



THE 1979 PER JACOBSSON LECTURE

The Anguish of Central Banking

Arthur F. Burns

Milutin Ćirović

Jacques J. Polak

Belgrade, Yugoslavia
September 30, 1979

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FOREWORD

The 1979 Per Jacobsson Lecture was given in the Sava Centar Complex, Belgrade, Yugoslavia, on September 30, 1979, at the invitation of the Honorable Petar Kostić and the Honorable Dr. Ksente Bogoev. The lecture, entitled "The Anguish of Central Banking," was presented by Dr. Arthur F. Burns, with commentaries by Dr. Milutin Ćirović and Jacques J. Polak. This publication contains the complete proceedings of the lecture meeting, which was the sixteenth in an annual series that was begun in the Aula of the University of Basle in 1964. The lectures are sponsored by the Per Jacobsson Foundation in order to promote informed discussion of current problems in the field of monetary affairs, in which Per Jacobsson played so large a role.

The Per Jacobsson Lectures are published in English, French, and Spanish and are distributed by the Foundation without charge. Through the courtesy of other institutions, other language versions are also issued from time to time. Further information may be obtained from the Secretary of the Foundation.

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Opening Remarks

William McChesney Martin

IT IS MY PRIVILEGE to call this sixteenth annual meeting of the Per Jacobsson Foundation to order. I would like to begin by asking Governor Bogoev of the National Bank of Yugoslavia to say a few words to us. Governor Bogoev.

Ksente Bogoev

FELLOW GOVERNORS AND DISTINGUISHED GUESTS: I deeply appreciate the privilege of welcoming to Belgrade on the occasion of the Per Jacobsson Lecture the eminent speakers who will address us today, and all of you, our distinguished guests.

Dr. Burns has undoubtedly chosen a topical and a challenging subject—the tasks faced by central banks in dealing with inflation and the relationship between inflation and the functioning of the international monetary system. I consider this to be a challenging subject primarily because of its significantly increased complexity in the present economic environment.

Inflationary developments and the international monetary system, considered separately, have at present acquired new features and, therefore, their traditional interdependence has also acquired a new meaning. In addition, inflation, traditionally a largely national phenomenon, has developed international characteristics, both with regard to its causes and its consequences. At the same time, the international monetary system has been called upon to cope with a wide range of elements that in the past were strictly national concerns. So we now have the undesirable combination of these phenomena, which is highly resistant to the attempts to dampen inflation. What has contributed to the more pronounced internationalization of inflation? One of the causes is the increased interdependence of economies in the present world, which has resulted not only in positive but also in unfavorable consequences.

This new international dimension of inflation is extremely important. Traditionally we have sought the roots of the inflationary process mainly at the national level. After a thorough analysis of the inflationary mechanisms, we have found that in the national context inflation is rooted in a complex combination of elements of monetary policy (or other policies) relating to demand management and the solving of conflicts of interest between social groups aiming at the largest possible share in income distribution. To these combined causes of inflation we must add conflicts of interest in distribution of income among countries. Thus, the international inflationary spiral has been added to the mechanism of the national inflationary spiral.

An especially significant consequence of the internationalization of inflation is the difficulty of conducting national anti-inflationary policies, particularly as regards the role of central banks in pursuing this policy. On the one hand, the containment of inflationary processes depends on national policy measures. And, on the other hand, against the background of internationalized inflation, these measures are substantially less effective than under conditions of isolated inflationary phenomena in one country. Of course, these are not the only causes of current inflationary trends and of their resistance to anti-inflationary measures implemented by national or international institutions.

However, I do not intend to discuss in detail the causes of inflation. The aim of my remarks is to point to the changed character of the present inflation, its close links with the international monetary system, and to the factors that have to be taken into account when considering monetary policy and the role of central banks, as well as other vital issues.

In this connection, I would like to emphasize that my remarks should not be taken as underestimating the role of monetary and other economic policies in the fight against inflation. On the contrary, the role of these policies has now become even more significant. It is, however, obvious that monetary and other policies, especially central bank policy, must adjust to the changed and much more complex conditions of today, in comparison with the traditional framework of isolated domestic inflation.

I think that many questions relating to this problem have yet to be resolved. This is borne out by the fact that inflationary pressures are still beyond control and that for the time being we have not found a way of effectively controlling inflation. Therefore, to repeat what I said at the beginning, I think that Dr. Burns has indeed found a topical subject for this lecture.

Bearing in mind the vast theoretical knowledge and the practical experience of the speakers who will address us today, I am certain that this lecture meeting will be a significant incentive for all of us to re-examine thoroughly the many essential problems in this field. Thank you.

William McChesney Martin

THANK YOU, GOVERNOR, for those pertinent and appropriate words and for the gracious welcome that has been extended to us by the Yugoslav Government. On behalf of the officers and the directors of the Foundation and all those who have contributed to making this meeting possible—many of whom are in this room today—I want to express our thanks for the facilities and for the help that the Yugoslav Government has given to us in arranging this meeting.

This is a very happy occasion and it gives me a chance to report briefly on the status of the Per Jacobsson Foundation. We are solvent. In fact, we received a contribution during the year. And we have a very effective staff who are working along the lines that I think Per Jacobsson would have approved.

I would like to mention that our president, Frank Southard, who is here today, will be happy to be of assistance to any of you at any time. We want the Foundation to be a cooperative venture, not something that belongs to just a few people. Many of our directors are with us today, including our honorary chairman, Marcus Wallenberg. Unfortunately, Eugene Black was not able to attend, but he sends his regards. We have a very loyal staff. Gordon Williams, Al Gerstein, and Joe Lang, our secretary, most of you have met. Graham Perrett, our treasurer, is also here. If any of you wish to contact the Foundation you can get in touch with any of them at any time. This is what makes it a joy and a pleasure to work with them.

We chose as our subject for today, as is appropriate, a broad topic, the international monetary system and the strains and pressures that are on it. We have in Arthur Burns a man who has had a great deal of experience. He is going to lay the groundwork for our discussion this afternoon. Then we have two commentators who are going to take a different approach. They have a different perspective and have had a different experience than Arthur, and they are going to make their comments not only on what Arthur has said but on a broader theme.

Before introducing Arthur Burns, I want to say that we are glad to have Erin Jucker-Fleetwood with us, the daughter of Per Jacobsson. During the year she completed the biography of Per Jacobsson, which is now available through the Oxford University Press.

Another comment I would like to make is that as the years pass, our numbers are somewhat depleted. Randy Burgess, our founding father, died a little over a year ago. We have also lost Bill Harcourt, Allan Sproul, Jean Monnet, and a number of others. So our ranks are being depleted. But our zeal and interest are still just as strong as ever, and we will continue in the spirit that they would have wanted us to continue.

Now I am going to turn the rostrum over to Arthur Burns. Arthur Burns, I am proud to say, was my successor at the Federal Reserve. I have known Arthur for a good many years, and as you grow older you begin to reminisce. The other day an incident came to my mind: I had the privilege one afternoon of having a long walk with President Eisenhower. It was raining, and we talked about quite a number of things. In the course of the conversation the name of Arthur Burns came up and President Eisenhower said to me, "You know, there is an economist who understands what he is talking about and also can explain it." I didn't in any way try to dissuade him that was indeed so.

We all know the distinguished career that Arthur has had. There is no necessity for me to relate his contributions as a teacher, as the chairman of the President's Council of Economic Advisers, and as an economic policymaker at the presidential level. Arthur is known to all of us, and I think we are extremely fortunate to have him speak today. He has a very good title—"The Anguish of Central Banking." Arthur.

Arthur F. Burns

THANK YOU VERY MUCH, BILL, for your very pleasant introduction and also for the anecdote about President Eisenhower. I treasure his memory. We first met in his office at the White House in early 1953. He had been president of my university, but we didn't have the opportunity to meet then. Professors at a university don't meet their president very often.

One of the advantages of getting older is that you acquire some perspective on life and on history. I have been watching with interest the reappraisal of President Eisenhower. He was widely criticized when he was President; there was a great deal of talk about

recessions and all kinds of domestic difficulties, also about his playing golf rather than attending to the business of government. But, looking back now, I and many others think of the 1950s as a decade of great prosperity, a decade in which we had a stable price level, and also as an era of social tranquillity.

I want to thank Bill for reminding me of President Eisenhower, who first brought me to government. And I want to thank Governor Bogoev for his introductory remarks on the subject of inflation, and for his kind remarks about the address I will be giving. This is my second visit to Belgrade, and I am delighted to see how this city has grown and prospered. Before I leave, Governor Bogoev, I want to learn what I can about your country and its economy.

The Anguish of Central Banking*

Arthur F. Burns

WHEN I WAS INVITED several months ago to deliver this year's Per Jacobsson Lecture, I found it easy to give my consent. Per Jacobsson was a financial statesman whose efforts in behalf of world economic order deserve to be remembered by this distinguished audience. I feel I can honor his memory best by presenting on this occasion some straightforward thoughts on central banking.

The international monetary system, which has been in almost constant turmoil during this decade, has benefited recently from several developments. Under the amended Articles of Agreement, the International Monetary Fund can exercise firm surveillance over the exchange rate policies of its members, and is therefore now in a position to move the nations of the world toward a rule of law in international monetary affairs. Another promising development is the establishment of the European Monetary System with the aim of maintaining relatively stable exchange rates within the Common Market.

A third positive development is recognition by the United States that the persisting deficits in its international current account must be eliminated, and that in the meantime decisive intervention to protect the external value of the dollar may well be needed. The conventional theory that a depreciating currency is beneficial to a nation's foreign trade and to its over-all economic activity has lost its appeal within the American Government. The officials concerned with economic policy have learned that whatever merit may in some circumstances attach to this theory, it is a dangerous guide for a country whose currency is still the centerpiece of the international monetary system. "Benign neglect" of the external value of the dollar came to an end dramatically, and I would hope irrevocably, last November.

*I am greatly indebted to my research colleague, Dr. Arthur Broida, for counsel and assistance in the preparation of this lecture.

This and other constructive developments suggested earlier this year that a closer approach to international equilibrium was under way and calm returned for a while to foreign exchange markets. But uneasiness about the monetary system, particularly about the future of the dollar, has continued and in fact intensified this summer. There have been ample reasons for concern—among them, the political convulsions in Iran, the enormous new increases in oil prices by OPEC, the narrowing at times of interest-rate differentials between New York and foreign money-market centers, and the limited progress in developing an effective energy policy in the United States. While all these factors contributed to nervousness, what has been most disturbing to foreign exchange markets in recent months is the reacceleration of inflation in the United States and in much of the rest of the world. Even Germany and Switzerland no longer qualify as islands of stability.

This unhappy development is one more indication, if any were needed, that the current instability in international finance is largely a consequence of the chronic inflation of our times and that stability will not return to the international monetary system until reasonably good control over inflationary forces has been achieved in the major industrial nations—and especially in the United States. This critical consideration at once raises serious questions: Why is the worldwide disease of inflation proving so stubborn? Why is it not yielding to the various efforts of the affected nations, including some determined efforts, to bring it to an end? Why, in particular, have central bankers, whose main business one might suppose is to fight inflation, been so ineffective in dealing with this worldwide problem?

To me, as a former central banker, the last of these questions is especially intriguing. One of the time-honored functions of a central bank is to protect the integrity of its nation's currency, both domestically and internationally. In monetary policy central bankers have a potent means for fostering stability of the general price level. By training, if not also by temperament, they are inclined to lay great stress on price stability, and their abhorrence of inflation is continually reinforced by contacts with one another and with like-minded members of the private financial community. And yet, despite their antipathy to inflation and the powerful weapons they could wield against it, central bankers have failed so utterly in this mission in recent years. In this paradox lies the anguish of central banking.

My aim today is to consider the causes of this paradox and its implications for the future. Much of what I say will inevitably reflect lessons that I learned during my service as Chairman of the Federal Reserve Board over an eight-year period that ended about eighteen months ago. This may be a good time to reflect on that experience; a year ago I was probably too close to it to have the necessary perspective, and a year from now the sharpness of my impressions may have begun to fade.

I shall focus mainly, although not exclusively, on the United States. That is the area that I know best, and I also believe the American experience—despite some unique aspects—is fairly representative of that of other industrial countries. The developing nations have their own characteristic sources and patterns of inflation. Nevertheless, in our interdependent world, economic conditions in the United States and other industrial countries are bound to have a significant bearing on the fortunes of developing countries.

BY WAY OF INTRODUCTION, I might note that during much of the period since the end of World War II, over-all economic developments were, in the main, satisfactory. By prewar standards, recessions were brief and mild through the mid-1960s, both in the United States and in other industrial countries; world trade expanded rapidly under a beneficent regime of stable exchange rates; and living standards rose impressively throughout the developed world. In most industrial countries inflationary pressures were troublesome from time to time—as in the immediate postwar years, during the Korean hostilities, and for a couple of years after the mid-1950s. These pressures were more substantial in some countries than in the United States, but in none did inflation appear to be out of control.

From 1958 through 1964, the United States enjoyed a remarkable degree of price stability. During that stretch of six years, the wholesale price index remained virtually unchanged and the consumer price index rose at an annual rate of only a little more than 1 per cent. And then the inflation that has ever since been plaguing the American economy got under way. Average wholesale prices rose at an annual rate of 2 per cent from 1964 to 1968, 4 per cent from 1968 to 1972, and 10 per cent from 1972 to 1978. This pattern of accelerating price increases is found in other countries also,

although rates of increase have varied widely, and in most industrial nations the acceleration began later—typically in 1969 or 1970.

Analyses of the inflation that the United States has experienced over the past fifteen years frequently proceed in three stages. First are considered the factors that launched inflation in the mid-1960s, particularly the governmental fine tuning inspired by the New Economics and the loose financing of the war in Viet Nam. Next are considered the factors that led to subsequent strengthening of inflationary forces, including further policy errors, the devaluations of the dollar in 1971 and 1973, the worldwide economic boom of 1972-73, the crop failures and resulting surge in world food prices in 1973-74, the extraordinary increases in oil prices that became effective in 1974, and the sharp deceleration of productivity growth from the late 1960s onward. Finally, attention is turned to the process whereby protracted experience with inflation has led to widespread expectations that it will continue in the future, so that inflation has acquired a momentum of its own.

I have no quarrel with analyses of this type. They are distinctly helpful in explaining the American inflation and, with changes here and there, that in other nations also. At the same time, I believe that such analyses overlook a more fundamental factor: the persistent inflationary bias that has emerged from the philosophic and political currents that have been transforming economic life in the United States and elsewhere since the 1930s. The essence of the unique inflation of our times and the reason central bankers have been ineffective in dealing with it can be understood only in terms of those currents of thought and the political environment they have created.

Historically, Americans have had deep faith in the concept of progress—in the idea that it was realistic to expect to better one's own lot and that of one's family in the course of a lifetime. During the greater part of America's history, government intervention in economic life was only peripheral. Personal progress was generally viewed as a reward for personal effort—assisted, perhaps, by good fortune. Provision for bad times or other contingencies of life was deemed prudent, but that was a private responsibility. The American's way through life lay along the road of self-reliance; only in extremity did he look to government or his neighbors for economic assistance.

This tradition of individualism was shattered by the cataclysmic events of the 1930s and 1940s. The breakdown of economic order

during the Great Depression was unprecedented in its scale and scope, and it strained the precept of self-reliance beyond the breaking point. With one-quarter of the labor force unemployed, personal courage and moral stamina could guarantee neither a job nor a livelihood. Succor finally came through a political idea that was novel to a majority of the American people but compelling nonetheless—namely, that the Federal Government had a far larger responsibility in the economic sphere than it had hitherto assumed.

Under the New Deal the Federal Government undertook extensive projects of public construction and offered work relief as well. It gave direct relief to the needy—a function previously performed only by local authorities or private charity. It established unemployment insurance and old-age pensions. It took steps to raise wages and prices with a view to fostering economic recovery. And beyond these innovative actions, the Federal Government greatly extended the range of its regulatory activities. It intervened massively in the securities market, in banking, in the public utilities industry, in the housing market, and in the farm sector; and it gave labor unions broad new rights and powers. Together, these and other New Deal measures laid the foundations of an activist government—a government responsible not only for relieving suffering and insuring against economic adversity, but also for limiting “harmful” competition, subsidizing “worthwhile” activities, and redressing unequal balances of market power. In less than a decade the government became a leading actor on the economic stage.

Just as Americans were persuaded during the depression that the Federal Government should help the unemployed, so they were taught by the experience of World War II to look to government to prevent unemployment in the first place. Under the compulsions of war, the government had demonstrated that it could assure gainful employment for every willing hand. It therefore seemed reasonable, and not only to the followers of Keynes, to expect government to do the same in a time of peace. In 1944, when President Roosevelt set forth the basis of his postwar domestic program in an “Economic Bill of Rights,” he put “the right to a useful and remunerative job” at the head of the list. With the war ended, the Employment Act of 1946 explicitly proclaimed the Federal Government’s responsibility to promote “maximum employment,” and this came to mean “full employment” as a matter of law as well as popular usage.

Armed with the Employment Act, the Government sought to demonstrate that it could combat unemployment with preventive as

well as curative measures. In fact, the period from World War II to the mid-1960s was marked not only by a dampening of the business cycle but also by persistent increases in the prosperity of American families. On the one side, rising incomes, reflecting substantial gains in labor productivity, made possible rising consumption, greater leisure, and better provision for retirement. On the other side, a steady stream of new and often improved consumer goods tended to sustain the growth of aggregate demand. The extensive development of consumer credit institutions made it easier for people to acquire automobiles, household appliances, and other goods and services, the desire for which was continually being whetted by alluring advertisements and the illustrations of potential life styles broadcast by television and the movies. The seemingly inexorable rise in living standards for the bulk of the population was reflected in upward trends in the proportion of families that owned their own home, that owned a summer home, that possessed one, two, and even three automobiles, that had telephones, that owned television sets, clothes washers, and food freezers; also in the proportion of the population that had graduated from high school and from college, that traveled abroad, that owned corporate stock, that carried life insurance, and so on.

This experience of economic progress strengthened the public's expectations of progress. What had once been a quiet personal feeling that the long future would be better than the past, particularly for one's children, was transformed during the postwar years into an articulate and widespread expectation of steady improvement in living standards—indeed, to a feeling of entitlement to annual increases in real income.

But the rapid rise in national affluence did not create a mood of contentment. On the contrary, the 1960s were years of social turmoil in the United States, as they were in other industrial democracies. In part, the unrest reflected discontent by blacks and other minorities with prevailing conditions of social discrimination and economic deprivation—a discontent that erupted during the "hot summers" of the middle 1960s in burning and looting. In part, the social unrest reflected growing feelings of injustice by or on behalf of other groups—the poor, the aged, the physically handicapped, ethnics, farmers, blue collar workers, women, and so forth. In part, the unrest reflected a growing rejection by middle-class youth of prevailing institutions and cultural values. In part, it reflected the more or less sudden recognition by broad segments of the population

that the economic reforms of the New Deal and the more recent rise in national affluence had left untouched problems in various areas of American life—social, political, economic, and environmental. And interacting with all these sources of social disturbance were the heightening tensions associated with the Viet Nam War.

In the innocence of the day, many Americans came to believe that all of the new or newly discovered ills of society should be addressed promptly by the Federal Government. And in the innocence of the day, the administration in office attempted to respond to the growing demands for social and economic reform while waging war in Viet Nam on a rising scale. Under the rubric of the New Economics, a more activist policy was adopted for the purpose of increasing the rate of economic growth and reducing the level of unemployment. Under the rubrics of the New Frontier and the Great Society, broad-scale efforts were made to stitch up open seams in the fabric of affluence—inadequate or unequal education, housing, medical care, nutrition. Under the rubrics of civil rights and citizen participation, minorities and other disadvantaged groups were given political weapons to maintain, consolidate, and extend their gains.

The interplay of governmental action and private demands had an internal dynamic that led to their concurrent escalation. When the Government undertook in the mid-1960s to address such “unfinished tasks” as reducing frictional unemployment, eliminating poverty, widening the benefits of prosperity, and improving the quality of life, it awakened new ranges of expectation and demand. Once it was established that the key function of government was to solve problems and relieve hardships—not only for society at large but also for troubled industries, regions, occupations, or social groups—a great and growing body of problems and hardships became candidates for governmental solution. New techniques for bringing pressure on Congress—and also on the state legislatures and other elected officials—were developed, refined, and exploited. Congress responded by pouring out a broad stream of measures that involved government spending, special tax relief, or regulations mandating private spending. Every demonstration of a successful tactic in securing rights, establishing entitlements, or extracting other benefits from government led to new applications of that tactic. Various groups found a powerful ally in the federal courts, which repeatedly struck down legislative or administrative limitations on access to government benefits. Even government employ-

ees, particularly at the state and municipal levels, discovered the pecuniary rewards of shedding genteel notions of public service and pressing economic demands with a strident militancy.

Many results of this interaction of government and citizen activism proved wholesome. Their cumulative effect, however, was to impart a strong inflationary bias to the American economy. The proliferation of government programs led to progressively higher tax burdens on both individuals and corporations. Even so, the willingness of government to levy taxes fell distinctly short of its propensity to spend. Since 1950 the federal budget has been in balance in only five years. Since 1970 a deficit has occurred in every year. Not only that, but the deficits have been mounting in size. Budget deficits have thus become a chronic condition of federal finance; they have been incurred when business conditions were poor and also when business was booming. But when the government runs a budget deficit, it pumps more money into the pocketbooks of people than it withdraws from their pocketbooks; the demand for goods and services therefore tends to increase all around. That is the way the inflation that has been raging since the mid-1960s first got started and later kept being nourished.

The pursuit of costly social reforms often went hand in hand with the pursuit of full employment. In fact, much of the expanding range of government spending was prompted by the commitment to full employment. Inflation came to be widely viewed as a temporary phenomenon—or, provided it remained mild, as an acceptable condition. “Maximum” or “full” employment, after all, had become the nation’s major economic goal—not stability of the price level. That inflation ultimately brings on recession and otherwise nullifies many of the benefits sought through social legislation was largely ignored. Even conservative politicians and businessmen began echoing Keynesian teachings. It therefore seemed only natural to federal officials charged with economic responsibilities to respond quickly to any slackening of economic activity—at times, in fact, as in the early days of 1977, to sheer illusions of such slackening—but to proceed very slowly and cautiously in responding to evidence of increasing pressure on the nation’s resources of labor and capital. Fear of immediate unemployment—rather than fear of current or eventual inflation—thus came to dominate economic policymaking.

This weighting of the scales of government policy inevitably gave an inflationary twist to the economy, and so too did the expanding role of government regulation. Traditional ways of protecting

particular groups against competition—such as raising farm price supports, increasing minimum wages, and imposing import quotas—did not lose their appeal as inflation kept soaring. On the contrary, all these devices of raising costs and prices were liberally employed even in the face of accelerating inflation during 1977 and 1978. Also troublesome were the newer social regulations—those concerned with health, safety, and the environment—that kept multiplying during the 1970s. However laudable in purpose, much of this regulatory apparatus was conceived in haste and with little regard to the costs being imposed on producers. Substantial amounts of capital that might have gone into productivity-enhancing investments by private industry were thus diverted into uses mandated by the regulators. Improvements in productivity were also slowed by the discouragement of business investment that resulted from the increasing burden of income and capital gains taxes. Progress in equipping the work force with new plant and equipment proceeded much less rapidly during the 1970s than during the 1950s or 1960s, and this shortfall contributed to the productivity slump and thus to the escalation of costs and prices.

Additional forces on the side of supply contributed to the inflationary bias. As the income maintenance programs established by government were liberalized, incentives to work tended to diminish. Some individuals, both young and old, found it agreeable to live much of the time off unemployment insurance, food stamps, and welfare checks—perhaps supplemented by intermittent jobs in an expanding underground economy. Even enterprising and ambitious individuals who sought permanent jobs could be more leisurely or more discriminating in their search when the government, besides pursuing a full employment policy, provided a protective income umbrella during jobless periods. In such an environment, employed workers could demand and often achieve longer vacations with pay and more frequent holidays and sick leave, besides enjoying coffee breaks and other social rites on the job. In such an environment, they could afford to reject a pay cut or a small wage increase when their employer pleaded serious financial difficulties. Thus the number of individuals counted as unemployed could rise even at times when job vacancies, wages, and the consumer price level were rising.

The philosophic and political currents that transformed economic life and brought on secular inflation in the United States have run strong also in other industrial countries. Rising economic expectations of people, wider citizen participation in the political arena,

governmental commitments to full employment, liberal income maintenance programs, expanding governmental regulations, and increasingly pressing demands on government for the solution of economic and social problems—all these became common features of the industrial democracies. And just as the rapid expansion of government activities in the United States was accompanied by persistent budget deficits and inflation, that too happened in other industrial countries. Indeed, other countries have often practiced loose governmental finance and inflation on a more intensive scale than has the United States.

AND SO I FINALLY COME to the role of central bankers in the inflationary process. The worldwide philosophic and political trends on which I have been dwelling inevitably affected their attitudes and actions. In most countries, the central bank is an instrumentality of the executive branch of government—carrying out monetary policy according to the wishes of the head of government or the ministry of finance. Some industrial democracies, to be sure, have substantially independent central banks and that is certainly the case in the United States. Viewed in the abstract, the Federal Reserve System had the power to abort the inflation at its incipient stage fifteen years ago or at any later point, and it has the power to end it today. At any time within that period, it could have restricted the money supply and created sufficient strains in financial and industrial markets to terminate inflation with little delay. It did not do so because the Federal Reserve was itself caught up in the philosophic and political currents that were transforming American life and culture.

The Employment Act prescribes that “it is the continuing policy and responsibility of the Federal Government to . . . utilize all its plans, functions, and resources . . . to promote maximum employment.” The Federal Reserve is subject to this provision of law, and that has limited its practical scope for restrictive actions—quite apart from the fact that some members of the Federal Reserve family had themselves been touched by the allurements of the New Economics. Every time the Government moved to enlarge the flow of benefits to the population at large, or to this or that group, the assumption was implicit that monetary policy would somehow accommodate the action. A similar tacit assumption was embodied in every pricing decision or wage bargain arranged by private parties or the Government. The fact that such actions could in combination be wholly incompatible with moderate rates of monetary expansion was

seldom considered by those who initiated them, despite the frequent warnings by the Federal Reserve that new fires of inflation were being ignited. If the Federal Reserve then sought to create a monetary environment that fell seriously short of accommodating the upward pressures on prices that were being released or reinforced by governmental action, severe difficulties could be quickly produced in the economy. Not only that, the Federal Reserve would be frustrating the will of Congress to which it was responsible—a Congress that was intent on providing additional services to the electorate and on assuring that jobs and incomes were maintained, particularly in the short run.

Facing these political realities, the Federal Reserve was still willing to step hard on the monetary brake at times—as in 1966, 1969, and 1974—but its restrictive stance was not maintained long enough to end inflation. By and large, monetary policy came to be governed by the principle of undernourishing the inflationary process while still accommodating a good part of the pressures in the marketplace. The central banks of other industrial countries, functioning as they did in a basically similar political environment, appear to have behaved in much the same fashion.

In describing as I just have the anguish of central banking in a modern democracy, I do not mean to suggest that central bankers are free from responsibility for the inflation that is our common inheritance. After all, every central bank has some room for discretion, and the range is considerable in the more independent central banks. As the Federal Reserve, for example, kept testing and probing the limits of its freedom to undernourish the inflation, it repeatedly evoked violent criticism from both the Executive establishment and the Congress and therefore had to devote much of its energy to warding off legislation that could destroy any hope of ending inflation. This testing process necessarily involved political judgments, and the Federal Reserve may at times have overestimated the risks attaching to additional monetary restraint.

Any such errors of political judgment are extremely hard to identify; but I believe, in any event, that errors of economic or financial judgment have in practice been far more significant. In a rapidly changing world the opportunities for making mistakes are legion. Even facts about current conditions are often subject to misinterpretation. Statistics on unemployment in the United States provide a good example. Even before World War II ended, some economists were trying to determine how much frictional and

structural unemployment would exist when the demand for labor and the supply of labor were in balance; in other words, the rate of unemployment that would reflect a state of full employment. Before long, a broad consensus developed that an unemployment rate of about 4 per cent corresponded to a practical condition of full employment, and that figure became enshrined in economic writing and policymaking. Conditions in labor markets, however, did not stand still. A huge influx of women and young people into the labor force, the liberalization of unemployment insurance, the spread of welfare programs, the progressive lifting of statutory minimum wages, the increasing proportion of families having more than one worker, and the increase of national affluence itself—all these changes in the economic and social environment served to render the conventional 4 per cent figure obsolete. The unemployment rate corresponding to full employment is now widely believed to be about 5½ or 6 per cent, and this year's report of the Council of Economic Advisers appears to concur in that judgment. But governmental policymakers, while generally aware of what was happening in the labor market, were slow to recognize the changing meaning of unemployment statistics, whether viewed as a measure of economic performance or as a measure of hardship. The Federal Reserve did not escape this lag of recognition and, once again, I believe that other central banks at times have made similar mistakes.

While misinterpretations of unemployment statistics or other current information have consequences for all public policymaking, there are other problems of interpretation to which the central banker's calling is peculiarly subject. Monetary theory is a controversial area. It does not provide central bankers with decision rules that are at once firm and dependable. To be sure, every central banker has learned from the world's experience that an expanding economy requires expanding supplies of money and credit, that excessive creation of money will over the longer run cause or validate inflation, and that declining interest rates will tend to stimulate economic expansion while rising interest rates will tend to restrict it; but this knowledge stops short of mathematical precision.

Partly as a result of the chronic inflation of our times, central bankers have been giving closer attention to the money supply than did their predecessors; but they continue to be seriously concerned with the behavior of interest rates. They face difficult questions about the relative weight to be given to measures of money and interest rates in the short run and long run; about the concept or

concepts of money that are most significant for policy purposes; about the interpretation of such developments as the growth of Eurocurrency deposits and credits; about the length and regularity of the lags with which changes in monetary growth rates influence business activity and prices; about the likely changes in monetary velocity as a consequence of institutional innovations and business cycle developments; and so on and on—as any student of central banking and monetary theory well knows. And there are more fundamental problems about potential conflicts between domestic and international objectives, about the appropriate response to exceptional events not encompassed by theory, and about the precise relevance of any theory based on past experience to a world where behavioral patterns are continually evolving.

It is clear, therefore, that central bankers can make errors—or encounter surprises—at practically every stage of the process of making monetary policy. In some respects, their capacity to err has become larger in our age of inflation. They are accustomed, as are students of finance generally, to think of high and rising market interest rates as a restraining force on economic expansion. That rule of experience, however, tends to break down once expectations of inflation become widespread in a country. At such a time, lenders expect to be paid back in cheaper currency, and they are therefore apt to demand higher interest rates. Since borrowers have similar expectations, they are willing to comply. An “inflation premium” thus gets built into nominal interest rates. In principle, no matter how high the nominal interest rate may be, as long as it stays below or only slightly above the inflation rate, it very likely will have perverse effects on the economy; that is, it will run up costs of doing business but do little or nothing to restrain over-all spending. In practice, since inflationary expectations, and therefore the real interest rates implied by any given nominal rate, vary among individuals, central bankers cannot be sure of the magnitude of the inflation premium that is built into nominal rates. In many countries, however, these rates have at times in recent years been so clearly below the ongoing inflation rate that one can hardly escape the impression that, however high or outrageous the nominal rates may appear to observers accustomed to judging them by a historical yardstick, they have utterly failed to accomplish the restraint that central bankers sought to achieve. In other words, inflation has often taken the sting out of interest rates—especially, as in the United

States, where interest payments can be deducted for income tax purposes.

In addition to these direct effects of inflation, there are other effects that raise doubts about the meaning of particular growth rates of the monetary aggregates. I have in mind changes in financial practices that evolved in the United States during the 1960s—particularly during the bouts with tight money in 1966 and 1969—and that culminated in an explosion of financial innovations in the 1970s.

Many of these changes were facilitated by regulatory actions or the development of new computer technology. But the driving force behind them was the incentive that sharply rising market interest rates gave to financial institutions and their customers to change their ways of doing business. Commercial banks responded to rising rates by economizing on non-interest-bearing reserves, and their customers responded by economizing on non-interest-bearing demand deposits. Both banks and large corporations developed new sources of funds in the Eurodollar market and the domestic commercial paper market. Banks developed new techniques of liability management by exploiting these sources as well as the vast potential of the federal funds market and the market for negotiable certificates of deposit. Other financial institutions—including savings banks, savings and loan associations, credit unions, and money market mutual funds—developed new transactions services in connection with customer accounts on which they paid interest. Banks fought this competition for transactions balances by offering large depositors special services that reduced the average level of balances they had to carry and by employing various ingenious means to pay interest on balances that were held in large part for transactions purposes.

Developments of these kinds have had profound consequences for the environment in which American monetary policy operates. Not long ago, the thrust of monetary restraint was conveyed more by reductions in the availability of credit—particularly residential mortgage credit—than by rising interest rates; at present, rising interest rates are the primary channel of restraint. This means that a higher level of interest rates is required to achieve any given degree of restraint—quite apart from the effects of inflation premiums that I discussed earlier. But how much higher is not clear; only time will tell. Not long ago, changes in M_1 , the familiar monetary aggregate confined to currency and demand deposits, reflected reasonably well

changes in the aggregate volume of transactions balances; at present, with new alternatives to bank demand deposits emerging all the time, a lower rate of growth in M_1 is required to achieve any given degree of restraint. But how much lower is not clear; only time will tell. Nor is it clear what other monetary aggregate, if any, would be more serviceable than the traditional M_1 as a monetary indicator. As a result of these effects of inflation, central banking has not only lost its moorings in interest rates; that has happened to a large extent also in the case of the monetary aggregates—certainly in the United States and perhaps in other countries as well.

There is no need to expand further on the opportunities for misjudgment that in recent years have surrounded policymaking at central banks. Some uncertainty, of course, has always characterized monetary policy, just as it has characterized policy decisions generally, whether in public or private life. It should be noted, however, that lags in recognizing some of the developments I have been discussing—with respect to unemployment rates, interest rates, and growth rates of the monetary aggregates—would tend to bias policy toward monetary ease. Moreover, the emergence of an inflationary psychology in industrial countries has imparted an asymmetry to the consequences of monetary errors, even if the errors themselves occurred as often in one direction as the other.

There is a profound difference between the effects of mistaken judgments by a central bank in our age of inflation and the effects of such judgments a generation or two ago. In earlier times, when a central bank permitted excessive creation of money and credit in times of prosperity, the price level would indeed tend to rise. But the resulting inflation was confined to the expansion phase of the business cycle; it did not persist or gather force beyond that phase. Therefore, people generally took it for granted that the advance of prices would be followed by a decline once a business recession got under way. That is no longer the case.

Nowadays, businessmen, farmers, bankers, trade union leaders, factory workers, and housewives generally proceed on the expectation that inflation will continue in the future, whether economic activity is booming or receding. Once such a psychology has become dominant in a country, the influence of a central bank error that intensifies inflation may stretch out over years, even after a business recession has set in. For in our modern environment, any rise in the general price level tends to develop a momentum of its own. It stimulates higher wage demands which are accommodated by

employers who feel they can recover the additional costs through higher prices; it results in labor agreements in key industries that call for substantial wage increases in later years without regard to the state of business then; and through the use of indexing formulas, it leads to automatic increases in other wages as well as in social security payments, various other pensions, welfare benefits, also in rents on many properties and in the prices of many commodities acquired under long-term contracts. On the other hand, unintended central bank effects of a restrictive type do not ramify in similar fashion. To develop any significant momentum in unwinding inflation, they would need to be both large and repetitive—a combination that can hardly occur under prevailing conditions in the industrial democracies.

If my analysis of central banking in the modern environment is anywhere near the mark, two conclusions immediately follow. First, central banks have indeed been participants in the inflationary process in which the industrial countries have been enmeshed, but their role has been subsidiary. Second, while the making of monetary policy requires continuing scrutiny and can stand considerable improvement, we would look in vain to technical reforms as a way of eliminating the inflationary bias of industrial countries. What is unique about our inflation is its stubborn persistence, not the behavior of central bankers. This persistence reflects the fundamental forces on which I dwelt earlier in this address—namely, the philosophic and political currents of thought that have impinged on economic life since the Great Depression and particularly since the mid-1960s.

My conclusion that it is illusory to expect central banks to put an end to the inflation that now afflicts the industrial democracies does not mean that central banks are incapable of stabilizing actions; it simply means that their practical capacity for curbing an inflation that is continually driven by political forces is very limited. Historically, central banks have helped to slow down the pace of economic activity at certain times and to stimulate economic activity at other times. They have also contributed to economic stability by serving as lenders of last resort or even going beyond that traditional function. During this decade alone, the Federal Reserve moved on at least two occasions to prevent financial crises that otherwise could easily have occurred. I have in mind particularly the failure of the Penn Central Transportation Company in June 1970 and the failure of the Franklin National Bank in October 1974. In the former case

the inability of Penn Central to refinance its outstanding commercial paper caused consternation among holders of commercial paper generally. To prevent a financial panic the Federal Reserve put aside its monetary targets for a while, opened the discount window wide, and changed its regulations so that commercial banks could raise funds in the open market to finance firms unable to renew their maturing commercial paper. In the Franklin National case, the Federal Reserve loaned to that troubled international bank almost \$2 billion; and while these advances were outstanding it was possible to arrange a takeover by another bank that protected the interests of Franklin's depositors and customers. These actions were influenced by a feeling of responsibility for the financial system as a whole—international as well as domestic. The central banks of some other countries, notably the Bank of England, have likewise discharged constructively the function of serving as lenders of last resort, and the entire concept of central bank responsibility has been both widened and clarified through discussions in recent years at the Bank for International Settlements.

All this and much more deserves to be noted about central banks—especially their tireless efforts to awaken the citizens of their respective countries to the economic and social dangers posed by inflation. But whatever the virtues or shortcomings of central banks may be, the fact remains that they alone will be able to cope only marginally with the inflation of our times. The persistent inflation that plagues the industrial democracies will not be vanquished—even substantially curbed—until new currents of thought create a political environment in which the difficult adjustments required to end inflation can be undertaken.

THERE ARE SOME SIGNS, as yet tenuous and inconclusive, that such a change in the intellectual and political climate of the democracies is getting under way. One of the characteristic features of a democracy is that it encourages learning from experience. Recent disturbing trends in economic and social life, particularly the persistence and acceleration of inflation, have led to much soul-searching by leaders of thought and opinion. Among economists, the Keynesian school has lost much of its erstwhile vigor, self-confidence, and influence. Economists are no longer focusing so exclusively on unemployment and governmental management of aggregate demand. They are paying more attention to the management of aggregate supply—to the need to strengthen incentives to

work and innovate, to ways of stimulating saving and investment, to the importance of eliminating barriers to competition, to ways of reducing the regulatory burdens imposed on industry, and to other means of bolstering business confidence. Many economists now recognize that much of reported unemployment is voluntary, that curbing inflation and reducing involuntary unemployment are complementary rather than competitive goals, that persistent governmental deficits and excessive creation of money tend to feed the fires of inflation, that the high savings rate that usually prevails in the early stages of inflation is eventually succeeded by minimal savings, and that when this stage is reached it becomes very much harder to bring inflation under control.

The intellectual ferment in the world's democracies is having its influence not only on businessmen and investors, but also on politicians, trade union leaders, and even housewives; for all of them have been learning from experience and from one another. In the United States, for example, people have come to feel in increasing numbers that much of the government spending sanctioned by their compassion and altruism was falling short of its objectives; that urban blight was continuing, that the quality of public schools was deteriorating, that crime and violence were increasing, that welfare cheating was still widespread, that collecting unemployment insurance was becoming a way of life for far too many—in short, that the relentless increases of government spending were not producing the social benefits expected from them and yet were adding to the taxes of hard-working people and to the already high prices they had to pay at the grocery store and everywhere else. In my judgment, such feelings of resentment and frustration are largely responsible for the conservative political trend that has developed of late in the United States. And I gather from the results of recent elections elsewhere that concern about inflation and disenchantment with socialist solutions are increasing also in other industrial countries. Fighting inflation is therefore being accorded a higher priority by policy-makers in Europe and in much of the rest of the world.

In the United States a great majority of the public now regard inflation as the Number One problem facing the country, and this judgment is accepted by both the Congress and the Executive establishment. Some steps have therefore been taken within the past year to check the rapid rise of federal spending, to lower certain taxes in the interest of encouraging business investment, and yet bring down the still large budget deficit. Pressures to augment the

privileges of trade unions have been resisted by the Congress. Some government regulations—as in the case of airlines and crude oil—have been eased. And even restrictive moves by the Federal Reserve, which not long ago would have stirred anger and anxiety in government circles, have been accepted with equanimity. Symbolic of the changed political atmosphere was the announcement of an increase in the Federal Reserve discount rate on the very day this July when a sizable decline of the nation's over-all production was being reported for the spring quarter.

The present widespread concern about inflation in the United States is an encouraging development, but no one can yet be sure how far it will go or how lasting it will prove. The changes that have thus far occurred in fiscal, monetary, and structural policies have been marginal adjustments. American policymakers tend to see merit in a gradualist approach because it promises a return to general price stability—perhaps with a delay of five or more years but without requiring significant sacrifices on the part of workers or their employers. But the very caution that leads politically to a policy of gradualism may well lead also to its premature suspension or abandonment in actual practice. Economic life is subject to all sorts of surprises and disturbances—business recessions, labor unrest, foreign troubles, monopolistic shocks, elections, and governmental upsets. One or another such development, especially a business recession, could readily overwhelm and topple a gradualist timetable for curbing inflation. That has happened in the past and it may happen again.

If the United States and other industrial countries are to make real headway in the fight against inflation it will first be necessary to rout inflationary psychology—that is, to make people feel that inflation can be, and probably will be, brought under control. Such a change in national psychology is not likely to be accomplished by marginal adjustments of public policy. In view of the strong and widespread expectations of inflation that prevail at present, I have therefore reluctantly come to believe that fairly drastic therapy will be needed to turn inflationary psychology around.

The precise therapy that can serve a nation best is not easy to identify, and what will work well in one country may work poorly in another. In the case of the American inflation, which has become a major threat to the well-being of much of the world as well as of the American people, it would seem wise to me at this juncture of history for the Government to adopt a basic program consisting of

four parts. The first of these would be a legislative revision of the federal budgetary process that would make it more difficult to run budget deficits and that would serve as the initial step toward a constitutional amendment directed to the same end. The second part would be a commitment to a comprehensive plan for dismantling regulations that have been impeding the competitive process and for modifying others that have been running up costs and prices unnecessarily. The third part would be a binding endorsement of restrictive monetary policies until the rate of inflation has become substantially lower. And the fourth part would consist of legislation scheduling reductions of business taxes in each of the next five years—the reduction to be quite small in the first two years but to become substantial in later years. This sort of tax legislation would release powerful forces to improve the nation's productivity and thereby exert downward pressure on prices; and it would also help in the more immediate future to ease the difficult adjustments forced on many businesses and their employees by the adoption of the first three parts of the suggested program.

I wish I could close this long address by expressing confidence that a program along the lines I have just sketched, or any other constructive and forceful program for dealing with inflation, will be undertaken in the near future in the United States or elsewhere. That I cannot do today. I am not even sure that many of the central bankers of the world, having by now become accustomed to gradualism, would be willing to risk the painful economic adjustments that I fear are ultimately unavoidable. I would therefore not be surprised if the return to reasonable price stability in the industrial democracies and thereby to an orderly international monetary system is postponed by more false starts. But if political patience in individual countries is severely tested as that happens, the learning process will also be speeded. The conservative trend that now appears to be under way in many of the industrial democracies will then gather strength; and unless political leadership falls into irresponsible hands, the inflationary bias that has been sapping the economic and moral vitality of the democracies can finally be routed.

* * *

MR. MARTIN: I think we are all very much indebted to Arthur Burns for this constructive and kaleidoscopic view of the problem we are dealing with. He emphasized the psychology of inflation and the fact

which we are all aware of, namely, that money is a social phenomenon, and a great deal depends on what people think it is or what they think it ought to be.

This was the sixteenth lecture in this series and it was a very fitting one. I have gone back and read all of them. And today's is complementary. The first one, by Maurice Frère and Rodrigo Gómez, was on "Economic Growth and Monetary Stability." And if you follow the line through and take some of Per Jacobsson's talks, you can see exactly what has transpired and where we have gone.

We have today two truly distinguished and competent people as commentators. And as I said earlier, they will not be commenting directly on what Arthur has said, but will provide their own perspective.

Our first commentator is Professor Ćirović, who is an eminent economist and an adviser to the Yugoslav Government. Professor Ćirović.

Commentaries

Commentaries on Dr. Burns's presentation were offered by Milutin Ćirović and Jacques J. Polak. The texts of their statements follow, beginning, respectively, on this page and on page 37, below.

THE INTERNATIONAL MONETARY SYSTEM: PROBLEMS AND PROSPECTS

Milutin Ćirović

IT IS A GREAT HONOR and a pleasure for me to have been invited to speak at this year's Per Jacobsson Lecture meeting. I am particularly happy to be a commentator of the lecture presented by such an outstanding central banker as Dr. Burns.

In analyzing the causes of inflation, Dr. Burns went further than central bankers usually do. He made a comprehensive economic and social analysis of the inflationary process in industrial countries. He pointed out that elimination or a substantial reduction of inflationary processes could not be achieved by means of restrictive monetary policy alone, but that it was necessary to create a political environment in which the difficult adjustments required to end inflation could be undertaken. However, it was not clear which of the methods of changing the behavior of transactors within the economic systems of industrial countries should be used so as to eliminate or at least substantially reduce inflationary expectations. Dr. Burns was right in his opinion that monetarism cannot be a successful tool of stabilization policy without corresponding changes in the political climate.

Since I would like my comments to be complementary to Dr. Burns's lecture, I shall express my views on the problems of the adjustment process from the point of view of the world economy. I think we are all aware that, in present circumstances, internal economic developments are being increasingly influenced by world

economic developments as a result of the interdependence of national economies. What are the main problems and economic strategies for dealing with these problems in the world economy?

It is well known that the world economy is no longer characterized by the dynamic equilibrium that prevailed during the postwar period as a whole. It should be emphasized that the severe recession in the developed market economies during the period 1974-75 was not followed by the expected upswing in economic activity in these countries. The double-digit rates of inflation that culminated in the developed market economies during the 1974-75 period were substantially reduced in the ensuing years, but they are accelerating again this year. The unfavorable performance of economic activity and high rates of inflation have also been associated with significant balance of payments disequilibria and occasionally with severe crises of some major currencies. In addition, the deceleration of fixed investment in the industrial countries is of particular concern. It is expected that the rates of investment and economic growth in these countries in the coming years will be at about half of their level during the 1960s.

THESE UNFAVORABLE TRENDS in the developed market economies have had very negative effects on the developing countries. It is particularly relevant that almost two thirds of all exports of developing countries is directed to markets in industrial countries. In terms of their trade and financial relations developing countries have so far had closer ties with industrial countries than with other developing countries.

On the one hand, the effects of the depressed economic conditions as well as the stronger inflationary pressures in developed countries have thus been quickly transmitted to the developing countries through (1) an automatic reduction in imports of raw materials and industrial products brought about by the depression in economic activity; (2) sudden falls and subsequent strong fluctuations in the prices of agricultural products and raw materials, a large share of the trade in which is accounted for by the developing countries; and (3) protectionism in the developed market economies, which artificially limits the export markets of developing countries. On the other hand, the recycling of part of the balance of payments surpluses of some developed countries to developing countries was carried out through the international credit market. The recycling of

resources had a positive effect in the sense that the reduction of the growth rate of gross national product of developing countries was smaller than it would have been in the absence of such recycling; the negative effect of this process was the excessive accumulation of foreign indebtedness by developing countries.

Two basic concepts involving two different approaches are used in analyzing the distortions of the world economy during the 1970s. Although both interpretations take into account the sharp increase in oil prices at the end of 1973, there is considerable variation in the broader theoretical framework of these analyses.

The first concept places special emphasis on strong inflationary pressures and inflationary expectations as the main cause of the sequence characterized by less dynamic production, deceleration of world trade, and all other well-known features of the world economy in recent years. As a proof thereof, it is argued that the 1974-75 economic crisis followed the 1972-73 boom when inflationary pressures and expectations existed; it is even argued that the average economic expansion attained by the end of 1973 exceeded the rates of sustainable economic growth. According to the traditional theory of cyclical oscillations, the price for the buoyant market conditions was the subsequent adjustment of surpluses and deficits of the world economy through crises and convulsions. To support this argument, the United States is cited as an illustration, which, after the 1974-75 recession, experienced a higher rate of economic growth than other industrial countries, but this gave rise to pressure on its balance of payments and caused temporary crises of the dollar as well as a subsequent acceleration of inflation in the country.

The theory behind this analysis of economic developments in the world or in individual countries leads to the conclusion that, from the point of view of stabilizing the world economy, the most important element is to combat inflation in those countries where it is exceptionally severe, thus ensuring the stabilization of the internal and external economic situation of these countries and, thereby, of the world economy as a whole. It is believed that the international economic, and particularly the monetary, system should be oriented primarily toward eliminating or avoiding the generation of stronger inflationary pressures. However, in present circumstances, the Keynesian proposition that the reflation of economic activity will not lead to a marked increase in prices as long as the level of production has not come close to full employment is not valid any more. Therefore, it is argued that prices will start increasing because of

cost-push factors rather than demand-pull factors even before full-employment is reached.

The first concept is correct to a great extent, but I think that it is one-sided, both with regard to the analysis and the conclusions, that is, the economic strategy that it leads to. It is one-sided because it takes into consideration only inflationary pressures as the factors causing distortions in the economy, while it treats the recessionary pressures as induced factors appearing somewhere along the chain of the transmission mechanism. It is even more one-sided because it maintains that even the mere orientation toward curbing inflationary pressures would indirectly have a dampening effect on recessionary pressures. In addition, on the important question of how to share the burden of restoring equilibrium to the world economy, it is maintained that this burden should be shared by deficit countries only. In other words, this concept is based on an implicit assumption that the world economy is in fundamental equilibrium but that individual countries (irrespective of their number) experience fundamental disequilibrium mainly due to mistakes made in their overambitious economic policies.

The analyses of the second concept are based on the assumption that distortions in the world economy are due to both inflationary and deflationary pressures, irrespective of their interaction, and that both cyclical and structural distortions of the global economic system are relevant. In support of this view, one may argue that even the depression of 1974-75 did not bring about the expected reduction in the rates of inflation. The crisis in these years was not followed by a pronounced increase in economic growth in industrial countries because there was not an adequate increase in fixed investment—a development that can be explained only by structural factors. Also, the second concept assumes that the deterioration in the functioning of the world economy does not arise only from the sum of the disturbances experienced in a certain number of national economies, but that worldwide disturbances are due partly to the interaction of adjustment processes either in national economies or in groups of economies. In other words, like the theory of the vicious circle that operates in national economies as a result of the interaction of negative factors, a vicious circle in the world economy is also possible. All this has important implications for the formulation of an economic strategy that is designed to take the world economy out of a suboptimal situation in respect of production, trade, inflation, protectionism, terms of trade for developing countries, and indebtedness of developing countries.

A somewhat different economic strategy for coping with this crisis is based on the second interpretation of the generation of inflation and its transmission, leading to disequilibrium in the world economy. The main point of this strategy is that there should be simultaneous effort toward stabilization (that is, reducing the rates of inflation and balance of payments deficits) and toward strengthening the expansionary forces that will lead to further growth of the world economy. The second important component of this strategy is that stabilization cannot be confined only to the more unstable national economies (in respect of inflation, balance of payments deficits, etc.), but that a dynamic stabilization of the world economy should be carried out through the active participation of all countries—surplus and deficit, developed and developing—which necessarily implies a corresponding degree of international coordination.

THE QUESTION IS how to formulate an economic policy capable of countering inflationary pressures, on the one hand, and, on the other hand, give new impetus to the process of economic development. Although it may seem paradoxical, I think that the starting point for the formulation of such a strategy is the monetarist view that there is only a narrow margin for trade-off between economic growth and inflation rates, and that in the long run there is no trade-off at all. However, monetarists have drawn a rather one-sided conclusion from this, now almost a generally accepted proposition, namely, that expansionary monetary policy and the emergence of inflationary pressures may to a certain extent and only temporarily increase the rate of economic growth, while later, under the direct impact of the balance of payments constraint, the growth rate must fall below the trend rate. However, another entirely different conclusion can be drawn from the above monetarist proposition. This conclusion is that the determination of the economic growth rate and the determination of the inflation rate are two processes which, although interrelated, are essentially separate ones. It still fits into the monetarist model in which monetary aggregates, through their effect on the formation of nominal income, play the main role in generating inflation, while in the long run, monetary aggregates do not affect the formation of real flows. The monetarist model seems, however, to have solved the problem only partially, as it seeks to regulate macroeconomic movements solely by regulating the money supply, which means that only the stabilization aspect of the economic policy is recognized. The aspect of economic development

is not introduced in this policy because it is implicitly assumed that a firm stabilization policy will provide favorable conditions for a revival of dynamic economic activity, first and foremost through business investment.

If we proceed, however, from the concept of fundamental disequilibrium in the world economy characterized by the simultaneous existence of inflationary and deflationary factors—even though they occur in a different configuration in each economy—an economic strategy aimed at eliminating the fundamental disequilibrium on a worldwide scale would have to be formulated so as to counter inflationary forces and at the same time provide expansionary impulses to economic development. In my opinion, economic strategy should not be oriented solely toward fighting inflation at one stage and fighting recession at a later stage. I think that an appropriate economic strategy should be directed against both inflation and recession since they occur simultaneously on the domestic and international scenes.

However, the question arises as to whether it is really possible to formulate such an economic strategy that would counteract both inflationary and recessionary forces at the domestic and international levels. In an optimal policy mix, monetary policy assisted by other instruments, above all by fiscal and incomes policies, would bear the brunt of the fight against inflationary forces and expectations. The main point of this strategy is, however, that the stabilization approach of the monetary policy could be maintained only if some other force in the economic system exerting a long-term upward influence on the economy were to be set in motion. I believe that the automatism of market mechanisms can no longer be seriously relied upon to create, by means of optimal market evaluation of the factors of production, a macroeconomic environment that would assure sufficient economic stimulus, primarily through fixed investment in the business sector.

One approach that would call for the formation of sufficient aggregate demand in the industrial countries is the Keynesian strategy that places emphasis on the role of fiscal policy. Under this concept, excess funds on the financial markets that under prevailing conditions cannot be absorbed by the business and household sectors would be activated by the government through deficit financing. This would offset deflationary gaps that would occasionally occur in the circular income flows. The government policy of deficit financing, however, would have to be highly flexible in order to

adjust quickly and as accurately as possible to any changing relationship between demand for and supply of funds on the financial market. Experience has shown that a government cannot modify its policy of deficit financing at the speed at which the ratio between demand for and supply of funds changes; so, in the long run, the share of the public sector in the final distribution of national income increases excessively, undermining sound economic development. It has been seen that the government's deficit financing policy can raise aggregate demand in the short run (sometimes even excessively), but that it leads to a deterioration in the composition of aggregate demand because the principal impetus to development comes from public sector consumption.

The second major factor contributing to the development of more dynamic economic processes at the domestic and international levels is the promotion of exports. Experience has shown that in the postwar period those industrial countries that experienced a strong expansion of exports, that is, the countries that pursued the strategy of export-led growth (the Federal Republic of Germany and Japan) registered better performances not only in respect of economic development but also in respect of stabilization. Besides, strong export growth gives rise to an increase in fixed investment, which means that productive capacities expand in such a way as to cover the rise in aggregate demand. A strategy based on a significant expansion of exports, and hence expansion of fixed investment, could provide a strong impetus for economic development; however, monetary policy, combined with policy instruments in the field of income distribution, could to an increasing extent assume the role of stabilization over the longer run. In other words, exports and investment would exert an expansionary influence on the growth of the real economy and this would become the driving force of the economic system, while monetary policy could be directed toward a deceleration in the growth of nominal income. Such a strategy would provide conditions conducive to a gradual reduction of the disparities between the growth of real and nominal incomes.

Now I come to the question of whether, under prevailing circumstances, it is realistic to expect export growth to become the driving force that could make the processes of economic activity throughout the world more dynamic. It is well known that even Japan, after the spectacular results it achieved in export expansion in the postwar period, places the main emphasis in its seven-year development plan on the expansion of domestic demand, probably

because of the pessimistic outlook for world trade and production in the period ahead. It seems certain that in the years to come a fast growth of exports in the world economy based on market automatism is not to be expected. In the current economic environment, the problem can be dealt with only on a worldwide and on an organized basis. In fact, the only realistic possibility of reversing the slow growth of world production and trade at present appears to be the introduction of an international mechanism that would pour new energy into the international economic system. What I am suggesting is that the current fundamental disequilibrium of the world economy essentially means that the system has lost a substantial part of its vitality. Only by creating a new motive power will it be possible to overcome the current stagnation of the world economic system.

In order to revive world economic activity, it would be essential for the purchasing power of the non-oil developing countries to increase at a faster rate, thereby setting in motion a faster circulation of flows of funds between these countries and the developed countries, which would lead to an acceleration in the expansion of world economic activity. Thus, an increase in world economic activity would be generated by an expansion of world trade, the growth rate of which could be brought back to the average rates recorded in the 1960s (approximately 9 per cent per annum). It is, however, impossible to expect a further expansion of the import demand of the non-oil developing countries through an increase in their indebtedness on commercial terms, as has been the case since 1974. The developing countries have during the past six years managed to moderate the fall in their economic growth rates by excessive borrowing abroad on commercial terms, but their debt-service ratios in terms of their gross national products and current foreign exchange earnings have attained levels that increasingly limit further enlargement of their capacity to borrow on commercial terms.

I believe that a faster increase in the purchasing power of the non-oil developing countries should be achieved along the following lines: stabilization of the terms of trade between primary and industrial products on the world market, a gradual diminishing of industrial countries' protectionism (which could be fostered by a more dynamic growth of the world economy), and an expansion of capital flows to non-oil developing countries on concessional terms.

IN THE PROCESS OF expanding the purchasing power of non-oil developing countries, the International Monetary Fund has an

important role to play, both in regard to balance of payments financing and to the creation of special drawing rights (SDRs). In order to finance their current account deficits, the non-oil developing countries tended in the 1970s to borrow increasingly from commercial banks on financial markets at the expense of their use of Fund resources. We are all aware of the developing countries' demands concerning the extension of repayment periods for Fund credits and the liberalization of the terms for using these credits, particularly when the payments deficits arise because of the reduced possibilities of export expansion on the markets of industrial countries.

Another mechanism for creating international liquidity through the Fund is the creation of SDRs. The strategy of creating this new type of reserve asset in the 1970s was too cautious and defensive. The main sources of reserve increases in the world arose from foreign exchange holdings (dollar holdings accounted for 80 per cent of total reserves) and, later on, from the revaluation of gold. In the 1970-78 period the average annual rise in SDR holdings was roughly SDR 1 billion, while the annual rise in foreign exchange reserves was about twenty times higher. For the 1980s, it is necessary to formulate a new and bolder strategy with the aim of making SDRs the principal reserve asset in the world economy. Incidentally, I have recently made such a projection of SDR expansion in the 1980s in my paper, "The Strategy of SDR Creation," published in the Yugoslav economic journal, *Finansije*.¹

To make economic activity more dynamic, particularly through the interplay of developed and developing countries, the world economic system has a powerful and suitable instrument. That is the link between the creation of SDRs and development financing. In pursuing the strategy of reversing the low growth rate of the world economy, significant results can be achieved by increasing the purchasing power of developing countries, which would be used for buying goods in the industrial countries. The activation of this link would directly and promptly lead to a rise in the level of resource utilization in the industrial countries, creating a satisfactory level of aggregate demand in these countries, which would give an impetus to their new fixed investment. It is absurd, I think, that there are immense unutilized capacities in one sector of the world economy resulting from the inability to market the potential production, while

¹No. 7-8 (July-August 1979), pages 399-420, in Serbo-Croatian.

in the other sector sound investment projects cannot be carried out because of insufficient purchasing power. Why should not a part of the purchasing power created by the Fund be used for attaining a higher level of capacity utilization in the industrial countries and for financing additional investment projects in the developing countries? Among different potential variants of the link between international reserve creation and investment financing, we could choose the most acceptable one, with the least unfavorable side effects.

Summing up, my view is that the problems facing the world economy are highly complex. This complexity is reflected in the fact that the world economy is moving away from the acceptable performance criteria in terms of production, trade, inflation, continuous structural readjustment, balance of payments imbalances, and levels of foreign indebtedness. The fact that these problems are particularly accentuated in non-oil developing countries is of great concern. In such a complex situation it seems unacceptable to isolate the problem of inflation from a whole range of problems the world economy is confronted with, and to try to formulate a one-dimensional economic strategy. If the international economic situation is as complex as it appears to me, the only rational response would be to act upon all the principal causes of suboptimal performance of the world economy, in other words, to create a multidimensional strategy.

Finally, I should like to add that the second concept of the dynamic stabilization of the world economy is realistic only if it is carried out in a well-organized way and on a worldwide scale. It seems to me that the Fund could develop into a world institution ensuring adequate adjustments of national economic and balance of payments policies, which would, at the international level, result in creating an environment conducive to both a faster expansion of world trade and production and a gradual reduction of inflation rates and balance of payments deficits. The Fund has in fact made the first rudimentary step in that direction by pursuing a medium-term strategy of coordinated development and balance of payments adjustments. The Fund's strategy has obviously not been sufficiently elaborated, and an adequate apparatus assuring improvement in the performance of the world economy—and hence, of most national economies—is not yet available. But today it is quite evident that all national economies, irrespective of the stage of their economic development and other differences, have great interest in mutual cooperation and that it is becoming widely accepted that a stable and strong growth of the

world economy is a precondition for regulating economic activity at the national level.

* * *

MR. MARTIN: Thank you, Professor Ćirović, for those interesting observations.

Now we have our last commentator. We are extremely fortunate to have him with us today. He has been with the International Monetary Fund since 1947. He has been honored in his own country, both as an economist and as a philosopher. He is the Economic Counsellor and Director of the Research Department of the International Monetary Fund. Mr. Jacques Polak.

THE EVOLUTION OF THE INTERNATIONAL MONETARY SYSTEM

Jacques J. Polak

IN HIS FASCINATING LECTURE, Dr. Burns has presented us with the thesis that inflation in the United States and elsewhere in the industrial world is a secular phenomenon, brought about by philosophic and political currents that originated almost half a century ago. It is not part of my assignment in today's program to enter into a discussion of this sobering, indeed depressing, thesis. However, less by way of argument than to inject some rays of light in what could otherwise appear as unmitigated secular gloom, I would like to recall some developments that seem to point in a rather different direction: For example, the decade and a half of price stability in the United States between the Korean and the Viet Nam conflicts, the remarkable success in curbing the post-1974 inflation in some European countries, and the experience of reasonable price stability in much of the Far East.

For the international monetary system, Dr. Burns does not expect return to stability until reasonably good control over inflationary forces has been achieved in the major industrial nations, and especially in the United States. On this fundamental point all of us would, I believe, agree. But this does not mean that the international monetary system must be left sitting quietly in a corner until the

campaign to subdue inflation is won. On the contrary, there is much work to be done on the international side now. The task involves first, deepening our understanding of the system as it exists; second, attempting to discover certain tendencies for change in the system; and third, steering the system in directions that we believe to be beneficial.

Even the first of these tasks is far from straightforward. There is indeed a remarkable lack of agreement on what the present system is. To mention a trivial, and yet perhaps not totally irrelevant, fact: there is no single place where one can find what one could consider the Fund's description of the system and of the Fund's role in that system. Various facets of the system have been described and analyzed in successive Fund Annual Reports; but since the pamphlet on *The International Monetary Fund: Its Form and Functions*¹ written by Marcus Fleming in 1964, the Fund has not published a comprehensive study on the subject. Too many observers believe that they can sidestep the issue of the characteristics of the present system by dubbing it a "non-system." Too many descriptions linger on what is past, mourning the loss of par values and convertibility in a manner reminiscent of the grief that an earlier generation expressed at the demise of the gold standard.

In the limited time at my disposal, I shall not endeavor to give an integrated picture of how, in my view, the present system functions. I shall, instead, comment on a number of new and emerging features of the system. In doing so, I shall touch on some interrelated facets of the system: exchange rates, adjustment, policy coordination, and reserve assets. But before I do this, a general word of caution in this whole area is called for.

Many of us have strong preferences on how we would like the system to develop. These sentiments have a tendency to intrude into our prognostications for the system, indeed even into our descriptions. I would suggest that these tendencies have earned us enough scars and bruises over the last decade to bring home the lesson that we need to put a healthy distance between our preferences and our prophecies for the system. As Per Jacobsson so often said, "Prophecies are hard to make, especially with respect to the future." The track record of many—I think I can say of many of us here—in projecting features of the international monetary system is far from impressive. On this subject, we have, in Mr. Churchill's famous

¹IMF Pamphlet Series, No. 2 (Washington, 1964).

phrase, a great deal to be modest about. Let me cite just three examples.

1. In the late 1960s and early 1970s it was generally assumed that, whatever the problems they had begun to cause, fixed exchange rates would have to stay. Governments, it was said, were not prepared to base their policies on anything else, and the overwhelming majority of business and banking spokesmen expressed the same view. Nevertheless, fixed exchange rates did not stick.

2. In the late 1960s, again, the view was generally held that the world's need for increased liquidity could not—and should not—be met by any substantial increase of U.S. dollars held in countries' reserves. The United States did not want this to happen, nor did other countries. It happened nevertheless.

3. Virtually everyone considered an increase in the price of gold as "unthinkable," an abdication from the intelligent management of international monetary affairs, even though it could provide a solution to the liquidity problem. Nevertheless, this increase happened. Gold refused to settle obediently into the role of a "metallic SDR." In a situation where some countries forced "black gold" into the center of the world economic stage, those countries that were fortunate enough to hold substantial quantities of the yellow variety decided that they had to play them for all they were worth, which has turned out to be more, and more, and more.

I have not cited these three instances of lack of foresight about the direction in which the monetary system might develop in order to create the impression that we are powerless bystanders to an evolution of the system brought about by unintelligible and uncontrollable forces of nature. But it is useful to admit the premise that certain basic economic forces make some features of the system inevitable and others unattainable, however strong our dislikes for the former and our likes for the latter. Among these forces I would mention: overriding national interests, the rising importance in the postwar period of international flows of trade and especially of capital, and the worldwide inflation of the last decade.

These forces set certain limits to our ability to influence the system—both as to the retention of some features and the introduction of desired changes. But within these limits there is much that we can do. Financial arrangements are man-made. Our ability to steer the system depends not only on surrounding circumstances but also—and crucially—on the quality of the arrangements themselves. The process of reform of the interna-

tional monetary system requires not only a climate of political will but, equally, the design of structures that can function under the pressures and in the turbulence that characterize even a favorable climate.

LET ME START with the exchange rate aspect of the system. It does not require an inordinate capacity for modesty to note that the major change in the exchange rate system that took place in the 1971-73 period was not the result of the Second Amendment of the Fund's Articles of Agreement, which did not go into effect until April 1978. But one should also note that the new Article IV does more than adjust legal forms to a changed reality. Exchange rate *arrangements* were left to each member's choice. This was inevitable; it had already occurred. But by an exercise of free choice exchange rate *policies* were submitted to the Fund's firm surveillance.

The experience of the last few years shows that concentration on policies rather than arrangements is the efficient choice. The categories sometimes used to describe exchange arrangements—"fixed," "floating," "managed"—are singularly unhelpful to classify the manifold combinations of arrangements and policies that members have adopted. Indeed, the Fund, which has given a great deal of thought to this question of classification, can do no better than to relegate the arrangements of almost a third of its members to a category called "other"—which includes all the major industrial countries except the Federal Republic of Germany.

The new Article IV observes that "orderly underlying conditions . . . are necessary for financial and economic stability." No doubt they are; in the absence of the needed underlying conditions, attempts to achieve exchange rate stability by controls or intervention are doomed to fail. But Article IV also has another side, and it is to this side that the Fund's surveillance is most directly addressed. The provision I refer to enjoins members—whether they are successful or not in establishing orderly underlying conditions—not to have an exchange rate that is economically wrong. The provision does not say this in such simple and easily understood words. But it stipulates that "each member shall . . . avoid manipulating exchange rates or the international monetary system in order to prevent effective balance of payments adjustment"—which would amount to the country maintaining too high a value for its currency—"or to gain an unfair competitive advantage over other members"—that is, by

maintaining too low a value for its currency. By exercising this surveillance task over members' exchange rate policies, the Fund encourages the early adjustment of inappropriate exchange rates, and thereby promotes one of its general purposes: "to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members."

The Fund is also—as this year's Annual Report indicates—increasingly using its surveillance authority in a broader sense. In its studies on the world economic situation and outlook, it is paying increasing attention to the impact that domestic economic policies in the largest industrial countries have on economic activity and the payments positions of all countries. In recent communiqués, the Interim Committee has spelled out its views on the contribution that a coordinated strategy of policy can make to noninflationary growth and the reduction in payments imbalances, and thereby to greater stability in exchange markets. In recent years, it has indeed been particularly important for countries to marshal a wide range of national policies to avoid excessive pressure on the U.S. dollar, the main reserve currency of the system. But it would be rash to generalize from this particular concern and to suggest in general—as a feature of the system—that greater stability of exchange rates should be pursued by the coordination of demand policies. Such an approach to exchange rate stability would, I am sure, be found to be both too uncertain in its effects and too expensive in terms of other national policy objectives and constraints.

Exchange rate surveillance in the narrower sense also encounters its difficulties, even though there is a noticeably increased willingness of countries to discuss exchange rate policy. The old taboos are no longer fashionable—but one may wonder how many of these still hide behind the manifold rationalizations that are advanced to delay changes in exchange rates whose disequilibrium character is not denied. A wide range of arguments are adduced, in developed as well as in developing countries, to justify inaction on exchange rates: the J-curve, lags, wage indexation, low elasticities, the overriding importance of demand factors. It would take far too much time to enter into a step-by-step discussion of each of these arguments. So I must ask you to forgive me for jumping to a conclusion, which I would phrase as follows: no country has an advantage in sticking to a disequilibrium rate for its currency, and no country in the end manages to do so.

THE MOST INTERESTING ELEMENT OF REFORM at the present time probably lies in the area of the reserve assets of the system. Up to now, the movement in the direction of the internationalization of reserve assets, i.e., the progress of the SDR, has been slow in an absolute sense and even retrograde on a proportional basis. Launched in the late 1960s as the instrument to meet the need for reserve increases that gold or dollars could not or should not meet, the SDR remained sidelined from 1972 to 1978 while the price of gold and the number of dollars in reserves multiplied. The allocation of SDRs has recently been resumed. But compared with annual increases in foreign exchange reserves averaging the equivalent of about SDR 25 billion over the last five years, allocations at a rate of SDR 4 billion a year were hardly likely to do much for the objective in the new Articles of "making the special drawing right the principal reserve asset in the international monetary system."

Now, however, a significant move in that direction seems attainable, given the recent interest in a substitution account administered by the Fund through which a large amount of dollars in members' reserves would be replaced with SDR-denominated claims. The possibility of this move is predicated—as are all steps in reform—on a suitable constellation of national interests and a technically workable scheme, and there is a reasonable basis now for the belief that these conditions are fulfilled at the present juncture. The United States now accepts the view—to quote a recent speech by Anthony M. Solomon, Under Secretary for Monetary Affairs, Treasury Department, that "a gradual reduction in the dollar's relative international role would appear consistent with underlying developments in the world economy." Many official holders appear interested in making their reserve portfolio less dependent on the value of a single currency, but are deterred from moving in that direction by the realization that large-scale switches to achieve diversification through the market would be both difficult and disruptive. And finally, as a result of a great deal of hard work, we may now be in a position to devise an equitable and workable technique for substitution—something that had eluded the Committee of Twenty.

What reason is there to assume that a substitution account, even if it can be agreed, will make a significant difference to the system? After all, under decisions already taken, there will, by the beginning of 1981, exist over SDR 20 billion in allocated SDRs; yet few would deny that, with well over \$200 billion in official reserves, the system

must still be characterized as essentially a dollar system. If a substitution account added to the system some tens of billions of SDR claims and withdrew a corresponding amount of U.S. dollars, how much of a difference would that make to the character of the system? No one can be sure, but it is clear that the substitution account is the only major avenue of reform that is within the realm of the attainable for now or for the foreseeable future. The most immediate gain that could accrue from a substitution account is that it could contribute to the evolution of the international monetary system in a direction that promises greater stability. But it could do more. By making, over time, SDRs and SDR-denominated assets a substantial part of countries' reserves and spreading such assets into nonofficial holdings as well, the account could gradually reduce the asymmetry in the system that derives from the special position of reserve currencies, the dollar in particular. We do not know precisely what lies at the end of this road, and it would be rash to hold out promises. But we do know, from the earlier attempt, that reform is not attainable in one fell swoop; we may find a road to further reform if the steps now actively considered produce a breakthrough into new ground.

The international monetary system is a highly complex construct. Its features with respect to exchange rates, reserve assets, and adjustment rules are all closely interrelated and improvements in one field may both support and require improvements in other fields. Improvements in the system can contribute to a better functioning of the world economy. But, in conclusion, one sobering thought should be ever-present in our minds when we concentrate our attention on the system: however well it may be designed, no system will produce satisfactory results in the absence of sensible policies, most particularly on the part of the main countries.

Closing Remarks

William McChesney Martin

I AM SURE that you will all agree with me that this has been one of the most useful and constructive meetings that we have had. When you get a chance to study these documents you will see that many thought-provoking ideas have been discussed here today.

We are very fortunate to have with us here the Minister of Finance of Yugoslavia, who will close this meeting with a few words. He has graciously consented to speak to us for just a moment. We want him to know how appreciative we are of the facilities and the help that the Yugoslav Government has given us. So, I am glad to present the Honorable Petar Kostić, Minister of Finance of Yugoslavia.

Petar Kostić

LADIES AND GENTLEMEN: I am very sorry that I was not able to be present all through this very important meeting, but I am sure that your discussions will prove to be very useful for you, for the forthcoming Annual Meetings of the International Monetary Fund and the World Bank, and for all of us, not only today and the next few days, but in the future as well. In the name of our Government, I wish you a very enjoyable stay in Belgrade, and all the best. Thank you.

Biographies

Arthur F. Burns is now a Distinguished Scholar in Residence at the American Enterprise Institute and a Distinguished Professorial Lecturer at Georgetown University.

Dr. Burns was born in Austria in 1904 and he received his A.B., A.M., and Ph.D. degrees from Columbia University. He held a number of academic and government positions prior to becoming Chairman of the President's Council of Economic Advisers in 1953. Some of his later positions included being the John Bates Clark Professor of Economics at Columbia University, and President of the National Bureau of Economic Research. In 1969-70 he was Counsellor to the President of the United States, and in the period 1970-78 he was Chairman of the Board of Governors of the Federal Reserve System.

Dr. Burns is the recipient of many awards and honorary degrees. He is the author of a number of books, the most recent being *Reflections of an Economic Policy Maker*.

Milutin Ćirović is Professor of Monetary Economics at the University of Belgrade, a post which he assumed in 1970.

Dr. Ćirović was born in Yugoslavia in 1928 and studied economics at the University of Belgrade, taking his first degree in 1951, and his doctorate in 1957. Subsequently, he pursued postdoctoral studies at the London School of Economics. Prior to joining the teaching staff of the Faculty of Economics at the University of Belgrade, Dr. Ćirović was employed as an economist by the Ministry of Finance and by the National Bank of Yugoslavia. At present, he is a member of the Research Council of the National Bank of Yugoslavia, the Council of the National Bank of Serbia, and the Council of Economic Advisers of Yugoslavia.

Dr. Ćirović is actively involved in the publication of the journal, *Finansije*, and is the author of several books on such subjects as money

and credit and the theory of balance of payments adjustments. A book on the international monetary system is shortly to be published.

Jacques J. Polak is Advisor to the Managing Director of the International Monetary Fund. Previously, he was the Economic Counsellor of the Fund (May 1966–December 1979) and Director of the Research Department (June 1958–December 1979).

Born in the Netherlands in 1914, Mr. Polak received his M.A. and Ph.D. degrees in economics from the University of Amsterdam. Prior to joining the Fund staff in 1947, he held positions with the Secretariat of the League of Nations (1937–43), the Netherlands Embassy in Washington (1943–44), and the United Nations Relief and Rehabilitation Administration (1944–46).

Mr. Polak taught economics at Johns Hopkins University in Baltimore (1949–50), and George Washington University in Washington, D.C. (1950–55). He is a Fellow of the Econometric Society, received a doctorate honoris causa from the Erasmus University in Rotterdam in 1972, and was appointed as Correspondent of the Royal Netherlands Academy of Sciences in 1978. Mr. Polak is the author of *An International Economic System* and, with Jan Tinbergen, *The Dynamics of Business Cycles*, as well as many articles.

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