

ESSAYS IN INTERNATIONAL FINANCE

No. 169, December 1987

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INTERNATIONAL MONETARY COOPERATION:  
ESSAYS IN HONOR OF HENRY C. WALLICH

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PAUL A. VOLCKER, RALPH C. BRYANT, LEONHARD GLESKE,  
GOTTFRIED HABERLER, ALEXANDRE LAMFALUSSY, SHIJURO OGATA,  
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INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS  
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## ESSAYS IN INTERNATIONAL FINANCE

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This essay is a collection of nine brief papers written in honor of Henry C. Wallich, with an Introduction by Paul A. Volcker. The collection was organized by David H. Howard, Larry Jay Promisel, Charles J. Siegman, and Edwin M. Truman, four of Henry Wallich's colleagues at the Federal Reserve Board and, in two cases, also his former students. The contributors are introduced in the Foreword, which describes the origin of the Essay.

PETER B. KENEN, *Director*  
*International Finance Section*

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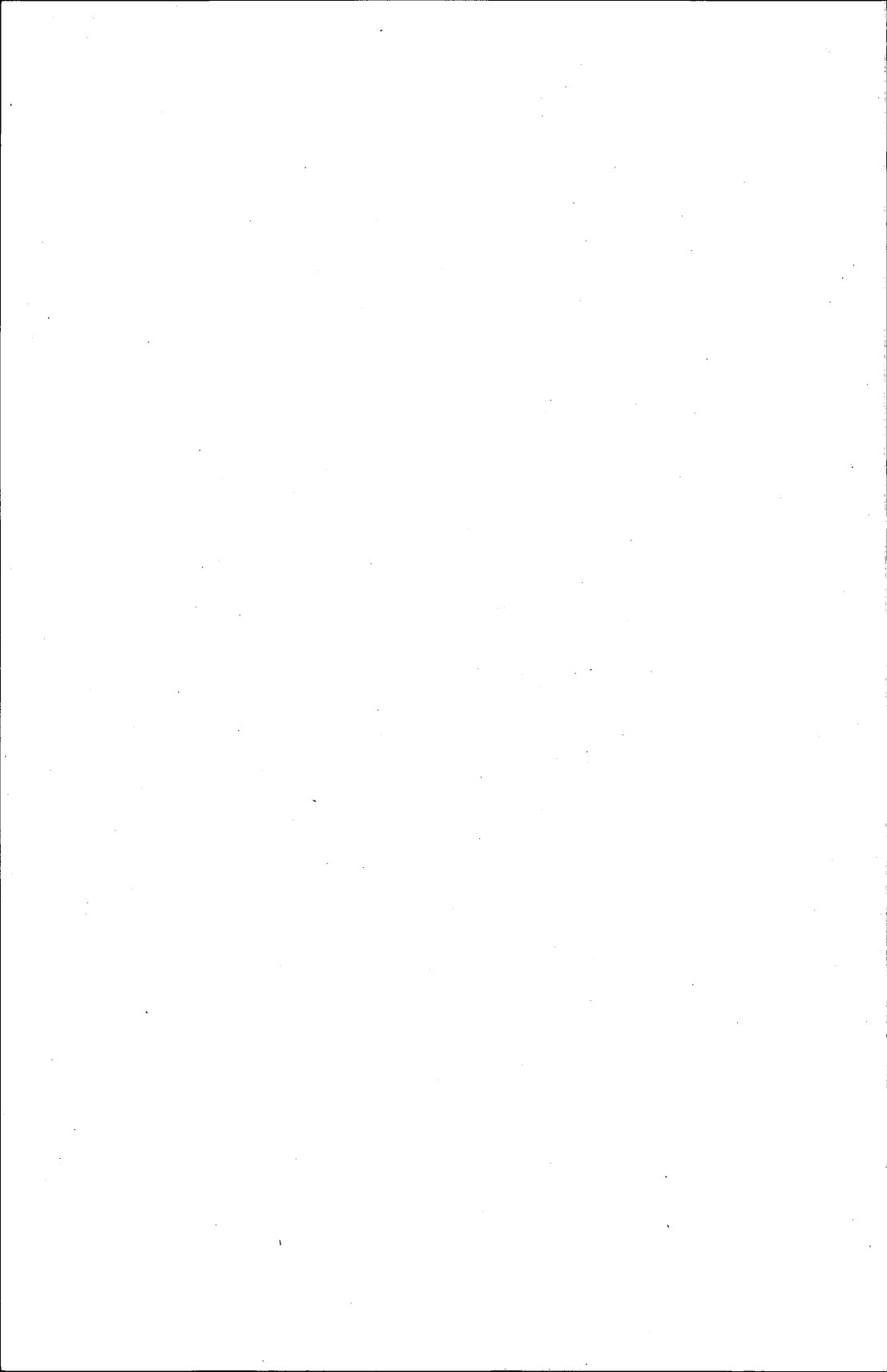
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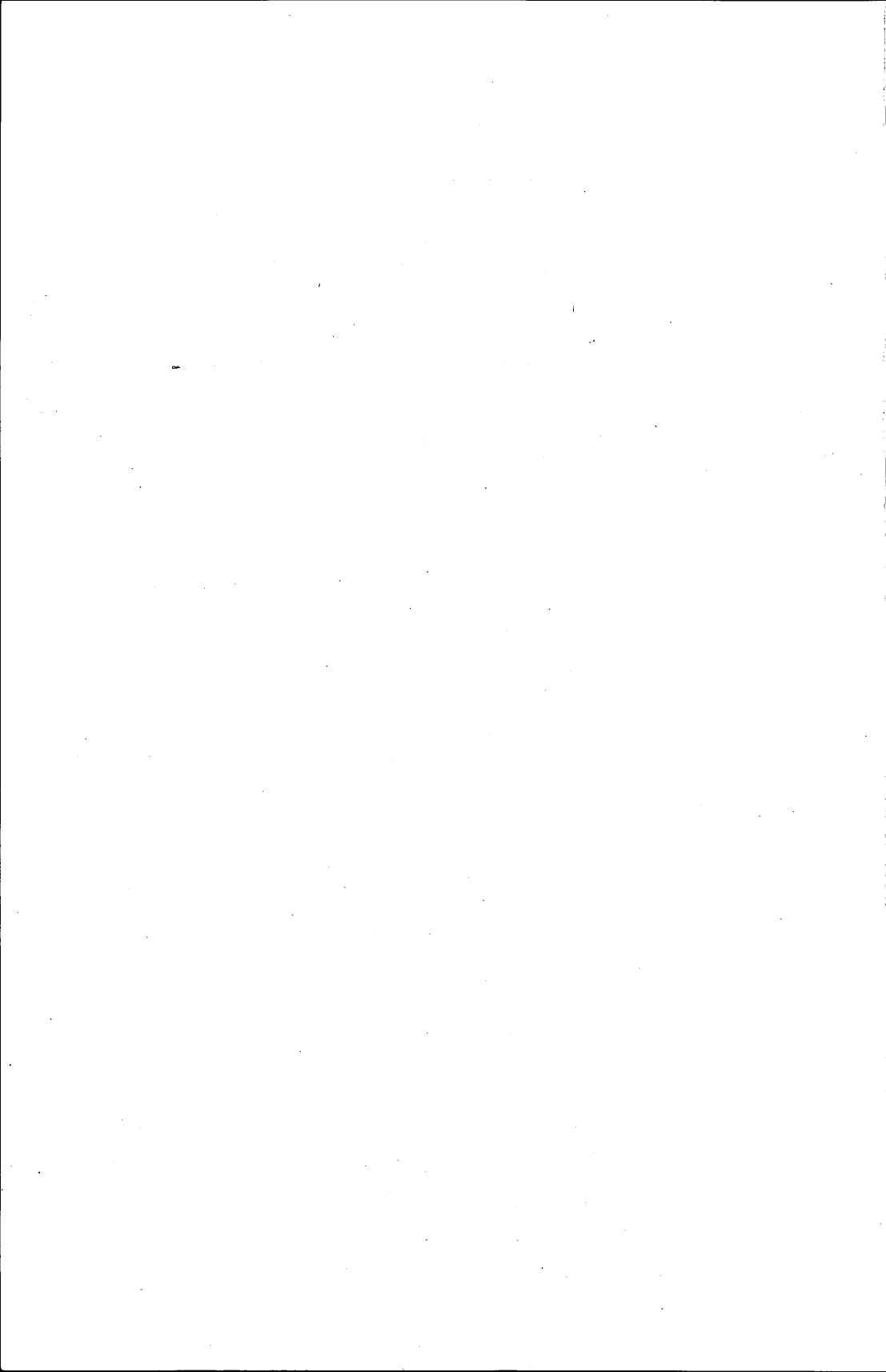
## FOREWORD

This collection of papers honors Henry C. Wallich on the occasion of his retirement from the Board of Governors of the Federal Reserve System. It is introduced by Paul A. Volcker, Chairman of the Board of Governors from 1979 to 1987. The papers were written in the summer of 1987.

All of the authors are colleagues or former students of Henry Wallich. Ralph C. Bryant is Senior Fellow in Economic Studies, The Brookings Institution, and before that was Director of the Division of International Finance at the Federal Reserve Board. Leonhard Gleske is a Member of the Board of Directors and of the Central Bank Council of the Deutsche Bundesbank. Gottfried Haberler is Resident Scholar at the American Enterprise Institute and formerly Professor of Economics at Harvard University. Alexandre Lamfalussy is General Manager of the Bank for International Settlements. Shijuro Ogata was Deputy Governor for International Relations of the Bank of Japan before his appointment in September 1986 as Deputy Governor of the Japan Development Bank. Jesús Silva-Herzog was Secretary of the Treasury of Mexico from 1982 to 1986. Ross M. Starr is Professor of Economics at the University of California, San Diego. James Tobin is Sterling Professor of Economics at Yale University. Robert Triffin is Professor Emeritus of Yale and Louvain-la-Neuve Universities.

I am grateful to Edwin M. Truman and his colleagues at the Board of Governors, who proposed and organized this collection of papers, giving the International Finance Section this opportunity to honor Henry Wallich for his many contributions as scholar and public servant.

PETER B. KENEN





## INTRODUCTION

*Paul A. Volcker*

In his long career as an economist, Henry C. Wallich has had many roles—researcher, professor, journalist, policy adviser, and policymaker. Two strong threads have run through all those roles, his interest in education and his talent for clarification. This group of essays by a small sample of his many students, friends, and colleagues is designed to reflect the diversity of Henry Wallich's interests and the range of his influence in order to honor in some small way his contributions to his profession, to his adopted country, and to international cooperation.

Like so many economists, policymakers, and other serious students of public policy, each of the authors in this tribute has been educated by Henry Wallich—some in the classroom or through his writings, and others by professional interaction in academic or policy forums. Indeed, it is a measure of his experience and influence that several of the authors have been both his student and his professional colleague. All of them proudly count him as a friend.

The central subject of these essays is international monetary cooperation. This is, of course, just one of many important issues about which Henry Wallich has thought and written extensively, but, looking back at his career, I perceive it to be a major recurring theme of his work in public service. Indeed, when I first met him almost forty years ago at the Federal Reserve Bank of New York, he was already professionally concerned with analyzing problems of international finance. As I noted on the occasion of his retirement from the Federal Reserve Board, his work in the area of international monetary arrangements and financial diplomacy during his term on the Board stood as a lasting contribution to international cooperation among central banks.

In an autobiographical essay published in June 1982 in the *Quarterly Review* of the Banca Nazionale del Lavoro, Henry leaves the impression that he believes he had a somewhat misspent youth. But I must disagree. After all, learning about the dangers of inflation in interwar Germany and how to drink sherry at Oxford would seem to be important preparatory steps to a career in central banking and international finance! Be that as it may, after his early education in Europe and a spell as an exporter in Argentina, Henry made his way to New York, and eventually Harvard University, where he completed his formal education in economics.

Even before he had written his dissertation, Henry became involved in public policy when he took a job at the Federal Reserve Bank of New York. There he specialized at first in the problems of Latin America—problems that were to continue to occupy his talents in later years. And his experience at the New York Reserve Bank led to another important milestone—his marriage to a research colleague, Mable Brown, who became his partner not only in raising a family but also in some of his professional work.

In 1951, Henry took a professorship at Yale, which subsequently served as his “home base” until he was appointed to the Federal Reserve Board in 1974. During that twenty-three-year period, he never lost his dedication to public service, as evidenced by stints as an adviser to President Eisenhower, Assistant to the Secretary of the Treasury, chief economic consultant to the Treasury, consultant to the Federal Reserve Board, and, in 1959-61, member of the President’s Council of Economic Advisers.

Shortly after leaving the Council, Henry broadened his audience to include the general public as well as students and policymakers by adding journalism to his professional repertoire. His work with the media, which began with editorials for the *Washington Post* and ended with a regular column in *Newsweek* magazine, continued until his appointment to the Federal Reserve Board.

At the Federal Reserve Board, Henry was of course involved in all the policy and regulatory issues that confronted the Board during a period of turbulent change. For much of his thirteen years on the Board, he was the senior member, providing an element of experience and continuity that added to his intellectual leadership.

Henry’s contributions during that period were particularly noteworthy in two areas. He was certainly the most persistently vocal and prescient among the Board members in calling attention to the dangers of inflation, and his voting record reflected his strong commitment to price stability. That commitment was related in part to his theoretical studies and in part to practical experience in the area of international economics and finance. Henry is by nature a true internationalist, never doubting that peace and prosperity for the United States must be found in the context of a stable international economic order. During his tenure on the Board, Henry readily accepted, and urged others to accept, that international considerations were becoming increasingly important to the formulation of U.S. economic policy. Henry ably represented the Board at innumerable international meetings, forming close professional relationships and personal friendships with many central-banking leaders in all parts of the world.

Throughout Henry Wallich’s career, he continued to educate, whether in the confidential settings of meetings at the Federal Reserve or the Bank for International Settlements or through the public medium of one of his many

articles or speeches. His is the career of an immensely talented intellectual dedicated to public service. In his 1982 essay noted earlier, he set down two rules that he tried to abide by: the general rule that “an economist has an obligation to accept a call to public service if and when it comes” and the personal rule that he “would not do something purely for the money that might be in it if there was not sufficient intellectual interest.”

I trust this small volume is a testimony to how well he followed those precepts—and in doing so served and honored us all.

*July 31, 1987*

## INTERGOVERNMENTAL COORDINATION OF ECONOMIC POLICIES: AN INTERIM STOCKTAKING

*Ralph C. Bryant*

Gradually but pervasively, the world economy and polity have been transformed in the last four decades. The economic links between national economies—cross-border transactions—have grown more rapidly than economic activity itself, causing a marked increase in economic interdependence. Simultaneously, there has been an increase in political pluralism—a marked expansion in the number of governmental decisionmaking units in the world and a greater diffusion of power among them.

Interaction between the trends of increasing economic interdependence and increasing political pluralism has generated many frictions and problems. The economic significance of national boundaries has been reduced by growing interdependence even as their political significance has been enhanced by increasing pluralism and the associated forces of nationalism. The two trends have exacerbated a mismatch between the economic and political structures of the world: the effective domains of economic markets have coincided less and less with national governmental jurisdictions. In turn, this mismatch has made decisions by nations' governments more difficult and the consequences of their decisions more uncertain. It has also created pressures for the strengthening of intergovernmental cooperation and international institutions. Yet the increasing political pluralism has simultaneously undermined the chances of effective responses to such pressures.

As an economist, Henry Wallich has made numerous contributions to the professional literature analyzing these pervasive changes in the world. As a central banker, he has played important roles in shaping government policies for dealing with them. It is a privilege to participate in this effort to honor Wallich's distinguished career as teacher, author, and public servant.

\* \* \*

In this essay, I present a summary appraisal of theoretical and practical thinking about intergovernmental cooperation, and in particular the "coordination" of economic policies. Necessarily, this is an interim and personal stocktaking; neither theory nor practice is in a settled state.

## Varieties of Intergovernmental Cooperation

Collaborative activities among governments can take many forms and can be modest or ambitious. "Cooperation" is best used to refer to the entire spectrum of these activities.

For most of recent world history, cooperation has taken limited forms. During brief, exceptional episodes of rulemaking characterized by cooperative bargaining, governments have agreed on covenants defining the environment within which they will interact. Then, during the lengthy periods between the intermittent bouts of rulemaking, they have made decentralized, independent decisions about the policy instruments under their control. The rules agreed to in the negotiating episodes have served as traffic regulations. Just as the drivers of automobiles mutually consent to drive on either the right or the left side of the road (but not on both sides in the same country!), governments have consented to understandings such as the General Agreement on Tariffs and Trade and the IMF Articles of Agreement to insure against the worst excesses of unconstrained noncooperative behavior.

In the absence of agreed procedures for monitoring and of sanctions to penalize infringements, traffic regulations have not always been rigorously observed. Departures have been especially noteworthy when the rules themselves have been deliberately left unclear (what lawyers call "soft law").

Although traffic regulations represent only the most limited form of cooperation, they have nonetheless nurtured a minimum sense of comity among national governments. Many of the regulations have significantly influenced world economic developments.

On the spectrum of cooperative activities, "consultation" is usually more ambitious than episodic rulemaking and often takes place more frequently. Consultation can involve the exchange of large amounts of information, thereby substantially improving the ability of individual governments to make decisions likely to promote national interests.

Even if consultations are frequent and intensive, each government can still make independent, decentralized decisions. I prefer to reserve the term "coordination" for the most ambitious forms of cooperation, namely, those characterized by jointly designed, mutual adjustments of policy actions. In clear-cut cases of coordination, explicit bargaining occurs and the governments agree to behave differently than they would have behaved without the agreement. The agreement embodies some degree, albeit small and tentative, of centralization in decisionmaking. To be durable, agreements need to be binding and enforceable. In contrast, noncoordinated decisions are characterized by an unwillingness to enter into binding commit-

ments. Each government adapts its decisions to what it observes others doing or expects them to do, but without constraints on its own independence of action and without assurances of constraints on the actions of others.

Recent history affords numerous examples of intergovernmental consultations that go beyond rulemaking. Examples of coordination are harder to find. Significantly, coordination occurs most frequently in areas where there is relatively little controversy and where the mutuality of interests is most clearly perceived. For example, intergovernmental coordination proceeds relatively smoothly for cross-border postal and telecommunications services and for navigation practices, but it is seldom observed for economic policies.

Concepts and definitions pertaining to this subject are imprecise. Along the spectrum of cooperative activities, there is no sharp demarcation between intensive "consultation" and explicit "coordination." It is especially difficult for outside observers of intergovernmental consultations to ascertain whether any explicit coordination has taken place. By my definition, an observer must be able in principle to identify the counterfactual situation—what the governments would have done in the absence of the apparent coordination—and demonstrate that an explicit adjustment of policies was agreed. Even inside participants may be unable to make a sharp distinction between consultation and coordination. Just as "implicit contracts" exist in labor markets, it is conceivable that governments implicitly coordinate their policies as a result of the exchange of information in their consultations.

Subtle differences between the varieties of cooperation cannot be discussed further here. In what follows, I am mainly concerned with the most ambitious forms of cooperation, which I will call "coordination proper."

One of the distinguishing features of ambitious forms of cooperation is their wider scope. The traffic regulations negotiated in intermittent episodes of rulemaking typically apply only to cross-border transactions and relationships, while coordination, and even the most intensive forms of consultation, are more likely to cover a much wider range of variables and policies, including those that are traditionally deemed "domestic." In principle, intergovernmental coordination could be relevant for all national policies having significant effects on foreign countries.

### **Should Governments Aspire to Coordinate?**

A large part of economic life in democratic societies (and an even larger part of economic theory) presumes decentralized and uncoordinated decision-making. Why not apply the same presumption of decentralized decisions to the economic policies of national governments?

Several thoughtful economists who have asked this question have reached

the conclusion that attempts to coordinate national economic policies will often be unnecessary or undesirable (see, for example, Corden, 1983; Corden, 1986; Stein, 1978; Stein, 1987). As I explain below, I agree with arguments asserting that coordination of economic policies may not be *feasible*, especially if it is detailed and comprehensive, but I cannot agree that it is unnecessary or undesirable.

Theory and history both provide decisive support for the presumption that, in certain circumstances, governments can mutually benefit from the coordination of their individual policies. The possibility that decentralized, noncooperative decisionmaking can produce outcomes that are decidedly inferior to the set of efficient, Pareto-optimal outcomes attainable through collective action has been recognized in political theory for centuries. Economic theorists studying market failures, externalities, collective (public) goods, and strategic interactions within national economies have identified numerous instances in which unconstrained maximization by individual agents, while rational for each agent, can be irrational for all individuals together. The presumption in favor of cooperative decisions extends naturally to many types of intergovernmental relations and international collective goods (Bryant, 1980, Chap. 25). And intergovernmental cooperation about macroeconomic policies is a clear-cut case of an international collective good. As the economic "spillovers" among economies continue to increase, the presumption strengthens that nations cannot foster their mutual economic interests if all their decisions are made in a noncooperative, decentralized manner.

The fundamental presumption in favor of cooperative decisions where externalities and collective goods are important is thoroughly discussed in the literature (for the case of economic policies, see Hirsch, 1976; Buiters and Marston, 1985; Cooper, 1985; Hamada, 1985; Bryant and Portes, eds., 1987; and Canzoneri and Henderson, forthcoming). Although I do not have space to develop that case here, it seems compelling to me that governments should extensively consult about their economic policies and, in selective cases, aspire to coordinate them.

Many critics of efforts to coordinate economic policies, it should be noted, are guilty of a serious confusion. They assert, or imply, that coordination (and cooperation) are synonyms for amity, harmony, or altruism. But coordination merely implies self-interested mutual adjustment of behavior. It certainly does *not* imply that national governments have common goals, that their goals are compatible, or that some governments must give up their own goals in deference to the goals of others. Indeed, it implies nothing about goals. The goals of governments are plainly different and often incompatible. Yet the potential for large gains from coordination may well be greatest when goals are inconsistent and discord is high.

### **Are the Potential Gains Sizable?**

A practical policymaker will not be satisfied, nor should he be, with a general presumption in favor of coordination. He will ask whether the potential gains are large or small.

An important difficulty here is that the question is not well defined. Measurement of gains, in practice or in analytical calculations, can be sensitive to the range of policies considered. Economists have focused primarily on the possibility of mutually designed adjustments in fiscal and monetary policies. But the potential gains from agreements spanning microeconomic and noneconomic as well as macroeconomic policies could conceivably be of a different order of magnitude. Recall that at the 1978 Bonn economic summit, perhaps the most salient historical example of coordination among the seven major industrial countries, the resulting package of agreements involved tradeoffs of both macroeconomic and energy policies (Putnam and Bayne, 1984; Putnam and Henning, 1986). The wider the domain of policies considered, it may be conjectured, the greater the chances of mutually beneficial "exchanges of policy adjustments." (On the other hand, the direct costs of negotiations and of political obstacles to reaching agreement presumably also become larger as the scope of attempted coordination is widened. There are sound reasons why intergovernmental discussions about monetary policies and those about geostationary orbits for telecommunications satellites are normally conducted in separate forums by separate people.)

Another measurement problem stems from the difficulty of distinguishing welfare improvements attributable to coordination proper from those attributable to the gains accruing simultaneously from less ambitious types of cooperation. My guess is that we economists underplay the importance of the "mere" exchange of information that occurs in consultation. It is true that a sharing of information and forecasts is all that typically happens in most intergovernmental discussions of economic policies. But it does not follow, as is often assumed, that this consultation has negligible welfare consequences. Since consultation and coordination tend to shade into each other along the spectrum of cooperative activities, the associated gains tend to blur into each other as well.

What empirical evidence do we have about the size of potential gains? Some important research in recent years has addressed this question, for example, Oudiz and Sachs (1984); Frankel and Rockett (1986); Holtham and Hughes Hallet (1987); and Canzoneri and Minford (1986). But these studies have examined only macroeconomic policies and have focused on the gains associated with moving from a so-called Nash noncooperative outcome to one or more definitions of a cooperative-bargaining outcome. Furthermore,



the sensitivity of these calculations to alternative specifications of underlying assumptions has not yet been adequately explored.

Unfortunately, we cannot yet safely generalize. Several of these studies have been characterized as showing only modest gains associated with moving from the Nash noncooperative to an explicitly coordinated solution, but the gains, even as measured, seem far from negligible to me. My personal hunch, moreover, is that these estimates of the potential gains from coordination, narrowly defined, may prove to be biased downward. And, again, I surmise that the mutual benefits of consultation ("pre-coordination," so to speak), which cannot readily be separated from the gains due to coordination proper, are quite substantial. While acknowledging that agnosticism is the only defensible conclusion for the moment, I thus still incline somewhat toward the view that the gains potentially realizable through cooperation (consultation *and* coordination) are worth writing home about.

### **Is Coordination Feasible?**

The practical policymaker will want to know not only whether the gains from coordination would be sizable, but also whether the exercise is feasible in the first place. On these grounds, sad to say, the policymaker must have considerable doubts.

There is great uncertainty about how policy actions and nonpolicy shocks originating in one nation influence economic developments in others. Even the sign of some important effects is uncertain. For example, neither macroeconomic theory nor empirical research definitively answers the question whether a monetary expansion in the United States causes an increase or a decrease in real economic activity in Europe and Japan (relative to what otherwise would occur). Even when analysts agree about the sign of effects, moreover, little consensus exists about their empirical magnitude.

Obviously, uncertainty about the size, and sometimes even the direction, of cross-border interactions among economies severely undermines the ability of analysts and policymakers to design coordinated policies.

Individual governments do not even have at their disposal an agreed analytical framework for evaluating the effects of external forces on their domestic economies. (Even if agreement exists within a government, analysts outside the government are likely to hold differing views.) Much less do governments have adequate frameworks summarizing how their policies affect other nations. What is true for the individual government is even more true for the collectivity of national governments.

To analyze the world economy as a whole, governments and international institutions require at least an internally consistent analytical framework—

and preferably an explicit empirical model—of the interactions among individual national economies. Yet only a few such models exist, even in rudimentary form, and there is no consensus on which one represents the most promising start. (An overview of current empirical knowledge about cross-border macroeconomic interactions can be found in Bryant and others, eds., 1988.) Most of these models attempt to study macroeconomic interactions only among the largest industrial countries. Hence, an especially great degree of uncertainty attaches to interactions between the economies of the industrial and the numerous developing countries (whose aggregate share in total world economic activity, and of course population, has been increasing).

The lack of convergence in analytical views about how national economies influence each other is an impediment sufficiently severe to preclude ambitious efforts to coordinate economic policies. But it is not the only impediment. Insufficient public awareness of the extent of economic interdependence, which in turn contributes to a lack of political will by government officials, is also an important obstacle. Rhetoric in favor of enhanced cooperation, and even coordination, has not been grounded in genuine political commitment. In effect, an individual government has favored consultations and coordination when its own participation would induce favorable behavior by other governments, but not when the process would uncomfortably constrain its own options. Just as superstition is defined as some other person's religion and protectionism as some other nation's commercial policy, stubborn attachment to outmoded ideas of national sovereignty inhibits *other* nations from agreeing to mutually beneficial commitments to inter-governmental consultations.

### **Next Steps in Research**

Major steps toward the coordination of economic policies must await further progress in basic research. Where are research needs the greatest?

The most obvious goal should be to refine existing empirical models of how national economies interact with each other. There is also ample room for new models that follow new approaches. At the same time, existing models should be systematically evaluated and compared to bring out their strengths and weaknesses. Exercises in model comparison are the best hope for gaining insights into how models can be improved and for fostering a convergence of analytical views about how the world economy actually functions.

If we want to assure progress, we must allocate more resources to multi-country empirical modeling. Such research is necessarily a collective enterprise. One man and a dog, so to speak, typically cannot mount an empirical

effort that can adequately handle the complexities of a multicountry model. A group of five researchers can accomplish substantially more than five times the achievement of a single researcher working in isolation.

A related topic that also requires more research is the specification of policymakers' preferences ("loss functions") as used in analytical calculations. What weights should be assigned to the assumed ultimate objectives of policy? How should analysts specify "ideal" time paths for these variables? What costs should be associated with changing the instrument settings of policy? How should the answers to these questions vary across countries? Some clues in the existing research suggest that the calculation of potential gains from coordination may be quite sensitive to alternative specifications of national goals.

Specification of the initial conditions under which coordination is attempted (the "baseline" used in analytical calculations) is still another problem area. It may be that estimates of the benefits from coordination are strongly baseline-dependent.

Much of the academic research of the last few years has concentrated on issues I have not yet mentioned, namely, the reputation and credibility of governments and the "time consistency" of policies. Expectational interactions among governments, and between governments and private-sector agents, are the central focus of this research (see, for example, many of the papers in Buitert and Marston, eds., 1985, and Bryant and Portes, eds., 1987).

While these issues are intellectually fascinating and sometimes crucially important in practice, they have probably received disproportionate attention. I am especially skeptical about the great emphasis on time consistency and the possibility that governments may "renege" on implicit agreements with private-sector agents. My doubts stem from the fact that the researchers have postulated theoretical environments characterized by extremely high-quality information. The relevant, correct model is assumed to be fully known to all agents participating in the strategic game. Agents are also presumed to have perfect information about the types of surprises ("disturbances," in economists' jargon) affecting the economic system. Yet in real life the information available is highly imperfect. Policymakers do not know which analytical model to use and do not share the same model. Governments may be poorly informed about the objectives of other governments. Private-sector agents are even more uncertain about models and the preferences of policymakers. No one knows for certain which disturbances have already occurred yesterday and today, much less which new ones may lie ahead.

As an example of the neglected importance of these informational aspects, consider the question of a government renegeing in period 2 on policies an-

nounced in period 1. What can renegeing mean? In real life, it cannot plausibly mean that the government "re-optimizes" in period 2 and thus changes its instrument settings away from pre-announced settings that were determined from optimization calculations in period 1. Private-sector agents and other governments should not rationally want the government to stick to a previously announced "open loop" path for its instruments if new disturbances have occurred in the meantime. Thus, the only logically sound notion of renegeing must imply that the government in period 1 announces future paths for its instrument settings—in effect, a complex set of "closed loop" rules—that are *contingent on the occurrence of all conceivable future disturbances*. Renegeing must then be defined as a departure from these complex rules. The information presumed to be available to governments and private-sector agents under this definition, however, is enormously greater than the information they in fact have. The monitoring and signal-extraction abilities implicitly attributed to the agents are thus incredible. In practice, governments do not announce policies that are anything like these complex future-disturbance-contingent rules. Nor do they know how to do so! Thus I believe that the concept of renegeing in the theoretical literature has limited practical applicability. We need a less sophisticated concept to apply to the low-quality-information world that we actually inhabit.

My skepticism even carries me so far as to malign the current fashion in economic theory for rational (model-consistent) expectations. Given the extreme uncertainty about how national economies and the world economy function, the availability of information assumed by the application of model-consistent expectational procedures is, again simply incredible. Agents cannot plausibly be assumed to know enough to be able to land on the "saddle paths" required for the stability of the models being used. Nor can we rely here on the "as if" proposition often used in economic theory. It is not credible to assert that governments and private-sector agents act as if they had all the knowledge and information required. One can accept the proposition that agents would form expectations in the postulated way *if* they possessed all the required information and knowledge. But, with equal validity, one can likewise accept the proposition that grandmothers, if they had wheels, would be wagons.

### **Practical Coordination Efforts in the Shorter Run**

Many years will have to pass before there is an analytical foundation solid enough to permit policymakers to attempt full-scale exercises in the coordination of economic policies. What, realistically, can practical policymakers do in the meantime?

One modest but important step would be to give stronger support to em-

pirical research on cross-border macroeconomic interactions. To be sure, the payoff to such support would probably not accrue during the tenure of current policymakers. Yet the prospective size of the payoff, discounted back to its present value, is large enough to justify such a gift from current policymakers to their successors. Especially deserving of strong, sustained support are the efforts of international organizations to improve their empirical modeling capabilities—the work of the staff at the IMF, the OECD, the World Bank, and the EEC Commission.

Even with the present imperfect knowledge of the functioning of the world economy, it is sometimes feasible for policymakers to identify—roughly but nonetheless robustly—a coordinated package of policy adjustments that promises to be mutually beneficial. Governments should be more alert to such opportunities and scrutinize them more carefully when they arise.

The 1978 Bonn economic summit is often cited, correctly in my view, as an illustration. In some quarters, especially in Germany, the 1978 summit has a bad reputation; some commentators, for example, have blamed Germany's inflation in 1979-80 on the expansionary fiscal actions agreed at the summit. But such adverse criticism is not founded on a thoughtful sifting of the empirical evidence, such as that of Holtham (forthcoming) or Putnam and Henning (1986). In my view, the 1978 summit is a modest, constructive example of the kind of loosely coordinated actions that, from time to time, the major countries should try to formulate and implement.

The economic situation in 1987 represented another opportunity. A mutually beneficial agreement among the major industrial countries could have had five main features: All participating governments could have committed themselves to the goal of substantially reducing the large current-account imbalances troubling the world economy. All could again have renounced protectionism and renewed their commitment to examine trade-policy problems cooperatively. The United States could have committed itself to a change in the mix of its policies, credibly reducing the size of its future structural budget deficits while easing its monetary policy. Major foreign governments could have agreed to expansionary policy changes to ensure that growth in their economies would be maintained while external imbalances were adjusted. And the participating governments could have announced a cooperative presumption about a lower exchange value for the U.S. dollar roughly consistent with the preceding goals and policies. (For further discussion, see Chapter 3 of Bryant, Holtham, and Hooper, 1987.) But the political obstacles to an agreement along these lines proved insurmountable, at least during 1987. The occasion clearly represented a missed opportunity for all the governments to foster their individual interests.

I conclude these observations with a normative judgment about the likely

evolution of intergovernmental cooperation. I doubt that there is an orderly, cooperative way to roll back the advance of economic interdependence. One can, in principle, imagine a cooperatively managed "dis-integration" of the world economy that could benefit most countries (Bryant, 1987, Chap. 9). In practice, however, such a course is probably infeasible; it would be an effort to squeeze toothpaste back into its tube. National governments therefore have little effective choice, in my view, but to try to adapt to the increased interdependence and manage it better.

If I am right that there is a gradual but virtually inevitable trend toward enhanced multilateral decisionmaking, governments will eventually make much greater efforts to coordinate economic policies. Although comprehensive efforts cannot yet succeed, modest and practical steps are possible even now. Governments ought collectively to raise their sights a little higher, even for the near term. They would thereby improve the chances that the world economy will experience healthy and noninflationary growth in the remaining years of the twentieth century.

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## MONETARY POLICY: PRIORITIES AND LIMITATIONS

*Leonhard Gleske*

Henry Wallich's "special relationship" with Germany and the Deutsche Bundesbank is legendary. It has found expression in his numerous economic writings and in his critical contributions to the debate on German "wine policy," published before he had to deal with the more sobering aspects of monetary liquidity and its control. My own acquaintance with him, soon to grow into a close and lasting personal friendship, goes back to the days when Professor Wallich prepared his *Mainsprings of the German Revival*, published in 1955. To a young central-bank economist, the discussions with him (often in *Weinstuben*, until then unknown to me) were an infinite source of knowledge and wisdom.

Henry Wallich's own "early experience as a nine-year-old boy in Germany arriving at the city swimming pool with inadequate liquidity," at the height of Germany's post-World War I hyperinflation, exemplified the post-World War II concerns that led to the establishment of a politically independent German central bank with clearly defined responsibility for monetary stability. Three decades later, Wallich placed the chapters on inflation at the beginning of his *Monetary Policy and Practice* (1981), because "inflation has at last been recognized as the main threat to our economy." It is a well-deserved tribute to his role as Governor of the Federal Reserve Board that inflation in the United States has been brought down from double-digit figures and, though no doubt still above his own goals, was substantially lower when he left the Board late in 1986 than when he joined it in early 1974.

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The final breakdown of the fixed-parity system nearly three decades after its inception at Bretton Woods in 1944 is generally attributed to three inter-related causes: (1) the malfunctioning of the balance-of-payments adjustment process, with the United States, as the key-currency country, critically involved; (2) the quest for greater autonomy in the pursuit of preferred national policy objectives; and (3) the growing mass of potentially destabilizing funds flowing through virtually uncontrolled "Eurocurrency markets."

Floating exchange rates have not provided ready-made answers to any of

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I thank Wolfgang Rieke for his help, a token of his deep respect and affection for Henry Wallich, the man and the economist.



these concerns. In recent years, external disequilibria, as measured by current-account balances, have been larger than ever before, and the United States, as the main deficit country, has rapidly turned into the largest international debtor. Countries with traditionally weak currencies have had to accept the fact that floating rates will not rid them of their balance-of-payments constraints or give them much additional freedom for high-growth and full-employment policies. In fact, they quickly discovered that the adverse terms-of-trade effects of depreciation may severely limit their room for maneuver, especially if a vicious circle of depreciation and inflation is left unchecked. Ever more closely integrated international money and capital markets and rapid financial innovation have turned international capital flows into a virtually irresistible market force, far outweighing trade and service transactions in their impact on exchange rates.

On the positive side, floating rates have helped countries in pursuit of domestic price stability to isolate themselves from an inflationary world environment. Indeed, allowing the exchange rate of the deutsche mark to float freely against the dollar in response to market forces was a precondition for the successful pursuit of a monetary policy that, from 1975 onward, progressively restored price stability to the Federal Republic of Germany. Sheltered from undesired foreign-exchange inflows, the Bundesbank was able to focus on an "intermediate target" for central-bank money that was designed to bring down inflation while leaving ample room to meet the economy's potential for medium-term growth. The Bundesbank was no longer exposed to the dilemma that it had repeatedly confronted during the fixed-rate era, when it tried to discourage large, continuous inflows of foreign exchange by setting low official interest rates, among other measures, while keeping domestic monetary expansion in check by restricting liquidity.

During the years of official U.S. "benign neglect" of the dollar in the second half of the 1970s, a freely floating DM was an indispensable element of the stability-oriented policy of the Bundesbank and the German government. It remained a keystone of German monetary policy when, for various reasons, the U.S. dollar rapidly regained strength until March 1985. Among these reasons were the firmly anti-inflationary policy of the Federal Reserve System and correspondingly high interest rates, the strong performance of the U.S. economy following the tax cuts introduced as part of a new supply-side policy, and the politically motivated "Reagan bonus" favoring the dollar.

Its new-found strength restored the dollar to its preeminent position among international currencies held by both private investors and central banks, a position that had begun to erode when the dollar was losing value at home and abroad. But it did not give rise to initiatives that would have

reinstated a system of stable (but adjustable) exchange rates with the U.S. dollar as its standard. The United States, as part of its "markets know best" philosophy, resolutely adhered to free floating. Other major countries, while practicing "managed floating" that involved them in considerable exchange-market intervention, also failed to support such initiatives. With some notable exceptions, the major industrial countries held to the view that floating exchange rates served the world economy well in difficult circumstances—two oil crises within less than a decade, rampant world inflation throughout the 1970s, and ever more volatile financial markets. Furthermore, floating rates enabled them to pursue domestic fiscal and monetary policies that guided them back to greater price stability at different speeds, in accordance with their specific economic, political, structural, and other circumstances. They were skeptical that exchange-market intervention would be an effective instrument to guarantee exchange-rate stability in the new financial environment.

The establishment of the European Monetary System (EMS), designed to create a zone of monetary stability based on the European Community, was in part a reaction to the American benign neglect of the dollar in the 1970s. Ironically, the dollar's rise from 1980 onward facilitated the initial functioning of the EMS: the strong preference of investors for the dollar over the DM, the "preferred alternative" international reserve currency, almost by definition implied a weaker DM against other EMS currencies than might otherwise have been the case.

Throughout the period of floating against the dollar, the DM has served as key currency in the European "snake" arrangement and its successor, the EMS, with exchange rates allowed to fluctuate only within narrow margins but realigned at irregular intervals to offset emerging inflation differentials. In recent years, the DM's key role in the EMS and its floating—first down and later up—against the dollar have exposed German monetary policy to sometimes conflicting constraints. In the early 1980s, the depreciation of the DM against the dollar at a time when inflation rates were still high by German standards called for a restrictive monetary stance despite low economic growth and rising unemployment.

The DM was occasionally supported by Germany's EMS partners when they bought DM on a large scale within the agreed margins. This left them with ample DM reserves to support their own currencies later. The Bundesbank tolerated such "intramarginal" DM interventions in part because they barely affected monetary conditions in Germany. The DM that were bought or sold were invested in the marketplace. Unlike obligatory interventions at the margins, no central-bank financing was involved, whether via the very-short-term-financing mechanism of the EMS or otherwise.

Only when a realignment of EMS central rates was imminent did obligatory intervention build up to considerable size, with corresponding monetary effects spilling over into the domestic banking system. But these effects were quickly offset by post-realignment flows in opposite direction.

In retrospect, German monetary conditions can be said to have been much less affected by intervention to defend EMS exchange rates within the agreed margins than was widely feared at the outset. In addition to the preference of EMS partners for intramarginal interventions, this is mainly accounted for by the greater than expected willingness of all partners to use appropriate interest-rate policies to adjust monetary conditions to the requirements of the exchange-rate system. On balance, Germany's EMS partners were prepared—some of them explicitly, others only implicitly—to adopt a stable exchange rate against the DM as an intermediate target for their own monetary policies. The DM provided them with a "low-inflation standard" that offered clear advantages over any other target available to highly open economies with close ties to Germany and each other. From time to time, the ingredients for potential conflict peculiar to an unwritten arrangement of this nature did show up, often reflecting the special circumstances confronting individual partners within the EMS, but also revealing divergent attitudes toward the behavior of the dollar (and occasionally the yen).

As inflation has gradually been brought under better control in most countries but growth has remained inadequate to bring down unemployment (or prevent it from rising further), there have been calls for greater coordination of monetary and exchange-rate policies. Although the EEC Commission lacks treaty power in the monetary-policy area, it has urged the submission of monetary and exchange-rate policy coordination to Community procedures and decisionmaking on the basis of a common appreciation of the problems faced and the aims to be pursued. The renewed efforts of some partner countries to liberalize capital movements have been cited to support the argument that free capital movements and fixed exchange rates leave no room for autonomous monetary policy.

The logic of this contention cannot be disputed. A system of permanently fixed exchange rates and full currency substitutability would indeed leave no room for divergent interest rates and national autonomy in monetary policy. Once monetary integration in Europe moves forward to that point, the stage will be set for true monetary union, with a full-scale European central bank. There is still some distance to go, however, before that goal is in sight. Inflation has been brought under better control in most Community countries, especially those that comprise the EMS, but inflation differentials and divergencies in budgetary and other policies remain large enough to

make future realignments a near certainty. It is thus clearly premature to speak of fixed exchange rates as a permanent feature of European monetary arrangements.

Moreover, it is not clear how once-for-all portfolio stock adjustments under completely free capital movements will affect the exchange-rate structure, or what the long-term follow-up effects will be. These, too, might call for realignments, even though national authorities might wish to resist them. It would be a grave mistake to act prematurely on the basis of the logic cited above. Such a move would be revealed quickly as an ill-fated attempt to freeze exchange rates and impose adjustment in other areas. Domestic inflation rates and the policies responsible for them, especially monetary policy, would have to meet the requirements of permanently fixed exchange rates. Such an attempt would call into question the EMS as it is functioning today.

The success of the EMS is due in large part to the willingness of its participants to direct their policy toward the highest possible degree of domestic monetary stability and allow any remaining inflation differentials to result in occasional realignments that will leave their competitive positions basically unchanged. This has greatly reduced the pressures on exchange rates caused by large uncorrected payments imbalances and flights of capital. One of the major instruments used to restore and retain the overall balance of the economy has been interest-rate policy. In contrast to the pre-EMS experience, inflation-adjusted (real) interest rates have been held at realistic levels in most countries. Short-term interest rates have often been allowed fully to reflect signs of a currency's weakness within the EMS and thus to prevent capital flows that might otherwise have put pressure on its exchange rate. By comparison, administrative restrictions on capital flows, given their well-known imperfections, have probably not made a large and lasting contribution to the coherence of EMS exchange rates. In the longer run, capital controls may even have lowered confidence in the currencies of the countries using them, with negative consequences for their terms of trade and economic growth that probably have exceeded any short-term gains.

The Bundesbank's primary commitment to price stability and its belief, based on experience, that exchange-rate stability depends critically on the achievement of domestic monetary stability, has led it to firmly resist all temptations to yield to political pressures (often advanced under the guise of "European initiatives") to submit its monetary policy progressively to common decisionmaking. The present institutional setting in the Community does not provide adequate safeguards against recourse to monetary instruments for purposes that might be in serious conflict with the goals toward which monetary policy can and should be aimed.

Yet, within the limits of its primary responsibility to ensure domestic

monetary stability—and at times stretching those limits to its own discomfort, the Bundesbank has made every effort to fulfill the DM's role as key currency of the EMS mechanism. In doing so, it has helped the system function smoothly even in sometimes rough waters. This was difficult enough, on occasion, during the years of a rising dollar; it has turned into a major preoccupation as the dollar has retreated from its dizzy heights and attempts are being made to prevent it from severely overshooting on the downside.

There was never any doubt that the Federal Republic of Germany, with its central bank, would play its role with other partners in any effort to restore external stability to the dollar at realistic values against other currencies. The Bundesbank's action in the DM/dollar market was instrumental in inducing the dollar's turnabout in late February 1985. Beginning in mid-1986, large and persistent current-account surpluses (chiefly due to lower oil-import costs) and net long-term capital inflows caused the money supply to rise rapidly in Germany. Hence, large-scale intervention to support the dollar and a drop in official interest rates to fend off capital inflows exposed the Bundesbank to the kind of dilemma it faced in the days of fixed dollar exchange rates.

Fortunately, downward market pressures on the dollar did not converge entirely on the DM. Because of the large bilateral U.S./Japanese trade and current-account imbalance, the yen/dollar exchange rate was at least as affected, if not more so, as the DM/dollar rate. In fact, in the weeks and months following the Louvre agreement of February 22, 1987, the yen became the main target of upward market pressures. The Bank of Japan, with other central banks, purchased dollars on a large scale; the Bundesbank was much less exposed to buying pressure.

The Bundesbank may have forestalled greater pressure by its decision on January 23, 1987, to lower its discount, Lombard, and money-market intervention rates by a half percentage point in light of the DM's 6 to 7 percent real appreciation since mid-1986. This decision illustrated once again that the DM's exchange rate is an important factor in the Bundesbank's formulation of policy. The Bundesbank takes into consideration changes in the terms of trade and the probable impact of these changes on prices and market interest rates, as well as on export industries and the economy as a whole. These factors may at times determine the outcome of a policy debate whose overriding objective is domestic monetary stability. In the final analysis, the weight given to the exchange rate will depend on its lasting contribution—positive or negative—to the achievement of that objective.

There is a great deal of concern in Germany at present that exchange-rate considerations are given too much weight in the formulation and implementation of monetary policy. This concern should be taken seriously as a re-

flection of the deep-rooted reaction to the experience with imported inflation under the Bretton Woods fixed-exchange-rate regime. It signals the greater risks perceived in a short-haul, purely pragmatic attitude dictated largely by exchange-rate considerations than in a long-haul, systematic policy based on a money-supply target. It also betrays a measure of unease, or outright mistrust, concerning the willingness or ability of partner countries to adhere to policies that offer the prospect of more lasting internal and external balance and monetary stability.

Germany's worries on this score are exacerbated by the fact that the central banks of most partner countries in the EMS have far less autonomy than the Bundesbank, and that U.S. Federal Reserve policy is currently subject to multiple constraints. Exchange-rate stability within the EMS and in relation to the dollar (and other third currencies) will be best served if all the countries concerned declare domestic monetary stability to be the overriding priority of their central banks and allow them to pursue policies with that objective. Only when these conditions are fully and permanently met will monetary union in Europe come within reach. The international monetary system will remain unstable as long as the policy mixes in major countries leave room for large internal and external imbalances that fuel currency instability.

The Bundesbank will be able to cooperate with the monetary authorities of other countries within the EMS and at the international level in the pursuit of exchange-rate stability to the extent that its partners respect the constraints placed on Germany's fiscal, monetary, and other policies by its desire for internal and external balance and price stability. The capacity to cooperate will reach its limits if the Bundesbank's ability to pursue its primary monetary objectives is at risk and domestic monetary stability is threatened.

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## FURTHER THOUGHTS ON INTERNATIONAL POLICY COORDINATION

*Gottfried Haberler*

This essay draws on and updates two of my papers (1987 and forthcoming) and takes into account an important 1984 paper by Henry Wallich of which I was unaware when I wrote my papers. Wallich is uniquely qualified to write on international policy coordination through his profound knowledge of the theory and practice of international trade and finance and his work in the Federal Reserve Bank of New York, at the U.S. Treasury, and as a Governor of the Federal Reserve System, to mention only the most important stations. Banking has been a tradition in the Wallich family. Henry's father and grandfather were prominent bankers in Germany, and his daughter, Christine Wallich, works in the World Bank. Commercial bankers, central banker, world banker: four generations of bankers.

In his study, Wallich first sets up a conceptual framework: "Coordination, harmonization, cooperation, consultation: these, in descending order, are the terms by which nations recognize . . . that they are not alone in the world." His paper "deals with the third element on this diminishing scale of international relationship—cooperation. 'Cooperation' falls well short of 'coordination,' a concept which implies a significant modification of national policies. . . . It falls short also of 'harmonization,' a polite term indicating a somewhat greater reluctance to limit one's freedom of action. But 'cooperation' is more than 'consultation.'" Wallich then lists the four "international institutions" with whose work he is familiar "from observation or participation"—to wit, economic summits, the International Monetary Fund (IMF), the Organization for Economic Cooperation and Development (OECD), and the European Monetary System (EMS)—and comments on their strengths and weaknesses. On the EMS he has this to say: "The European Monetary System represents perhaps the tightest grouping requiring the most intensive cooperation and, at least conceptually, firm coordination of macro policies. Complete success obviously has not been achieved."

The fact that Wallich accords these endeavors only a low rank on his scale—cooperation not coordination—indicates that he is rather skeptical about the recent drive for international policy coordination initiated and pushed by the United States. A brief analysis of what happened from 1985 to June 1987 will, I believe, fully justify Wallich's judgment.

After the dollar reached its high point in February 1985, U.S. balance-of-

payments and exchange-rate policy took a sharp turn under Secretary of the Treasury James Baker. Baker's predecessors pursued a policy of laissez-faire or benign neglect, letting market forces determine exchange rates and keeping interventions in the foreign-exchange market at a minimum, occasionally trying to counter "disorderly" market conditions.

Under Secretary Baker, the United States has initiated a highly active balance-of-payments policy. The aim is to eliminate, or at least sharply reduce, the huge U.S. trade and current-account deficits and the Japanese and German surpluses. This imbalance is generally regarded as unsustainable and all the more dangerous because it is the main cause of the protectionist drive in Congress. To deal with the problem, the United States has launched an energetic two-pronged drive to bring about, first, reform of the international monetary system and, second, coordination of the economic policies of the major industrialized countries. Before taking up the problem of coordination, let me very briefly sketch the monetary background.

### **The Monetary Background**

The first step of the new policy was the surprise meeting of the Group of Five at the Plaza Hotel in New York City on September 22, 1985, where it was agreed that "some further orderly appreciation of the main non-dollar currencies against the dollar is desirable." The Plaza decision to push the dollar down was endorsed by the economic summit meeting in Tokyo in May 1986.

In his State of the Union Message in February 1986, President Reagan went a step further. He said: "We must never again permit wild currency swings to cripple our farmers and other exporters. . . . and tonight I am directing Treasury Secretary Jim Baker to determine if the nations of the world should convene to discuss the role and relationship of our currencies." This was generally interpreted to mean that it might be possible to organize a Bretton Woods type of international conference to negotiate a return to some sort of fixed exchange rates, and it reflected the widespread disenchantment with the performance of floating exchange rates. But a return to fixed exchange rates in the foreseeable future is surely out of the question. It is therefore not surprising that there was no follow-up of the President's directive.

Later in 1986, the United States made increasingly urgent and impatient demands that Germany and Japan stimulate their economies, and threatened a further decline of the dollar in case of inaction. This was not calculated to stabilize exchange rates. The dollar kept falling, especially against the yen. Japanese worries mounted, and on October 31, 1986, Secretary Baker had a surprise meeting with his Japanese counterpart, Finance Min-



ister Kiichi Miyazawa. The ministers agreed that the dollar/yen rate was at that time "broadly consistent with the underlying fundamentals." Two months later, the dollar plunged again. Mr. Miyazawa made another emergency trip to Washington to no avail. Then, on February 22, 1987, the Group of Seven (minus Italy) met at the Louvre in Paris and declared that "the substantial exchange rate changes since the Plaza agreement . . . have now brought their currencies within ranges broadly consistent with underlying economic fundamentals." The Louvre agreement was reconfirmed by the next meeting of the Group of Seven in Washington on April 8 and by the Venice summit meeting from June 8 to 10, 1987.

The implied judgment that the dollar had declined enough to eliminate or sharply reduce the external deficit was by no means generally accepted. Even some high U.S. officials expressed the view that the dollar would decline further. But they were promptly rebuked by the White House. Only the President and the Secretary of the Treasury can make such judgments, it was said.

With all due respect, it must be said that we, economists as well as ministers of finance, simply do not know enough to say what the "proper" or "equilibrium" exchange rate is. The modern asset-theoretic approach to the problem of exchange-rate determination under floating rates has taught us to be modest. This approach was thrust upon analysts by the fact that financial markets in the industrial countries have become increasingly interdependent in the past twenty-five years or so, and that, as a consequence, capital flows across national boundaries have become enormous. Like the stock market, the foreign-exchange market is a very delicate mechanism that does not easily lend itself to governmental manipulation. Time and again, even massive interventions by central banks have been overwhelmed by even more massive capital flows. The fact is that the usual sterilized interventions, which leave the money supply unchanged, can deal only with minor disturbances. It is true that nonsterilized interventions of sufficient size could stabilize the exchange rate at any desired level, but that would be tantamount to a return to fixed but adjustable exchange rates.

The market has done a better job than governments of setting exchange rates. When the dollar became overvalued in 1984, the market corrected itself quickly. The dollar reached its high point in February 1985 and started to decline well before U.S. policy changed. To regard the swing of the dollar as a gigantic market failure, as is often done, is a gross misinterpretation. Actually, the 1981-85 chain of events in the United States of budget deficits, high interest rates, the strong dollar, and large trade deficits was, up to a point, highly beneficial for the United States and for the world economy. The large budget deficits pulled the U.S. economy out of the stabilization recession of the early 1980s, the high interest rates attracted foreign capital,

the strong dollar helped bring inflation down, and the large trade deficits lifted the world economy out of the recession.

I said it was beneficial up to a point. There can always be too much of a good thing. Indeed, it is almost generally agreed that the large budget deficits have served their purpose and should be phased out. The reason is that the large budget deficit is a stumbling block for getting rid of the trade deficit. To make that clear, assume that the dollar has declined sufficiently and that the trade and current-account deficits shrink, which implies that capital imports decline. If the budget deficit does not shrink too, interest rates will rise, putting the Federal Reserve on the spot. If it lets interest rates rise, public borrowing will crowd out private investment, which will bring on a recession. If it keeps interest rates down, there will be inflation and a recession later on.

### **The Drive for International Policy Coordination**

Under Secretary Baker, the drive for international policy coordination went into high gear—once again, for the idea has a long history. In 1978, not to go farther back, the United States had a bout of inflation, the dollar was weak, and the trade deficit of \$31 billion in 1977 and \$34 billion in 1978 was regarded as alarmingly high. The call rose for international policy coordination. At the Bonn summit meeting in July 1978, an agreement was reached that Germany would stimulate its economy by fiscal expansion and the United States would take anti-inflationary measures, including decontrol of oil prices in order to reduce oil imports. These steps constituted what is called international policy coordination or the locomotive approach, the role of the locomotive being assigned to Germany. The result was that Germany got more inflation than it had bargained for, which gave policy coordination a bitter taste for German policymakers. The dollar remained weak until after Paul Volcker was appointed Chairman of the Federal Reserve Board more than a year later.

International policy coordination was the main theme of the Tokyo summit meeting held in May 1986. The heads of state and of government of the seven summit countries set up a new Group of Seven (Group of Five plus Canada and Italy) and instructed the seven ministers of finance to meet “at least once a year” to review “the mutual compatibility” of their economic objectives and forecasts, “taking into account indicators such as GNP growth rates, inflation rates, interest rates, unemployment rates, fiscal deficit ratios, current-account and trade balances, monetary growth rates, reserves, and exchange rates.” The ministers met in Washington on September 27, 1986, “to conduct the first exercise of multilateral surveillance pursuant to the Tokyo Economic Declaration.” The one-page communiqué was largely

a collection of generalities: the ministers agreed "that the present scale of some current account imbalances cannot be sustained," "that cooperative efforts need to be intensified in order to reduce the imbalances in the context of an open growing world economy," and so forth. The statement was evidently a compromise, which, according to press reports, was reached after spirited and somewhat acrimonious discussions.

The drive for policy coordination has in practice become largely a sparring match between the United States on the one hand and Germany and Japan on the other; we demand that they stimulate their economies, they admonish us to cut our budget deficits. The outcome of the Washington meeting was expressed in two key sentences of the communiqué. First, the ministers "noted . . . that economic growth in surplus countries was improving but that such growth will need to be sustained. . . ." This seems to be what Germany and Japan wanted. Second, "countries with major [external] deficits . . . committed themselves, among other things, to making further progress in reducing their budget deficits in order to free resources to the external sector."

The June 1987 Venice summit meeting did not bring any basic change in policy, but it elaborated the program of the Tokyo summit: The heads of state and government agreed that strengthening of the mechanism of policy coordination would be undertaken with the assistance of the IMF. They ordered "the use of performance indicators to review and assess current economic trends and to determine whether there are significant deviations from an intended course that require consideration of remedial actions." Under the more detailed framework, the ministers of the seven summit countries are expected to review specified indicators throughout the year to assess each country's performance. This need not be taken literally, but it means still more high-level meetings, which will be good news for the airlines, hotels, and telecommunications services. But will it be good for the world economy?

Meanwhile, the United States continues to put pressure on Germany and Japan to stimulate their economies in order to reduce their trade surpluses and the U.S. trade deficit. The U.S. position suffers from three weaknesses. First, the United States still needs foreign capital, because the elimination of the budget deficit is not in sight.

Second, econometric studies by the IMF staff, by the Federal Reserve Board staff, and at the National Bureau of Economic Research indicate that even a substantial and sustained increase in German and Japanese noninflationary growth would have only a small effect on the U.S. trade deficit. Nor would inflationary growth in Germany and Japan help much. If unexpected and at first unperceived, it might improve the U.S. trade balance for a while. But market participants would soon become aware of what was hap-

pening and would bid up the dollar in the foreign-exchange market. This is not meant to deny that faster economic growth in Germany and Japan is desirable. It is very desirable, but we should not expect it to solve the problem of the U.S. trade deficit.

Third, public criticism of other countries is counterproductive. No country likes to do things under pressure from abroad. At the same time, no modern government relishes unemployment, and all want growth. Germany and Japan are no exception, although Germans, for well-known historical reasons, are more fearful of inflation than are Americans and tolerate a little more unemployment to keep inflation at bay.

All this does not mean that countries should refrain from criticizing each other. But criticism and advice should be offered quietly in the OECD, the Bank for International Settlements, the IMF, etc. Shouting criticism and advice from the housetops, thereby inciting the media to echo them in cruder form, is politically counterproductive.

### **What Should Be Done?**

I take it for granted, and I believe it is almost universally accepted, that a global imbalance exists. Phasing out, or at least sharply reducing, the huge U.S. trade deficit, not overnight but over a reasonable period of time, is necessary from both the national and the international standpoint. Piling up a huge foreign debt is not desirable, and it is anomalous, to put it mildly, for the richest country in the world to borrow from the rest of the world to finance its budget deficits. United States exports must increase and/or imports must decline; in other words, the traded-goods industries must expand. Recall that at the Washington meeting of the Group of Seven on September 27, 1986, the United States, as a country with a major external deficit, committed itself to reduce its budget deficit "in order to free resources to the external sector."

Now look at the other side of the coin. A reduction of the U.S. external deficits implies, of course, a decline in German and Japanese surpluses (unless they find another outlet for their savings—for example, in the third world—but I shall not explore that possibility). If German and Japanese exports decline and/or imports increase, and the traded-goods industries contract and release productive resources, where should they go? The usual answer is that they should be absorbed by larger budget deficits. The *Economist* (London, June 13, 1987) puts it succinctly: "The near-unanimous view in the markets (echoed in private by officials) is that America needs to cut its budget deficit while Japan and West Germany increase theirs. That, according to everybody's economic model, would bring trade flows back towards balance and would let the dollar stay roughly where it is without the need for higher interest rates in America."

I suggest that this is much too simple. There are other possibilities. For example, it may be desirable to shift the resources—labor and capital—released by the traded-goods industries into private investment to stimulate growth. Actually, however, this whole approach is flawed. Changes like the ones under consideration are going on all the time: demand for certain products declines, setting free labor and capital for employment elsewhere. In a capitalist, free-market economy, it is not the job of the government to determine where the released resources should go. That should be left to market forces, guided by the price mechanism. The Western economies have demonstrated great flexibility and adjustability. The government can and should help adjustment by breaking down structural rigidities, especially in the labor market, many of which are of its own making. Furthermore, the government, mainly through monetary policy, must see to it that aggregate demand is kept on an even keel, to prevent a contraction and inflationary expansion. All this is pretty straightforward and does not require an elaborate system of objective indicators to understand it. In fact, it is a little naive to believe that it is possible to agree internationally on a set of indicators that will tell every country what it ought to do.

Somebody might ask: Why not apply the same principle to the American problem? Why not let the market do it? The answer is simple: The cause of all the trouble is the huge U.S. budget deficit. We have seen that if the external deficit disappeared and the budget deficit remained what it is, the consequence would be recession or inflation. The market cannot solve government budget problems.

Now a last question: Suppose the U.S. budget deficit is eliminated but large external deficits continue, because Japanese and other foreign investors still invest in the United States—what then? My answer is that, from the American standpoint, capital imports for productive private investment, unlike capital imports to finance unproductive government deficits, are not objectionable. But is it no longer objectionable that the richest country borrows heavily from the rest of the world? I shall not engage in international moralizing. I confine myself to saying that the ideal solution would be for many third-world countries, such as those in Latin America, to put their economic houses in order and create a hospitable climate for foreign investors that would attract much of the capital that now goes to the United States.

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## CURRENT-ACCOUNT IMBALANCES IN THE INDUSTRIAL WORLD: WHY THEY MATTER

*Alexandre Lamfalussy*

Sometime in the 1970s it became fashionable among an active and influential section of academic economists to dismiss the traditional concern of policymakers with the current account of the balance of payments—even when this concern took the more sophisticated form of aiming for a sustainable or desirable pattern of current-account imbalances. In a world of floating exchange rates, free trade, and high capital mobility (so ran the argument), cutting the balance of payments into slices may no longer be helpful for economic analysis and may be misleading for policy prescription, while singling out the current account as the most important component of international payments could be positively harmful. Let governments pursue optimal domestic policies, and let market forces work out their preferred combination of international payments flows. Any such combination will be a function of the saving and investment pattern in individual countries and will reflect the market's view of each country's development prospects and of the policies pursued by governments.

Policymakers and their advisers were therefore urged to forget their obsession with the current account and concentrate on sound domestic policies. Curiously enough, this advice apparently had its greatest impact on market participants. Throughout the years 1982-84, exchange-market operators showed no interest in the rapidly growing U.S. current-account deficit; they began to notice it only in 1985 and have not lost sight of it since. By contrast, the reaction of policymakers was mixed. Some seem to have been persuaded—witness the benign neglect displayed by the U.S. authorities toward their country's current-account position until 1985 (with the notable and honorable exception of Henry Wallich and his colleagues at the Fed)—but most were not. They continued to monitor the prevailing pattern of current-account imbalances and to express views about it. In 1985, at about the same time as exchange-market participants, U.S. officials rejoined the mainstream tradition. Thus both private and official practitioners are now very much interested in the international pattern of current accounts. But not all academic economists have been similarly converted.

Given the very high degree of financial integration that characterizes the Western industrial world and the steadily growing importance of cross-bor-

der financial transactions relative to trade flows, the issue is by no means moribund. My own sympathy lies with the official tradition. I will try to explain why by exploring some of the pros and cons of the issue in the light of our continuing experience with major imbalances in the current accounts of the United States, Japan, and the Federal Republic of Germany.

### **The Argument that Current Accounts Matter**

Do current accounts matter in today's circumstances? The argument of those who would answer "Yes" run along three lines: (1) They point to the interconnection between a current-account imbalance and imbalance in the "real" domestic economy. (2) They worry about the "sustainability" of the imbalances and the process of unwinding them, which, in the absence of corrective policies, could lead to financial upheaval and world recession. (3) They fear the damaging consequence of possible policy responses—a return to protectionism in trade and finance.

1. That a current-account imbalance has a domestic counterpart in the imbalance between output and domestic expenditure is a national-accounting identity that hardly needs to be gone into further. The concern is not about the existence of such an unquestionable identity but about its implications for the process of adjustment.

On the deficit side, the large and persistent trade deficit in the United States, associated with a long period of dollar overvaluation, has gone hand in hand with the destruction of whole segments of the U.S. tradable-goods industry. Not only has this imposed severe hardship in some parts of the country and high social costs as a result of labor transfers, but it has painfully delayed the adjustment of the U.S. trade balance to the subsequent decline in the price of the dollar. Some of the tradable-goods industry that could have taken advantage of the readjusted exchange rate has meanwhile disappeared. It may well reappear, but not overnight, especially if those responsible for investment decisions in these industries remain overcautious after the bitter experience of large and unpredictable real-exchange-rate fluctuations.

On the surplus side, a country like Japan (and, to a lesser extent, West Germany) is accustomed to a persistent trade surplus. It has built up an industrial structure geared to such an extent to export-led growth that a strengthening of its currency tends to have an immediately depressing impact on domestic investment and therefore on total domestic demand. Such an export-induced weakening of industrial investment is not easily offset by stimulating other types of domestic spending. There is thus a strong link between exports and imports that implies an arduous adjustment process.

Thus, when current-account imbalances have been large and long-last-



ing—in particular when they have come about as a result of protracted departures from purchasing-power parity rather than of a short-lived cyclical desynchronization—there are forces at work on both the deficit and surplus sides that cause the adjustment process induced by an exchange-rate change to be slow and painful. To be successful in these cases, the adjustment mechanism must be supported by strong domestic policies, and we know from experience how difficult it is to implement such policies.

2. The starting point of the “sustainability” line of the argument is also an accounting identity: a current-account imbalance is equivalent to a change in the country’s net external financial position. When a country runs a deficit, there is an increase in the net financial claims of the rest of the world on that country; the reverse happens in the case of a surplus. This has two consequences.

On the one hand, the change in the net external financial position has a feedback effect on the current account itself via its impact on the cross-border flow of net financial income. Beyond a certain point, which depends on such factors as the size and duration of the current-account imbalance, the net interest flowing into or out of the country, and the rate of growth of the economy, the process may enter the “snowball” phase. Something will have to give, and the adjustment may imply financial disruption.

On the other hand—and this part of the argument is particularly forceful in the case of a major country that persistently runs a large external deficit—the current-account imbalance induces a shift in the composition of the financial portfolios held by the rest of the world. All other things being equal (which, of course, they are not), foreign holders of financial assets will accept a steady increase in their claims on the deficit country only if there is an improvement, relative to other financial assets, in the prospective yields of these claims. In the absence of continuously better real growth prospects in the deficit country than in the rest of the world, such an improvement will require an adjustment of interest rates or exchange rates in the deficit country, or a combination of the two.

Applying this reasoning to the current-account imbalances now prevailing, it is unconvincing to argue that the United States has reached anything approaching the “snowball” phase. Both the current-account deficit and the net external liabilities are still small in relation to the relevant U.S. aggregates. But the second part of the argument should not be dismissed too readily. Adding \$140 billion per annum to the net financial claims of the rest of the world on the United States (and adding it in dollars) produces a marked change in financial portfolios outside the United States, even for countries like Japan with very large financial portfolios and a substantial flow of savings.

Will the holders be willing to continue to accommodate such changes in

their financial portfolios without requiring a further rise in U.S. interest rates and/or a weaker dollar? And can one expect that such an adjustment will occur smoothly and gradually, with no disruption of financial and exchange markets? If the answer to these questions is "No," the result could be a weaker dollar combined with higher interest rates, leading simultaneously to a recession and accelerating price increases in the United States. Without a compensating stimulus to growth from other countries, there would be a serious risk of world recession, with a further disruptive feedback into the financial markets. This is the much-feared "crash landing" scenario. If this scenario were to materialize, the dollar could become so weak as to usher in another period of exchange-rate misalignments.

3. Those who think current-account imbalances matter today worry about the potentially dangerous reactions of governments or legislative bodies. As has been amply demonstrated in the United States, it is difficult to contain protectionist pressure in a country with an overvalued currency and a large current-account deficit, however devoted its government may be to the concept of free trade. The lesson to be drawn from the U.S. experience is that this protectionist pressure is not easily reversed: witness its persistence even now, more than two and half years after the dollar peaked.

Another danger arises from the fact that capital-importing countries become highly dependent financially on the outside world. How would the United States react to such dependence? A negative reaction could add the destructive influence of financial protectionism to that of trade protectionism. It requires a great deal of faith in our democratic institutions to argue that enlightened authorities will resist such pressure because they know that the end result would be a welfare loss for all. Since there is a possibility that the freedom of both trade and capital flows would be curtailed, would it not be better to aim for an economic environment that minimizes the protectionist temptation?

### **The Counterargument**

Those who still consider official concern over the prevailing current-account imbalances to be excessive believe that it is based on a lack of confidence in the proper functioning of markets. The main counterargument appears to center on the role, efficiency, and smooth functioning of the price mechanism—basically, of exchange-rate movements—in the adjustment process. Rather than address the issue of protectionism, this counterargument is directed at the concern expressed (1) about the implications of lasting exchange-rate misalignments and current-account imbalances for the adjustment process and (2) about the "sustainability" of imbalances and the financial and other consequences of the process of unwinding.

1. The counterargument relevant to the first concern is quite simple. Granted, real-exchange-rate fluctuations of the size experienced in the past few years create a misallocation of resources, but in the end the fluctuations *are* reversed and the misallocation of resources is corrected. That this is a costly business is beyond doubt, but what is the alternative? To have the authorities try to fix real exchange rates at a level that is just as likely to be “wrong” as the one produced by the market?

2. Something similar can be said, *mutatis mutandis*, about the fear of the disruption that could come from interest-rate or exchange-rate movements as a result of the behavior of holders of financial claims denominated in dollars. Interest-rate or exchange-rate movements may indeed be swift, but it is up to market participants to protect themselves. After all, financial engineering has succeeded in producing a great many highly efficient hedging instruments. Moreover, why should one fear a “free fall” of the dollar? A combination of relative interest-rate and exchange-rate levels is bound to put a brake on market reactions. Besides, all these foreigners who have been so eagerly investing in the United States may have been quite right in their explicit or implicit belief that growth prospects will remain more favorable in the United States than in the rest of the industrial world. Finally, as long as the underlying inflation rate in the United States—the rate generated domestically—remains low, the impact of a lower dollar on the rate of increase in the U.S. price level will be transient. It need not rekindle lasting inflationary expectations. And, again, one can doubt the ability of officials to make a better judgment than the market about the right exchange rate or to impose their views on the market through exchange-market intervention or other means.

Two observations lend some support to this counterargument. The first is a very general one. Over and over again, economists have made the mistake of underestimating the corrective ability of the market mechanism. As a result, they have often detected “structural” problems that proved to be much less structural than they at first appeared and were subsequently solved by market responses. The dollar shortage—the “structural” balance-of-payments surplus of the United States in the immediate post-war years—is a case in point; the oil shortage is another.

The second observation is more recent and obviously not (or perhaps just not yet) conclusive. The much-feared “crash-landing” of the dollar has not so far materialized. The decline of the dollar from its 1985 peak has been rapid at times, but it has not yet disrupted the markets—at least if “disruption” is defined as large-scale and widespread financial losses leading to chain reactions and worldwide recession. At the same time, there can be little doubt that the depreciation of the dollar *has* set in motion the process of real adjustment on the trade front, however slowly and painfully. This is

clearly visible on both sides of the German and Japanese real trade flows and at least on the export side of the U.S. trade account.

### **Conclusions**

Whatever respect I may have for the ability of market forces to correct even large and seemingly sticky imbalances, I am still unconvinced by the counterargument. The economics profession has not been able to provide us with even a remotely satisfactory understanding of how exchange rates are determined—and, in particular, of how floating exchange rates would behave in the absence of official intervention. The collapse of purchasing-power parity has not been fully understood. Finally, international financial integration has added a new dimension to the interdependence of countries already closely tied through trade integration. The world economy has moved into uncharted waters.

To illustrate the first of these points, we ought to remind ourselves of what happened in 1985 and in March-April 1987. Did the badly needed downturn of the dollar in 1985 occur because the market finally realized that the current-account imbalances were becoming unsustainable or because the authorities intervened to help bring it about? We shall never know the answer, of course, but it is at least arguable that without the intervention of the Bundesbank in February 1985 and the Plaza agreement in September of the same year, the dollar's decline would have been delayed. The action of the authorities may have encouraged the market's reappraisal of the importance of the current-account imbalances. Similarly, it is arguable that the relative calm of the exchange markets between May and mid-August 1987 could not have happened without the massive central-bank intervention of March and April, supported by active coordination of monetary policies. This action may well have persuaded the market that the authorities meant business. We shall never know what would have happened to the dollar, the financial markets, and the world economy without those measures. But we cannot rule out the possibility that events would have taken a nasty turn.

The "uncharted waters" problem also argues in favor of at least open-minded agnosticism. History has demonstrated that a financial crisis can occur in a market economy with or without policy mismanagement—even though theoretical economists may endlessly debate whether the observed instability of financial-asset prices is due to the inherent nature of the financial markets or to wrong government policy. Since we are navigating in truly unknown waters, only future experience will tell us whether the current financial revolution, which combines innovation and domestic deregulation with international financial integration, increases or reduces the fragility of the financial system, or, to be more precise, whether it heightens or lessens

the risk that a local financial crisis may be rapidly transmitted throughout the world. Since we do not know the answer, it would be foolish to dismiss the possibility that the present current-account imbalances, if unheeded, could push the world economy toward a global recession and financial hardship. Although I believe there is a relatively small probability of this happening, given the attractiveness of the United States as an investment outlet in an uncertain world, a hugely damaging eventuality, however improbable, demands preventive action. And the main component of that action should be the coordination of macroeconomic policies for the explicit purpose of bringing the present large current-account imbalances back to sustainable proportions.

## HOW TO COPE WITH THE PRESENT INTERNATIONAL MONETARY SYSTEM

*Shijuro Ogata*

There are diverse views on the deficiencies of the present international monetary system. Some argue that the multi-reserve-currency system that has come into being is inherently unstable. Others insist that the instability is primarily rooted in the dollar standard, which is no longer supported by gold convertibility or a strong U.S. economy. What is the actual situation, and what are the immediate prospects? Should or can the existing system be reformed or improved? This short essay is intended to examine these questions from the pragmatic point of view of a former central banker.

Immediately after the Second World War, the U.S. dollar attained an unrivaled position as the most widely used international currency in the world. Since the establishment in 1958 of convertibility of the major European currencies for nonresidents, however, the international use of national currencies has gradually been diversified. A number of factors are responsible.

First, with the economic recovery of Europe and Japan and the continuous deterioration of the U.S. balance of payments, the relative positions of the U.S. economy and other major economies have changed. Second, the growth and liberalization of financial markets outside the United States have enabled them to provide residents and nonresidents alike with attractive instruments for finance and investment in other national currencies. Third, the instability of exchange rates, particularly after the floating of major currencies, has prompted the diversification of currencies held and transacted internationally. And, finally, differentials in regulations and practices among major financial markets have induced a shift in financial transactions in national currencies from less liberalized national markets to more liberalized foreign markets, as we have observed in the remarkable growth of Eurocurrency markets. The shift has contributed to the increased international use of national currencies other than the dollar.

It is not easy to assess the exact degree of currency diversification, but judging from the statistics of the Bank for International Settlements that report banks' cross-border liabilities (BIS, 1987) and the estimate made by the International Monetary Fund on reserve-currency holdings (IMF, 1986), the share of the dollar both as transaction currency and as reserve currency was about 63 to 65 percent in 1985-86, while the shares of the

deutsche mark and the Japanese yen reached 12 to 16 percent and 7 to 8 percent respectively, followed by other major European currencies.

Although the relative position of the dollar has declined over time, it should be noted that the dollar's share is much larger than the share of the U.S. economy in the world in terms of gross national product, and its position as reference currency in the global context is still unchallenged. The ECU now serves as the standard of value mainly within the European Monetary System, but the major exchange rates—as well as the quotations of most internationally traded commodities—continue to be expressed in terms of the dollar. This special status of the dollar must be due largely to the fact that, despite the decline of the relative position of the U.S. economy, U.S. financial markets maintain their supremacy in size and variety of financial instruments. Today, with the technological progress in telecommunications, the busiest hours of the world's cross-border financial transactions tend to overlap the operating hours of the New York markets—strong evidence of the integration of world financial markets that are still, or increasingly, centered on New York. Many monetary authorities hold the dollar for working balances not only because of its role as reference currency and major intervention currency but also because of the high liquidity of dollar assets, which can be cashed in at low cost in case of need. The dollar continues to be the most important vehicle of international financial transactions.

While the international monetary system has already been transformed into a kind of multi-reserve-currency system in the sense that there are several reserve currencies, the dollar retains a special position. For this reason, the United States is still expected to assume a special responsibility for maintaining the stable value of the dollar as the anchor for international monetary stability. But there is a crucial problem: if the United States does not follow appropriate policies to maintain the stable value of the dollar, other countries are more likely to be hurt than the United States itself because of the still relatively large size of the U.S. economy and the dominant position of U.S. financial markets. Because this asymmetry is no longer counterbalanced by gold convertibility, the present system can be called a *de facto* dollar standard.

What are the immediate prospects for the international monetary system? First, the dollar is unlikely to be restored to its previous superior position in view both of the changes that have been taking place over the years in the world economy and of the probable further growth of financial markets outside the United States, due in part to the emergence of large capital exporters such as Japan.

Nevertheless, it is not certain that the position of the dollar will continue to decline. Despite the fact that the United States has become a large net

debtor, confidence in the dollar can be strengthened if the United States makes some progress toward adjusting its balance of payments and if its financial markets can maintain their supremacy, even without taking into account the dollar's unique role as safe haven during international political disturbances.

Finally, it would be extremely difficult to reduce the dollar's position deliberately. After all, the choice of currencies by exchange- and financial-market participants depends upon their preferences. The only thing the authorities can do after substantially removing exchange controls is to liberalize financial transactions further, thereby indirectly promoting the international use of nondollar currencies. Even if an attempt were made to introduce a global system based on a unit of account, that unit would be composed of some basket of national currencies that includes the dollar, since gold has already lost its special role as the standard of value. As with the present SDR, the value of the unit would be likely to fluctuate in inverse but stable correlation to the value of the dollar unless the dollar's share in the unit fell very low. Such a system would not be too different from the present one.

Under these circumstances, it would be more realistic to expect the existing system to continue and to explore ways to strengthen it rather than attempt to reform it by deliberate actions. It is occasionally argued that the present system overburdens the United States with a special responsibility. What is needed now, however, is for the United States to do a better job of fulfilling that responsibility, with greater support from other major countries.

The greatest dilemma for strengthening the existing system is how to increase exchange-rate stability despite continued large international imbalances. Exchange-rate adjustments are often necessary and very effective for reducing imbalances, but we have already witnessed drastic changes in exchange rates since 1985. Further reliance on exchange-rate adjustments will be counterproductive in view of their inflationary impact on depreciating countries and deflationary impact on appreciating countries, as well as the perpetuation of j-curve effects. All these factors are likely to delay and discourage the necessary cyclical and structural adjustments by the countries concerned. Furthermore, the flow of capital to finance deficit countries during the adjustment process may be upset if exchange rates continue to be unstable. Judging from their recent joint statements, major countries seem to agree on the desirability of greater exchange-rate stability. This stems from their growing recognition that further drastic exchange-rate changes would be counterproductive, but not necessarily from agreement on optimum exchange rates.

In this situation, exchange-rate stability can be attained only if macroeco-



conomic policies are better coordinated. Though international imbalances are about to peak, they are still enormous, and there must be a clear tradeoff between exchange-rate adjustments and macroeconomic policy coordination. If further exchange-rate changes are to be reduced, macroeconomic policy coordination must be increased, and this is not easy. Very often, the need for greater policy coordination has been accepted only after the emergence of exchange-market pressures that were provoked by officials urging further exchange-rate changes out of frustration over the slow progress of adjustment. It is definitely preferable for major countries to increase coordination through mutual surveillance and quiet but effective persuasion that will not arouse market pressures.

Macroeconomic policies can be coordinated by allocating compatible policies to each country. The United States must continue trying to reduce its fiscal deficit gradually but steadily. The deficient saving and excessive spending that underlie the continued U.S. current-account deficit can best be addressed by reducing net fiscal spending, since an increase in the rate of U.S. saving, though necessary, takes a long time. There are those who argue that a smaller U.S. fiscal deficit would lower U.S. interest rates and weaken the dollar. But if lower interest rates are caused by reduced demand for credit on the part of the government, their bearish impact on the dollar can be offset by increased confidence in the manageability of the U.S. economy.

The impact of a substantial reduction in the U.S. fiscal deficit will be deflationary. Other major countries, particularly those like Japan with room for maneuver in view of their internal and external performance, must strengthen their domestic economic activity. In this way, they will not only counteract the adverse effects of the appreciation of their own currencies but also compensate for the deflationary impact of U.S. actions, although higher domestic growth in Japan and Germany may not have a large and immediate impact on global trade imbalances.

In the meantime, medium-term structural adjustments must be carried out: improvement of international competitiveness in the case of the United States, correction of economic and social rigidity in the case of Europe, and transformation of the economic structure from an export-led economy to a more balanced one in the case of Japan.

Among macroeconomic policies, monetary policy has several important roles to play. To some extent, it can adjust interest-rate differentials between countries to help stabilize exchange rates. It can also function as a means of demand management by affecting financial costs and liquidity, but it is more effective in restraining excess demand than in stimulating deficient demand. In any event, the important thing is to moderate the growth of monetary aggregates in order to prevent the rise of inflationary pressures.

National efforts to control the money supply should be coordinated, but it is not realistic to attempt to introduce an international mechanism with specific numerical targets. Differences still exist among countries in their emphasis on various aggregates. Furthermore, in part because of the liberalization of financial transactions, changes are taking place in the relationships between transaction balances and investment balances, as well as between monetary aggregates and the real economy.

Recently, the international coordination of macroeconomic policies has turned out to mean the coordination of monetary policies almost exclusively, because of the institutional and political rigidity of fiscal policy. The failure of the United States to contract its fiscal deficit promptly has placed heavy burdens on its monetary policy. The U.S. experience must have increased the cautiousness of other fiscal authorities toward fiscal flexibility. Of course, in the medium term reduction of the fiscal deficit is desirable in any country, particularly to lower real interest rates and to reduce the danger of crowding out private demand for credit. But some temporary flexibility in fiscal policy can be justified for large surplus countries, where reliance solely on monetary policy often has limited effectiveness. Implementing timely and prompt fiscal measures, instead of delayed and inevitably too expansionary actions, can reduce the danger of weakening fiscal discipline.

The implementation of effective macroeconomic policies is indispensable for reducing international imbalances and stabilizing exchange rates, but the coordination of exchange-market policies is also important. The monetary authorities must be concerned with the external value of their currencies. Therefore, if they publicly declare their indifference to exchange rates and their intention not to intervene, such actions may disturb exchange markets and encourage unnecessary speculation. Though exchange-market intervention is by no means a panacea, it is useful not only to moderate wide fluctuations in exchange rates but to prevent excessive one-way movements. Intervention can be effective when accompanied by appropriate macroeconomic policies and conducted in coordination with other countries.

The major countries should reach some understanding about reserve policy in preparation for exchange-market intervention and to prevent benign or malign neglect of policy coordination. In the absence of gold convertibility, the best way to exercise discipline through reserve policy is for the major countries to share exchange risks by holding each other's currencies as reserve balances and by timely borrowing of other currencies either unilaterally or within the framework of a swap network. By taking exchange risks as holders or borrowers of other currencies, the countries concerned will have an incentive to maintain the stability of exchange rates.

In addition to macroeconomic, exchange, and reserve policies, trade and capital policies should also be coordinated. With regard to trade, major

countries are urged to keep open and keep opening their markets in order to maintain free trade and secure the benefits of adjustment. Protectionist pressures must not be allowed to replace exchange-market pressures. With regard to capital, since the adjustment of the existing imbalances is a time-consuming process, a stable flow of capital must be maintained from large surplus countries to the rest of the world, particularly to developing countries, in order indirectly to help reduce global trade imbalances. The reimposition of direct capital controls is of course no longer possible or desirable; what the authorities should do in this connection is to coordinate their strategy on international debt problems and their financial-market supervision.

Last but not least, it is extremely important to have an effective mechanism for surveillance of international policy coordination. In the past, surveillance has been largely confined to the limited groups of major countries that are participated in by the representatives of the IMF, the Organization for European Cooperation and Development, the European Communities, and the BIS. But, as recent events have demonstrated, exchange-rate adjustments among major countries alone cannot solve global imbalances. The cooperation of other countries, particularly newly industrializing countries, is also very important. Although there are some who advocate the formation of a group even smaller than the Group of Five or Seven, it is more practical to pursue surveillance in all sorts of existing fora, small and large, and to try to increase opportunities for dialogue with important countries outside the Group of Ten.

Effective international cooperation requires a strong political will on the part of the leaders of the countries concerned, particularly to overcome domestic opposition and irritations throughout the time-consuming adjustment process. At the bureaucratic or professional level, the participation of government officials in international discussions is essential to achieve timely and effective implementation of whatever is agreed upon. It is clear, however, that central bankers, though their legal authority is often limited, have an advantage in pursuing a constructive international dialogue under any circumstances because of their professional expertise, their well-established formal and informal channels of communication, and their close association with the financial and academic communities. Such central-banked international dialogues are exactly what Henry Wallich has pursued in his long and dedicated service as a truly international central banker.

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## EXTERNAL DEBT AND OTHER PROBLEMS OF LATIN AMERICA

*Jesús Silva-Herzog F.*

I was a student in Professor Henry Wallich's money and banking course at Yale University a little more than twenty-five years ago. I remember him as always punctual, knowledgeable, and precise in his comments. He had the aura of someone who knew what he was talking about. In the ensuing years, my responsibilities at the Central Bank of Mexico and later at the Treasury permitted me to maintain a friendly and cordial relationship with him, and I saw that even when he was not teaching, the order and logic of his arguments and the clarity and profundity of his ideas ensured that the professor in him did not disappear. Instead, he extended the scope of his classroom to the world outside the academy.

Ever since he was a young man, Henry Wallich has had many direct contacts with Latin America. His experiences in Argentina in the 1930s developed into a lasting interest. He has always insisted on the need to avoid treating Latin America uniformly and to recognize that, in spite of its common historical roots, the region is a mosaic of diversity.

In the numerous works he wrote as a professor of economics and as a member of the Board of Governors of the Federal Reserve System, his continuing interest in the problems of world development frequently drew his attention to the problems of the South. He has contributed directly to the long-term education of numerous distinguished Latin American economists and is a well-known and respected author in the region. A number of regional financial institutions have benefited from his ideas and suggestions, and he had an important role in the establishment of the central bank of Cuba soon after the Second World War. What I intend to do in the following pages is to review some problems of particular interest to Latin America that have also been of interest to him.

From the very beginning, Henry Wallich has been interested in the enormous challenges to Latin America presented by export fluctuations. He recognized how hard it was for domestic economic policies to compensate even modestly for the effects of imported booms and depressions. In a 1961 article, he concluded that, because of the state of international capital markets, "It remains difficult to remedy by international loans the harm that temporary fluctuations in the terms of trade can do to an economy" (1961, p. 344).

In that article, he analyzed the concept of "countercyclical lending" linked to fluctuations in export revenues. The concept—with some exten-

sions in its coverage—could be useful in the future treatment of the debt problem. It is impossible to ignore the impact of such fluctuations on the real capacity of a country to service its debt. For example, because of the abrupt fall in oil prices, Mexico lost around \$8 billion in 1986—a third of its total export earnings. This fact was not sufficiently recognized by its creditors, who refused to modify the basic payments conditions because of the risk of creating what they called an “inconvenient precedent.”

The so-called debt crisis began in August 1982. Its origins can be traced not only to the debtor countries' decisions to obtain additional foreign resources to foster economic growth but also to the desire of commercial banks in the developed countries to lend their ample liquid resources and make good profits. The governments of creditor countries and international financial institutions applauded the successful recycling process. Thus, there is no doubt that the responsibility for the emergence of the crisis must be shared.

In spite of some voices of caution in the years preceding the crisis, the problem appeared almost as a surprise. It is useful to underline this fact, since frequently we exaggerate our ability to predict the future. In the mid-1970s, concern began to be expressed about the accelerated growth of the external indebtedness of developing countries, especially of oil importers. Consequently, U.S. Congress and government circles began to insist on the need to improve the information systems about debtor countries and the mechanisms for supervision and vigilance in the creditor countries.

This concern was not sufficient to call a halt to lending, however. Henry Wallich himself said in August 1977, “the surge in external country indebtedness that has accompanied a large increase in world payments imbalances since 1973, while attracting substantial attention, does not seem to pose any imminent threat to the stability of the world economic and financial system” (1977b). In Congressional testimony in April 1980, he concluded that “there appears to be considerable room for further U.S. and foreign bank participation in lending to developing countries” (1980).

In spite of the greater risks that were considered to be associated with loans to developing countries—sovereign risks—statistics showed that these countries' compliance with such financial obligations was even better than compliance in domestic operations. Besides, as Henry Wallich observed in 1977, “Another important benefit from international lending has been the contribution to the earnings of U.S. banks. In recent years, reported international earnings have accounted for as much as 60 to 70 percent of total earnings for a few of the largest banks.” Furthermore, he noted, “the great bulk of the international lending by American banks was financed from foreign-source funds” and did not affect domestic credit needs (Wallich, 1977a).

Henry Wallich called for prudence and caution, however. In 1981, he wrote: "Fundamentally, a good number of countries are borrowing amounts that cannot be continued far into the future without leading to debt burdens that appear unsustainable from historical experience. In other words, some of the proportions [debt ratios] must change, presumably through more effective balance-of-payments adjustments on the part of the borrowers" (1981). A few months later, he insisted: "Borrowing countries may have to slow down the rate of growth of their indebtedness. Lending banks may have to slow down the expansion of their LDC portfolios relative to their total assets." But he recommended caution and imagination so as to "avoid creating the impression that LDC borrowing is reaching some kind of upper ceiling. That need not be the case" (1982).

A combination of negative internal and external factors, short and long term, precipitated the crisis. On the internal side, the debtor countries did not always devote the resources obtained from abroad to the most economically and socially productive uses. Project financing gave way to overall balance-of-payments financing. In general, external borrowing permitted these countries to avoid taking such necessary steps as reducing the characteristic currency overvaluation of those years, shrinking the government deficit, lowering subsidies, and stimulating the foreign sector. But there were also negative factors on the external side. International interest rates moved from a negative level in real terms—it was not a bad business to borrow under those conditions—to unprecedentedly high positive levels. Industrial countries fell into a slow-growth phase. And the prices of the basic Latin American export products declined. The combined effect of all these factors and the absence of adequate compensatory measures produced a very heavy capital outflow from Latin America of a clearly speculative character.

In spite of these negative elements, which undoubtedly reduced the net contribution of the external resources, Latin American economic growth was dynamic in the years preceding the crisis. However, a detailed analysis of the use of external indebtedness needs to be made, notwithstanding its analytical difficulties.

Henry Wallich participated actively from the first moments of the debt crisis. In mid-August 1982, a few days before the Mexican moratorium, he traveled to Basel with Mexican government officials to attend an extraordinary meeting at the Bank for International Settlements and assist in the preparation of a \$1.8 billion bridge loan by the central banks of the industrial countries. This operation was a very important element in the Mexican financial package. In the ensuing months, his presence alongside Paul Volcker was a constant feature of attempts to contain the debt crisis.

The strategy that was followed after those initial moments was to give borrowers time and additional resources to help them handle their prob-

lems. The restructuring of payments into longer maturities, the addition of new money, and the imposition of severe domestic economic adjustments, together with the recovery of economic activity in the rich countries, were expected to make it possible for the debtor countries to resume economic growth, comply with their financial obligations, and gradually return to the international capital markets. The debt crisis was viewed as a short-term liquidity problem and not as a structural problem. The treatment of the various debtor countries undergoing difficulties (in the first weeks, the crisis was thought of as an isolated Mexican problem) was relatively homogeneous, in spite of repeated insistence on the case-by-case approach.

The international cooperation effort was notable and unprecedented. Action was fast and profound. There is no question that when the political will exists, things can be done. The international financial crisis predicted by the pessimists was avoided.

The 1982 debt crisis did not produce the collapse of the international financial system. However, after five years we cannot say that the problem has been solved, as the optimists had predicted. On the contrary, the external debt has become a serious political problem for the majority of the Latin American countries and a heavy burden on domestic efforts to resume growth. Debt service—essentially interest payments—consumes, on average, more than a third of Latin American foreign-exchange revenues, significantly reducing the resources available to support investment and development.

Up to now, the adjustment burden has fallen excessively on the Latin American debtor countries. Domestic economic adjustment, which would have been necessary even in the absence of the debt problems, has contributed to an abrupt reduction in the rate of economic growth. Per capita income is today 10 percent below its 1980 level. If austerity continues, it may menace the democratic regimes that have now been extended through almost the entire region. There is a widespread conviction today that the debt problem cannot be solved in stagnation, that there must be economic growth. Until recently, this concept was not generally accepted, but Henry Wallich saw it clearly from the beginning.

Henry Wallich has devoted much of his life to monetary and financial problems. He is a believer in the power of monetary policy, even though he recognizes its limitations, especially when it is confronting a permanent, large budget deficit. He believes in market forces, in competition, and in less regulation by the state, but he recognizes the need, under certain circumstances, to maintain controls in order to avoid monopolistic situations. In certain instances, he favors selective credit controls to foster economic development, without tampering with the essential character of banks as the impartial arbiters of credit.

Again and again, he has insisted on the need for the United States to reduce its budget deficit. There lies the real explanation for inflation and the trade deficit. Exchange-rate policy or higher protectionist barriers will be insufficient without a significant correction in the fiscal accounts. In 1984, he stated: "The appropriate policy prescription for dealing with the trade deficit and the excessively strong dollar, in my view, is to reduce the structural deficit in our federal budget." A year later, he again insisted that a substantial reduction in the budget deficit would permit "declines in real interest rates, a depreciation of the dollar in exchange markets, and (with some lags) a reduction in external deficits" (1985b). The moral authority of the United States is eroded when it insists religiously that debtor countries correct their fiscal imbalances while its own imbalance stands uncorrected.

Nevertheless, the prescription for debtor countries is accurate and necessary. In their domestic economic-adjustment programs, Latin American countries have generally relied more on financial instruments than on fiscal measures. Some of their recently launched heterodox plans to fight inflation have failed because they did not attack the fundamental problem—the disequilibrium in public finances. Active, realistic, and sometimes aggressive management of exchange and interest rates has been a fundamental part of the adjustment programs. Unfortunately, the fiscal measures taken have primarily consisted of reductions in the levels of public investment, with obvious deleterious effects for future economic growth. Current expenditures are always more resistant to cuts and to austerity.

Meanwhile, many debtor countries are facing negative net flows of financial resources. Additional external borrowings are insufficient to cover debt-service payments, and a positive trade balance must be generated to cover the difference. While it is true, as Wallich (1985a) has argued, that older capital-importing countries went through this stage, which is a natural one in the evolution of external indebtedness, the circumstances of Latin American debtor countries today are very different. The crisis of the last five years, accompanied by a reduced standard of living for the populations in these countries, has produced an atmosphere of "debt fatigue," as well as political demands to restore economic growth. Yet the domestic and external environment is unfavorable for economic growth. Real interest rates are still quite high and rising, and the medium-term prospects for the prices of the main Latin American exports do not look very promising. Furthermore, the dynamism of the industrial economies has diminished, with no clear signs of recovery, and protectionist pressures in the developed world have become much stronger.

It will take time to solve the external debt problem, and there are no magic formulas. The fundamental premise of the solution should always be an adequate rate of economic growth. In order to achieve it, the excessive



debt-service burden must be reduced to match the real capacity to pay, defined as the level that will permit an adequate rate of economic growth. The debt problem must be linked more tightly to trade, since only if exports are expanded will it be possible to facilitate debt payments and provide the necessary incentive for growth in the debtor countries.

There is no denying that the limitation or suspension of debt payments would interrupt credit flows and isolate the debtor countries from the international financial system. Furthermore, it would not be a durable formula and would go against the basic interests of the debtor countries. Nevertheless, in the medium term, an improvement in the economic prospects of the indebted countries could be the best incentive to banks to go back voluntarily to extending credit, which is at present highly curtailed.

Latin American countries have made a tremendous effort during the first five years of the debt crisis. Profound changes in the basic orientation of economic policies have taken place that were difficult even to imagine before. Among them are more realistic exchange- and interest-rate policies, movement toward opening up economies to the outside world, reductions in subsidies, correction of fiscal accounts, and reduction in the size of the public sector. In the coming years it will be necessary to continue this process of internal economic adjustment.

Latin America will have to keep on worrying about inflation, which has long been one of Henry Wallich's fundamental worries. He emphasizes the enormous distortions produced by the inflationary process. While recognizing that inflation is not exclusively a monetary phenomenon but can have many different causes, he has frequently stated with characteristic firmness that inflation cannot proceed very far if there is monetary restraint, that less money is less inflationary than more money, and that the cost of letting inflation run is higher than even a costly form of restraining it.

In an inflationary environment, efforts to correct the fiscal accounts are distorted by the effect of inflation on the servicing—interest payments—of the domestic debt. For a number of years, Mexico insisted that efforts to correct the fiscal accounts are distorted by the effect of inflation on the interest payments when servicing the domestic debt. Mexico suggested the introduction of other concepts of government deficits that take the inflation element into account and permit a better evaluation of domestic efforts to correct fiscal imbalances, such as the primary deficit, excluding all interest payments, and the operational deficit, excluding the inflation premium in domestic (and sometimes foreign) interest payments. After long conversations and negotiations with international financial institutions and other creditors, the second concept was finally accepted for the first time in the financial package for Mexico in the summer of 1986. Ten years before, Henry Wallich had pointed out that "inflation causes the government to

overstate the size of its deficit. Of the \$23 billion paid as interest on the publicly held government debt instruments in fiscal year 1975, some fraction possibly exceeding one-half must properly be regarded as an inflation premium. . . . The inflation premium . . . is, in an economic sense, not interest but repayment of principal" (1976).

There is no question about the usefulness of this concept, for analytical and political reasons. However, it can distract attention from the fundamentals. From the financial point of view, the nominal deficit really matters and should not be forgotten, as has tended to be the case recently in some countries.

In the future, Latin America will depend more on its own resources and on its domestic efforts. There will be less support from foreign lending than in the years preceding the crisis. Nevertheless, import and investment needs and debt-service payments will necessitate an adequate flow of new money from abroad. More debt to solve the debt problem does not seem to be a viable solution by itself. But it will be a necessary part of the solution in the coming years, provided that the debt in nominal terms grows slowly enough to permit a reduction in real terms and an improvement in the ratios used to measure creditworthiness (essentially, debt to GNP and service payments to exports). As Professor Wallich (1985a) has said, "With an adequate growth rate in the rest of the world, developing countries can reduce their debt ratios (not the absolute value of the debt) to levels at which adequate borrowing opportunities will open up again spontaneously. Trade surpluses, however, are likely to prevail for most countries much of the time."

This approach is all very logical, but what happens if the conditions on which the present external-debt strategy is based do not materialize? What if growth in the industrial countries is not at the minimum level of around 3 percent per year considered necessary to foster economic activity in the debtor countries? What if interest rates remain high or even go up in the near future? What if protectionist pressures in the creditor countries become stronger or the pessimistic forecasts about the prices of basic Latin American exports come true?

In such an environment, which is not too improbable, it would be necessary to adopt new approaches to the debt problem. These new approaches would necessarily include lower debt-service payments, which could be achieved by reducing either interest payments or principal. Some of the questions that will have to be considered in the coming years are the need for a longer-term perspective, the case-by-case approach by creditors, the value of outstanding loans in the secondary market, the degree of conditionality, and the conversion of bank debt into long-term instruments.

Henry Wallich has been an active and important participant in the attempts to deal with international economic and financial problems. As a fre-

quent member of his country's delegation, he has played an important role in recent efforts at multilateral cooperation, in the functioning of such international institutions as the International Monetary Fund and the Bank for International Settlements, and in the discussions aimed at better coordination of policies among the industrial countries (which have yet to show much progress). His frequent references to the developing world reveal a concern that is not very common in government and academic circles in the rich countries.

Henry Wallich used to argue years ago that the United States cannot, and does not, ignore the international consequences of its actions. Unfortunately, this truth is not always as clear and evident to others.

In different forums, he has presented his country's point of view, which, though not always accepted, was always serious and respected. He has always remained optimistic, even when confronted with the serious problems connected with oil, the external debt, and the overvaluation of the dollar. In 1974 he said, "We must not deceive ourselves about the fact that we face severe difficulties. We shall be sailing in uncharted waters part of the time. But our institutions are strong, the right policies are at hand, and given the will, I feel confident that the way will be found." That expression of optimism remains valid today, more than a dozen years later.

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## ON THE THEORETICAL FOUNDATIONS OF FINANCIAL INTERMEDIATION AND SECONDARY FINANCIAL MARKETS

*Ross M. Starr*

"There have been three great inventions since the beginning of time: fire, the wheel, and central banking."

*Attributed to Will Rogers*

Financial intermediary institutions and secondary markets in financial instruments perform essential functions in the allocation of capital in an economy. This is unsurprising. Why they do so, however, is not well modeled in economic theory. That they serve an allocative function is the result of the interaction of two distinct characteristics of finance and production: (1) There are scale economies and fixed costs in financial transactions. (2) The time period during which marginal wealth holders will hold a financial instrument is less than the gestation period for maximum yield of real investment. Secondary financial markets and financial intermediaries allow wealth holders to liquidate their holdings as needed so that a succession of short-lived (or long-lived but liquid) financial investments can finance a long-lived illiquid physical investment.

This essay suggests theoretical microeconomic foundations to explain the function of financial intermediaries and secondary financial markets in the allocation of capital. Economists are notorious for the attitude, "That's all very well in practice, but will it work in theory?" It is in this spirit that the inquiry is undertaken. The function of capital markets is to allocate resources (savings and wealth accumulations) over time from low-yield uses to higher-yield uses. The only peculiarity in this description that distinguishes capital markets from other commodity or factor markets is that part of the allocation is intertemporal. Both capital and food, for example, are necessities. Why is the structure of capital markets more complex and important than that of food markets? This essay develops a family of sufficient conditions so that intermediaries and low-cost secondary markets are required to achieve an efficient allocation of capital in a market general equilibrium. This exercise is intended to explain and formalize the allocative role of these institutions. Further, it is intended to provide a rationale for financial-policy

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It is a pleasure to express appreciation for Henry Wallich's friendship over the years. In writing this essay I have benefited from the comments of Benjamin Bental and James Rauch. Errors are my own.

prescriptions on restructuring capital markets in developing countries (see Shaw, 1973; McKinnon, 1973; and McKinnon, ed., 1976). The role of finance in economic development has been a continuing interest of Henry Wallich's research and policy advice (Wallich, 1985).

The criterion used to evaluate alternative financial structures is economic (Pareto) efficiency of market equilibrium. Conditions are posited that represent actual economies or conventional economic models, where the equilibrium allocation of resources under one set of financial institutions can be shown to be inefficient, and the resource allocation under an alternative institutional arrangement is economically efficient. This situation is a rationale and explanation for the persistence and success of the efficiency-promoting alternative institutions.

Efficiency of allocation is a criterion for the uses of real economic resources—labor, land, and capital. The test is whether the allocation across agents and over time exhausts opportunities for superior resource allocation (in terms of a hypothetical *ex ante* reallocation or compensation principle). Actual markets for capital and intertemporal resource allocation are financial markets, however, not goods markets, as they would be in an Arrow-Debreu economic model with a full set of futures markets (Debreu, 1959). Hence the question to be treated is the efficiency properties of the allocation of real resources that results from the equilibrium of financial markets in alternative settings. This requires consideration of real tastes and technologies, financial-market equilibria, and their interaction.

The economic conclusion of the inquiry is unsurprising and can be briefly summarized. Liquid secondary financial markets and financial institutions with liquid liabilities perform similar functions.<sup>1</sup> They allow long-lived illiquid and indivisible physical assets to be financed through the portfolios of wealth owners holding liquid divisible financial assets. Financing long-lived assets is economically useful on the real side, since physical investment is characterized by gestation; high-yield real investments tend to be long lived. There is no inconsistency in the apparently conflicting liquidity characteristics of the real allocation. Though demands for liquidation by individual wealth holders may be large as a proportion of individual wealth and be timed unpredictably or irregularly, demands for net liquidation in the economy as a whole are small and relatively regular as a proportion of aggregate wealth. Financial institutions and liquid secondary-asset markets reconcile these claims on wealth and promote an allocation superior to the alternative available in their absence—a reallocation of the composition of wealth holding in favor of liquid real assets (inventories and short-maturity real investment) and away from higher-yielding long-maturity real assets.

<sup>1</sup> Explaining the role of secondary markets seems particularly tricky, since these markets raise no new capital but merely reallocate outstanding assets.

This is all old stuff, sometimes appearing under the heading "monetization of capital" (Tobin, 1964). Every money-and-banking text notes the disparity in maturities between the asset and liability sides of a bank balance sheet. Facilitating the disparity is the essential function of banking and secondary financial markets. These markets and financial firms fill more than a convenience or retailing function. Rather, by changing the combinations of liquidity, yield, and risk available to investors, compared with an economy where such markets and institutions are absent, they change the economy's allocation of capital. A given volume of capital will be invested differently and not as well in the absence of intermediaries and secondary markets as in their presence.

A useful exercise to begin the inquiry is to find conditions under which capital markets would *not* require distinctive institutions or specialized secondary markets. Consider the following family of proposed sufficient conditions:

A.1. There is no default risk on debts.

A.2. There is no transaction cost on purchase or sale of debt instruments.

A.3. There is no uncertainty.

Conditions A.1, A.2, and A.3 are relatively simple; all appear implicitly or explicitly in familiar economic models. But they are sufficient to do away with financial intermediaries and secondary financial markets. Under the conditions (A), debt instruments are a standardized commodity item. They are sold in small, convenient units and repaid on maturity. Savers buy and hold them for the period for which they wish to save. There is no need for premature liquidation and hence no need for secondary financial markets; that would occur only under uncertainty or with a sufficiently complex transaction-cost structure. There is no need to assess risk or diversify portfolios; that would arise only if default were possible. There is no higher return to a large or institutional investor; that would require transaction costs. Under the conditions (A), debt instruments become a commodity item. They can be sold and redeemed in grocery stores alongside returnable soda bottles and lottery tickets.

The world of conditions (A) is not, however, the world in which we live. A family (B) of financial-market characteristics is suggested below, designed to explain the usefulness of financial intermediaries and secondary financial markets. The (B) family is followed by (C), production technology and wealth-holder characteristics that provide a rationale for the view that effective intermediation and secondary markets are essential in equilibrium for an economically efficient allocation of capital among alternative investment prospects.

Consider the following conditions on the financial instruments and markets:

- B.1. There is default risk.
- B.2. There are transaction costs on debt instruments at purchase, including costs of evaluation of default risk. These costs may be in the nature of
  - (a) fixed costs, incurred on acquisition of the debt instrument and independent of the length of time it is held, or
  - (b) set-up costs, independent of the size of purchase.
- B.3. There is uncertainty about
  - (a) the default risk of specific instruments, and
  - (b) the timing of desired wealth-holder liquidation.

Incurring costly research may allow investors to make more informed choices in the light of these uncertainties.

For a given aggregate investment plan, the conditions (B) make it advantageous to finance the plan through financial intermediaries and financial instruments with active low-cost secondary markets. Condition (B.3.b) implies the desirability of secondary markets to allow for liquidation of asset holdings. Conditions (B.1) and (B.3.a) imply that portfolio diversification is desirable. But (B.2.a and b) imply portfolio concentration; a relatively large scale in asset holdings is preferable, resulting in lower costs of transaction and evaluation. These contradictory tendencies lead to channeling investment through large-scale intermediaries if the intermediary liabilities require lower transaction costs on liquidation than do the instruments on the asset side of the intermediary balance sheet.

What are the implications of these considerations for the economically efficient allocation of capital? Very few, without additional assumptions on the nature of capital. So far, we have established only the institutional arrangements for financing a given capital stock. Consider the following assumptions on saving and capital:

- C.1. A low-transaction-cost, low-yield, short-maturity physical asset is available to wealth holders. This may be thought of as storage of consumption goods, or claims on firms performing storage.
- C.2. Yield on physical investment may vary positively with time to liquidation. That is, physical investment exhibits gestation.
- C.3. There are scale economies in physical investment. These are achieved at a scale that is large relative to typical investments of individual wealth holders.
- C.4. The gestation period for the highest yield of marginal physical capital is longer than the maturity desired by wealth holders of marginal investment.

In the absence of financial intermediaries and low-cost secondary markets for financial assets, assumptions (C.1) and (C.4) imply that wealth will be held disproportionately in the low-yield, low-cost instrument. Assumption



(C.2) tells us that this instrument will not typically be the highest-yielding investment.<sup>2</sup> An equilibrium allocation in this model will exhibit lower average yields than necessary. It will be economically inefficient as a result of capital-market imperfection. This inefficiency creates a function for secondary markets and for financial intermediaries. These institutions allow a succession of short-lived financial investments to finance long-lived physical capital. Assumption (C.3) provides another rationale, independent of gestation, for using large intermediaries or low-unit-cost markets for financial instruments: the scale of efficient physical investment is large relative to that of desired holdings of a single instrument in a typical portfolio. This reflects the interaction of scale economies in production with desired portfolio diversification by wealth holders. Large physical investments can be small portions of individual portfolios when the investment is financed by securities sold on low-cost markets to many buyers or through large intermediaries. Assumption (C.4) provides the rationale for a liquid secondary market in the divisible liabilities of illiquid, indivisible production units.

Real allocative functions are the analytic foundations of financial markets and financial intermediaries. Liquid financial markets and institutions are needed to overcome the impediments to investment embodied in (B) and (C). These characteristics present sufficient conditions so that these institutions truly promote efficient allocation. By contrast, under (A) the financial intermediaries and secondary markets in financial instruments have no significant function to perform in promoting efficient resource allocation.

A simple example will help to make these ideas concrete. Consider a many-agent economy with two production activities, four agent types, and a seasonal structure:

Activity 1—Storage: No seasonal dependence or gestation, costless. Net rate of return 0, gross rate 1.

Activity 2—Farming: Strong seasonal dependence, prolonged gestation. Inputs in March yield net rate of return much larger than 0 and gross rate of return much larger than 1 when liquidated in November; inputs yield net rate of return less than 0, gross rate of return less than 1 when liquidated prior to November.

Agents of type 1: Hold positive wealth in March through May.

Agents of type 2: Hold positive wealth in June through August.

Agents of type 3: Hold positive wealth in September through November.

Agents of type 4: Farmers, who seek net financial liability (real asset) March through November.

<sup>2</sup> For recognition of the interaction of gestation and intermediation, see Diamond and Dybvig (1983).

This description of the real economy reflects assumptions (C.1), (C.2), and (C.4). In particular, the example emphasizes the link between investment yield and maturity, on the one hand, and the difference between the gestation period of marginal high-yield investment and the maturity preference of the marginal investor, on the other. We can, in addition, fulfill (C.3) by positing a minimum efficient scale in farming that is large relative to the individual savings of agents of types 1, 2, and 3.

In a financial market without transaction costs or default risks (the world of assumptions A.1 to A.3), an equilibrium allocation will have the savings of agents of types 1 to 3 finance the farming of agents of type 4. There is no particular incentive for investors to diversify their portfolios across the liabilities of type 4 agents, since there is no default risk. To finance his planting, the farmer will roll over a succession of three-month notes that start in March and will be fully repaid in November. The allocation of real resources appears to be Pareto-efficient: the seasonal requirements of high-yield farming investment and investor preferences are simultaneously accommodated.

Let the real resources and tastes posited above remain unchanged. Consider the difficulty introduced by the risks and transaction costs posited in conditions (B.1) to (B.3) in the absence of liquid financial intermediaries and low-cost liquid financial markets. The investors, agents of types 1, 2, and 3, will seek to reduce the transaction costs and default risks incurred. They will diversify across debtors and reallocate investment away from farming to storage, the low-transaction-cost, low-default-risk alternative. The result is a significant investment reallocation that reduces investment in farming, the high-yield activity, and significantly increases the required rate of return there. There is an output and efficiency loss in the equilibrium allocation.

Finally, consider the introduction of low-cost, liquid financial-intermediary institutions and secondary financial markets. When successful, these innovations have the effect of overcoming the difficulties of transaction costs and differing timing preferences. The result is a reversion to the efficient allocation consistent with conditions (A.1) to (A.3).

So far, the argument has been informal. We should ask what a satisfactory formal model and theory of financial institutions and costly financial markets would include. The preceding discussion suggests several elements:

1. Both the financial and real sides of the economy should be represented. Decisions are made in both areas, but economic efficiency is judged only with respect to the resulting real allocation.
2. Transaction costs and differences in transaction costs among alternative institutional arrangements are essential.
3. Differences in maturity preferences between savers and real investors are essential. The conflict here is between the savers' desire for liquidity

(relatively short maturity) because of the possibly uncertain timing of desired expenditure and the gestation required of real investment.

4. To represent the differences in (3), real time enters the model to allow refinancing of real investment through the use of secondary markets, roll-over of short-term debt, or intermediaries.

The approach I would expect to combine these concerns successfully is the model of a sequence economy with transaction costs (see Hahn, 1971; Heller and Starr, 1976; Radner, 1972; Starr, forthcoming; and Starrett, 1973). This family of models has already been strikingly successful in recognizing financial-market-equilibrium characteristics sufficient for Pareto efficiency of the equilibrium allocation in a pure exchange economy with certainty (Starrett, 1973). An appropriate next step is to inquire into the more complex functions of financial markets and intermediaries in a production economy with uncertainty.

Providing analytic foundations for the role of financial intermediaries and of secondary markets in financial assets is unfinished business for economic theory. The essential element is to recognize that promoting the convenience of wealth holders, or reducing the transaction costs faced by them, is a major economic function. By reducing transaction costs to bring together private and social rates of return, financial markets and intermediaries reduce the required differential rate of return between short-lived divisible investment and long-lived indivisible investment. Hence higher-yielding long-lived indivisible investment is facilitated, with a consequent efficiency gain. This is the essential function of financial intermediaries and secondary financial markets. The importance of these institutions in promoting allocative efficiency in developed and developing countries has been a continuing focus of Henry Wallich's teaching and work.

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## AGENDA FOR INTERNATIONAL COORDINATION OF MACROECONOMIC POLICIES

*James Tobin*

My friendship with Henry Wallich began almost fifty years ago when we were fellow graduate students at Harvard. It became much closer during the twenty-three years we were colleagues at Yale. We have often disagreed, but I have always enjoyed our arguments, learned from him, and respected him as an economist, teacher, and human being. Both in academia and in Washington, whether in learned journals or in popular media, he has always dedicated his mind and pen to our science's contributions to policy and to the general welfare. Henry has consistently asked the right questions and, undistracted by fashions and technicalities, has focused rare insight and wisdom on central issues, none more than monetary stability, national and international. Offering here some thoughts of mine on this subject, I am glad to see Henry's paper on international macroeconomic cooperation (Wallich, 1984).

\* \* \*

Coordinate policies! So economists urge governments. Financiers, journalists, pundits, politicians take up the cry. Central bankers and finance ministers agree, as do presidents and prime ministers. They meet, they talk, they announce progress. It turns out to amount to very little. The need for coordination seems obvious from the imbalances of trade and gyrations of exchange rates in the 1980s. When no other appealing solutions are evident, "coordination" seems the natural panacea. But what is its specific content?

### **Coordination under Bretton Woods**

Coordination is not a new subject. Long before Bretton Woods gave way to floating exchange rates, coordination was discussed and sought, but never successfully achieved. The major mechanism of coordination was thought to be international respect for certain "rules of the game." The rules concerned principally the obligations of surplus and deficit countries to take corrective measures. Some rules were actually prescribed in the Bretton Woods treaty, though with considerable ambiguity. Others were unwritten traditions that central bankers inherited from gold-standard days.

In those days, "surplus" and "deficit" usually referred to official reserve

settlements. Under the fixed-parity regime, adjustment obligations referred to monetary policies; to official borrowing and lending, whether bilateral or through the International Monetary Fund (IMF); and to parity adjustments. In the 1960s, especially in policy discussions among the Group of Ten and in the Organization for Economic Cooperation and Development (OECD), fiscal measures were also considered instruments of international adjustment.

Surplus countries inevitably felt less compulsion to adjust than their opposite numbers, whose deficits could exhaust their reserves and international credit lines. For deficit countries, the first and principal defense of their parity was to take contractionary macroeconomic measures, especially to tighten domestic credit. Financial help from other countries and from the IMF was generally conditional on austere counterinflationary programs. Deficit countries were frequently pushed to the next line of defense, devaluation.

The United States occupied a special central position in the Bretton Woods system. Deficits did not impose reserve discipline on the United States until the 1960s. Other countries held U.S. dollar obligations as reserves. Thus financed, U.S. deficits did not lower U.S. gold reserves or alarm U.S. policymakers until the rest of the world began to distrust the U.S. Treasury's ability and willingness to maintain dollar/gold convertibility. At the same time, the reserve-currency role of the dollar foreclosed U.S. initiatives to devalue against other currencies. Eventually, the Nixon administration forced other countries to appreciate their currencies by telling them that their alternative was to buy dollars that might never be convertible into gold.

Surplus countries faced little pressure to adjust under Bretton Woods. They could enjoy their abundant and growing reserve positions, the export prosperity resulting from undervalued exchange rates, and the luxury of negotiating conditional credits to deficit countries from positions of superior strength and virtue. Although the Bretton Woods agreement gave lip service to symmetrical moral responsibilities, the IMF possessed almost no power over surplus members. That the United States had rejected the Keynes Plan, which would have been a better deal for deficit countries, became ironical when the United States itself turned into a deficit country with an overvalued currency.

### **Coordination under Floating Rates**

Proponents of floating rates sometimes contended that free currency markets would achieve all the coordination needed, that consciously concerted policies and agreed "rules of the game" would be superfluous. Each country

could pursue autonomously its national macroeconomic objectives. Official intervention in currency markets would be unnecessary and, indeed, harmful. Exchange-rate movements, replacing reserve settlements, would balance international payments. This did not mean, of course, that countries would be freed from the discipline of international markets. Discipline would be administered via terms of trade and of credit.

Experience has not borne out these optimistic claims but has instead validated the skepticism of Henry Wallich, who at the time expressed a preference for fixed rates (Wallich, 1969). Countries have not been happy with volatile market-determined exchange rates or with the accompanying imbalances of trade, current transactions, and capital movements. Those discontents inspire the current insistent cries for policy coordination.

Coordination has occurred when major central banks and governments all agreed on national and international policy priorities, most notably during the second oil shock in 1979-80. They unanimously and synchronously undertook severely restrictive monetary policies designed to wring the inflation of the 1970s from the economies of Western Europe, North America, and Japan. But policies have not been coordinated since late 1982; diagnoses and priorities have diverged once again. The United States has criticized the caution of demand management in Europe and Japan. The whole world has condemned U.S. fiscal policy.

Nevertheless, even in the 1980s coordination of a kind has occurred on occasion, in the form of agreement on the desirable path or range of the dollar's value in terms of other major currencies. In September 1985, the Group of Five finance ministers meeting at the Plaza Hotel agreed that the dollar should fall from its heights and blessed the decline that was already under way. In 1987, major finance ministers and central bankers have agreed, beginning with the Louvre meeting in February, that the dollar has fallen far enough. They have made it clear by word and deed that they would back up this common view by official interventions in currency markets.

However, agreements on paths and ranges for exchange rates have not been accompanied by understandings on how the monetary and fiscal policies of the several countries would achieve them. Indeed, the economic summit in Venice in June 1987 failed even more obviously than its predecessors to reach any semblance of policy coordination. The cart has been put before the horse. Concerted *ad hoc* attempts to steer the exchange markets without agreement on the policies that affect and concern those markets are unlikely to succeed for long or to yield acceptable outcomes in more significant macroeconomic variables.

Some economists dissent from the general view that the unprecedented capital-account and current-account imbalances of the 1980s are pathologi-

cal. Instead, they see the Invisible Hand at work worldwide—for example, the savings of thrifty Japanese are channeled to profligate U.S. consumers and taxpayers. Americans' optimal intertemporal plans, they say, appear to call for spending sprees in this decade. If both sides are optimizing, their plans presumably contemplate bulges of American saving and Japanese consumption in some future decade or century. Unfortunately, in the absence of long futures contracts in commodities, securities, and currencies, those bulges cannot be discerned. Meanwhile, less comforting hypotheses cannot be dismissed: that we in the United States are mistakenly assuming debt burdens we are unprepared to bear, and that Japanese savers are shortsightedly foregoing consumption and investment opportunities at home or elsewhere in the world.

Exchange rates today depend on expectations of exchange rates tomorrow and tomorrow's tomorrow. Rational expectations of real exchange rates depend on estimates of the real international terms of trade consistent with future current accounts, which in turn depend on the saving propensities and investment opportunities of the several nations. There is no presumption that current accounts should be zero along an equilibrium path. Non-zero current accounts must be financed by equivalent capital movements, in part induced by an appropriate structure of interest rates. Expectations of real exchange rates have to be translated into nominal rates by estimates of future price paths in the various countries. Estimates of national inflation rates, as well as of interest rates, require forecasts of monetary and fiscal policies.

The relationships just sketched are not, of course, sequential or recursive. They make up a complex system of dynamic interdependence that econometricians have not been able to estimate. I doubt that traders in the markets can do so either. I doubt they even try. The same complexities baffle policymakers, whether coordinated or not. While these complexities make coordination difficult, they also offer constructive opportunities to policymakers to shape the expectations that guide the markets, even to make them more rational.

Floating rates have diminished the asymmetries of adjustment pressures on deficit and surplus countries. The logical counterpart of reserve accumulation under fixed rates is exchange appreciation under floating rates. But this is a handicap to export industries, by no means as welcome as building up reserves with an undervalued currency. In the past, moreover, countries often liked their currencies to be cheap, hoping to gain jobs at the expense of their foreign competitors—"beggar-thy-neighbor" macroeconomic policy. Now, however, there are symmetrical worries about depreciation and inflation because of the impact of exchange rates on the local-currency cost of imports and other goods whose prices are set in foreign



currency. Thy neighbor may be beggared on prices instead of jobs. The 1981-85 appreciation of the dollar improved U.S. inflation statistics while generating a large trade deficit.

The primacy of price or inflation stability among macroeconomic objectives, a legacy of the 1970s, appears to be an obstacle to corrective adjustments today. Countries are reluctant to accept the local price increases incident to depreciation of their currencies. Despite continuing U.S. trade deficits, the Federal Reserve in 1987 has sought to prevent further decline of the dollar, largely for fear of the consequences for price indexes. In addition to talk, the Fed's moves have included increases in interest rates and sales of foreign currencies. During the preceding dollar appreciation, Japan and Europe continued along disinflationary paths, offsetting demand stimuli from exchange rates and U.S. recovery by domestic restraint of demand. Thus they succeeded in maintaining extraordinary slack in their labor and product markets.

The time-honored story of adjustments to payments imbalances assigns a decisive role to changes in relative prices between national economies. Under a gold standard or other fixed-parity regime, these changes occur internally consequent to movements of reserves—whether via automatic market forces or via acquiescent or active policy. With parity change or floating rates, relative prices change as exchange rates are translated into local prices. If these price adjustments are not allowed to occur, corrections of trade imbalances are delayed or frustrated.

### **Capital Mobility and International Interest Rates**

The era of floating rates has coincidentally been the era of internationalization of money and capital markets. Advances in telecommunications and computers have made financial transactions throughout the world inexpensive and instantaneous. Deregulation has made most of them legal. New markets have opened, and the types of contracts traded have multiplied. Thousands of bright traders attend video screens and telephones watching for opportunities for speculation or arbitrage. The gross volume of transactions boggles the mind. With private funds as mobile as they have now become—and the end is not in sight—a return to fixed parities among currencies of major national or continental economies is probably not feasible: the political and institutional differences among those economies, the immobilities that still impede movements of goods and services, are too great.

In the absence of capital controls, money-market interest rates in different currencies, adjusted for exchange-rate expectations, cannot sharply diverge from equality. The same applies to longer-term nominal interest

rates, though with less force because of the shortness of traded contracts in exchange-rate futures. Sometimes, as in Wallich (1984), interest-rate parity is alleged to apply to *real* rates. This assumes that exchange rates move with differences in inflation rates, an assumption so deviant from experience that no economist or trader could rationally rely upon it.

Capital mobility makes market interest rates converge, but to what? In the 1950s and 1960s, the answer could have been: to dollar interest rates under the control of the Federal Reserve. Not in the 1980s. The markets and monetary policies of the United States still weigh heavily in determining world interest rates, but so do the markets and central banks of other major countries. Only by accident will uncoordinated monetary policies produce a desirable average of world interest rates or a constellation of rates consistent with a viable structure of international capital and current accounts.

The world average of short interest rates is an obvious candidate for coordinated decision—subject, of course, to at least annual periodic review. Not every central bank would be expected to aim at the same interest rate. Deviations from the agreed average would reflect divergent expectations of, and targets for, inflation. They would also be calculated to induce appropriate exchange-rate paths and capital movements, that is, those capital movements consistent with feasible and mutually desired current accounts. First approximations would assume that each country is growing normally within its target ranges for unemployment and inflation.

### **Coordination of Demand-Management Policies**

A quarter-century ago, the main substance of coordination appeared to be the use of monetary and fiscal policies to expand or contract aggregate demand in the several countries. Obviously, a surplus country with high unemployment and low inflation should pursue expansionary policies, while a deficit country with overfull employment and high or rising inflation should do the opposite. Appropriate policy was less clear for a surplus country in an inflationary boom or a deficit country in a noninflationary slump (like the United States in the early 1960s). Such imbalances were deemed “structural,” requiring nonmacro policies lubricated by finance from surplus to deficit countries.

I published a “rules of the game” article for that era and that international monetary regime (Tobin, 1966), a precursor of this note. Even in those times, when full employment was a respected concept and an acknowledged responsibility of national governments, I doubted that countries could agree on each other’s domestic unemployment, inflation, and growth targets. I suggested that each country, after discussions in the group, choose for itself

and announce, at least to the group, the unemployment and price numbers that would determine its macroeconomic policy responsibilities—expansionary, neutral, or contractionary. I repeat that suggestion now. Naturally, these designations would not be forever; they would be for the next three years, say, and would be reviewed annually at group meetings. While they were in force, all members informed of current developments would know what policy responses to expect, and each member would be accountable to the others if these did not occur or were inadequate.

For reasons given above, price targets should be for indexes of domestic value added, excluding impacts of import prices. A country should not contract demand just because depreciation of its currency has raised the local prices of oil products, nor should it be expected to expand demand if appreciation has lowered them. If and when those price changes feed into domestic factor costs, they will become relevant to macroeconomic policy. Of course, every country should try, via domestic labor-market policies and other *microeconomic* measures, to prevent such secondary effects. This rule of policy coordination would be an incentive to do so.

I will not conceal that I personally find outrageous the targets of demand management implicit in the persistent high unemployment rates and low rates of real growth accompanying low and declining inflation rates in Germany, Britain, and Japan. But Secretary Baker and Chairman Volcker could not persuade the leaders of their governments otherwise, and certainly I cannot. So let *them* bear the brunt of stating their targets explicitly to the world community and the obligation of sticking with them.

These demand-management obligations will contribute to corrections that involve reducing the trade and current-account surpluses of slack economies and the deficits of other economies, especially those with (self-defined) excess demand. Too much should not be expected. Marginal propensities to import are not big enough to remedy current trade imbalances without much larger relative changes in national aggregate demands than are desirable by anyone's criteria. Corrections of trade imbalances generally require real-exchange-rate movements as well.

How can these rules for demand management be reconciled with the coordination of interest rates and monetary policies proposed above? The mixes of fiscal and monetary policy in the various members of the group must come into play. A basic principle would be not to use monetary policy to beggar from neighbors either employment or price relief. Suppose, for example, that high unemployment hits an economy which, according to the first approximations of coordinated interest rates and capital movements, is assigned a relatively high interest rate. That country would be allowed to lower its interest rate below the assigned target by an amount commensurate to its shortfall in economic activity, but it would have to rely mainly on

fiscal policy for active demand stimulus. A slack economy that normally has saving to export could obtain stimulus both from a low-interest-rate monetary policy and from fiscal policy. A fully employed economy threatened with inflation and short of domestic saving should correct its position by fiscal restraint rather than by high interest rates.

### **Difficulties Acknowledged and Unpleasant Alternatives Noted**

Even if agreement in principle could be reached on meaningful coordination along these lines, I recognize that its implementation would be very difficult, both econometrically and politically. The attempt might be confined to the Group of Five; it certainly should involve no more than the Summit Seven. The OECD could be used as the technical secretariat, receiving information from the members of the group and preparing iterative medium- and short-term projections for discussion, negotiation, and decision.

The major political problem might be the inflexibility of fiscal policies dedicated to domestic interests and ideologies. Some national fiscal idiosyncracies would just have to be built into the estimates of national saving propensities assumed in projections and agreements. What is required is enough flexibility in short-run deviations from permanent fiscal policies so that monetary policies are not burdened with full responsibility for both domestic stabilization and international payments equilibrium.

I believe that coordination of macroeconomic policies would be somewhat easier if *international* measures were taken to diminish speculative and interest-sensitive short-term capital movements. To this end, I have proposed an internationally uniform tax on spot transactions across currencies (Tobin, 1978).

Coordination of macroeconomic policies is certainly not easy; maybe it is impossible. But in its absence, I suspect nationalistic solutions will be sought—trade barriers, capital controls, and dual-exchange-rate systems. Wars among nations with these weapons are likely to be mutually destructive. Eventually, they, too, would evoke agitation for international coordination.

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## THE PAPER-EXCHANGE STANDARD: 1971-19??

*Robert Triffin*

### **Two Interlinked Careers**

My delight in contributing to this volume honoring Henry Wallich is increased by the fact that his career and mine were closely interlinked for many years, fostering a deep and lasting friendship between us, in spite of our frequently opposite political leanings. Indeed, our political divergences stimulated endless discussions, at times enriching and modifying our initial viewpoints.

I first came to know him in 1942, while working at the Federal Reserve Board on Latin American monetary policies and institutions, for which he carried the main responsibility at the Federal Reserve Bank of New York. We collaborated particularly closely in the fundamental 1947 monetary and banking reform of the Dominican Republic, which replaced the dollar with a national currency (see Wallich and Triffin, 1953).

Very happy with my own career at the Board, I was surprised by Henry's decisions to take a leave from his banking career in order to earn a Ph. D. at Harvard, and in 1951 to switch to an academic career at Yale. These decisions, however, had a major influence on my own acceptance of a professorship at Yale combined with the chairmanship of a new program in international and foreign economic administration, designed to improve the economic training of people already employed in their own countries, particularly in central banks. Needless to say, Henry was a major contributor to this program.

I must mention also how encouraged I felt by his early and persistent approval of one of my brainchildren, the European Monetary System (EMS), which was scorned or ignored at the time by most American economists but praised by Henry as "at least a partial success story" and one of few he was able to cite in his paper on institutional cooperation (Wallich, 1983).

\* \* \*

What follows is a summary of my main conclusions about the breakdown of the international monetary system and the reforms urgently needed to ward off an even worse collapse in the forthcoming months.<sup>1</sup>

<sup>1</sup> For fuller details, and especially statistical documentation, see Triffin (forthcoming).

## Introduction

Fourteen years too soon, in *Europe and the Money Muddle* (Triffin, 1957), I predicted the unavoidable collapse of the "gold-exchange standard" enshrined in the Bretton Woods Agreement, but I never shared the enthusiasm of most of my academic colleagues for the "paper-exchange standard" or, overwhelmingly, the "paper-dollar standard" that succeeded it *de facto* in the 1960s and *de jure* on August 15, 1971. Even in my most pessimistic mood, however, I did not dream that the paper-exchange standard would accommodate the financing of the wildest world inflation and most aberrant capital flows in history.

In the next section, I point out a few of the odd deficiencies of the standard official statistical sources on which most analyses are based. I then try to correct them, as far as possible, in order to summarize the factual evidence hidden in a mass of statistics that baffle and mystify not only the proverbial man in the street but even policymakers and their advisers. This evidence should leave no doubt about the urgent need for fundamental reforms to ward off repeated and worsening exchange crises. Wide intellectual consensus was reached on this point as far back as June 1974 in the swan song of the Committee of 20, after a decade of debate and negotiations. At summit meetings, nevertheless, the heads of state of the major industrial and financial powers continue their fruitless debates about the desirability of further adjustments in exchange rates or of temporary stabilization, postponing indefinitely any consideration of the institutional defects that are at the root of disorderly exchange-rate fluctuations.

## The Statistical Record: 1971-86

### *Correcting Standard Statistical Sources*

Economic analyses of the regional network of balances of payments are generally based on the standard tables of *International Financial Statistics* (IFS), the *Survey of Current Business* (SCB), and the Organization for Economic Cooperation and Development (OECD). These tables, however, are highly misleading in several respects.

1. Regional estimates of balances on current account and of the net capital movements financing them (and equal to them, by definition) total up to enormous world discrepancies: \$63 billion in 1986 and even more in previous years. The working party recently set up to explain and eliminate these discrepancies as far as possible tentatively and provisionally attributes three-fifths of the 1986 discrepancy (\$38 billion) to the industrial countries and only two-fifths (\$25 billion) to the nonindustrial countries. This would switch the industrial countries' \$20 billion deficit to an \$18 billion surplus

but merely reduce the nonindustrial countries' deficit from \$43 billion to \$18 billion. This seems to me an implausible outcome, since the obvious underreporting of official grant receipts by itself accounts for \$20 billion of the \$25 billion correction. (One may wonder why the International Monetary Fund cannot tackle this issue directly by asking the industrial countries to provide the regional breakdown of the \$33 billion that they report, when only \$13 billion are reported by the recipient countries.)

Pending the final report of the working party, I prefer to accept as more reliable the estimates provided by the 21 industrial countries, and to correct accordingly the excessive deficits and equivalent net capital imports obtained by totaling the less reliable reports of about 160 other countries. This is inexact but undoubtedly closer to reality than the totally uncorrected estimates still used in the standard statistical tables of the IMF and the OECD.

2. The *IFS* tables on international monetary reserves are also incomplete, deficient, and even misleading in several respects:

a. Foreign-exchange reserves measured in SDRs bizarrely include the contractual value of the gold reserves held by the EMS countries in swap accounts with the European Monetary Cooperation Fund (EMCF), better known by its French initials as FECOM (Fonds Européen de Coopération Monétaire). The swap technique is used for the purpose of preserving each member country's gold ownership, with the attendant risks of gains or losses, a purpose quite different from the one ascribed to it by the IMF when it treats these reserves as foreign exchange. This mistake is corrected in my Table 1.

b. *IFS* estimates of gross reserve assets should be supplemented by comparable estimates of gross reserve liabilities and net reserve assets or liabilities. This raises no problem as far as SDR and IMF transactions are concerned,<sup>2</sup> but we can only "guesstimate" foreign-exchange liabilities. I have entered as *nil* the insignificant amounts of foreign-exchange reserve liabilities that might be owed by developing countries, thereby assuming that they are owed almost exclusively by the United States and other industrial countries. Liabilities of the United States are calculated as the sum of the "Selected U.S. Liabilities to Foreign Official Institutions" reported in the *Federal Reserve Bulletin* (Table 3.15, line 1) and those of foreign branches of U.S. banks to foreign official institutions (Table 3.14, line 66). This is likely to underestimate total U.S. liabilities and thus overestimate those of other industrial countries calculated as a residual. (On the other hand, the selected liabilities reported in the *Bulletin* include small amounts of liabili-

<sup>2</sup> Note, however, that net *creditor* positions in the Fund are not fully reflected in net *reserve* positions, because IMF profits are not allocated among member countries.



TABLE 1  
FINANCING OF CURRENT-ACCOUNT SURPLUSES (+) AND DEFICITS (-) IN 1986  
(in billions of dollars)

	World (a)	United States (b)	Other Industrial Countries (c)	Nonindustrial Countries <sup>a</sup>		
				Reported (d)	Discrep- ancy (e)	Adjusted [a - (b + c)] (f)
NET CURRENT SURPLUS (+) OR DEFICIT (-) = NET CAPITAL EXPORTS (+) OR IMPORTS (-) <sup>b</sup>	x	-141	+120	-43	+63	+20
<u>I. Other than monetary reserves <sup>c</sup></u>	x	<u>-114</u>	<u>+103</u>	<u>-52</u>	<u>+63</u>	<u>+11</u>
II. <u>Net credit reserves <sup>d</sup></u>	-	<u>-27</u>	<u>+17</u>	<u>+9</u>	-	<u>+9</u>
1. Foreign exchange	x	-27	+15	+11	-	+11
2. SDR position	-	-	+1	-	-	-
3. IMF position	-	-	+1	-2	-	-2
A. <u>Gross assets</u>	<u>+63</u>	<u>+5</u>	<u>+46</u>	<u>+12</u>	-	<u>+12</u>
1. Foreign exchange	+59	+4	+43	+11	-	+11
2. SDR holdings	+4	+1	+2	+1	-	+1
3. Reserve position in IMF	+1	-	+1	-	-	-
B. <u>Gross liabilities (-)</u>	<u>-64</u>	<u>-32</u>	<u>-28</u>	<u>-3</u>	-	<u>-3</u>
1. Foreign exchange	-59	-31	-27	-	-	-
2. SDR allocations	-3	-1	-1	-1	-	-1
3. Use of IMF credit	-2	-	-	-2	-	-2

<sup>a</sup> My attribution of the world discrepancies to the nonindustrial countries only is obviously incorrect and may be improved when the working party set up to correct the estimates publishes its final report. But the provisional attribution of three-fifths of the discrepancies to industrial countries [*BIS Annual Report* (June 15, 1987), p. 62] is wildly excessive. My estimates are undoubtedly far closer to reality than those still reported currently in *IFS* and OECD publications.

<sup>b</sup> From *OECD Economic Outlook*, 41 (June 1987), pp. 68, 138.

<sup>c</sup> Difference between estimates on first line and those on line II.

<sup>d</sup> From *IFS* (June 1987), but the gold reserves held by EC countries in swap accounts with the EMCF and BIS have been deducted from "foreign exchange" estimates.

ties, associated primarily with military transactions, that are not reported as reserve assets by the creditor countries.) These approximations obviously entail some errors and inconsistencies, but for insignificant amounts (perhaps \$20 billion at the very most) compared with the order of magnitude of total liabilities (more than \$240 billion for the United States alone at the end of 1986).

c. *IFS* world totals for foreign-exchange reserves, nongold reserves, and total reserves (lines 010) exceed substantially the sum of those shown for industrial countries (lines 110) and for developing countries (lines 200). I was advised many years ago by the Director of the Research Department to add this discrepancy to the total shown for the non-oil-producing developing countries (line 201). Why doesn't *IFS* follow the same advice?

3. In connection with the U.S. balance of payments and international balance sheet, my tables correct two obvious deficiencies of the standard *SCB* tables:

a. Gold reserves are still measured at the last official price of \$42.22 per ounce, obviously irrelevant and even absurd when market gold prices rise to levels more than ten times that price. My measurement at current market price is undoubtedly optimistic, since huge U.S. sales would press down market prices, but it is certainly far better than the *SCB* practice.

b. The annual *SCB* table on the U.S. investment position totally ignores the huge cumulative statistical discrepancy repeatedly ascribed in the text of accompanying articles as probably due mainly to unrecorded capital flows. I include it as such in my tables, as was done until 1900 in all official estimates. I was greatly encouraged to see it done also (at the suggestion of Henry Wallich?) in the lead article of the *Federal Reserve Bulletin* of May 1986 (pp. 287-297, and particularly 294), and in other articles since then. The *Bulletin's* cumulative discrepancy, entered as an unrecorded liability, is the same as mine, except for an insignificant difference due to the fact that the *Bulletin* calculation does not begin until 1959.

### *The Factual Record*

The first line of my Table 1 highlights the aberrant direction of the net capital flows financing regional surpluses or deficits on current account. The fantastic \$141 billion current-account deficit reported by the United States in 1986 entailed an equivalent surplus for the rest of the world, roughly "guesstimated" in my table at \$120 billion for the other industrial countries and \$20 billion for the nonindustrial countries. It also entailed, by definition, an equivalent amount of net capital imports by the United States.

This is, of course, an outcome exactly opposite to the pious resolutions, repeatedly voted by the United Nations General Assembly, requesting the more advanced industrial countries, richer and better endowed with capital, to devote at least 1 percent of their GNP to capital exports aimed at accelerating the development of poorer and less-capitalized countries. These resolutions accord with common sense, economically as well as humanely, but obviously fail to determine actual events or even policies. Secretary of the Treasury James Baker was thus, unfortunately, perfectly right when he pointed out at the final press meeting of the Venice summit, in answer to

President Mitterand, that it was superfluous to repeat in the communiqué a resolution often proclaimed already by the United Nations to which the United States paid little attention anyway.

Instead of contributing about \$40 billion of net capital exports to foreign development, the richest and most heavily capitalized country in the world (except for a handful of Persian Gulf countries) imported more than \$140 billion of the rest of the world's savings. As for the nonindustrial countries, I may be incorrect in estimating that they were themselves minor contributors (\$20 billion) to the financing of the U.S. deficit, but their net capital imports, if any, certainly amounted to a mere fraction of those going to the United States.

Confining attention to the capital flows that should be most amenable to official control, the investment of credit reserves recorded in part II of Table 1, nonindustrial countries clearly appear as net lenders rather than net borrowers. This is overwhelmingly due to their accumulation of \$11 billion in foreign-exchange reserves, an amount five or six times larger than their net use of IMF credit.

Taking other capital flows as a residual, Table 1 again shows the United States as the only borrower and the other industrial countries as the major lenders. The breadth of the U.S. financial market undoubtedly explains this investment pattern, but it is clearly due in part to the policy traditions and institutional arrangements that have made the dollar not only the main reserve currency but also the main parallel currency for international contracts, settlements, and reserve accumulation by commercial banks and other large investors, as well as by central banks.

The major international economic problem thus centers on the balance of payments of the United States with the rest of the world. Table 2 brings out the major developments since 1970, showing the impact of balance-of-payments flows and of various adjustments—particularly for price and exchange-rate fluctuations—upon the balance-sheet estimates at the end of the years 1970, 1982, 1985, and 1986. The first and most alarming observation is the fantastic deterioration of U.S. net international assets. They have fallen by nearly \$500 billion over the last four years, from *plus* \$125 billion at the end of 1982 to *minus* \$373 billion at the end of 1986, and by \$159 billion in 1986 alone.

Assets and liabilities are broken down in part III between (A) gold and foreign-aid assets and (B) exchange-market assets and liabilities. The distinction is made partly because the huge fluctuations of gold assets (A.1) are due nearly entirely to wild fluctuations in market prices rather than to balance-of-payments flows, but primarily because they do not constitute capital exports, whose estimates are essential to the policy appraisal below. Net foreign-aid assets (A.2) could hardly be used to defend dollar exchange rates

TABLE 2  
INTERNATIONAL BALANCE SHEET OF THE UNITED STATES, 1970-86  
(in billions of dollars)

	Period Flows					End of Year			
	Totals		Yearly Averages			1970	1982	1985	1986
	1971-82	1983-86	1971-82	1983-86	1986				
I. Balance of payments: current account	-7	-411	-1	-103	-141				
A. Net earnings on past investments	+235	+90	+20	+25	+21				
B. Other current transactions	-242	-511	-21	-128	-162				
II. Adjustments	+76	-87	+6	-22	-18				
A. SDR allocations <sup>a</sup>	+5	x	-	x	x				
B. Coverage and valuation (prices and exchange rates)	-38	-69	-3	-17	-34				
C. Unrecorded gold appreciation	+109	-18	+9	-5	+17	+1	+109	+75	+92
1. Market value	+109	-18	+9	-5	+17	+12	+121	+86	+103
2. Published value (-)	-	-	-	-	-	-11	-11	-11	-11
III. Net international assets	+69	-498	+6	-125	-159	+56	+125	-214	-373
A. Gold and foreign-aid credits	+151	-3	+13	-1	+19	+44	+195	+174	+192
1. Gold at market prices	+109	-18	+9	-5	+17	+12	+121	+86	+103
2. Net foreign-aid claims	+42	+15	+4	+4	+2	+32	+75	+88	+89

B. Exchange market	<u>-82</u>	<u>-495</u>	<u>-7</u>	<u>-124</u>	<u>-177</u>	<u>+12</u>	<u>-70</u>	<u>-388</u>	<u>-565</u>
Total assets	+617	+228	+51	+57	+117	+122	+739	+851	+967
Total liabilities (-)	-699	-723	-58	-181	-294	-110	-809	-1,238	-1,532
1. Official reserves	<u>-144</u>	<u>-37</u>	<u>-12</u>	<u>-9</u>	<u>-33</u>	<u>-23</u>	<u>-166</u>	<u>-170</u>	<u>-203</u>
Assets excluding gold	+19	+15	+2	+4	+5	+3	+23	+32	+37
Liabilities (-)	-163	-52	-14	-13	-38	-26	-189	-203	-241
2. Bank and treasury securities	<u>+161</u>	<u>-190</u>	<u>+13</u>	<u>-48</u>	<u>-48</u>	<u>-10</u>	<u>+151</u>	<u>+9</u>	<u>-39</u>
Assets	+391	+102	+33	+26	+59	+14	+405	+447	+506
Liabilities (-) <sup>b</sup>	-230	-292	-19	-73	-107	-24	-254	-438	-545
Banks	-205	-221	-17	-55	-95	-23	-228	-354	-449
Treasury securities	-25	-71	-2	-18	-12	-1	-26	-84	-96
3. Customers	<u>-100</u>	<u>-268</u>	<u>-8</u>	<u>-67</u>	<u>-96</u>	<u>+45</u>	<u>-54</u>	<u>-226</u>	<u>-322</u>
Assets <sup>c</sup>	+207	+112	+17	+28	+53	+105	+312	+371	+424
Liabilities (-)	-307	-380	-26	-95	-149	-60	-366	-598	-746
Statistical discrepancy	-119	-80	-10	-20	-24	-3	-121	-177	-201
Recorded <sup>c</sup>	<u>-188</u>	<u>-300</u>	<u>-16</u>	<u>-75</u>	<u>-125</u>	<u>-57</u>	<u>-245</u>	<u>-421</u>	<u>-545</u>
Net international assets in survey tables	<u>+81</u>	<u>-400</u>	<u>+7</u>	<u>-100</u>	<u>-152</u>	<u>+58</u>	<u>+137</u>	<u>-112</u>	<u>-264</u>
Difference due to:	<u>-12</u>	<u>-98</u>	<u>-1</u>	<u>-25</u>	<u>-7</u>	<u>-2</u>	<u>-12</u>	<u>-102</u>	<u>-109</u>
1. Statistical discrepancy	-118	-80	-10	-20	-24	-3	-121	-177	-201
2. Unrecorded gold appreciation	+109	-18	+9	-5	+17	+1	+109	+75	+92

<sup>a</sup> Contingent liabilities for SDR allocations excluded.

<sup>b</sup> Liabilities of commercial banks and U.S. Treasury securities held by the private sector (mostly banks). This total previously known as "dollar balances" reflects essentially the use of the dollar as a world parallel currency.

<sup>c</sup> Direct investments, securities (other than U.S. Treasury securities), and transactions with unaffiliated foreigners reported by U.S. nonbanking concerns.

SOURCES: *Survey of Current Business* (June 1987), p. 40, with the following exceptions for cumulative statistical discrepancy (in last four columns): (1) beginning in 1960, *ibid.*, Table I, pp. 54 and 55, line 65, with reverse sign plus end-of-1959 estimate—\$8.6 billion; (2) end of 1959 calculated from *Historical Statistics of the United States: Colonial Times to 1970*, Washington, 1975, pp. 866-867.

on world exchange markets, since they are overwhelmingly (98 percent) long-term and more akin to grants than to loans, usually being rolled over or canceled but rarely paid when falling due.

Looking at exchange-market assets alone, the evolution of the last sixteen years (1971-86) is characterized by an accelerating growth of liabilities, nearly fully recycled abroad by capital exports over the years 1971-82, but increasingly absorbed by U.S. current-account deficits over the years 1983-86.

Exchange-market liabilities have risen throughout the period at an increasing pace, averaging \$58 billion a year from 1971 through 1982, \$181 billion yearly in the following four years, and peaking at \$294 billion in 1986. This brought them from \$110 billion in 1970 to \$1,532 billion in 1986, an increase of more than \$1,400 billion, nearly fourteen times as large over sixteen years as over all previous years and centuries. This obviously should not, and in any case *cannot*, be expected to continue indefinitely. It is bound to trigger repeated and worsening exchange-rate crises, interlinked with contagious banking crises. This persistent and enormous accumulation of foreign liabilities would not have been possible if the national currency of the United States had not been accepted as a world reserve currency by foreign central banks and as a parallel currency by other major international transactors. The policy implications of such a system of reserve and liquidity creation will be discussed below. Let me merely emphasize at this stage that the use of these persistent and growing capital inflows was totally different in the years 1971-82 and 1983-86. In the first period, about 88 percent (\$617 billion out of \$699 billion) was recycled abroad by capital exports, leaving only 12 percent to finance exchange-market deficits. Those capital exports, however, were at the root of the unprecedented world inflation of that period.

Over the last four years, by contrast, less than a third (\$228 billion out of \$723 billion) were recycled abroad, more than two-thirds being absorbed by U.S. current-account deficits. The world banker's role conferred on the United States by foreign acceptance of the dollar was no longer used to make it the major world lender but, on the contrary, the major world borrower.

Table 3 relates the contrasting balance-of-payments deficits of the United States and surpluses of Germany and Japan to the enormous and growing differences in national saving among these three major world powers. The ratio of national saving to GNP has been more than halved in the United States, declining to 2 percent in 1986, which was about one-fifth the German ratio and less than one-seventh the Japanese ratio. Germany and Japan were thus able to finance net private investments equal to or larger than those of the United States and yet have huge foreign surpluses, while the United States was left with a huge foreign deficit.

TABLE 3  
SOURCES AND USES OF NET SAVING IN THE UNITED STATES,  
JAPAN, AND GERMANY, 1984-1986  
(in percent of GNP)

	United States <sup>a</sup>			Japan <sup>b</sup>			Germany <sup>b</sup>		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
1. Private saving	6.9	6.3	5.3	15.2	14.9	15.7	9.1	9.1	10.7
2. Official deficit (-)	-2.7	-3.4	-3.3	-2.1	-0.8	-0.9	-1.9	-1.1	-1.2
3. National saving (1 + 2 = 4 + 5)	4.2	2.9	2.0	13.1	14.1	14.8	7.2	8.0	9.5
4. Net private investment	6.6	5.7	5.4	10.2	10.3	10.4	6.2	5.8	5.5
5. Foreign balance	-2.4	-2.9	-3.4	2.9	3.8	4.4	1.0	2.2	4.0

<sup>a</sup> From *Federal Reserve Bulletin* (June 1987), Table 2.17.

<sup>b</sup> From *OECD National Accounts* and national sources.

The basic explanation of this contrast has two elements: (a) the role of military expenditures, amounting to 6.6 percent of U.S. GNP but less than 1 percent of Japanese GNP, and (b) the reliance of the U.S. economy on installment financing, backed by advertising campaigns to "buy now, and pay later" for residential houses, vacations, automobiles, television sets, innumerable household appliances, etc.

This explanation suggests how difficult it will be to change the situation in time to ensure a soft rather than a hard dollar landing. The current state of disarmament negotiations with Secretary Gorbachev raises a ray of hope as far as the first problem is concerned, and the latest U.S. fiscal-reform bill has also taken some steps in the right direction, but what president would dare to propose, and succeed in curbing as much as necessary, the financing of the other consumption expenditures mentioned above?

## Policy Implications

### *The Dollar as a World Parallel Currency*

The unviability of an international monetary system dependent on the use of a *national* currency as a *world* parallel currency had already been amply demonstrated in the interwar period by the collapse of the sterling-exchange standard in September 1931. This collapse returned the world to a gold standard that was just as unviable in the long run, and it was replaced after the Second World War by the dollar-exchange standard incorporated in the Bretton Woods system. Such a system was bound to strengthen pow-

erfully the financial, economic, political, and military hegemony of the United States in a world fragmented into about 180 national states, each theoretically sovereign but actually more and more interdependent. Most of them became, in fact if not in name, protectorates of the United States.

American hegemony was generally accepted until the mid-1960s as immensely beneficial to the protected states as well as to the United States itself. Financially and economically, it was used with a wisdom and generosity commanding the assent and even enthusiasm of all concerned. Some qualms were voiced about the U.S. balance-of-payments deficits that were financed by the accumulation of dollar reserves by other countries, but these averaged less than \$1 billion per year from 1950 through 1969 and were barely sufficient to avoid the deflationary pressures that would have resulted otherwise from an insufficient accretion of gold reserves. Moreover, dollar reserves earned interest for their holders and could be converted into gold at the holders' discretion, in fact as well as legally. They were not used to finance U.S. deficits on goods and services but rather to finance net capital exports, particularly enormous foreign-aid grants and loans. These grants and loans were devoted to the economic reconstruction of Europe and the feeding of starving populations, the acceleration of development in third-world countries, and the reconstitution of depleted monetary reserves. Reserves were restored not only through the accumulation of dollar reserves but also by large gold purchases from the United States, which reduced the U.S. gold stock from a bloated 75 percent of the world total in 1949 to 30 percent in 1969.

The United States could only congratulate itself for adopting and implementing policies inspired by an awareness of its interdependence with the rest of the world—policies that can claim credit for a period of global economic progress without precedent in world history. Their disastrous and growing reversal since the mid-1960s would be incomprehensible if it were not for the corrupting influence of excessive power upon its holders.

It began with the Vietnam War and President Johnson's refusal to finance it by increasing taxes or compressing other expenditures, since the resulting U.S. *internal* as well as *external* deficits could be financed painlessly by other countries' purchases of the dollars that were flooding world exchange markets. These deficits continued at an expanding pace in the 1970s and 1980s with a suicidal overrearmament race with the U.S.S.R., making unavoidable the "temporary" suspension of gold convertibility by President Nixon on August 15, 1971, nearly forty years to the day after the suspension of sterling convertibility ended sterling's role as the main world parallel currency.

Yet foreign central banks and other official institutions continued to accumulate the inconvertible paper dollar in amounts that no one would have



deemed conceivable: about \$215 billion, from only \$26 billion at the end of 1970 to \$241 billion at the end of 1986. The accumulation of dollars by the private sector, in the form of Treasury securities and claims on U.S. banks, was even more formidable: \$521 billion, from \$24 billion at the end of 1970 to approximately \$545 billion at the end of 1986.<sup>3</sup> Flooded with deposits, commercial banks expanded their foreign loans from a mere \$14 billion at the end of 1970 to \$405 billion at the end of 1982. This was undoubtedly the major source of the unprecedented world inflation; all countries, even those pursuing the most inflationary policies, could substantially increase their gross monetary reserves, thus escaping the need to adjust their policies and/or exchange rates. Their net indebtedness, however, rose correspondingly, since much of their borrowing was used to finance consumption rather than investment, not to speak of official corruption and a vast increase in armament expenditures. In 1983, U.S. banks suddenly woke up to the growing illiquidity and insolvency risks entailed in their loans, and they began to reduce their lending drastically, from more than \$110 billion in 1982 to only \$1 billion in 1985. In 1986, they increased it again reluctantly, by about \$59 billion, in an attempt to ward off a cessation even of interest payments by their debtors.

All in all, less than half of gross capital inflows are now re-exported by the United States through foreign-aid grants and credits or other loans and investments; the remainder is absorbed domestically by the excess of imports over exports of goods and services.

This disastrous record confirms the warnings, vainly reiterated for more than sixty-five years by officials and their experts at many international monetary gatherings (such as the Genoa Conference of 1922, the gold delegation of the League of Nations, the International Monetary Fund, and Jeremy Morse's Committee of Twenty) against the dangers inherent in the use of a national currency as an international reserve asset or parallel world currency. These warnings were expressed even more candidly, bluntly, and forcefully by academic economists. They were the main theme of most of my writings, as well as of those of Jacques Rueff and Fritz Machlup. The political and military significance of the system was best perceived by President de Gaulle and denounced as long ago as 1795 in the fourth article of Kant's *Essay on Perpetual Peace*, which I annex to this paper and urge you to read, for it is written in a savory language and is as topical today as ever.

Space does not allow me to reproduce here my complementary proposals for worldwide and regional monetary reforms,<sup>4</sup> but the former were briefly summarized at the request of the chairmen of the Congressional Summit on

<sup>3</sup> These and following estimates refer to all commercial banks located in the United States, including branches and agencies of foreign banks.

<sup>4</sup> They are summarized and updated in Triffin (forthcoming).

## Exchange Rates and the Dollar held in Washington on November 11-13, 1985:

### SUGGESTED AGREEMENT AND COMMUNIQUÉ OF THE GROUP OF TEN

#### 1. *Reserve Assets*

Our international monetary system of settlements and reserve creation will be based on "reserve deposits" with the IMF (merging the present SDR accounts and reserve positions in the Fund), enabling us:

- a) to adjust the overall pace of reserve creation to the requirements of feasible noninflationary growth of world trade and production; and
- b) to invest these reserves in the pursuit of commonly agreed high-priority objectives, including among others the acceleration of development in the less developed countries.

The huge gold and foreign exchange reserve holdings inherited from the past system will be converted as rapidly as possible into such "international reserve deposits" with the IMF.

#### 2. *Exchange Rates*

Our basic objective is to restore the stability of *real* exchange rates between our currencies at *competitive* levels, promoting appropriate and tenable current account balances in each country's external payments.

Our domestic policies will aim at maintaining also the stability of *nominal* rates for as long periods as possible, but to realign them promptly whenever necessary to reach this basic objective.

#### 3. *Capital Movements*

We shall seek to deter speculative capital flows contrary to the basic objective affirmed above; and to offset them, whenever necessary, by reverse flows of official investments, in the spirit of our Group of Ten (and Switzerland) Agreement on the IMF "General Arrangements to Borrow."

Two things must happen for there to be any hope of reaching a worldwide agreement along these lines as soon as possible: The United States must be convinced of the exorbitant responsibilities and costs entailed for its own economy, as well as for the rest of the world, by the abusive use of its national currency as a parallel world currency. And the advantages of such an agreement must be demonstrated by having it adopted and put into operation by all countries ready to do so, particularly by the countries of the European Community through the development of the ECU as a reserve-asset and parallel-currency alternative to the inconvertible and fluctuating paper dollar of today.

#### *The ECU as an Alternative Parallel Currency*

The eight years during which the European Monetary System has functioned have amply demonstrated its ability to perform the essential role of an exchange-rate system, which is to preserve or restore with reasonable speed the stability of real exchange rates among member currencies at competitive levels, consonant with desirable and feasible surpluses and deficits

in their international accounts. Exchange-rate realignments have proved negotiable whenever necessary to avoid excessive financing of the persistent inflationary price and cost differentials that participating countries were politically unable to avoid.

This success, however, was undoubtedly due in part to the strength of the dollar vis-à-vis the mark and other strong EC currencies until the end of 1984. The strong dollar eased exchange-rate tensions considerably within the Community. Unfortunately, it weakened Germany's interest in implementing paragraph 4 of the Annex to the Bremen agreement of July 6 and 7, 1978, and thus in consolidating "not later than two years after the start of the scheme, the existing arrangements . . . in a *European Monetary Fund*." This objective has acquired a new urgency in view of the awesome foreign-exchange and bank crises likely to erupt at any time as a consequence of the enormous U.S. deficits and of the decision of various Latin American countries to suspend or limit contractual amortization and even interest payments on their huge bank indebtedness. It is particularly necessary to avoid disruptive realignments of intra-Community exchange rates—those that are not required by significant inflation differentials. The last such realignment, on January 12, 1987, was only a weak foretaste of foreseeable future tempests.

The success and even the feasibility of such progress, however, require that it be planned in such a way as to avoid further aggravation of the dollar crisis. Indeed, the European Monetary Fund should enable the Community to help resolve the awesome dollar problem, particularly through the conversion of short-term dollar indebtedness into exchange-guaranteed "consols" and the extension of *conditional* credit to finance further U.S. deficits that cannot possibly be eliminated overnight.

This decentralization of the defunct Bretton Woods system would help rally to it not only many disaffected countries of the third world but even countries of the Communist world. I urge you to read, in this connection, the unprecedented and revolutionary statement of the delegate from the U.S.S.R. Institute of World Economics, Dr. D. V. Smyslov, at the Round Table East-West Conference on the Future of the International Monetary System, held at Szirák (Hungary) on August 28-29, 1986 (see Szabó-Pelsóczy, ed., forthcoming).

The major obstacle to the adoption of these suggestions lies in the obdurate opposition of central banks in general, not just of the Bundesbank (see Aglietta, 1986, and Triffin, 1985).

### *The ECU as Sole European Currency*

The completion of the economic and monetary union, repeatedly promised by the heads of state and government of the EC since the first European

summit at The Hague in December 1969, remains as uncertain today as ever. The failure of the more modest proposals summarized above would obviously condemn it to oblivion, but their success would make it far easier to implement than the stillborn Werner plan. That plan envisaged a gradual elimination of exchange-rate margins and fluctuations, making member currencies fully convertible with one another at irrevocably fixed exchange rates. This convertibility, once achieved, could then, but *only then*, be consolidated and dramatized by the creation of a European currency replacing all national currencies.

The EMS has instead *begun* by encouraging use of the ECU as a parallel currency (see Masera, 1987). The success of the transitional phase summarized above and the wider utilization of the ECU in external transactions that are now denominated and settled in Eurocurrencies would affect the denomination of private assets and liabilities now totaling well over \$1 trillion. All that would be needed to complete economic and monetary union would be to extend its use progressively to domestic as well as international transactions at a pace that might differ from country to country. Luxembourg, Belgium, and Italy could undoubtedly be expected to proceed faster in this respect than Germany and the United Kingdom.

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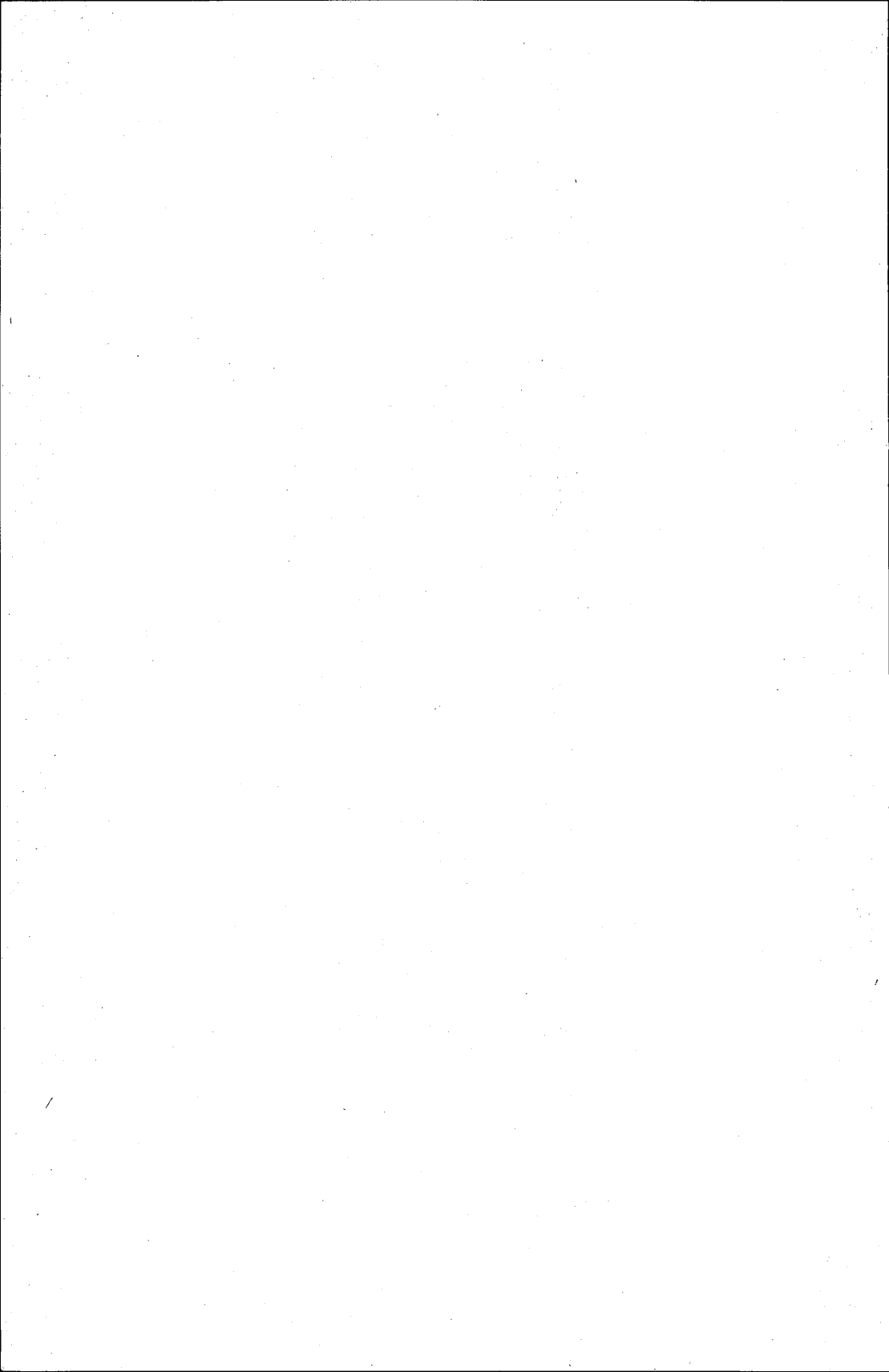
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## ANNEX

*From Emmanuel Kant, 4th Article of "Perpetual Peace: A Philosophical Essay" (1795)*

### **No National Debts Shall Be Raised by a State to Finance Its Foreign Affairs**

No objection can be taken to seeking assistance, either within or without the State, in behalf of the economic administration of the country; such as, for the improvement of highways or in support of new colonies or in the establishment of resources against dearth and famine. A loan, whether raised externally or internally, as a source of aid in such cases is above suspicion. But a credit system, when used by the powers as a hostile, antagonistic instrument against each other and when the debts under it go on increasing indefinitely and yet are always liquid for the present (because all the creditors are not expected to cash their claims at once), is a dangerous money power. This arrangement—the ingenious invention of a commercial people in this century [England] constitutes, in fact, a treasure for the carrying on of war; it may exceed the treasures of all the other States taken together, and it can only be exhausted by the forthcoming deficit of the exchequer,—which, however, may be long delayed by the animation of the national commerce and its expansionist impact upon production and profits. The facility given by this system for engaging in war, combined with the inclination of rulers toward it (an inclination which seems to be implanted in human nature), is therefore a great obstacle in the way of a perpetual peace. The prohibition of it must be laid down as a preliminary article in the conditions of such a peace, even more strongly on the further ground that the national bankruptcy, which it inevitably brings at last, would necessarily involve in the disaster many other States without any fault of their own; and this would damage unjustly these other States. Consequently, the other States are justified in allying themselves against such a State and its pretensions.



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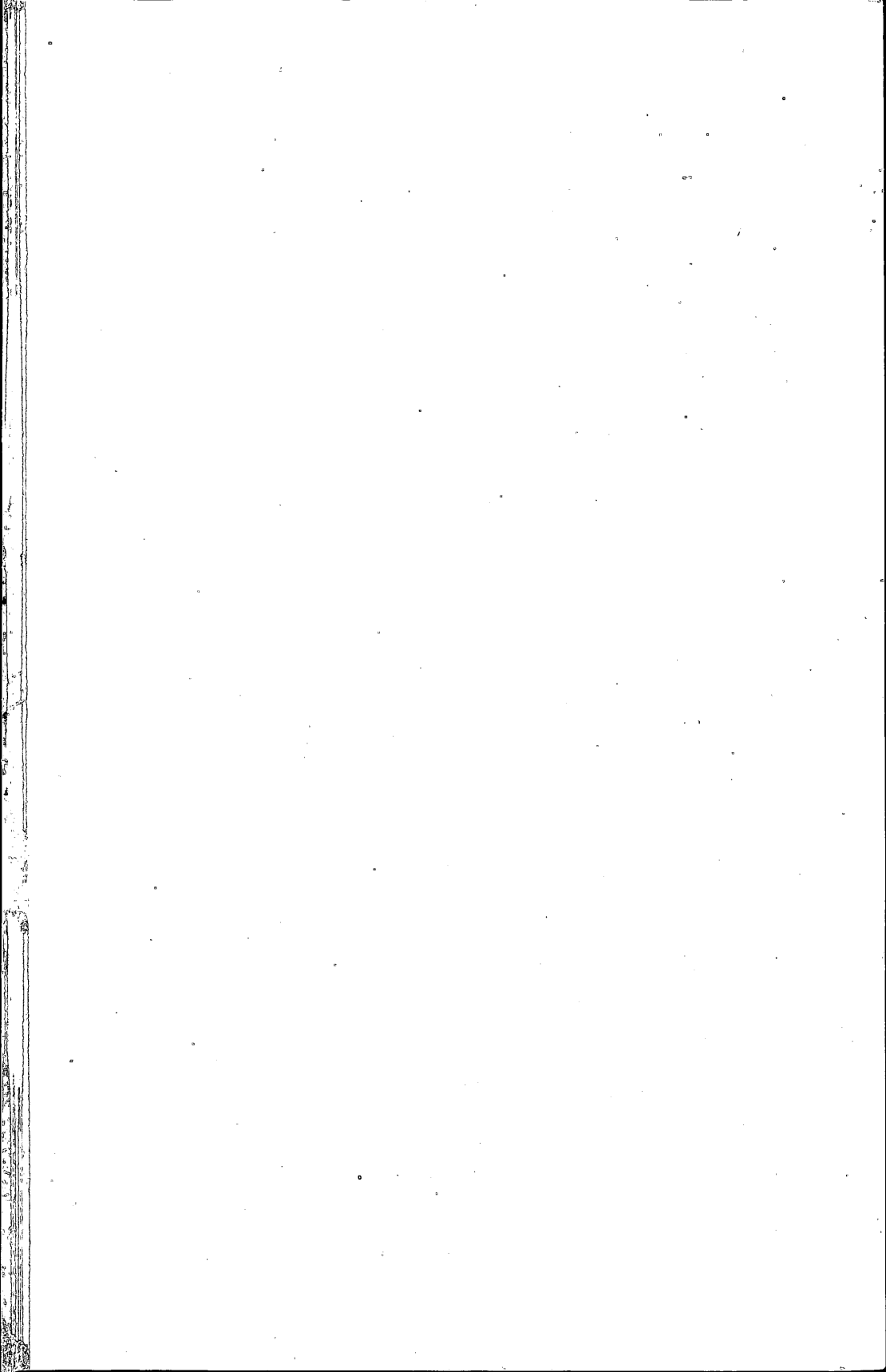
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