

ESSAYS IN INTERNATIONAL FINANCE

No. 45, May 1964

PROBLEMS OF MONETARY CONTROL

JACOB VINER



INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY

Princeton, New Jersey

This is the forty-fifth in the series ESSAYS IN INTERNATIONAL FINANCE *published from time to time by the International Finance Section of the Department of Economics in Princeton University.*

It is also the fourth in a group of essays based on hearings held before the Canadian Royal Commission on Banking and Finance in the summer and fall of 1962, and published in this series with the permission of the Royal Commission. Permission to publish in no way implies that the Commission agrees with any or all of the views expressed. The International Finance Section published, as ESSAY No. 42, the Memorandum submitted to the Royal Commission by the late Sir Dennis Robertson, with a foreword containing a description of the mandate of the Royal Commission and of the program of this Section to publish some of the Memoranda of Evidence. The Memorandum submitted by Dr. Marius Wilhelm Holtrop was published as ESSAY No. 43, and the Staff Paper prepared for the Commission by Professor Harry G. Johnson was published as ESSAY No. 44.

The author of the present essay, Jacob Viner, a native of Canada, is Walker Professor of Economics and International Finance, Emeritus, of Princeton University. He has taught and lectured also at several other universities, including the University of Chicago and the Institut Universitaire de Hautes Etudes Internationales of Geneva. He is the holder of a number of honorary degrees, and in 1962 he was awarded the Francis A. Walker Medal, the highest distinction conferred by the American Economic Association.

Except for the opening section, which was presented to the Commission in written form, Professor Viner's testimony is here presented in a revised version of its original oral exposition, on September 19, 1962, with the elimination of the questions asked by the Royal Commission and considerable reorganization of the material presented at the hearings. Professor Viner's original language has been retained as far as possible.

The Section sponsors the essays in this series but takes no further responsibility for the opinions expressed in them. The writers are free to develop their topics as they will. Their ideas may or may not be shared by the editorial committee of the Section or the members of the Department.

The submission of manuscripts for this series is welcomed.

FRITZ MACHLUP, Director
International Finance Section

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PART I—FORMAL STATEMENTS

A. PRELIMINARY STATEMENT SUBMITTED IN WRITING

Monetary control would face difficult problems and would have far from complete probabilities of success in a modern advanced economy even if it had a single objective. But it is commonly today expected to serve, or at least not to conflict with, at least four major objectives:

- (1) Stabilization of the price level;
- (2) Maintenance of relatively full employment;
- (3) Maintenance or restoration of balance-of-payments equilibrium, often interpreted to include maintenance of approximately stable foreign-exchange rates in relation to gold-standard or near-gold-standard currencies;
- (4) Maintenance or attainment of a desired minimum national rate of growth, aggregate or per capita, a rate which may require not only full employment but also a higher ratio of capital formation or saving to national income than has hitherto prevailed.

In practice, economic controls in democratic countries must conform to what I will label as the "distribution" requirement, that is, they must not appear to be differential or discriminatory in their short-run impacts as between different sectors of the national economy, such as urban-rural, big business-small business, and so forth, beyond the limits of tolerance set by the prevailing distribution of political power. To some degree also there will be a preference for indirect over direct controls except in times of major emergency.

Except by fortunate coincidence, no economy can attain completely all of these objectives simultaneously. Monetary control by itself can, at best, make some contribution to the attainment of *all* of these objectives, but if it is to make the maximum contribution it is capable of to any one of these it seems in principle necessary that it be left free to give priority to that objective even when it conflicts in some degree with one or more of the other objectives. This does not mean that government as a whole must, grave emergencies excepted, surrender pursuit of any of the other objectives, but it means that it must seek their attainment in some degree and perhaps mainly through other measures than monetary control, measures which do not make impossible, although they may make more difficult, the attainment of the goal which has been assigned to the monetary authority as its primary goal.

If the monetary authority is to pursue effectively its prior goal while

contributing as much as it can consistent with priority of that goal to the attainment of other national objectives, it must have the power to use several different instruments of monetary control, and to use them in combinations and with timing and intensity of use which are flexible. Even if it gave consideration to only a single objective, it is probable that it could not operate satisfactorily in conformity to a single, relatively simple formula or rule adopted by itself or assigned to it, but would need to exercise a considerable amount of discretion and judgment from day to day—or at least month to month—in deciding upon the form and intensity of its operations. The more objectives it tries to serve, the greater will be the range of flexibility required in the choice and manner of application of its various instruments, but the greater also will be the danger of blurring of objectives and of inadequate action in the promotion of its prior objective through disproportionate attention to other objectives which appear to conflict but which are not, and perhaps should not be, a major responsibility for it. It should probably try to formulate for itself an order of relative priority with respect to the different objectives, but it should not be required to accept the national order of priorities as also its own operational code if it is to have a reasonable chance of achieving in high degree the one or more objectives for which it has special responsibility. All other relevant agencies of government should be alerted to the degree of responsibility they have both for not unnecessarily creating difficulties for the achievement by the monetary control of its special responsibilities and for seeking modes of achievement of those objectives constituting their special responsibility which interfere as little as possible with the objectives of the monetary control and which even perhaps contribute to their achievement. Most important here, of course, are fiscal-budgetary policy and debt management.

I do not claim that it is possible even in theory completely to harmonize all the legitimate economic objectives of government, or even to escape occasional fairly serious conflicts between objectives which can be resolved only by compromising or temporarily abandoning one or more of them. No agency, however, should be asked—or encouraged—to abandon an objective which is a prior responsibility for it until a high-level decision of the government declares that there is no tolerable alternative.

It is in this general setting that the international aspects of monetary control need to be discussed. For Canada, as for any country, they can be realistically discussed only on the basis of some assumptions as to the relative degree of emphasis to be given to the respective objectives, as to whether it is short-run or long-run programs which are under

discussion, and as to what instruments or methods are acceptable or unacceptable on grounds other than their potential effectiveness in promoting the assumed set of objectives. Of high importance also is the weight to be given to the international obligations of the country as part of a world community when these call for some modification or compromise of purely domestic objectives.

Special attention, of course, needs also to be given to the particular characteristics of the national economy which make its international economic relations differ in any important respects from those of other countries. Four characteristics may be perceived which significantly differentiate the Canadian from the American situation.

Because of its economic size and its role as leader in the world diplomatic alignment, the United States needs to give more weight to the impact of its policies on the outside world than does Canada.

Because of the role of the U.S. dollar as one of the two international reserve currencies, the United States has limitations on its freedom and power to change the gold value and the foreign-exchange value of its currency; from these limitations Canada is substantially free.

Because of its economic size the United States has to take into account much more than does Canada that any action by it which has an adverse effect on the outside world will lead to imitative, defensive, or retaliatory action by other countries.

On the other hand, its international transactions are for the United States a much smaller proportion of its total transactions than for Canada, so that in terms of the stability of its own economy the United States is much less dependent on and has much less need of adjustment to events outside its own territory than is the case for Canada.

It is in the light of these considerations that the selection of objectives, the relative priority given to them, the instruments used to serve them, need to be examined. The problems are numerous and complex, and the one general statement that can be made with assurance about them is that there is no simple formula which can be discovered which provides in advance a guide to the decisions to be made or a code of working rules by which to govern the execution of these decisions.

B. OPENING STATEMENT IN ORAL TESTIMONY

The problems of keeping an economy in order are complicated by the fact that normally an economy has a fairly elaborate set of objectives, is not fully conscious of just what these are, and has never made a systematic effort to decide just what relative weight it will assign to each of these objectives in case of any need of harmonization or reconciliation to resolve the conflict. In addition to that, the management

of the economy, in so far as government is managing an economy, is usually assigned on historical grounds among different agencies in a variety of ways, and they are never particularly carefully planned out. These agencies have acquired traditions of their own and on occasions policies of their own, about which they may be fully aware but of which the rest of government and the community at large may not be.

In addition, the modern economy has to bear with the economists. They are there with advice, recommendations and solutions, but they rarely stop to ask what are the objectives of the economy and what the advice is being given for, and they tend, as specialists, to have chosen a goal themselves and to advise means for attaining it to the utmost, without very much consideration for the possibility that there may be other and conflicting goals.

Still another burden the modern economy has to bear is the confidence existing today in the possibility of quantified prophesying of future trends. Such prophecies command a degree of confidence which is not justified philosophically or historically. I do not have to go very far afield in time or place in order to find rather striking instances of overconfidence in statistical anticipations for the next few years, or next decade, of how an economy is going to operate.

In order not to choose an illustration too close to your home, I will cite the American experience in just this year 1962. What I think is probably the most ably staffed body of economic advisers the United States has ever had, for whose general technical skill I have the greatest admiration, started out early this year, with full confidence, to predict what the gross national product would be and what the course of the employment trend would be during the year. It took just a few weeks for these forecasts to show signs of having been sour, and now it is clear that they were very sour. Next year they will be prophesying in the same way, with unimpaired confidence in their skill. The forecasters are doing as well as human beings can, except for the readily available alternative of remaining silent.

They are attempting a performance for which there is no logical justification. The justification they present is highly technical, skilled, and highly learned, but it is relevant only to a world in which events are not the result of relatively few decisions by a relatively few powerful men, or are not dominated by a small number of variables. The techniques are suitable only for physical phenomena determined by a great number of variables which are substantially homogeneous and coordinate in weight, and where the universe as a whole is a stable one. This is not what a modern economy is like.

I am not saying: Don't look forward; don't take a long view. I do think you can foresee a lot and predict a lot, but impacts, not outcomes or events. You can predict, for instance, that if you use the printing press very heavily the direction of your impact on the national stock of money and the price level will be upward and not downward. The economists and the statesmen can predict, within limits, the direction in which a particular act of legislation or a particular event impinging on your economy from outside is going to affect or influence the economy.

What I believe neither the economist nor anybody else can forecast is what I call "events," which in combination constitute the whole conjuncture of the state of an economy. That conjuncture is always the result of a substantial but not unlimited number of variables which shift in importance through time, which are unstable through time. What we know, within limits which are unfortunately not narrow, is that a certain kind of action will produce an impact in a certain direction, but there may simultaneously occur other actions operating in the other direction, so that the net effect may be the reverse of the impact of the first action. I would not call this a false forecast, in that sense, if its limitations are recognized in advance and if "impact" and "event" are distinguished.

In addition to this is the problem in government of assigning functions to agencies. If the government has, as it will inevitably have, a fairly large set of objectives; if it has, as I say it will have, inadequate awareness of what these objectives are; if it is in doubt as to what relative weight to assign to these objectives; how does it assign mandates to its agency, particularly if it wants it to work under a very specific mandate, according to a rule or body of rules or a strict code? How can you reconcile plural and inconstant objectives with specific and constant mandates?

Basically, I think you cannot reconcile these, and you therefore have to feel your way by trial and error, using all the information, judgment, and wisdom you can marshal.

There is one thing you can adopt, as a pattern, or a general idea, which I think is very pertinent to the question of deciding what are the functions of a central bank.

A government, or a community, can make up its mind, substantially, that there is a certain goal to which it attaches great importance, so that it will stand by that goal and support it, even though at times it will seem to be conflicting with some other cherished goal or goals.

Let me assume that that goal is stabilization of the price level, of the purchasing power of the Canadian dollar. There may have been assigned to a central bank the function of using, to the best of its abilities and to

its utmost powers, in the pursuit of this goal, all those tools which it is permitted to use in its operations. Then the mandate, if it were carefully framed, would indicate whether it is a long-run or a short-run assignment, or both—because it would be important for the operator to know. The central bank would have to be told: we do not expect you to assume responsibility for all the goals this country has. You should try to become aware of what they are; you may have alternative modes of operation, which will interfere in different degrees with other national objectives, and if such is the case, you should take this into consideration in choosing your procedure. But your assignment, until further instructions are received from government, is to do what you can to maintain a stable price level. The treasury may have other objectives which conflict pretty sharply. If they make your task harder, then work harder. If the treasury chooses, let us say, to finance on the basis of short-term maturities to lower the interest burden of the debt, whereas in the interest of the goal of stabilization of price levels long-term maturities would be more appropriate, then, whatever instrument the central bank chooses to use, it should use it more intensively to counterbalance the adverse impact on the price level of the treasury action. In other words, if it is national policy that an official agency pursue a particular goal, it must be permitted to operate at times against the immediate short-run objectives of some other agency of the government.

I take as an illustration debt management as an instrument which can be made to serve the objectives of a central bank, and yet for which a ministry of finance will often, and I would say inevitably, have in some degree different and conceivably conflicting objectives.

The internal objectives of a ministry of finance are sometimes very strange to look upon for an economist who is thinking only of the economy of a country as a whole. Very often the major goal seems to be to try to minimize the interest cost of the debt to the national economy. To me this seems the most minor of objectives, in the light of other goals which the economy, thinking of its problems seriously, would take into account, like price stabilization, full employment, ironing out the business cycle, and so forth.

It is possible, within limits, for a ministry of finance to have a debt-management policy which goes quite counter, say, to price-level stabilization, and for a central bank to pursue honestly and effectively a price-stabilization policy, and yet to eliminate inter-agency conflict.

I believe that the British pattern of operation, in principle, achieves this fairly systematically. As I understand it, the British Treasury decides independently what the maturity of its issues is going to be, as far as it is concerned, but it is the Bank of England which decides what

the real maturity of a new issue is going to be, as far as the outside public is concerned; it takes over the issue, buys as much of it on its own account as it wants to, sells the rest of it to the public, and matches its own investment in that issue by sale of some other issue of a different maturity which it had in stock. The manipulation of the average maturity of the public debt held by the public is potentially a rather important instrument for monetary management. I think it has been underutilized because ministries of finance have had other objectives than monetary management and central banks have not been authorized or willing to neutralize the impact of the treasury's actions on the effective maturity of the debt by counteractions with respect to their own holdings. I would make more elaborate distinctions were this an operation recommendation, but in brief, I distinguish between the average maturity of the debt as the treasury issues it and the effective maturity, or the average maturity of that portion held by the public. The former, under my scheme of management, is of very little consequence except to the treasury itself. Most important is the average maturity of the debt in the hands of the non-banking public.

The point I want to make is that when there is a conflict of functions or goals between two agencies it may nevertheless still be possible for the central bank to accomplish the goal or objective which it regards as important. The central bank would need to be equipped with assets, and included in those assets of a central bank is the key asset of the printing press and also of the machine to cancel money.

Suppose the issue by the treasury is a long-term issue at a time when the central bank would like to have the average maturity of the debt as a whole shortened rather than lengthened. The bank absorbs the long-term issue heavily and refinances itself by selling some short-term bills it has on hand. The total holdings of government securities by the central bank might not change by one dollar. The treasury is happy because it has accomplished its purpose. The central bank would be reasonably happy because the state of its own finances is not important, or should not be, either to it or to the country. What it has done internally is to shift its holdings of government issues as between maturities. What it has done to the economy is not to permit the government financing to change the average maturity of the debt held by the public.

Now let me turn to another case where goals may be in conflict. Say a government has a balance-of-payments deficit. There are many alternative ways of curing a balance-of-payments deficit, whose relative merits depend on what you want. For many persons the most significant aspect of a short-term balance-of-payments deficit is that it puts down-

ward pressure on the foreign-exchange value of the national currency where that is not held fixed or rigid. If, however, the economy is not very much concerned about the value of its currency on the foreign exchanges, then obviously that would not be a very significant concept for it, and it would want some other concept of balance-of-payments deficit, or pressure, or disequilibrium. It is a little inconsistent for a country that does not care about the stability of its foreign rate of exchange to care about its holdings of foreign liquid assets, because the immediate function of foreign liquid assets is to give you a means of meeting a pressure on your exchange when you do not want it to express itself in its natural way.

Many economists regard concern about the movement of the rate of exchange as substantially illegitimate, on the ground that the exchange rate should be left free to reflect in an orderly but flexible way in a healthy market pattern the relative status through time of your economy vis-à-vis the rest of the world. One can present a very persuasive argument for that in terms of "free-market" theory, because a rate of exchange is a price, and it is the function of a price to equalize the relevant demand and supply on the market. When the foreign-exchange rate is left flexible and unmanaged, it is a free price in a free market, and its fluctuations, therefore, must be presumed to accomplish a valuable social service. Therefore, you ought to let the foreign exchange "float."

On the basis of a set of somewhat ethereal assumptions, which abstract from many of the facts of the universe, of the actual world, I am a believer in a free market and in the useful function of flexible prices. That is where my biases lie.

However, it so happens that there are no two prices, probably, that are exactly similar or homogeneous in the world in the manner of their behavior and determination. In any case, the price of a national currency in terms of other currencies is a very peculiar sort of price in a number of respects. In the first place, it is ideally constituted for speculation. A national currency can be absolutely without homogeneity through time but usually is an absolutely homogeneous commodity at any one moment. A person in another country knows exactly what he is buying when he buys a Canadian dollar, at least for the moment. Therefore, it can be marketed easily, with no necessity for inspecting the particular parcel. This is, I believe, a little more than you can say even for number one Canadian hard. There is no problem of varieties of grade or quality in that sense.

Secondly, there are no tangible or definite limits to the range of the possible future exchange value of a floating currency. It is not tied

to anything solid, either to a demand limit on its ceiling value or to a cost limit on how worthless it can become; in that respect it is in principle unlike any other commodity I can think of.

To this proposition it has been replied that the value of a currency is tied to its purchasing power. If a monetary unit will buy twice as much as another foreign monetary unit, its value will be approximately twice that of the foreign unit. I agree, but it is the peculiarity, I believe, of exchange-rate fluctuations, as it is not, incidentally, of fluctuations in the prices of corporate common stocks, that they tend to create their own purchasing-power parities. The fluctuations of exchange rates themselves operate on the relevant price levels, and they tend so to operate as to confirm speculators' anticipations of what they are going to be in the future.

I will make a statement which I ought to warn you would be regarded by most of my professional colleagues as extreme. I can see only one rock of any solidity that stands as a barrier at the moment even in the United States against a fairly serious degree of inflation engineered or at least unrestrained by government: the fact that the government is aware of and in some degree shares the aversion of a large body of public opinion to depreciation of the U.S. dollar in terms of gold or of foreign currency.

One Latin American country, except for a lapse of some three years in the 1890's, has had inflation steadily, without skipping a year, for well over a century. The pace of its inflation in the past, however, never reached the dimensions that it has achieved within the last two or three years. The country has, in some ways, prospered over the years. It is not possible to prove from that country's record that the result of chronic inflation is necessarily that the country's economy will not prosper. It is even possible that it might have prospered a little more with the inflation than if it had had a conservative and financially austere government, such as it had for several years in the 1890's.

On the other hand, measured by the standard measures its economy appears much stronger and to have progressed much more rapidly than I think it has in fact. A lot of the figures represent a spurious growth. The gross national product, as authoritatively computed in modern times, includes the salaries of government officials whose business it is to operate barriers to production.

In an inflationary economy, a large part of the economy can be engaged in locating the lags in price adjustments and in "curing" bottlenecks by raising prices to the point where supply, scanty as it is, meets the demand. The incomes thus gained find full reflection in the "gross national product."

It is arguable that a modest rate of inflation is beneficial. When I say that it is arguable, I mean that I personally do not feel capable of completely rebutting it. It is arguable that a creeping inflation plus general confidence that it will never be allowed to become a galloping one may sometimes overcome certain frictions and certain sluggishness and act as a sort of stimulus which on the whole does move the economy to a little faster pace than it would otherwise attain.

However, that issue has not had to be decided in the past. No government that I know of has ever, except indirectly or by implication, committed itself to an absolutely fixed level of prices. Governments have, however, committed themselves to absolutely fixed or substantially fixed rates of exchange. They do that when they give a fixed-dollar gold value to their monetary unit, or they do it in terms of the exchange rate itself.

In Latin America some four or five countries have followed the path of austerity with respect to their monetary-value policy as distinguished from the others which followed the path of galloping inflation at times and, in any case, have not struggled for rigidity with respect to foreign-exchange rates.

On the whole, I think that the Latin American economies which followed monetary rigidity or austerity programmes have not moved as rapidly as, say, the Argentine did until, say, ten years ago, or perhaps even as Brazil has. In Latin America as a whole, monetary austerity has not proved to be a great stimulus to growth nor has it obviously and unambiguously prevented political and social unrest.

A careful student who considers the records of these countries might find that financial rigor does not inevitably lead to the most rapid rate of economic progress, and does not always protect against social unrest. Its virtues are important, but they are qualified ones.

A word more on tight money versus easy money as possibly involving a conflict of goals and of agencies. Historically, there has been somewhat of a tendency to get very much excited about inflation when deflation seems to be threatening, or is even under way, and to be quite complacent about it when inflation is really going on, and this has been true even of the central bankers. There never has been an occasion in a country with a reasonably free central bank where the central bank has acknowledged that it was one of the agents or a part of the machinery for producing inflation, but the record, I think, speaks otherwise. If the record of central banking relative to its role as a check on inflation—or for that matter on deflation—is a very mixed one, one major explanation is that central banks have been charged with a variety of ill-defined functions and have usually been unable or disinclined to follow any one of them rigorously.

PART II—THE SUBSTANCE OF THE MATERIAL PRESENTED IN ANSWERS TO SPECIFIC QUESTIONS

A. ON THE RELATIONSHIP BETWEEN STABLE PRICES AND ECONOMIC GROWTH

I. *Compatibility between the objectives of price stability and economic growth*

I have listed a stable price level as one of the commonly accepted objectives of monetary policy. The issue is an important one on many grounds that I have not raised. Stability of price levels has many things to be said for it, including ethical things, moral things. Our contracts are made in terms of prices and there ought to be some solidity in the circumstances that are represented by the words which are used in the contracts. Change in a price level is, in part, a process of transferring in unforeseen and unplanned ways wealth and income as between different categories of persons; an engineered change. In all probability a part, at least, of the transfer resulting from a monetarily-induced change will be highly unjust and inequitable.

But how rigid should one be? Should one get alarmed because the consumer price index has gone up by a per cent? I would say no. All things are within reason, and in any case there is no price-level series that I know about that is not subject to a substantial margin of error or of ambiguity as to its significance. But I would not disregard a long-term upward or downward trend even in creeping changes. If, however, you do not have 100 per cent confidence in the quality and relevance of your index, you should study it very thoroughly to see whether by maintaining the index absolutely stable you are not introducing a fairly substantial drift in the real or significant price level either upwards or downwards, because the index may have a systematic inflationary or deflationary bias in terms of the price level which you want, or should want, to stabilize. Every commodity price index has an element of inflationary bias insofar as the qualities of the covered commodities have tended to be drifting upwards.

The relationship between price-level trends and economic growth is a debated one. Some economists report that they cannot see any evidence of close positive association between price stability and economic growth and, on the contrary, that they see some evidence of the opposite. I am impressed by the authority and the standing of some of the men who have studied this in recent years, and think they have found a positive

association through time between even quite substantial inflation and fairly rapid economic growth.

The findings by themselves suffice to show that historically the two can be associated, and one must conclude, therefore, that one is not an insuperable barrier to the other. But they both might have been a common product of a third factor. It may also be that growth need produce inflation only if you take no steps to stop inflation. Nevertheless, striving to be reasonably objective, for the findings are not to my taste, there they are. They need further exploration but they do work against the strong conviction I had in the past that inflation and sustained substantial growth are incompatible with each other.

Do not misunderstand me. I am not going on record as recommending to the people of Canada that they practice inflation more than they have in the past, and even more skillfully and enthusiastically, or trying to assure them that their past inflation has not been responsible for a good deal of the trouble they tell me they are in now. All I am saying is that one fact which is often alleged by very conservative economists like myself, to the effect that history shows rising price levels and substantial growth to be incompatible with each other, does not seem to be true if compatibility is understood as meaning positive association in time.

A raw-material producing and exporting country may of course have something substantial to gain from even chronic inflation *abroad* in the prices of its prime export products. This may be net gain, and net gain even though it results in inflation in its own internal price level. You must keep distinct the trend of the prices in your own currency and in a foreign currency, of say, basic export products, or basic import prices, and the trend of the over-all price level in terms of your own currency.

It would be a real question of policy for Canada, if the prices of newsprint, pulpwood, copper, iron ore, raw lumber, wheat, the basic commodities that Canada exports, are moving up substantially in the outside world in terms of most foreign currencies—or in terms of gold—as to what Canada should aim at with respect to its own whole price level. My own feeling would be that, abstracting from the certain amount of weight I would give to the virtues of fixed exchange rates, Canada should still follow a stable-price-level policy and adjust to these price premiums on its export products, if necessary, by exchange appreciation of its currency.

The effect of a national stable-price-level policy on the export prices in terms of foreign currencies of Canada's basic products, I would think, would be slight. Let us take the price of nickel. This is not settled by Canadian government policy or American government policy; it is settled by the world market, or, if you like, by a small group of men

who decide what price is to their best advantage. It is, or was, a prize example of an administered price.

The price-level policy of a country will, of course, for a time have some influence on the trend of its export prices in terms of foreign currency. A country following an inflationary domestic-price policy will for a time, perhaps, get higher real prices, even in terms of foreign currency, for its export products—assuming either that it maintains fixed exchange rates, or that its prices rise more than the exchange value of its currency depreciates. That, I take it, is from a national point of view an advantage in itself, but it may be associated with disadvantages. It may quickly lessen the physical quantity of its exports seriously, and it may always be susceptible to what is the great danger to a business, an industry, a country, of relatively upward price changes that they may initiate forces tending to a continued shift adverse to it in the type of materials used, in consumption patterns, in use patterns, or in processing patterns.

Let me take the price of nickel purely as a hypothetical illustration. In the years in which the price of nickel was clearly an administered price, it may be that the price set was too low, or too high, in terms of the general Canadian interest. I am sure the producers followed their best judgment as to their own interest, but their best judgment may not have been good. If the price was too low, instead of earning say, 20 per cent a year on the original invested capital they would have earned only 18 per cent, or 16 per cent. But the effects of too high a price can be more serious in the long run not only to the producers but to the national economy. It may not appreciably cut down sales immediately, but it may start people abroad looking around for substitute materials for Canadian export products or for substitute sources of supply of the same materials.

2. Price indices as guides to policy

The use as guide to policy of the cost-of-living index, or the consumer-price index, has been objected to because of the quality changes it does not allow for, and also because of the increasing element of services in the index whose prices, in many cases, directly reflect wage rates.

Well, these increases in the prices of services that reflect predominantly wages are, of course, just as genuine price increases as any others, and the inclusion of prices of services in the price-level index is especially needed because of the increased expenditure on services, whose importance we have perhaps not adequately assessed as yet. It involves, for instance, a reduction in the labor force that operates under collective bargaining as compared to the one that does not, because the proportion of those engaged in service occupations that are organized is on the whole lower than for factory workers.

However, if price stability is accepted as a major objective, it is arbitrary to take, say, the consumer-price index alone and, on the other hand, it is also arbitrary to take the price index of wholesale manufactured products, or any other single index. If I could trust government and if I could trust the professional statisticians and if I could trust, say, the central bankers, to hit upon the optimum blend, I would suggest that they take three or four or five indexes, watch them all—give them all the consideration that they judge to be appropriate—and then use their judgment as to which of these to follow at any particular moment. In other words, there is needed a mean between a strict formula, which relieves the person to whom you give the mandate of the need of further thought, and the grant of completely discretionary authority, which gives unlimited scope to personal temperament, inertia, the desire to avoid making difficult decisions, and undue reaction to the immediate flow of events, and may thus lead to an improperly operating control. I am avoiding a precise answer, perhaps because I believe that precision is often the only virtue that precise answers have. I do not know any way of framing a precise rule, whereby you can dispense with the need of wisdom, judgment, and information, if the objective to be served is a rational, and not an arbitrary, one.

If you want to rely on indexes, you have to know your index, and to know it thoroughly. That costs money, more money than the ordinary statistical agency is provided with. Secondly, there is need for an occasional outside survey of an inside operation, for there may be blind spots in the vision of the inside operator. That also costs money.

I would not answer the question even then, without additional information. I would ask the question, "What do you want a stable price level for?" You have to answer that first before you can answer which is the better, a stable wholesale-price level or a stable consumer-price level.

I would put a good deal of weight on the consumer-price index because I think that is where the chief inequities resulting from price changes arise. People living on a fixed pension have to buy the consumer-index basket of goods just as much as persons who are directly profiting from a wage inflation. I would add this comment. If both indexes, consumer and wholesale prices, were good in technical quality in terms of the professional criteria of those who construct them, I would suppose that most of the time the range of difference in trend between the two would be relatively small, particularly for short-run trends.

I personally would recommend price-level stability as an important goal but "an" important goal and never "the" important goal. I would recognize situations in which I would let it go by the board.

A stable price level does not relieve owners and managers of produc-

tive services from the need of anticipating price changes, for the constituent prices in the index will have shifting relations to one another. I am not arguing that a stable price level has the merit that it releases businessmen, say, from the necessity of speculating about price trends. They still have to speculate about price trends of the materials they buy as against the things they process them into, and so on.

Forecasting a trend in a particular direction in the price level as a whole can have specially important consequences on the operations of an economy. There are circumstances in which the expectation that the price level is going to rise, based on government actions or promises, would be just what the doctor would prescribe, as contributing to a "reflation" which was both desired and desirable. In 1931 and 1932 a pledge that the government would do everything within its power to see to it that prices within twelve months would be, say, 15 per cent on the average higher than they were at that moment conceivably could have produced the reversal of the deflationary trend, for a good deal of that depression resulted from an epidemic of fear, and one of the major fears was that prices would fall further.

The expectation of a declining trend of prices, particularly at a pretty severe rate, plus the assumption that wages would lag behind prices in the sense that they would not fall as rapidly as the fall in prices, could really be a very powerful muffler on business operations. The reaction it would create would be to reduce all inventories to the minimum, to check expansion or replacement of productive facilities, and so on.

The old proposition that wages lag behind prices seems no longer to be generally true as far as rises in prices are concerned. The progress of collective bargaining has eliminated in part this objection to inflation on grounds of equity; at least it has lessened it. Part of the injustice of inflation as it operated in the past was that as prices rose it took quite a while before wages reacted to the full, so that for a while there was a reduction in real wages, at least per hour of work.

Today, there is the much discussed "cost-push" factor. Wage rises now may even be the initiating factor in inflation. This gives rise to the pertinent question whether a policy designed to achieve reasonably stable prices over a long period of time calls for a wages policy as well. I would say certainly for the United States, and I would suppose that the Canadian situation is not different. It will not be possible in the future to have any genuine price-level policy unless it includes readiness to use some kind of government influence on the pattern of behavior of these two powerful forces, businessmen administering prices and trade unions, whether through mere consultation with them, through exhortation, or otherwise. In the past, I have ridiculed exhortation as an

effective instrument of statesmanship. I now believe, however, that it has some potentialities in a mixed competition-monopoly economy such as we have, where economic power is diffused in large lumps, where you do not want too powerful government, but where the "individuals" government is dealing with are not weak atoms but are in some degree "powers" rivaling the power of government.

As in international relations, we are here clearly dealing not with atoms but with "powers." In such a case you need moral pressures and education unless you are prepared, which I would hope not, to rely wholly on direct government controls. Education here ought to be tripartite. Government ought to assume its own education, and it ought to plead with the power groups to educate themselves. If government does not have the education as to appropriate policy from a community point of view, it means that the political process operates blindly. If large-scale business does not have it and if trade union officials do not have it, it may mean that they do not want it; that they are biased against it, as leading to unacceptable restraints on their pursuit of financial gain.

It is hard to find the most expert American spokesmen for labor who even in their more philosophic discourse do not tend to find that the remedy for every kind of economic evil rests either in forced increases in wage rates or in a forced reduction of the working week without any reduction in the weekly pay, or in featherbedding, or in some combination of these. Whether it be depression or inflation, boom or under-employment, they tend to find more pay for less work the specific remedy for all kinds of economic diseases.

On the part of business the chief difficulty is that it defends its role in society on the basis of the ideology of free competition, but does not believe in its key element of competition with respect to prices. Not only does it not believe in genuine price competition, but it does what it safely can, and upon occasion more, to escape the pressures of price competition by arrangements and procedures which are intended to suppress it.

The idea of competition as the basis of a free economic system which operates to the benefit of mankind, produces progress and a reasonable amount of equity, and so on, is only some two centuries old. Much of the traditional argument for it becomes irrelevant if you assume that the competition does not extend to the area of prices. If it is largely confined to the area of salesmanship, if it is cost-raising competition, the story is a different one. I remember that before World War I at many important street intersections in Montreal there would be at three of the corners imitation little Greek temples which were bank branches, and on the

remaining corner there would be a saloon. The saloon did operate in perfect competition with the banks, for the people's savings, but not with other saloons. At the banks there was no question of competitive reduction of the price charged to the borrowers, and no question of competitive bidding for deposits through the interest rate paid. But nonprice competition can take the form of product differentiation which consists merely of changing the brand-name, the wrapper, or the color of the product. Color variety is one of the blessings of life, but the degree of blessing may be small. Moreover, the color or design appeal may be used as a cover for deliberately built-in obsolescence, either in physical capacity to last and to function, or psychologically, as when a color is changed to make last year's garments unattractive, or when automobile manufacturers look for designers of more vulgar taste than their own or their competitors', and thus to gauge and to stimulate the worst tendencies towards bad taste on the part of the public. Here business needs to be educated, exhorted, put under moral pressure. I would let the small merchants do pretty much what they like, however. They cannot effectively escape the pressures of what true and serviceable competition prevails; their economic power vis-à-vis their customers has shrunk to a shadow of what it once was, and without government aid they cannot by themselves make monopoly workable.

With respect to this question of cost-push and/or administered price inflation, it is reluctantly that I have come to the conclusion that the problem is a serious one. There is a substantial amount of evidence that because of the prevalence of price-administering and of collective bargaining prices do sometimes rise when it is in the interest of the economy that they should not or even that they should drop, and that wages do rise even when it may be in the interests of labor itself, let alone the economy, that they should not. Government may well need to have the apparatus and the disposition to come to reasoned conclusions as to what is in the prevailing circumstances undesirable practice, and then to communicate its findings as firmly as it can to the public, and to ask large-scale business and trade unions to consider what the national objectives are and what the impacts of their own operations are on these objectives, even if they are then left free to act according to the dictates of their corporate or trade-union consciences.

One of the great policy failures of the western free world occurred when it allowed giant corporations and cartels to emerge without special restraints while adopting a new economic philosophy of free competition adapted to an economy comprised of small powerless economic units. When giants exist you need an economic philosophy and policy appropriate for an economy of giants.

A corporation can be just as "moral" as an individual—even more moral. A corporation will spend its shareholders' money on a good cause when the directors and managers themselves would not spend their own money on the same good cause. This is not so much a moral question, as it is a question of the influence of size on power and on decision-making processes and of the natural way in which large units express themselves in action. My argument is really, I think, a tribute to both trade unions and corporations, because I am claiming that if a government skillfully presented its views as to the community interest to trade unions and to business leaders, they would respond where it was not abundantly clear that the government was wrong—as it well might be—more readily than would the mass of ordinary unorganized individuals.

B. ON THE RELATIONSHIP BETWEEN FULL EMPLOYMENT AND ECONOMIC GROWTH

I. *Level of unemployment consistent with "full employment"*

Let me take the American picture. The American economy is having its problems too which need systematic and objective scrutiny. One is a sluggish rate of growth. Another one is an uncomfortable and nearly intolerable level of unemployment. We ought to do better than to have as many involuntarily unemployed in the United States as we now have. The number of involuntarily unemployed is generally greater than the number reported as unemployed. That is not always true; if a husband loses his job his wife may then become a seeker of employment and be included on the labor-force rolls, and then you have statistically two unemployed whereas psychologically and economically you have only one. But, on the other hand, a man who is unemployed and who does not think he has any chance of getting a job, goes off the unemployment rolls not because he is employed but because he is hopelessly unemployed.

Let us assume that the U.S. figures are correct; then the present amount of unemployment is too great to be accepted complacently. I am told that the amount of unemployment in Canada is also too great.

But I am not well enough informed to be able to say with any degree of confidence what minimum percentage of unemployment is to be regarded as constituting a "problem." A reported difference, of, say, between two per cent in one country and four per cent in another country might mean no real difference at all. There are important differences in definitions and in circumstances between countries. International comparisons of degrees of unemployment may mislead you more than they inform you, because the definitions are different.

I remember once about 30 years ago sitting in on a conference at

Washington when I was temporarily a civil servant, when the Agriculture Department was pressing for a definition of unemployment under which the wheat farmer would be treated as unemployed from October to April.

An unemployed person in the United States is one who is not working and is actively seeking work. But "actively seeking work" is a highly technical term and means, I think, "if you are registering at an employment office," and there are many who would not register there even if they were on the edge of starvation. They feel it labels them, and so on. There are many for whom such registration brings no benefit. Also there are fakes. As between countries the definitions vary, and the same definition can mean different things in two different settings. My own feeling is that in the United States anything approaching four per cent ought to be regarded as intolerable for more than a few months or half a year, or perhaps a year at the most. But I am relying here on what experts say, and not on any expertness of my own.

2. *Reduction or elimination of unemployment as chief objective of public policy*

Sustained involuntary unemployment is a very serious social evil. A working class that feels that unemployment other than transitional and frictional is a real risk for it is never going to feel that society is organized with due consideration of its interest. But I am not qualified to specify when in terms of unemployment statistics the signal for special action has been given. I must leave it for others better informed to locate the critical percentage. When it comes to programs of action, moreover, I have no confidence in my own unaided judgment as to degree and timing.

If I were to sit with you gentlemen to help plan Canadian policy, what I heard from you and learned from you and your staff of experts would undoubtedly influence any advice I would give as to kind, degree, and timing of action. In this month of September 1962, it may very well be that the important issue for you is price stability because it is being threatened and there need to be considered measures which will support or weaken it. Unemployment is not a major issue for any single week or month. Only as it continues for a period of some length should it be regarded as a major problem. We ought to know enough to be able to remove the risk of a substantial percentage of involuntary unemployment over a sustained period for the labor force as a whole.

Some 150 years ago in England a major economic and political issue was whether it was possible to relieve hunger resulting from unemployment without undermining the honesty and will to work and the in-

tegrity of the working class. Today we know that if you guarantee the bare necessities of life to an involuntarily unemployed man it will probably not make him a bum for the rest of his life, but 150 years ago some of the fathers of my profession seemed to think that men could be so corrupted with ease. When you accept plural objectives you need to be conscious of the potentiality of conflict between them and to look for ways of adjustment, so that you can try to pursue all your goals simultaneously as far as periods of some length are concerned. But in any one week or month, or even in one full year, you may have to be working counter to one of these particular goals. My feeling, however, is that as far as unemployment is concerned, if it lasts for, say, six months, and if in extent it rises above what in the wisdom of the experts is the tolerance level, you must do something substantial about it.

3. The relationship between rates of economic growth and levels of employment

It is important to distinguish between the objective of a reasonably rapid rate of economic growth and the objective of a reasonably high level of employment, and when you are discussing one, not to assume that you are also discussing the other. It is obvious that an economy in which all men are usefully employed all the time will, other things equal, grow more than one which has very serious unemployment. Increase in employment does of itself tend to produce some growth. But the growth that people talk about now when they talk about national policy and unsatisfactory rates of growth is often the per capita rate of growth of capital resources and of income at a normal level of employment. The rate of growth now so much under discussion is not only a question of degree of employment, and may not at all be a question of size of labor force, but is primarily a question of per capita rate of capital formation through saving from income, of rate of technological improvement, and of increase of productivity per employed laborer working with the same amount of capital resources per laborer.

The growth people are talking about now also involves such things as comparing U.S. growth with Russian growth, aggregate or per capita, for its military, or political, or prestige significance. Growth is also important for other reasons, such as, for example, its facilitation of adjustment, through the normal processes of retirement of workers and depreciation of plant without positive injury to anyone, to shifts in products or in processes. The modern emphasis on "growth" is concerned with contributions to growth by technical improvement or discovery, by liberalized foreign trade, and by increasing the ratio of saving and of capital investment to national income, and also perhaps by

growth of labor force, but not with an upward trend of the ratio of employed to those wishing employment. Moreover, let me point out that what would at one historical stage be regarded as unemployment, perhaps serious unemployment, would be regarded in another society or historical stage as a healthy, normal, desirable situation, because of changed values with respect to leisure, employment for women outside the home, child labor, and age of retirement.

The proportion of hours of a man's life that he devotes to gainful employment today is shrinking year by year in the western world. In the first place he stays in the educational stage before employment longer than he used to. In the second place, while he lives longer, if he lives he retires earlier. You have also the shrinking of the work week, the paid vacation, increases in the number of paid holidays. All of these things are leading to an appreciable downward trend of the ratio of average paid working hours to the total hours in a week or year, and this applies to the normal western country.

On the other hand, there are two forces working in the opposite direction: one is the increased proportion of the population that is gainfully employed at some stage of its life, especially the increased proportion of women who engage in gainful employment as compared to 100 or 50 years ago, or 30 years ago, and this trend is quite marked. Another is that the shrinking of the official work week produces as a subsidiary phenomenon "moonlighting" or working part of each day or week on a second job.

Some of my professional colleagues believe it is dangerous for a country to adopt growth objectives as part of its national policy, because that means that you are not going to accept whatever growth the free market spontaneously yields, but will introduce controls, discriminatory taxation, forced saving, and so on.

I have not so far raised the issue of freedom from regimentation; I will only say that at some stage of government intervention in economic process I become quite sensitive to that sort of argument. Now suppose that for strategic or military reasons it is decided that it is urgent that the American economy grow at a faster rate per year—whether in the aggregate or per capita—how can you bring it about?

Depending on what the objective is that it is intended to serve, the nature of that growth matters. What strategic service will be performed if all the growth goes into more chrome on automobiles, for instance? It is my feeling, however, that no matter what special purposes a government may want to serve by additional growth, it will not be able to direct what growth does occur altogether to those purposes but will have to be content with much of it going to other purposes with

which it is less concerned, such as chrome on automobiles, or education, or hospitals. I am of course speaking of free societies, but I do not believe even the Russians can achieve 100 per cent allocation to the official objectives of the product, or the growth of product, of their economy. If you want growth for military purposes, or for educational purposes, you must strive, therefore, for substantially promiscuous or unallocated growth in the hope that the required fraction of it will become available for the purposes that you really value. That is the best answer I can give to the argument that growth policy necessarily involves serious encroachment on freedom. Growth produces a promiscuous basket of things which individuals desire, some of which government may not approve of. But we cannot get for Jones the things we approve of his getting whether he cares for them or not, unless we also make it possible for him in some measure to get the things he wants but of which we do not approve. If the United States was seriously concerned, with respect to growth, only about its military strength relative to Russia's, coerced reconstruction of the national pattern of consumption or of the makeup of our gross national product would, if it were politically practicable as a plan and also enforceable, be a much quicker and better-aimed procedure in terms of hitting your target than would just working for general growth over the years. But it would involve a major threat to economic and other freedoms.

C. ON BALANCE-OF-PAYMENTS ADJUSTMENTS

I. *Conflicts between balance-of-payments adjustment and other policy objectives*

In the United States we have also a balance-of-payments problem—not in the sense of any deficit in our current commercial account, but in the sense of a drain on our supply of internationally liquid assets. I think I know of at least 25 different steps which the United States could take, without revolutionary changes, to cure its balance-of-payments problem. In this sense, this is one of the most minor major crises in the history of mankind. However, most of the possible remedial steps would be unpleasant to take for one reason or another. Some of the steps would impair the image of the United States in terms of its international relations, and would have an adverse material impact on the rest of the world. Some of them would require political courage in excess of the normal supply, or would be politically costly to the administration initiating them.

The Canadian balance-of-payments position may in some respects be even weaker. I do not know it in detail, and I make no claim to speak on this as an informed person.

In any case, one of the sources of weakness in the United States balance of payments is that never in the history of mankind has there been such a manifestation of unilateral giving of one's substance to others without contractual obligations to do so. Except that we are not defending Russia or China against anything, we are involved in the promiscuous defense of almost every government against external aggression of a military kind. We are giving economic aid to Communist countries, to socialist countries, to anti-American countries, to developing countries, and to poor countries which are not developing. There is no obvious positive correlation between friendliness to the United States and eligibility for American foreign aid, or to capacity and will to use the aid to good purpose and receipt of aid.

Here is apparently one easy path to correction of the American balance-of-payments deficit, but it is a path which many believe would result in a much more serious political and strategic imbalance, and would involve also failure to accept the moral responsibilities as a leader of the world community which history has imposed on us.

We could, through moderate trade restrictions, assuming no retaliation, temporarily cure most of our balance-of-payments difficulties, but at a long-run cost to our economy, and with impairment of a desirable world structure of commercial relationships which is in our long-run national interest and which it took a generation of effort to establish. The economist who is aware of the complex setting in which new trade restrictions would operate would never let himself look on the problem as analogous to that of a plumber fixing a leaking sink. He would remember that he is concerned with the plumbing of the whole house and that repair of the kitchen sink must not involve flooding the cellar.

Moreover, plumbing is not the whole house. If I were asked: "What specific recommendations would you make?" I would have to ask: "What do you want? What sort of a world do you want? What sort of a country do you want? What sort of an economy do you want? Do you want something that will keep you going until Christmas or do you care about next year?", and other such questions.

My reactions to such questions would seem to most people to be a sort of escapism from the burden of reaching decisions. I still think I have something to contribute to the process of decision-making, but I do not profess that I am able to give you precooked answers to your problems. I would rather ask: "Have you identified your problems? Do you know what their significance is for the long run, as well as for the short-term future? What kind of a country do you want Canada to be, and into what kind of world pattern do you want to fit Canada?" Only then would I have some advice to offer, and it would still be qualified advice.

It has been claimed that balance-of-payments pressures which occur when you are having an inflationary boom probably are pressures to do what you should do anyway for many other reasons. But when you have severe internal difficulties, heavy unemployment, soft rather than rising prices, it is unfortunate if at that time balance-of-payments pressures come along; I would not see any providential harmony in that situation. I would distinguish these two classes of cases. Historically, I would say, there are often times when meeting balance-of-payments pressures by restrictive monetary or fiscal measures would be very helpful for internal monetary and economic policy also.

There are at least five or six Latin American countries at this moment where if the balance-of-payments pressures were taken seriously and almost any kind of deflationary response was made to them, it would be a good thing in terms of any reasonably sensible national monetary or other economic goal. You may ask: Why are they so ignorant as not to respond in this way? It is generally not a case of ignorance, but of weakness and political fears on the part of those making the decisions, which restrains them from taking anti-inflationary steps. It is never pleasant for a statesman to tell the workman with a vote, "You must accept a lower money wage over the next six months or year," or even, "You must not ask for an increase." That never brings great cheers for the statesman from the workman, though afterwards the workman can perhaps be persuaded that he ought to respect the statesman for having done that.

Thus, suppose you divide the historical record into two kinds of periods. In one period, there is pressure on the balance of payments associated with internal inflation, budgetary deficits, and rising prices. At least at the moment, almost any form of deflationary response to the impact of that balance-of-payments pressure would be helpful to a sounder and healthier economy. On the other hand, in a period when depression, falling prices, unemployment, and balance-of-payments deficit are present together, a tragic dilemma has to be faced, the tragedy being that you have two perfectly sensible, perfectly sound, and quite important objectives that call for action in opposite directions.

2. The possibility of foreseeing and preventing conflicts between internal and external objectives

Can a conflict in objectives such as this particular one have been foreseen and perhaps anticipated? I would suppose not, except very partially and conjecturally. The only fairly reliable prophecy in this area is that based on hindsight; is a prophecy after the event. I do not say you cannot do a certain kind of quite relevant predicting, and act accordingly.

For instance, when things are easy both as to internal activity and as to international liquidity, and prices are not weak, you can safely predict that it will not always be so. It will be prudent then deliberately to accumulate reserves that can save you from severe pressures later and leave you the freedom to cope with a subsequent domestic recession by, say, easy money or budgetary deficits without having to worry about the balance of payments.

For a country like Canada always, for the United States before 1933 and since, say, 1959 or thereabouts, and for all the rest of the world, the notion that there may be a balance-of-payments crisis in the offing ought to be present in the inner consciousness of statesmen and government officials as they frame and operate their economic policies.

The United States from 1933 to 1958 lived in a peculiar period, peculiar to it and unique in history in general, the "Fort Knox period." The hoard of gold at Fort Knox was operating silently but powerfully all the time during this period. It was operating to free the United States for the time being from certain responsibilities and obligations to its own people and its own economy which normally governments always have. In deciding on its monetary and fiscal policy, it did not have to take into account the possibility of a balance-of-payments crisis, or to pay any attention to its current balance of payments. It had what approached an almost inexhaustible reserve in the form of gold at Fort Knox. In its policies it could therefore disregard balance-of-payments considerations, which it did, from 1933 to 1960 or 1961, and which in deeds, if not in words, it is still substantially continuing to do.

No other country could, or did act in this manner, and the United States itself normally could not. The special American feature was that an outrageous devaluation produced an outrageous concentration of gold in the United States, and that for one reason or another the normal inflationary consequences did not fully work themselves out, so that the gold hoard did not shrink, or shrank very slowly. But by 1959 the United States was again in the normal pattern, and balance-of-payments considerations were again important for it, although it was two years before there was any significant reflection of the gold drain, that I could see, in government policy; what reflection there was was still on a vocal or a token basis.

I did not see its imminence until 1958. It is not for me, therefore, to blame anyone for not foreseeing it sooner. But in fat years one should build up reserves for the lean years, even if one does not know when these lean years will come—although if many countries were to try to do this simultaneously, there would be difficulties.

In the England of the nineteenth century, partly from inadequate

vision and partly because of its interest in its own income, the Bank of England, traditionally supposed to be the operating agency and the trustee of the gold-standard system for the world, operated on a gold shoestring, operated with little more than a token supply of gold monetary reserves.

Throughout the century, from 1819 to 1914, this intermittently got England into fairly serious trouble, which could have been foreseen—not in the timing, but as a possibility. And the way to prepare for it was fairly readily available and known. The Bank of England by itself could not have done it, because it needed to earn dividends on its shares, and if it kept ample gold reserves for the country's needs there would have been no income. But the government could easily have enabled the Bank of England by a formal or disguised subsidy to build up an additional reserve for emergencies of, let us say, 50 to 100 million pounds. We would now regard that as a trifle; but it then would have sufficed.

3. *Effects of changes in the U.S. level of gold reserves on the liquidity of other countries*

Today the United States has less freedom in this respect than England could have had in the nineteenth century, or than Canada has now. The United States cannot protect its own liquidity very far without getting other countries into trouble because it is too big and can to some degree augment its own liquidity only by impairing the liquidity of the rest of the world. Canada has unlimited scope in this regard. Canada, if it chooses the appropriate time, can accumulate an abundantly adequate reserve without being conscience-stricken lest it be hurting the rest of the world, and Canada, unlike the nineteenth-century Bank of England, can afford it. The annual cost would be only whatever would be the appropriate interest charge on whatever number of millions of dollars of internationally liquid assets would suffice for this purpose. Moreover, I would point out that Canada has always known how to earn money on its internationally liquid reserves, a possibility not available to nineteenth-century England. But I would hate to be misinterpreted here. I am not recommending to Canada now a free, irresponsible pursuit of liquidity in terms of narrowly-conceived national interest. Canada also has responsibilities with regard to the rest of the world. All that I concede is that these are not of the degree of those of the United States now or of England in the nineteenth century. The United States is chosen to bear these responsibilities not because psychologically or morally or emotionally it is better equipped to carry them, but primarily because

of its economic size. Size is of great consequence in the economics of international relations, as well as in its politics.

One of the important ways of dealing with size is to get adjusted mentally, morally, emotionally and economically to one's real size. Its relative lack of size gives Canada a measure of freedom of choice as to the instruments to be used, say, to correct a balance-of-payments disequilibrium that is not open, in the same degree, to the United States because the United States would have very seriously to consider the impact on the outside world. Part of that outside world that the United States has to keep in mind—and, possibly, does not keep adequately in mind—is Canada. If the United States shrugs its shoulders that may be more than merely a jostle to its neighbor.

4. *Freely flexible versus fixed foreign-exchange rates*

Many economists would say that for Canada, and even for the United States, a system of freely flexible exchange rates would either forestall or resolve these problems. Well, I try not to be a bigot. In general, I favor working through free-market forces and would interfere with free-market forces only after careful consideration, as far as possible by general rule, and only for weighty reasons. Now, a flexible exchange is an example of a flexible "price," like, say, a flexible cotton price, if I may suppose that the cotton price is a quite free and unmanipulated price. But to apply to the foreign-exchange market the logic of a perfectly free and perfectly flexible market economy we have to overlook the fact that we are in a world of sluggish prices, of administered prices, of rigged prices, of collective-bargaining prices, of government-regulated prices. Of all prices, why should you single out the exchange value of your currency as almost the only price of major importance which can be safely left subject only to the spontaneous forces of the free market?

Even in a world of free-market prices, I might still not be for a foreign-exchange market with which government in no way interferes, directly or indirectly. In a world such as ours where markets are only very partially free, I concede that I have no logically satisfactory formula for foreign-exchange rates, whether of freedom or of regulation. Whatever regulation, direct or indirect, of a national character I support is supported by me totally without enthusiasm and only as presumptively less objectionable than any alternative that seems available. There are valid and important objections to national regulation of foreign-exchange rates by means of fixing the gold value of your national currency, of which perhaps the weightiest are that it is arbitrary, that it is not under modern conditions a reliable guarantee of stable foreign-

exchange rates, that it is liable to be a cause of deflation, and that it is only a partial and somewhat unreliable protection against inflation. If there were a relatively small country which could be counted on to be able and willing to maintain a stable price level through boom and recession, I would urge it to free itself from any link to gold until price stabilization was a major goal successfully pursued by the bulk of the free world. Given conditions as they are, however, I favor for all countries a strong but not completely unbreakable link between their national currencies and gold, with the currency value of gold alterable only either by international action or, unilaterally, where it is fostering either extreme deflation or extreme inflation.

If fixed currency values for gold threatened to result in substantial inflation or deflation for the free world at large, I would support appropriate alterations in the monetary price of gold by international agreement but I do not feel that this is for the time being an urgent problem.

There is substantial flexibility, given a moderate amount of organized international cooperation, in the minimum gold reserve adequate for the currency systems of the free world without involving general deflationary pressure. There is under existing and foreseeable circumstances no prospect that currency links with gold would operate on a wide scale as an inflationary force.

I do not claim that it is in theory or in practice impossible for a floating-exchange system to operate satisfactorily for a particular country. But for confidence to be warranted that this will be the case for any particular country, certain quite exacting conditions need to be met. One is that there shall be justified confidence that economic forces in present-day markets, with their prevalent imperfections as compared to the free-market model of economic theory, shall operate substantially as in the ideal free market. Another is that the government will not use the freedom from gold or fixed-exchange-rate restrictions to manipulate the exchanges by direct or indirect means in what may be, from the point of view of the national interest or of the interest of international economic cooperation, a perverse pattern. An exchange to be genuinely floating must be free from any pattern, open or concealed, of government interference with it, but an exchange set up as floating in appearance is nevertheless susceptible to substantial manipulation by government in a variety of ways, provided that only indirect means are used and that the purpose to influence the exchange rate is not formally acknowledged.

I know of only two instances of full-fledged floating exchanges, the Canadian and the Peruvian, both now dead, but both deaths bemoaned

by many economists. I am not well enough informed to appraise the workings of either of these experiments or the causes of their termination.

I concede that some of the fears I had as to how a floating exchange would work for *any* country were not justified by events, at least for a number of years, in Canada. I derive from that one or the other of two conclusions: that the Canadian people had a great degree of confidence in the wisdom, integrity and foresight of their government and its agencies, including the Bank of Canada itself, and that this confidence was justified; or, secondly, that the community was without ideas of any kind on the subject sufficient to bring it to a state of distrust and apprehension, and that government and its agencies operated wisely and efficiently or were fortuitously spared from rigorous testing of its wisdom and efficiency.

In the United States there prevails special admiration for the wisdom and ability of Canada's higher civil servants, and for the wisdom and integrity of Canadian politicians in that they respect the quality of their civil service and deal with it as a good democratic government should deal with a brilliant and dedicated civil service. This contributed to the belief that, whatever might be the case in other countries, Canada could survive and even flourish under a floating exchange.

I do not understand the Canadian events of the past eighteen months. They are hazy to me. One of the things I am not sure of—and I get conflicting reports from American experts—is how one finds whether an exchange is genuinely a floating exchange. A perfectly floating exchange is probably an inconceivable thing, if one defines it strictly. How close Canada came to it in this period, I do not know.

The Canadian experience has at least taught me that a floating exchange is with less probability and less speed the path to disaster that I earlier feared it might be. But I still feel that a wide range of countries—and in this range I include the United States, with qualifications—are not safely to be trusted with a floating exchange; and that the fixed-exchange rate—cult, myth, rigidity, illogicality though it be—is in many countries the sole surviving barrier to almost unrestrained inflation. As the major reserve-holding country, the United States has additional reasons for maintaining a fixed relationship of its currency to gold.

At the present time the fact that in the United States we have a fixed gold value for our currency, or a partial set of stable rates of exchange with other currencies, the fact that we have the one, or the other, or both of these, appears to me one of the important factors of a substantial but incomplete stock of factors which supports belief that on the whole

the United States Government over the next few years will follow a fairly sober financial policy.

5. *Lack of logic in maintaining a fixed price for gold and fixed foreign-exchange rates*

Tying a currency to gold, or to fixed exchange rates, is not a logical principle. There are circumstances in which it could be a stimulus to inflation. Under other, and now more probable, circumstances, it could bring about even more disastrous deflation. In principle, I have nothing to say for fixed exchange rates; in principle, I am biased in favor of flexible prices for all things. But in the light of the special circumstances under which every currency must operate, and, in the light of past history, I know of no country which can be safely relied upon always to act with sobriety when freed from the budgetary and monetary restraints imposed by the necessity of maintaining exchange parity or gold parity. In a way, it is like putting chain and ball on the legs of your citizens at random, because you cannot identify which are honest and can be safely allowed to roam the streets at night.

I have no recommendation to make as to what specific exchange-rate policy Canada should follow in the near future. The range of information I would need to venture to tender advice as to what Canada ought to do with respect to the exchange value of its currency, or to the pattern whereby its exchange rate is determined, is much greater than I have. I offer you a sample of the points on which I am conscious of being ignorant. I have not seen any detailed analytical study of Canada's balance-of-payments difficulties in recent years. I do not know just how much of it, if any, was due to bear speculation. I know there has occurred a very serious drain on Canada's international liquid assets, but I do not know whether the character of it was such as to portend serious pressures continuing into the distant future, or whether a lot of very itchy money had come in here and has now been taken back, and that that is the end of that story.

In any case, there are very roseate opinions in the United States as to the future prospects of Canada, as to the wisdom, solidity and genius of your government, as to the virtues of your political procedures, and so forth. There have even been some in the United States who invested money in Canada, thinking this is a haven for all the kinds of economic virtues which seemed to them to be in short supply in the United States. Canada no doubt is a special haven for some economic virtues. I would nevertheless have guessed the odds in favor of even Canada being capable of living in reasonable safety with a floating exchange as not high. In the light of recent events, perhaps I was not mistaken.

D. ON THE MANDATES TO THE CENTRAL BANK

I. *Only one policy objective for the central bank*

I believe I would advise that a new central bank be not assigned as its particular responsibility a wide range of national objectives, desirable though they might be, and that it be assigned one particular objective, and be left free to pursue it except in a crisis. I would leave the decision as to the general pattern of national objectives to Parliament, to such other agencies as were found appropriate, to the people, and to the democratic political process.

If I were then to be asked what would be a sensible and suitable single goal for a central bank, I would urge the traditional one of maintaining a stable purchasing power of the national monetary unit. That would be not only its primary objective, but approximately the sole major one for which it assumed responsibility. This would not mean that the bank says: "This is more important than anything else," but rather that the bank would be authorized to say: "This is more important in terms of our operations than anything else for which we have special responsibility. If there are other things with which this conflicts, let the rest of the economy or the government accommodate itself to it by whatever measures it chooses." The central bank should have the authority to do this and it should not have to face a minister of finance coming in and saying: "We want a lower interest rate because of the new issue of long-term bonds we are planning, and you must not follow a policy whose consequence will be to produce a higher interest rate." If the central bank were set up properly the governor of the bank should, in these circumstances, be able to tell the minister of finance that this was illegitimate interference.

A central-banking shop that is faced with the requirement of constant subordination to the traditionally confused, inharmonious objectives of a typical ministry of finance cannot operate successfully, cannot reach clarity as to what it can and should do, and cannot make a sensible selection of instruments or tools to use. It may be that you want to assign to the central bank as its major goal minimization of the cost to the government in terms of the interest rate on its debt. To my mind that would be one of the most absurd national goals for a central bank ever invented, but it is often the dominant short-run goal of ministers of finance, particularly at issue time or a week before. Let us not confuse national objectives in general, or the proper operations of a central bank, by making the central bank merely the minor servant of the relatively trivial goals of another agency of government.

How do you decide whether the goals are trivial? It is mainly a mat-

ter of dimension. How much difference does it make what the Canadian public debt costs in interest paid out by the Canadian government to Canadians, whether it costs—I do not know what the range is—\$250 million or \$275 million a year?

Another point is that the minister of finance may be trying to make some kind of a personal record. Gladstone, in order to be able to cut the income-tax rate by half-a-per cent, would have, I think, lived on milk and water and punished himself and flagellated himself, and the national economy as well, and he would have thought he was thereby rendering a great national service. But I am acting, not perhaps out of character, but out of the image of myself I am trying to present, when I use the word "trivial," because it is my thesis that it is always for the community to decide what the proper national goals are. The economist is not a special expert in choosing between national goals. In this particular case it is only because a small quantity of reduction in debt burden seems to me an inadequate justification for interfering with the, to me, "major" goal of price-level stabilization that I presume to use the adjective "trivial."

It is not merely a question of whether it is of major importance that the interest rate on the average on the government debt be $4\frac{1}{2}$ per cent rather than $4\frac{5}{8}$ per cent. The only point I should make is that if the government thinks that *is* a major issue, then it ought to look around for other ways of dealing with that situation rather than through the central bank, for the central bank has other things to take account of. A law could be passed, for instance, that every man with an income of over \$5,000 a year shall buy a prescribed amount of long-term government bonds until the rate of yield of government bonds falls below some prescribed maximum. Or some other way of doing it without interfering with the central-banking process should be adopted. I stress noninterference with the central-banking process, however, only if it has clearly assigned and narrow goals and sticks to them; otherwise, you are making the bank the authority over the economy, and I am not advocating that.

What I am advocating is a clear mandate; partly because I think the central bank will operate more efficiently if it has a clear mandate, and partly because I think the central bank will have a great deal more courage to follow its goals as it sees them if it has a clear mandate to support them and can plead not merely its own wisdom as to selection of goals but the mandate that the people has assigned to it.

I think that it is important in the United States that its central bank be given as at least one of its major goals the maintenance of the pur-

chasing power of the U.S. dollar. We do not have that in the United States.

I do not know of any central bank that has been formally assigned a logical function in its own economy, but I have not studied the literature on the texts of central-bank charters. Central banks are still emerging, still changing. They have a relatively short history, and a lot of that history is a history of adherence to traditional ruts and of lack of clarity, or at least of clear formulation, of their responsibilities.

I am trying, however, to make only one point: that it is important that the central bank be assigned specific and clearly defined duties, and that these should be narrowly limited in range. What these duties should be is a matter for national decision.

If you were to ask me what are the professed goals of most central bankers, I would say on the basis of what I have heard *them* say that if they were appearing before a commission like this they would either include a wide range of goals, including virtue and motherhood and also everything else they could think of which is nice and good, or insist on the lack of power of central banks to serve effectively any specific important goal.

A central banker, when the recent record of his bank or his country has been good as far as the stability of the price level is concerned, will naturally emphasize the role of the central bank in achieving that record. But the same central banker, when the record over the past two or three years has not been too good as far as price stabilization is concerned, will be likely to start talking about other objectives, or about the inherent limits of central banking. Perhaps I exaggerate the importance of a clear mandate to the central bank. Some years ago, testifying before a Congressional committee in Washington, I urged that a price-stabilization mandate be made part of the Employment Act. Literally, as I read it, the Employment Act is a plea for maximum inflation. It sets "maximum purchasing power" as a goal, and does not define it. The most obvious definition of that is: the maximum amount of money or of money income possible. Now, that depends only on the speed of the printing press. I was rather severely attacked by Federal Reserve economists at the hearing on the ground that price stabilization is, of course, implied and included in the mandate to the Federal Reserve and has always been taken into account. My colleagues in the profession also thought I was minimizing the extent to which, by the nature of things, the central bank would assume that to be its mandate. I was also criticized for assuming that if a central bank did have a mandate it would make any difference, that the mere words would have any effect. This shook my confidence somewhat, but I now have the impression that

the Administration, the same committee of Congress, and the Federal Reserve Board itself, have since gone on record to the effect that there is some virtue in an explicit mandate to promote price stabilization, and that it would be helpful to the Federal Reserve in their business, and for much the same reasons which I had then expressed, even if clumsily.

How I came to my conclusion may be relevant. I was at one time adviser to the Secretary of the Treasury. The Treasury Department in Washington had a tremendous range of functions spreading all over the map, and I had contact with a number of them. On one occasion, on the question of interpretation of tariff rules, an important diplomatic issue arose with Nazi Germany as to whether a certain provision in the statutes gave the Treasury an obligation or merely discretionary power to apply countervailing duties on bounty-fed imports. The State Department—the business of the State Department is to keep the peace and at that moment its business was to keep the peace with the Nazis—fought hard on behalf of the German government, on the ground that the statutory provision although written in mandatory form was really discretionary, and that the Secretary of the Treasury could use his judgment in the interests of peace, or of prosperity. The Secretary was able to reply to the State Department and to the President that his general counsel and the Director of the Customs Bureau, who was himself also a lawyer, had said that it would be an impeachable act to disregard the letter of the statute, that the mandate was explicit and clear, and this decided the issue. I saw on a number of other occasions a powerful Secretary of the Treasury in close contact with and with great influence on the President, and having the President's support, finding it impossible psychologically to take some desired step against the position of his own legal staff that it would be counter to the statutory mandate under which he was operating.

2. Legislative versus executive determination of central bank's policy objective

I might bring out another phase of what is involved. There is always the possibility that a legislature may contain members or an administration include officers who consider that money does not show its full potential virtue unless it flows in unrestrained abundance from the printing press or its equivalent. Obviously, some kind of a conflict between that kind of legislator or official and a central bank can easily arise. In a case like that my own inclination would be to provide the bank with defenses against the legislator or the official and the best defense is that the parliament or the legislature should have disarmed that legislator or official by giving a mandate to the central bank to do the

specific job or jobs assigned to it. Your form of government is, of course, different from ours, but I believe it is sufficiently like ours in needing to sort out responsibilities for specific functions and to assign duties to appropriate agencies. This is in no way inconsistent in a democracy with the ultimate force and power of government resting with the legislature and the executive, and not with any appointed agency, even if it involves some restraint on the power of the executive branch of government or of individual members or particular groups of members of the legislature.

Let me try to explain more fully what I regard as one possible way of setting up a central bank, of limiting its functions, and also of giving it a clear mandate. The government itself might want at any moment to change its mind about that mandate. I do not say that the bank should have the power of veto over such a change, or that it should have an unbreakable contract as to the tenure or length of time during which a mandate once given shall be effective. In terms of the relationship of the central bank to the government, there is an infinite number of workable ways which the arrangements can take. The government, including here both executive branch and the legislature, and not the central bank, is the final authority in a full-fledged democracy. The government cannot surrender its own authority beyond a period of time set at its own pleasure without losing its sovereignty. I would not, for instance, wish the sovereignty of the Dominion of Canada to be shared with the Bank of Canada. I would keep it in the government of Canada, and so also with respect to the United States, or to Britain.

But the mandate to a central bank can at the same time be a self-denying ordinance on the part of the Cabinet, or the Congress. To speak in American terms, when Congress passes a resolution or an act it imposes an obligation not only on the Federal Reserve but for a provisional period on itself. That is something that generally Congress is emotionally unwilling to recognize, namely that when it passes an act it is imposing a restraint upon itself for a week, at least, or a month. In practice administrative agencies in Washington continually have to complain that Congress gives them instructions in January and then in February a Senate committee scolds them for having carried them out. I recognize that absolute precision of mandate is impossible in practice, that some degree of elasticity is both inevitable and desirable, that emergency situations are likely to call for emergency procedures, and that since inevitably it is human beings that are involved, you have to work that out largely in terms of personal relationships, rather than of precise legal formulae.

Let us suppose that unemployment is the issue on the one hand, and

that stable prices is the issue on the other. If the seemingly most promising avenue of approach to an unemployment problem treated in isolation is, say, a budgetary deficit financed by the central bank, then I would say it would be better to arrange it so that it is not financed directly and compulsorily by the central bank because that impairs the ability of the central bank to carry out its own responsibilities and makes it a mere sub-agency of the treasury, or of the administration.

Let us suppose instead that the government's financing is done by way of short-term bills which are sold to the commercial banks at a time when they have excess reserves. In a situation of that sort the central bank should not immediately impose tight money, on the ground that otherwise the effect of that bill flotation would be that next season, or next year, prices would rise. The bank in such circumstances should see the whites of inflation's eyes before it starts shooting.

It will be objected that such precise mandates could become fixations. Can I use an example relative to the United States? There has been great discussion about the long-term government-bond interest-rate ceiling in the United States. That ceiling was imposed by law, and the Federal Reserve Board, and many others, think it a mistake, a hurtful rigidity resulting from an infatuation. But notice whose infatuation that was. It was an infatuation of Congress and not an infatuation of the central bank or of the Treasury or of the President. There is no cure for that in American constitutional procedure. I propose no remedy. I am enough of a democrat to say that Congressional infatuations for the most part have to be accepted as acts of God. There is nothing that can be done about them, except by Congress. On the whole, however, I have no general presumption that the administrators and the executives do not have their own infatuations, as well as Congress—and even economists.

But what if it is the central bank itself which has an infatuation, about a certain device, or a certain discount rate, or a certain level of prices, or a certain cyclical pattern? History is certainly marked by infatuations on the part of central banks as well as on the part of legislatures. Central banks have a more stable tradition, whereas Congress changes every two or four years, and at longer intervals it changes its party complexion, so that Congress has a greater flexibility through time in the variety of its infatuations. Central banks have traditional rigidities. Some of them may even be useful on the whole, but because they are rigidities stretching over a long period, they can give rise to friction between bank and government, or between bank and Congress.

A mandate to the central bank which commands it to use its instruments as freely as is necessary to maintain stability of the price

level, or to promote some other specific objective, does introduce a rigidity which might prove costly. But remember that there is always a remedy on hand. The same power that gave the bank its mandate can withdraw it in a crisis, or because its views and objectives have changed.

I should say something as to how I believe conflict of purpose or objective as between two official agencies, or differences in the vision of different official agencies as to the relative importance of different objectives, can be dealt with. There should be high-level consultation for the exchange of information and views. According to the country and its system, if agreement cannot be reached, a decision, which could involve changes in the mandate of one of the agencies, or of both, but in any case would decide the issue, should come from the highest executive authority, whatever it may be. In the United States that authority would be the President, if no statute were involved, otherwise the Congress; in Canada, perhaps the Cabinet. It should involve as a minimum a clear announcement to the public that the issue has arisen, and how it has been resolved, so that the whole matter never becomes a backroom matter. The public must be made aware of the fact that there is an issue involving a conflict of goals, and that the appropriate high authority has decided the issue. In that way you maintain the prestige and the integrity of the agency that has been overruled. At least, it has not yielded through timidity; it has yielded to legitimate authority, and it is now carrying out a new mandate which is made perfectly respectable on democratic or constitutional principles by the fact that it has been decreed by the supreme authority, even if nothing else can be said for it.

If the new statutory or executive mandate runs violently counter to all the ideas of the central banker as to what is respectable monetary policy then I suppose he ought to resign as a moral protest, but apart from a profound crisis of conflict of opinion I think that what I have suggested is a workable type of procedure. But the decision must be announced in detail so that the public, and the legislative body also, has a chance to express itself on the merits of the issue, and so that this is not merely an *ad hoc* casual interference but a thoughtful and considered procedure on the part of the government.

Whether the mandate, or the change in the mandate, comes from the government in power, and not from the legislature, would be a matter that would vary profoundly from country to country. I do not, therefore, make an issue of whether it is the executive branch or the legislature which formulates or decrees any mandate to the central bank, provided one is decreed.

In England, where party discipline is normally perfect and parliamentary government in the British sense is complete, the decisions are

made by the Cabinet, although perhaps in form subsequently confirmed by Parliament. As I am not inside the Cabinet, I do not know what a British "Cabinet decision" means in practice. Those decisions may be made by the Prime Minister alone if he so chooses for all I know, but the Cabinet will normally support it in the House as if it is united, and so will the majority party in the House. In England it is regarded as a violent protest which sometimes shakes the government when 25 or so backbench members of the prevailing party speak mildly against a government-sponsored measure, even if when the division comes they will usually vote for the measure or abstain from voting.

The American picture is quite different, and I do not know the Canadian picture. I have lost track over the years of just how Canada is governed. However, the American picture is not like that at all. If you ask me who decides, then I will say it is a gamble as between any number of agencies and branches of government. Congress has within it scattered pockets of power. It has absolute monarchs scattered all over it, as far as specific items of policy are concerned. Power is broken up into separate packages. There are at least a hundred men in Washington who are on some type of issue and at some moment liable to have an approach to absolute veto power such as is found in the Security Council of the United Nations.

The issue arises—and it is an important and real issue—as to whether the mandate to the central bank should be in the form of an act or a statute in rigid terms which it might take considerable time to change, or in the form of an authorization from the legislature to the prime minister or the president or the finance minister to tell the central bank what to do at any time of the day or night by means, say, of just a telephone call. These are two extreme limits. Another appropriate question is: If it is a statutory mandate that is involved, what do you do in emergency circumstances where the mandate would be regarded by the executive, or by the agency, as highly unsuitable to the prevailing circumstances.

What I would suggest in case of an emergency is a calling together of the powers that be, the conflicting agencies—and in the Canadian pattern that means, I presume, the Cabinet and the Bank—and the thrashing out of a decision, a Cabinet decision, which would be authoritative as an order in council, or its equivalent, without prior reference to Parliament. That can be done, I should think, within 24 hours. There is that flexibility, plus—and this I stress very much—a really revealing announcement to the public, since I presume that there are no secret orders in council. Is more flexibility than that needed?

In the United States the problem is much more difficult because there

is no routine machinery which in the highest emergency can concentrate power of decision quickly in any sphere regardless of the statutory code and judicial procedures. That is a tribute I pay to the British form of governmental organization. For dealing with major emergencies, it is a much more logical form, and has much more potentiality of efficient and rapid operation than has the American form, which can at times produce near deadlock.

What I have said implies that on major issues the central bank would always have a directive from some higher authority, and that it would be a publicly announced mandate, in the United States a statutory one, which would run until it was changed. Under American procedures, it would perhaps be desirable that a temporary and qualified discretionary facility be granted by statute to the President to suspend or amend this mandate on the plea of emergency and with required formalities of announcement and justification. The essence of what I am suggesting, as emergency procedure, calls for two things. One is, if you like, a council of war, or a major council of executive government, meeting to suspend or alter a statutory mandate to the agency, in Britain the Cabinet, in the United States the President and his agents or advisers, and the second is complete publicity, explanation and justification. That justification can be directed to both the legislative body and to the people. Those are the two major steps.

As I understand democratic process, there is a necessity to have the formality or the ceremony, or "due process." Secondly, there is the obligation to be imposed by statute—or by tradition—that there shall be full disclosure of the reasons and the purposes of the action, to the legislature, to the public, and to the agency involved, so that the dignity of the agency is protected, and so that it cannot be done merely by a message over the telephone from some official, no matter how high the status of that official.

If the president can phone the governor of the central bank and say, "We need 500 millions more of currency, start issuing it at once," if he can do this without consulting his cabinet, without informing the legislature, and without public announcement, that makes a mere clerk out of the central bank. Something like this has happened upon occasions, I believe, in some countries.

I do not know that anybody has ever advocated quite that relationship as a suitable and standard one for a central bank. I do believe, however, that some prime ministers or presidents have made gestures towards operating that way. On the other hand, I do not recommend a central bank so autonomous that it can go ahead indefinitely following a path once prescribed to it, or self-prescribed, even if the heavens fall;

there should be some orderly way in such circumstances of quickly cutting a central bank down to scale. In the light of history both are concrete possibilities—I speak here not with respect to Canada, but to the world of central banking at large. Interference with a central bank in its day-to-day operations and in the selection of the goals it shall pursue, or the tools it shall use—or refrain from using—ought not to be casual and undisciplined. Even a president of the United States, or a prime minister, or a cabinet, to say nothing of a finance minister, needs to recognize that in the proper working of a democracy even the highest relevant executive authority needs self-discipline, or even external discipline, in his dealings with the central bank.

I suppose that, in practice, it is certain that a perfect procedure will not be completely attainable. But the ideal one seems to me to be one that preserves in general the ability of a central bank to perform its assigned functions as it sees fit under its mandate, but retains for the executive in emergencies, and, of course, for the legislature always, the authority to suspend or alter its mandate by established and formal procedures. The bridge I would build between the superior powers and the central bank is to impose by tradition or legislation a code of behavior on the top executive authority which is, in general, self-denying and non-interfering, but which permits it in an emergency directly to intervene, subject to a substantial measure of solemn ritual. The agency must be heard; and a council of war must hear the agency before it reaches its decision.

Secondly, the decision must be in writing so that the agency is protected in its professional self-respect by being permitted to show that it is obeying legitimate higher authority and not acting at its own volition. Thirdly, the legislature and the people must have a chance to comment on the intervention, and either to commend or to condemn the intervening authority.

I think I would add to the statement of specific objectives in the mandate a listing of the instruments that it shall have the authority to use. Some of these instruments may interfere with the rights of subjects and citizens or with the operations of other branches of government. Also, if the central bank contemplates something new in the way of controls—let us suppose it wants to change the pattern of reserve requirements—that may be something of the utmost importance to the commercial-banking system. The central bank ought not to be able at its discretion to change the whole pattern of reserve requirements. The mandate to it should specify the tools the central bank may use in pursuit of the prescribed goals.

If the central bank becomes convinced that the pattern of reserve

requirements it is permitted to use is antiquated and is not geared well to serve the prescribed goals, I would have easy access of the central bank to whatever machinery there is for initiating new legislation—subject of course to the consent of the executive.

I am not saying that the mandate ought to include the provision that the central bank must never acquire a new idea and put it into practice. But new legislation, in many cases, will be expedient, even where the effect of a change in procedure may not be substantial from the point of view of the economy as a whole, if it is important to a particular sector of the economy. I am just following the general idea of democratic process that the situation of an individual or a firm or an industry before the law shall be clear to it and shall not be changeable except by due process. What is to be regarded as “due process” will vary as between countries and circumstances.

E. ON THE POSSIBILITY OF COUNTER-CYCLICAL POLICY

I. *Efficacy of monetary policy in moderating business fluctuations*

Probably the potentialities for success of a central bank in serving monetary policy are greatest if it is assigned as its overriding goal a long-run price-level goal. Among all the possible other goals that might be assigned to it, the closest rival—I am talking about potentialities and not historical achievements—in potentialities of success would be the ironing-out or moderating of cyclical fluctuations in prices, which would yield as a byproduct substantial achievement of the full-employment goal, insofar as unemployment is a cyclical phenomenon and insofar as intra-cycle price stabilization would reduce cyclical unemployment.

I abstract from frictional unemployment, as not appropriately to be made a major concern for a central bank. Seasonal unemployment I would like to abstract from too. It might not be worthwhile endeavoring to do much about it through central banking or any other mechanism in a country like the United States or Canada. In a country which is predominantly agricultural, in which there is, let us say, a three months' growing season, and for the other nine months there is nothing much to do, it can be a major problem, but that is not the case any more here or in the United States, and even in such a country the solution would probably best be sought by other means than monetary policy.

I abstract also, for the time being, from chronic unemployment resulting from collective bargaining or administered prices or from price rigidity in general. That leaves me with cyclical unemployment alone and here monetary policy is, I think, potentially capable of doing a great deal.

At this still experimental stage of seeking remedies for cyclical un-

employment, we ought not to put reliance solely on monetary policy but work also through fiscal policy. In the field of fiscal policy some important and very gratifying discoveries have already been made. Chief of these is that you can have built-in cyclical stabilizers in your fiscal system and that they work with much more success than had been anticipated. Cyclical stabilization, moreover, does not conflict with any other major objective that I can think of, because ironing out the cycle is good for both short-run and long-run price stability, is good for growth, is good for the unemployment problem as a whole, and is also good from the point of view of social justice, political stability, and so on.

I am relying on only a fifteen-year record; next year, maybe, I will be eating my words. But on the record since the end of the war, the cycles in your country, in England, in the United States, in the free world as a whole, have been milder and shorter. So far there seems to have been a structural change in the semi-spontaneous working of a capitalistic free-enterprise system which lessens the menace of the business cycle, and that is a great step forward.

Monetary policy, however, has its most important role in contributing to the long-run stabilization of the price level. To this goal, stabilizing the cyclical behavior of prices has, I believe, an important contribution to make.

If the outsider may judge from the record of past experience, central banking seems to be inherently susceptible to internal weaknesses to which it needs alerting, if cyclical stabilization is for it an appropriate goal. On the bare record of its operations, it would sometimes be difficult to find persuasive evidence that moderating rather than amplifying the cycle was its goal, especially if one correlates cycles in prices with cycles in money supply and assumes that central banks, if they can control anything, can control the money supply. There is considerable evidence that central bankers have upon occasion been fearful of using their instruments of control because they were believed to be so powerful as to be too dangerous to use and upon occasion, sometimes the same occasion, have spoken somewhat contemptuously of their instruments as being so feeble as not to be worth invoking. There have also been instances, many instances, where action was taken, and in the right direction, but the action was token action, grossly disproportionate in degree to the action the situation seemed to call for.

2. Long-run stabilization of price level and counter-cyclical policy

I do not see any glaring conflict between long-run stability of prices and ironing out cyclical fluctuations. I would regard anti-cyclical price

stabilization to mean reducing to a minimum the deviations within each cycle from the desired trend level of prices. In that sense, the central bank would sometimes be working to change prices rather than to keep them from changing. But I see no problem in this. If there occurred yesterday an undesired fall in prices, I would welcome its being higher today if I were a central banker and, in principle, I would do something to make it so.

In other words, the price stabilization with respect to the cycle that I would want the central bank to pursue would be minimum cyclical deviation from the desired long-run trend, which for me would be zero trend. It means that if you want to minimize the deviations within the cycle from the long-line trend, you sometimes want prices to change from what they were yesterday, rising if they were below the trend and falling if they were above the trend.

Anti-cyclical price stabilization could be in conflict with employment stabilization as far as monetary policy is concerned. I would concede the possibility, on general principles, that there could be important conflicts. I would yield here to others who are more competent to judge whether such major conflicts are likely to occur. I can certainly conceive of cases, even very serious ones. In any event, there is a factor, the administered price and the cost-push factor, which can generate such conflicts. If at a time of substantial cyclical unemployment, wage rates are being pushed up, say, by a powerful labor union, and the price level, a substantially administered one, has been stable, the employers may say to the government—as they may very well say at this moment in the United States to the government—“If we yield to these labor pressures we will raise our prices.” The government is quite likely to accept price instability in preference to strike-induced accentuation of unemployment. If there are simultaneously administered prices, cost-push factors, and considerable unemployment, there is always an argument against doing anything anti-inflationary in its impact and thus tending to aggravate the unemployment. Under these circumstances, a central bank has no instruments appropriate to the situation, should concede this, and should firmly deposit the problem in the government’s lap.

3. *Counter-cyclical monetary measures and possible inflationary effects*

There is a familiar argument, a “lag” argument, an argument resting on the belief that the full effects of a monetary action come only after a fairly long interval, that if much emphasis is put on monetary measures for recovery from recession, you may push so much potential liquidity into the economy that you have an inflationary problem which carries

into the future. I am not impressed by it, provided the central bank feels perfectly free to reverse its action at any moment. I do not think that injection of a large amount of currency into the economy or sizeable bill purchases by the central bank today need have any unwanted effect on the general price level two years hence, if you leave to the bank power in the interval to reverse its action to any degree it regards as appropriate.

If I were a central-bank operator, I would rely predominantly on the first impacts of my action and on the power to reverse this action as soon as it was perceptibly causing more price rise, or price fall, than was desired. Inflation normally requires the support of an increased money supply to sustain itself and deflation normally will not persist long if the economy is given abundant liquidity. A central bank which has the power to change the money supply has the power to control the general trend of prices, without need of resort to forecasting, if it is willing to use its instruments with sufficient flexibility and reversibility of direction.

Many central bankers, and others, have the notion that the ideal central-banking mode of operation is to be quiet and passive most of the time, and especially not to be continually active. I feel, on the contrary, that the central bank should operate very much like the driver of an automobile on a winding and hilly road. He is almost constantly either mildly braking or mildly pressing the accelerator. That is the way I think a central banker should work, making small moves, not because substantial action is never needed, but because when needed it should usually be achieved through cumulative small steps, with readiness at all times to reverse direction.

4. *The role of the central banker as a forecaster*

Further, the central banker should do no forecasting, but should operate in terms of accepting, strengthening, or reversing the trend of the immediately preceding period. If you like the way the price level has been behaving, in direction and degree, in the preceding period, go on as before; if you don't like it, alter your pattern of action in appropriate degree and direction. It is perhaps naive to say that this does not involve forecasting, but the kind of forecasting it involves is not as to actual events, but as to the direction—and in lesser degree the extent—of the impact on events of the central bank's own actions. There is no need of a crystal ball. In any case, none is available. The bank should act on the basis of its latest report as to the trend of prices. There will be a lag, a short one, between the actual events and the report thereon, but this lag will be of little consequence if the bank is always ready to alter its pattern of action in direction and in degree. Considerable importance

attaches to or is imputed to the "announcement" effects of central-bank actions. I would retain whatever value there is in these effects by letting the drift of central-bank action over a period instead of single actions do the "announcing," or, still better, by providing explicit explanation of what the bank is doing and why.

This is in a sense a proposal for a revolutionary change in the normal procedure of central banking. In the United States it is scarcely a practicable change, given the size of the Federal Reserve Board and the extent to which its control over the banking system is subdivided within itself or shared with other agencies. In the United States the record as to why the Federal Reserve has reached certain decisions has to be prepared by staff members who cannot often be certain why or how the decisions were reached, even though they were present at the time; even the men who made the decisions may not know how or why they were reached. That is one argument in favor of a single central banker.

If the control operations are such that you can make them cumulatively, freely, without any restriction or inhibition on how soon you may reverse them, positive forecasts are not needed, and have no essential function to perform, except forecasts as to the direction and degree of the impact of each particular central-bank action taken. I am assuming that the single or predominant goal is a movement in a particular direction of the price level and that the central bank has full confidence that it can predict correctly the direction and has some confidence that it can predict approximately the degree of impact of each particular step it takes on the price level. If the actual change in price level in the next week, or month, falls short in degree, or is opposite in direction, then it should strengthen its action; otherwise it should take no further action, or take a weaker action, or even reverse the direction of its action. This does not involve the assumption that reactions are nearly instantaneous, that the lags are very short. I am relying on the cumulative effect of the impacts of a series of actions. This does not imply that the central banker has to be at his desk every day of the week; certain kinds of operations can be restricted to Fridays or Mondays, or the second and fourth Wednesdays of the month.

I do not assume anything except that the direction of impact on the price level of a particular action is known. A forecast of what the price level actually will be next week or month is not required. The events of the past week or month provide all the guidance needed as to the direction, and some guidance as to the degree, of what, if any, action should be taken this week. If I like these events, I act to support them; if not, I act to countervail them. But I do not pretend to know that events will be the same next week, or that they will not be such as to call for

reversal in direction or change in degree of my operations. I would confine myself to nudging the next week's changes towards the desired trend and my forecasting to judging in what direction and in what degree my actions would impinge on the price level, but I would assume that other factors whose impacts I could not forecast were simultaneously operating, and that I therefore could not forecast what the price level would in fact be at the next time stage.

Economics would be of no practical use if it provided us with no equipment for predicting. But I distinguish between predicting actual events and predicting the impact of an act. The true impact of an act, say a restrictive act, like open-market sales by a central bank, needs to be predicted, especially as to direction. That the impact of such an act will be that of making money tighter than it would have been in default of the act, that is predictable. But I distinguish between predicting the impact, or contribution to the event, of an act, of an operation such as open-market sales, and predicting the event itself, that is, the actual price level. What can be predicted is what kind and to some extent what degree of influence an open-market operation will have on interest rates or on prices. What I deny to be predictable is what, say, the actual level of interest rates, or of prices, both of which depend also on many other factors, will be next week or month.

If I were skilled and experienced, and had a lot of information and an excellent staff gathering the relevant material all the time, and had a sensitive market, I could then offer with some confidence a prediction as to the *degree* as well as the direction of impact on interest rates or on prices. But I still would not be predicting as to what will in fact happen to interest rates or prices next week. It is in that sense that I say that you do not have to predict events such as the level of interest rates or of prices at a specific future time. What we need to know is the probable impact on the events of particular things *we* do today in the hope of making the actual events of tomorrow come closer than they would otherwise do to what we want them to be.

Nor would I pretend to know what will in fact happen to interest rates or prices if I do nothing. So I am not saying that I know or am predicting that what went on last week will continue to go on next week unless I do something. On the contrary, I am denying information about the actual state of tomorrow. I am directing my mind solely to the forecast, if you like, of how the events of tomorrow will differ from what they would have been if I had not taken this particular action.

There is nobody in the United States who knows what the stock-market trend is going to be on Wall Street next week; nobody has any means of forecasting it with any reliability. But I can predict with some

confidence the direction of the impact on the stock market of certain kinds of actions. I could frame a statement for the President to make, and I would guarantee that of itself it would have a bearish impact on the stock market the next day. I could also guarantee that I could frame a statement for him to make that of itself would have a bullish impact on the stock market next day. What I am denying is that anyone can reliably predict that the stock-market index in either case would in fact fall or rise, since other forces would also be at work. I can predict the direction of the direct impact of a specific act without being capable of predicting the net result in degree or even in direction of all the factors at work.

If you predict the weather tomorrow, you say that it will be raining or that there will be a high temperature. That is predicting an "event." But if you postulate what influence on the weather would be exerted by a northwest wind, I do not call that of itself weather forecasting, even if you can produce that northwest wind, as long as you are ignorant of what the impacts will be of other weather-influencing factors, such as temperature, humidity, and so forth.

F. ON THE RELATIONSHIP BETWEEN INTEREST RATES AND CREDIT AVAILABILITY

I. Interest-rate policy as a vital instrument of monetary control

A change in the bank rate or the discount rate is often meant to be regarded as a signal to the public. But I see no virtue in central bankers acting as if they were dumb and had to resort to sign language, I would much prefer that they use English.

I have been asked if I would distinguish the relative effectiveness of actual changes in interest rate, of changes in availability of money, and of the induced psychological changes.

I think that there are four vital effects of central-bank operations: the announcement effect; the effect on the quantity of money, as relevantly defined; the effect on liquidity, in some broader sense than money supply; and the effect of a contrived or induced change in the interest rate. Interest-rate change ought to be regarded, however, as more a by-product of central-bank operations than as a central-bank tool.

When the central banker is tightening money, he ought not to say, "We want interest rates higher," but rather "We want the quantity of money smaller," or, better, "We want the flow of cash expenditures to be lessened." The effect on interest rates of his operations should be regarded as incidental.

In the earlier economic history of Canada, I cannot recall that do-

mestic interest-rate changes entered into any of the economic discussions before 1914, and there was no reason why they should. In my youth, before I went to college, and later to pay my way through college, I was a bookkeeper in Montreal and had charge of the bank financing of a small manufacturer. As I recall, the question of interest rate never came up in dealings with the bank. The interest rate was 6 per cent, and it had been at that level as far back as the memory of man went. It was 7 per cent elsewhere, perhaps 8 per cent on the prairies, but it did not change in Toronto or in Montreal or on the prairies over the years. It may perhaps have been slightly different for different categories of creditworthiness. What was important in discussion with the banker, once or maybe twice a year, was the size of the line of credit: What would be the maximum indebtedness that my firm could have at the bank? In the Canadian experience before 1914 there was no central bank. There was no real discount rate. There were no changes in the rates that the banks themselves charged when dealing with Canadian customers. If my facts are correct, and if changes within Canada in amounts of outstanding bank credit were an element in maintaining equilibrium in the Canadian balance of payments, these changes were the result of rationing of credit by the banks and not of changes in the rates they charged on loans. If monetary control must operate through changes in interest rates, it would be a puzzle as to what kept Canada in international balance for 75 years. Canada was on a convertible—gold or U.S.-dollar—exchange basis at absolutely fixed rates. So far as Canada was concerned, there had since Confederation been no deviation, no weakness, no period of pressure of any sort that endangered the stability of the Canadian dollar, despite the absence of any flexibility in domestic interest rates. That clearly shows that induced or contrived or spontaneous changes in the interest rate are not essential, although they may be highly useful, constituents in a system of monetary controls.

2. Effect of credit availability on the balance of payments

How then was Canadian balance-of-payments equilibrium maintained? If Canadian exports were running down in price or volume, there were Canadian individuals and firms whose spending and investing power was immediately and directly reduced to an important degree, and this impact passed on to other Canadians in the form of reduced spending and investing power for them. This in some proportion operated to reduce imports and thus made a fairly direct contribution to restoration of equilibrium in the international balance. Such direct and spontaneous adjustment is largely over in the world today because prac-

tically every country in the world has substantially isolated its internal economy from the direct and speedy impact of its international transactions. If the private international transactions are still somewhat self-equilibrating of themselves, their equilibrating tendencies can be counteracted or nullified by official fiscal or central-bank operations that are not designed or obviously concerned with the promotion of short-run international equilibrium.

Sir Hugh Dalton once, as Chancellor of the Exchequer, confessed in the British House of Commons that he was puzzled why England, which was domestically so thoroughly liquid, with no financial pressures at all, should be internationally under such pressure. It was, of course, in large part the excess domestic liquidity he was producing by his fiscal policies which was causing the illiquidity of Britain internationally.

In the 19th century that would have been a genuine paradox. England and Canada in the 19th century could not at the same time have been highly liquid at home and highly illiquid on the frontiers. The two liquidities would have coalesced. We now have machinery to separate them, central-banking machinery for the most part, and the same machinery can also be used to bring them together artificially. In the 19th century Canadian banks were not deliberately acting as parts of a national mechanism when they decided to reduce lines of credit, but in response to their own liquidity position. But in the Canadian system, where the banks were relative giants, the liquidity of the nation as a whole vis-à-vis the outside world was a dominant factor in determining the liquidity of the banks. Whereas in a country like the United States, the Kennebunk First National Bank had no need to worry about the state of the balance of payments of the United States in extending its own credit, a Canadian bank such as the Bank of Montreal—which in addition deliberately imposed upon itself a measure of central-banking responsibility—was made conscious directly of the international situation, because that played such a large part in its own liquidity. The two liquidities could not diverge widely, and so the Bank had no choice but to operate in an internationally equilibrating fashion. But it did so not by changing its interest rates, but by making credit less or more available.

The "line of credit" reflects availability of credit in an objective form, and it especially takes that objective form when for some institutional or legal reason, or by established custom, flexibility in the rate of interest does not prevail. In any case, quite apart from formal credit rationing by the banks, there are many ways by which the process of reducing or increasing availability of credit can operate without involving flexibility of interest rates.

Debt management also seems to me to be potentially important as an instrument of monetary control, but because of its impact on liquidity, as distinct from its impact on money supply, on the general availability of credit, or on the interest-rate structure. The longer the average maturity of the national debt held by the public, other things equal, the less is the liquidity of the public. A rise in long-term interest rates resulting from a treasury shift from short-term to long-term issues affects the liquidity of holders of all long-term debt, public or private. The increase in long-term interest rates reduces the money value to bondholders in general of their holdings, makes them feel poorer, reduces their command over credit, and because of their reluctance to take a loss may restrain them from financing new investment by selling their holdings of bonds. In all these ways, a shift in government financing from short-term to long-term issues can have a substantially deflationary effect.

On the side of the ordinary person, a rise in the long-term rate of interest, however it comes about, operates to create an impairment of his capital assets on the basis of the standard processes of valuation. If people's investing habits and spending habits are influenced appreciably by their own notions of what their assets are worth, of what their prospective income is, and of the changes therein, then changes in interest rates affect the propensities to spend. They even more obviously affect the willingness to borrow for investment purposes.

But a list of what operations and what kinds of things a central bank can do, or what a debt manager can do, that will tend to produce upward or downward pressure on prices, or on the rate of expenditures on consumer and capital goods, including imported goods, would be a long one, and it is a mistake to treat the monetary-control mechanism as consisting merely of contriving changes in the interest rate.

I do not wish to minimize the extent to which changes in interest rates are associated with the monetary mechanisms, or are an important part of such mechanisms, whether as equilibrating factors or as by-products, but rather to warn against oversight of the importance even today of the rationing and availability factor and of liquidity. Today change of availability and change of interest rate tend to be closely associated. In the United States, the rationing is in fact often more open than the increase in interest rates. The fixing of the line of credit is more or less routine, but the increase in real interest rate may take the form of a requirement that an increased proportion of any loan must be kept as a non-interest-paying deposit.

What this means is that, first, they tell you in effect how much they will lend you net, and then they tell you that the effective rate of interest

on the net loan will be, say, 7 per cent instead of the *pro forma* rate of 5 or 6 per cent. They use availability, the formal interest rate, and a disguised higher interest rate, as means of controlling the volume of their loans. That is clearly part of standard New York banking procedure.

In other words, if you go to negotiate a loan you will find that they will negotiate with you not only as to the *pro forma* interest rate and not merely as to the maximum sum they will lend you, but also as to what proportion of that sum you will have to keep as an idle deposit. One reason for this procedure, I suppose, is that they do not like to publish the fact that they are charging 6 or 7 per cent when the nominal rate is 5 per cent, and when to some customers the real rate is only 5 per cent; or else they are reluctant to make frequent changes in their formal rates, perhaps because this would make it more difficult to maintain "administered" minimum rates on loans. Another reason is that this arrangement is flexible. They can change it during the term of the loan. If the money market gets easier they can relax the compensating-balance requirement. The point is that the compensating balance can be more flexibly handled than the interest rate. There may also be some legal limits on interest rates which can thus be evaded. On the other hand, the legal-reserve requirements are applicable to the gross deposits, without distinction as between the genuine and the nominal portions of them.

In a modern metropolitan money market, the availability of credit cannot be restrained without having an increase in effective interest rates spread through the capital market. But it should be recognized that where rationing is operative it has an effect additional to the effect of the interest rate, and also that the effect of the rationing itself on the interest rate manifests itself in other sectors of the money market than the commercial-banking sector, which is doing the rationing. There is an analogy in the multiple-exchange-rate system, where exchange at the preferred rate is always rationed.

I have a hunch myself that rationing of this sort has some merits. For instance, a banking system dealing with all kinds and grades of client can use two kinds of restraint or brake. One is rationing, or degree of availability, and the other is the rate of interest. I am not criticizing this. I am only saying that interest-rate variations are only one of the instrumentalities by which control of the volume of credit manifests itself.

In a modern money market both interest-rate variations and credit rationing will always be present. This can be true, even where the borrower is an absolutely first-class, creditworthy corporation. It may be

too big for its bank. The bank will say, "Yes, we are delighted to have you as a customer, but we cannot handle your \$20 million transactions. You are too big for us and we have to put a ceiling on how much we will tie up with you alone." That is so at least in the United States, but in Canada your banks are giant banks. In a unit-banking system there has often to be a sharing of the financing of giant corporations between a number of banks. Otherwise there might be a breach of legal as well as prudential and asset restrictions on what a bank can lend to a single client. In any case, in even a modern money market, rationing, changes in availability, operate as substitutes for interest-rate changes as well as supplements to them.

G. ON THE RELATIONSHIPS BETWEEN CASH RATIOS, SECONDARY-RESERVE RATIOS, AND MONETARY CONTROL

1. *Some measures of bank liquidity*

No matter how you define cash, the cash ratio is not an adequate measure of liquidity. The English, in fact, do not find very interesting the movements of bank cash ratios, which are very low and very stable. They emphasize what they call the liquidity ratio. Logically, it seems to me it is perfectly sensible to use a broader range of assets than cash to measure liquidity. I do think that stress on what I will call secondary reserves is perfectly wise and sound, except they should not be pooled on an equal basis per unit with actual cash reserves. I would like to see two ratios used, the cash ratio and the secondary-reserve ratio. My feeling is that a ratio based on pooled assets of cash and near-cash is too simple for use. I would therefore rely on two separate ratios. In principle, I would have the various kinds of bank assets graded as to their reserve significance, in judging what regulatory measures are indicated.

On the whole question of the use of reserve requirements as an instrument of central-banking control, some of the new experiments that have been made in lesser countries, in the post-World War II period, deserve examination. Growth ratios of loans or liabilities may be significant and required minimum ratios which discriminate, on liquidity grounds, between classes of assets or classes of bank liabilities without involving direct selective control over the banking system's credit-granting activities, may be worth consideration.

2. *Different treatment for different types of deposit liabilities*

In general, I think that in the United States the distinction between demand and time deposits in computing required reserve ratios needs refinement because the line between deposit liabilities subject to one

reserve ratio and those subject to another and lower reserve ratio is so easy to cross; the deposits, without changing their true character, can change their denomination. Customers, with or without bank urging, can shift their accounts from one class to the other without significantly changing their own liquidity or that of their bank.

Moreover, the compensating demand deposit of the kind mentioned earlier, which is a required fraction of your loan upon which you cannot draw, is a disguised way of charging you more interest. Logically, it need not carry any reserve requirement at all, since it is not usable at all by the customer. It is not as liquid to the depositor as a time deposit which can be fairly quickly converted to a demand deposit or to cash. When a bank lends \$100,000, of which \$20,000 is frozen, it is really lending only \$80,000. Under the American system, that \$20,000 requires as much reserve as the most volatile part of the \$100,000 demand "deposit."

There is no reason to take as sacred the inherited, traditional devices and formulae used in operating central credit control; some of the smaller countries have perhaps devised some tools which are more logical than those used by the more mature and experienced countries. One of these is to base reserve-ratio requirements on the rate of expansion of liabilities rather than on the absolute volume. Another is the taking of reserves away from banks or putting restraints on their use. In some countries you have to keep on reserve with the central bank a larger percentage of an increase of your deposit liability over a stated period of time than of the base deposit liability.

There are many possible ways of adjusting required reserve ratios to the rate and direction of movement of the volume of a bank's liabilities. Reserve requirements can be structured to attain the purpose of banking control in a more refined manner than by simply using a cash-ratio requirement against aggregate deposit liabilities without account of other liquid assets, the kind of liabilities, their pattern of relative change, and so on. I cannot see, for instance, why commitments to lend, which are not even recorded in standard bank statistics, do not call for reserve requirements as much as do time deposits, let alone "compensating" balances, since they affect the liquidity, in opposite directions of course, of both the banks and their customers.

Let me mention a possible type of reserve requirement which I once suggested as a "second-best" or "lesser-evil" device. At a time when the American government was considering putting pressure on the banks to invest in the government debt, it seemed to me that one possible arrangement would be to require the banks to keep reserves against their assets and not against their liabilities. You could then discriminate as

to the character of the assets; you could, for example, require zero reserves against holdings of government bonds, and, say, 50 per cent reserves on commercial loans. I did not support that procedure at all, except as an alternative to the banks being required by decree to buy government bonds. My own feeling, however, is that differentiation on the assets side, while perhaps more logical for credit-control purposes than differentiation on the liabilities side of a bank's balance sheet, would lend itself too easily to direct controls of the pattern of investment.

There is not any one correct way of fashioning reserve requirements for banks. But the decision as to what is the optimum system of reserve requirements should follow a careful inquiry as to the purposes it is intended to serve. For the safety of depositors, one system may be best, but it may not be suitable as a tool of monetary control. Without comparing the purposes and the arrangements, it will be just good luck if what you have is effectively serving any useful purpose.

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ESSAYS IN INTERNATIONAL FINANCE

- † No. 1. Friedrich A. Lutz, *International Monetary Mechanisms: The Keynes and White Proposals*. (July 1943)
- † 2. Frank D. Graham, *Fundamentals of International Monetary Policy*. (Autumn 1943)
- † 3. Richard A. Lester, *International Aspects of Wartime Monetary Experience*. (Aug. 1944)
- † 4. Ragnar Nurkse, *Conditions of International Monetary Equilibrium*. (Spring 1945)
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- † 6. Arthur I. Bloomfield, *The British Balance-of-Payments Problem*. (Autumn 1945)
- † 7. Frank A. Southard, Jr., *Some European Currency and Exchange Experiences*. (Summer 1946)

- † 8. Miroslav A. Kriz, *Postwar International Lending*. (Spring 1947)
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- † 10. Frank D. Graham, *The Cause and Cure of "Dollar Shortage."* (Jan. 1949)
- † 11. Horst Mendershausen, *Dollar Shortage and Oil Surplus in 1949-1950*. (Nov. 1950)
- † 12. Sir Arthur Salter, *Foreign Investment*. (Feb. 1951)
- † 13. Sir Roy Harrod, *The Pound Sterling*. (Feb. 1952)
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