

PN-ABK-788

INTERNATIONAL CENTER FOR ECONOMIC GROWTH

in

and



International Center for Economic Growth



Since 1985 the International Center for Economic Growth, a nonprofit organization, has contributed to economic growth and human development in developing and post-socialist countries by strengthening the capacity of indigenous research institutes to provide leadership in policy debates. To accomplish this the Center sponsors a wide range of programs—including research, publications, conferences, seminars, and special projects advising governments—through a network of more than 230 correspondent institutes worldwide. The Center's research and publications program is organized around five series: Sector Studies; Country Studies; Studies in Human Development and Social Welfare; Occasional Papers; and Working Papers.

The Center is affiliated with the Institute for Contemporary Studies, and is headquartered in Panama with the administrative office in San Francisco, California.

For further information, please contact the International Center for Economic Growth, 243 Kearny Street, San Francisco, California, 94108, USA. Phone (415) 981-5353; Fax (415) 986-4878.

## ICEG Board of Overseers

- |   |   |
|---|---|
| Y. Seyyid Abdulai<br><i>OPEC Fund for International<br/>Development, Austria</i>                    | Woo-Choong Kim<br><i>Daewoo Corp., Korea</i>  |
| Abdalatif Al-Hamad<br><i>Arab Fund for Economic and Social<br/>Development, Kuwait</i>              | Adalbert Krieger Vasena<br><i>Argentina</i>   |
| Nicé'is Ardito-Barletta<br><i>Chairman, Panama</i>  | Pedro Pablo Kuczynski<br><i>Peru</i>  |
| Roy Ash<br><i>Ash Capital Partnership, USA</i>  | Agustín Legorreta<br><i>Inverlat S.A., Mexico</i>   |
| Bruce Babbitt<br><i>Steptoe &amp; Johnson, USA</i>  | Sol Linowitz<br><i>Coudert Bros., USA</i>   |
| Raymond Barre<br><i>France</i>  | Jorge Mejía Salazar<br><i>Colombia</i>  |
| Roberto Campos<br><i>National Senator, Brazil</i>   | Saburo Okita<br><i>Institute for Domestic and International<br/>Policy Studies, Japan</i> |
| Carlos Manuel Castillo<br><i>Costa Rica</i>   | Torrás Pastoriza<br><i>Banco de Desarrollo Dominicano,<br/>S.A., Dominican Republic</i>   |
| A. Lawrence Chickering<br><i>International Center for<br/>Economic Growth, USA<br/>(ex officio)</i> | John Petty<br><i>American Czech &amp; Slovak Enterprise<br/>Fund, USA</i>                 |
| Gustavo Cisneros<br><i>Organización Cisneros, Venezuela</i>   | Stephan Schmidheiny<br><i>Anova A.G., Switzerland</i>                                     |
| Roberto Civita<br><i>Editora Abril, Brazil</i>  | Hari Shankar Singhania<br><i>J.K. Organization, India</i>                                 |
| A. W. Causen<br><i>BankAmerica Corp., USA</i>   | Anthony M. Solomon<br><i>Institute for East-West Security Studies,<br/>USA</i>            |
| Robert B. Hawkins, Jr.<br><i>Institute for Contemporary Studies,<br/>USA</i>                        | J. J. Vallarino<br><i>Consejo Interamericano de Comercio y<br/>Producción, Panama</i>     |
| Ivan Head<br><i>University of British Columbia,<br/>Canada</i>                                      | Amnuay Viravan<br><i>Bangkok Bank Ltd., Thailand</i>                                      |
|   | Paul A. Volcker<br><i>James D. Wolfensohn, Inc., USA</i>                                  |

P<sub>N</sub>-ABK-788

ISBN 76269

—*Executive Summary*—

# **Exchange Rate Policies in Developing and Post-Socialist Countries**

Edited by  
Emil-Maria Claassen



An International Center for Economic Growth Publication

ICS PRESS  
San Francisco, California

© 1992 International Center for Economic Growth

Printed in the United States of America. All rights reserved. No part of this book may be used or reproduced in any manner without written permission except in the case of brief quotations in critical articles and reviews.

Publication signifies that the Center believes a work to be a competent treatment worthy of public consideration. The findings, interpretations, and conclusions of a work are entirely those of the authors and should not be attributed to ICEG, its affiliated organizations, its Board of Overseers, or organizations that support ICEG.

Inquiries, book orders, and catalog requests should be addressed to ICS Press, 243 Kearny Street, San Francisco, California 94108, USA. Telephone: (415) 981-5353; fax: (415) 986-4878. To order, call toll-free in the contiguous United States: (800) 326-0263.

This is an executive summary of the book *Exchange Rate Policies in Developing and Post-Socialist Countries*, edited by Emil-Maria Claassen, published by ICS Press in 1991.

Cover design by MRP Design.

ISBN 1-55815-188-5

# Contents

<b>Preface</b> .....	6
<b>Summary of Conclusions</b> .....	7
<b>An Overview of <i>Exchange Rate Policies in Developing and Post-Socialist Countries</i></b> .....	10
Internal and External Convertibility .....	10
Repressed versus Open Inflation and Currency Reforms .....	12
Choice of the Nominal Anchor .. .	16
Sequencing of Reforms and Convertibility .....	19
The Phenomenon of Overvaluation .....	21
Exchange Rate Policy of Newly Industrialized Countries .....	23
The Optimal Exchange Rate Regime .....	24
<b>About the Contributors</b> .....	26

**Contents of the book *Exchange Rate Policies in Developing and Post-Socialist Countries***

**Part I Introduction**

Chapter 1 Exchange Rate Policies in Developing and Post-Socialist Countries: An Overview  
*Emil-Maria Claassen*

Chapter 2 Stabilization Policies in Developing and Socialist Countries  
*Robert A. Mundell*  
Comments: *Juergen B. Donges*

**Part II Socialist Countries**

Chapter 3 Stabilizing the Ruble: The Problem of Internal Currency Convertibility  
*Ronald I. McKinnon*

Chapter 4 Stabilization Policies in Poland: A Progress Report  
*Roman Frydman, Stanislaw Wellisz, and Grzegorz W. Kolodko*  
Comments: *Edmund S. Phelps*

Chapter 5 Gradual or Radical Transformation? The Case of the German Monetary Union  
*Emil-Maria Claassen*  
Comments: *Dieter Bender and Daniel Gros*

Chapter 6 The Eastern Bloc: Legal Reforms before Monetary and Macroeconomic Policies  
*Reuven Brenner*  
Comments: *John Williamson*

Chapter 7 Intraregional Convertibility in Eastern Europe: Is It Still an Issue?  
*Marie Lavigne*

**Part III      Developing Countries**

- Chapter 8      Exchange Rate Policies in Developing Countries  
*Bijan B. Aghevli and Peter J. Montiel*  
Comments: *J. Peter Neary*
- Chapter 9      Capital and Current Account Liberalization and  
Real Exchange Rates in Developing Countries  
*Sebastian Edwards*
- Chapter 10     Growth Collapses, Real Exchange Rate  
Misalignments, and Exchange Rate Policy in  
Developing Countries  
*Deepak Lal*  
Comments: *Apostolos Condos*
- Chapter 11     Exchange Rate Policy in Countries with  
Hyperinflation: The Case of Argentina  
*Roque B. Fernández*  
Comments: *Juan L. Cariaga*
- Chapter 12     Unification of Official and Black Market Exchange  
Rates in Sub-Saharan Africa  
*Brian Pinto*  
Comments: *Friedrich L. Sell*
- Chapter 13     Exchange Rate Policies for the East Asian Newly  
Industrialized Countries  
*Yung Chul Park and Won-Am Park*  
Comments: *Helmut Reisen*

**Part IV      Conclusion**

- Chapter 14     Advice on the Choice of an Exchange Rate Policy  
*John Williamson*  
Comments: *Herbert G. Grubel*

# Preface

*Exchange Rate Policies in Developing and Post-Socialist Countries* looks at one of the most important questions that all countries—both developing and industrial—must answer: What is the optimal exchange rate regime? Answering this question appropriately and following through with policy are vital for economic progress in the developing and formerly socialist countries. Developing countries are coping with a history of import substitution, overvalued currencies, and hyperinflation. Meanwhile, the countries of Eastern Europe face a legacy of price controls, repressed inflation, and currencies that cannot be converted into goods.

All of these problems are related to exchange rate policies. But reforming such policies is a large and difficult job. In what order should reforms be instituted? Should the exchange rate be fixed or managed? How can currency reform be made credible? Emil-Maria Claassen and the contributors to this volume bring their expertise and experience to bear on these hard questions.

*Exchange Rate Policies in Developing and Post-Socialist Countries* presents the discussions that took place at a conference held May 10–12, 1990, in Berlin, and this executive summary gives the main conclusions of that volume. We are pleased to have cosponsored the conference and to publish this important study.

Nicolás Ardito-Barletta  
General Director  
International Center for Economic Growth

November 1991  
Panama City, Panama

# Summary of Conclusions

In the 1980s, after twenty or thirty years of economic mismanagement, developing countries began to liberalize their economies. They were joined, in 1989, by the countries of Eastern Europe, who threw off the legacy of communism and moved toward democracy and the free market. An important element in the liberalization and stabilization efforts of both groups of countries is exchange rate policy, and both groups are now facing similar issues and choices.

Contributors to the volume *Exchange Rate Policies in Developing and Post-Socialist Countries* examine a number of issues related to exchange rates set in the larger context of macroeconomic policies. Their conclusions include the following:

1. Important differences and similarities exist between developing and socialist countries. For example, the socialist countries rely (or relied) on a centrally planned economy, while the developing countries rely, for the most part, on a market economy with a huge public sector and many disruptive state interventions. Furthermore, most developing countries participate in multilateral international trade, while the socialist countries do not. Both socialist and developing countries, however, have experienced unbalanced growth, because both groups stressed industrialization at the expense of agriculture. Both types of countries suffer from disguised unemployment and from capital-intensive production due to the artificially low price of capital. Both groups have rudimentary financial systems.
2. The currencies in the formerly socialist countries are not convertible into goods either internally or externally. With price controls in effect, a currency cannot function as a

means of payment and a store of value. Therefore, goods take on the functions of money.

- Internally, goods are simultaneously abundant in hoarded supplies and in shortage in the marketplace.
  - Externally, trade among Eastern European countries is basically bilateral (in other words, it consists of barter); shortages of goods prevent multilateral trade from taking place.
3. One result of the shortage of goods in a planned economy, which is the main cause of inconvertibility, is the existence of a monetary overhang. This overhang gives rise to inflation during the transition period. Inflationary situations could be corrected by a properly administered currency reform. All of the contributors emphasize that a currency reform can only succeed with a proper mix of monetary, fiscal, and exchange rate stabilization.
  4. Any fundamental liberalization reform must be credible to succeed. For example, currency reforms are probably only credible when they are accompanied by a fixed exchange rate. The recent tendency in developing countries toward more flexible exchange rate arrangements may help lead to the external adjustment needed to absorb external shocks, but it could also be the result of internal mismanagement. In the latter case, more flexible exchange rates could mean the loss of a credible nominal anchor as a yardstick for monetary discipline.
  5. An important issue for both socialist and developing countries is the sequencing of liberalization reforms. Gradual reform may lack credibility and lead to a complete failure of reforms. In general, it appears that trade liberalization should come before financial convertibility.
  6. The phenomenon of overvaluation has plagued many developing countries. Overvaluation can be seen as the

- source of the growth collapse of several countries during the 1980s. A deliberate overvaluation policy can be used, in countries with an overvalued official rate and a black-market rate, to generate considerable tax revenues. Recognition of an overvalued currency presumes knowledge of the fundamental real equilibrium exchange rate, which is important for all types of economies.
7. The exchange rate policy of the newly industrialized countries of East Asia is a special case among developing countries. These countries are close competitors, their development strategy is based on manufacturing and export-led growth, and their growth performance has been around 10 percent a year for the past two decades. These countries should not establish an Asian Monetary System, with Japan at the center, because there is relatively little intraregional trade among Asian economies compared with trade with the United States and Europe for exports and with Japan for imports. A potentially viable proposal is a managed joint float of the NICs with respect to a trade-weighted basket of key currencies. However, the political leadership for such a scheme seems to be lacking.
  8. The traditional choice between fixed and flexible exchange rates has been changed to one between fixed and managed floating exchange rates. Candidates for a pegged exchange rate are small open economies, such as those of Eastern Europe. A managed floating exchange rate can be combined with the formation of a currency area. The worst of all exchange rate regimes is a fixed and overvalued exchange rate, which has been observed in many developing countries in the past.

# **An Overview of *Exchange Rate Policies in Developing and Post-Socialist Countries***

The year 1989 was probably as decisive for world history as the year 1789 was two hundred years earlier. The political democratization and economic liberalization of Eastern Europe constitute a challenge to any third-way solution between capitalism and socialism. Unfortunately, it took seventy years after the rise of Marxism-Leninism in the Soviet Union for the world to recognize that democracy and the market economy are among the least of evils for the political and economic organization of society.

The developing countries passed through a shorter period of painful experience. Many of them, having gained their independence in the 1950s, went through an experimental third-way solution that was preached in that decade by the universities of Oxford, Cambridge, and Paris. In the 1980s, after twenty or thirty years of economic mismanagement, they began the process of liberalizing their economies. Their experiences with liberalization may offer lessons for the liberalization efforts of the formerly socialist countries.

## **Internal and External Convertibility**

One result of the decades of central planning in the formerly socialist economies is that their currencies cannot be converted into goods either internally or externally. With price controls still in effect, the domestic currency in any formerly socialist economy is prevented from functioning as a means of payment and a store of value. Consequently,

goods take on the functions of money. On the one hand, many domestic transactions take the form of barter. On the other hand, households and firms hoard goods as a store of value. Thus, a paradoxical situation arises: goods are in abundance as far as hoarded supplies are concerned, and they are simultaneously in shortage because only a limited amount of soft goods can be purchased with the domestic currency. Ronald McKinnon, in his chapter on stabilizing the ruble, estimated the inventories of firms in the Soviet Union for 1985. They amounted to 82 percent of national income, while U.S. firms accumulated inventories equal to 31 percent for the same year.

The situation is no better in terms of external convertibility. The share of Eastern Europe and the Soviet Union in total world trade was under 8 percent in the late 1980s. Roughly half of it was traded among the members of the Council for Mutual Economic Assistance (CMEA). Despite the formal existence of a common socialist currency, called the transfer ruble, trade among CMEA members was basically bilateral (which is merely barter), while multilateral trade accounted for only 1 percent of total CMEA trade. The transfer ruble was designed to allow a country to be a net exporter to one country and use its transfer ruble surpluses as a net importer from another CMEA country. However, that type of multilateral trade arrangement never exceeded the 1 percent mentioned, because a country with balances in transfer rubles could rarely find another member country that was disposing of any available goods. In reality, the transfer ruble was not convertible into goods and thus was not transferable.

Bilateral trade negotiations consisted mainly of five-year trade agreements, which were detailed in yearly trade protocols. Each country tried to obtain hard goods (goods in short supply within the CMEA region, such as raw materials and food products) by selling soft goods (mostly machinery, which could not be sold easily to the West). As Marie Lavigne notes in her chapter on intraregional convertibility, the Soviet Union subsidized this trade pattern in favor of its trading partners, at least until 1987. On the one hand, the terms of trade were favorable for Eastern Europe. The Soviet Union sold oil at low prices, compared with prices of acquired Eastern European machinery. However, this trend was reversed in the late 1980s because of the worldwide decline in oil prices. On the other hand, after a long-term trade surplus (with

a corresponding accumulation of transfer rubles), the Soviet Union moved toward a deficit position with Eastern Europe when it granted foreign trade rights to a growing number of Soviet enterprises, which could earn foreign currencies in order to import on their own account.

In early 1990, the CMEA members agreed to shift toward foreign trade based on world prices and settled in convertible currencies from 1991 on. The dominant view in the West is that Eastern Europe should be increasingly integrated into the world economy, while the Soviet Union should be disjoined from Eastern Europe because of the uncertainty about its future economic reform. Consequently, a revival of the CMEA as a regional union would not be desirable. External currency convertibility would be an important part of the transition process toward a market economy and toward integration into the Western world economy, and any further efforts for intraregional convertibility within Eastern Europe would therefore be redundant.

Marie Lavigne, however, does not share this view. She believes the transition should be gradual, especially for intraregional trade relationships. Reducing trade within the CMEA from the present 50 percent average of total trade to, for instance, 20 percent of total trade would be devastating, since foreign trade could not be diverted to the West because of the lack of competitiveness. One possible scheme for increasing multilateral trade would be monetary arrangements involving settlement in domestic currencies, provided that they become progressively convertible within each economy, within the CMEA area, and outside the area.

### **Repressed versus Open Inflation and Currency Reforms**

Repressed inflation refers to a situation in which the price level is fixed by price controls, and there is a simultaneous excess supply of money (a monetary overhang) and a corresponding excess demand for goods. This phenomenon expresses the shortage of goods within the economy or the imperfect convertibility of the domestic currency into domestic goods (that is, lack of internal convertibility).

If one opts to avoid open inflation, it is necessary to eliminate the monetary overhang. There are many ways to do so, as Robert Mundell

describes in his chapter on stabilization policies. The simplest, but probably also the least popular, is to confiscate a part of the outstanding volume of bank deposits. A less harmful method is to freeze bank deposits and to wait to determine what to do with the frozen deposits in the future. They could be converted later into property titles of physical assets during the privatization of state-owned enterprises and land. They could also be converted into new government bonds, implying a fiscal deterioration as to future debt service. Until 1990, no Eastern European country, except East Germany, had chosen to confiscate or freeze deposits. The conversion rate of East German mark prices and wages into West German mark prices and wages was 1:1, while the conversion rate of East German mark currency into West German mark currency was 1.6:1 according to Emil-Maria Claassen's calculation.

Two important observations must be made with respect to a price-level peg. On the one hand, after the elimination of the monetary overhang, prices can and should be decontrolled in order to introduce the necessary change in relative prices. At that stage, the price-level peg can be replaced by an exchange rate peg, so that the domestic relative prices of tradable goods would reflect those of the international economy. On the other hand, as Robert Mundell emphasized, a monetary overhang cannot be eliminated by canceling one or two zeros of the outstanding quantity of money (examples are the New French franc or the new peso) and by also reducing prices by the same proportion, since the excess supply of money would be maintained, but expressed by another numeraire.

An open inflation is the alternative to equilibrating the money market through decontrol of prices. The money supply is not reduced, but the money demand is increased as a result of rising prices. The subsequent short-lived hyperinflation (as in Poland or Yugoslavia) could also be regarded as a silent confiscation of the monetary overhang, since its real value is reduced to zero through the price-level increases. Robert Mundell points out that inflation is usually preferred to direct confiscation, since it operates by deceit on an unsuspecting public. However, as Reuven Brenner remarks in his chapter on the sequencing of reforms in the Eastern bloc, confiscation through open inflation is not all that dramatic, since people were already used to high prices in black markets. The official price level was largely understated, and real wages were

overstated. The high prices in black markets actually were nominal bribes to avoid long queues or years of waiting.

If a country opted for open inflation, a fixed exchange rate that would promote the credibility of future monetary policy could be adopted. Since open inflation restores internal convertibility, a monetary anchor in the form of a fixed exchange rate could guarantee confidence in future price-level stability.

This type of reform occurred in Poland and Yugoslavia. As Roman Frydman, Stanislaw Wellisz, and Grzegorz Kolodko describe the Polish situation in their chapter, on January 1, 1990, the exchange rate was set above the free market rate at 9,500 zlotys to the U.S. dollar. Zlotys were freely convertible into dollars. In the first months of 1990, there was a considerable shift from dollars into zlotys, since the latter were made attractive by high interest rates on zloty deposits. Poland's open inflation took place mainly from August 1989 to February 1990, with a retail price index of 1,640 (December 1988 = 100), while afterward monthly inflation rates were less than double digit. Yugoslavia's open inflation represented several thousand percentage points in 1989 and early 1990. Yugoslavia then introduced a new convertible dinar for 10,000 old dinars and pegged the new dinar to the deutsche mark at 7:1. As in the case of Poland, there was a considerable shift from deutsche mark holdings into holdings of the new dinar, since the latter had equally high returns on deposits. The Yugoslavian currency reform resembles Germany's currency reform of November 1923, described in Emil-Maria Claassen's chapter, when one trillion paper marks were exchanged for one gold mark (or Rentenmark) and when the exchange rate of the gold mark to the U.S. dollar was set at 4.2:1.

As all contributors on the inflation issue emphasize, a currency reform can be fully successful only with a proper mix of monetary, fiscal, and exchange rate stabilization. Since, in the case of hyperinflationary developing countries, monetary financing of the budget deficit is the main cause of hyperinflation, fiscal austerity is a precondition for success. For Eastern European countries, however, the fiscal picture looks far more varied. There are two monetary sources for open inflation: (1) the monetary overhang built up during the period of repressed inflation and (2) the additional money creation during the transition phase.

The second source is demonstrated for the Soviet Union in the chapter by Ronald McKinnon, but it is equally applicable to other socialist countries. In the absence of an elaborate fiscal system, the main government revenue of socialist countries came from the surpluses of enterprises. The central planning authorities fixed prices according to cost (labor, intermediaries, etc.), plus transfer of the so-called surplus to the government. When the first price deregulations went into effect and certain enterprises were allowed to set prices freely, the surpluses disappeared. The Soviet budget deficit rose progressively from 1.8 percent of GNP in 1985 to 10 percent in 1989 (to 14 percent according to Reuven Brenner).

There is a third inflationary source in many Eastern European countries, provided that the banking system has not been reformed, as both McKinnon and Brenner show. In planned economies, firms had full access to bank credit at zero or low interest rates in order to finance the purchase of inputs they needed to fulfill the plans. In the terminology of the Hungarian economist Janos Kornai, enterprises had soft budget constraints. To the extent that bank reforms are slowed down, this specific lack of financial constraint constitutes another source of inflation.

Open inflation can lead to hyperinflation, as in Yugoslavia and to a lesser extent in Poland. Among developing countries, Latin America is the most frequent candidate for hyperinflation, and Argentina is the most obvious example of the failure of various anti-inflation plans. In his chapter on hyperinflation, Roque Fernández discusses the case of Argentina. The traditional approach to stabilization in Argentina was the announcement of fiscal discipline plus price controls, and the traditional result was increasing inflation after a short period of stabilization. The Austral Plan of June 1985 confirmed this tradition. The lack of fiscal discipline, together with unsound monetary management, accelerated inflation in 1986–1987. The consequences of the Austral Plan lasted for several years, with the result that credibility in the government's announcements vanished completely.

The Primavera Plan, introduced some months before spring 1988, included some positive measures, particularly the liberalization of foreign exchange controls and the commercial policy. However, by the time the authorities abandoned the idea of heterodox policies and moved gradually to more orthodox measures, such as the reduction of the budget

deficit and sound monetary management, it was too late. The strong credibility available at the beginning of the Austral Plan was gone. The lack of credibility and the fear of repudiation of the government debt increased interest rates to over 30 percent for operations in U.S. dollars—that is, four times the London interbank offered rate (LIBOR).

Fernández makes an interesting point on the choice between using debt financing or money creation to finance a budget deficit. Under normal circumstances, it is believed that more debt finance and less money creation reduces the inflation rate. However, to the extent that an increased stock of public debt involves higher real interest rates, as was the case for Argentina, the budget deficit deteriorates, implying higher monetary finance and a higher inflation rate. Because of its impact on the stock of public debt and on the real interest rate, greater borrowing requires more inflation than not borrowing (depending on which side of the Laffer curve the economy is located). Consequently, the most important anti-inflationary measure is ultimately to reduce the budget deficit.

### **Choice of the Nominal Anchor**

One of the lessons of the past three decades of macroeconomics is that policy makers can fix only one nominal variable; the other variables become endogenous (provided that markets clear). According to Mundell, among the nominal variables available as the single exogenous one (that is, the nominal anchor of the system) are (1) the quantity of money, (2) the nominal exchange rate, (3) the price level, and (4) the nominal wage rate. The Western industrial countries normally choose between the first two variables. The first system consists of a fixed quantity of money and a flexible exchange rate. The second system is just the contrary: a fixed exchange rate and a flexible quantity of money.

The idea of targeting the money supply can be ascribed to the monetarist school. When the rate of growth of the money supply is fixed, all other nominal variables adjust as endogenous magnitudes: the price level, the nominal exchange rate, and the nominal wage rate. Furthermore, these three endogenous nominal variables have to move in such a way that the resulting real exchange rate and real wage rate ensure

an equilibrium in the real sector of the economy (the goods market and the labor market, respectively). The money supply target can be motivated by the ultimate goal of price-level stability or a low inflation rate. The three current monetary areas in the world economy (the dollar, deutsche mark, and yen areas) could be interpreted so that the center countries in each area fix the growth rate of the money supply according to the desired price-level evolution, while all other nominal variables float correspondingly.

The second system consists of a fixed nominal exchange rate that is attained by letting all other nominal variables float. Its ultimate goal could also be price-level stability or a low inflation rate. Since a country can fix only one exchange rate among the various exchange rates it has with different countries, it would choose the exchange rate of the country with which it has an important trade relationship and which succeeds relatively well in pursuing price-level stability. The evolution of the European Monetary System (EMS) toward a German monetary area is a striking example.

The choice between a fixed and floating exchange rate is not a matter of indifference if the monetary authorities of the country lack credibility as a consequence of their past inflation-prone behavior. Pegging to the deutsche mark, for example, involves following the monetary policy of the Deutsche Bundesbank, which has gained a high level of credibility for its maintenance of price-level stability over the past four decades.

Pegging the price level is probably the most inconvenient method, since it not only would imply price control of thousands, if not millions, of goods, but would also result primarily in the distortion of relative prices. The other extreme is controlling a single price; pegging the exchange rate would be the simplest version if the specific currency is convertible on the domestic and international level.

Since the late 1970s, developing countries have in general moved toward more flexible exchange rate arrangements, usually managed floating or independently floating rates. In most cases, however, these terms do not accurately describe the underlying exchange rate policy, since the exchange rate is ultimately set by the authorities, even though it is frequently adjusted. Until the mid-1970s, the majority of third world countries pegged to a single currency. As Bijan Aghevli and Peter Montiel show in their chapter on exchange rate regimes in developing

countries, during 1976–1989, the proportion of countries pegging to a single currency fell from 63 percent to 38 percent (and to a single currency or currency basket, from 86 percent to 66 percent), while the proportion of countries relying on flexible arrangements more than doubled to exactly one-third.

Three main factors contributed to the more flexible exchange rate arrangements. With the wide fluctuations in the exchange rates of the industrialized countries, a number of countries opted to peg to a basket of currencies and made frequent adjustments of the exchange rate vis-à-vis the intervention currency (mostly the single currency to which they had previously pegged). A second factor, particularly for countries in Latin America, was the sharp acceleration of domestic inflation during the 1980s. Rapid depreciation of their currencies was inevitable in order to avoid a deterioration in their external competitiveness. Finally, during the same period, the emergence of external shocks (the growth slowdown in industrial countries, the increase in the international interest rate, the debt crisis, and adverse terms-of-trade effects) forced many developing countries into depreciation as one element of a generalized stabilization program.

An interesting question, also raised by Aghevli and Montiel, concerns the use of the exchange rate as the nominal anchor, a practice that had been abandoned by countries that shifted toward increased flexibility of nominal exchange rates. Since nominal devaluations may undermine financial discipline, the result can be strong domestic inflationary pressure, giving rise to a real appreciation and thus to a loss of international competitiveness.

The generalized movement toward more flexible exchange rate arrangements could imply higher inflationary tendencies as a consequence of the abandonment of the exchange rate as the nominal anchor. If nothing can anchor the domestic price level, attempts to achieve a real depreciation through nominal devaluations may simply end in accelerated domestic inflation. This is an important lesson for the Eastern European countries in their attempt to establish external competitiveness and to maintain price stability, at least for the small open economies of Central Europe in contrast to the large and relatively closed economy of the Soviet Union. For the developing countries as a whole, Aghevli and Montiel show that the real exchange rate appreciated during

1978–1982, stabilized up to 1985, and depreciated only in the second half of the 1980s, despite a considerable acceleration of inflation during the last period.

If the nominal exchange rate is used as the nominal anchor to avoid inflationary pressure, any attempt to depreciate the real exchange rate must be based on domestic financial policies to decelerate the domestic price level. Establishing more rigid nominal exchange rates in developing countries, however, raises the question of credibility. Once countries are accustomed to altering the nominal exchange rate, the public may not perceive the decision to peg it persistently as a credible policy action. Once the authorities have made a nominal devaluation without changing the real exchange rate, confidence in stable future monetary policy may be broken. Ideally, it could be argued, nominal devaluation should have been used in the past only for mitigating external shocks, not for ratifying domestic inflationary pressure.

### **Sequencing of Reforms and Convertibility**

In his chapter on the sequencing of reforms, Reuven Brenner argues that macroeconomic policies (such as monetary, fiscal, and exchange rate stabilization) should come after implementation of basic legal and economic reforms (such as the introduction of property rights, bankruptcy laws, and a simple tax system). Decontrolling prices, he asserts, would be meaningless without a legal decentralized framework for determining prices by privatized enterprises. If the bureaucracy is not abolished, the well-established tradition of corruption will continue the misallocation of resources.

In the case of Germany, the implementation of the various macroeconomic policies was nearly simultaneous. The deutsche mark was introduced in order to make possible all other economic reforms. The labor market played a predominant role in the monetary and economic unification of East and West Germany. Because there was perfect labor mobility from East Germany to West Germany after the removal of the wall between them on November 9, 1989, gradual adjustment measures would not have stopped the labor migration. Even under the adopted shock therapy (monetary union, implementation of the Western

legal, fiscal, and social system, and progressive privatization of combines that were not doomed to bankruptcy), a unified labor market with low wage differences is still an enormous risk for increasing unemployment in both East and West Germany. Emil-Maria Claassen concludes that the German monetary union was the only viable and credible solution for East and West Germany.

An important issue in the appropriate sequencing of liberalization policies is liberalization of trade and capital flows. Conventional wisdom suggests that trade account reforms should be implemented first and the liberalization of the capital account afterward. The reason is that the abolishment of capital controls (and a well-functioning domestic capital market) may lead to net capital inflows and, therefore, to a real appreciation that would not favor the tradable goods sector and the current account. The liberalization of foreign trade, however, through the suppression of trade impediments and tariffs would necessitate a compensating devaluation. As a consequence, trade liberalization should come first in order to consolidate the industrial or tradable goods sector. Simultaneous capital liberalization would endanger the structural reform of the trade account. Furthermore, the capital inflows would be unsustainable in the future if the tradable goods sector has not been restructured sufficiently to provide for future debt service.

In his chapter on capital and current account liberalization, Sebastian Edwards confirms the above sequencing of liberalization measures on the basis of an intertemporal framework. By reviewing empirical studies on Argentina, Chile, Colombia, and Uruguay, he comes to the following conclusions. On the one hand, for these four countries, trade liberalization required a depreciation of the equilibrium real exchange rate (the real exchange rate being defined as the relative price of tradables to nontradables). On the other hand, development of a liberalized, nonrepressed domestic capital market produced an appreciation of the equilibrium real exchange rate. These results are not only of extreme importance for the stabilization and structural adjustment policies in developing countries, but they should also constitute a guideline for the sequencing of liberalization reforms in former socialist countries. Capital liberalization tends to frustrate the depreciation that is necessary to sustain trade reform. The capital account should be opened up after the current account is fully liberalized.

## **The Phenomenon of Overvaluation**

Until the early 1970s, the world economy experienced a "golden age" of growth. Then, various real shocks emerged: the oil price rise of 1973, the boom and fall in commodity prices, increasing unemployment in the industrial world, the second oil price shock in 1979, large fluctuations in capital flows, the debt problem, and high real interest rates. Many of them were common to a great number of developing countries, but economic performance and, in particular, growth performance diverged sharply. Out of a sample of twenty-one developing countries chosen for a World Bank study entitled "The Political Economy of Poverty, Equity, and Growth," Deepak Lal observes in his chapter a growth collapse of eleven among them (Brazil, Costa Rica, Ghana, Indonesia, Jamaica, Madagascar, Mexico, Nigeria, Peru, Turkey, and Uruguay).

One of the common causes for the growth collapse was an overvalued real exchange rate, indicating a fall in competitiveness. There were several reasons for this misalignment. Many countries were confronted by accelerating inflation, resulting from huge budget deficits with an increasing ratio of public debt to gross domestic product (GDP). In general, the nominal exchange rate adjustment and the inflation path led to an overvaluation of the real exchange rate.

Another reason for growth collapses in countries with only moderate inflation (for example, Nigeria and Jamaica) is related to the real exchange rate effect of the "Dutch disease" phenomenon. In general, an external shock arising from a favorable terms-of-trade evolution for specific export commodities or from heavy capital inflows led to a real appreciation of the exchange rate. The causal link was generally fiscal expansion through the windfall profits of the primary export sector or through easier borrowing abroad. In many cases, since the additional public expenditures were partly for nontradable goods, the domestic prices of nontradable goods rose, leading to a real appreciation. When there was a reversal of the terms of trade or a cessation of foreign borrowing, public expenditures had to be reduced (that is, a fall in absorption), and the real exchange rate had to return to its original level. If there were nominal wage rigidities or sluggishness in price movements of nontradable goods, the last resort would be a nominal devaluation.

Maintenance of an overvalued real exchange rate must be explained either by an insufficient reduction in government expenditures or by an insufficient adjustment of the price of nontradable goods and of the nominal exchange rate.

Price controls arrived at by setting official prices below equilibrium prices imply rationing (for instance, through queuing up) and the formation of black markets. Exchange controls that set the official exchange rate below the equilibrium one (overvaluation) also imply rationing and the emergence of black foreign exchange markets. In the past, many socialist and developing countries have lived with this everyday phenomenon.

This dual regime of official and black market exchange rates misallocates resources through tax-subsidy effects. If all commercial foreign exchange transactions take place at the official exchange rate, exporters are taxed and importers are subsidized. One part of the export revenues comes from smuggling, while the other part of export revenues is sold at the official exchange rate. The tax rate on these official export revenues is equal to the black market premium on foreign exchange. It is an implicit tax from which importers and the government profit. According to Brian Pinto in his chapter on exchange rates in sub-Saharan Africa, importers are rationed through import licenses sold by the government at the official exchange rate. Domestic prices of tradables reflect those of the black foreign exchange market. Consequently, importers receive a rent linked to the difference between the black market and the official rate. Taxation of exports at the premium rate creates disincentives to produce exports and lowers the ability to import (in particular, to import intermediate goods), which leads to the phenomenon of import compression. On the other hand, to the extent that the government is a net buyer of foreign exchange for its purchases of imported goods and for the service on its foreign debt, the other part of the implicit tax on export producers is used by the government.

Exchange rate unification (that is, the increase of the official rate to approximate the black market rate) raises a policy dilemma. On the one hand, unification leads to benefits for resource allocation by increasing exports and eliminating import compression. On the other hand, for an unchanged volume of public expenditures, the government needs more tax revenues. If more ordinary taxes cannot be raised, the

alternative is to increase the inflation tax (provided that the money-demand elasticity with respect to the inflation rate is still less than unity). Consequently, a trade-off occurs between the benefits for resource allocation and the inflation costs of unification. This trade-off can be avoided only when the new exchange rate policy is combined with fiscal reforms to reduce the budget deficit, as Pinto demonstrated for Ghana and Sierra Leone. Gradual exchange rate unification would be ineffective without matching fiscal reform.

### **Exchange Rate Policy of Newly Industrialized Countries**

What is the appropriate exchange rate policy for developing countries that are close competitors, whose development strategy is based on exports of manufactured goods, and whose growth performance has been around 10 percent a year over the past two decades? These countries are the East Asian newly industrialized countries (NICs): Hong Kong, South Korea, Singapore, and Taiwan. All four countries have been running a persistent trade deficit with Japan and a surplus with the United States. In the 1980s, their real effective exchange rates moved in a synchronized fashion. Until 1985, they remained rather stable. When the U.S. dollar began to depreciate against the yen and the deutsche mark, the currencies of the NICs appreciated significantly less with respect to the dollar than did the yen, leading to a depreciation of their currencies in real effective terms. From that moment on, the NICs (in particular, Korea and Taiwan) were increasingly criticized for exercising trade protection through currency depreciation.

In their chapter, Yung Chul Park and Won-Am Park discuss two exchange rate proposals. The first consists of the establishment of an Asian Monetary System, with Japan as the center, along the pattern of the European Monetary System (EMS). One of the main arguments against such an Asian monetary integration is the relatively small size of intraregional trade among Asian economies in comparison with the trade dominance of the NICs with the United States and Europe for exports and with Japan for imports. With a peg to the yen, the NICs are forced to revalue their currencies with respect to nonyen currencies whenever the yen appreciates.

The second proposal is a managed joint float of the currencies of the NICs (and probably of some other East Asian currencies) with respect to a trade-weighted basket of key currencies. A joint float with respect to a common basket would eliminate the problem of competitive depreciation among NICs. According to Park and Park, the joint float could represent a first step toward the establishment of a currency area in the Asian Pacific region. However, no political leadership now exists that is strong enough to bring about such a scheme among the East Asian NICs.

### **The Optimal Exchange Rate Regime**

In the concluding chapter of the book, John Williamson gives advice on the choice between a fixed or managed floating exchange rate. He discourages floating rates, pointing out the huge misalignments of exchange rates and the existence of speculative bubbles that he says characterized the 1970s and, in particular, the 1980s.

He recommends a fixed rate for a country that satisfies three conditions: (1) it should have a small open economy, (2) the currency to which it pegs should play the role of a stable anchor, and (3) the central bank should be replaced by a currency board, or an independent central bank committed to the fixed rate should be established. He also answers the question of whether a country should choose a single-currency peg or a multicurrency peg in a pragmatic way. If 50 percent or more of a country's trade is with a single country, it should peg to the currency of that country (provided that the latter is also a stable anchor in terms of monetary stability). Otherwise, it should opt for a basket of the currencies of its most important trading partners.

In all other cases, the priority should be given to a managed exchange rate, either with close bands (as in the EMS) or with wide bands (as envisaged by Williamson's target zone proposal). Monetary policy or nonsterilized interventions in the foreign exchange market should be the instruments of exchange rate management. Here as well, the question is whether a managed exchange rate should have as a reference a single currency or a basket of currencies. A single-currency peg stabilizes the bilateral rate, while considerable changes can occur in the effective

exchange rate. A multicurrency peg stabilizes the effective exchange rate (macroeconomic stability), while considerable fluctuations can occur in the bilateral rates (microeconomic instability).

The real difficulty of a managed exchange rate regime is to know precisely the fundamental equilibrium rate that should indicate the target level of the managed exchange rate. John Williamson's answer has been known for a decade. It is the rate that reconciles internal equilibrium (highest level of domestic activity with continued control of inflation) and external equilibrium in the medium term (sustainable current account imbalances). Sebastian Edwards is more explicit about the current account criterion, since it is derived from a maximization of intertemporal welfare within an intertemporal current account constraint.

With respect to developing countries, Williamson's yardstick of an overvalued currency is based on an examination of the evolution of non-traditional exports. If such exports are nonexistent, stagnant, or declining, this is *prima facie* evidence of overvaluation and of medium-term balance-of-payments problems. As far as socialist countries are concerned, he believes that a convertible currency is the most promising way of reforming the price structure of tradable goods. However, the commitment to a fixed nominal exchange rate for an indefinite future implies the danger of a future overvaluation, and thus of a future loss of credibility, if the underlying macroeconomic conditions cannot be fulfilled. As John Williamson remarks in his chapter, "Credibility is too precious to be squandered."

## About the Contributors

EMIL-MARIA CLAASSEN is professor of monetary and international economics at the University of Paris-Dauphine. During the 1980s he held academic positions at INSEAD (Fontainebleau), the European University Institute (Florence), and New York University. He was the Bundesbank Professor at the Freie Universität Berlin, where the conference "Exchange Rate Policies in Developing and Post-Socialist Countries" was held. Among his previous works are four edited volumes on international economics: *Stabilization Policies in Interdependent Economics*; *Recent Issues in International Monetary Economics*; *Recent Issues in the Theory of Flexible Exchange Rates*; and *International and European Monetary Systems*.

BIJAN B. AGHEVLI is a senior adviser in the Research Department of the International Monetary Fund. He has a Ph.D. from Brown University.

DIETER BENDER is professor of economics and director of the Institute of Development Research and Development Policy at the Ruhr-Universität Bochum, Germany. His main fields of research are international finance and macroeconomics, exchange rate theory, and international trade and developing countries.

REUVEN BRENNER holds the Repap Chair in Economics at McGill's School of Management and is associate fellow at the Centre de Recherche et Développement en Économie (CRDE), Université de Montréal. Brenner is the author of four books: *History: The Human Gamble* (1983);

---

These individuals contributed to the volume *Exchange Rate Policies in Developing and Post-Socialist Countries*, from which this executive summary is taken.

*Betting on Ideas: Wars, Invention, Inflation* (1985, paperback 1989); *Rivalry: In Business, Science, among Nations* (1987, paperback 1990); and *Gambling and Speculation* (with Gabrielle Brenner, 1990). He has also written articles on macroeconomics and legal-constitutional issues in the Eastern Bloc, where he grew up.

JUAN L. CARIAGA is the executive director of the Inter-American Development Bank for Bolivia, Paraguay, and Uruguay. He was the finance minister of Bolivia during the implementation of the stabilization program of 1985. He has written five books and numerous articles on economics in Latin America and the United States.

APOSTOLOS CONDOS received his Ph.D. in economics from Iowa State University. He taught at Duke University and has been a member of the staff of the World Bank. He is presently senior economist in the Policy Analysis Division of the Food and Agriculture Organization of the United Nations.

JUERGEN B. DONGES is professor of economics at the University of Cologne, Germany, and codirector of the Institut für Wirtschaftspolitik in Cologne. He has been an adviser to economic research institutes and government agencies in Germany and elsewhere as well as to the World Bank, the United Nations Industrial Development Organization, the United Nations Conference on Trade and Development, and other international organizations. His many publications focus on trade policy, development economics, economic growth and structural change, and the economics of European integration.

SEBASTIAN EDWARDS is the Henry Ford II Professor of International Business Economics at the Anderson Graduate School of Management of the University of California, Los Angeles (UCLA). He is also a professor of economics at UCLA, a research associate of the National Bureau of Economic Research, and a senior fellow of the Institute for Policy Reform. He is a coeditor of the *Journal of Development Economics*. Edwards's main fields of research are international economics and the economics of developing and Eastern European countries. His most recent books are *Debt, Adjustment and*

*Recovery: Latin America's Prospect for Growth and Development* (1988) and *Real Exchange Rates, Devaluation and Adjustment* (1989).

ROQUE B. FERNÁNDEZ is president of the Central Bank of Argentina and a member of the Board of Directors of the Centro de Estudios Macroeconómicos de Argentina (CEMA). Fernández received a Ph.D. in economics from the University of Chicago in 1975. He is the author of two books and more than fifty articles in books and professional journals.

ROMAN FRYDMAN holds a Ph.D. in economics from Columbia University and is associate professor of economics at New York University. He has written extensively on the theory of market behavior under uncertainty and expectations formation. He is a coeditor, with Edmund S. Phelps, of *Individual Forecasting and Aggregate Outcomes* (Cambridge University Press, 1983). Since the changes in Eastern Europe he has been investigating the problems of making a transition to a market economy. Frydman proposed, with Andrzej Rapaczynski, an approach to the privatization of Polish industry, which has been incorporated into the privatization program announced by the Polish government.

DANIEL GROS is a senior research fellow at the Centre for European Policy Studies, Brussels. He teaches at the University of Leuven and serves as an academic adviser to the European Commission.

HERBERT G. GRUBEL is a professor of economics at Simon Fraser University in Canada. He has taught at Stanford University, the University of Chicago, and the University of Pennsylvania and has held temporary research and teaching positions at the U.S. Treasury, the Australian National University, Oxford University, the University of Cape Town, the Institute of Southeast Asian Studies in Singapore, the University of Nairobi, and the Free University of Berlin. Grubel is the author or editor of fifteen books and has published over two hundred professional articles and chapters in compendia. He received his Ph.D. from Yale University.

GRZEGORZ W. KOLODKO is a professor of economics at the Central School of Planning and Statistics in Warsaw and director of the Research Institute of Finance, the leading think tank in Poland. He is also a member of the government's Economic Council and has helped plan Poland's stabilization programs. From 1982 to 1988, Kolodko was an adviser to the governor of the National Bank of Poland. He has published six books in Polish. His most recent book, *Hyperinflation and Stabilization in Postsocialist Economies*, has been published in English and Russian.

DEEPAK LAL is professor of political economy at University College London and James S. Coleman Professor of International Development Studies at the University of California, Los Angeles. Educated at St. Stephen's College, Delhi, and at Oxford, he served in Tokyo as a member of the Indian foreign service. He has taught development economics at universities in the United Kingdom, Australia, and the United States and has advised governments in developing countries worldwide. From 1984 to 1987, he was research administrator, economics and research, for the World Bank. His recent books include *Prices for Planning: Towards the Reform of Indian Planning* (1980); *The Poverty of Development Economics* (1983); and *The Hindu Equilibrium*, in two volumes (1989).

MARIE LAVIGNE is a professor of economics at the University of Paris I (Panthéon-Sorbonne). She is also director of the European Studies Center at Stirin, Czechoslovakia, a branch of the Institute for East-West Security Studies in New York. Her most recent book is *International Political Economy and Socialism*, Cambridge University Press (1991).

RONALD I. McKINNON is William Eberle Professor of Economics at Stanford University, where he has taught since 1961. He is an internationally known expert on international and development finance, and his current research focuses on financial processes in liberalizing socialist economies. In addition to many articles and essays, he has published three books: *Money and Capital in Economic Development* (1973); *Money in International Exchange: The Convertible Currency System*

(1979); and *The Order of Economic Liberalization: Financial Control in the Transition to a Market Economy* (1991).

PETER J. MONTIEL is deputy division chief of the Developing Country Studies Division in the Research Department of the International Monetary Fund. He has a Ph.D. from the Massachusetts Institute of Technology (MIT).

ROBERT A. MUNDELL is professor of economics at Columbia University and an authority on international economics and macroeconomics. After receiving his Ph.D. at the Massachusetts Institute of Technology (MIT), Mundell worked at the International Monetary Fund and then became a professor of economics at the University of Chicago and editor of the *Journal of Political Economy*. Mundell is known as the father of the theory of optimum currency areas and an originator of the theory of the international macroeconomic policy mix, the monetary approach to the balance of payments, and supply-side economics. His books include *International Monetary Conflict and Reform* (1965); *Man and Economics* (1968); and *International Economics* (1971). He has also written more than one hundred articles for professional journals.

J. PETER NEARY is professor of political economy at University College Dublin. Educated at University College Dublin and Nuffield College, Oxford, he has been a visiting professor at Berkeley, Princeton, and Queen's (Ontario), and a visiting scholar at the Massachusetts Institute of Technology (MIT) and the International Institute for Applied Systems Analysis (Vienna). He has published extensively, especially on international trade theory, and edited *Natural Resources and the Macroeconomy* (1986) with Sweder van Wijnbergen. He is a former editor of the *European Economic Review*, a fellow of the Econometric Society and the Centre for Economic Policy Research (London), and a member of Academia Europaea.

WON-AM PARK is a fellow at the Korea Development Institute. He is a graduate of Seoul University and the Massachusetts Institute of Technology (MIT). He was formerly a member of the Research Department of the Central Bank of Korea. Park has written papers on

Korean macroeconomic policies, the East Asian NICs, trade with Japan, and other topics.

YUNG CHUL PARK is professor of economics at Korea University. A graduate of the University of Minnesota, Park has served as president of the Korea Development Institute.

EDMUND S. PHELPS has been McVickar Professor of Political Economy at Columbia University since 1982. He is an adviser to the European Bank for Reconstruction and Development (EBRD) and was a member of the EBRD mission to Moscow for the Joint Study of the Economy of the Soviet Union in 1990. His most recent books are *The Slump in Europe: Open Economy Theory Reconstructed* (with Jean-Paul Fitoussi); *Seven Schools of Macroeconomic Thought: The Arne Ryne Lectures*; and *Modern Readings in Macroeconomic Theory*.

BRIAN PINTO received his B.A. from Loyola College, Madras, India; his M.B.A. from the Indian Institute of Management, Ahmedabad; and his Ph.D. in economics from the University of Pennsylvania. He has held assignments on macroeconomic policy research and international finance at the World Bank. He helped launch the World Bank's Financial Technical Assistance program, designed to transfer high-tech finance (swaps, options, futures) to developing countries. He has written for many well-known professional journals. Currently, he is resident economist at the World Bank mission in Poland.

HELMUT REISEN is a senior economist at the Development Centre of the Organization for Economic Cooperation and Development (OECD) in Paris. He previously worked at the Kiel Institute of World Economics and the German Ministry of Economics. He has written primarily on international monetary economics, with particular reference to advanced developing countries. His most recent monograph is "Public Debt, External Competitiveness, and Fiscal Discipline in Developing Countries," Princeton Studies in International Finance no. 66. He is also coauthor of a forthcoming OECD Development Centre study entitled *Financial Opening in Dynamic Asian Economies: Pitfalls, Prerequisites, and Perspectives*.

FRIEDRICH L. SELL is a professor of international and development economics at the University of Giessen, Germany. Previously, he was division chief of the research group on international resource transfer at the Kiel Institute of World Economics and leader of the project "Present Problems and Future Prospects of the Brazilian Economy in the International Division of Labor" at the Kiel Institute.

STANISLAW WELLISZ is a professor of economics at Columbia University. A native of Poland, Wellisz received his Ph.D. from Harvard University. He has been a consultant to many developing country governments, including Cameroon, Venezuela, Mauritius, and Jamaica, and in 1990–1991 was an adviser to Poland's Ministry of Finance. He is the author of *The Economies of the Soviet Bloc* and coauthor of *The Political Economy of Poverty, Equity and Growth: Five Small Open Economies* (forthcoming).

JOHN WILLIAMSON is a senior fellow at the Institute for International Economics in Washington, D.C. He has held various teaching positions and has served as a consultant to the U.K. Treasury and an adviser to the International Monetary Fund. He has written extensively on international monetary issues, and his publications include *The Open Economy and the World Economy*; *Political Economy and International Money*; *The Exchange Rate System*; and *Targets and Indicators: A Blueprint for the International Coordination of Economic Policy* (with Marcus H. Miller).

# ICEG Academic Advisory Board

Abel G. Aganbegyan  
*Academy of Science of the USSR,  
USSR*

Yutaka Kosai  
*Japan Center for Economic Research,  
Japan*

Michael J. Boskin  
*Stanford University, USA (on leave)*

Anne O. Krueger  
*Duke University, USA*

Hakchung Choc  
*Asian Development Bank, Philippines*

Deepak Lal  
*University of California, Los Angeles,  
USA*

Rudiger Dornbusch  
*Massachusetts Institute of  
Technology, USA*

Ronald I. McKinnon  
*Stanford University, USA*

Ernesto Fontaine  
*Pontificia Universidad Católica de  
Chile, Chile*

Charles E. McLure, Jr.  
*Hoover Institution, USA*

Herbert Giersch  
*Kiel Institutue of World Economics,  
Germany*

Gerald M. Meier  
*Stanford University, USA*

Francisco Gil Díaz  
*Ministry of Finance, Mexico*

Seiji Naya  
*University of Hawaii, USA*

Malcolm Gillis  
*Duke University, USA*

Juan Carlos de Pablo  
*DEPABLOCONSULT, Argentina*

Arnold C. Harberger  
*University of California, Los Angeles,  
USA*

Affonso Pastore  
*Universidade de São Paulo, Brazil*

Helen Hughes  
*Australian National University,  
Australia*

Gustav Ranis  
*Yale University, USA*

Shinichi Ichimura  
*Osaka International University, Japan*

Michael Roemer  
*Harvard Institutue for International  
Development, USA*

Glenn Jenkins  
*Harvard Institute for International  
Development, USA*

Leopoldo Solís  
*Instituto de Investigación Económica  
y Social Lucas Alamán, Mexico*

D. Gale Johnson  
*University of Chicago, USA*

David Wall  
*University of Sussex, United Kingdom*

Roberto Junguito  
*Banco Sudameris, Colombia*

Richard Webb  
*Pontificia Universidad Católica del  
Perú, Peru*

James Worley  
*Vanderbilt University, USA*