Volume Title: International Economic Cooperation

Volume Author/Editor: Martin Feldstein, ed.

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-24076-2

Volume URL: http://www.nber.org/books/feld88-4

Publication Date: 1988

Chapter Title: Macroeconomic Policy

Chapter Author: Stanley Fischer, W. Michael Blumenthal, Charles L. Schultze, Alan Greenspan, Helmut Schmidt

Chapter URL: http://www.nber.org/chapters/c9786

Chapter pages in book: (p. 11 - 78)

1 Macroeconomic Policy

1. Stanley Fischer

International Macroeconomic Policy Coordination

International cooperation in macroeconomic policy-making takes place in a multitude of settings, including regular diplomatic contacts, the IMF, the General Agreement on Tariffs and Trade (GATT), the European Monetary System (EMS), the OECD, the Bank for International Settlements (BIS), and summits. It takes a multitude of forms, from sharing information about current and future policies, through consultation about decisions, to actual coordination of policies. Coordination "implies a significant modification of national policies in recognition of international economic interdependence."[1]

Coordination holds out the promise of mutual gains resulting from the effects of economic policy decisions in one country on the economies of others. The Bonn Summit of 1978, in which Germany agreed to an expansionary fiscal policy in exchange for a U.S. commitment to raise the price of oil to the world level, is a much quoted example of policy coordination.[2] That agreement, followed by the second oil shock and increased inflation, was later viewed by many as a mistake. It was used in 1986 by German policymakers as an argument against the trade of fiscal expansion in Germany for fiscal contraction in the United States.

Both the potential and the incentive for economic policy coordination have increased as the world economy has become increasingly integrated since World War II. It was of course true during the entire period

that other economies were significantly affected by U.S. economic performance. The impact of other economies on the United States has increased as both their share of the world Gross National Product (GNP) and the share of imports and exports in the U.S. GNP have risen. In section 1.1 of this paper, I trace the connections between economies and the impacts of foreign and U.S. fiscal and monetary policies on the respective economies. It remains true that the United States is the most independent of the major economies, that is, it is least affected by decisions made elsewhere, but even it can no longer make policy as if it is a closed economy.

Research, theoretical and applied, on policy coordination has proliferated in the last decade. The potential gains from policy coordination and the different types of possible coordination have been clarified by a theoretical literature that draws on the theory of games. Conditions under which coordination may even worsen economic performance have been identified. However, empirical work based on applications of these models implies that the potential gains from coordinating policies may be quite small. These developments are reviewed in section 1.2.

Countries have cooperated in macroeconomic policy-making since at least the interwar period when Britain's 1925 return to gold was urged and assisted by the Federal Reserve. The breakdown of cooperation and the world economy during the Great Depression served as a powerful spur to the creation in 1944 of the Bretton Woods system, the IMF, the World Bank, and GATT—institutions that would permit the resumption and growth of world trade. Those institutions, in place during a period of extraordinary growth and prosperity, were in many respects highly successful, even though in the end the Bretton Woods adjustable peg exchange rate system could not withstand the pressures of speculative capital flows.

The shift to flexible exchange rates in 1973 occurred because countries had been unable to coordinate their policies. It had been argued that flexible rates would insulate countries from foreign shocks, implying far greater freedom than under Bretton Woods to pursue domestic goals independently of foreign reactions and policies. But experience since the onset of floating rates has reaffirmed international interdependence and led to the current search for methods of cooperation. In section 1.3 I briefly describe macroeconomic policy cooperation and coordination since the 1920s and the institutions that have been put in place to facilitate that cooperation.

In section 1.4 I discuss and evaluate recent proposals for macroeconomic policy coordination, including those arising from the 1986 Tokyo agreement, the 1987 Paris agreement, and exchange rate target zones. I argue that continued systematic policy coordination on a grand scale

among the major economies is unlikely, because the largest countries are still too insulated—particularly in the short run—from the foreign repercussions of their actions. The most that can be expected in the near future is occasional agreements, when a mutually advantageous bargain can be struck, and the continued exchange of information in the many formal and informal international meetings in which economic policy is discussed. But coordination on a smaller scale, as in the EMS, has developed significantly.

Eventually, but only in the very long run, as understanding of the operation of policy improves and interdependence grows, countries may begin systematically to coordinate their policy decisions for their mutual benefit. Even then, and certainly until then, the best that each country can do for other countries is to keep its own economy in shape.

1.1 The Extent of Interdependence

International trade has become increasingly important to all countries in the period since World War II. Table 1.1 presents data for the Group of 5 (G-5; i.e., five largest economies in OECD) countries.[3] Both exports and imports have risen sharply for Germany, France, and the United Kingdom. Japan's imports have not grown much as a proportion of GNP, though the export share has risen substantially. Although the proportionate increase in exports and especially imports has been high for the United States, it remains by far the most closed of the OECD economies. The importance of trade issues is seen clearly in the fact that the three largest OECD economies each had a trade gap of at least 3 percent of GNP in 1985.

More impressive even than the growth of trade in goods and services is the increasing integration of the world's capital markets. European currencies only became convertible in 1958;[4] now there is complete freedom of capital movements for the major economies, except France and Italy, and they have announced their intentions to remove controls.

Table 1.1 **Share of Exports and Imports in GNP (%)**

	U.S.	Japan	Germany	France	U.K.
1950 Exports	4.3	10.4[a]	11.4	15.6	22.3
Imports	4.1	10.5[a]	12.7	14.6	22.9
1970 Exports	5.6	11.3	22.6	15.2	22.3
Imports	5.4	10.2	20.6	14.9	21.4
1985 Exports	7.0	16.4	35.2	23.5	29.3
Imports	10.0	12.6	31.3	24.0	28.1

Source: IMF, *International Financial Statistics*, 1986.

[a]Figure is for 1955.

Whereas daily trading volume on the New York Stock Exchange averages less than $10 billion, foreign exchange transactions in Tokyo, New York, and London average more than $100 billion per day. Capital flows were the proximate cause of the death of the Bretton Woods system. They are a major and extraordinarily rapid mechanism for transmitting shocks in the international economy.[5]

Policy interactions among countries depend on the exchange rate regime. In the Bretton Woods adjustable peg system, expansionary monetary policy in the United States would cause domestic expansion, tending to raise the domestic price level, and a current account deficit. The current account deficit would cause an inflow of dollars to other countries requiring foreign monetary expansion to maintain the exchange rate. This was the source of the frequent charge that the United States exported inflation in the Bretton Woods period. With the lifting of capital controls, speculative capital flows provided a more immediate link among economies. Expansionary domestic policies could lead to the anticipation of devaluation, to a massive capital outflow, and to devaluation or an imposed change in policies.

Proponents argued that flexible exchange rates would reduce interdependence. Expansionary monetary policy in one country would lead to inflation and depreciation of that country's currency, but it would not affect other economies. There was little discussion of the international transmission, if any, of fiscal policy changes in one economy.

Interdependence has nonetheless increased in the flexible rate system. The missing element in the earlier analysis was the recognition of the slow adjustment of prices and wages. If prices and wages in the domestic economy were fully flexible, then an increase in the money stock would indeed lead immediately to a proportional increase in the price level and exchange rate. In practice, the slow adjustment of domestic prices and wages and the rapid adjustment of the exchange rate to policy changes have meant that monetary and fiscal policy changes in one country affect the real exchange rate rapidly. The real exchange rate changes are transmitted rapidly to foreign economies, affecting both the profitability of exports and the Consumer Price Index (CPI) as prices of imports change.

Policy decisions in today's flexible exchange rate world are transmitted to other countries through three main channels:

1. Policy decisions or their expectation affect interest rates and asset prices, including the exchange rate. U.S. fiscal expansion increases interest rates, attracting foreign capital and creating a demand for dollar securities. The capital inflow causes a dollar appreciation and, by drawing capital out of foreign economies, raises interest rates abroad too. U.S. monetary contraction likewise raises interest rates and causes a dollar appreciation.

2. The rapid interest rate and exchange rate responses are transmitted slowly to real variables. Exchange rate depreciation through the J-curve initially worsens the trade balance measured in domestic currency, taking up to two years (and perhaps more) to produce an improvement in the current account and, through the increase in net exports, to exert an expansionary effect on the domestic economy. By the same token, a depreciation of the domestic currency will take several years to reduce exports and real activity in foreign economies. Real interest rate movements likewise affect investment slowly.

3. Aside from their effects on trade flows, changes in exchange rates also affect domestic inflation. A depreciation directly affects domestic inflation by raising the prices of imports. Further, by increasing the profitability of exports and increasing aggregate demand, depreciation affects wage claims and thereby indirectly increases the inflation rate.

Commonsense evidence suggests these interactions are large enough to matter. The world economy recovered in 1984 and 1985 under the impetus of an expansionary U.S. fiscal policy despite restrictive European and Japanese fiscal and monetary policies. The massive appreciation of the dollar from 1980 to 1985 made large parts of U.S. industry and agriculture uncompetitive and generated strong political pressures for protection and, to a much more limited extent, for a reversal of fiscal policy.

Some econometric evidence on the extent of economic policy interactions is summarized in table 1.2, which shows the effects of fiscal and monetary policies in the United States and the rest of the OECD on their economies.[6] The data in the table are estimates of the effects of the policies in the second year after they have been introduced, by which time most of the impact of the policy change has taken place. They are based on the properties of twelve econometric models, representing a wide range of views about the operation of the economy and showing considerable diversity of results.[7]

To read table 1.2, consider a typical entry, say that for GNP in row I. Note 1 indicates that the policy action in row I is a sustained increase in U.S. government spending of 1 percent of GNP (with no change in tax rates). The entry 1.2 under "Own" means that the GNP in the United States is 1.2 percent higher in the second year after the policy has been put in place than it would otherwise have been. The entry 0.3 under "For." (Foreign) means that the GNP in the rest of the OECD in the second year after the U.S. policy change is 0.3 percent higher than it would otherwise have been. Similarly, moving across row I to the CPI column, the 1 percent of GNP increase in U.S. government spending raises the price level in both the United States and abroad by 0.3 percent (i.e., very little) relative to what it would otherwise have been.

Table 1.2 Policy Interactions, United States and the Rest of the OECD[a]

	GNP (%)		CPI (%)		Int. Rate (%)		Current Acc. ($billion)		Ex. Rate (%)
	Own	For.	Own	For.	Own	For.	Own	For.	
I.	1.2	0.3	0.3	0.3	1.1	0.4	−13.1	6.9	+1.4
II.	1.5	0.2	0.3	0.5[b]	0.6	0.4	−7.1	5.3	+0.4
III.	1.2	−0.1	0.9	−0.3	−1.6	−0.5	−2.8	−2.9	−6.4[b]
IV.	0.6	0.1	0.5	−0.5	−1.1	−0.3	−0.2	0.1	−3.2

Notes: 1. The policy actions are:

Row I. U.S. fiscal expansion, a sustained increase in U.S. government spending equal to 1 percent of GNP.

Row II. OECD fiscal expansion, a sustained increase in government spending in the rest of OECD by 1 percent of GNP.

Row III. U.S. monetary expansion, an increase in the U.S. money supply of 4 percent.

Row IV. OECD monetary expansion, an increase in the money supply in the rest of OECD by 4 percent.

2. "For." means foreign. In rows I and III, "Own" = U.S. and "For." = OECD; in rows II and IV, "Own" = OECD and "For." = U.S.

3. These results are averages, based on simulations of twelve econometric models. Some variables are not calculated in certain models, though in all cases there are at least ten estimates. Ranges of estimates vary; information on the ranges is reported in Holtham (1986).

4. The interest rate is a short rate.

5. The exchange rate is the value of the domestic currency. A depreciation registers as a negative number.

[a]These data are averages of data reported in tables 1a and 6a of Frankel and Rockett (1986). They are the changes in the variables shown in the second year after a policy change has been initiated. The GNP, CPI, and exchange rate data are percentage changes from a baseline value. The interest rate data are expressed as the change in the interest rate.

[b]These numbers are heavily influenced by one substantial outlier.

The strongest and most consistent results found by examining the twelve models are those for the effects of U.S. fiscal policy. The results for monetary policy show considerable divergence across the different models.

U.S. fiscal expansion, row I of table 1.2, is expansionary both in the United States and abroad, resulting in higher output and higher prices. Although the models concur in the inflationary effects in the United States, some models show U.S. fiscal expansion reducing foreign prices. U.S. fiscal expansion increases interest rates both at home and abroad and generally leads to a dollar appreciation. Note though that the interdependence between the United States and the rest of the OECD is limited: although U.S. fiscal expansion by 1 percent of GNP increases U.S. GNP by more than 1 percent, its impact in the rest of the OECD

is only one-fourth of its direct U.S. impact. None of the twelve models studied shows GNP in the rest of the OECD rising by as much as 1 percent of its GNP.

The results of foreign fiscal expansion, summarized in row II of table 1.2 (here "Own" = OECD; "For." = U.S.), are consistent with the U.S. case. The foreign currency appreciation is much smaller than the dollar appreciation is in row I. This is consistent with the complaint by individual foreign countries that fiscal expansion in their countries would lead not to appreciation, as in the United States, but rather to depreciation, as a result of loss of confidence in the sustainability of their balance of payments deficit.[8] The failure of the Mitterrand expansion in 1981 is some evidence in favor of this view, though that period was marked by monetary as well as fiscal expansion. The spillover effects on GNP in the United States are quite small (0.2), though all but one of the models concur in showing these effects to be positive.

Monetary expansion in the United States is examined in row III ("Own" = U.S.; "For." = OECD). A 4 percent increase in the U.S. money stock leads to lower interest rates, a dollar depreciation, and an increase in U.S. GNP and price level. The U.S. current account is shown as worsening, probably because the effects of the increase in income on imports are more rapid than the effects of the dollar depreciation on the current account. Expansionary U.S. monetary policy is shown as having negative effects on the rest of the OECD. This must be largely due to the worsening of their current account. Note both that the table implies an improvement in the current accounts of non-OECD countries[9] and that there is a greater diversity of views among the models on the effects of monetary expansion—particularly the spillovers to the non-OECD countries—than about fiscal expansion.

Note also that foreign fiscal expansion (row II) has relatively small effects on the U.S. current account within the two-year horizon of table 1.2. An increase in government spending of 1 percent of GNP in all the rest of the OECD improves the U.S. current account by only $5.3 billion in the second year after the policy change. The table implies that the benefits of foreign expansion for U.S. exports are likely to be small.

The results of the effects of monetary expansion in the rest of the OECD (row IV; "Own" = OECD; "For." = U.S.) on those countries are in the same direction as the "Own" columns in row III. However, U.S. monetary expansion is more powerful in the United States than the rest of the OECD monetary expansion is for those countries.[10]

Table 1.2 confirms the interdependencies among economies. They are stronger—or at least more reliable—for fiscal than for monetary policy, but they also have to be qualified. In the first instance, the

"Own" effects on GNP are in all cases much larger than the "Foreign" effects, thus the interdependence is limited. This is a fundamental finding that will color much of the remainder of this paper. Second, the analysis of fiscal and monetary policy in the rest of the OECD implies a degree of coordination that simply does not exist. The major OECD countries, including Japan and Germany, do not necessarily pursue coordinated policies. Even if they did—together with France, Italy, the United Kingdom, Canada, and the smaller OECD countries—the effects of expansion in those countries on U.S. GNP would be limited, unless U.S. monetary and fiscal policies changed in response. The table therefore indirectly emphasizes the dominant role of the United States.

Significant as the basic results in table 1.2 are, recent experience suggests that they omit an important, sectoral aspect of policy interdependence. Exchange rate changes, and subsequent effects on trade flows and competitiveness, generate pressures for policy changes. In the case of an appreciation, the pressures are for protection, not for fiscal discipline. Despite the governments' commitment in principle—and, in a succession of negotiations, in practice—to increased freedom of trade, protectionist pressures from well-organized export- and import-competing sectors have been increasingly effective. That sectoral aspect of interdependence, and the dangers it brings of a breakdown of the world trading system that has been a major achievement of the entire post–World War II period, is as important for the well-being of the major economies as the direct macroeconomic interdependences that are the subject of table 1.2. Because the exchange rate adjusts very rapidly to expected and actual policy changes, the competitive effects of macroeconomic policies may begin to exert political pressures well before they have major macroeconomic impacts.

Slower moving interdependencies also deserve attention. Exchange rate changes move the location of production and international investment. The effects on the location of production go in both directions. Producers move to countries where wages, measured in international prices, are low—thus to countries with undervalued currencies. But some producers (e.g., Honda) move into countries where protectionist pressures may raise import barriers—thus to countries with overvalued currencies.

Structural interdependence arises from the growing integration of world markets and the mobility of firms to areas of least regulation and taxation. The United States and the United Kingdom have agreed to coordinate capital requirements for banks. The U.S. tax reform of 1986 may well spark similar reforms in other countries, not necessarily because the intellectual case is convincing, but because other countries want to retain the skilled and high-paid individuals affected by the reform.

1.2 Policy Coordination in Theory

The theoretical literature on macroeconomic policy coordination has grown rapidly in volume, sophistication, and complexity.[11] The basic argument for coordination can be seen in the following example. Consider two countries called, for the sake of concreteness, America and Europe, each constrained to use only fiscal policy. Suppose that fiscal expansion produces higher output and an appreciation for the expanding country. Each country is concerned about both its level of output and its current account.

In the most independent arrangement, each country chooses its optimal policy taking the policy action of the other country as given. Equilibrium in each country is reached at the point where the benefits of expansion are balanced by the costs of appreciation, given the other country's decision. This is a noncooperative equilibrium.[12]

In this situation, expansion in one country, say America, makes the other country better off. If America expands, Europe's output and current account improve, and vice versa. If both expand together, both will become better off, as output rises and the current account of each country deteriorates very little.[13] If the countries can agree on the expansion, both improve their situation. If only one country expands, it becomes worse off.[14] Without coordination or cooperation, a mutually beneficial expansion is prevented.

Perhaps the only mystery in this story is why the countries do not reach the cooperative equilibrium without coordinating. The explanation lies in the football spectator problem.[15] If everyone is sitting, someone who stands has a better view. People see equally well if everyone stands or if everyone sits. Sitting in the seats is more comfortable than standing. In the noncooperative equilibrium, everyone stands. That is because in the noncooperative case, each person does what is best for him or herself given the actions of others. If everyone sits, someone, taking what the others will do as given, will stand. If everyone is standing, then it is best to continue standing. The cooperative solution is for everyone to sit. The problem is that each person is tempted to get ahead by standing. Thus the cooperative solution will not be achieved without an explicit agreement on coordination—in this case that everyone stays seated.

Returning to the economic example, what happens if one country, say America, goes ahead in the hope that Europe will follow? After all, American expansion increases European income and improves its current account. Surely Europe will expand in response. What Europe does depends on its evaluation of American responses to its action. If it believes America will continue to act as the leader, it will likely expand, making both countries better off than they were in the

noncooperative equilibrium.[16] If Europe does not respond, America is worse off for having expanded. But even if Europe does respond when America acts as leader, the final equilibrium is not as good for both countries as would be possible if each could make its policy decisions with the assurance that the other would be cooperating fully.

This example, which underlies the locomotive case for German expansion in 1977, captures the essential motivation for policy coordination. But it is not always true that coordination leads to more expansionary policies by both countries. Optimal cooperative policies depend on the objectives of the policymakers, the nature of the transmission mechanism between the economies, the policy tools that they have available, and the nature of the disturbances that hit their economies and call for policy responses.

Transmission between the economies in the locomotive example is positive: expansion in one country produces expansion and an improved current account in the other. Negative transmission is also possible: under some circumstances expansionary monetary policy in one country causes contraction in the other. If the exchange rate is viewed as an instrument of policy, competitive devaluation can produce so-called beggar-thy-neighbor outcomes in which a devaluing country gains exports and increases employment at the expense of the other, which increases its imports while it loses exports. Cooperation may then result in less active use of the policy than when the countries are independently pursuing their own interests. For instance, suppose the targets of policy are output and inflation, and monetary policy is the only instrument. In the noncooperative equilibrium, each country is balancing the costs of added inflation against the benefit of higher output. But an expansionary policy in each economy reduces output in the other. If monetary policy in each economy becomes less expansionary, the same income levels can be attained at a lower rate of inflation.[17]

Policies may also be transmitted asymmetrically between countries. As in table 1.2, monetary expansion in America may produce lower output in Europe while European money growth produces higher output in America. If the targets are inflation and output, the cooperative equilibrium is one in which Europe expands relative to the noncooperative case, while America contracts. Despite the prominence of the locomotive theory example, coordination does not necessarily mean more expansion all round.

Cooperative responses depend also, obviously, on the economic disturbances with which they have to deal. If transmission effects are positive, a shift of demand between countries will call for differing policies in the two countries. A worldwide disturbance will call for similar policy responses in different countries if transmission effects are positive.

Differences in objectives between countries affect the particular policy actions that should be taken in each country, but they do not affect the basic principle of gains from cooperation. Europe (or Germany) may be more hostile to inflation than America, but both countries can produce lower inflation rates by cooperating than by pursuing independent policies.[18]

So far it has been assumed that there is a once-for-all decision on policy which takes effect immediately. Policy analysis becomes more difficult when account is taken of both the time lags with which policy works and the fact that policy decisions are made period after period, not once-for-all. Empirical evidence shows long lags in the effects of policy decisions. The J-curve is a relevant example. When lags are long and uncertain, as they are, optimal policy is cautious. The danger is that strong actions taken today will come into effect at an uncertain later date, when they might be totally inappropriate to the economic situation.[19]

It is sometimes argued that the best policy is entirely inactive—that the government should set a constant growth rate of money, fix tax rates and government spending at levels appropriate for the long run, and not respond at all to disturbances to the economy. The argument is not entirely resolved,[20] but there is a clear case for active monetary policy to counteract shifts in money demand that would cause inflation or deflation. Similarly, the short-run inflexibility of prices combined with the rapid adjustment of the exchange rate means that foreign monetary disturbances change the real exchange rate, also creating a possible need for active monetary policy to prevent the shocks from being transmitted to the domestic economy.

Once we recognize the ongoing nature of policy interactions among countries, reputational considerations make cooperative equilibria more likely. Each country knows it will be better off in the long run if the cooperative equilibrium is maintained. Countries may develop strategies both to punish those that do not cooperate, and to earn a reputation for reliability. It then becomes possible that countries will reach and stay at the cooperative equilibrium. This reduces the force of the one-period example by suggesting that there is more cooperation than the discussion of the football spectators suggests.

Coordination through reputation, without explicit international agreements, is less likely the more countries there are. When everyone is at the cooperative equilibrium, the temptation for one small country to break ranks is very strong. The potential cost to it of doing so may also be high, for it is more dependent on the world economy than is a larger country. But because it inflicts very little damage on the rest of the world by not cooperating, it is not certain that it will be penalized. Coordination is probably easier to achieve among larger countries, or among groups of countries that have coordinated policies internally,

despite the inverse relationship between the size and openness of economies.

What happens to cooperation when countries have different views about the effects of policy? Frankel (1986) and Frankel and Rockett (1986) have examined cooperative policy-making when nations have different models of the economy. Given each country's model, it is possible to find a set of policies that each nation believes will improve its welfare. Whether those policies will actually improve economic performance in their countries depends on the true model of the economy. Frankel and Rockett use the twelve models of the economy whose properties are summarized in table 1.2 to examine the outcome of policies that might be agreed to. Assume that each country believes in one of the twelve models, and further that one of the models is correct, but that no one knows which it is. Frankel and Rockett show that it is quite likely that cooperation makes an economy worse off than it would be if it pursued a noncooperative strategy, doing what it regarded as best given the actions of other countries.

The force of this calculation is that the twelve models examined have each been advanced by reputable scholars, they come from several countries, and several might be used in choosing policies in their countries. If policy coordination agreements were made on the basis of those models, they would be quite likely to turn out badly. Just how powerful this result is depends on whether there are policies whose effects are widely agreed upon and which work in the agreed upon manner. It is then possible that policies that are not optimal in any model, but that do well in all of them, would perform well in the real world.

Rogoff (1985) and Kehoe (1986) have shown another condition under which cooperative policy may produce a worse outcome than the Nash equilibrium. In the Rogoff example,[21] domestic wage setting depends on the expected price level. The policy variable is the money stock. In the absence of cooperation, each central bank is constrained from trying to raise output through expansionary policy by the inflationary impact of the resultant depreciation. When the central banks cooperate, that constraint is removed. Expecting more inflation, wage setters set a higher nominal wage, and on average the price level is higher. If the central banks could precommit themselves not to attempt to expand the money supply excessively after the wage has been set, cooperation would produce better performance than uncoordinated policy.[22]

Many of the qualifications to the locomotive theory example raise doubts about the potential gains from cooperative policy-making. Another source of doubt is the weak interaction effects examined in table 1.2. Several authors have attempted to estimate potential gains from cooperation using econometric models. The best-known work is that

of Oudiz and Sachs (1984), who used the Federal Reserve's multi-country model (MCM) and the Japanese Economic Planning Agency (EPA) model to study coordination among the United States, Japan, and Germany.

Oudiz and Sachs assumed that governments target the level of GNP, the inflation rate, and the current account. They estimated the trade-offs that each country was willing to make among the three goals on the basis of experience in those countries. Japan, for instance, appears to put the highest weight on the current account, Germany on the inflation rate.

Using these trade-offs, Oudiz and Sachs (1984) calculated the gains that would have been obtained in 1984–86 by pursuing cooperative policies. Their basic result is that the gains for the United States and Germany would have been small (averaging, across the two models, less than 0.2 percent of GNP per year) while those for Japan were larger (averaging nearly 0.7 percent of GNP per year across the two models).[23] Surprisingly, cooperation involved expansionary fiscal and monetary policies in the United States, and fiscal contraction with monetary expansion in Germany and Japan. Oudiz and Sachs argued that the improvement from cooperation would increase if the entire OECD, or the major European countries, were added to the model.

In a subsequent paper, Oudiz (1985) examined policy coordination within the EMS. Interaction effects are stronger than they are between the United States and the rest of the OECD in table 1.2. Nonetheless, the gains from coordination are again quite limited, except in the case of France which would gain nearly 1 percent of GNP per year. Hughes Hallett (1986) finds small gains from cooperation between the United States and Europe, with most of the gains accruing to Europe.

The game theory literature on policy coordination, then, makes a convincing case that coordination is generally superior to noncooperative policy-making. But beyond that general principle, it provides no simple results showing how cooperative rules should operate. It shows also that there are exceptions to this principle, most important that the application of cooperative policies calculated in incorrect models may worsen rather than improve economic performance. It may be better to look for robust rules that perform well in many models than rules that are optimal in a particular model. Finally, calculations imply that the gains from coordination per se would be small, even if the correct model of the economy were known.

1.3 The Historical Background

International cooperation in economic policy extends back at least to nineteenth-century cooperation between central banks. The Bank

of England and the Bank of France, the major repositories of gold in Europe, helped each other out in several nineteenth-century crises, starting as early as 1825 (Clapham 1944).[24] Russia and France, economically linked through French loans to Russia, also cooperated in maintaining the convertibility of gold in France.

The nineteenth-century gold standard imposed discipline on monetary policies. As has often been remarked, the system was far from automatic.[25] Supposedly, a set of "rules of the game" developed to describe the policies central banks should have followed. The standard account of the operation of the gold standard, in which an expansionary shock in one country leads to a gold outflow, implies that central banks should have permitted the money stock to be determined by gold flows. However, Bloomfield (1959) has shown that gold inflows were typically offset rather than allowed to produce automatic changes in the domestic money supply. Although policy had discretionary elements, one rule was followed consistently: tighten interest rates to defend the convertibility of gold. Thus the indirect effects of high interest rates on domestic activity substituted for the gold flow mechanism which Hume argued equilibrated the system. Explicit cooperation between central banks was episodic, associated with crises, but nonetheless effective. The coordination of nonexistent fiscal policies was not an issue.

Cooperation between central banks became much more active in the 1920s.[26] After Britain decided in 1918 to return to gold at the prewar parity, international conferences in 1920 and 1922 laid the foundation for the return to gold in a gold exchange standard. The conclusions of the 1922 Genoa Conference noted the need to avoid a competitive struggle by central banks to acquire gold but did not specify how such a cooperative solution was to be obtained.

Britain's return to gold in 1925 was actively encouraged by both the League of Nations and the Federal Reserve System. Benjamin Strong of the New York Federal Reserve Bank and Montagu Norman of the Bank of England were in very close touch throughout the 1920s, and the New York Fed supported Britain's return to gold with a $300 million loan. Strong and Norman's attempts to restore the gold standard system seemed to have succeeded by the end of the 1920s when over fifty countries were back on gold.

But by that stage the weakness of the system was already becoming clear. Britain had gone back to gold with an overvalued exchange rate and struggled through the rest of the 1920s to bring prices down further. Tight monetary policy, meaning high interest rates, was under constant attack from the U.K. Treasury, implying that the coordination imposed by the discipline of the inappropriate exchange rate might not withstand domestic political pressures. France in 1926 undervalued the franc and began accumulating gold with the intention of building Paris as a major

financial center. This was the competitive struggle for gold that the Genoa Conference had warned against. Fixed exchange rate systems create an asymmetry between creditors and debtors that enables the former to avoid adjusting, and that creates the incentive for competitive beggar-thy-neighbor devaluations.

The fixed parities could not withstand the shocks of the Great Depression and the persistent attempts of France to accumulate gold.[27] By 1931 Britain was off gold, floating its exchange rate and beginning a period of relative recovery. In 1933 the United States left gold, in the process torpedoing that year's World Monetary and Economic Conference meeting in London that had on its agenda the stabilization of exchange rates. In 1934 the dollar attained de facto stability against gold at $35 an ounce. All through this period France stayed on gold, devaluing eventually in 1936. A tripartite agreement was reached in that year to set exchange rates among the franc, dollar, and sterling, and it operated successfully through 1939, permitting devaluations of the franc while maintaining stability of the dollar-sterling exchange rate.

The lessons of the interwar period for cooperation are mixed. The cooperative return of Britain to gold at the prewar parity—chosen by Britain itself—was a mistake. France's lack of cooperation in competing for gold showed the potential weakness of a fixed-rate system. And the unwillingness of Britain and the United States to subordinate their domestic policies to maintenance of the gold standard when the going got tough is a warning of the effective limitations of international constraints on domestic policy. Issues of fiscal policy coordination did not arise in this period either, aside from general agreement that budgets should be balanced.

The most significant breakdown of international cooperation during the interwar period came in the competitive devaluations and growth of protection that sharply reduced the volume of world trade during the Great Depression. That breakdown, more than the failures of monetary coordination, is the shadow hanging over the international economy, warning of the continued need for cooperative policy.[28]

An important question that arises from the interwar period is that raised by Kindleberger (1986): Was the Great Depression itself largely due to a failure of international monetary leadership? Kindleberger argues that the international system cannot operate successfully unless some country or institution takes the responsibility of acting as lender of last resort in times of distress.

There can be little doubt that vigorous Federal Reserve policy in 1931, directed at stopping the domestic recession, would both have prevented the worst of the Great Depression in the United States and reduced its impact in other countries. But given that the Fed already had the clear task of sustaining domestic stability, it is difficult to see

that agreements on international coordination would have led it to be more expansionary than it was.

Bretton Woods in 1944 was the first, and probably the last, occasion that the entire structure of the international economy could be considered anew. The IMF, as it emerged, was closer to the American (White) plan than to the British (Keynes) proposal. The Keynes plan was more ambitious, particularly in encouraging adjustment on both surplus and debtor countries. Reserves were to be held in international currency (Bancor) units at the IMF, and interest would have been paid on both excess and deficient balances. A country holding excess reserves would have had to discuss with the IMF its plans for adjustment, including appreciation or expansion of the domestic economy. However, the IMF had no power to enforce policy decisions. The IMF would have been required to expand the total of reserves at a rate appropriate to the expansion of world trade.

The adjustable peg exchange rate system was common to both proposals. Under the Bretton Woods agreement, countries could adjust the exchange rate if they were in "fundamental disequilibrium." Except for adjustments within a 20 percent band of the parity first established, members would change exchange rates only with IMF approval—it was not anticipated that they would be adjusted often. Convertibility was expected to be restored after an initial adjustment period. The IMF could lend to deficit countries but was not expected to finance capital outflows, which were instead to be handled through capital controls.[29] Policy coordination would come from the discipline of the fixed exchange rates, and from discussion and consultation within the IMF. "What had been created was the embryo of a world central bank" (Solomon 1977, p. 13), but it did not control the world supply of money or even high powered money.

The IBRD, also set up at Bretton Woods, was expected to help finance postwar reconstruction, but supplanted by the Marshall Plan, it has devoted itself to development. A stillborn International Trade Organization to promote free trade, negotiated in 1946 and 1947, was not ratified. The GATT, a surprising success, has served much that same purpose.

Bretton Woods was followed by a quarter century of substantial exchange rate stability, rapid economic growth, and the growth of world trade. From 1949 to the 1960s, only France and Canada among the major countries adjusted their exchange rates. In 1958 the major countries moved to convertibility, with Japan following in 1964. The dollar had become the world's main reserve currency; the dollar shortage was by the end of the 1950s giving way to concerns about the U.S. balance of payments deficit. Triffin (1960) had begun to warn of the need for a more systematic basis for regulating reserve creation than

U.S. balance of payments deficits. Despite the omens, the system had given the world economy one of its most impressive periods of growth.

In the early 1960s the United States built up a set of measures to defend the dollar, including swaps with other central banks, the issue of foreign-currency-denominated bonds, and the Interest Equalization Tax. The U.S. current account deficit declined during that period and went into surplus, but capital outflows and later foreign (mainly French) gold purchases kept up the pressure. Domestic policy was affected by the position of the dollar: expansionary policy was inhibited at the beginning of the Kennedy Administration, and their monetary policy's "Operation Twist," intended to raise the short interest rate relative to the long, was an attempt to encourage investment without causing a capital outflow. The investment tax credit had the same aim.

The 1960s also saw the development of regular consultation on economic policy among the OECD countries outside the framework of the IMF. The OECD's Economic Policy Committee meets three times a year with senior government officials (e.g., the Chairman of the Council of Economic Advisers from the United States) in attendance. Working Party 3, to which the ten largest members of the OECD (G-10) belong, meets even more frequently. There is no lack of discussion or information about their current economic policies among the major industrialized economies—although countries are less likely to discuss future policy changes in these forums.

The shift of consultations to the OECD reflected both the increase in the membership of the IMF and the European countries' desire to meet on more equal terms with the Americans. The possibility arose in the early 1960s that the United States would have to borrow from the IMF to support the dollar, but IMF resources were inadequate. The G-10 was the locus for discussions that set up the General Arrangements to Borrow (GAB), which would provide—with G-10 approval—loans to the IMF.

In the 1960s the Europeans used Working Party 3 meetings to pressure the United States to deal with the dollar problem. The Europeans attributed the problem to expansionary U.S. monetary policy which, it was argued, was exporting inflation to Europe. Robert Solomon (1977) emphasizes that there was remarkably little discussion of possible exchange rate adjustments. Americans believed the dollar could not be devalued against gold without completely changing the nature of the monetary system by putting the reserve currency role of the dollar in doubt. The Europeans did not want to revalue because the United States had a current account surplus; the problem at that stage was one of capital flows, not the current account.

The discipline imposed by the fixed exchange rate system in the 1960s is worth emphasizing. Germany and the Netherlands revalued

in 1961. The next major adjustment was the British devaluation in 1967. That came after a three-year struggle by the Labor government to avoid the stigma of devaluation. A massive loan package assembled from the GAB, IMF, the United States, and other sources in 1964 preserved the $2.80 parity, but crises recurred in the next two years. Despite cooperative attempts to starve off the devaluation, including both intervention by and loans from the Fed and other central banks, and restrictive domestic policies, Britain in the end succumbed. The Bretton Woods system unquestionably enforced policy coordination—though not to the benefit of the British economy at the time.

Purchases of gold from the London gold pool accelerated after the British devaluation, culminating in the closing of the pool and the institution of the two-tier price system. The United States remained committed to buy and sell gold at the official price in intercentral bank dealings, but not to sell to private buyers. Dollar reserves were still claims on gold, but the agreement was that those claims would not be pursued. Negotiations for the establishment of the SDR were proceeding at the same time.[30] The first SDR's were created in 1970, giving the IMF the ability to create a reserve asset, and opening up the possibility of the IMF developing eventually into a world central bank, as the Keynes plan had envisaged.[31]

Exchange crises became more regular after 1968. Capital flowed into Germany, creating pressure for revaluation. French political problems created pressures for devaluation. In an Alphonse and Gerhardt routine repeated in 1987, each preferred the other to act. Both acted in 1969, when the mark was allowed to float for a time before a new parity was set. In 1970 the Canadian dollar was set afloat. Despite a current account surplus of $2 billion, capital outflows produced a U.S. balance of payments deficit (before official transfers) of $10 billion, 1 percent of GNP.

The Bretton Woods system succumbed in 1971. Massive capital flows forced the mark to float in May. In August the United States imposed the wage-price freeze, a 10 percent import surcharge, and suspended gold convertibility. In subsequent negotiations, the United States agreed to raise the price of gold as part of a package leading to the return to fixed rates. The December 1971 Smithsonian agreement established a new set of parities, which lasted, with strains, for the next fifteen months. During that period the European currency snake, the forerunner of the EMS, was established.

In February 1973, Japan, Italy, and Switzerland floated their currencies. The snake currencies followed, and the worldwide fixed exchange rate system was dead. It had operated successfully until the mid-1960s and had continued to put pressure on domestic policies into the 1970s. It was a victim fundamentally of the failure of countries fully to co-

ordinate their macroeconomic policies. The system imposed discipline on countries in deficit as they faced an increasing probability of running out of reserves. But because its liabilities were the main reserve currency, there was not the same discipline on the United States when it ran deficits. The surplus countries were unwilling to expand at a rate sufficient to make revaluations unnecessary; alternatively, they were unwilling to accept foreign rates of inflation. Nor were the deficit countries willing to accept the contractionary policies that would have been needed for them to protect the exchange rate.

Proximately the Bretton Woods system succumbed to massive international capital flows. Capital flows fast in the international monetary system, and it is doubtful that macroeconomic policies to cure the imbalances of the early 1970s would have taken effect quickly enough to maintain the exchange rate. Perhaps a firm commitment by all countries to pursue exchange rate targets, firmly believed, would have been self-sustaining. But it is hard to imagine that all the major countries will ever firmly commit themselves to exchange rate targets unless they use the same money. Thus it is difficult to see among the major countries the successful return to a fixed exchange rate system with free capital flows.

The fact that the capital flows precipitated exchange rate changes does not establish that they were destabilizing. They may rather have recognized the inevitable. In some cases capital flows were beaten back. In 1964 Italy refused to devalue despite capital outflows, obtained international loans, and prevailed. So for a time did Britain. The Italian refusal to devalue, followed by rapid growth, was probably wise; the British decision followed by three years of slow growth was not. It can be concluded neither that speculative capital flows should always be resisted, nor that they should always be succumbed to.

The outstanding feature and the major surprise of the new era that began in 1973 is the volatility of both nominal and real exchange rates, as illustrated in figure 1.1. Exchange rates fluctuate more than prices of goods but less than stock prices. Table 1.3 presents measures of the variability of the month to month changes in the exchange rate.[32] Equally surprising have been the massive cumulative, and ultimately reversed, movements in the dollar, dominated of course by its movements in the 1980s. Note though that the real value of the dollar is only now returning to its value at the start of the decade.

The issue of whether exchange rates fluctuate excessively has been extensively though inconclusively researched.[33] Pre-1970s theoretical discussion argued that speculation was inherently stabilizing because successful speculators would have to buy low and sell high. More recently it has been shown that speculative bubbles can exist without anyone necessarily losing money. Excessive volatility of exchange rates

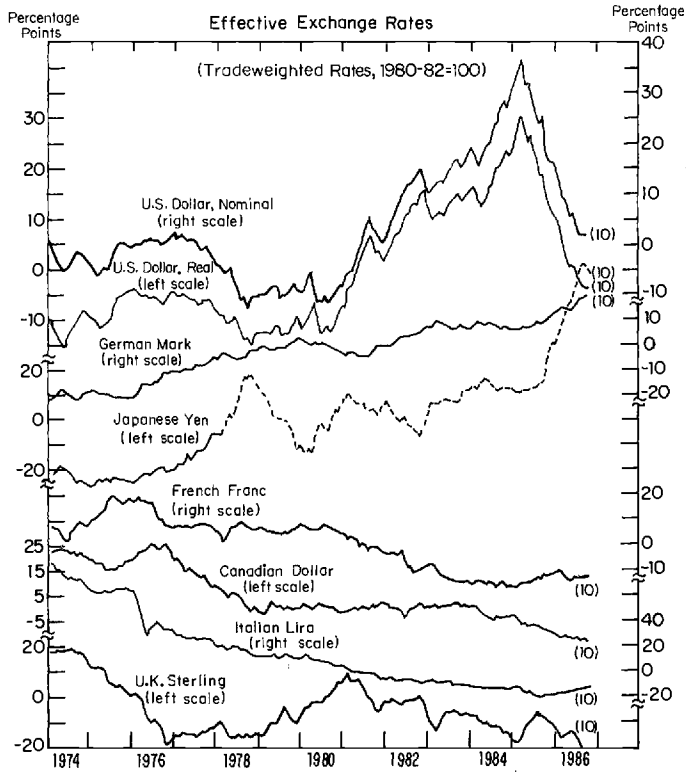

Figure 1.1 Exchange rates, 1974–1987. *Source:* Goldman Sachs Economic Research.

is thus a theoretical possibility, but empirical research has not been able to show that rates have fluctuated more than they should have, given economic policies, the shocks hitting the economy, and the information available to market participants. In particular, the system had to deal with the strains of two massive oil shocks and unprecedented divergences between fiscal policies in the United States and the rest of the world.[34]

Exchange rate movements in 1973 and 1974 led to discussions of intervention among the central banks, which agreed to maintain orderly conditions in the markets. It was already becoming clear that floating rates did not insulate countries from each other's policies and that the same conflicts that had led to the breakdown of Bretton Woods could reappear in the new floating rate world.

Policy discussions and the sharing of information continued in the OECD forums and in the IMF. Policy coordination continued to be discussed and little acted upon. It was during this period that the Economic Summits emerged as vehicles for policy discussions and decisions.[35]

Table 1.3 **Exchange Rate Variability**

	Exchange Rate	CPI	New York Stock Exchange
United States	22.8	5.0	53.9
Germany	19.3	3.9	
Japan	33.1	35.3	

Notes: 1. Data are standard deviations of monthly change in the variables, expressed as a percentage at an annual rate from July 1973 to December 1986.

2. Exchange rate is a trade-weighted (MERM) index from *International Financial Statistics*.

3. Standard deviation of Japanese CPI inflation is very high in part because of high and variable Japanese inflation up to 1975. The standard deviation of Japanese CPI inflation for the period starting July 1976 is only 8.3.

4. The New York Stock Exchange index is Standard & Poor's 500.

Participants in the first Summit, at Rambouillet in 1975, accepted floating exchange rates, giving up the notion that a restoration of fixed parities was likely, and agreed to intervene to maintain orderly markets.

After remaining reasonably stable in the first year of the Carter Administration, the dollar began to slide in 1978 as the U.S. economy, with the aid of active fiscal and monetary policies, continued its rapid recovery from the 1974–75 recession. With the U.S. expansion helping other countries, but the dollar under pressure, the call for international coordination began to be heard. Germany, the strongest economy in Europe and the leader of its currency bloc, was the main focus of attention, seen as the potential locomotive for the world recovery. Japan was under less pressure because it had agreed at the 1977 Summit to seek annual growth of 7 percent and had introduced an expansionary budget.

The Europeans, in turn, regarded U.S. policy as too expansionary. In addition, they argued that the U.S. failure to adjust the price of oil to world levels was worsening its balance of payments and strengthening the Organization of Petroleum Exporting Countries (OPEC). As the 1978 Bonn Summit approached, the dimensions of a deal could be seen. The deal was that Germany would increase government spending by 1 percent of GNP, while the United States would put in place a program to reduce oil imports. In addition, the United States agreed to undertake anti-inflationary measures, including a reduction in a planned 1979 tax cut.

In their analysis of the bargain reached in Bonn, Putnam and Henning (1986) point to domestic disagreements on policy as an important reason for success of the international agreements. In neither Germany nor the United States was there a consensus for the policies agreed to by the governments at the Summit. Oil price decontrol was unpopular in the U.S. Congress; expansion was opposed by important segments of

the German political and economic system. Putnam and Henning argue that the domestic proponents of the policies were able to use the Summit process to move the decision their way, inviting the pressure exerted by foreign governments. They suggest that Chancellor Schmidt may have been quite willing to expand but preferred to conceal his preferences for domestic political reasons. This analysis does not encourage the view that international coordination can easily be achieved on a regular basis.

Whereas the previous London Summit had reached agreed but not plausible growth targets, the Bonn Summit agreement was more specific, and was thus verifiable and credible, in specifying policy actions for the United States and Germany.[36] Japan was specific in agreeing to hold exports to no growth, a commitment that was achieved, but the communique again specified a Japanese growth target rather than specific fiscal or monetary actions. Germany passed the expansionary budget package within a month of the Summit. The United States was slower in following through, but the commitment was an important factor in strengthening the resolve of the Carter Administration to decontrol oil prices.

The Bonn Summit is credited by de Menil and Solomon (1983) with also contributing to the successful conclusion of the 1979 Tokyo Round of tariff negotiations. The London Summit had expressed the desire of the participants for a prompt and positive conclusion of the tariff negotiations, a commitment that was exploited by the U.S. representative to force final agreement by the time of the Bonn Summit.

The second oil shock struck between the Bonn and Tokyo Summits. Both the Tokyo and the 1980 Venice Summits were dominated by the energy problem, and no macroeconomic policy agreements were reached. This was not only because the Germans had begun to regard the Bonn agreement as a mistake, but also because there were no obvious macroeconomic bargains to be reached.

Despite the German expansion, the dollar continued to fall after the Bonn Summit. U.S. inflation was rising. The United States pressured Germany to intervene in support of the dollar, but the Bundesbank resisted, pushing instead for a change in U.S. domestic policy. In October the President announced an anti-inflationary package that included voluntary wage-price restraints. In response the dollar declined sharply. By November the Fed had assembled an announced $30 billion fund which it would use in support of the dollar. This time the dollar responded favorably and continued to rise through the middle of 1979.

In November 1979 the United States made the basic decision to fight inflation through restrictive monetary policy. Although the decision commanded wide international support, it was made largely for domestic reasons as inflation was increasingly recognized as the number one problem facing the nation.

The cast of summit characters changed in the 1980s. With widespread agreement that the fight against inflation was first priority, there was at first little need to discuss macroeconomic policy. At the beginning of the Reagan Administration, the United States adopted a hands-off policy on the exchange rate, showing remarkable equanimity about the rise of the dollar. The vigor of the 1984 recovery kept the dollar problem concealed from the political process through that year. But as the nature of the U.S. twin deficit problem became clearer, and as the political pressures of declining exports and rising imports mounted, echoes of the 1976–78 debate were heard.

With the change of U.S. Treasury Secretary in 1985, and growing protectionist pressure in Congress, the Reagan Administration began to look for ways to reduce the trade deficit and to move the dollar down. Japan-bashing became a popular if ineffective political activity. The Administration was unwilling to raise taxes and was unable to cut spending. Unable to attack the trade deficit through fiscal policy,[37] it was constrained to fight for the opening of foreign markets and to attempt to push down the dollar. The dollar slide that had begun in February 1985 was briefly accelerated by the announcement of the Plaza G-5 agreement of September 1985 that agreed to intervene to push down the dollar. The dollar continued its decline into 1986.

Déjà vu arrived in 1986. Germany and Japan were being pressured to expand to help the United States. Neither wanted to expand, putting the onus of the problem on U.S. fiscal policy. Economists could see a clear bargain: U.S. fiscal contraction offset by domestic monetary expansion and Japanese and German expansion. But the Reagan Administration was not taking that route. There were of course differences between the 1986 and 1976–78 debates. Among them: the inflation rate was low—close to zero in Germany and Japan; the United Kingdom was far less expansionary than it had been a decade earlier.

Talk of policy coordination increased. The 1986 Tokyo Summit agreed that the G-7 finance ministers would meet at least once a year to review the compatibility of their economic objectives. They were to consult a large set of indicators, including policy variables. The finance ministers were "to make their best efforts to reach an understanding on appropriate remedial measures whenever there are significant deviations from an intended course." The significance of this agreement is discussed in section 1.4.

There was also some action. In October 1986 the finance ministers of the United States and Japan agreed that Japan would reduce its discount rate, in that the United States would continue to fight protectionism and that the then-current yen-dollar exchange rate [154 yen to the dollar] was "broadly consistent with the present underlying fundamentals." The agreement noted and strengthened the fiscal expansion package Japan was undertaking and recorded the U.S. tax

reform act. The agreement was also thought to be a signal to the Germans that they might lose their seat at the very top levels if they failed to cooperate.

In February 1987, the G-7 met in Paris and issued a communique stating that exchange rates were currently appropriate given the economic policies being followed. The Germans agreed to increase slightly the tax cut they were planning for 1987, and the Japanese pledged to pursue fiscal expansion, as previously agreed. The United States for its part would attempt to bring its budget deficit down. There was no explicit mention of intervention to attempt to enforce the current levels of exchange rates.

The concentration on U.S.-Europe-Japan relations should not be allowed to obscure the importance of the EMS, set up in 1978. The EMS can be viewed as an agreement by France and Italy to accept German leadership in monetary policy, imposing constraints on their domestic monetary and fiscal policies. The EMS has been surprisingly successful, withstanding even the Mitterrand expansion in 1981–82. With the announcement in 1986 that Italy and France plan to lift capital controls, the EMS now faces a crucial test.[38] British membership, which appears increasingly likely, would also significantly change the nature of the organization by adding another capital-control-free currency to the system. British and German policies would have to be closely coordinated if the fixed exchange rate within the EMS were to hold for any length of time, otherwise capital flows between the two currencies would quickly force changes in the parity.

Discussions of economic policy also take place in the framework of the IMF, under the general heading of surveillance. The end of the Bretton Woods system left the IMF's responsibilities for dealing with exchange rates undefined. The IMF's Article IV, dealing with exchange rates, was amended in 1978. Members recognized their obligation not to manipulate exchange rates unfairly, and the IMF was given the responsibility of exercising "firm surveillance over the exchange rate policies of members." Bilateral Article IV discussions between the IMF and members take place annually, but the Article IV reports are not published.

Multilateral surveillance is less regular and formalized. The IMF Managing Director attends some G-5 meetings but is not apparently in a position to exercise influence. The *World Economic Outlook,* published since 1980, is discussed at Executive Board meetings, but this is not known to influence policy in individual countries. In 1985 both the G-10 and the Group of 24 developing countries published proposals for multilateral surveillance, with a greater emphasis on the international economy and policy coordination. With the Tokyo Summit agreement, these proposals are presumably moving toward implementation.[39]

1.4 The Prospects for Coordination

The historical record suggests the following generalizations:

- The Bretton Woods system imposed significant constraints on domestic policies, including on occasion U.S. domestic policy.
- Under Bretton Woods, countries were not willing to subordinate domestic policies entirely to maintenance of the exchange rate. The same was true under the gold exchange standard of the interwar period.
- Increasingly massive capital flows made maintenance of fixed rates progressively more difficult, perhaps because it was clear countries were not absolutely committed to maintaining the exchange rate.
- Information sharing about economic policy has been extensive since the 1960s and has moved to increasingly authoritative levels of government.
- Interdependence among economies did not markedly decline as a result of the move to floating exchange rates. Countries were revealed not to be indifferent to the behavior of their exchange rates, and they sometimes took domestic policy actions in response. Exchange rate crises occurred, not in the form of an attack on a fixed rate, but rather as a rapid shift out of a currency and rapid depreciation.
- Policy coordination under the Bretton Woods system occurred more as a result of the constraints imposed by the system than by explicit agreement.
- Explicit coordination has been rare in the post–Bretton Woods period. The Bonn Summit is a clear example of such coordination. International political pressures to change economic policy have been common, especially in the last few years, as the magnitude of the U.S. trade deficit problem became clear. Apparent agreements on policy coordination were reached in October 1986 and February 1987, but it is not yet clear whether any policy actions will follow.

The bewildering array of organizations, meetings, plans, and activities described in the previous section should not be allowed to obscure the basic question of what is to be gained by international coordination. The evidence of section 2.2 is that the gains at best would be modest and that there is a possibility that the gains would be negative.

I will now discuss the prospects for four different types of coordination, in the order of the increasing constraints imposed on individual countries.

1.4.1 Surveillance and Information Exchange

Information exchanges already take place on a broad scale. The shift to regular consultation among finance ministers envisaged in the Tokyo

Summit agreement makes it more likely that the international implications of domestic policy decisions will be weighed, as the finance minister contemplates explaining the decision to his counterparts at the next meeting.

Multilateral surveillance can bring an outside perspective to economic discussions that may be clouded by domestic political considerations. In this connection, it could be helpful if a way were found to publish some version of the IMF's Article IV reports, which are of a generally high standard and could serve as an outside technical evaluation of domestic policies. These reports could eventually exercise some influence over domestic policy decisions if they turned out over the years to provide a good analysis of the state of the world economy.

Useful as this type of information exchange is, it cannot be expected to exert more than a marginal influence on policy.

1.4.2 Discretionary Policy Deals

Occasionally there is a clear international policy deal to be made. That was true in 1978; it appears to be true in 1987. Regularly scheduled OECD meetings, those among finance ministers set up at Tokyo, special meetings such as that at the Louvre in February 1987, and the Summits are the appropriate places for such deals to be made. They will and should continue to occur.

It is doubtful though that continuing coordination, "significant modification of national policies in recognition of international economic interdependence," will emerge from these meetings. The domestic political process is sufficiently complicated that the international input cannot be more than a small factor in regular policy-making. Putnam and Henning's (1986) analysis of the Bonn agreement suggests the importance of the domestic political configurations in that case.

In both the Bonn Summit case and the possible February 1987 trade of German and Japanese expansion for a reduction in the U.S. budget deficit along with increased resistance to protection, the proposals involve a change in American policy that looks untenable in the long run. The supporters of coordination in the United States call on the international factor to help change American policy of which they disapprove. It is doubtful that they would be as enthusiastic if in 1982 coordination had required them to accept the current German view that there is very little to be done about high unemployment and that budget balance is the main criterion for good policy.

There is nothing in either the Bonn Summit or the 1987 examples to refute the view that there would be little need for coordination if each country were taking good care of its own domestic policies.

1.4.3 Policy Harmonization through Rule Changes

The rules of the Bretton Woods system enforced more coordination than the successor regime. A return to fixed exchange rates among all the major economies now looks unlikely, but suggestions for changes in the international rules are frequent. I briefly discuss two proposals.

The McKinnon Monetary Rule: Ronald McKinnon (1984) has suggested that money growth rates be coordinated among the United States, Japan, and Germany. His proposal can be phrased alternatively as tieing national money growth rates to the behavior of the exchange rate. An appreciation of a currency is a cause for greater money growth in that country and less money growth elsewhere. The assumption underlying this rule is that international shifts in the demand for money are the main causes of exchange rate changes. The rule could have unfortunate consequences; for instance, expansionary fiscal policy would induce an increase in the money stock.

The rule approach to monetary and fiscal policies, exemplified by the McKinnon monetary rule, is attractive in providing certainty about policy. If optimal rules for all countries could be calculated, taking into account the interactions among economies, it would be sensible to implement them, perhaps even by law. The Bretton Woods system can be seen as an example of such a system, which, while not prescribing policy, put in place an immediate target of policy—maintenance of the exchange rate—that tightly constrained policy choices. That system ultimately broke down; there has been no similar simple replacement suggested; and the state of knowledge about the effects of monetary and fiscal policies is not such as to commend the implementation of monetary and fiscal policy rules any time soon.

The Target Zone Proposal: Seeking to combine the virtues of floating rates with the benefits of fixed rates, John Williamson (1985) has proposed target zones for exchange rates. Countries would announce wide bands within which the exchange rate could move, but they would have to take corrective action as the exchange rate approached the limits of the bands. Williamson's proposals have received widespread attention.[40] The elusive character of the zones suggests they will not much constrain domestic policies unless the exchange rate reaches the limits of the zone. At that point countries will face the same choices they faced in the Bretton Woods system, and it is not clear why they will not then move their zones. The proposal is a subtle and probably ineffective way to introduce gentle discipline on players who have been impervious to rigorous discipline in the past.

1.4.4 A Three-Currency Bloc World

The international economy appears increasingly to be evolving into three currency blocs: the yen, the dollar, and the mark or the EMS

currency. There are fixed rates within each bloc, implying coordination of fiscal and monetary policies within the blocs, and flexible rates between them.

Those countries that are sufficiently willing to coordinate their policies to maintain a fixed exchange rate indicate their willingness by joining the bloc. That is what the decision to join the EMS means, and, if it continues to develop successfully, it may eventually evolve into a truly fixed exchange rate regime.

The three-bloc system is very close to the notion of optimal currency areas discussed by Robert Mundell (1971) in 1961. Mundell asked what characteristic defined an area or group of countries in which it was optimal to maintain a fixed exchange rate. He argued that the key was the mobility within that area of factors of production (i.e., capital and labor).

Consider, for instance, the United States. If each state had its own currency, the Texas dollar would have appreciated in the 1970s and depreciated in the 1980s. Because there is factor mobility in the United States, the adjustment came instead by labor and capital moving into Texas in the 1970s and out in the 1980s. So long as factors are mobile, adjustment can come through movements of factors rather than changes in the real exchange rate.

Why would adjustment through factor mobility be preferable to adjustment through exchange rate changes? Ultimately the argument comes down to risk sharing. If every region in the country were an independent currency area with no factor mobility, individuals' incomes would fluctuate with the state of the local economy. They would do better than average sometimes and less well at other times. With factor mobility, individuals reduce the variability of their incomes by retaining the right to move on to other markets when the local economy shrinks.

On the basis of the mobility of factors of production, Europe may eventually become a natural currency area. Japan and the United States already are. It seems unlikely that full freedom of factor movements, including labor, will develop among the three areas. That is the reason why the world is more likely to see three currency blocs rather than just one, and that is why exchange rates among them are likely to remain flexible.

1.5 Concluding Comments

The notion of international policy coordination is appealing and appears to hold out the promise of major improvements in economic performance. However, estimates of the quantitative impacts of policy decisions in one economy on other economies are quite small. These results, together with explicit calculations of the benefits of coordi-

nation, suggest the gains will rarely be significant. Further, theoretical analysis finds many circumstances under which coordination worsens rather than improves economic performance.

The interest in policy coordination in the United States has been strongest when advocates of coordination were hoping to use international policy agreements to bring about changes in domestic policies that they regarded as either undesirable or eventually untenable. It is entirely possible though that formal coordination would sometimes require a country to undertake policy actions of which it disapproved.

So long as exchange rates remain flexible—and they will likely remain flexible among the three major currency areas—macroeconomic policy coordination among the major blocs is unlikely to advance beyond the provision of mutual information and occasional agreements for specific policy trade-offs. Both information interchanges and occasional policy agreements when the circumstances are right are useful and should be encouraged.

But more consistent ongoing policy coordination in which countries, including the United States, significantly modify national policies "in recognition of international policy interdependence" is not on the near horizon. Fortunately, the evidence suggests that the potential gains from coordination are in any event small: the best that each country can do for other countries is to keep its own economy in shape.

Notes

I am indebted to Geoffrey Carliner, Rudiger Dornbusch, and Martin Feldstein for comments.

1. This definition is from Wallich (1984).

2. Putnam and Henning (1986) provide a comprehensive analysis of this episode.

3. Except for the United Kingdom, the share of exports for each country in 1950 was below its 1929 level. U.S. imports, which amounted to 10 percent of GNP in 1985, have risen more rapidly than exports.

4. Germany has allowed its residents to export capital since 1957; convertibility in 1958 applied to external holders of other European currencies, while capital controls continued for domestic residents.

5. They played this role too in the heyday of the gold standard from 1880 to 1914.

6. The properties of twelve international econometric models were discussed at a Brookings Conference on Empirical Macroeconomics for Interdependent Economies, March 1986. Frankel and Rockett (1986), Hickman (1986), and Holtham (1986) all present summaries of some of the properties of those models.

7. The twelve models are: DRI multicountry; Compact (European Economic Community); EPA (Japanese Economic Planning Agency); Project Link; Liverpool (a rational expectations monetarist model); MSG (McKibbin-Sachs

global); MCM (Federal Reserve Board's Multicountry Model); Minimod (based in the IMF); Interlink (from the OECD); Taylor (from Stanford University); VAR (a minimally structured vector autoregressive model); and Wharton mode.

8. Oudiz and Sachs (1984) show that fiscal expansion may cause depreciation for countries whose liabilities are not held internationally.

9. If the current accounts of both the United States and the rest of the OECD worsen, the current accounts of other countries must improve.

10. The "foreign" effects of the monetary expansions have different signs in some columns. However, estimates of these effects show a wide range, and the precise numerical magnitudes should not be given significant weight.

11. Mundell (1971) is an influential contributor. Hamada (1985), Buiter and Marston (1985), and Cooper (1986) are useful general references to the theoretical literature. This section draws in particular on Canzoneri and Gray (1983), and Canzoneri and Henderson (1987); the latter provides a comprehensive view of recent developments.

12. In game theory jargon, it is called a Nash equilibrium.

13. The mutual expansion cannot continue without limit, either because expansion worsens current accounts (vis-à-vis the rest of the world) or because full employment is reached.

14. The reasoning is as follows: The country had previously expanded to the point where the benefits of expansion were balanced by the cost of appreciation. If it now expands further, the costs of the appreciation outweigh the benefits of the expansion.

15. The usual example is the prisoners' dilemma. Here two suspects, questioned separately, are each offered a better deal if he confesses than if he remains silent while the other confesses. If neither confesses, the prosecution fails to convict. Fearing that the other will confess, each prisoner confesses. If they had been able to coordinate, neither would have confessed. Since it is not clear whether to be on the side of the prisoners (in which case the cooperative equilibrium is better) or the law (when the noncooperative solution is socially preferable), I give a slightly less familiar example.

16. Technically, America is acting as a Stackelberg leader, and the new equilibrium is a Stackelberg equilibrium. See Canzoneri and Henderson (1987) for more precise definitions and a discussion of some problems with the Stackelberg equilibrium.

17. Canzoneri and Gray (1983) analyze this example in detail.

18. It is often pointed out in the literature that the coordination problem disappears if each country has as many policy instruments as targets. With perfect certainty, each country can then attain its targets exactly, and need not worry about foreign decisions. When the effects of policy are uncertain, international coordination may still be useful, even if each country has as many policy instruments as targets.

19. This is what happened after the Bonn Summit in 1978 when an expansionary German fiscal policy began to take effect as the second oil shock hit.

20. It is reviewed at length in Fischer (1988).

21. This is closely related to the Barro-Gordon (1983) analysis in which discretionary policy raises the average rate of inflation.

22. Kehoe's (1986) example is also based on the government's inability to precommit, in his case not to tax capital heavily.

23. The differences between the results using the two models are large, e.g., 0.99 percent of GNP per year gain in the MCM for Japan, versus 0.37 percent per year in the EPA.

24. The assistance from the Bank of France to the Bank of England in 1825 was indirect, the British Foreign Secretary finding assistance from so recently defeated an enemy difficult to acknowledge (Clapham 1944, p. 101).

25. Fischer (1988) discusses the automaticity of the system.

26. Eichengreen (1985) provides an interesting account of this period, drawing on the theoretical developments described in section 1.2 above.

27. Einzig (1937) sharply criticizes French international monetary policy in the interwar period.

28. Devaluations per se were actually expansionary, since by raising the value of gold they increased the nominal value of the world money stock. It should also be noted that there are no estimates of the cost to individual economies of the reduction in the volume of trade. At the macro level, protectionism diverted demand from the international to the domestic economy, and it is not certain that the total loss of demand was necessarily high. At the micro level, protectionism reduced welfare by denying economies the benefits of comparative advantage.

29. In this section I draw freely on Robert Solomon's (1977) account of the period.

30. The creation of the SDR was the culmination of a process that started with a G-10 group set up in 1964 to study the creation of reserve assets.

31. Fischer (1983) discusses this possibility.

32. In table 6.2 of his paper in this volume, Richard Marston presents related data. Apparent differences are a result of my expressing the rates of change as percentages of annual rates.

33. Richard Marston discusses the possible excess volatility of exchange rates in section 6.1 of his paper in this volume.

34. I take up in section 1.4 the question of whether the floating rate system itself made these divergent policies possible.

35. The six largest countries in the OECD participated in the first two Summits; since then, Canada has become a member of the group (G-7). De Menil and Solomon (1983) describe and analyze the Summits through 1982.

36. The appendix of de Menil and Solomon (1983) summarizes the communiques of the first eight Summits.

37. Unless one counts the 1984 *Economic Report of the President* as an administration document, there was no administration recognition through the end of 1986 that the trade deficit is linked to the budget deficit.

38. Giavazzi and Giovannini (1986) argue that capital controls have been essential to the success of the EMS.

39. Kenen (1986) and Solomon (1987) contain insightful discussions and proposals on the prospects of multilateral surveillance.

40. See, for instance, Brainard and Perry (1986).

References

Barro, Robert J., and David B. Gordon. 1983. A positive theory of monetary policy in a natural-rate model. *Journal of Political Economy* 91:589–610.

Bloomfield, Arthur I. 1959. *Monetary policy under the international gold standard: 1880–1914*. Federal Reserve Bank of New York.

Brainard, William C., and George L. Perry, eds. 1986. Symposium on exchange rates, trade and capital flows. *Brookings Papers on Economic Activity* 1:165–235.

Buiter, Willem H., and Richard C. Marston, 1985. *International economic policy coordination*. New York: Cambridge University Press.

Canzoneri, Matthew, and Joanna Gray. 1983. Two essays on monetary policy in an interdependent world. Federal Reserve Board, International Finance Discussion Paper no. 219.

Canzoneri, Matthew, and Dale W. Henderson. 1987. Strategic aspects of macroeconomic policymaking in interdependent economies. Georgetown University. Typescript.

Clapham, John. 1944. *The Bank of England*. Vol. 2. London: Cambridge University Press.

Cooper, Richard N. 1986. *Economic policy in an interdependent world*, chap. 11. Cambridge, Mass.: MIT Press.

de Menil, George, and Anthony M. Solomon. 1983. *Economic summitry*. New York: Council on Foreign Relations.

Eichengreen, Barry. 1985. International policy coordination in historical perspective: A view from the interwar years. In *International economic policy coordination*, ed. Willem H. Buiter and Richard C. Marston. New York: Cambridge University Press.

Einzig, Paul. 1937. *World finance 1935–1936*. New York: Macmillan.

Fischer, Stanley. 1983. The SDR and the IMF: Toward a world central bank? In *International money and credit: The policy roles*, ed. George von Furstenberg. Washington, D.C.: International Monetary Fund.

———. 1988. Rules versus discretion in monetary policy. Forthcoming in *Handbook of Monetary Economics*, ed. B. Friedman and F. Hahn. Amsterdam: North-Holland.

Frankel, Jeffrey A. 1986. The sources of disagreement among international macro models and implications for policy coordination. NBER Working Paper no. 1925. Cambridge, Mass.: National Bureau of Economic Research.

Frankel, Jeffrey A., and Katherine Rockett. 1986. International macroeconomic policy coordination when policy-makers disagree on the model. NBER Working Paper no. 2059. Cambridge, Mass.: National Bureau of Economic Research.

Giavazzi, Francesco, and Alberto Giovannini. 1986. The EMS and the dollar. *Economic Policy* 1(2):455–74.

Hallett, A. J. Hughes. 1986. International policy design and sustainable policy bargains. University of Newcastle upon Tyne, England. Mimeo.

Hamada, Koichi. 1985. *The political economy of international monetary interdependence*. Cambridge, Mass.: MIT Press.

Hickman, Bert G. 1986. The U.S. economy and the international transmission mechanism: A structural comparison of twelve multicountry models. Center for Economic Policy Research, Stanford University, no. 78.

Holtham, Gerald. 1986. International policy co-ordination: How much consensus is there? Brookings Discussion Papers in International Economics, no. 50.

Kehoe, Patrick J. 1986. International policy cooperation may be undesirable. Federal Reserve Bank of Minneapolis, Staff Report no. 103.

Kenen, Peter B. 1986. What role for IMF surveillance? *World Development*.

Kindleberger, Charles P. 1986. *The world in depression*. 2d ed. Berkeley: University of California Press.

McKinnon, Ronald I. 1984. *A new international standard for monetary stabilization*. Washington, D.C.: Institute for International Economics.

Mundell, Robert A. 1971. European and American monetary policy. In R. A. Mundell, *Monetary theory.* Pacific Palisades, Calif.: Goodyear.
Oudiz, Gilles. 1985. European policy coordination: An evaluation. Centre for Economic Policy Research, London, England, Paper no. 81.
Oudiz, Gilles, and Jeffrey Sachs. 1984. Macroeconomic policy coordination among the industrial economies. *Brookings Papers on Economic Activity* 1:1–64.
Putnam, Robert D., and C. Randall Henning. 1986. The Bonn Summit of 1978: How does international policy coordination actually work? Brookings Discussion Papers in International Economics, no. 53.
Rogoff, Kenneth. 1985. Can international monetary policy cooperation be counterproductive? *Journal of International Economics* 18:199–217.
Solomon, Robert. 1977. *The international monetary system 1945–76: An insider's view.* New York: Harper & Row.
———. 1987. IMF surveillance. Brookings Institution. Mimeo.
Triffin, Robert. 1960. *Gold and the dollar crisis.* New Haven: Yale University Press.
Wallich, Henry C. 1984. Institutional cooperation in the world economy. In *The world economic system: Performance and prospects,* ed. Jacob A. Frenkel and Michael L. Mussa. Dover, Mass.: Auburn House Publishing.
Williamson, John. 1985. *The exchange rate system.* Policy Analyses in International Economics no. 5. Washington, D.C.: Institute for International Economics.

2. *W. Michael Blumenthal*

Two Perspectives on International Macroeconomic Policy Coordination

I thought that perhaps I, as someone who is responsible for what is probably the prototype for a large, modern, computer-age, multinational firm, could make a modest contribution to begin with by injecting, if you will, a note of reality into this discussion. Then I'd like to describe to you what it is governments face as they wrestle with macroeconomic policies and as they attempt to coordinate and collaborate on matters relating to macroeconomics.

I will very briefly tell you what Unisys Corporation does and how a company like ours functions. But, of course, this is not intended to be a commercial at all.

Unisys has annual sales of roughly $10 billion, half in the United States, half outside. Our activities are distributed through one hundred different countries, with major concentrations in the European Economic Community, Japan, Canada, Mexico, Brazil, Korea, and Taiwan, in addition to the United States.

We sell information systems and services that consist of totally intermingled products and components. Memory chips come from Japan, logic chips from the United States, cables and similar accessories from Mexico, the heads for the storage gear are assembled in Singapore, central processors are assembled in the United States, the United Kingdom, France, Brazil, Belgium, Canada, and several other places. The software is produced all around the world, including Asia and the Middle East. Media are produced in Ireland. And so it goes.

The point is that our products, both hardware and software, are composed of subsystems and parts and services that come from all over the world, and they are totally intermingled when they reach the user.

Our financial operations are also worldwide. The best example of this was our need to raise about $5 billion quickly last year when we acquired another company. Three leading banks put together a consortium; the telegrams went out at about 4:01 PM on a Monday afternoon, right after the markets closed; and by the next morning a consortium of more than fifty banks had been assembled and the $5 billion had been oversubscribed. This involved Japanese banks, eleven banks in Europe, and the rest in the United States and Canada.

We immediately hedged our interest rate exposure, since these were in large part floating rate loans. Of course, we are constantly in the foreign exchange markets to hedge our foreign exchange rate exposure relating to our regular day-to-day activities in the various countries where we operate.

The executive team of Unisys is multinational. The top forty or fifty people in the company include Americans, British, Swedes, Swiss, Japanese, Germans, Indians, Chinese, Canadians, and probably a few other nationalities.

Production can shift very rapidly in our kind of business. We made a decision just before Christmas of 1986 to move a complex operation from Santa Clara, California, to Singapore. There had been nothing done on this except a feasibility study. The first storage gear heads are being assembled in Singapore this month (April 1987). In something like 90 to 120 days, we were able to move a critical production operation literally halfway around the world.

Our products are usually shipped by air. Since quarterly results are important in the United States, where we're measured on quarterly report cards, I can tell you that we put systems on airplanes on the 29th of March to reach customers all over the world and that they were billed on the 31st. Within 24 to 36 hours, our equipment can go anyplace in the world and reach the customer.

Our computer systems in customer sites are often linked one with the other. For example, large systems in Hong Kong or Taiwan can be

monitored through customer service centers established in Sydney, Australia. If anything goes wrong with a customer anywhere in Southeast Asia, our service centers can monitor, fix, and keep the systems going across national boundaries.

Patents are freely exchanged. They are royalty free, for much of the technology in our industry is pretty well internationalized. Because investments in technology are very heavy, there is an enormous intertwining of companies. To put it another way, everybody in this industry is in bed with everybody else. We buy from our major competitors and they buy from us. Most of us are interlinked with one another. We are, all at the same time, suppliers, customers, and competitors. We joint venture, we co-produce, we share, we compete.

This is the reality of a modern, high-technology corporation, and, of course, there are many, many others like us. Though there are many industries and companies whose focus is much more domestic, I think that this international pattern is becoming more common, whether in automobiles, pharmaceuticals, or even in more traditionally domestic industries such as textiles.

Now I will make a few comments about what I believe this picture of the Unisys Corporation illustrates. First, there is indeed an increasingly high degree of structural interdependence between companies operating across national subsidiaries with regards to products and components, manufacturing operations, the mobility of various factors of production, and the intertwining of operations.

Factor mobility, unthinkable fifteen or twenty years ago, is now a reality, a fact of life. This applies, and I did not stress it, even to assembly labor for both hardware and software. In the case of software, for example, we have arrangements with countries in which the cost of labor is low since labor costs are important in the software area. Throughout the world, therefore, you will find, say, Indian nationals brought from India on temporary duty to do software work in other countries. They are employed in their own countries, as a kind of contract labor, and they remain based in their own countries. This shows that factors of production previously considered immobile have now become quite mobile.

National boundaries have lost much of their meaning for us because of the scope and character of our operations. As far as our operations are concerned, national boundaries have become a hindrance and a nuisance, but we tend to find ways to get around them.

When you think about it, the concept of a "national" corporation is perhaps becoming obsolete. It is difficult to think of Unisys as an American corporation, given the kind of organizational pattern I have described. That argument is even more properly applied to our major competitor, IBM. They have long been one of the larger Japanese

computer exporters, and their products are probably more totally intermingled as to origin than is true for us. Thus, the concept of a national corporate entity in this kind of world is becoming increasingly anachronistic.

The final critical point is that all of this has become possible because in the last ten or fifteen years accelerating technology has fundamentally altered the way we do business.

I will turn now to the government perspective. Thinking about the kind of culture shock I had to go through as I moved from the government sector to the private sector in 1980 clearly brings home to me the widening gap between government thinking, government organization, and government concerns, on the one hand, and the way many key elements in the private sector actually function, on the other. This leads me to two rather important conclusions.

First, technology has made it extraordinarily difficult to understand, let alone manage, our economic affairs and our macroeconomic problems. Perhaps this is self-evident. I think we've all experienced this difficulty during our various tours of duty. I'm not sure that I fully appreciated the width of the gulf that has opened up between practices and requirements when I last served in the government, or that I fully understood the complexities of the new issues we have to face.

The second fundamental conclusion that one would have to reach, except that I don't quite know what to do with it, is that national sovereignty as an underlying basis for the conduct of either domestic or international economic affairs is increasingly inefficient and inapplicable to the kind of economic environment that governments have to face. Or, to put it another way, technology has outstripped or overtaken the kind of political economy that we have been used to in the past.

What are the implications of all this? I'm not suggesting that we ought to strive for world government as a solution, although one could argue that that is where the ultimate logic might lead us. That's obviously not a rational guide for future research, although it does raise interesting questions about where we may ultimately come out. All this does imply that political economists must urgently focus on the means and the mechanisms for the management of either domestic or international economic relations that better take into account the realities of the private sector that I have described.

I should note parenthetically that I have read with interest the debate in the literature about whether international collaboration is useful and the interesting descriptions of cases where coordination of economic policies internationally may in fact be counterproductive. No doubt that's possible. But I would have to say that, at least in the world in which I function, there is little doubt in my mind that the internation-

alization of operations and the efforts to coordinate policies are not zero-sum games. This is true as much for the government sector as it is for the private sector, if it is done right.

The problem that we will be discussing here is, of course, that so far the record of our efforts to cope with the new economic environment is a pretty modest one and that there is, to put it mildly, ample room for improvement.

Based on my experience in government under three presidents during the last twenty-five years, I would say that up to the early 1970s we weren't doing all that badly. We had a reasonably functioning regime for international collaboration suited reasonably well to the then-prevailing circumstances, which were, of course, among others, the paramount importance of U.S. economic power in the world system, Bretton Woods, and the fact that we were operating, in the premicroelectronic era, a point I keep coming back to over and over again.

We had a GATT that functioned reasonably well in trade matters. It was well suited to a world where merchandise trade was of key importance, factors of production were much less mobile, the capital markets were nationally distinct, and tariffs were a critical form of protection, although even then agriculture, nontariff barriers, invisible trade, and similar areas were not really handled well. But these were merely imperfections in a system that otherwise was reasonably efficient.

Similarly, the IMF, the World Bank, and the OECD (as a forum for a discussion of national economic policies) all served us reasonably well during that period. When it came to developed and less-developed country (LDC) relations, by the early 1970s the system was getting rather creaky, as witnessed by the growing dissatisfaction of LDCs leading to the creation of UNCTAD, lack of progress in agriculture, worries about technology transfers, the American challenge, and so forth.

It seems to me that today we have to conclude that most of these institutions have been rendered substantially less effective. They have been overtaken by events. In the trade area, with a bow in Bob Strauss's direction, I would have to say that the last truly far-reaching trade negotiation successfully completed under the GATT was the Kennedy Round which ended in 1967. Since then, really substantive negotiations have become very difficult to complete because such matters as nontariff barriers, intellectual property, agriculture, and transport investment simply are not suitable for negotiation in that kind of forum, and we have not found a successful substitute as yet.

The IMF has been no more successful than the central banks and the ministries of finance in working to keep order in the world financial markets and to keep international exchange rates from overshooting and undershooting and making life difficult for those in the private sector such as myself.

And, of course, these institutions have also proved inadequate to deal with the implications of the debt crisis or to cope with the burgeoning problem of the debt of the developing countries.

So, clearly, we need to think about what steps can be taken, gradually no doubt, to improve the institutional framework. We do need to improve these institutions and to develop new institutions that are better able to cope with the kinds of problems I have described. I would think that this will involve (and presumably this will be discussed here) new and better coordination of the world banking system, perhaps with an information exchange among the central banks with more policy coordination on elements of national monetary policy and a closer coordination with the activities of the IMF. A new regime is needed to limit excessive exchange rate fluctuations, and a better framework to deal with agricultural matters is also long overdue. Here again, technology has been the major factor. If there's any truth to the basic rule that it is the sight of the gallows that clarifies the mind and that it is only in periods of exigency that governments begin to focus on how they can better work together, then it seems to me that the time has come to do more. Clearly, an expanded and improved trade and investment organization that can deal with some of the new issues that I have referred to is needed. And, of course, international collaboration in the security markets and in their regulation—recognizing the fact that these markets are totally tied together and are really functioning as one—would be most helpful.

Let me just say one more thing about the Summits, since I participated in three of them. I have very little to add to what I think has been an excellent summary report by de Menil and Solomon (1983). I agree, based on my experience, that though the Summits are imperfect, they do provide a useful basis on which to build; they are important from the point of view of public education on these issues; they do expose world leaders to each other; and they do get the bureaucracies in the various countries energized and counteract national with international concerns. Thus, it seems to me that even if they do not show any concrete progress, they do serve to keep us from sliding back. And they do allow national governments to focus on and bring to a head disputes, disagreements, and policies that are deadlocked. Thus, Summits can become a convenient political mechanism for national leaders to push forward their own policies. I think that is the story of the Bonn Summit. Obviously, Chancellor Schmidt can speak to this with greater authority.

My impression, looking back on the Bonn Summit as a successful Summit in which something was really accomplished, is that most of the things decided upon were really matters that the various governments at that point wished to do anyway. I know that was true with

regard to the United States on the energy commitment, and it is my impression, at least in looking back (and I'm sure Helmut Schmidt will comment on this), that by the time the Summit had come around, he and his government were also anxious to move on the commitments they had made. The Summit provided a convenient way of accomplishing that. So the notion that the Summits are a true bargaining forum, at least based on the three that I have attended, strikes me as somewhat unrealistic. But they can be an important way for the various government leaders to get their domestic constituencies to go along with what they feel needs to be done. I think that is a technique that ought to be built on, perhaps in a variety of ways. I see that there are two Summit models that are mentioned—one a very informal one just for the top leaders and their deputies to come together; the other a more permanent institutional framework. My own view is that, based on my experience, it's not really a question of one or the other. We probably need both in order to make some progress.

Reference

de Menil, George, and Anthony M. Solomon. 1983. *Economic summitry.* New York: Council on Foreign Relations.

3. *Charles L. Schultze*

International Macroeconomics Coordination—Marrying the Economic Models with Political Reality

Stanley Fischer's background paper provides a balanced and highly useful exposition of recent economic research into the problem of macroeconomic policy coordination. Precisely because it is an excellent analytic summary of the state of the art from the professional economist's standpoint, it highlights how drastically the theoretical discussion is forced to simplify the complexities of the political forces and motivations which actually drive macroeconomic decision making in both the domestic and international arenas. I want to use the analytic framework that Fischer lays out as a starting point and then try to see what happens, along various dimensions, as we introduce some easily

recognizable political and institutional realities that do not square with the usual assumption of the theory. In the process I will make some specific observations about several past and present efforts to achieve macroeconomic policy coordination.

The Theoretical Model

The framework within which macroeconomic policy is typically analyzed has the following characteristics. In each country there is a monolithic decision-making entity, "the government." The government has a relatively limited number of macroeconomic policy objectives; they are usually three in number: output, inflation, and the foreign balance. The government also has a small number of policy instruments to use in nudging the economy toward its targets. (The number of policy instruments is at least one less than the number of macroeconomic targets.) Those instruments are almost always fiscal policy and monetary policy. Finally, all governments agree in broad outline on how the world works with respect to such key matters as the short-run trade-off between inflation and unemployment, the interconnections between domestic policy actions, exchange rates, and the trade balance, and the current economic outlook. Given these underlying assumptions and recognizing that the setting of policy dials by one country affects the economic performance of other countries through trade balances and exchange rates, the theoretical models attempt to show how, and under what specific circumstances, countries can all do a better job of achieving their own macroeconomic goals when they act in concert and in ways that engender mutual trust, compared to the outcome when they act alone. Indeed, in these models macroeconomic policy coordination does not constitute a "deal" or "trade" in which one party gives up one thing to get another. Given the assumptions, each party can, through coordination of policies, have more of what it wants in one or more macroeconomic dimensions without giving up anything in the other.

If the major elements of the policy coordination game were, in fact, as I have sketched out, we should have seen a lot more macroeconomic coordination among countries than we have in recent decades. Why, if there are possibilities of clear gains from coordination that can be identified by all parties, do we not have more of it? Stanley Fischer gives us the analogies of the football spectators and the prisoners' dilemma. Everybody in the football stands would be better off if everyone sat down, but acting alone each spectator finds it in his self-interest to stand. The two prisoners would be better off if both kept their mouths shut, but acting alone each is better off to inform on the other. But this will not do as an explanation. We are not dealing with 50,000 football spectators but with the top officials of only five—or at most seven—

countries. And, unlike the prisoners, no one is keeping these officials from talking to each other.

Some Political Realities

In my judgment macroeconomic policy coordination is so hard to come by and its costs and benefits are so hard to assess because decision makers do not act the way the models require. There are four major ways in which political reality tends to deviate significantly from the underlying assumptions of the theoretical model. Let me first describe them and then suggest how they substantially complicate the problem of both thinking about and carrying out international policy coordination.

First, it is quite common, if not universal, that presidents, prime ministers, cabinet officers, parliamentarians, and congressmen do not think of macroeconomic and other policy instruments solely as instruments but very often treat those instruments as very important ends in themselves, or at least as way stations on the road to some other important end with little relationship to macroeconomic demand management. President Reagan does not think of taxes as an instrument of fiscal policy. Low tax rates are in themselves his highest priority domestic objective on structural supply-side grounds. The shadow price at which he would trade off fiscal deficits for low taxes is, I think, very close to infinite. To the U.S. Congress, spending programs are not fiscal policy instruments but ends in themselves. While I am less familiar with Japan, it is my impression that for Prime Minister Nakasone, reducing the Japanese budget deficit to zero by 1990 is an ultimate objective; Japanese fiscal policy is not for him an instrument to be used for other macroeconomic ends. A bit later on I will try to show how the fact that macroeconomic policy instruments are often themselves political goals usually makes the process of international policy coordination much more difficult, but occasionally it can have the opposite effect.

A second way in which the world differs from the assumptions of theoretical models is that political decision makers in the various countries (and their economic advisers) often do not share a common view of how the economic world works. It is my strong impression, for example, that current German political leaders believe some combination of two things: (1) The scope for faster German expansion is still severely limited by structural rigidities and by an excessive level of real wages. Any substantial demand stimulus from the government would do little to raise output and would mainly be dissipated in higher inflation. (2) Despite the expected fall in exports, overall economic growth in Germany is likely to proceed at a satisfactory pace without the need for additional stimulus from the government. These views are obviously not shared by the U.S. Treasury (or at least they do not

believe them to be applicable to Germany). Similarly, from their public statements and private conversations, top Japanese officials apparently believe strongly that the long-run equilibrium value for the yen to be somewhere in the range of 150 to 160 to the dollar (or higher). They resist a further drop in the dollar not merely because they think it has been going down *too fast,* but rather because it has already reached or fallen below its equilibrium value. It is hard to find anyone in U.S. officialdom who agrees with that conclusion. Fischer recognizes and indeed emphasizes the difficulty that arises for the theoretical analysis of policy coordination when decision makers have significantly different economic models in mind. He cites several articles which conclude that such differences hinder the making of mutually acceptable macroeconomic bargains, and, according to one study, can make them dangerous.[1]

A third way in which the simplifications needed for the theoretical models importantly fail to represent reality is their implicit assumption that for each government there is a single unitary decision maker with a well-defined set of policy preferences.[2] In fact, as we all know, government decisions are the outcome of a tug-of-war within the government itself. On some issues the differences are small and the decisions overwhelmingly one-sided. But sometimes the differences are wide and deep with the power balance fairly evenly divided. In those cases the final decision is a close one and is usually a compromise among the warring factions.

This departure from the theoretical model lends itself at least occasionally to the striking of international bargains and enlarges the possibility of macroeconomic coordination. When part of one government is, for purely domestic reasons, pushing for a change in some macroeconomic policy, the fact that the change can be used to extract a favorable move from other governments can tip the balance toward the proponents of change.[3] It is much more difficult to model this process, however, and because different power centers within a single government have differently weighted objectives and different views of how the world works, it is also more difficult to show that a deal will necessarily improve each country's performance.

The fourth way in which the world of international political bargains differs from the analytic models of policy coordination is that some of the most important possibilities for coordination involve a "deal" in which some countries trade commitments to change macroeconomic policy for concessions from other countries in areas that have little to do with macroeconomics. The 1978 Bonn Summit agreement was a case in point.[4] In fact, the world is even more complicated than this, as we shall see, because even here a "deal" can usually be struck only when there are important *differences of opinion within countries* about the policies that are being "traded."

Let me try very briefly to formulate a few generalizations about how these characteristics affect the prospects for and the potential benefits and costs of different types of policy coordination.

Various Kinds of Policy Coordination

It is useful in thinking about this problem to distinguish two kinds of policy coordination: First, there is coordination through continuing adherence to an agreed upon rule (or set of rules) to guide macroeconomic policy. Bretton Woods provided such a set of rules at the core of which was the commitment so to conduct policy as to maintain fixed exchange rates. Second, there is discretionary coordination based on case-by-case bargaining that produces a specific agreement to do certain specific things on a one-time, or at least time-limited, basis. The agreement reached at the Bonn Summit and, arguably, the Plaza agreement of September 1985 are examples of this second type.[5]

Coordination by Rule: Exchange Rate Target Zones

One prominent proposal that has been circulating in recent years is for a return to a modified and softened form of a fixed exchange rate. Countries would agree to keep their rates within an agreed upon target zone and implicitly undertake to conduct their macroeconomic policies to meet this commitment.[6] One major benefit claimed for such a system is that it would create a political commitment powerful enough to keep countries from embarking on macroeconomic policies that tend to drive exchange rates far away from their long-run equilibrium and create tremendous temporary disturbances in trade and capital flows and industrial structures. The extreme mix of U.S. fiscal and monetary policies of the last five years is a key example of the kind of policy that presumably would be prevented. There are economic reasons to be chary of a target zone system,[7] but I want to concentrate on the political implications. In a world in which political leaders treated the components of fiscal policy—tax rates and expenditure programs—as instruments, and, within limits, attached no overriding importance to their level, then conceivably honoring the commitment to a target zone might over time begin to acquire some weight as a political goal. But, in fact, it is hard for me to imagine that President Reagan would have given up his twin commitments to increased defense spending and cutting taxes for the sake of keeping the dollar within the target zone. The whole job of trying to meet the target zone commitment would have fallen on the Federal Reserve System, which in order to keep the dollar from appreciating would have been committed to a policy of keeping U.S. nominal interest rates low, despite the huge budget deficits. The result would have been the creation of substantial inflationary pressure within the United States and quite possibly after a year or two a dollar which violated the target zone agreement on the downside!

To generalize, on those not infrequent occasions in which the instruments of fiscal policy are treated by political leaders as high-priority objectives in themselves, a country loses the ability to vary the mix of fiscal and monetary policies to meet the exchange rate commitment without substantial damage to domestic output or inflation objectives. In those circumstances, to try to enforce macroeconomic policy coordination through an agreement to fix exchange rates could lead to highly undesirable consequences. Granted that the size of the U.S. fiscal deficit was determined by other than macroeconomic considerations, it was far better to have suffered the divergent macroeconomic and wide exchange rate swings that resulted than to have coordinated policy with a large inflationary bias. And I can imagine political circumstances where the results could be deflationary in nature. More generally, the lesson to be drawn from this is that if one of the instruments of macroeconomic policy is subject to being fixed by considerations other than macroeconomic objectives, adhering to any kind of an exchange rule will sometimes lead to highly undesirable consequences.

Discretionary Coordination: The "Pure" Case

There are several types of discretionary macropolicy coordination. One of these is the "pure" case along the lines of theoretical models that Fischer presented, in which all countries can gain on one or several fronts through coordination without having to give anything up. There are situations where the political realities do match the simplifying assumptions of the model. One example would be an agreement among countries, in the face of a serious recession, not to use competitive beggar-thy-neighbor devaluation as a means of exporting employment.[8] A closely related real world example was the generally well-observed agreement among the OECD countries at the onset of the 1975 recession that they would not resort to protectionist measures. Generally, in a deep recession common to all countries, various kinds of policy coordination can be arranged and can pay off. But these are easy cases. In a deep recession, not complicated by a previously inherited inflation, almost all economic models will at least point in the same direction, even if they disagree over magnitude—aggregate demand expansion can raise output without significant costs in higher inflation. Coordination expansion can remove potential current account and exchange rate problems that might constrain any one country from acting alone. Moreover, while political leaders often treat fiscal policy instruments as ends, the treatment is asymmetric. Low tax rates are an end in themselves, but high tax rates are not. Mutatis mutandis, the same is true of expenditures. In a deep recession political leaders are less likely to balk at fiscal expansion because they have independent goals of high tax rates and low spending programs.[9]

Outside of a deep worldwide recession, however, the existence of the political realities I outlined earlier will usually make the analysis and the execution of purely macroeconomic policy coordination quite difficult.

Fischer, for example, tells us that economists can see a clear potential bargain at the present time—it would consist of, on the one side, reduction in the U.S. budget deficit accompanied by U.S. monetary expansion and, on the other side, Japanese and German expansion of domestic demand. The logic behind this concerted action presumably is that the United States could reduce its budget deficit and its trade deficit at a smaller cost in a depreciated exchange rate if only Germany and Japan would expand domestic demand more rapidly. On the other side, Germany and Japan could raise domestic demand and absorption without risking additional inflation. But here the fact that fiscal policy instruments are treated as goals gets in the way of the macroeconomic bargain. The reason the U.S. budget deficit remains high is *not* because U.S. leaders fear the additional dollar depreciation that deficit reduction would bring. Far from it. Fear of a depreciated dollar is not why President Reagan refuses to agree to a tax increase nor why the Congress refuses to cut spending programs by enough to do the job. The potential bargain is irrelevant to them because it treats as an instrument to be costlessly changed what they consider a policy goal. Since substantial downward pressure on the dollar continues despite the current U.S. budget impasse, the U.S. Treasury and the Federal Reserve would prefer to have more of the relief on the trade deficit come from European and Japanese expansion and less from a depreciating dollar. And it is, of course, quite conceivable that Germany and Japan may end up taking stimulative action on their own. But their actions will not be taken in order to generate faster demand growth than they earlier forecast, but rather to keep demand and output from slipping badly below that forecast.

On the other side of the ledger, the fact that one instrument of economic policy is frozen, because it has been fixed in pursuit of other goals, may increase the need for macroeconomic policy coordination. Several of Fischer's examples have to do with situations in which countries can use only one of the two fiscal policy instruments. Richard Cooper has argued, with respect to European countries, that the emergence of a full-fledged international capital market has increased the freedom of individual countries to expand on their own without the constraint generated by fears of a depreciating currency.[10] Fiscal expansion, partially offset by tight money and higher interest rates, would make it possible to finance the resulting current account deficit without the necessity of a large devaluation. But if, as appears to be the case, most European governments during the past four years set their sights on a policy of long-run "consolidation" of their budget deficits,

expansive fiscal policies were anathema to them. In that case, reliance on a "go it alone" monetary policy for expansion could indeed lead to problems of currency depreciation and great inflationary pressure. Expansion requires coordination of monetary policies. Thus, turning instruments into goals sometimes precludes and sometimes increases the need for policy coordination.

The fact that different governments, and different groups within the same government, often do not agree about how the economic world works makes a big difference to the prospects of policy coordination. In extreme situations—deep worldwide recession or deep inflation—there is more likely to be agreement within and among countries about causes and consequences. But in other situations, different economic models may well give different signals even with respect to direction. So the pure model of mutual gains from cooperation breaks down. At this point what is critical is likely to be whether or not governments internally have unified or strongly competing views about macroeconomic policy. As I said earlier, if there are differences of opinion within a country about the proper course of internal policy, the additional gains from cooperation could tip the balance in one or several countries toward the internal policy needed to complete the coordination agreement. In this case, so long as one agrees with the economic model and the policy objectives of the winners, the well-being of all countries can be improved. There are only two morals I can draw from this. First, a coordinated set of macroeconomic policy changes will be much more difficult both to arrange and to justify in periods that are closer to equilibrium. Second, unless there is a significant group within a particular country that is leaning toward the proposed policy change anyway for purely internal reasons, it may be useless or even counterproductive to try to push a coordinated strategy.

Discretionary Coordination: The "Deal"

The second type of discretionary policy invokes a "deal" in which some countries offer up changes in macroeconomic policy that they may not have otherwise undertaken (or *say* they would not undertake) in return for changes by other countries in areas of policy outside the macroeconomic field.[11]

The 1978 Bonn Summit represented that kind of a deal. The components of the deal were threefold: First, a commitment to expedite the then-lagging MTN discussion leading to the Tokyo Round, which was a particularly significant concession from the French. Second, U.S. agreement to move domestic oil prices up to the world market levels by the end of 1980, a concession wanted by all the other participants. Third, German and Japanese agreement to stimulate their economies,

a policy change especially wanted by the United States and France. That Summit has been widely written about and will, I am sure, be talked about much at this conference. I want to make only three comments.

In the first place, the 1978 Bonn Summit, if not quite unique, was very special. It was, I said, not essentially an exercise in macroeconomic coordination enabling each partner to achieve better performance in its macroeconomic goals, but a trade between macroeconomic and other goals. Only very occasionally, I suspect, will a concatenation of circumstances arise making such a deal possible.

Second, the 1978 Bonn Summit was influenced to an important extent by the existence of differences of opinion. According to Putnam and Henning (1986, 63–69) there existed within the German government some important proponents of fiscal expansion. Equally, within the American government there were those who believed that oil prices should, in any event, be raised toward world levels. I know less about Germany, but in the case of the United States it is almost certain that without the potential gains from a Summit deal the proponents of oil price decontrol would have been far less successful in reaching their objective.[12] I suspect a deal would not have been struck had there not been important groups in both the German and U.S. governments who actively wanted to pursue the very policies which their governments, with alleged reluctance, eventually offered up at the Summit. This makes the 1978 Bonn Summit deal even more unique.

Finally, my own reflections about the 1978 Summit preparations suggest to me that it is in the very nature of such bargaining that each party gradually assigns a more and more unrealistic importance to the concessions it hopes to wring from the other party. Let me quote from a Council of Economic Advisors memorandum to President Carter just before the Summit, entitled *Economic Effects of Alternative Outcomes at the Summit:*

> "If as a result (of German and Japanese economic stimulation and other actions) industrial countries increased domestic growth rates by an average of 1 percent, U.S. exports would grow by about $2 billion a year faster for each year in which the higher growth was sustained. Although it is impossible to predict exchange rates, a depreciation on the order of 1 to 2 percent would be needed to obtain the same effect on the trade balance.

Those were scarcely earthshaking results. But after months of hard negotiation and persuasion, success became much more important as a symbol and for the sake of "having won" than, in the cold light of hindsight, the potential economic gains warranted.

The Current Case for a "Deal"

This leads me to a final observation about policy coordination in the context of today's economic scene. Fischer's table 1.2, which is quite similar to other findings, suggests that the actual gains from purely macroeconomic coordination are not very large. From the standpoint of the United States, for example, the improvement in its current account balance and the slowdown in dollar depreciation from a 1 percent fiscal stimulus in other OECD countries is quite small. It alone would hardly seem to justify the pressure the United States is putting on other countries to undertake additional stimulus.

But there is a more compelling case for coordinated action in Japan, Europe, and the United States—a coordination that is not purely macroeconomic in character and that incorporates large political elements. Japan and Europe have only recently begun to feel the depressing impact on the demand for their output of the falling dollar and the soon-to-be declining U.S. trade deficit. But private economic forecasts and current economic data increasingly suggest, for most of them, a significant slippage in the rate of expansion. The world is already on the edge of substantial economic difficulty on two fronts: First, protectionist pressures did not really subside in the wake of recovery from the 1982 recession; in Europe the recovery has never been strong, and in the United States the effect of recovery in moderating protectionist pressure was, after a time, offset by the growth in the trade deficit. I am not sanguine about the consequences if macroeconomic policy outside of the United States allows already modest economic growth to slip even further and unemployment to begin rising again, while the United States itself is fighting an only partially successful rearguard action against the protectionist pressures engendered by its own trade deficit. Second, the LDC debt situation continues along the precarious edge between muddling through and collapse. Again, failure of Europe and Japan to offset the macroeconomic consequences of the declining U.S. trade deficit could tip the balance.

If political leaders in Europe and Japan and their economic advisers are united in a view that growth prospects remain good, or that macroeconomic stimulus will be largely dissipated in inflation, there is little room for action. But if this is not the case, there is a role for coordinated policy and the possibility of making a deal. First, with respect to protectionism, the gains from the coordination of stimulative action do not rest on the trade or exchange rate spillovers contained in the usual macroeconomic models. As noted above, these are not large, at least among the three major blocks—Europe, the United States, and Japan.[13] Rather the gains arise from the interaction between domestic expansion and protectionism. For one country to maintain or increase growth on

its own—even if feasible from a macroeconomic standpoint—would not generate sufficient spillover effects in world trade to counter mounting protectionist pressures stemming from stagnating growth in other OECD countries. And if such measures begin, even the expanding country would not be able to resist its own internal pressures for retaliation. But this would not be true in a concerted expansion. Thus, even though the purely macro spillovers from coordination are relatively modest, the gains could still be significant when the dynamics of protectionism are taken into account. In the case of the LDCs, faster expansion in Europe and Japan (combined with U.S. action to reduce real interest rates, as indicated below) would generate political and economic gains that could be important in preventing a tipping of the balance in some countries toward financial and political crises.

Second, in contrast to the political situation of the past few years, there are now some American political leaders who believe there is a glimmering hope that enough pressure can be brought to bear on President Reagan that he might agree to accept an overall package of deficit reduction measures, including a moderate-sized tax increase. The recent clamor by the United States for economic expansion in other countries has raised this issue in the consciousness of American public opinion, to the point where other governments have decided that some economic stimulus is in any event warranted in their own countries, and might be able in the upcoming Summit to add an important new set of pressures on the President and the Congress, sufficient to make that glimmering hope a reality. Thus, this year's Summitry might exploit some of the political realities I have listed and try to moderate others: using nonmacroeconomic issues to bargain for macroeconomic concessions, taking advantage of differences of opinion within governments, and converting U.S. tax and expenditure policies from goals to fiscal policy instruments.

Notes

The views set forth in this chapter are solely those of the author and do not necessarily represent the opinions of the trustees, officers, or other staff members of the Brookings Institution. The author has benefited from comments by George L. Perry and Robert Solomon.

1. See Fischer, p. 22, in this volume. See also Cooper (1986b), who says: "But I would conjecture that the major stumbling block to close macroeconomic cooperation is sharp continuing disagreement on means-ends relationships, on the technology of macroeconomics, and the influence of instruments of policy on national economies" (p. 98).

2. This lack of a unitary decision process and its importance on the Bonn Summit is stressed by Putnam and Henning (1986, 104–14). On this and other points, I have drawn importantly from their analysis.

3. Although, paradoxically, if the other governments mistakenly forecast that the proponents of change will win anyway, they may (wrongly) try to get a "free ride," thereby aborting that agreement.

4. See Putnam and Henning (1986).

5. I say "arguably" because some people contend (and I agree) that the Plaza agreement was mainly in terms of changing the rhetoric with no real commitment on macropolicy action.

6. Williamson (1985).

7. For a discussion of the pros and cons of target zone systems, see Brainard and Perry (1986), especially the papers by Cooper, Dornbusch, Branson, and Williamson.

8. However, as Sachs points out in his background paper for this conference (see chap. 15, this volume), once the concern of political leaders in most OECD countries shifted to inflation control in the late 1970s and early 1980s, there was some evidence of beggar-thy-neighbor policies to appreciate currencies and export inflation.

9. But see the argument by Cooper (1986a, 13).

10. Cooper (1986a, 4–8).

11. Putnam and Henning (1986, 114–18) analyze some of the implications of adding issues other than macroeconomic to the bargaining table.

12. This was clearly evidenced in early 1979 after the Summit when internal negotiations were underway over the scope and speed of oil decontrol. The political White House advisers wanted to move as late and as gradually as possible. But in every meeting, participants from the Treasury and other agencies would wave the Bonn Summit commitment, with a decisive effect on the ultimate decision.

13. Within Europe, on the other hand, if fiscal stimulus is blocked by a drive to continue budget consolidation so that only monetary policy is available, the standard case for coordinating expansive monetary policies will hold.

References

Brainard, William C., and George L. Perry, eds. 1986. Symposium on exchange rates, trade, and capital flows. *Brookings Papers on Economic Activity* 1:165–235.

Cooper, Richard N. 1986a. External constraints in European growth. Paper prepared for the Conferences on Impediments to European Economic Growth, Brookings Institution, October 9–10.

_____. 1986b. International cooperation in public health as a prologue to macroeconomic cooperation. Brookings Discussion Papers in Macroeconomics, no. 44.

Putnam, Robert D., and C. Randall Henning. 1986. The Bonn Summit of 1978: How does international policy coordination actually work? Brookings Discussion Papers in International Economics, no. 53.

Williamson, John. 1985. *The exchange rate system*. Policy Analyses in International Economics no. 5. Washington, D.C.: Institute for International Economics.

4. *Alan Greenspan*

Prospects for International Economic Cooperation

Economists generally argue that the ideal international economic order would include a single currency and free trade. Such a regime would maximize economic efficiency and lead to all of the textbook benefits of comparative advantage and optimum allocation of capital. The fifty separate states of the United States achieved that, at least to a large extent, and certainly the Common Market supported by the European Monetary System (EMS) is a noteworthy effort. But common currencies and open borders to goods and services are too often in conflict with national sovereignty.

The concept of international economic coordination is essentially a notion in which sovereignty is traded off for the economic benefits of an international division of labor. One could argue, as indeed I would, that it is to everyone's advantage to engage in the benefits of international trade and finance, and that the exercise of sovereignty would best serve a nation's people over the long run by freer trade and coordinated international economic policies. The problem is that national politics seemingly require a much shorter time frame for fulfillment than it takes for international cooperation to yield benefits to individual countries and their citizens.

This tendency is underscored by the sequence of negotiations that generally are supposed to lead to international cooperation. All too often heads of government, finance ministers, or trade negotiators meet to hammer out an international agreement *after* much of the crucial negotiating leeway has been sharply delimited by previous domestic political compromises. An American presidential candidate, for example, who promises upon election to initiate a trade bill that would double the tariffs on goods competing with industry x is scarcely left with a useful negotiating position when multinational trade talks are on the agenda at his first economic summit as president. A democratic system functions through a series of domestic political compromises and agreements. Too often those agreements significantly preclude avenues for effective compromise over similar issues in later international forums.

Unless some means is found to introduce international considerations in the context of the striking of domestic political agreements, the potential areas of meaningful compromise over real policy alternatives at international meetings is severely limited. At the extreme, economic summits, or their equivalent at lower levels, produce communiques

that are merely the rephrasing of already agreed upon domestic economic initiatives of the individual countries.

Much of the extraordinary economic cooperation of the early post–World War II period was initiated by the United States as part of its domestic political agenda. Our purpose was to support the economic recovery of Europe and Japan and, hence, develop a viable Western economic community. American participation in the IMF, World Bank, OECD, and other economic forums was part of a policy agenda developed within the context of our domestic political system.

Now that the United States is no longer as preeminent in economic affairs as it was a generation ago, it is no longer capable of virtually unilaterally dictating the conditions of Western economic cooperation.

Principal Obstacle

Coordination is particularly difficult in the face of very strong market forces. This is especially the case in the foreign exchange markets. Unless exchange rate coordination is workable, policies attempting to affect interest rate levels and differentials become ineffective. In such an environment, fiscal and trade policy coordination is unlikely to achieve much. Hence, at the risk of spilling over into the subject matter that may be the province of other sessions, I should like to especially focus on this key aspect of macroeconomic policy coordination in today's environment.

The EMS has been able to hold the cross rates among the major European currencies in a relatively narrow band. No such stabilization, however, is likely to be initiated soon for any of the major exchange rates relative to the U.S. dollar. The principal obstacle is the extraordinarily large stock of U.S. dollar assets held in international currency portfolios. Of the approximately $2.5 trillion in international bank claims on nonresidents, more than two-thirds are denominated in dollars. Moreover, about three-fourths of international bond issues are denominated in dollars. Despite Japan's dramatic rise as an international financial power, international claims denominated in yen remain a small fraction of those in dollars.

When there are relatively small amounts of cross-border claims in foreign currencies and, hence, little in the way of financial assets held in other than domestic currencies, the demand for foreign exchange tends to mirror intercountry demand for goods and services. Under those conditions, markets generally tend to arbitrage the currencies toward levels consistent with purchasing-power parity, that is, to equalize what currencies can purchase in the way of goods and services originating in various countries. Such conditions exist, more or less, among the European currencies, and this is a major reason for their relative success in maintaining exchange rate stability.

When substantial cross-border holdings of financial claims exist, however, the demand for one currency relative to another is the combination of demand for transaction and investment purposes. In recent years, it has become ever more obvious that investment demand is virtually swamping transactions demand in all dealings with respect to the dollar. This results from the extraordinary buildup of dollar-denominated financial assets in world markets, the demand for which changes sufficiently rapidly to overwhelm changes stimulated by shifts in the underlying purchasing power of the U.S. dollar relative to other currencies. This is not the case with other currencies, even such "strong" currencies as the yen and the mark, and this is one reason it is so difficult to reach the "right" value of the dollar vis-à-vis major U.S. trading partners.

The very size of dollar investment holdings implies that relatively small random changes in the propensity to hold dollar-denominated assets create flows that swamp transaction demand shifts. Such shifts obscure pressures on the value of the currency stemming from changes in purchasing power parities. And the limited supply of alternative currencies means any moderate change in the propensity to hold dollars will create a disproportionate change in demand for yen or mark securities relative to the available stock of such securities. This results in a major change in these currencies' bilateral exchange rates relative to the dollar. If the aggregate supply of yen among international currencies, for example, were equal to that of the U.S. dollar, exchange rate fluctuations between the yen and the dollar would moderate, although their volatility vis-à-vis other currencies would remain.

Hence, any realistic effort to reduce the volatility of exchange rates is likely to require equalizing the available stocks of the major currencies in international financial markets and/or lowering the aggregate levels.

The recent instability in exchange rates itself has probably induced added flows of cross-border liabilities as a currency hedge, which in turn has tended to increase exchange rate instability. In a hypothetical international monetary system of fixed exchange rates, the hedging requirements would largely disappear and the need to hold balanced currency portfolio positions would be reduced. Fixed rates, if believed, reduce the risk premiums in holding claims in foreign currencies.

Obviously, it is undesirable to reduce cross-border claims between the originators of savings and the ultimate users of those savings. However, the huge interbank market proliferated beyond any expectation in the past 20 years, in part because of the differing regulatory environments for international banking. Many of these interbank deposits are vehicles to avoid national and central bank regulations and reserve requirements (which, of course, are equivalent to taxes on banking claims).

How much reduction in redepositing is either desirable or feasible isn't clear. Should a substantial reduction occur, it also is unclear that the net demand for any currency relative to the dollar would change significantly. A good part of interbank depositing is merely a passive process to facilitate intermediation between the final user of funds and the initial saver.

Anticipatory claims or liabilities in the interbank market that are not immediately supported by final demand do tend to build up, however. For example, a bank anticipating a fall in the exchange rate of the dollar could accept dollar deposits, convert them to another currency, and redeposit them in another bank. The transaction would weaken the dollar's exchange rate, but of course, the subsequent reconversion would strengthen the dollar.

Undercutting Efficiency

In the long run, this expectation-based inventorying of funds cannot have an effect on exchange rates, since net demand and supply of funds ultimately will prevail. Nevertheless, fluctuations in interbank depositing beyond those that passively reflect underlying demand almost surely impose some degree of volatility on the foreign exchange market.

Redepositing cannot be suppressed significantly and effectively, it would appear, without undercutting the extraordinary efficiency of international financial markets. It is possible, however, that less regulation of capital flows could reduce the need for multiple redepositing in the Caribbean or other havens from regulation and taxation.

Minus some attention on this front, exchange rates against the dollar are likely to continue to be volatile. Whether anchored with some fixed standard or not, efforts at international coordination of macroeconomic policies as a consequence will be difficult.

My final concern about the efficacy of economic policy coordination is in a way more fundamental and disturbing. Coordination presupposes a conceptual framework that specifies how economic events in one country affect another and, more generally, how all such events interact internationally. Obviously lacking such a conceptual framework, governments would not know what to cooperate about to achieve even agreed upon goals.

It was implicitly assumed during the formation of the OECD and, specifically, its Economic Policy Committee that the then-accepted Keynesian structure, in its international context, appropriately described the lines of relationship from policy to policy impact.

But as econometric models tied to domestic economies began to run into explanatory difficulties so have their counterparts in the international arena. Stanley Fischer's discussion (see above) on the use of models to lead international coordination is scarcely encouraging on this score.

I would not, however, conclude that the effort of coordination is without value. If we aver that cross-border trade enhances world living standards, we are of necessity asserting that independent economies significantly affect each other. If our tools for influencing coordination are less effective than we would like, it means only that we should sharpen our conceptual understanding of how our constantly evolving economies are changing. We have no choice but to keep trying.

5. *Helmut Schmidt*

Prospects for International Cooperation

I would like to start with a question. When was it that the political elites first understood the necessity of international economic cooperation of governments, central banks, and so on? When did that happen?

It seems to me it happened at the end of World War II, when the political leaders remembered the domino-type of deflationist recession and depression of the early 1930s, and when they, at the same time, understood the necessity of rebuilding—economically rebuilding—the world after World War II. This was done in Europe as well as in East Asia, even in the former defeated enemy countries like Japan and Germany due to the enormous generosity of the United States. These two motivations did flow into each other.

This then led to the already mentioned institutions like Bretton Woods, the World Bank, IMF, GATT, OECD. I think Mike Blumenthal has described it correctly (see above).

The backbone of these institutions was the overwhelming economic and political strength of the United States of America. There was no question of who was to lead the Western world. It was self-understood. There was no other possibility, and there was no question inside the U.S. elites that they had to take the lead.

Later on the strength of the United States started to wither away—due to Mao Tse-tung; due to de Gaulle; due to the Vietnamese war in the 1960s; due to OPEC; due to many other factors including the fact that those countries whom you had helped to regain their economic strength really did regain some strength and you were no longer the one and only overwhelming factor in the world's economy. But this loss of economic strength was also due to the political mistake which you made when you in a so-called benign way neglected not only the monetary developments and the currency developments, but also the deterioration of the functioning of the world's economy as a whole in the late 1960s and early 1970s. The phrase "benign neglect" was coined

for a specific situation, but it was neglect of the interdependence of the economic functioning of the world.

Since at least the late 1960s (you might also say since 1973, when the free floating of currencies started and when the first oil price explosion was started), we have been faced with a growing disorder of the world. The Third World politicians ask us time and again to create a new economic order of the world; this seems to presuppose that there is an old order or a present order. But there is not. We don't have an order in the world. We might call it a fluctuating or fluid constellation, but there is no order. There are almost no rules any longer being kept now.

This was possible even after the beginning of the general currency float in the early 1970s, and there were at least two men in Europe who seem to have understood it. I think there were many more in the world who understood, but we, Giscard and myself, happened to have some influence because by coincidence we were leaders of our governments at the time. We used the peak of this period of détente, which had been brought about by Nixon and Brezhnev at the Helsinki Conference of 1975, to try to influence the other leaders of the Western countries to convene what later became known as an economic summit.

It was not very easy to convince Harold Wilson, he was difficult to convince of anything, anytime. It also was not very easy to convince Gerry Ford, but Gerry Ford let himself be convinced. All of us were aware that the whole thing would run into the rocks if we let it get into the hands of the national bureaucracies, ministries, and what have you. Therefore, it was prepared by personal representatives; people like Raymond Barre, who was then an unknown quantity even in France, who acted as the personal representative of Giscard, who so far knew him only superficially; people like George Shultz, who was with Bechtel in San Francisco at the time and was internationally experienced since he had been Secretary of the U.S. Treasury; or Wilfried Guth, to just remember a third example, who then was a member of the executive of Deutsche Bank and had never been in government.

They were successful in preparing the groundwork, and the first meeting happened in Rambouillet. I think that this was the most successful one. I have participated in eight such Summit meetings, but I think the first one was the best one. I will come back to this qualification a little later.

I would just like to mention that Giscard and the German Chancellor of those years also invented a number of other international, semi-official international groupings. Together with George Shultz, we invented the Group of 5, then called the Library Group. Why? Because the first meeting was held in the library in the basement of the White House.

We invented the Euro-Council, which since 1974 meets three times a year. We also invented the European Monetary System, which has been staggering along after some initial success, since other people have taken over and do not propel it further.

In all these meetings we were very eager to include the Japanese from the beginning, because we did foresee the growing isolation of Japan, which now is greater than it was twelve years ago.

So the feeling in leaders at the time, and this does include Gerry Ford and George Shultz, was that we needed some more international elbow rubbing and some exchange and mutual influencing of ourselves regarding, for instance, our monetary and fiscal policies.

The question is: What did we achieve? We did bring the Japanese into the fold and made them feel a little bit more at home, at least in the beginning. More important was the fact that we achieved some economic education of political leaders, but you have to start this business all over again every once in a while once you get a new prime minister, a new chancellor, or a new president.

Normally political leaders of a country have no knowledge of economic interdependence. They have learned some prejudices in their college years, some of their political friends have added some prejudices, and this is the equipment they bring with them once they enter the national political scene. Moreover, they have been learning over their political career to be responsible to national or regional or local pressure groups.

So we had a little success in educating political leaders. And I think Mike Blumenthal is right, sometimes the participants used each other in order to take legitimate economic steps they had already intended to take but which had run into domestic opposition, and now they could make them look like a result of an international meeting or an international compromise and consensus.

The most important achievement, I think, was that we were able over a long period of years to avoid open economic warfare. This was not inevitable. It could have happened easily. But we were able to avoid open economic warfare, one against the other.

Now there is a long list of what we have not achieved. We did not achieve, as has been hinted at by Alan Greenspan and Charles Schultze and others, exchange rate reliability. Which may not seem like much in the eyes of the Americans or maybe—formerly—in the eyes of the Germans and the Japanese; nowadays I have come to understand that it is a great menace to exporting industries. If you have to export rice or grain, or if you have to export conventional commodities or conventional manufactured goods, international exchange rates matter much.

If you right now try to conquer, as an American enterprise, a new share of the market in Europe or in East Asia, only to see five years later that the dollar goes up again and you lose your market totally, you will be discouraged for the rest of your life from trying it a second time. This is exactly what is happening now in the United States. There is an enormous chance to regain market shares in the world, but people have become discouraged by the ups and downs of the dollar in the last fifteen years.

We did not achieve a world monetary system. What we have is a monetary nonsystem of the world that is much worse than the Bretton Woods system and that is categorically worse than the international gold standard before 1914. It is an invitation to all kinds of trite political practices over the counter and under the table, as it were.

We did not achieve a well-organized cooperation regarding the structure of intermeshed domestic development in the Third World and foreign development aid toward the Third World. We have a lot of organizations in that field, starting with the World Bank and what have you, but the actual development in most countries of the Third World is just chaotic. For instance, there is a handful of bankers in this country and in my country who think that to make the Third World pay interest is much more important than to look at their domestic economic development.

We have failed to coordinate our energy policies. In a time when oil prices were exploding, a big country started to hamper other countries in their development of nuclear reactor branches.

We failed to foresee the debt crisis. We failed to foresee the enormous process of integration of public and private financing all over the world. Central banks have been unable to control the so-called Euro-currencies. Who fifteen years ago would have understood a term like "Euro-dollar"? Anybody would have thought that the dollar comes out of Washington. What is a Euro-dollar? But it does exist. The Euro-currencies have a volume nowadays of $1.8 trillion worth, or something on that order of magnitude, not under the control of our central banks.

We have also failed to prevent offshore banking. Grand Cayman is a sheet of banks nowadays, as is Luxembourg and all those places that are not under surveillance of our national banking regulatory agencies or our central banks, and mischief is brooding there. But since no major tragedy has happened so far, we live with it and think it's normal. It's not normal. Our central banks have abdicated to a great degree. They are not aware of it. All the admonishing of them has not led them to understand that they can solve these problems only if they cooperate much closer than they do. They ought to be the banks of banks. But things could happen in this world in which the central banks are not

big enough and not close enough to each other to control the tragedies that might occur.

We also failed to address the biggest problem behind them all, namely, the world's population explosion. In 1925, I remember it exactly because that was the year when I was entering school, I learned that there were 2 billion people in the world. In the year 2025, there will be more than 8 billion. Right now it's 5+ billion, at the end of the century, twelve years and eight months ahead, there will be 6+ billion people. All these people not only want to be nourished, want to be fed, need water, but all these people will cook their meals and will use energy.There are two main forms of energy. One is nuclear, which entails a number of hazards like Three Mile Island, like Chernobyl, like the fact that no government in the world has yet invented a process that does away with the nuclear waste. The other form of energy is hydrocarbons, and hydrocarbons also cause a number of threats to the environment, including the greatest danger of all, which has not been understood by political leaders so far, but only by a number of physicists. This is the aggravation of the amount of carbon dioxide in the lower atmosphere, the so-called greenhouse effect. This is without any doubt to come. Without any doubt! This has not been understood by us political leaders, nor has it been really dealt with by the economists. Economists are talking about the next quarter or the next year. Their utmost foresight goes three to five years ahead. The greenhouse effect will become important in the middle of the lifetime of our children. Those who are 35 or 40 years of age will live long enough to see thousands of species die out and the level of the oceans come up. People who live in deltas, like the Dutch people or the people in Bangladesh, will have to flee from their homes because the surface of the ocean will go up. We have totally failed to address the population problem, and we still do.

After having overcome the balance of payments network upheaval due to the second oil crisis shortly, let us say, after 1981, we ought not to have failed to make Japan, Germany, Holland, and others aware of the fact that their economic policy mixes are more than 50 percent responsible for the permanent up-valuation of the yen, the Deutsche mark, the Dutch gulden, and others who follow that course.

We have been totally unable to make the political leaders in Japan and Germany understand that in the medium run the world will not be willing to accept a situation in which the great victor of World War II has become the greatest debtor of the world and the former axis powers have become the greatest creditors of the world—Japan in the first place and Germany in the second. This already is the case today. There is no way psychologically for the rest of the world to accept this. The

leaders in both these countries have just begun to realize that they cannot afford to be the leaders of the Western world, a situation in which their debt becomes a greater menace to the rest of the world than the debt of Brazil or Mexico.

There are three triangles in the world of which people are aware. There is the economic triangle with the United States on one of the three corners, Japan on the second, and the so-called Common Market of Europe on the third. (I say "so-called" because it is a rather *uncommon* common market: eleven currencies in one market, twelve tax systems, twelve legal systems, twelve insurance systems, twelve different systems of all kinds of security regulations. You try to introduce an elevator that has been built in England into a newly built hotel in France; it's almost impossible!) But this triangle of economic leaders is well understood, more or less, in the world.

The power triangle is not as well understood. But by the end of the century everybody will perceive that there are two superpowers, America and the Soviet Union, and that there is, inevitably, a third world power: China. China already today could, of course, destroy Moscow with their nuclear rockets, and Moscow could not hope to avoid it; the same is true vis-à-vis the United States. Even if China will still be a developing country in twelve years time, maybe with a level of real income of $700 per capita per year, they will be a military world power.

I am mentioning these two triangles for one reason. It's the United States of America, only, that is part of both these triangles. Russia is not part of the economic triangle; as an economic factor Russia does not play any role and will not play any role in the near future. China will never play any role economically, except that all our exporters think that they are a huge market. But they don't realize that these Chinese have no huge exports nowadays or in the foreseeable future to pay for their imports. So China will not play a major role economically, nor will Russia.

America, of course, will. And America plays a role in this power triangle. America is the only country who participates in both these structures which govern the globe. That's the reason why America is in a position to lead the world in the future.

But if you don't lead the world, who then is going to do it? Probably Luxembourg.

You are in the process of abdicating leadership. The instinct of the United States is to go alone. I am a guest in your country five or six times every year. I seem to sense that the mentality here is isolationist again. Not necessarily in the political meaning of the word, but the instinct is to go alone.

Now you have to understand the reasons for this instinct. You are not really economically interrelated with the world. Take that little

country of Germany, with just one quarter of your population; our exports in absolute figures are even a little bigger than yours. Take Japan, one half of your population; their exports are also a little higher than yours. Your exports are relatively small, less than 10 percent of your GNP. You are not really export-minded because your domestic markets are such huge markets. Why should General Motors try hard to export cars?

In the United States you consume about 3 percent more than you produce. This has been the case for more than just a couple of months; it has gone on now for years. You eat up more than you produce. Your consumption and domestic use of your GNP is 103 percent. You are the richest country in the world, yet, at the same time, you are already the greatest debtor in the world. At the end of Ronald Reagan's term you might have a net foreign debt on the order of, some people say, $700 billion. Early in the 1990s you will have a net foreign debt on the order of $1 trillion, because I can't foresee a U.S. presidential candidate promising to cut into the budget and raise taxation: He would not be elected. If he gets elected on some other promises and takes some time to reverse those promises into opposite actions and tries to undertake them, then the senators and the congressmen will beat him in the neck. So it will be very difficult to change this development in the early 1990s.

Your currency, in my eyes, has become a yo-yo, up and down, up and down. You might be capable of coping with such a yo-yo dollar. It may not mean so much if you are not so much interested in exports anyway. But the rest of the world cannot afford for the major currency of the world to behave like that. I happen to think that it is ridiculous that you have such an enormous deficit in your budget and let about three-quarters of it be financed by the savings of people outside the United States. You are importing about $140 billion in capital and credit, net per year, which is almost three-quarters of your budgetary deficit. This cannot go on for long. Just think about the way you expect the Brazils and the Mexicos to service their debts, namely, by export surpluses. You will have to service your debt to the rest of the world, but you don't have export surpluses, and you are not likely to arrive at export surpluses. You have export deficits. So I guess you will just print the dollar. You will print the interest. You will do away with Paul Volcker and others and change the composition of the open market committee, or whoever takes the decision, and you will just print the dollars. That's my fear for the early 1990s.

You will not be in a position, like Peru or Brazil, to declare a moratorium on servicing your debt. You will service your debt by easing up much further than hither to on your money supply. So there is no global economic leadership by the United States right now, although you are the only ones who could lead the world. Because you are not

leading it, you are not legitimated to criticize the Japanese and the Germans, because you make as big mistakes as they make, only from the other side of the coin. There is no legitimization on the side of the Germans or Japanese to criticize you, and there is no legitimization on your side to criticize the Japanese or the Germans.

Now, are there prospects for improvement? I am uncertain. Governments are responsible enough to answer the demands and questions of national groups, national pressure groups, national public opinion, national parliaments, and then they have to enter into electoral campaigns every once in a while on national levels, local levels, state levels.

The Summits and the Euro-Councils, even the meetings of central bankers and finance ministers, have deteriorated into public relation events. Several thousand journalists come to a so-called summit meeting nowadays and make it impossible for the leaders to talk and listen to each other in confidence. Because every word, every fifteen minutes, is being carried outside of this room by some press speaker to inform the national press, and they print tomorrow "how strongly the chancellor has spoken" or what how he has told the American president or the Japanese prime minister or what evil things he has been committing. You should exclude the press from these meetings, this is my advice!

The greatest tragedy is brooding over Japan, I think, because of the isolation of Japan, which, on the other hand, is becoming the number one financial power house of this world. Please try to compare the capital formation of savings per year in Japan with the capital formation of savings in absolute figures in this country: Capital formation in Japan is double in absolute figures! They are obviously intellectually unable to use that enormous capital formation inside their own country. The instincts of not only Nakasone but the whole political elite in Japan to arrive at a nondeficit budget are ridiculously wrong. There is no choice for them, if they don't use the money by their own industry and by their own government, other than to export the capital. If there continues to be such a big capital demand in this country, the Japanese in a short while will own not only half of Hawaii, but also half of Puerto Rico. They don't understand, though, what they're doing to themselves.

China, on the other hand, will be successful, but economically, as I have said, they will not play a world role.

Turning to the Soviet Union: How good this great communicator Gorbachev may be I don't know, but he doesn't have any economic concept so far. He is opening up some of the rigidities in which they, in the last sixty or seventy years, have governed their public opinion and subdued the opposition intellectuals and other critical voices. He has good instincts there, but he lacks an economic concept.

In my view, there is a great danger of a backlash. Now the intellectuals and the press reluctantly, because they don't know how long such openness will last, start to speak up. They will get used to speaking up and articulating criticisms. Once it appears, in three or five years' time, that the economic promises will not come through, they will criticize that. Then, I guess, the government will clamp down on them again. So I am not too hopeful about the domestic government in Russia.

I am not too hopeful regarding the economic integration of Europe either, but I won't get into that issue because that one takes too much time.

All I would like to say in the end is: Be aware of the fact, ladies and gentleman, that if the United States should for a longer while not take up the reins of economic political leadership in the world, you will also lose your grand strategic leadership of the West. If it becomes common understanding in Europe and elsewhere in the world that you are not able economically to manage your affairs, nobody will believe what you tell them in the field of SDI or zero-zero option or whatever.

All this is not necessarily a cause for despair. I think it is still a good world, but one has to think of the question: What can one do? Mike Blumenthal has described a multinational enterprise. Mike, I was again impressed by what you said about your enterprise, but it is not a multinational one. It's an American enterprise that does business, that produces and sells and buys, in, I don't know, fifty countries of the world. It's a national enterprise, in my opinion.

Multinational enterprises hardly do exist. It's the wrong terminology. There are some binational enterprises, like Royal Dutch Shell or like Phillips. Multinationals do not exist so far. Siemens, for instance, or Hitachi—these are national enterprises spanning the globe, doing business all over the globe. They are not necessarily led by national instincts, that would be wrong to say, but the leadership will be either German, in the case of Siemens, or, in the case of Burroughs or Sperry or Exxon, it will be American.

What is needed, I think, are international meetings of CEOs of firms who do global business. Meetings like this—small groups where they can exchange their experiences, their grievances, their interests, their desires, and their apprehensions. Meetings between Japanese, Europeans, people from let us say Hong Kong, South Korea, America, the Latin American countries, and so on; multinational meetings of financial executives and agricultural leaders, for instance. The ridiculous agriculture policies of Japan, Europe, and the United States are due to the nationalist structure of the pressure groups. They never meet each other, these national pressure groups, they are never forced by

economists to exchange their ridiculous prejudices. Meetings like the meeting of this group today, I think, are really worthwhile.

Summary of Discussion

De Menil began by pointing out that the disparity between economic theory and reality unfairly weakened the case for fixed exchange rates. Results of economic simulation models often show that the gains from coordination are implausibly small and that the degree of interdependence is limited; perhaps this is because so little is known about exchange rate expectations. Yet, de Menil argued, the discipline exerted by fixed rates is a powerful political tool. He expressed the opinion that had the Reagan Administration understood the effects of its proposals on the current account and the exchange rate, it might have proceeded differently. The Mitterrand experiment was reversed, largely due to the pressures imposed by the EMS. Of course, if coordination were completely effective, such an experiment would not have been attempted at all. Coordination at the worldwide level will be more difficult, however, since capital controls would not be as practical as they are in the EMS. It will be harder both to ensure that the chosen parities are credible and to guarantee that policies will be reformulated in order to salvage the exchange rate.

Ruggiero pointed out that the main task for the United States is to find a way to reduce fiscal and merchandise trade deficits while maintaining world growth. Any successful strategy will require more compatible economic policies. What steps should be taken? On the subject of the exchange rate, Ruggiero suggested that the dollar has depreciated enough. At current levels, the current account should improve by $20–$30 billion. Any further rapid and substantial depreciation of the dollar should be against the currencies of the newly industrialized countries. Further substantial depreciation against the EMS currencies and the yen would be counterproductive: inflation and interest rates would tend to rise in the United States, while growth in West Germany and Japan would fall and protectionist pressures abroad would mount.

Ruggiero also emphasized that there is no quick fix for the current situation and suggested five elements which any solution would necessarily contain. First, U.S. taxes must be raised. There are a variety of ways to do this without endangering high growth; a tax on oil is an example. Second, the rest of the European Community would have to find a better strategy for lowering unemployment and improving growth. Third, possibilities for a "reference zone" exchange rate system should be explored. He noted that despite the view of the experts (who were

as pessimistic about the viability of the EMS as they are about worldwide exchange rate target zones), the political will had made the EMS a reality. Fourth, continued adherence to a policy of free trade is needed if developed and, especially, less-developed countries are to grow. Finally, Ruggiero stressed that the imperfect separation between global economic and political interests implied that policy coordination is essential to the survival of the Western alliance.

Robert Solomon asked Helmut Schmidt to clarify his earlier claim that the United States had shirked its leadership role in the world economy. Solomon pointed out that it is the United States that has been forced to lecture a recalcitrant West Germany and Japan on the need to lower unemployment and raise growth. It was the U.S. Treasury that initiated the Plaza agreement, the Baker Plan, the Louvre agreement, and important aspects of the Tokyo Summit.

Schmidt asserted that U.S. statesmen do not demonstrate enough ability to follow through and make their policy initiatives successful. The United States lacks credibility as a leader because its own house is not in order. These problems must be resolved before the United States can hope to fulfill its responsibilities as a world economic leader. Schmidt also contrasted leadership within the U.S. Executive Office with that of other countries. The U.S. president is an imperial figure; to get through, advisers must catch the emperor's ear. In other countries and in large corporations, leaders preside over frequent cabinet meetings and use them more as a forum for policy-making.

McNamar agreed with Schmidt's assessment of the benefits of a rule-by-cabinet system. The difficulty of economic leadership is enhanced in the United States by the separation of powers. Perhaps more prudent policy could be assured if the Secretary of the Treasury were required to have votes of confidence within the Congress. McNamar expressed disappointment that neither a consumption tax nor a value-added tax was passed. In view of this, he felt that as a result of the inability of the Reagan Administration to force a reduction in government spending, the Reagan Administration's economic policies have failed.

Branson asked Mike Blumenthal and Helmut Schmidt to account for their ostensibly contradictory views on world factor mobility. Blumenthal had stressed the ability of his company, and others like it, to arrange financing and to shift production rapidly around the world. If factors are so mobile, then why does Helmut Schmidt assign such importance to the policies of any single country.

Blumenthal agreed with the implications that Bill Branson had drawn from capital mobility, but he noted that factor mobility is far from being either perfect or uniform. He felt that mobility did not bear directly on the issue of leadership, and that a prerequisite for good leadership is having one's own house in order.

Foell asked the former chairmen of the Council of Economic Advisers (CEA) attending about the ability of economic and scientific advisers to affect the views of the president.

Greenspan felt that an adviser can influence decisions, but only when his views are solicited. *Schultze* added that a range of advice is required on all important issues; it is the responsibility of the CEA chairman to give advice from an economic viewpoint and not to posture in order to gain presidential influence.

Fischer noted that many conferees seemed unhappy with floating exchange rates and eager to consider target zone proposals. He reminded them, however, that the world came to floating rates from a system of fixed rates. The Bretton Woods arrangement collapsed because of acute policy divergences. It would be ironic if divergent policies were both the reason we came to a floating system and the reason we left it. Fischer also disagreed with George de Menil's contention that the Reagan Administration would have retreated from its fiscal strategy if the effects of the strategy had been known in advance. These policies reflect the philosophy that government is too big and depend on faulty folk wisdom which holds that spending follows taxes.

Feldstein agreed that the Reagan Administration would not have been induced by a fixed-rate system to change fiscal policy. He added that in 1981 the U.S. Administration did not believe that either government budget deficits or trade balance deficits were forthcoming. Even when substantial deficits began to appear, both the President and his Secretary of the Treasury clung to the view that the tax cut would increase growth enough to eliminate the budget deficit. The now familiar link between budget deficits, interest rates, the dollar, and the trade balance was not seen by the President and other key Administration officials until much later. While it takes time for individual political leaders to learn, their offices have no memory.

Schultze attacked the view that fixed exchange rates could begin to solve pressing international economic problems. Fixed rates have the potential to solve smaller problems associated with floating rates, such as excessive short-term volatility. But larger problems, primarily those of policy coordination, would not disappear with the adoption of fixed rates. Schultze felt that fixed rates might even have been dangerous, given the current Administration's entrenched views on U.S. expansionary fiscal policy.

Sachs argued that, under fixed rates, the U.S. fiscal expansion not only would have continued, but also would have required a large monetary expansion. The cost of fixing foreign exchange would have been substantial inflation in the United States at a time when inflation was already viewed as the major problem confronting the economy. Under this more realistic scenario of much higher U.S. prices, fixed rates

would not even have prevented the real appreciation of the dollar. Sachs characterized as scandalous the lack of quantification behind the belief that expansion by U.S. trading partners would have an appreciable effect on the trade balance. Macroeconomic simulation models consistently yield transmission effects far too small to resolve the current account problem. He stressed that it is unfair to ask a country such as South Korea to appreciate its currency when the effects on U.S. GNP or trade would be negligible. Sachs also argued that a fiscal adjustment in the United States would need to be matched by expansion abroad. With inflation low and real interest rates high, the appropriate vehicle is monetary policy. Investment, particularly in LDCs, would benefit substantially from the lower interest rates.

Frenkel characterized as nostalgic the view that fixed exchange rates would indeed be credible if only the United States had control of its fiscal policies. He asked about the appropriate circumstances under which to consider revamping the international monetary system. He expressed the view that the international monetary system needs to be improved, but a reform should not be viewed as an instrument of crisis management. In the present context, the short-term crisis concerns the fiscal imbalances in the world economy. He stressed that the discipline required to make a fixed rate system work would not materialize simply by declaring parities to be rigid.

Kunihiro reiterated the need for coordination from Japan's perspective and argued that each country must attend first to those of its own policies which conflict with shared goals. In particular, he expressed concern over the U.S. temptation to use the exchange rate as a tool for macroeconomic action. The awareness in Japan of international transmission effects has generated a move toward a more expansionary fiscal policy. Kunihiro expressed further concern that the level of this international awareness is low in the United States, which is a much more closed economy than Americans generally believe, and that foreign conditions do not influence policies in the United States as much as they do in Japan.