

The NBER Digest

NATIONAL BUREAU OF
ECONOMIC RESEARCH, INC.

October 1988

The South Korean Success Story

Between 1980 and 1986 South Korea went from being the world's fourth largest debtor country, in the midst of an economic crisis, to a nation with high growth rates, a current account and trade surplus, and controlled inflation. By 1986, "in contrast to many of the other large Third World debtor countries currently negotiating rescheduling arrangements with their creditors, Korea not only met all debt service obligations but was in the position to actually reduce her debt stock by \$2.25 billion," writes NBER's **Susan Collins** in **External Debt and Macroeconomic Performance in South Korea** (*NBER Working Paper No. 2596*). This amazing turnaround was accomplished with a comprehensive, export-focused investment plan (financed by external borrowing as well as domestic saving) and an active, interventionist government policy. During this same period, 17 middle-income debtor countries tried to adjust their economies by lowering demand—that is, reducing imports and investment—and while their output stagnated and per capita income declined, their debt stubbornly remained near its 1985 peak level.

After a decade of growth averaging more than 9 percent, Korean output declined nearly 5 percent in 1980. Inflation, which had been around 14 percent in 1978, rose to nearly 29 percent. The following year, Korea's debt stock was \$32.4 billion, or 49 percent of gross domestic product. The crisis had both external and domestic causes, including the rise in oil and commodity prices, the slowdown in world de-

mand for Korean exports, an agricultural disaster, an overvalued exchange rate, and the assassination of President Park.

"What is the adjustment package that has worked for Korea? The centerpiece has been a comprehensive export-focused investment plan, operationalized through competitive exchange rates, credit rationing, tax and other incentives for targeted industries, and allocation of external credit."

During 1980-1 the government devalued, reduced the fiscal deficit, and helped bring about a decline in real wages. By 1982, Korean growth was still relatively low and exports stagnated, but the current account deficit and inflation had fallen significantly. The government then initiated a more expansionary policy. In addition, the world economy picked up, stimulating demand for Korean exports. From 1983-4 growth rates spurted, savings rose, and both inflation and the current account deficit fell further. At the same time, real wages, per capita income, and consumption all increased.

Korea's successful economic adjustment followed

How Do the Agencies Affect Fixed Mortgage Rates?

two themes. First, rapid growth rates (especially of exports), rising labor productivity, and expanding physical and human capital allowed Korea to borrow heavily but to keep the burden of repayment manageable and to avoid squeezing real incomes. Foreign capital played a critical role, first as aid in the decade following the Korean War and then as external debt (especially in 1966-9, 1974-5, and 1979-82). Because Korea's output, especially exports, was growing, the actual debt burden grew more slowly than the nominal debt stock. For example, in 1964-82 Korea's debt-to-GNP ratio reached 53.5 percent, but debt service was only 20.6 percent of exports. Collins concludes that "Korea's growth performance is a key piece of the puzzle surrounding the quick adjustment to the 1979-82 debt crisis."

She also notes that "Korea offset reductions in factor productivity after the first oil shock with a substantial increase in investment." At the same time, labor played an important role: the average workweek increased to 54.8 hours, and the work force was well-educated and disciplined. Finally, from 1975-85, exports drove Korea's growth and generated the foreign exchange needed to repay external debts.

The second theme was an active, interventionist government policy that was credible, consistent, and coherent. Investment to promote exports received top priority, and the economy was led through a fundamental industrial restructuring. Korea instituted a series of five-year plans (beginning in 1962) that determined the level of investment necessary for a desired level of growth, and singled out sectors to be stimulated, focusing especially on exports. The close link between government and business in Korea made this strategy work.

Government savings were positive in every year since 1962, and the country's savings rate rose from 14 percent in 1965 to over 34 percent in 1986. With the exception of the late 1970s, Korea followed a consistent, credible exchange rate policy over this period, maintaining a competitive, sometimes undervalued, real exchange rate with low variance. Real depreciations often were accompanied by real wage *increases*, because labor productivity was increasing.

Finally, tax preferences and interest rate subsidies helped domestic industries after 1965. Also, import restrictions increased substantially during the 1970s. Almost all Korean imports are raw materials, intermediate products, or capital goods. Consumer products represent less than 5 percent of Korean imports.

In summary, Collins writes: "What is the adjustment package that has worked for Korea? The centerpiece has been a comprehensive export-focused investment plan, operationalized through competitive exchange rates, credit rationing, tax and other incentives for targeted industries, and allocation of external credit."

Purchases of mortgage loans by two federal government agencies keep interest rates on fixed-rate mortgages (FRMs) artificially low, according to an NBER study by **Patric H. Hendershott** and **James D. Shilling**. The Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) buy up "conforming" mortgages: that is, mortgages collateralized by one to four family properties and under a certain maximum dollar amount indexed to house prices (the limit is \$168,700 in 1988). In recent years, 80 percent of the mortgage loan dollar volume has been under the conforming limit. The agencies then "securitize" these mortgages: that is, repackage them in securities for sale to a wide range of investors. Between 1977 and 1981, Fannie Mae and Freddie Mac were minor players in the mortgage markets: they securitized only 4 percent of new conforming FRMs. But in the 1980s, the agencies' roles exploded. By 1986 they securitized over half of new conforming FRMs. Because adjustable-rate mortgages (ARMs) are less standardized, and because savings and loans prefer to hold rather than to sell them, less than 10 percent of conforming ARMs were securitized in 1986.

In **The Impact of the Agencies on Conventional Fixed-Rate Mortgage Yields** (*NBER Working Paper No. 2646*), Hendershott and Shilling report that the dominant role of Fannie Mae and Freddie Mac has affected mortgage rates. Rates on conforming loans are about 30 basis points (that is, 0.3 percentage points) lower than rates on nonconforming loans because of securitization by the federal agencies. Rates on nonconforming loans that are above the current loan ceiling but are likely to be below the ceiling within a year are 15 basis points lower than they otherwise would be.

"Purchases of mortgage loans by two federal government agencies keep interest rates on fixed-rate mortgages (FRMs) artificially low."

Lower rates on FRMs make people more likely to choose them than ARMs. The lower FRM interest rates also induce people to own rather than to rent and to own larger houses than they otherwise would.

Although the impact of a 30-basis-point drop may seem small, Hendershott and Shilling estimate that such an increased differential between FRMs and ARMs could be expected to lower the ARM share of new mortgages by as much as 20 to 35 percentage points.

Hendershott and Shilling base their conclusions on a comparison of yields on conventional FRMs in California, 4750 of which were closed in May-June 1978 and 1875 of which were closed in May-June 1986, periods before and after the agencies began to dominate the market. These loans constituted one-quarter of the total loan volume nationwide in 1986 and one-half of the volume above the conforming limit.

DRH

How the Debt Crisis Picked Its Victims

Middle-income developing countries with unequal distributions of income were far more likely to face a debt crisis in the early 1980s than otherwise similar countries with more equal income distributions, according to NBER Research Associate **Jeffrey Sachs** and **Andrew Berg**. A high level of per capita income, a large agricultural sector, and trade policies that favor exports also were associated with successful avoidance of a debt crisis.

In **The Debt Crisis: Structural Explanations of Country Performance** (*NBER Working Paper No. 2607*), Sachs and Berg find that forced reschedulings of foreign debt and a low value of country debt on the secondary market were associated with a high degree of income inequality among a sample of 35 middle-income countries. Their measure of inequality is the ratio of income received by the top 20 percent of the population to income received by the bottom 20 percent. "In such economies, the pressures for redistributive policies tend to be greatest, while the ability of the wealthy to resist the pressures . . . also tend to be strong given their significant command over economic and political resources," Sachs and Berg argue. This "distributional

tug-of-war" tends to undermine effective macroeconomic management. The resultant budget deficits and inflation often lead to serious problems with foreign debt.

A smaller agricultural share of the GNP also is correlated with foreign debt problems, Sachs and Berg discover. Once again, the impact seems to be through politics. Since it is easier to concentrate opposition to the government in cities, developing countries that are highly urbanized tend to have short-lived governments. The political party in power has a strong incentive to borrow up to the lending limit of foreign banks, since it benefits from an increase in government spending while there is a good chance that the opposition party will be saddled with the debt.

Trade policies that are oriented toward export promotion also are correlated with avoidance of the debt crisis, according to Sachs and Berg. "Outward-oriented economies" are better able to increase export earnings to service their debt. In addition, there is a broader political interest in avoiding episodes of overvaluation that are harmful to the more powerful export sector. Sachs and Berg argue that these periods of overvaluation were an important cause of the debt crisis in several cases.

"Middle-income developing countries with unequal distributions of income were far more likely to face a debt crisis in the early 1980s than otherwise similar countries with more equal income distributions."

Sachs and Berg discover that the only other significant variable affecting the debt crisis is high per capita income, reflecting more effective economic and political institutions. They find no independent effect for movements in the terms of trade, the commodity composition of exports, nor the rate of national savings, all of which are frequently mentioned in discussions of the debt crisis.

Sachs and Berg calculate that a highly unequal distribution of income, a low agricultural share, and an inward-oriented policy each account for about one-third of the difference between the 89 percent discount on Peru's foreign debt and the par rating for the typical country in East Asia. They do not find a regional effect, for example that Latin American countries are more likely to reschedule, independent of the other variables.

LB

Recent NBER Books

Trade Policy Issues and Empirical Analysis

Trade Policy Issues and Empirical Analysis, edited by Robert E. Baldwin, is available from the University of Chicago Press for \$46. This volume, based on a 1987 NBER conference, covers a wide range of topics including trade policy in developing countries, the effect of protectionism on output, and analyses of specific industries. It should interest economists, policymakers, and anyone concerned with how international trade and trade policy affect domestic economies.

Editor Robert E. Baldwin is director of the NBER's trade relations project and the Hillsdale Professor of Economics at the University of Wisconsin, Madison.

To order this volume, write to: The University of Chicago Press, Order Department, 11030 South Langley Avenue, Chicago, IL 60628. Academic discounts of 10 percent for individual volumes and 20 percent for standing orders for all NBER books published by the University of Chicago Press are available to university faculty; orders must be sent on university stationery.

NBER Macroeconomics Annual 1988

The NBER Macroeconomics Annual 1988, edited by Stanley Fischer, is now available from The MIT Press. The hardcover edition is \$30; the paperback costs \$14.95.

This is the third volume in a series from the National Bureau of Economic Research that effectively links theoretical and empirical developments in macroeconomics with specific current issues facing the United States and foreign economies. This edition contains eight articles initially presented at a conference held in Cambridge, MA last March. In the first article, Alberto Alesina presents recent developments and tests the theory of economic policymaking. Next, David Romer estimates the economic cost of excessive government budget deficits. Matthew D. Shapiro and Mark W. Watson seek to identify the sources of fluctuations in output and employment. John Kennan asks if the labor market acts as though it is always in equilibrium. Kazuo Ueda explores the causes of the Japanese current account surplus. The final three shorter papers by Fischer Black, Kenneth French, and Robert J. Shiller evaluate the efficient-markets hypothesis in light of the October 1987 stock market crash.

Stanley Fischer is a member of the NBER's Programs of Research in Economic Fluctuations and Financial Markets and Monetary Economics. He is currently on leave from the MIT economics faculty while serving as Vice President of Development Economics and Chief Economist at The World Bank.

Order this volume, either hardcover or paperback, directly from The MIT Press, 55 Hayward Street, Cambridge, MA 02142; (617) 253-2884.

The National Bureau of Economic Research is a private, non-profit research organization founded in 1920 and devoted to objective quantitative analysis of the American economy. Its officers are:

Chairman—Richard N. Rosett

Vice Chairman—George T. Conklin, Jr.

Treasurer—Charles A. Walworth

President and Chief Executive Officer—Martin Feldstein

Executive Director—Geoffrey Carliner

Director of Finance and Administration—Sam Parker

Contributions to the National Bureau are tax deductible. Inquiries concerning contributions may be addressed to Martin Feldstein, President, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138.

The NBER Digest summarizes selected Working Papers recently produced as part of the Bureau's program of research.

Working Papers are intended to make preliminary research results available to economists in the hope of encouraging discussion and suggestions for revision. The Digest is issued for similar informational purposes and to stimulate discussion of Working Papers before their final publication. Neither the Working Papers nor the Digest has been reviewed by the Board of Directors of the NBER. Preparation of the Digest is under the supervision of Donna Zerwitz. The articles indicated by DRH and LB were prepared with the assistance of David R. Henderson and Lewis Beman, respectively.

Individual copies of the NBER Working Papers summarized here (and others) are available free of charge to Corporate Associates and other supporters of the National Bureau. For all others, there is a charge of \$2.00 per paper requested. Prepayment is required for all orders under \$10.00. Please do not send cash. For further information, please contact: Working Papers, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138; (617) 868-3900. Abstracts of all current National Bureau Working Papers appear in the NBER Reporter.