"A Monetary and Fiscal Framework for Economic Stability"*

by Milton Friedman

American Economic Review 38, June 1948, pp. 245-264

During the late 19th and early 20th centuries, the problems of the day were of a kind that led economists to concentrate on the allocation of resources and, to a lesser extent, economic growth, and to pay little attention to short-run fluctuations of a cyclical character. Since the Great Depression of the 1930's, this emphasis has been reversed. Economists now tend to concentrate on cyclical movements, to act and talk as if any improvement, however slight, in control of the cycle justified any sacrifice, however large, in the long-run efficiency, or prospects for growth, of the economic system. Proposals for the control of the cycle thus tend to be developed almost as if there were no other objectives and as if it made no difference within what general framework cyclical fluctuations take place. A consequence of this attitude is that inadequate attention is given to the possibility of satisfying both sets of objectives simultaneously.

In constructing the monetary and fiscal framework proposed in this paper, I deliberately gave primary consideration to long-run objectives. That is, I tried to design a framework that would be appropriate for a world in which cyclical movements, other than those introduced by "bad" monetary and fiscal arrangements, were of no consequence. I then examined the resulting proposal to see how it would behave in respect of cyclical fluctuations. It behaves surprisingly well; not only might it be expected not to contribute to cyclical fluctuations, it tends to offset them and therefore seems to offer considerable promise of providing a tolerable degree of short-run economic stability.

This paper is devoted to presenting the part of the analysis dealing with the implications of the proposal for cyclical stability. Nonetheless, in view of the motivation of the proposal it seems well to begin by indicating the long-run objectives adopted as a guide, even though a reasonably full discussion of these long-run objectives would not be appropriate here.

The basic long-run objectives, shared I am sure by most economists, are political freedom, economic efficiency, and substantial equality of economic power. These objectives are not, of course, entirely consistent and some compromise among them may be required. Moreover, objectives stated on this level of generality can hardly guide proximate policy choices. We must take the next step and specify the general institutional arrangements we regard best suited for the attainment of these objectives. I believe—and at this stage agreement will be far less widespread—that all three objectives can best be realized by relying, as far as possible, on a market mechanism within a "competitive order" to organize the utilization of economic resources. Among the specific propositions that follow from this general position, three are particularly relevant: (1) Government must provide a monetary framework for a competitive order since the competitive order cannot provide one for itself. (2) This monetary framework should operate under the "rule of law" rather than the discretionary authority of administrators. (3) While a truly free market in a "competitive order" would yield far less inequality than currently exists, I should hope that the community would desire to reduce inequality even further. Moreover, measures to supplement the market would need to be taken in the interim. For

both purposes, general fiscal measures (as contrasted with specific intervention) are the most desirable non-free-market means of decreasing inequality.

The extremely simple proposal which these long-run objectives lead me to advance contains no new elements. Indeed, in view of the number of proposals that have been made for altering one or another part of the present monetary or fiscal framework, it is hard to believe that anything completely new remains to be added. The combination of elements that emerges is somewhat less hackneyed; yet no claim of originality can be made even for this. As is perhaps not surprising from what has already been said, the proposal is something like the greatest common denominator of many different proposals. This is perhaps the chief justification for presenting it and urging that it receive full professional discussion. Perhaps it, or some variant, can approach a minimum program for which economists of the less extreme shades of opinion can make common cause.

This paper deals only with the broad outlines of the monetary and fiscal framework and neglects, or deals superficially with, many difficult, important, and closely related problems. In particular, it neglects almost entirely the transition from the present framework to that outlined here; the implications of the adoption of the recommended framework for international monetary arrangements; and the special requirements of war finance. These associated problems are numerous and serious and are likely to justify compromise at some points. It seems well, however, to set forth the ultimate ideal as clearly as possible before beginning to compromise.

I. The Proposal

The particular proposal outlined below involves four main elements: the first relates to the monetary system; the second, to government expenditures on goods and services; the third, to government transfer payments; and the fourth, to the tax structure. Throughout, it pertains entirely to the federal government and all references to "government" should be so interpreted.[1]

1. A reform of the monetary and banking system to eliminate both the private creation or destruction of money and discretionary control of the quantity of money by central bank authority. The private creation of money can perhaps best be eliminated by adopting the 100 per cent reserve proposal, thereby separating the depositary from the lending function of the banking system.[2] The adoption of 100 per cent reserves would also reduce the discretionary powers of the reserve system by eliminating rediscounting and existing powers over reserve requirements. To complete the elimination of the major weapons of discretionary authority, the existing powers to engage in open market operations and the existing direct controls over stock market and consumer credit should be abolished.

These modifications would leave as the chief monetary functions of the banking system the provision of depositary facilities, the facilitation of check clearance, and the like; and as the chief function of the monetary authorities, the creation of money to meet government deficits or the retirement of money when the government has a surplus.[3]

2. A policy of determining the volume of government expenditures on goods and services—defined to exclude transfer expenditures of all kinds—entirely on the basis of the community's desire, need, and willingness to pay for public services. Changes in the level of expenditure

should be made solely in response to alterations in the relative value attached by the community to public services and private consumption. No attempt should be made to vary expenditures, either directly or inversely, in response to cyclical fluctuations in business activity. Since the community's basic objectives would presumably change only slowly—except in time of war or immediate threat of war—this policy would, with the same exception, lead to a relatively stable volume of expenditures on goods and services.[4]

3. A predetermined program of transfer expenditures, consisting of a statement of the conditions and terms under which relief and assistance and other transfer payments will be granted.[5] Such a program is exemplified by the present system of social security under which rules exist for the payment of old-age and unemployment insurance. The program should be changed only in response to alterations in the kind and level of transfer payments the community feels it should and can afford to make. The program should not be changed in response to cyclical fluctuations in business activity. Absolute outlays, however, will vary automatically over the cycle. They will tend to be high when unemployment is high and low when unemployment is low.[6]

4. A progressive tax system which places primary reliance on the personal income tax. Every effort should be made to collect as much of the tax bill as possible at source and to minimize the delay between the accrual of the tax liability and the actual collection of the tax.

Rates, exemptions, etc., should be set in light of the expected yield at a level of income corresponding to reasonably full employment at a predetermined price level. The budget principle might be either that the hypothetical yield should balance government expenditure, including transfer payments (at the same hypothetical level of income) or that it should lead to a deficit sufficient to provide some specified secular increase in the quantity of money.[7] The tax structure should not be varied in response to cyclical fluctuations in business activity, though actual receipts will, of course, vary automatically.[8] Changes in the tax structure should reflect changes in the level of public services or transfer payments the community chooses to have. A decision to undertake additional public expenditures should be accompanied by a revenue measure increasing taxes. Calculations of both the cost of additional public services or transfer payments and the yield of additional taxes should be made at the hypothetical level of income suggested above rather than at the actual level of income. The government would thus keep two budgets: the stable budget, in which all figures refer to the hypothetical income, and the actual budget. The principle of balancing outlays and receipts at a hypothetical income level would be substituted for the principle of balancing actual outlays and receipts.

II. Operation of the Proposal

The essence of this fourfold proposal is that it uses automatic adaptations in the government contribution to the current income stream to offset, at least in part, changes in other segments of aggregate demand and to change appropriately the supply of money. It eliminates discretionary action in response to cyclical movements as well as some extraneous or perverse reactions of our present monetary and fiscal structure.[9] Discretionary action is limited to the determination of the hypothetical level of income underlying the stable budget; that is, essentially to the determination of a reasonably attainable objective. Some decision of this kind is unavoidable in drawing up the government's budget; the proposal involves a particular decision and makes it explicit. The determination of the income goal admittedly cannot be made entirely objective or mechanical. At

the same time, this determination would need to be made only at rather long intervals—perhaps every five or ten years—and involves a minimum of forecasting. Further, as will be indicated later, errors in the income goal tend to be automatically neutralized and do not require a redetermination of the goal.

Under the proposal, government expenditures would be financed entirely by either tax revenues or the creation of money, that is, the issue of non-interest-bearing securities. Government would not issue interest-bearing securities to the public; the Federal Reserve System would not operate in the open market. This restriction of the sources of government funds seems reasonable for peacetime. The chief valid ground for paying interest to the public on government debt is to offset the inflationary pressure of abnormally high government expenditures when, for one reason or another, it is not feasible or desirable to levy sufficient taxes to do so. This was the justification for wartime issuance of interest-bearing securities, though, perversely, the rate of interest on these securities was pegged at a low level. It seems inapplicable in peacetime, especially if, as suggested, the volume of government expenditures on goods and services is kept relatively stable. Another reason sometimes given for issuing interest-bearing securities is that in a period of unemployment it is less deflationary to issue securities than to levy taxes. This is true. But it is still less deflationary to issue money.[10]

Deficits or surpluses in the government budget would be reflected dollar for dollar in changes in the quantity of money; and, conversely, the quantity of money would change only as a consequence of deficits or surpluses. A deficit means an increase in the quantity of money; a surplus, a decrease.[11]

Deficits or surpluses themselves become automatic consequences of changes in the level of business activity. When national money income is high, tax receipts will be large and transfer payments small; so a surplus will tend to be created, and the higher the level of income, the larger the surplus. This extraction of funds from the current income stream makes aggregate demand lower than it otherwise would be and reduces the volume of money, thereby tending to offset the factors making for a further increase in income. When national money income is low, tax receipts will be small and transfer payments large, so a deficit will tend to be created, and the lower the level of income, the larger the deficit. This addition of funds to the current income stream makes aggregate demand higher than it otherwise would be and increases the quantity of money, thereby tending to offset the factors making for a further decline in income.

The size of the effects automatically produced by changes in national income obviously depends on the range of activities government undertakes, since this will in turn determine the general order of magnitude of the government budget. Nonetheless, an essential element of the proposal is that the activities to be undertaken by government be determined entirely on other grounds. In part, this element is an immediate consequence of the motivation of the proposal. The motivation aside, however, it seems a desirable element of any proposal to promote stability. First, there is and can be no simple, reasonably objective, rule to determine the optimum share of activity that should be assigned to government—short of complete socialization—even if stability were the only objective. Changes in circumstances are likely to produce rapid and erratic variations in the share that seems desirable. But changes in the share assigned government are themselves likely to be destabilizing, both directly and through their adverse effects on anticipations. The attempt to adapt the magnitude of government operations to the requirements of stability may therefore

easily introduce more instability than it corrects. Second, the share of activity assigned government is likely to have far more important consequences for other objectives—particularly political freedom and economic efficiency—than for stability.[11a] Third, means other than changes in the share of activity assigned government are readily available for changing the size of the reaction to changes in income, if experience under the proposal should prove this desirable. And some of these means need not have anything like the same consequences for other objectives.

Under the proposal, the aggregate quantity of money is automatically determined by the requirements of domestic stability. It follows that changes in the quantity of money cannot also be used—as they are in a fully operative gold standard—to achieve equilibrium in international trade. The two criteria will by no means always require the same changes in the quantity of money; when they conflict, one or the other must dominate. The decision, implicit in the framework recommended, to select domestic stability means that some other technique must be used to bring about adjustments to changes in the conditions of international trade. The international arrangement that seems the logical counterpart of the proposed framework is flexible exchange rates, freely determined in foreign exchange markets, preferably entirely by private dealings.[11b]

III. Effect of Proposal under Present Institutional Conditions

The fluctuations in the government contribution to the income stream under the proposed monetary and fiscal framework are clearly in the "right" direction. Nonetheless, it is not at all clear that they would, without additional institutional modifications, necessarily lead either to reasonably full employment or to a reasonable degree of stability. Rigidities in prices are likely to make this proposal, and indeed most if not all other proposals for attaining cyclical stability, inconsistent with reasonably full employment; and, when combined with lags in other types of response, to render extremely uncertain their effectiveness in stabilizing economic activity.

A. Price Rigidities

Under existing circumstances, when many prices are moderately rigid, at least against declines, the monetary and fiscal framework described above cannot be expected to lead to reasonably full employment of resources, even though lags in other kinds of response are minor. The most that can be expected under such circumstances is a reasonably stable or moderately rising level of money income. As an extreme example, suppose that the economy is in a relatively stable position at reasonably full employment and with a roughly balanced actual government budget and that the great bulk of wage rates are rigid against downward pressure. Now, let there be a substantial rise in the wage rates of a particular group of workers as a consequence either of trade union action or of a sharp but temporary increase in the demand for that type of labor or decrease in its supply, and let this higher wage rate be rigid against downward pressure. Employment of resources as full as previously would imply a higher aggregate money income since, under the assumed conditions of rigidity, other resources would receive the same amount as previously whereas the workers whose wage rates rose would receive a larger aggregate amount if fully employed. But if this higher money income, which also of course would imply a higher price structure, were attained, the government would tend to have a surplus since receipts would rise by more than expenditures. There is nothing that has occurred that would, in the absence of other

independent changes, offset the deflationary effect of the surplus. The assumed full employment position would not therefore be an equilibrium position. If attained by accident, the resultant budgetary surplus would reduce effective demand and, since prices are assumed rigid, the outcome could only be unemployment. The equilibrium level of income will be somewhat higher than before, primarily because transfer payments to the unemployed will be larger, so that some of the unemployment will be offset. But there is no mechanism for offsetting the rest. The only escape from this situation is to permit inflation.

As is widely recognized, the difficulty just described is present also in most other monetary and fiscal proposals; they, too, can produce full employment under such circumstances only by inflation. This dilemma often tends, however, to be concealed in their formulation, and, in practice, it seems fairly likely that inflation would result. The brute fact is that a rational economic program for a free enterprise system (and perhaps even for a collectivist system) must have flexibility of prices (including wages) as one of its cornerstones. This need is made clear by a proposal like the present. Moreover, the adoption of such a proposal would provide some assurance against cumulative deflation and thereby tend to make flexibility of prices a good deal easier to achieve since government support for monopolistic practices of special occupational and industrial groups derives in large measure from the obvious waste of general deflation and the need for protection against it.

B. Lags in Response

Our economy is characterized not only by price rigidities but also by significant lags in other types of response. These lags make impossible any definitive statement about the actual degree of stability likely to result from the operation of the monetary and fiscal framework described above. One could reasonably expect smaller fluctuations than currently exist; though our ignorance about lags and about the fundamental causes of business fluctuations prevents complete confidence even in this outcome. The lag between the creation of a government deficit and its effects on the behavior of consumers and producers could conceivably be so long and variable that the stimulating effects of the deficit were often operative only after other factors had already brought about a recovery rather than when the initial decline was in progress. Despite intuitive feelings to the contrary, I do not believe we know enough to rule out completely this possibility. If it were realized, the proposed framework could intensify rather than mitigate cyclical fluctuations; that is, long and variable lags could convert the fluctuations in the government contribution to the income stream into the equivalent of an additional random disturbance.[12]

About all one can say about this possibility is that the completely automatic proposal outlined above seems likely to do less harm under the circumstances envisaged than alternative proposals which provide for discretionary action in addition to automatic reactions. There is a strong presumption that these discretionary actions will in general be subject to longer lags than the automatic reactions and hence will be destabilizing even more frequently.

The basis for this presumption can best be seen by subdividing into three parts the total lag involved in any action to offset a disturbance: (1) the lag between the need for action and the recognition of this need; (2) the lag between recognition of the need for action and the taking of action; and (3) the lag between the action and its effects.

The first lag, which is nonexistent for automatic reactions of the kind here proposed, could be negative for discretionary proposals if it were possible to forecast accurately the economic changes that would occur in the absence of government action. In view of the record of forecasters, it hardly needs to be argued that it would be better to shun forecasting and rely instead on as prompt an evaluation of the current situation as possible. The lag between the need for action and the recognition of that need then becomes positive. Its exact magnitude depends on the particular discretionary proposal, though the past record of contemporary interpreters of business conditions indicates that it is not likely to be negligible.[13]

The second lag is present even for automatic reactions because all taxes will not or cannot be collected at source simultaneously with the associated payments, and transfer payments will not or cannot be made immediately without some kind of a waiting period or processing period. It is clear, however, that this lag can be reduced to a negligible time by appropriate construction and administration of the system of taxes and transfer payments. For discretionary action, the length of the lag between the recognition of the need for action and the taking of action depends very much on the kind of action taken. Action can be taken very promptly to change the form or amount of the community's holdings of assets by open market purchases or sales of securities or by changes in rediscount rates or reserve requirements. A considerably longer time is required to change the net contribution of the government to the income stream by changing the tax structure. Even though advance prescription for alternative possibilities eliminates any delay in deciding what changes to make in tax rates, exemptions, kinds of taxes levied, or the like, administrative considerations will enforce a substantial delay before the change becomes effective. Taxpayers, businesses or individuals acting as intermediaries in collecting the taxes, and tax administrators must all be informed of the change and be given an opportunity to make the appropriate adjustments in their procedures; new forms must be printed or at least circulated; and so on.

The longest delay of all is likely to be involved in changing the net contribution of government to the income stream by changing government expenditure policy, particularly for goods and services. No matter how much advance planning may have been done, the rate of expenditure cannot be stepped up or curtailed overnight unless the number of names on the payroll is to be the only basis in terms of which the expenditure is to be controlled or judged. Time is involved in getting projects under way with any degree of efficiency; and considerable waste in ceasing work on projects abruptly.

The third lag, that between the action and its effects, is present and significant both for automatic reactions and discretionary actions, and little if anything can be done about it by either legal or administrative reform of the fiscal and monetary structure.[14] We have no trustworthy empirical evidence on the length of this lag for various kinds of action, and much further study of this problem is clearly called for. Some clues about the direction such study should take are furnished by *a priori* considerations which suggest, as a first approximation, that the order of the various policies with respect to the length of this lag is the reverse of their order with respect to the length of the lag between the recognition of the need for action and the taking of action. Changes in government expenditures on goods and services lead to almost immediate changes in the employment of the resources used to produce those goods and services. They have secondary effects through the changes thereby induced in the expenditures of the individuals owning the resources so employed.

The lag in these induced changes might be expected to be less than the lag in the adjustment of expenditures to changed taxes or to a changed amount or form of asset holdings. Changes in taxes make the disposable incomes of individuals larger or smaller than they would otherwise be. Individuals might be expected to react to a change in disposable income as a result of a tax change only slightly less rapidly than to a change in disposable income as a result of a change in aggregate income.

These indications are, however, none too trustworthy. There are likely to be important indirect effects that depend on such things as the kinds of goods and services directly affected by changed government expenditures, the incidence of the changes in disposable income that result from changed expenditures or taxes, and the means employed to finance government deficits. For example, if deficits are financed through increases in the quantity of money and surpluses are used to reduce the quantity of money, part of the effect of changes in government expenditures or taxes will be produced by changes in interest rates and the kind and volume of assets held by the community. The entire effect of open-market operations, changes in rediscount rates and reserve requirements, and the like will be produced in this way, and it seems likely that these effects would take the longest to make themselves felt.

The automatic reactions embodied in the proposal here advanced operate in part like tax changes—in so far as tax receipts vary—and in part like expenditure changes—in so far as transfer payments vary; and like both of these, some part of their effect is through changes in the quantity of money. One might expect, therefore, that the lag between action and its effects would be roughly the same for automatic reactions as for discretionary tax changes, a good deal shorter for automatic reactions than for discretionary monetary changes, and somewhat longer for automatic reactions than for discretionary changes in government expenditures on goods and services.

This analysis, much of which is admittedly highly conjectural, suggests that the total lag is definitely longer for discretionary monetary or tax changes than for automatic reactions, since each of the three parts into which the total lag has been subdivided is longer. There is doubt about the relative length of the total lag only for discretionary expenditure changes. Even for these, however, it seems doubtful that the shorter lag between action and its effects can more than offset the longer lag between the need for action and the taking of action.

Given less extreme conditions than those required to convert the present proposal into a destabilizing influence, the reduction achieved in the severity of fluctuations would depend on the extent and rapidity of price adjustments, the nature of the responses of individuals to these price changes and to the changes in their incomes and asset holdings resulting from the induced surpluses or deficits, and the lags in such responses. If these were such as to make the system operate reasonably well, the improvement would tend to be cumulative, since the experience of damped fluctuations would lead to patterns of expectations on the part of both businessmen and consumers that would make it rational for them to take action that would damp fluctuations still more. This favorable result would occur, however, only if the proposed system operated reasonably well without such aid; hence, in my view, this proposal, and all others as well, should be judged primarily on their direct effects, not on their indirect effects in stimulating a psychological climate favorable to stability. It must be granted, however, that the present proposal is less likely to stimulate such a favorable psychological climate than a proposal which

has a simpler and more easily understood goal, for example, a proposal which sets a stable price level as its announced goal. *If the business world were sufficiently confident of the ability of the government to achieve the goal,* it would have a strong incentive to behave in such a way as greatly to simplify the government's task.

IV. Implications of the Proposal if Prices Are Flexible and Lags in Response Minor

The ideal possibilities of the monetary and fiscal framework proposed in this paper, and the stabilizing economic forces on which these possibilities depend, can be seen best if we put aside the difficulties that have been detaining us and examine the implications of the proposal in an economy in which prices of both products and factors of production are flexible[15] and lags in other types of response are minor. In such an economy, the monetary and fiscal system described above would tend toward an equilibrium characterized by reasonably full employment.

To describe the forces at work, let us suppose that the economy is initially in a position of reasonably full employment with a balanced actual budget and is subjected to a disturbance producing a decline in aggregate money demand that would be permanent if no other changes occurred.[16] The initial effect of the decline in aggregate demand will be a decline in sales and the piling up of inventories in at least some parts of the economy, followed shortly by unemployment and price declines caused by the attempt to reduce inventories to the desired level. The lengthening of the list of unemployed will increase government transfer payments; the loss of income by the unemployed will reduce government tax receipts. The deficit created in this way is a net contribution by the government to the income stream which directly offsets some of the decline in aggregate demand, thereby preventing unemployment from becoming as large as it otherwise would and serving as a shock absorber while more fundamental correctives come into play.

These more fundamental correctives, aside from changes in relative prices and interest rates, are (1) a decline in the general level of prices which affects (a) the real value of the community's assets and (b) the government contribution to the income stream, and (2) an increase in the stock of money.

The decline in the general level of prices that follows the initial decline in aggregate demand will clearly raise the real value of the community's stock of money and government bonds since the nominal value of these assets will not decrease. The real value of the remainder of the community's assets may be expected to remain roughly the same, so the real value of the total stock of assets will rise.[17] The rise in the real value of assets will lessen the need for additional saving and hence increase the fraction of any given level of real income that the community will wish to consume. This force, in principle, would alone be sufficient to assure full employment even if the government maintained a rigidly balanced actual budget and kept the quantity of money constant, since there would presumably always be some price level at which the community could be made to feel rich enough to spend on consumption whatever fraction or multiple of its current income is required to yield an aggregate demand sufficient to permit full employment.

This effect of a lower price level in increasing the fraction of current private (disposable) income devoted to consumption is reinforced by its effect on the government's contribution to the

income stream. So long as the price level, and with it money income, is below its initial level, the government will continue to run a deficit. This will be true even if employment is restored to its initial level, so that transfer payments and loss in tax receipts on account of unemployment are eliminated. The tax structure is progressive, and exemptions, rates, etc., are expressed in absolute dollar amounts. Receipts will therefore fall more than in proportion to the fall in the price level; expenditures, at most, proportionately.[18] Because of the emergence of such a deficit, the price decline required to restore employment will be smaller than if the government were to maintain a rigidly balanced actual budget, and this will be true even aside from the influence of the deficit on the stock of money. The reason is that the price level will have to fall only to the point at which the amount the community desires to add to its hoards equals the government deficit, rather than to the point at which the community desires to add nothing to its hoards.[19]

The decline in the price level may restore the initial level of employment through the combined effects of the increased average propensity to consume and the government deficit. But so long as a deficit exists, the position attained is not an equilibrium position. The deficit is financed by the issue of money. The resultant increase in the aggregate stock of money must further raise the real value of the community's stock of assets and hence the average propensity to consume. This is the same effect as that discussed above except that it is brought about by an increase in the absolute stock of money rather than by a decline in prices. Like the corresponding effect produced by a decline in prices, the magnitude of this effect is, in principle, unlimited. The rise in the stock of money and hence in the average propensity to consume will tend to raise prices and reduce the deficit. If we suppose no change to occur other than the one introduced to start the analysis going, the final adjustment would be attained when prices had risen sufficiently to yield a roughly balanced actual budget.

A disturbance increasing aggregate money demand would bring into play the same forces operating in the reverse direction: the increase in employment would reduce transfer payments and raise tax receipts, thus creating a surplus to offset part of the increase in aggregate demand; the rise in prices would decrease the real value of the community's stock of money and hence the fraction of current income spent on consumption; the rise in prices would also mean that even after "overemployment" was eliminated, the government would run a surplus that would tend to offset further the initial increase in aggregate demand;[20] and, finally, the surplus would reduce the stock of money.

As this analysis indicates, the proposed fiscal and monetary framework provides defense in depth against changes in aggregate demand. The first line of defense is the adjustment of transfer payments and tax receipts to changes in employment.[20a] This eases the shock while the defense is taken over by changes in prices. These raise or lower the real value of the community's assets and thereby raise or lower the fraction of income consumed. They also produce a government deficit or surplus in addition to the initial deficit or surplus resulting from the effect of changes in employment on transfer payments and tax receipts. The final line of defense is the cumulative effect of the deficits or surpluses on the stock of money. These changes in the stock of money tend to restore prices to their initial level. In some measure, of course, these defenses all operate simultaneously; yet their main effects are likely to occur in the temporal order suggested in the preceding discussion.

Even given flexible prices, the existence of the equilibrating mechanism described does not of course mean that the economy will in fact achieve relative stability. This depends in addition on the number and magnitude of the disturbances to which the economy is subject, the speed with which the equilibrating forces operate, and the importance of such disequilibrating forces as adverse price expectations. If the lags of response are minor, and initial perverse reactions unimportant, adjustments would be completed rapidly and there would be no opportunity for disequilibria to cumulate, so that relative stability would be attained. Even in this most favorable case, however, the equilibrating mechanism does not prevent disturbances from arising and does not counteract their effects instantaneously—as, indeed, no system can in the absence of ability to predict everything in advance with perfect accuracy. What the equilibrating mechanism does accomplish is, first, to keep governmental monetary and fiscal operations from themselves contributing disturbances and, second, to provide an automatic mechanism for adapting the system to the disturbances that occur.

Given flexible prices, there would be a tendency for automatic neutralization of any errors in the hypothetical income level assumed or in the calculations of the volume of expenditures and revenues at the hypothetical income level. Further, it would ultimately be of no great importance exactly what decision was reached about the relation to establish between expenditures and revenue at the hypothetical income level (*i.e.*, whether exactly to balance, to strive for a deficit sufficient to provide a predetermined secular increase in the quantity of money, etc.). Suppose, for example, that errors in the assumed income level, the calculated volume of expenditures and receipts, and the relation established between expenditures and receipts combined to produce a deficit larger than was consistent with stable prices. The resulting inflationary pressure would be analogous to that produced by an external disturbance and the same forces would come into play to counteract it. The result would be that prices would rise and the level of income tend to stabilize at a higher level than the hypothetical level initially assumed.

Similarly, the monetary and fiscal framework described above provides for adjustment not only to cyclical changes but also to secular changes. I do not put much credence in the doctrine of secular stagnation or economic maturity that is now so widely held. But let us assume for the sake of argument that this doctrine is correct, that there has been such a sharp secular decline in the demand for capital that, at the minimum rate of interest technically feasible, the volume of investment at a full-employment level of income would be very much less than the volume of savings that would be forthcoming at this level of income and at the current price level.[21] The result would simply be that the equilibrium position would involve a recurrent deficit sufficient to provide the hoards being demanded by savers. Of course, this would not really be a long-run equilibrium position, since the gradual increase in the quantity of money would increase the aggregate real value of the community's stock of money and thereby of assets, and this would tend to increase the fraction of any given level of real income consumed. As a result, there would tend to be a gradual rise in prices and the level of money income and a gradual reduction in the deficit.[22]

V. Conclusion

In conclusion, I should like to emphasize the modest aim of the proposal. It does not claim to provide full employment in the absence of successful measures to make prices of final goods and of factors of production flexible. It does not claim to eliminate entirely cyclical fluctuations in

output and employment. Its claim to serious consideration is that it provides a stable framework of fiscal and monetary action, that it largely eliminates the uncertainty and undesirable political implications of discretionary action by governmental authorities, that it provides for adaptation of the governmental sector to changes occurring in other sectors of the economy of a kind designed to offset the effects of these changes, and that the proposed fiscal and monetary framework is consistent with the long-run considerations stated at the outset of this paper. It is not perhaps a proposal that one would consider at all optimum if our knowledge of the fundamental causes of cyclical fluctuations were considerably greater than I, for one, think it to be; it is a proposal that involves minimum reliance on uncertain and untested knowledge.

The proposal has of course its dangers. Explicit control of the quantity of money by government and explicit creation of money to meet actual government deficits may establish a climate favorable to irresponsible government action and to inflation. The principle of a balanced stable budget may not be strong enough to offset these tendencies. This danger may well be greater for this proposal than for some others, yet in some measure it is common to most proposals to mitigate cyclical fluctuations. It can probably be avoided only by moving in a completely different direction, namely, toward an entirely metallic currency, elimination of any governmental control of the quantity of money, and the re-enthronement of the principle of a balanced actual budget.

The proposal may not succeed in reducing cyclical fluctuations to tolerable proportions. The forces making for cyclical fluctuations may be so stubborn and strong that the kind of automatic adaptations contained in the proposal are insufficient to offset them to a tolerable degree. I do not see how it is possible to know now whether this is the case. But even if it should prove to be, the changes suggested are almost certain to be in the right direction and, in addition, to provide a more satisfactory framework on which to build further action.

A proposal like the present one, which is concerned not with short-run policy but with structural reform, should not be urged on the public unless and until it has withstood the test of professional criticism. It is in this spirit that the present paper is published.

Notes

[*] The author is associate professor of economics at the University of Chicago. An earlier version of this paper was presented before the Econometric Society on September 17, 1947, at a meeting held in conjunction with the International Statistical Conferences in Washington, D.C. I am deeply indebted for helpful criticisms and constructive suggestions to Arthur F. Burns, Aaron Director, Albert G. Hart, H. Gregg Lewis, Lloyd W. Mints, Don Patinkin, and George J. Stigler.

[1] The reason for restricting the discussion to the federal government is simply that it alone has ultimate monetary powers, not any desire to minimize the role of smaller governmental units. Indeed, for the achievement of the long-run objectives stated above it is highly desirable that the maximum amount of government activity be in the hands of the smaller governmental units to achieve as much decentralization of political power as possible.

[2] This proposal was advanced by Henry C. Simons. See his *A Positive Program for Laissez-Faire: Some Proposals for a Liberal Economic Policy*, Public Policy Pamphlet No. 15 (Univ. of Chicago Press, 1934); "Rules *vs.* Authorities in Monetary Policy," *Jour. Pol. Econ.*, Vol. XLIV (Feb., 1936), pp. 1–30. Both of these are reprinted in Henry C. Simons, *Economic Policy for a Free Society* (Chicago, Univ. of Chicago Press, 1948).

[3] The adoption of 100 per cent reserves is essential if the proposed framework is to be entirely automatic. It should be noted, however, that the same results could, in principle, be achieved in a fractional reserve system through

discretionary authority. In order to accomplish this, the monetary authorities would have to adopt the rule that the quantity of money should be increased only when the government has a deficit, and then by the amount of the deficit, and should be decreased only when the government has a surplus, and then by the amount of the surplus.

[4] The volume of expenditures might remain stable either in money or real terms. The principle of determining the volume of expenditures by the community's objectives would lead to a stable real volume of expenditures on current goods and services. On the other hand, the usual legislative procedure in budget making is to grant fixed sums of money, which would lead to stability of money expenditures and provides a slight automatic contra-cyclical flexibility. If the volume of real expenditures were stabilized, money expenditures would vary directly with prices.

[5] These transfer payments might perhaps more appropriately be regarded as negative revenue.

[6] It may be hoped that the present complex structure of transfer payments will be integrated into a single scheme co-ordinated with the income tax and designed to provide a universal floor to personal incomes. But this is a separate issue.

[7] These specifications about the hypothetical level of income to be used and the budget principle to be followed are more definite and dogmatic than is justified. In principle, the economic system could ultimately adjust to any tax structure and expenditure policy, no matter what level of income or what budget principle they were initially based on, provided that the tax structure and expenditure policy remained stable. That is, there corresponds some secular position appropriate to each possible tax structure and expenditure policy. The best level of income and the best budget principle to choose depend therefore on short-run adjustment considerations: what choice would require the least difficult adjustment? Moreover, the level of income and budget principle must be chosen jointly: the same final result can obviously be obtained by combining a high hypothetical income with a surplus budget principle or a low hypothetical income with a deficit budget principle or by any number of intermediate combinations. My own conjecture is that the particular level of income and budget principles suggested above are unlikely to lead to results that would require radical short-run adjustments to attain the corresponding secular position. Unfortunately, our knowledge about the relevant economic interrelationships is too meager to permit more than reasonably informed conjecture. See Section IV below, especially footnote 22.

[8] The principle of setting taxes so as to balance the budget at a high level of employment was suggested by Beardsley Ruml and H. Chr. Sonne, *Fiscal and Monetary Policy*, National Planning Pamphlet no. 35 (July, 1944). Since the present paper was written, the Committee for Economic Development has issued a policy statement in which it makes essentially the same tax and expenditure recommendations—that is, it calls for adoption of a stable tax structure capable of balancing the budget at a high level of employment, a stable expenditure policy, and primary reliance on automatic adjustments of absolute revenue and expenditures to provide cyclical stability. They call this policy the "stabilizing budget policy." The chief difference between the present proposal and the C.E.D. proposal is that the C.E.D. is silent on the monetary framework and almost silent on public debt policy, whereas the present proposal covers both. Presumably the C.E.D. plans to cover monetary and debt policy in separate statements still to be issued. See *Taxes and the Budget: A Program for Prosperity in a Free Economy*, a statement on national policy by the Research and Policy Committee of the Committee for Economic Development (Nov., 1947).

[9] For example, the tendency under the existing system of fractional reserve banking for the total volume of money to change when there is a change in the proportion of its total stock of money the community wishes to hold in the form of deposits; the tendency to reduce tax rates and increase government expenditures in booms and to do the reverse in depressions; and the tendency for the government to borrow from individuals at the same time as the Federal Reserve System is buying government bonds on the open market.

[10] See Henry C. Simons, "On Debt Policy," *Jour. Pol. Econ.*, Vol. LII (Dec., 1944), pp. 356–61.

This paragraph deliberately avoids the question of the payment of interest to banks on special issues of government bonds, as has been proposed in some versions of the 100 per cent reserve proposal. The fundamental issue involved in judging such proposals is whether government should subsidize the use of deposit money and a system of check clearance and if so, what form the subsidy should take.

The large volume of government bonds now outstanding raises one of the most serious problems in accomplishing the transition from the present framework. This problem would be eased somewhat by the monetization of bonds that would occur in the process of going over to 100 per cent reserves. But there would still remain a substantial volume. Two alternatives suggest themselves: (1) freeze the volume of debt at some figure, preferably by converting it into perpetuities ("consols"); (2) use the monetization of the debt as a means of providing a secular increase in the quantity of money. Under the second plan, which, on a first view, seems more attractive, the principle of balancing the stable budget would be adopted and the government would commit itself to retiring, through the issuance of new money, a predetermined amount of the public debt annually. The amount to be retired would be determined so as to achieve whatever secular increase in the quantity of money seemed desirable. This problem, however, requires much additional study.

[11] These statements refer, of course, to the ultimate operation of the proposal. Under the second of the alternatives suggested in the preceding footnote, the change in the quantity of money during the transitional period would equal the excess of government expenditures over receipts plus the predetermined amount of money issued to retire debt.
[11a] An example of the relevance of these two points is provided by the tendency during the 'thirties to recommend an increase in the progressiveness of the tax structure as a means of increasing the propensity to consume and hence, it was argued, employment. Applied to the postwar period, the same argument would call for a shift to regressive taxes, yet I wonder if many economists would wish to recommend regressive taxes on these grounds.
[11b] Though here presented as a byproduct of the proposed domestic framework, flexible exchange rates can be defended directly. Indeed, it would be equally appropriate to present the proposed domestic framework as a means of implementing flexible exchange rates. The heart of the matter is that domestic and international monetary and trade arrangements are part of one whole.
[12] See Milton Friedman, "Lerner on the Economics of Control," *Jour. Pol. Econ.,* Vol. LV, No. 5 (Oct., 1947), p. 414, especially footnote 12.
[13] *Ibid.,* p. 414, especially footnote 11.
[14] Reforms of other types, for example, reforms increasing the flexibility of prices, might affect this lag.
[15] The concept of flexible prices, though one we use continually and can hardly avoid using, is extremely difficult to define precisely. Fortunately, a precise definition is not required for the argument that follows. All that is necessary for the argument is that there be a "substantial" range of prices that are not "rigid" because of long-term contracts or organized noncontractual agreements to maintain price and that these prices should react reasonably quickly to changes in long-run conditions of demand or supply. It is not necessary that there be "perfect" flexibility of prices, however that might be defined, or that contracts involving prices be subject to change at will, or that every change in long-run conditions of demand or supply be reflected instantaneously in market price.
[16] The same analysis would apply to disturbances producing only a temporary decline. The reason for assuming a permanent decline is to trace through the entire process of adjustment to a new equilibrium position.
[17] If the real value of other assets of the community should fall, this would simply mean that the price level would have to fall farther in order to raise the real value of the community's total stock of assets. Note that under the proposed framework, all money in the community is either a direct government obligation (nondeposit currency) or is backed one hundred per cent by a direct government obligation (deposits in the central bank). If this analysis were to be applied to a fractional reserve system, the assets whose aggregate real value could be guaranteed to rise with no directly offsetting fall in the real value of private assets would be the total amount of government obligations (currency and bonds) held outside the treasury and central bank. On this and what follows, see A. C. Pigou, "The Classical Stationary State," *Econ. Jour.,* Vol. LIII (Dec., 1943), pp. 342–51, and "Economic Progress in a Stable Environment," *Economica,* n.s. XIV (Aug., 1947), pp. 180–90; and Don Patinkin, "Price Flexibility and Full Employment," to be published in the September, 1948 number of this *Review.*
[18]The effect of the lower price level on expenditures depends somewhat on the precise expenditure and transfer policy adopted. If, as is called for by the principle of determining the expenditure program by the community's objectives, the real volume of government expenditures on goods and services is kept cyclically stable and if the program of transfer payments is also stated in real terms, expenditures will decline proportionately. If government expenditures on goods and services are kept cyclically stable in dollar terms, or the program of transfer expenditures is stated in dollar terms, expenditures will decline less than proportionately.
[19] If the real volume of government expenditures on goods and services is kept cyclically stable and the transfer program is also stated in real terms, the aggregate expenditures of government under fixed expenditure and transfer programs would tend to be the same fraction of the full-employment income of society no matter what the price level. This fraction would be the maximum net contribution the government could make to the income stream no matter how low prices, and with them money income and government receipts, fell. Consequently, this force alone would be limited in magnitude and might not, even in principle, be able to offset every disturbance. If either program is in absolute terms, there would be no limit to the fraction that the government contribution could constitute of the total income stream.
An alternative way to describe this effect is in terms of the relation between the expected expenditures and receipts of consumers, business, and government. It is a condition of equilibrium that the sum of the desired expenditures of these groups equal the sum of their receipts. If the government maintains a rigidly balanced budget, equilibrium requires that consumers and business together plan to spend what they receive (*i.e.,* not seek to add to their money hoards). If the government runs a deficit, consumers and business together need not plan to spend all they receive; equilibrium requires that their planned expenditures fall short of their receipts by the amount of the deficit (*i.e.,* that they seek to add to their hoards per period the amount of the deficit).

[20]The limit to the possible effect of the surplus on the current income stream would be set by the character of the tax structure, since there would probably be some maximum percentage of the aggregate income that could be taken by taxes no matter how high the price level and the aggregate income.

[20a]It should be noted that this is the only effect taken into account by Musgrave and Miller in their calculations of the possible magnitude of the effect of automatic variations in government receipts and expenditures. (R. A. Musgrave and M. H. Miller, "Built-in Flexibility," this *Review,* March, 1948, pp. 122–28.) They conclude that "the analysis here provided lends no justification to the view now growing in popularity that 'built-in flexibility' can do the job alone and that deliberate countercyclical fiscal policy can be dispensed with." While this is a valid conclusion, it does not justify rejecting the view that "built-in flexibility" can do the job alone, since the "analysis here provided" takes no account of what have been termed above the "more fundamental correctives."

[21] Because of the effect discussed above of price changes on the real value of assets, and in this way on the average propensity to consume, it seems to me that such a state of affairs would not lead to secular unemployment even if the quantity of money were kept constant, provided that prices are flexible (which is the reason for including the qualification "at the current price level" in the sentence to which this footnote is attached). But I am for the moment accepting the point of view of those who deny the existence or importance of this equilibrating force. Moreover, if the quantity of money were constant, the adjustment would be made entirely through a secular decline in prices, admittedly a difficult adjustment. Once again changes in the government contribution to the income stream and through this in the quantity of money can reduce the extent of the required price change.

[22]This and the preceding paragraph, in particular, and this entire section, in general, suggest a problem that deserves investigation and to which I have no satisfactory answer, namely, the characteristics of the system of equations implicit in the proposal and of their equilibrium solution. It is obvious that under strictly stationary conditions, including a stationary population, the equilibrium solution would involve constancy of prices, income per head, etc., and a balanced actual budget. The interesting question is whether there is any simple description of the equilibrium solution under specified dynamic situations. For example, are there circumstances, and if so what are they, under which the equilibrium solution will tend to involve constant money income per head with declining prices, or constant prices with rising money income per head, etc.? It is obvious that no such simple description will suffice in general, but there may well be broad classes of circumstances under which one or another will.

Reprinted in Milton Friedman, *Essays in Positive Economics*, pp. 133-156. Chicago: University of Chicago Press, 1953.

10/3/12