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INTERNATIONAL ECONOMIC COMPARISONS

Concern over rising interest rates shook financial markets around the world and inspired bearish economic assessments. The new consensus among private analysts is that the U.S. economy will decelerate from 1987 to 1988. In sharp contrast, the Administration believes that the Nation's economy will perform strongly next year. The International Monetary Fund (IMF) and the European Commission also project accelerated economic growth for the United States, as well as other industrialized countries. (For details, see Forecasts.) The U.S.-Canada Free Trade Agreement (see Forecasts and article on U.S. Trade Developments), the apparent readiness of the industrialized countries to increase World Bank resources, and other efforts to enhance international macroeconomic policy cooperation help brighten world economic prospects.

The U.S. Government proposed to add fluctuations in the average price of a basket of commodities—including gold--to the existing set of economic indicators that are now used to monitor performance and to coordinate economic policy among the seven major industrial countries. The proposal, presented by Treasury Secretary Baker at the joint meeting of the IMF and World Bank, encountered a mixed reception both at home and abroad.

The proposed system--also known as the Baker plan--is based on the idea that a relatively high rate of inflation in a country will tend to cause that country's currency to depreciate. According to the plan, central banks would automatically intervene in exchange markets if the price index of the commodities included in the basket became misaligned. For example, a faster increase of the basket's price index in the United States than in West Germany would be taken as an early warning that the dollar would depreciate against the German mark. This situation would prompt central banks in the two countries to restore the dollar/mark exchange rate to the desired level.

Some economists welcomed the proposal saying that stable exchange rates would lead to generally lower interest rates. Moreover, the inclusion of gold in the arrangement could help restore respectability to the international financial system. However, some analysts view the proposal with alarm. They argue that fluctuations suppressed in the currency markets would resurface with a vengeance in national financial markets, and that the net result would be even higher interest rates. Some U.S. trading partners also worry that any automatic system would inhibit their ability to conduct an independent monetary policy.

Industrial Production

U.S. industrial production rose by 0.2 percent in September, following a 0.3-percent rise in August. The industrial production index has not declined since January.

The annual rates of industrial growth in the major industrialized countries, calculated by comparing the latest available monthly output with the output in the corresponding month of the previous year, were as follows: Canada, 4.1 percent; France, 2.9 percent; Italy, 5.3 percent; Japan, 5.5 percent; the United Kingdom, 3.7 percent; the United States, 4.5 percent; and West Germany, 1.8 percent.

Investment

Nonresidential fixed investment in the United States increased by a 2.2 percent seasonally adjusted rate both in nominal and in constant dollar terms from the first to the second quarter of 1987. According to the most recent survey by the U.S. Department of Commerce, U.S. businesses estimate that their investment spending in 1987 will exceed last year's level by 2.5 percent in nominal terms and by 1.4 percent in real terms. On average, investment appears much stronger in Europe. The European Community's latest survey signals an 8.0-percent nominal and a 5.0-percent real increase in the Community's investment for the year 1987.

Reflecting optimism and fast growth of money supplies in the major industrialized countries, increases in stock prices by far outstripped the growth of nominal GNP of the major industrialized countries before "Black Monday" and the ensuing turmoil on major stock markets. From August 1986 to August 1987, stock prices rose by 34.2 percent in the United States, by 45.1 percent in Japan, and by 7.5 percent in West Germany.

Trade

According to estimates by the General Agreement on Tariffs and Trade (GATT), the volume of world merchandise trade during the first half of 1987 was 3.0 to 3.5 percent above its level during the corresponding period of 1986. The volume of world trade grew by 3.5 percent in 1986. Mining products trade, led by the recovery in oil exports, increased by 7.5 percent, and trade in manufacturing products rose by 3.0 percent. Agricultural trade, however, declined by 1.0 percent over the period.

Employment

The rate of unemployment in the United States (on a total labor-force basis, including military personnel) decreased to 5.8 percent in September from 5.9 percent in both August and July.

The national statistical offices of other countries reported the following unemployment rates: the August rate was 8.8 percent in Canada, 14.2 percent in Italy, 2.8 percent in Japan, 10.2 percent in the United Kingdom, and 8.9 percent in West Germany. The July rate was 11.0 percent in France. (For foreign unemployment rates adjusted to U.S. statistical concepts, see the tables at the back of this issue.)

Prices

As a result of higher energy and housing costs, the U.S. Consumer Price Index rose at a seasonally unadjusted rate of 0.5 percent in August, following a 0.2 percent rise in July. Inflation ran at a 5.1 percent annual rate during the first 8 months of 1987 compared with only 1.1 percent during the corresponding period of 1986. The so-called underlying rate of inflation, that disregards the volatile food and energy prices, rose from an annual rate of only 3.0 percent during the second quarter to 3.7 percent in July and to 4.9 percent in August.

Higher import prices and the general trend of rising costs after long periods of business expansion (cost push inflation) tend to undermine price stability. However, most analysts believe that U.S. policymakers' strong anti-inflationary stance, the price-restraining effects of still formidable foreign competition, and the unwillingness of heavily indebted consumers to pay higher prices are sufficient deterrents against the resurgence of damaging rates of inflation. Private economists believe that inflation for the full year of 1987 will be 4.5 percent. The Administration's projection for inflation remains 4.0 percent.

Countries overseas are equally determined to keep inflation under control. An important inflation-controlling factor abroad is that the cheaper dollar has reduced import prices.

The average rate of inflation during the 1-year period ending in September 1987 was 5.0 percent in Italy and 0.5 percent in West Germany. The rate of inflation during the 1-year period ending in August 1987 was 4.5 percent in Canada, 3.5 percent in France, 0.8 percent in Japan, 4.4 percent in the United Kingdom, and 4.3 percent in the United States.

Living standards

The United States spends more on medical care relative to its gross domestic product (GDP) than any other industrialized country, according to the Organization for Economic Cooperation and Development (OECD). Medical expenditures made up 10.7 percent of the 1984 GDP in the United States, 9.1 percent in France, 8.4 percent in Canada, 8.0 percent in West Germany, 7.1 percent in Italy, 6.4 percent in Japan, and 5.9 percent in the United Kingdom. Whereas, in other countries, the bulk of medical care is publicly financed, Americans must largely provide for themselves. The Government pays 88.9 percent of medical expenses in the United Kingdom, 82.0 percent in Italy, 79.0 percent in West Germany, 74.4 percent in Canada, 72.1 percent in Japan, 71.2 percent in France, and only 41.4 percent in the United States. Economists are divided over the desirability of strong Government participation in medical care. Some consider publicly financed health care inefficient, whereas others claim that without it the distribution of medical care will approximate income distribution. Policymakers in all industrial democracies find it very difficult to devise plans that keep medical services at high quality and reasonably priced, yet available to all in need.

Forecasts

Economic growth

In a survey of its members, the National Association of Business Economists concluded that the U.S. economy will grow by 3.0 percent in 1987 and by 2.7 percent in 1988. More than one-half of the economists surveyed think that the U.S. economy will fall into a recession in 1989. Very similarly, the Business Council--a group of leading U.S. corporate executives--forecasts 2.5 to 3.0 percent growth of the U.S. economy in 1987 and 1988. The Adminsitration's forecast is that U.S. economic growth will accelerate from 2.6 percent in 1987 to 3.2 percent in 1988.

The latest projections of the IMF call for 2.4 percent average growth in the industrial countries in 1987 and 2.6 percent growth in 1988. For the U.S. economy, the IMF forecasts 2.4 percent growth in 1987 and 2.7 percent growth in 1988. The European Commission's forecast for the U.S. economy is virtually identical. For the European Community's economy, the Commission projects 2.2 percent growth in

1987 and 2.3 percent in 1988. For the Japanese economy, the Commission's projections call for 2.9 percent in 1987 and 3.5 percent in 1988.

U.S. debts

The Federal deficit amounted to an estimated $150 billion to $158 billion during fiscal year 1987, increasing the total Federal debt to $2.4 trillion. Congressional budget economists project that to reduce the Federal budget deficit by $23 billion as planned during fiscal year 1988 would require $10 billion to $15 billion in new Government revenues. The prospects of new taxes worries economists as much as do cuts in Government spending. Economic theory predicts that drastic deficit reductions will contract the economy unless a loosening of monetary controls allows for compensating increases in consumer and investment spending. Most economists see very little chance of returning to monetary policies sufficiently stimulative to compensate contractionary fiscal policies.

According to a private Japanese research institute, the United States might default on its external debt when it reaches $500 to $600 billion. The net external U.S. debt was estimated at $335 billion by the end of June 1987, and it is expected to reach the indicated danger zone by the end of 1989.

The U.S.-Canada Free Trade Agreement

The U.S.-Canada Free Trade Agreement is generally hailed as a highly progressive, benchmark event. According to press reports at the time the accord was announced, the spur to bilateral trade is expected to create 750,000 new jobs in the United States during the next decade and 500,000 new jobs in Canada during the next 5 years. After going fully into effect in 1999, the agreement may generate 5 percent real economic growth annually in Canada and up to 1 percent real economic growth annually in the United States.

Many economists and trade officials consider the long-term effects of the agreement to be salutary for both parties and for international trade at large. The bulk of Canadian economic development has been restricted to a few hundred miles along the U.S. border. According to USITC analysts, economic integration with the United States might be an important catalyst to the opening of the Canadian Midwest and other less developed regions in Canada. By serving as a successful example of enhanced economic cooperation between the world's largest trading partners, the agreement may also breathe new life into other currently dormant free-trade agreements in the Western Hemisphere, such as the Latin American Free Trade Area and the General Treaty of Central American Economic Integration. Some believe that the proposed agreement will also give an impetus to the current round of GATT talks.

Criticism leveled at the U.S.-Canadian trade pact by some economists and by trade officials overseas is based on the theoretical expectation that some of the negative long-term effects attributed mainly to more complex forms of economic integration, such as customs unions, common markets, and economic unions, are also present in bilateral free-trade agreements. One of these negative effects is the so-called trade diversion due to the substitution of lower cost imports from countries outside the agreement for higher cost imports from countries within the agreement. This may occur because the elimination of tariffs will make some U.S. and Canadian goods less expensive on their joint markets than some efficiently produced imports from third countries that are excluded from the tariff reduction. ▪

U.S. TRADE DEVELOPMENTS

The U.S. merchandise trade deficit declined from $16.5 billion in July to $15.7 billion in August, but it remained significantly higher than the $14.2 billion average deficit calculated for the previous 12-month period. Because trade figures in constant dollars are released only on a quarterly basis, it is not known with certainty whether the balance measured in constant dollars has declined from the second quarter of 1987. When economists cite the reduction in the constant dollar trade balance as a major cause for the past few months' increases in the Nation's industrial production and employment, they refer to the reduction that took place from the second half of 1986 to the first half of 1987 (see table 1 for volume and unit value indices of U.S. exports and imports).

The reduction in the deficit from July to August occurred because imports fell by more than exports. Imports declined from $37.5 billion in July to $35.9 billion in August and exports declined from $21.0 billion to 20.2 billion. Manufactures trade set the direction of overall trade developments once again. Passenger car, clothing, and footwear imports showed declines from July to August. The decline in passenger car imports reflects a softening trend on the U.S. car market (car sales during January-September 1987 were 13.0 percent below sales during the corresponding period of 1986). On the export side, decreases in aircraft, automobile and tractor parts, and telecommunications equipment shipments outweighed increases in chemicals, passenger cars, and automatic data processing equipment.

Table 1
Volume and price indices for U.S. exports and imports, January-March 1986 to April-June 1987

(1977 = 100.0)

	Volume		Unit value	
Time period	Exports	Imports	Exports	Imports
1986:				
January-March	113.4	162.0	155.7	157.4
April-June	109.7	163.4	156.1	152.5
July-September	107.2	166.4	157.0	152.2
October-December	117.2	165.2	157.1	156.1
1987:				
January-March	117.1	161.0	156.9	158.5
April-June	125.9	168.9	158.3	163.3

Source: Office of Business Analysis, Department of Commerce. Third quarter statistics for the current year are not yet available.

The oil import bill rose from $4.6 billion in July to $4.7 billion in August. The volume of oil imports increased from 243.0 million barrels to 243.4 million barrels and the average price of imported oil increased from $19.13 to $19.31. The volume of oil imports during January-August 1987 was 4.5 percent above their level during the corresponding period of 1986. Reduced exports of wheat, corn, and animal feeds were the primary factor behind the decline in the U.S. agricultural trade balance, from $0.6 billion in July to $0.4 billion in August.

The U.S. deficit in trade with Japan declined from $5.1 billion in July to $4.9 billion in August, but on a year-to-date, annualized basis it was $1.0 billion higher than the record $58.6 billion deficit chalked up in 1986. The U.S. deficit in trade with the 12-nation European Community narrowed from $3.3 billion to $2.1 billion. U.S. trade with Europe was characterized by increased U.S. exports and reduced imports. The U.S. deficit in trade with Canada increased by nearly $0.3 billion from July to August.

The new U.S.-Canada Free Trade Agreement will intensify competition on both sides of the border, but probably will have little effect on the overall balance of trade between the two countries.

Views of the most desirable trade policy that the United States should follow are more polarized than ever. The daily press blamed the lack of improvement in the U.S. trade situation for the worldwide slide in stock prices in October. This troubling phenomenon appeared to many as a shot fired across the bow of laissez faire trade theories. However, economists view the Nation's external deficits in conjunction with its internal deficits. Mounting Federal and corporate debts tend to drive up interest rates. Given high levels of deficits, interest rates can be reduced in the short term only by risking inflation or by an economic downturn. Since policymakers want to keep inflation under control, interest rates will remain high unless we enter a recession. High interest rates would lead to high levels of capital inflows as long as the Federal Government's deficits continue. The resolution of the current economic and trade policy dilemmas depends largely on politics; analysts must wait and see what political actions are taken in response to these dilemmas before they can predict the outcomes.▪

INTERNATIONAL TRADE DEVELOPMENTS

Services Trade Included in New Bilateral Trade Agreement

One of the significant breakthroughs in the recently negotiated free- trade agreement between the United States and Canada was the inclusion of services in the bilateral arrangement. The agreement is the first international understanding ever concluded that applies binding rules to a broad range of services sectors.

The agreement covering services trade incorporates the principles of national treatment, right of establishment, right of commercial presence, transparency in regulation, and even a dispute settlement mechanism. The agreement is historic in that it represents the first example of major trading partners mutually assuming the discipline offered by a code covering trade in services. The fact that the entire question of trade in services is currently on the negotiating table in the GATT Uruguay Round adds particular significance to the U.S.-Canadian accomplishment.

The new U.S.-Canadian agreement governing services does not cover existing measures, but rather all future measures in the services realm. A standstill in the imposition of new restrictions has thus been achieved. Because the United States enjoys a relatively open services market with Canada, the agreement gives U.S. service providers the assurance they desire to maintain the present situation and to make the environment for services trade even more transparent in the future. Pending approval by the U.S. Congress and the Canadian Parliament, the services agreement will cover a broad range of services industries when it comes into effect on January 1, 1989. Specific sectoral annexes to the agreement (not yet public) will include architecture, tourism, enhanced telecommunications, and computer services. These annexes will clarify the application of the disciplines of the agreement to specific services sectors. In the future, an annex is likely to apply to the transportation sector as well. A unique facet of the agreement includes the financial services sector, where a special deal was struck to ensure national treatment within Canadian financial institutions for U.S. citizens and firms. As a result, U.S. banks will be excluded from the overall limitations placed on foreign banks' market share in Canada.

Of particular importance in the service area is the agreement's inclusion of a chapter outlining reciprocal undertakings regarding temporary entry for business purposes by citizens of one country into the other country. Specific understandings will facilitate temporary entry for business persons and recognized professions and persons engaged in sales or after-sales service functions. The current requirement for prior approval procedures and employment certification tests will be relaxed considerably. The agreement will provide for facilitated entry for persons in 150 different services sectors.

The agreement is significant in light of the volume of bilateral trade in services. Approximately 53 percent of Canada's service sector exports go to the United States. An even greater share of service imports--63 percent--come from the United States. Canada generally runs a deficit on services trade with the United States. This deficit amounted to $9.9 billion in 1985, down slightly from $10.4 billion in 1982. The deficit is generally explained in terms of a greater degree of U.S. investment in Canada than the reverse, and the greater number of Canadians who vacation in the United States. Major service industries in U.S.-Canadian commerce are tourism, transportation, communication, and banking and investment.

The United States accounts for a smaller share of Canada's trade in services than its trade in goods (over three-quarters of Canadian merchandise trade is with the United States). In 1984, trade in services between Canada and the United States amounted to approximately Can$20 billion. Of tradeable services exports (i.e. receipts) of Can$14.2 billion generated in Canada, Can$8.3 billion or 59 percent were estimated to be exports to the United States. On the payments side--61 percent or Can$11.7 billion of Canada's tradeable services imports of Can$18.6 billion were imported from the United States. These data do not include the returns on investment that are generally included in the services component of current account balance of payments statistics. Except for a slight surplus in freight and shipping, Canada has a bilateral deficit with the United States in all other services trade categories. The services trade deficit with the United States of Can$3.3 billion in 1984 represented three-fourths of Canada's world deficit in trade in services.

The factors affecting trade in services are similar to those affecting goods trade. In general, goods and services do not compete with each other, but rather complement each other in trade. This closeness between goods and services is carried over into the regulatory realm. Many of the regulations as well as the macroeconomic factors affecting trade in services are comparable with those influencing goods trade. Thus, there is no particularly unique influence that exchange rates, business cycles, or rates of economic growth have on services as distinct from goods. It should also be emphasized that these influences are similar in both Canada and the United States.

In short, the proposed U.S.-Canadian services agreement could serve as an important foundation for formalizing and expanding services trade between the two countries. The conclusion of a bilateral agreement covering goods and services takes on added significance because it comes when work in the Uruguay Round of multilateral trade negotiations in the GATT intensifies. ▪

The Economic Implications of South Korea's Labor Unrest

The issue of labor rights in South Korea has long been an explosive and highly political issue. The government has traditionally taken a hard line on labor issues by outlawing strikes and imprisoning those it considers labor agitators. But after the government agreed to democratic changes in late June, a series of labor strikes swept South Korea in July. The widespread labor unrest caused only relatively small losses in production and exports, but may have more significant long-run consequences for Korean industry. Government economists estimate that the work stoppages resulted in production losses of over $1.6 billion, and export losses of over $700 million, with declines in automobile shipments accounting for about one-half of the losses in export revenue. Production losses at the country's three auto exporters cut the usual monthly shipments of 60,000 cars by about two thirds.

Whereas exports had risen 35 percent during June and July 1987 compared with June and July 1986, they rose only 18.5 percent in August 1987 compared with August 1986, as some foreign buyers were reportedly shifting orders to Taiwan and Hong Kong. Nevertheless, economists at the Korea Development Institute, a Government-sponsored think tank, predict GNP will grow by 11 percent this year, with the current account surplus expected to exceed $7 billion.

The strikes have focused on three issues: a demand for democratic unions to replace government-controlled associations, increased wages, and improved working conditions. Government officials and industry executives are most concerned about the effects of the 10 to 20 percent wage increases that resulted from the strikes. They fear that rises in labor costs will reduce the future competitiveness of Korean products abroad. In the past, wages comprised less than 10 percent of the manufacturing costs for Korean industry; it is likely that an increase in labor costs will quicken the pace of the shift from labor-intensive industries such as textiles toward technology-oriented industries such as electronics and automobiles.

The government is also concerned about the potential impact of wage increases on macroeconomic variables. Pay raises, coupled with increases in the money supply, could accelerate inflation to beyond 5 percent, according to some estimates, in contrast to the 3 percent recorded in 1986. Unemployment may rise from the current 3.4 percent as higher wages encourage increased automation.

Despite the economic problems resulting from the labor unrest and associated pay increases, policymakers in Korea sympathize with many of the workers' economic demands. Labor Minister Lee Hun-Kee admits that "under the government's growth-first policy, there is no denying that not enough attention has been paid to the question of equitable distribution of income and improvement of working conditions." Ruling party leader Roh Tae-Woo acknowledges that "when we concentrated our efforts toward economic growth we somewhat neglected the demands of workers."

The working conditions faced by Koreans support these admissions. According to the International Labor Organization, the average workweek for manufacturing employees is 54.3 hours, the longest in the world. Although productivity in manufacturing has nearly doubled since 1980, real wages have risen by less than 40 percent. Korea is also considered to be one of the most hazardous countries in the world for a worker; according to union officials, last year 1,660 employees were killed on the job, out of a total workforce of 16.1 million. More than 20,000 others were crippled in industrial accidents.

Some of the nation's business leaders, in contrast to Government officials, have not yet changed their attitudes toward workers' economic demands. For example, Kim Woo-Joong, chairman of the Daewoo conglomerate, claims that Korea can compete in the international market only "with our low labor costs. Workers must render some sacrifice. Later, they can enjoy their lives." This attitude, besides encountering effective domestic opposition recently, is also drawing adverse reaction overseas. Proposed trade legislation in the U.S. Congress includes a provision that would give the President the authority to classify the denial of labor rights, including the right to form democratic labor unions, as an unfair trade practice subject to retaliation. ▪

Troubled CBERA Gets Fresh Ideas

The second annual Caribbean Basin Business Conference in San Juan, Puerto Rico, ended September 26 after 4 days of major investment promotion efforts by Puerto Rico and Caribbean countries. Although the success of the Caribbean Basin Economic Recovery Act (CBERA) has remained limited (September IER), Government representatives from Puerto Rico and the Caribbean Basin challenged businessmen from around the world to take advantage of the powerful investment incentives that now exist in the region. In particular, Puerto Rico's twin-plant program, which links Puerto Rico with other Caribbean Basin countries through complementary production operations, was hailed as offering a wealth of investment opportunities. Conference workshops explored the possibilities and advantages of using Puerto Rico's tax incentives and financing benefits under section 936 of the Internal Revenue Code coupled with low-wage twin plants, including the investment and production sharing opportunities arising from these provisions throughout the Caribbean.

Section 936 of the U.S. Internal Revenue Code provides U.S. companies a 100-percent credit against Federal income tax on business and investment income earned in Puerto Rico. These tax-free earnings, or "936 funds," are the source for low-cost concessionary-rate financing of investment in Puerto Rico through the Government Development Bank of Puerto Rico and private financial institutions. The Tax Reform Act of 1986 extended the use of 936 funds effective

January 1, 1987, to help finance complementary or twin-plant projects in eligible CBERA countries. A qualifying CBERA nation is one that has signed a bilateral Tax Information Exchange Agreement (TIEA) with the U.S. Government. To date, only three countries--Barbados, Grenada, and Jamaica--have ratified TIEA's; however, other countries are nearing ratification or considering doing so.

By establishing a complementary plant in an eligible CBERA nation, a firm currently operating in Puerto Rico under the 936 tax provision can take advantage of both the 936 benefits and the availability of inexpensive labor in another Caribbean nation. Under the twin-plant concept, components manufactured in Puerto Rico (or perhaps the United States) can be sent to CBERA countries for labor-intensive assembly work. Finishing and quality-control work would be done in Puerto Rico. The types of investment projects that qualify for 936 funds are currently under review. In general, the projects must represent a joint effort, be competitively advantageous to both countries involved, and must contribute to the economic development of both. Those projects that compromise Puerto Rican industry will not be approved. Specifically, 936 funds will be made available for purchasing plants, equipment, etc. as well as for infrastructure projects that support the development projects. Loans will become available as of January 1, 1988.

Conference workshops examined successful investment and production-sharing operations in various sectors such as agro-industry, electronics assembly, light manufacturing, services, and apparel. For example, case studies in agro-industry, one of the more successful areas of production, indicated that Caribbean Basin countries are just beginning to exploit the tropical agricultural market and have room for expansion. The advantages of twin-plant arrangements in this sector that were cited included production capability, proximity to the U.S. market, and plentiful low-wage hand labor. Among the problems cited were the lack of technical expertise, knowledge of USDA inspection requirements, and adequate transportation facilities. Under current twin-plant arrangements, Puerto Rico has provided processing facilities for vegetables, citrus, and exotic fruits produced in Jamaica, Dominica, and the Dominican Republic. Future expansion in these areas, as well as in fish farming, livestock, herbs and spices, and ornamental horticulture was encouraged.

Other conference workshops examined investment promotion programs and production-sharing opportunities by country. Speakers highlighted the advantages of investing in their respective countries. The primary advantages cited for such investment included low labor costs, proximity to the U.S. market, favorable climate (in the case of agricultural products), and the recent expansion of free-trade zones in CBERA countries.

Several well-known political figures addressed the conference during special sessions including Jose Napoleon Duarte, President of El Salvador, Jim Wright, Speaker of the House, and Rafael Hernandez Colon, Governor of Puerto Rico. An important theme that grew out of the conference was the need to combine the comparative advantages of the CBERA nations to promote regional economic development and compete more effectively in the international market. Representatives from across the Caribbean Basin argued that the Caribbean region is now more than ever a viable investment alternative to the Far East. They stressed that the advantages already mentioned such as 936 benefits, low wages, and proximity to the U.S. market, as well as favorable changes in the exchange rate, demonstrate the great potential for development. ▪

United States and Japan Strive To Commercialize Superconductor Technology

Research laboratories in Japan and the United States are working around the clock to commercialize recently discovered superconducting materials. The latest race for technological superiority pits such giants as IBM and Bell labs in the United States against NEC and Hitachi in Japan. Although the United States, among others, appears to have the leading edge in developing the basic technology, there are concerns among U.S. policymakers and the scientific community that Japan may eventually be more successful in marketing superconductors, just as they have been in the past with VCR's, color televisions, and transistors.

Superconductors are materials capable of carrying electrical currents without the loss of power due to resistance and without generating excess heat. Until recently, superconductors were considered to be too expensive and impractical for commercial use. Conventional metal alloy superconductors could only function after being cooled with liquid helium to temperatures near absolute zero (-459o degrees Farenheit) and could only handle small amounts of electricity. However, in February 1987, an IBM lab discovered that certain ceramic materials (formed from copper oxide and other elements) are superconductors at higher temperatures. This finding led to a surge of research activity in Europe and on both sides of the Pacific. Since February, labs in the United States and Japan have achieved breakthroughs in raising the temperature barriers at which the new materials will operate.

Despite such successes in the laboratory, commercial application of superconductors is still 5 to 10 years away. The ceramics developed thus far are brittle and difficult to form into useful shapes such as wires. In addition, they are incapable of carrying large enough amounts of electrical currents for use in industrial electrical devices. However, if new fabrication techniques can be developed, or if new materials can be found to overcome these obstacles, the potential commercial applications for superconductors are enormous, with projections for a world market totaling over $10 billion annually. Some of the possible uses for the new superconductors include developing smaller and faster supercomputers, more efficient power generators, better medical devices, advanced electronics systems, and even transcontinental transmission lines.

The United States and Japan have thus far followed two different approaches to superconductor research activities. In the United States, Government-sponsored research efforts are decentralized in universities and national labs. Seven U.S. Government agencies are sponsoring advanced ceramics and some superconductor research. However, there appears to be little coordination of effort and much competition between these agencies for funding. By contrast, Japan's national research activities are focused in the private sector. Following IBM's discovery in February, the Government of Japan immediately mobilized its resources and began pursuing a strategy that has worked successfully several times before--galvanizing private industry, universities, and Government in a concerted effort to promote a particular industry. An advisory group from each of these three sectors was established to give researchers an opportunity to exchange information and to keep the Ministry of International Trade and Industry (MITI) posted on new developments. Among the companies represented in the advisory body are NEC, Toshiba, Nippon Steel, and Mitsubishi, all of whom have already directed their own resources towards superconductor research. As a result, these larger companies may not be as supportive of MITI's centralized approach to developing the technology as some of the smaller ones.

Several Japanese ministries have been involved in promoting superconductor research including MITI, the Science and Technology Agency, and the Ministries of Education and Transportation. All of these agencies are seeking increased funding for superconductivity research under the FY 1988 budget. In addition, there are currently 30 to 50 Japanese universities performing basic research on new materials for superconductors.

The U.S. Government has been slower to formulate a national strategy. On July 28, President Reagan announced an 11-point plan to promote the development of commercial superconductor technology in order to ensure that the United States does not fall behind its other international competitors. The President's initiative called for the formation of an advisory group of industry and academic experts, the shifting of Federal funds into superconductivity research, the establishment of three superconductivity research centers under the Department of Energy's jurisdiction, and the provision of $150 million in funding to the Department of Defense for research in military applications for superconductors. The National Science Foundation has already allocated $600,000 in FY 1988 for developing new processing techniques. The President's announcement signaled an awareness by both the Administration and the scientific community that joint cooperation between Government, industry, and universities will be necessary to ensure international competitiveness in the long term. Several universities have already formed research groups and are looking toward the government and private corporations for funding.

Prior Japanese experience in developing and marketing conventional industrial and electronic ceramics may be advantageous in the current competition to develop superconducting ceramics. The Japanese may also have an added economic incentive to develop viable room temperature superconductors quickly since the liquid helium used in current cooling processes must be imported from the United States. However, it is too early to determine which country will eventually dominate the commercial market for superconductors. Contrary to recent press reports regarding an impending agreement between the United States and Japan on superconductor research, sources close to the talks say that only bench-level discussions have occurred between individual scientists about the exchange of information or researchers. Some U.S. scientists report that they routinely exchange information with their Japanese counterparts and that a formal agreement between the two countries would have little effect on their daily research activities. ▪

United States and China Sign Agreement on Trade in Tungsten

A 4-year orderly marketing agreement limiting China's exports of ammonium paratungstate (APT) and tungstic acid to the United States was signed by the two countries on September 28. The agreement was negotiated at the request of President Reagan after the U.S. International Trade Commission had determined that market disruption exists by reason of these imports from China. In its investigation, which was instituted on behalf of the domestic tungsten industry under section 406 of the Trade Act of 1974, the Commission found that U.S. imports of APT from China had increased from 385,000 pounds of tungsten content during 1983, or 23 percent of the total quantity imported, to 2.1 million pounds of tungsten content during 1986, or 83 percent of the quantity imported. Imports of tungstic acid from China amounted to 345,000 pounds of tungsten content during 1986, approximately the same as during 1984 and 1985, but China was the source of virtually all U.S. imports of this product during the 3-year period.

The intent of section 406 is to provide protection for a domestic industry that is being injured, or threatened with injury, by a rapid increase, either absolute or relative, in imports from a Communist country. Since the central Government in these countries is assumed to control production, pricing, and marketing decisions, the legislation is based on the premise that imports from them have a unique potential to disrupt the U.S. market through rapid and unexpected surges. In the case of tungsten products from China, however, the market disruption appears to have been a direct result of the decentralization of enterprise management and trading activities. A surge in China's tungsten exports during 1981 and 1982 was apparently the result of rivalry between two Government-trading agencies, vying for the sole right to handle this important metal market. The competition intensified in 1984 when trade in tungsten (together with other products) was decentralized as China's leaders extended the economic reforms, and provincial authorities as well as agencies at the national level were permitted to export both the tungsten ore and processed products. Since China is the world's largest exporter of tungsten (it is estimated to account for about one-third of the total output of tungsten ore), the uncontrolled sales of these various entities resulted in a significant increase in not only the volume but also the range of tungsten products entering the international market.

Although the United States has held a series of consultations with China on the tungsten issue since 1983, the Chinese Government took no major steps to reassert control over these exports until early 1987. Finally, in March of this year, following the institution of the market disruption investigation by the Commission and further bilateral consultations, China announced the establishment of a single agency with responsibility for tungsten exports. According to the directive issued, the new China Association for the Export of Tungsten Ore and Accessories will set export prices based on world market prices and will "supervise" exports by production units. How well it will succeed in controlling trade in tungsten products will soon become apparent since the orderly marketing agreement between the United States and China went into effect on October 1.

Under the terms of this agreement, China will limit its exports to the United States of APT and tungstic acid to a combined total of 425,000 pounds tungsten content during October-December 1987, followed by annual limits of 1.81 million pounds during 1988, 1.94 million pounds during 1989, and 2.05 million pounds during 1990. The limit during January-September 1991 will be 1.5 million pounds. The agreement includes provisions to ensure that the effectiveness of the specified limits on APT and tungstic acid is not undermined by transshipments or by increased shipments of tungsten oxide. ▪

STATISTICAL TABLES

Industrial production

(Percentage change from previous period, seasonally adjusted at annual rate)

Country	1984	1985	1986	1986 II	1986 III	1986 IV	1987 I	1987 II	1987 Apr.	May	June	July	Aug.	Sept.
United States	11.2	2.0	1.0	-2.1	1.9	3.3	3.2	4.3	1.2	8.7	7.7	10.7	3.7	2.4
Canada	8.8	4.3	–	–	–	–	–	–	–	–	–	–	–	
Japan	11.1	4.6	-0.3	.9	-2.1	-2.4	5.6	-0.8	-17.7	-15.5	66.2	12.1		
West Germany ..	3.3	3.9	2.2	10.2	-4.5	-.1	-2.8	-.5	23.5	38.4	-10.9			
United Kingdom ..	1.3	4.7	2.0	0.6	5.6	.5	4.0	2.9	-8.2	11.2	-14.7	30.2		
France	1.7	.8	.7	6.2	5.4	-5.1	-1.3	8.1	-11.0	12.4	26.0			
Italy	3.3	1.2	2.7	6.0	-12.8	7.3	11.5	6.7	-19.8	30.7	-33.9			

Source: *Economic and Energy Indicators*, U.S. Central Intelligence Agency, October 9, 1987.

Consumer prices

(Percentage change from previous period, seasonally adjusted at annual rate)

Country	1984	1985	1986	1986 II	1986 III	1986 IV	1987 I	1987 II	1987 Apr.	May	June	July	Aug.	Sept.
United States	4.3	3.6	1.9	-1.7	2.6	2.7	5.3	4.9	6.2	4.9	4.3	2.9	6.2	2.4
Canada	4.3	4.0	4.2	3.0	4.7	4.9	3.5	5.6			3.4	5.9	3.1	
Japan	2.3	2.0	.6	.9	-2.0	-.1	-2.2	5.0			-2.3	-5.8	6.1	
West Germany ..	2.4	2.2	-.2	-1.0	-.5	-1.5	.9	1.4			.9	3.6	2.5	
United Kingdom ..	5.0	6.1	3.4	.7	2.4	6.5	5.7	1.9			2.6	4.6	3.5	
France	7.7	5.8	2.5	1.7	2.6	3.2	5.2	2.3			2.0	2.8	3.2	
Italy	10.6	8.6	6.1	5.0	5.0	3.2	4.1	4.3			5.6	7.1	7.9	

Source: *Economic and Energy Indicators*, U.S. Central Intelligence Agency, October 9, 1987.

Unemployment rates

(Percentage; seasonally adjusted; rate of foreign countries adjusted to be roughly comparable with U.S. rate)

Country	1984	1985	1986	1986 II	1986 III	1986 IV	1937 I	1937 II	1987 Apr.	May	June	July	Aug.	Sept.
United States	7.5	7.2	7.0	7.1	6.9	6.9	6.7	6.2	6.3	6.3	6.1	6.0	6.0	5.9
Canada	11.3	10.5	9.6	9.6	9.7	9.4	9.6	9.1	9.3	9.1	8.9	9.1	8.8	
Japan	2.8	2.6	2.8	2.8	2.9	2.9	3.0	3.1	3.0	3.2	3.0			
West Germany ..	7.8	7.9	7.6	7.7	7.5	7.4	7.4	7.5	7.5	7.5	7.6	7.6	7.6	
United Kingdom ..	11.7	11.3	11.1	11.2	11.2	10.9	10.6	10.3	10.5	10.2	10.1	10.0	9.8	
France	9.9	10.4	10.7	10.6	10.8	10.8	11.2	11.3	11.3	11.3	11.2	11.2	11.2	
Italy	5.9	6.0	6.3	6.3	6.0	6.6	6.7	6.7						

Note.—Italian unemployment surveys are conducted only once a quarter, in the first month of the quarter.

Source: Statistics provided by Bureau of Labor Statistics, U.S. Department of Labor, October 1987.

Trade balances

(Billions of U.S. dollars, f.o.b. basis)

Country	1984	1985	1986	1985 IV	1987 I	II	III	IV	1987 Mar.	Apr.	May	June	July	Aug.
United States[1] ...	−107.6	−133.6	−149.6	−147.2	−154.4	−139.6	−155.6	−166.8	−136.8	−138.0	−150.0	−169.2	−164.4	−169.2
Canada	16.0	12.8	7.5	11.6	6.8	7.6	6.4	8.0		14.4	8.4	1.2	4.8	
Japan	43.9	55.8	92.5	67.6	71.6	89.6	104.8	104.0		33.2	94.8	88.8	92.4	
West Germany ..	18.8	25.4	52.6	29.6	41.2	51.6	60.4	57.2		62.4	58.8	63.6	62.4	
United Kingdom ..	−5.7	−2.6	−12.2	−1.2	−8.4	−9.6	−17.2	−14.8		−9.6	−22.8	−14.4	−18.0	
France	−2.8	−2.6	.1	−1.6	.4	−4.4	0	1.6		−7.2	−10.8	−7.2	−6.0	
Ital	−11.0	−12.1	−2.1	−14.4	−10.8	.0	1.6	−.8		−8.4	−6.0	−21.6	−14.4	

[1] Exports, f.a.s. value, unadjusted; imports, customs value, unadjusted. Beginning with 1986, figures include previously undocumented exports to Canada. Data for individual quarters do not reflect similar adjustments.

Note.—Beginning with January 1986, the U.S. Department of Commerce stopped reporting export and import data on a seasonally adjusted basis. U.S. data for prior periods have been changed accordingly. This does not affect the comparability of U.S. and foreign trade balances on an annual basis.

Source: *Economic and Energy Indicators*, U.S. Central Intelligence Agency, October 9, 1987.

U.S. trade balance, by major commodity categories and by selected countries

(Billions of U.S. dollars, customs value basis for imports)

Item	1984	1985	1986	1986 II	III	IV	1987 I	II	1987 Mar.	Apr.	May	June	July	Aug.
Commodity categories:														
Agriculture	18.4	9.6	4.5	.0	.5	2.3	1.4	1.3	.4	.5	.5	.3	.7	.6
Petroleum and selected products, unadj	−52.5	−45.9	−31.8	−7.2	−7.2	−6.8	−7.6	−9.0	−2.7	−2.5	−3.0	−3.5	−4.1	−4.2
Manufactured goods	−78.9	−102.0	−134.3	−32.4	−36.1	−34.7	−32.7	−34.9	−10.7	−10.9	−11.3	−12.7	−13.3	−12.2
Selected countries:														
Western Europe	−14.1	−23.3	−28.2	−8.0	−7.3	−6.3	−5.2	−6.6	−2.1	−1.9	−2.2	−2.5	−3.5	−2.1
Canada[1]	−20.1	−21.7	−23.0	−5.8	−5.9	−5.4	−3.2	−2.3	−.7	−.9	−.9	−.5	−.6	−.9
Japan	−33.8	−46.5	−55.3	−12.5	−13.5	−15.0	−13.6	−14.5	−4.7	−4.7	−4.8	−5.0	−4.8	−4.6
OPEC, unadj	−12.3	−10.2	−8.9	−1.5	−2.1	−1.8	−2.4	−2.8	−.7	−.7	−.9	−1.2	−1.6	−1.6
Unit value (per barrel) of U.S. imports of petroleum and selected products, unadj	$28.11	$26.59	$15.02	$13.40	$11.41	$12.60	$15.55	$17.23	$16.23	$16.76	$17.16	$17.77	$18.15	$18.33

[1] Beginning with February 1987, figures include previously undocumented exports to Canada.

Note.—Beginning with January 1986, the U.S. Department of Commerce stopped reporting export and import data on a seasonally adjusted basis. U.S. data for prior periods have been changed accordingly. This does not affect the comparability of U.S. and foreign trade balances on an annual basis.

Source: *Summary of U.S. Export and Import Merchandise Trade*, U.S. Department of Commerce, July 1987.

Money-market interest rates (90-day certificate of deposit)

(Percentage, annual rates)

Country	1984	1985	1986	1986 II	1986 III	1986 IV	1987 I	1987 II	1987 Apr.	May	June	July	Aug.	Sept.
United States	10.7	8.3	6.5	6.5	6.0	5.8	6.1	6.8	6.5	7.0	6.9	6.5	6.6	7.3
Canada	11.3	9.7	8.6	8.9	6.1	8.4	7.4	8.0	7.1	8.3	8.5	9.2		
Japan	6.7	6.5	4.9	4.7	4.7	4.4	4.1	3.7	3.5	3.7	3.8	3.7		
West Germany ..	6.0	5.5	4.6	4.6	4.5	4.7	3.9	3.7	3.7	3.7	3.7	3.9	4.0	
United Kingdom ..	9.9	12.1	10.8	10.1	9.9	11.3	10.5	9.3	9.6	9.0	9.3	9.4	10.3	
France	11.7	10.0	7.7	7.4	7.2	7.6	8.2	8.1	8.0	8.1	8.1	7.9	7.9	
Italy	15.9	15.0	12.8	12.9	11.4	11.2	10.9	10.7	10.6	10.5	11.0	11.1	12.3	

Note.--The figure for a quarter is the average rate for the last week of the quarter.

Source: Statistics provided by Federal Reserve Board.

Effective exchange rates of the U.S. dollar, unadjusted and adjusted for inflation differential

(Index numbers, 1980-82, average=100; percentage change from previous period)

Item	1984	1985	1986	1986 II	1986 III	1986 IV	1987 I	1987 II	1987 Mar.	Apr.	May	June	July	Aug.
Unadjusted														
Index number	122.4	127.1	106.0	106.7	102.8	102.7	97.1	94.4	96.0	94.0	93.5	94.8	96.0	95.7
Percentage change	7.2	3.8	-16.6	-9.4	-3.7	-.1	-5.5	-2.8	-.9	-2.1	-.5	1.4	1.3	.3
Adjusted:														
Index number	119.6	122.5	101.5	99.1	96.9	98.3	93.4	90.7	92.4	90.5	90.0	91.3	92.5	92.2
Percentage change	6.1	2.4	-17.1	-6.8	-2.2	1.4	-5.0	-2.9	-.8	-2.2	-.6	1.	1.1	-.3

Note.—The foreign-currency value of the U.S. dollar is a trade-weighted average in terms of the currencies of 15 other major nations. The inflation-adjusted measure shows the change in the dollar's value after adjusting for the inflation rates in the United States and in other nations; thus, a decline in this measure suggests an increase in U.S. price competitiveness.

Source: *World Financial Markets*, Morgan Guaranty Trust Co. of New York.

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