPOINT

Beyond the Kyoto Protocol

The shopping districts here in Tokyo are already sporting their Christmas lights, indicating that the year-end sales season is upon us. It has been quite a year for Japan in terms of the weather and other natural phenomena, including the long and extremely hot summer, the series of severe typhoons, and the devastating earthquake that struck Niigata Prefecture last month. Through all this the economy has kept expanding, but the pace of growth definitely seems to be slowing, and the disruptive impact of the typhoons on business shipments has been clouding the message of key economic indicators.

Abnormal weather has been occurring not just in Japan but in places all around the world. Though the scientific evidence may not yet be adequate to make a clear judgment, we find ourselves wondering if global warming is at least partly to blame. It was in this context that we heard the news that Russia recently ratified the Kyoto Protocol, meaning that it will go into effect next February 16.

Under this agreement the industrial nations as a whole are supposed to cut their emissions of carbon dioxide and other greenhouse gases. But some important countries, notably the United States and Australia, are refusing to ratify the protocol.

Another serious problem is that it places no restraints on the emissions of the developing countries, including those that are expected to be major centers of growth in the years to come, such as Brazil, China, and India. As of 2002, incidentally, the United States accounted for 23.1% of the world's total carbon dioxide emissions, followed by the European Union, 13.0%; China, 11.5%; Russia, 5.9%; Japan, 4.9%; and India, 4.4%.

Under the Kyoto Protocol Japan is required to reduce its average emissions in the period from 2008 to 2012 to 6% less than the level of 1990. Since emissions are currently running about 8% higher than in 1990, this means they will need to be cut by approximately 14%. This will be no easy task, particularly since our country has already implemented energy-saving measures on a large scale. It will require additional efforts in various areas, including industry, transportation, and the household sector.

The Kyoto mechanism also allows trading in greenhouse gas emission rights. This is of interest to countries like our own, which may find it impossible to meet their targets otherwise. And it may well offer a major opportunity for integrated trading companies like Sumitomo Corporation with busi-

ness networks spanning the globe.

The sharp rise of the price of oil is a source of concern in terms of its economic impact. But Japan is in much better shape to deal with this development than it was at the time of the oil shocks in the 1970s thanks to the strength of the yen and in particular to the dramatic strides that it has made in energy saving. In fact Japan is one of the world's leaders in energy-saving technology.

The current trend around the world is for populations to decline in the developed countries and rise in the developing countries. Of course the developed countries must save energy and cut back on their greenhouse gas emissions, but it is

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Compiled and edited by
Sumitomo Shoji Research Institute, Inc.
1-8-11 Harumi, Chuo-ku, Tokyo 104-6136
Tel: +81-3-5166-3180
Fax: +81-3-5166-6201

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Global Strategy and Research Dept.
1-8-11 Harumi, Chuo-ku, Tokyo 104-8610
E-mail: econo@sumitomocorp.co.jp
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also essential for the developing countries to undertake energy saving in order to achieve sustainable growth while preserving the environment. Probably the biggest issue

for the world in the first half of the twenty-first century will be to create a post-Kyoto Protocol framework aimed at ultimately building a “zero emissions” global society

through a grand pooling of human knowledge. Japan can clearly make a major contribution to this international effort.

■ *Akio Okawara, November 19, 2004*

REPORT

South Korea's Major Export Industries: The Issue of Local Content

South Korea has pulled out of its 1997 economic crisis, and it is now in the process of developing at a rapid clip. In 2003 its gross domestic product, at \$605.2 billion, was the eleventh largest in the world. The value of its exports has been expanding at an average rate of 21% for the past 40 years, a record unmatched by any other country, and last year the figure came to \$193.8 billion, up 19.6% from 2002 and number 12 in the global ranking. And this year exports had already topped the \$200 billion mark as of the end of October. But problems remain, including a level of foreign currency earnings from exports that is low by comparison with major industrial nations.

Variations in local content levels

Among South Korea's main export categories, the top five, namely semiconductors, wireless communication apparatus (including mobile phones), automobiles, computers, and ships, account for 43% of the country's total export value. In August this year, the Korea International Trade Association issued a report on the earnings structure of these top export items. It found that the local content level of automobiles was a high 95%, followed by ships at 80%, but the figures for the

information-technology-related products that have recently emerged as leading export items, such as mobile phones, digital displays, and semiconductors, were only in the 40%–70% range.

First let us look at semiconductors. South Korea has a share of about 8% of the global semiconductor market, which amounts to about \$180 billion (as of 2003). In the field of memory chips, it accounts for 35% of the global market of \$33.7 billion, and in the subcategory of DRAM chips, it accounts for as much as 44% of the global market of \$17.5 billion. In terms of local content value, meanwhile, South Korea produces only 22% of its semiconductor-manufacturing equipment, but it makes a full 65% of its semiconductor materials. The level of local content is particularly high for “back end” fabrication, for which the technology is relatively easy to acquire. It currently produces materials like silicon wafers, process gases, and IC lead frames domestically, importing only to cover shortfalls. And while the domestic production share for “front end” equipment (which accounts for over 70% of total chip-making equipment) is only 18%, the share for assembly equipment is 38%.

In the mobile phone market,

Samsung Electronics ranked third in the world last year, and LG Electronics placed sixth. The local content share for mobile phones averages 70%, but there is great variation by phone type and by manufacturer. For generic handsets the share is a high 80%, but for camera-equipped devices it is only 50%. And among the different manufacturers the shares vary from around 30% to 80%. In the case of camera phones, manufacturers rely largely on imports for such parts as modem chips, camera module chips, and sound chips.

South Korea produced some 3.2 million automobiles last year, the sixth largest number in the world. The domestic content share of auto parts is 95% in terms of numbers inspected and about 90% in terms of value. Parts currently being imported include electronic components, engine components, and transmissions. The main reason for the high level of local content is probably that many major foreign auto parts makers set up operations in South Korea, largely through acquisitions, in the wake of the 1997 crisis.

The auto parts industry consists largely of small and medium-sized enterprises that have little capacity for investment in research and development, in contrast to their counterparts in major industrial countries.

Overall their R&D investments amount to less than 1% of their total sales. Though South Korean manufacturers are on a competitive level similar to that of their overseas counterparts in parts that are largely mechanical, such as brakes, antilock brake systems, and accelerators, they lag when it comes to parts for next-generation vehicles, such as hybrid cars and fuel-cell cars, which require a comprehensive mastery of newer technologies.

Turning to shipbuilding, South Korea leads the world in competitiveness with respect to general-purpose commercial vessels. In 2003 it passed Japan and took first place in the global rankings of shipbuilding orders by tonnage, and in 2004 its share of the global shipbuilding market has climbed to 56.2%. The domestic content share for ships is about 80%, and it is as high as 95% if electronic communication equipment and the like (which constitute the main import items) are excluded.

South Korea also holds the top share in the global market for liquid-crystal-display monitors, with Samsung Electronics accounting for 22% and LG Electronics for 21%. Like semiconductors, LCDs require tremendous amounts of initial investment to produce, making this a difficult field to enter, but South Korean manufacturers have made large-scale investments at appropriate junctures, and they have achieved a world-leading competitive position in terms of profitability. The country's share of the global market for LCD products is high, but the domestic content share of materials is only 40%. Materials are being produced within South Korea, but the supply is insufficient to meet the demand, and so manufacturers continue to rely heavily on imports. Also, some materials, such as liquid crystals and prism sheets, are entirely imported. And while polarized

film is produced domestically, most of the PVA film and TAC film used as materials for it comes from Japanese manufacturers; in this sense it cannot be said to represent 100% domestic content.

How to raise foreign currency earnings

In January this year, the Bank of Korea published figures for the ratio of foreign currency earnings on South Korea's exports in 2000. (This ratio is calculated by subtracting the cost of imported materials from the value of exports and dividing the difference by export value.) The average figure peaked at 69.8% in 1995 and declined during the late 1990s; as of 2000 it stood at 63.3%.

In the area of electric machinery and electronic products, which are a major export sector, the foreign currency earning ratio was 54.1%, down 11.2 percentage points from the 65.3% figure for 1995. This reflected a sharp drop in the share of domestically produced parts. The ratio also fell for chemicals and general machinery, which have relatively high domestic content shares in the 60% to 70% ranges. And in the fields of semiconductors, wireless communication and broadcast apparatus, and digital display equipment, the foreign currency earning ratios for 2000 were under 50%. The BOK notes that major industrial countries have much higher ratios, citing such figures as the United States' 94.7%, Japan's 90.5%, France's 87.5%, and Britain's 84.3%.

In order to raise the level of foreign currency earnings for the five major export items, there is an urgent need to raise the share of domestic content and to stop depending on imports for critical parts and production equipment. This is no simple task, however, inasmuch as South Korean manufacturers cannot invest

nearly as much as their Western and Japanese counterparts in R&D. Up to now, there have been calls for the development of domestic parts industries every time the South Korean economy has slumped, but as soon as the economy has started growing again, these calls have been forgotten.

Ever since shortly after ties between Japan and South Korea were normalized in 1965, the pattern that has prevailed in South Korea's international trade has been one in which increases in exports to the rest of the world are accompanied by rising imports of materials and equipment from Japan, leading to larger deficits in South Korea's trade balance with Japan. The South Korean economy has achieved rapid growth over the years, but this basic structure remains little changed. The bilateral trade deficit was a record high of \$19 billion in 2003, and it is expected to top \$20 billion in 2004. The main cause is the strength of South Korea's exports, which has led to increased imports from Japan, combined with the ongoing sluggishness in exports to Japan.

Back in 1993 the Japanese and South Korean governments agreed on an action plan to correct the trade imbalance. A foundation was established to promote bilateral technological cooperation aimed particularly at fostering South Korea's parts manufacturers, especially small and medium-sized enterprises, and Japan has provided technology transfers and other forms of assistance. But the process of raising domestic content levels for materials and manufacturing equipment is a time-consuming one, and the existing pattern of dependence on imports from Japan can be expected to continue for some time to come.

■ *Toru Fujita, November 10, 2004*

INTERNATIONAL AFFAIRS

This section takes a look at major topics on the international scene, offering an outline of developments together with highlights of media commentary and reports from research institutes.

The EU constitutional treaty

On October 29, in Rome, the leaders of all the member states of the European Union (EU) signed a constitutional treaty that is intended to serve as a new framework to advance European political and economic integration. In May this year the EU grew from 15 to 25 members, and more members are anticipated in coming years. The treaty aims to respond to fears that as the EU swells in size and its membership diversifies decision-making processes will become increasingly complex, and to consolidate the EU's unity as an economic bloc to counter the United States, the world's largest economy.

The treaty reiterates the EU's basic principles of advancing democracy and human rights and achieving unity within diversity, amends voting procedures in the Council of Ministers to streamline decision making, changes the council presidency from its present six-monthly rotation among members to a two-and-a-half-year term, provides for a minister for foreign affairs who will be in charge of both foreign and security policy, and strengthens the powers of the European Parliament.

The signing put the official seal of approval on provisions already agreed to at a June 18 EU summit. If ratification by member states proceeds smoothly, the treaty will come into force in the autumn of 2006.

A British think tank delivers

qualified praise: "While it is too early to tell how citizens will respond, the new treaty is certainly a simplification and clarification of the existing treaty base and gives the EU a legal personality for the first time." But it also cautions, "With an increasing number of member states considering or already committed to holding a referendum, there is considerable uncertainty about the chances of successful ratification across the EU-25. In this respect, the agreement . . . is only the first part of the battle to provide the EU with a constitution."

The October 30 *New York Times* echoed this warning: "With Europeans becoming more outspokenly skeptical about closer political integration, the national votes look as if they will become a vote of confidence in the union itself, and there is a strong possibility the new Constitution could be rejected in at least one country. In that sense, the signing signals the opening of a battle by national leaders to win over voters on the Continent."

The October 29 *Financial Times* considered the possible ramifications of rejection: "The response to any rejection would depend on many variables. These will include the size of the member state involved, the number of states rejecting the treaty, the length of EU membership and whether refusal reflects disapproval of too much or too little EU integration.

"If a country gets a No vote in a referendum it will have to consider the scale of rejection and whether the campaign focused on the constitutional treaty or the broader issue of EU membership. The bigger the country, the more difficult the solution."

If even one member state fails to ratify the treaty, it will not come into force. At least 10 are planning referendums on the pros and cons of ratification. A yes vote is far from assured. Britain and Denmark, for example, fear curtailment of national sovereignty. France has to contend with considerable popular opposition to the idea of Turkey's joining the EU. Ireland, Poland, Portugal, and other small states feel that the new voting system will disadvantage them. Indeed, the battle has just begun.

Post-Arafat Palestine

On November 11 Yasser Arafat, chairman of the Palestine Liberation Organization (PLO) and president of the Palestinian Authority (PA), died in a military hospital on the outskirts of Paris. For some 40 years he had been the central figure of the Palestinian liberation movement and had enjoyed overwhelming support among the Palestinian people.

In 1956 Arafat formed Fatah, which would become the mainstream faction of the PLO when it was organized in 1964. In 1969 he became chairman of the PLO, and in 1996 he was elected president of the PA (formed in 1994). Despite his iconic status, he was unable to unite Palestine under his leadership. Palestine split into PLO and non-PLO forces, and the PLO itself divided into mainstream and antimainstream factions. The territory was riven by a seemingly endless cycle of terrorist attacks against Israel by non-PLO extremist armed groups like Hamas and Islamic Jihad followed by Israeli military reprisals. Finally, Israel refused to negotiate with Arafat and embarked on a unilateral course of

action, including the announcement in February this year that it would withdraw from Gaza.

Arafat's unexpected death has catalyzed a shift to a new leadership structure. Former Prime Minister Mahmoud Abbas (also known as Abu Mazen), a moderate, has been appointed to succeed Arafat as chairman of the PLO, while Rawhi Fattouh, the speaker of parliament, has been named interim president of the PA. Fattouh has announced a presidential election for January 9.

The November 12 *Financial Times* cautioned against overoptimism: "Israel and the US may be disappointed if they expect a new leadership that will be more willing to compromise on fundamental Pal-

estinian demands. There is a near-universal public consensus that insists on a return of all Palestinian land occupied in 1967, the right of return of Palestinian refugees to their former homes and to a division of Jerusalem."

In a commentary in the November 5 *Washington Post* Dennis Ross, director for policy planning in the Department of State under President George Bush senior, took a slightly more upbeat view: "It is the absence of a figure of authority that invites a power vacuum and is almost certain to trigger a struggle for power in Arafat's aftermath. But because Palestinians fear a violent struggle, there will be an internal dialogue among different factions within Arafat's

organization—Fatah—and between Fatah and groups such as Hamas. And in all likelihood, there will be an agreement to preserve stability and avoid conflict, at least for an interim period. Perhaps there will be a collective leadership."

Continued support and cooperation from the United States and the international community are essential if the elections are to take place on schedule, a new Palestinian leadership is to be established, and peace negotiations with Israel are to be resumed at an early date.

■ *Takaya Mitamura*
November 19, 2004

INSIDE WASHINGTON

A Second Term for President Bush

The long presidential election campaign that began with last January's Democratic Party caucuses ended on November 2 with the reelection of the incumbent, George W. Bush. Bush won 51% of the vote, or over 59.8 million votes—the highest number ever garnered by a presidential candidate. His opponent, Senator John Kerry, won over 56.3 million votes, the second highest figure ever. Altogether, over 14 million more votes were cast than in the 2000 contest between Bush and Al Gore, an indication of the high degree of interest in this year's election.

On election day long lines formed outside polling places. Before the election, many had predicted that a higher turnout would favor the Democrats, but in the event Bush received some two-thirds of the extra votes. Many postelection analyses cited presi-

dential advisor Karl Rove's careful preparations for the 2004 campaign, initiated as soon as Bush was inaugurated in January 2001, as a major factor behind this phenomenon. An army of volunteers was deployed to work doggedly to increase the vote among the Republicans' conservative support base. This enabled the Republicans to mobilize more votes than the Democrats, who had been considered better organized thanks to union support.

The second Bush administration's immediate challenges are to ensure that the general election scheduled in Iraq in January is conducted safely, restore law and order, and stabilize the country. Opposition to the Iraq war is gradually rising in the United States, and developments in Iraq may well press the administration to make hard decisions regarding its commitment there, including the scale and duration of US mili-

tary involvement. Other difficult diplomatic and security issues that demand attention include the suspected nuclear ambitions of Iran and North Korea and the Israeli-Palestinian peace process in the wake of the death of Palestinian Authority President Yasser Arafat.

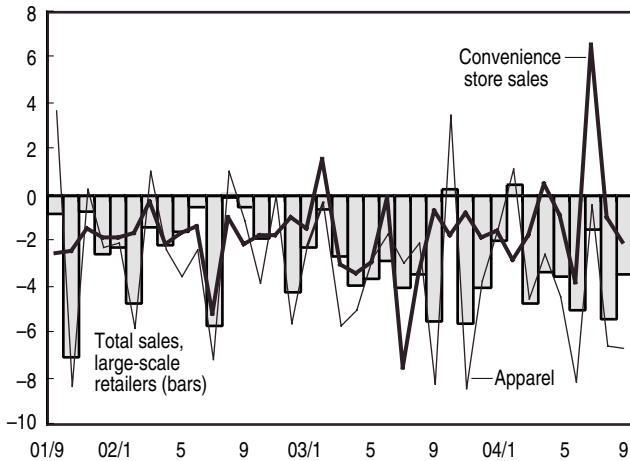
The Republicans have increased their majority in both the House of Representatives and the Senate. Thanks in part to population shifts to the South and Midwest, the Republican heartland, the party is seen as enjoying an advantage for some time to come. Meanwhile, the polarization of the nation seen in the 2000 election was clearly evident in this year's election as well. Attention will be focused on whether the administration will use its numbers to pursue an even harder-line conservative policy agenda.

■ *Kunio Tsurumi, Washington*
November 12, 2004

JAPANESE INDUSTRY

RETAIL

(year-on-year change, %, adjusted for no. of stores)



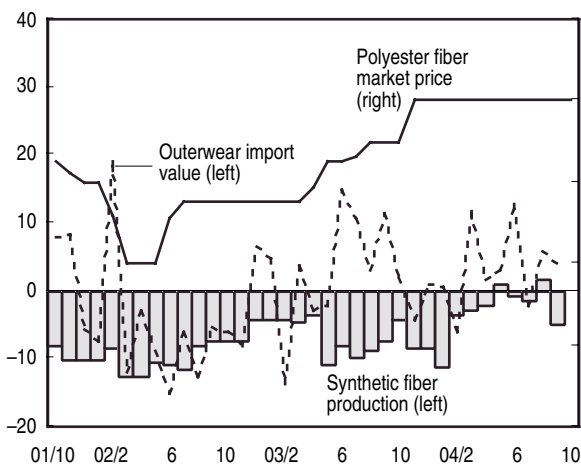
Source: Ministry of Economy, Trade, and Industry.

September sales at large-scale retailers were down 3.4% year on year. In the April–September semester, department stores saw revenues fall due to poor responses to the hot summer and to the impact of typhoons, but they increased their operating profits by cutting expenses; convenience stores increased both revenues and profits.

TEXTILES

(year-on-year change, %)

(¥/kg)



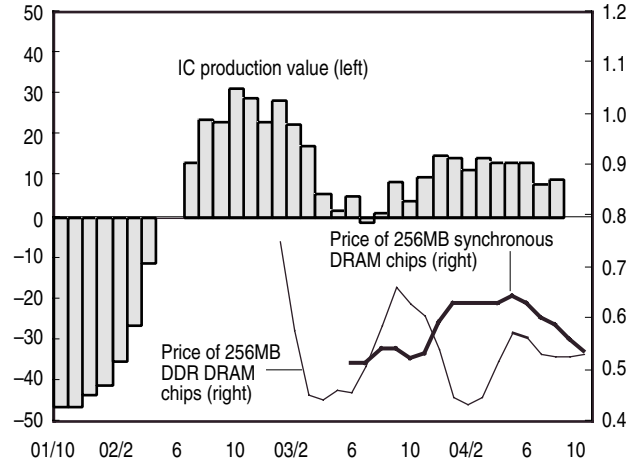
Sources: Japan Chemical Fibers Association, etc.

Synthetic fiber production fell 4.9% year on year in September. Prices for materials rose further in East Asian markets due to high oil prices and demand for winter wear. Major domestic makers are trimming stocks with 10% production cuts in October–December.

SEMICONDUCTORS

(year-on-year change, %)

(¥ thousand/unit)

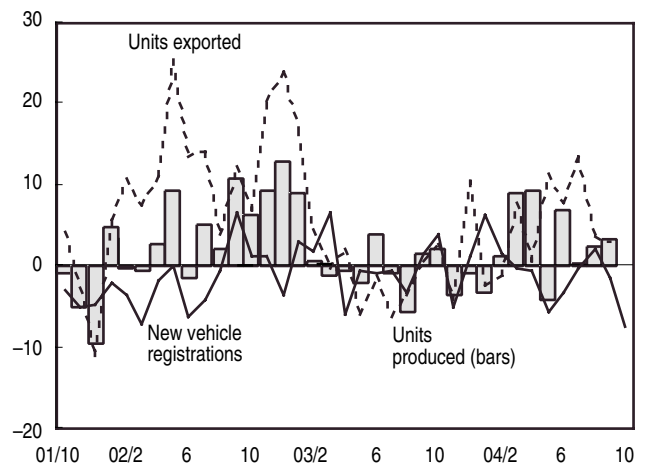


Sources: Research Institute of Economy, Trade, and Industry, etc.

The semiconductor industry is in an adjustment phase. Manufacturers cut their production levels significantly in October in the face of unexpected inventory backlogs of digital appliances and other goods. Taiwan's TSMC expects its capacity use to slip below 90%. It remains to be seen whether the adjustments will be only temporary.

AUTOMOBILES

(year-on-year change, %)



Sources: Japan Automobile Manufacturers Association; Japan Automobile Dealers Association.

September motor vehicle production increased for the fourth month in a row, gaining 3.5% year on year. The April–September figure was up 3.1% from 2003. Exports are strong, but domestic sales continue to decline.

■ *Soichi Okuda and Etsuko Toyama, November 16, 2004*

WORLD ECONOMY

The global economy is now shifting, particularly among the major countries, from rapid growth to a path of slower expansion. However, uncertainty regarding the sustainability of the expansion has been spreading: Persistently high oil prices continue to be a concern, and there are growing expectations of a decline in the US dollar, reflecting such factors as the twin deficits in the United States' budget and payments balance and renewed speculation that China may revalue the yuan.

Japan

The economy has continued to grow in **Japan**, but the support from exports and capital investment has weakened. So far the adjustment has only been from the excessive growth through the first half of the year to a more sustainable pace of expansion, and the chances of a downturn still seem slight, but fears of such an outcome cannot be completely avoided in view of such factors as high oil prices, the emerging risk of a further decline of the dollar against the yen, inventory adjustment in the information-technology sector, and worries about possible slowdowns in the US and Chinese economies.

The preliminary figures for July–September gross domestic product released by the Cabinet Office on November 12 showed a quarterly real growth rate of 0.1% (an annualized rate of 0.3%), considerably less than the expected figure of 0.5%. The household sector was relatively strong: Consumer spending was up 0.9% from the previous quarter, and residential investment advanced 0.2% amid sentiment that interest rates might be heading up. But the corporate sector, which had previously been the main driver of growth, showed

a sharp loss of momentum. Capital investment declined for the first time in four quarters, slipping 0.2% from the April–June figure. Also, partly because of the typhoons that struck Japan during the quarter, exports grew by just 0.4%, much less than the previous quarter's 3.6%, while imports sustained their upward momentum with a growth rate of 2.7%. As a result, net exports made a contribution of minus 0.2 point to the growth rate, the first such negative figure in eight quarters.

The government has forecast a real growth rate of 3.5% for fiscal 2004 (year ending March 2005), but the prospects for achieving this now seem dim, since it would require quarterly growth rates of 1.3% in both October–December and January–March.

United States

Real GDP growth in the **United States** came to an annualized rate of 3.7% in the July–September quarter, thanks in large part to the renewed pickup in consumer spending powered by strong car sales.

October brought a net increase of 337,000 in jobs. This strong performance was partly due to special factors like hurricane damage repair work, which pushed up employment in the construction industry by about 70,000 from the previous month. The employment figures for August and September were also revised upward, and nominal hourly wages have been rising. The employment picture thus continues to show signs of improvement. Nonmilitary capital goods orders (excluding aircraft), which are considered a leading indicator of business investment, grew by a brisk 2.8% in September, following lackluster performance in July and August.

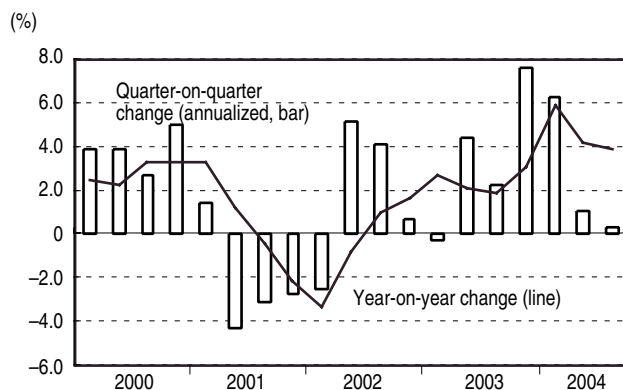
On November 10 the Federal Reserve Board raised the federal funds rate to 2.0%. It was the fourth such hike since June. Given such factors as the employment recovery, observers expect another hike in December.

The November 2 presidential election resulted in another term for incumbent George W. Bush. The Bush administration is expected to keep up its small-government-oriented economic policies, including moves to make existing tax cuts permanent.

Europe

The real quarterly GDP growth rate for the **euro area** in July–September was just 0.3%, showing clearly that the region's economy was marking time. The German and French economies each grew by just 0.1%, considerably less than in the previous quarter. The main cause of the slowdown appears to be the loss of steam

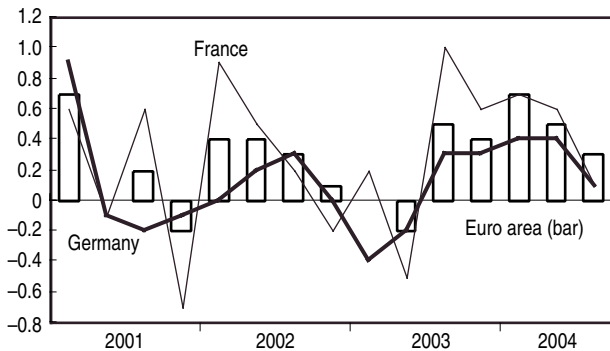
Figure 1. Real GDP Growth, Japan



Source: Cabinet Office.

Figure 2. Real GDP Growth, Euro Area

(quarter-on-quarter change, %)



Sources: National statistics.

in external demand, which had previously been powering growth. With the euro having resumed its upward movement against the dollar since October, prospects for renewed support from the external front seem poor. Consumer spending has started rising again in France thanks to a halt in deterioration of the employment picture, but it remains weak in Germany, where major corporations are continuing to trim their payrolls.

September industrial production in **Britain** slipped for the fourth straight month. But consumer spending, which had been pulling the economy, continued to move ahead, with retail sales up 1.1% over August.

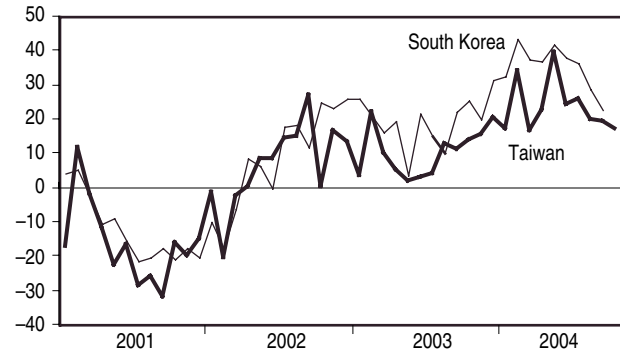
Russia's economy has been keeping up its rapid expansion thanks to the higher prices for oil and non-ferrous metals, and the country has also been earning large current account surpluses. Recently, however, it has become clear that industrial production growth is decelerating. And stock prices, which hit a record high in April, have since then been taking a breather, partly because of concerns about the possible failure of the major oil company Yukos.

Asia

The World Bank issued a revised economic outlook for East Asia in November. For 2004 it foresees a growth rate of 7.1%, higher than its previous forecast in April,

Figure 3. Trends in Exports, South Korea and Taiwan

(year-on-year change, %)



Sources: National statistics.

but it takes the view that the expansion has already peaked, and it predicts a rate of 5.9% for 2005.

In **South Korea** the economy has been lackluster; domestic demand has been lagging, and export growth in October came to just 21.0% year on year, reflecting the slowdown in China-bound and in IT-related exports. The Bank of Korea, which had lowered interest rates in August, did so again in November, pushing its benchmark rate down to a record low.

Slower growth in exports to China and Hong Kong caused **Taiwan's** export growth for October to come in at a relatively disappointing year-on-year rate of 17.5%. The loss of momentum in IT investment in the United States is also liable to have a negative impact.

Malaysia, by contrast, has continued to enjoy strong growth. In September industrial production was up 9.8% year on year, and exports rose by 28.8%.

China has also been keeping up its rapid growth. Real GDP was up 9.1% from a year before in July–September. Responding to lively domestic demand and rising real estate prices, in October the monetary authorities hiked their benchmark interest rate, a sign that they are starting to look at interest rate policy as a means of avoiding overheating, in addition to the administrative guidance they have been using to rein in lending since the beginning of the year.

■ **Soichi Okuda and Fumio Oi, November 16, 2004**

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