

For Release on Delivery  
Friday, September 27, 1968  
12 noon, E.D.T

MONETARY POLICY AND ECONOMIC STABILITY

A Paper Presented by

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Before the

Tenth Annual Meeting  
of the  
National Association of Business Economists

The Waldorf-Astoria  
New York, New York

September 27, 1968

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By  
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I am delighted to visit with the National Association of Business Economists to discuss the role of monetary policy in the joint efforts of the private and public sectors to arrest inflation in this country and get us back on a path of sustained, noninflationary growth of output and employment. While most members of this organization are associated with large industrial and commercial enterprises, many others are identified with banks and other financial institutions. Thus, because of this spectrum of interest, this membership is especially equipped to appreciate the limitations as well as the potentialities of monetary policy as an instrument of stabilization.

When I was invited to participate in this 10th Annual Meeting, I accepted within the framework of three constraints: I would not attempt to forecast or project the detailed performance of the national economy during the year ahead; I would not discuss the future course and content of monetary policy; and I would speak for myself -- expressing my own personal views -- without suggesting in any way a commitment to the same assessment by other members of the Federal Reserve Board or the Federal Open Market Committee.

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\*Member, Board of Governors of the Federal Reserve System. I am grateful for the assistance of several members of the Board's staff in the preparation of these remarks. Mrs. Susan Burch helped with the statistics on price developments, and Mr. Edward Fry was responsible for the calculations describing the behavior of the money supply and bank credit during periods of Treasury financing. Mrs. Mary Smelker assisted with the comparative assessment of the surtax and income tax reduction of 1964.

As far as I am personally concerned, the proper objective of stabilization policy -- including monetary policy -- over the next year is quite clear: we should aim for an unmistakable abatement in the inflationary pressures that have plagued the economy during the last three years. So that I will not be misunderstood, let me express this conviction another way: I think we must make a determined effort to cut substantially the rate of increase in prices over the coming year. That should be the first priority. Having been quite explicit in this view, I also want to be explicit with respect to my realization that a successful stabilization policy, designed to arrest an inflation that has gotten such a long head start, will involve a substantially slower rate of growth in real output during the next six to nine months; under these circumstances, employment may register only a modest gain, and unemployment may climb somewhat. Nevertheless, none of us should have any illusions about the stubbornness of the current inflation -- nor about the real costs that must be borne if it is to be brought under reasonable control.

Fortunately, unlike the situation we faced in the late spring, we now have in place a combination of stabilization policies which I believe will produce a significant degree of moderation in the rate of growth of gross national product (GNP) in the closing months of 1968 and in the first half of 1969. Despite the delayed response of some sectors of the economy (particularly consumers) to the fiscal restraints which became effective last July, I am personally convinced that these measures -- in combination with the monetary restraint followed with varying intensity since last November -- will achieve the purpose for which they were intended.

On the other hand, I think we should keep these fiscal measures in proper perspective when we attempt to assess their expected impact:

- With respect to the 10 per cent surtax, we must remember that it was quite small relative to the magnitude of increases in personal income that have occurred in the last few months; only a fairly short time has elapsed since it became effective; and a sizable number of low income taxpayers were exempted.
- The restraints imposed on the rate of expansion of Federal expenditures will have an immediate and direct effect on income, and this will be a primary source of moderation in the growth of aggregate demand.

Later on in these remarks, I will comment further on what -- in my judgment -- is a reasonable view to take when appraising the potentialities of the surtax.

While I am confident that the stabilization measures we have in place will help achieve a dampening in the rate of economic growth in the months ahead, I do not lose sight of the fact that the current inflation has become deeply embedded in the fabric of the economy.

- The broad features of the price advances in the last few years are generally known. Yet, the extent to which inflation has seeped through the pores of even some of the remotest segments of the economy may not be so fully appreciated.
- Thus, it may be well to review briefly below the extent to which inflation has been propagated since mid-1965.

In trying to explain the origins of the current inflation, a number of private observers (mainly in the academic community but also including some in a few large banks) have asserted that -- far from contributing to the formulation and conduct of an effective stabilization policy -- the Federal Reserve System

itself has been a principal source of instability. To support their assertion, they trace the substantial variations in the money supply (particularly during the last few years) and conclude that the rate of monetary growth alone has been the main cause of domestic inflation. Obviously, I do not accept this contention. Rather, I think it would be much more instructive to examine rather closely the disequilibrium in the domestic economy which is the mainspring of the inflationary pressures.

- This imbalance can be traced clearly in the widening gap between our available resources and the excess demands placed on them following the acceleration of the Vietnam War in mid-1965.
- There was a big margin of unused resources in the early 1960s with GNP in 1961, for example, running 9 or 10 per cent below the full-employment level. But under a fiscal policy designed to spur growth, the economy advanced closer to its full potential in subsequent years. By late 1965, however, the economy began to forge ahead of its natural growth rate largely under the pressure of Vietnam War demands. By the second quarter of 1968, excess demands far exceeded our resources and provided a graphic demonstration of the strains resulting from the Vietnam War.

I will make a few additional comments below on this dramatic swing in the intensity of resource use. It is in the environment created by this excess demand for goods and services that we must seek the causes of the current inflation.

Before I conclude, I would also like to comment briefly on the behavior of the money supply, bank credit and related financial indicators since the Federal Reserve adopted a policy of monetary restraint last November. An examination of these indicators shows what should be obvious to most careful observers:

- During most of this year, the Federal budget deficit and its financing in the money and capital markets were major influences on the rapid expansion of the money supply and bank credit through the late summer months.
- However, during those periods free of U.S. Treasury financing, the money supply and bank credit generally grew very little or actually declined.

This study of changes in monetary conditions during the last year leads me to one conclusion: if we are truly committed to the use of monetary policy as a meaningful instrument in our kit of stabilization measures, we must be equally committed to the use of fiscal policy to ensure that the size of the Federal budget deficit that must be financed will be kept quite small during a period when the prime objective is to arrest inflation.

#### The Efficacy of Fiscal Policy

As I mentioned above, I do not share the doubts being expressed by some observers as to whether the fiscal measures adopted last June will lead to a moderation in the pace of economic expansion. Since these doubts arise particularly from the fact that consumer spending has remained strong in the third quarter despite the imposition of the 10 per cent surtax, it may be helpful to ask just what behavior one could reasonably expect on the part of consumers.

To a considerable extent, expectations about consumers' response to the surtax seem to be based implicitly in many cases (and sometimes explicitly) on their reactions to the reduction in personal income taxes in the spring of 1964. In my opinion, the 1964 experience provides little

guidance for us today. It will be recalled that consumer spending rose strongly after the tax decrease of that year, and -- despite some complicating factors -- the over-all performance of the economy in 1964 and the first half of 1965 justified the optimistic anticipations of those who had worked for the tax reduction.

In its Annual Report in early 1964, the Council of Economic Advisers (CEA) estimated that, if personal income taxes were reduced by approximately \$9 billion, there would be a direct increase of over \$8 billion in consumption expenditures. As these outlays generated new income and successive rounds of spending and respending, perhaps another \$10 billion of consumption would be added. Consequently, the rise in consumption alone would eventually lift GNP by more than \$18 billion above what it would have been in the absence of the tax reduction.<sup>1/</sup> In its Annual Report for 1965, CEA looked back on the response of consumers to the tax cut and was pleased with the outcome. It estimated that the total expansion in consumer spending taken alone reflecting the impact of the tax reduction was \$9 billion in 1964. The CEA thought that the increase in consumer spending by the end of that year was at an annual rate of \$13 billion. The Council was confident that subsequent rounds of spending and respending would assure that the full effects of the tax reduction on consumption would be brought about as 1965 unfolded. In

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<sup>1/</sup> Technicians will recognize the assumption of a tax cut "multiplier" of about 2. From an examination of the actual experience following the 1964 tax cut, Mr. Frank deLeeuw of the Board's staff estimates that the multiplier was about 2.4 -- somewhat higher than CEA had assumed. (Federal Reserve Bulletin, January, 1968, p.23.)

retrospect, the CEA estimate of a \$13 billion addition to the annual rate of GNP in the fourth quarter of 1964 has been borne out by the econometric analysis undertaken by the Board's staff as well as by the work done at the Wharton School of Finance and Commerce of the University of Pennsylvania.

Given this favorable experience with the earlier tax reduction, why did we fail to get a more prompt moderation in consumer spending once the surtax went into effect? There are several possible explanations, and several will be explored in the following pages: (1) in view of the momentum of income increases, the tax increase is relatively small to have a sizable dampening effect; (2) it is too early to look for much effect; (3) the surtax is different from the tax cut of 1964 in that it will have its major impact on high income groups; and (4) recent rates of saving have been relatively high -- above the normal ratio to disposable personal income -- and they may well drop far enough to offset a considerable proportion of the effect of the surtax.

There is probably some truth in each of these points about the efficacy of the surtax. Taken alone, without the allied restraint on expenditures, it has a smaller fiscal impact than the tax cut of 1964 and 1965: its impact is mainly at middle and high incomes; there is likely to be some lag in its effect, and people may be more content with a larger drop in the percentage of income saved than in some periods when saving was already a smaller percentage of income.

The surtax is relatively small: Compared to the 1964 tax cut, the surtax is small. The 1964-65 cut amounted to \$11 billion in



liabilities -- \$6.7 billion at the beginning of the 1964 calendar year and the rest at the beginning of 1965. It was about 2.5 per cent of disposable personal income, while the surtax of \$6.9 billion is only about 1.1 per cent of disposable personal income for fiscal 1969.<sup>1/</sup> Almost the entire impact of the 1964-65 tax reduction was felt in early 1964, when withholding rates were cut from 18 per cent to 14 per cent of income. This cut was so large that tax collections from make-up payments were extremely high in early 1965. Yet, by then, the economy was expanding briskly, so that consumption continued to expand and the saving rate dropped only temporarily. In contrast, the surtax is likely to cause some large payments in the first half of 1969 since nothing was withheld for the April-June retroactive period of the tax.

The surtax will operate with a lag: In 1964, the tax cut's stimulus to consumption was relatively prompt, in part because the reduction had been anticipated. Saving also rose temporarily and the full effect of the cut was spread over a number of quarters. Although the surtax did not affect pay checks for the entire third quarter, we should expect about three-fifths of its effect on GNP to be registered before the end of the first quarter of 1969 -- if we disregard the make-up payments.<sup>2/</sup> If there is no tax-induced change in saving patterns, we should expect GNP to

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<sup>1/</sup> About \$7.8 billion will be collected in fiscal 1969, but this includes collections on April-June, 1968, liabilities.

<sup>2/</sup> Econometric studies by deLeuw and others have shown that it takes eight quarters for a change in the tax rate to exert its full multiplier effect of 2.4 on the GNP -- although about 60 per cent falls in the first two quarters. However, the multiplier of the surtax may be lower than 2.4 because of its lesser impact on lower income groups.

be at a rate more than \$8 billion below what it would otherwise have been by April, 1969.

The surtax is an upper-income tax: The 1964-65 tax cut was quite helpful to people at the bottom end of the taxable income range. The new minimum standard deduction reduced drastically the liabilities of many low-income taxpayers from income taxes, and the first bracket rate was cut sharply. This undoubtedly increased the stimulating effects of the cut. By contrast, the surtax is most effective at higher income levels, where people have more latitude about spending or saving. Married couples who pay less than \$290 of taxes are exempt, and graduated rates apply to those in immediately higher tax brackets. This is likely to increase the lag -- if not the ultimate effectiveness -- of the surtax.

Saving may be cut rather than spending: Because of the recent high rates of saving, there may be a greater tendency for the tax increase to reduce the rate of saving than would usually be the case. However, it is only reasonable to assume that the tax increase will reduce the dollar amount of spending much more than it does saving.

In my opinion, many of those who think the economic expansion is not being braked sufficiently, give too much emphasis to the surtax and too little to other components of the fiscal package adopted last June. In particular, the leveling out of Federal expenditures should be assigned significant weight, since it will have an immediate and direct effect on income.

Some recent private surveys show an advance in spending for fixed capital next year; however, considering the higher price levels at which new equipment and plant will be installed, the real increase may be small. Moreover, these surveys tend to reflect only the plans of large corporations.

Thus, again I believe that there is real ground for concluding that the surtax will help moderate the rate of economic growth. Consequently, we should also begin to make some headway during the coming year in our efforts to bring inflation under control.

#### The Propagation of Inflation

But despite this somewhat more promising prospect, we should not be misled into believing that the path from here on will be fairly smooth. Far from it. Because inflation was allowed to progress so far before an effective combination of fiscal and monetary policy could be exercised, the road ahead of us will be especially difficult to travel.

We are all familiar with the intensity of the current inflation as measured by the behavior of the leading price indexes. For example, the GNP implicit deflator (the most broadly-based of the price indexes) rose at an annual rate of 3.7 per cent in the first quarter and by 4.0 per cent in the second quarter of this year. In 1967 as a whole, the deflator advanced by 3.1 per cent. The consumer price index (CPI) in July was 4.3 per cent above the level of a year ago, while the prices of services were 5.6 per cent higher than in July, 1967. These figures describe a situation that cannot be classified as anything other than inflationary.

However, what I find particularly disturbing is the way in which the price advances have accelerated in the last few years. This fact is shown with considerable clarity in the behavior of the CPI -- which rose 2.5 percentage points between June, 1965, and June, 1966; during the next twelve months the climb was 2.7 percentage points, and the rise in the year ending last June was 4.2 percentage points. While these advances were broadly based, they were particularly large for services. In fact, it is in the area of services that one can trace most clearly the spreading of inflation through the economy.

Charges for consumer services have been rising faster each year since 1964 -- after increasing only 2 per cent annually early in this decade -- and this last year is no exception. From June, 1967, to June, 1968, prices of services increased 5.1 per cent, compared with 4.4 per cent in the preceding 12-month period and 3.7 per cent in 1965-66.

About half the services represent the output of service industries, where labor costs are a high proportion of total costs and where typically productivity gains are limited. Large wage advances over the last year, stimulated by manpower shortages and augmented by the further boost last February in Federal minimum wages (that had been extended to cover service industries for the first time in February, 1967), have contributed significantly to the acceleration in service prices over the last year.

Among the "labor intensive" services, medical care -- an area of longstanding manpower shortages and also one with rapidly expanding demands -- remained the most rapidly rising major sector over the

last year. Costs of these services increased 7.1 per cent, in the twelve months ending last June -- less than from mid-1966 to mid-1967 when the introduction of the medicare program helped boost the rise to 9 per cent, but more than double the rise for as recent a period as from mid-1964 to mid-1965.

Among other labor intensive services, charges have accelerated over the last year or have continued to rise sharply: thus, the rise for auto repairs has stepped up to over 5 per cent from 4 per cent, that for domestic service to nearly 12 per cent from about 8 per cent, and that for movie theater admissions to 11 per cent from 5 per cent. Home maintenance and repairs and charges at barber and beauty shops have continued to show the sharp 5 to 7 per cent rates of advance that prevailed from mid-1966 to mid-1967.

Charges for service items where labor does not form a large proportion of total costs -- such as interest, property insurance and taxes -- have also risen substantially further over the last year. The rise in property insurance has accelerated, rising 6 per cent over the year. Moreover, rents increased 2.4 per cent from mid-1967 to mid-1968, as compared with 1.3 per cent over the preceding year and with an average of around 1 per cent a year in the 1961-66 period. This acceleration probably not only reflects rising costs but also strong demand for rental units both for reasons of demography and because of a limited supply of houses.

Mortgage interest rates, which had advanced sharply throughout 1966 under the impact of a policy of monetary restraint, showed little

net change during 1967 and then rose considerably again in the first half of this year. In the month of June alone they increased 4 per cent, accounting for as much as one-fourth of that month's especially large rise in the total CPI. Between mid-1967 and mid-1968, they rose 6 per cent as compared with a rise of 3-1/2 per cent over the preceding 12-month period.

In general, by almost any standard, prices had been relatively stable prior to the acceleration of military activity in Vietnam in July, 1965. Unit labor costs in the second quarter of 1965 actually stood at only 98.8 of their 1957-59 base. Although failure of industries with decreasing costs to reduce prices during the period is partly responsible for the failure of price increases in the services to be fully offset by decreases in prices elsewhere, I would still characterize the period 1961 through mid-1965 as one of relative price stability. The Vietnam build-up, however, put strong demand pressure on heavy industry, and in the next 15 months prices advanced sharply in defense industries and the capital goods sectors, as the increment in expenditures for the war pressed unevenly on capacity and skilled labor. By the fourth quarter of 1966, unit labor costs had risen to 102.4 -- a gain of 3.6 percentage points.

The tighter monetary and less expansive fiscal policies applied in 1966, together with a significant increase in the savings rate and the overhang of excessive inventories, however, produced a moderate decline in the rate of growth in the first half of 1967. Price increases also became more moderate -- 1.7 per cent as measured by the CPI in the 9 months to June, 1967, vs. 2.5 per cent in the same period a year earlier.

Even this slower pace of price increase, however, was still above the experience earlier in this long expansion and -- since demand had moderated -- the continuing price increases largely reflected rising costs set in motion by the previous period of excess demand. During the first half of 1967, unit labor costs continued to advance sharply, and in the second quarter were 105.5 of their 1957-59 base. In this very recent historical period, therefore, strongly increasing labor costs actually coincided with a small decline in manufacturing employment.

From this brief review of the emergence of inflationary pressures during the last three years, all of us who are dedicated to the restoration of domestic stability should be prepared for a difficult assignment ahead.

#### The Source and Progression of Domestic Disequilibrium

As I noted above, in the last few years, a small but articulate group of economists -- especially in the academic community but also in a few financial institutions -- have argued that the Federal Reserve System through its conduct of monetary policy has become a prime source of instability in the American economy. They argue further that, to avoid such effects, the Federal Reserve should revamp its strategy and techniques of monetary management with the aim of keeping the annual rate of growth of the money supply within a fixed range -- such as 2 to 4 per cent or 2 to 6 per cent. However, aside from a few converts in one or two of the Federal Reserve Banks, this view has won virtually no support among monetary policymakers. On the other hand, the suggestion has evoked a favorable response from several highly-placed members of Congress.

Personally, I find such a view of stabilization policy unacceptable. Instead of becoming an epigone of this new philosophy of the money supply, I believe it would be far more productive -- if we are to understand the behavior of prices -- to investigate significant changes in aggregate demand in relation to the availability of the nation's resources. Starting from this vantage point, I reach the conclusion that the distortions associated with the Vietnam War -- compounded by the way in which the latter has been financed -- are the principle sources of the current inflation in the United States. To appreciate the magnitude of the strains exerted on the economy by the acceleration of military activity in Vietnam in mid-1965, it would be helpful to review briefly the performance of the economy -- with considerable assistance from monetary and fiscal policy -- during the 4-1/2 years ending in June, 1965.

#### The Accomplishments of Balanced Growth

Between February, 1961 and July, 1965, the main task of monetary and fiscal policy was to assist the economy achieve a rate of expansion sufficient to reduce the sizable margin of unused human and material resources. Working smoothly together during this period, these policies helped to produce a period of growth in which the gap between our actual and potential output was virtually closed, and remarkable price stability was maintained. Every sector of the economy benefited from this prosperity which was unmarred by labor or capital bottlenecks or the arbitrary effects of intense inflationary pressures. In less than 5 years, real disposable income per capita increased 21 per cent, a larger gain than occurred in



the preceding 12 years; corporate profits rose steadily without the usual 2-1/2 year cyclical interruption typical of the previous 26 expansions, and our exporters each year were able to sell in overseas markets a considerable margin in excess of our imports. Moreover, the higher taxes automatically occurred from rising incomes and profits made it easier for Federal and State and local governments to undertake important and necessary programs of human resource development and at the same time invest heavily in scientific projects while adding substantially to our military arsenal.

At the trough of the recession in early 1961, the Council of Economic Advisers estimated that the gap between our actual and potential GNP under conditions of high employment was almost \$50 billion. Although the Federal Reserve had begun in March, 1960, a reversal of its previous policy of monetary restraint, over 5 million workers were still unemployed during the first quarter of 1961. The discount rate was subsequently lowered twice, and open market and other special measures were taken to increase bank reserves and the money supply. However, the Federal Reserve was handicapped by the first serious balance of payments situation since the early 1930's, and neither the money supply nor long-term private financing was able to respond to a policy of monetary ease as promptly as in previous periods. The rate of 3 month Treasury Bills was kept up since it was feared that short-term funds would flow abroad, and although long-term interest rates eased somewhat, their level did not offer positive encouragement for needed business investment and residential construction.

International considerations, therefore, made strong reliance on fiscal policy as well as monetary policy necessary at this time. While

the so-called "automatic stabilizers" had mitigated the recession by adding to unemployment compensation disbursements around \$3.0 billion and personal income taxes fell by \$0.7 billion, additional fiscal measures were clearly called for to move the domestic economy forward. The incoming Administration undertook a number of major fiscal actions beginning in early 1961 and extending through the spring of 1964. For the present purpose, there is no need to repeat this catalogue of measures. It is sufficient that we bear in mind the conditions under which these stimulative fiscal policies were adopted: the economy was burdened with excessive unemployment and a sizable volume of unused industrial capacity.

Reflecting the launching of these stimulative policies, the Federal budget -- measured on a national income accounts basis (NIA) -- recorded a deficit of almost \$5 billion at an annual rate in the first quarter of 1961, compared with a deficit of less than \$1 billion in the fourth quarter of 1960. The potential Federal budget surplus under conditions of high employment by the first quarter of 1962 was less than \$11 billion, although it had been at \$15.1 billion in the fourth quarter of 1960. However, attempts to carry out additional stabilization policies to ensure a continuation of the more rapid growth now underway encountered legislative and other delays from time-to-time. As a consequence, while the early efforts to encourage economic expansion had helped to reduce the surplus to \$8.3 billion by the fourth quarter of 1962, the delayed adoption of additional measures resulted in a loss of momentum. So, by the final quarter of 1963, the margin of surplus had widened to

\$14.3 billion, and over the year there was no further reduction in the unemployment rate. Nevertheless, the growth in real GNP from the fourth quarter of 1961 to the same quarter of 1963 was a substantial 9.8 per cent. Unit labor costs remained at their 1957-59 average, and the general measures of prices -- the GNP deflator, CPI and WPI indexes -- advanced at rates below those typically experienced during the last two previous expansions.

However, the widening margin of unused resources during 1963 led to renewed efforts to stimulate the economy. The principle vehicle was the Revenue Act of 1964 embodying very substantial tax cuts. In addition to the cuts in individual tax liabilities already discussed, there was also a reduction in tax rates for corporations, which when combined with the 1962 measures to stimulate investment meant a net decrease of about 1/5 in corporate tax liabilities from the 1961 level. Together, by 1967, these reductions had added \$18 billion to disposable income.

Personal consumption and business investment in plant and equipment responded sharply to the tax reductions. As a result, in the first half of 1965, the full-employment surplus was down to \$11 billion, and unemployment was finally remaining below the 5 per cent level.

This chronicle of expansion with the assistance of intelligent stabilization policies should be remembered well -- since it stands in marked contrast to the experience of the succeeding three years. During this earlier period, net exports advanced, and there was no undue exuberance in consumer spending. Inventories were in reasonable balance with sales, and business fixed investment was not outstripping demands. Housing

was at a high level appropriate to the demands of a wealthy nation with an increasing number of young couples.

### The Genesis of Disequilibrium

In mid-1965, however, this balanced expansion was sharply diverted by the acceleration of the Vietnam War effort. The annual rate of military spending jumped by \$5 billion from the middle of 1965 to early 1966. A former member of the CEA estimates that careful calculation of indirect effects indicates that the effective add-on was actually over \$15 billion by the first quarter of 1966. Previous to the addition of these extra defense expenditures, there had been talk of a "leveling out of the economy" and the possibility of a modest 1966 tax cut as a tonic.

In this new phase, fiscal and monetary policy initially acted in tandem. But by December, 1965, the Federal Reserve concluded that the inflationary implications of the rapid increases in aggregate demand that were already occurring with further increases on the horizon required the adoption of a vigorous stabilization policy. While there was a clear preference for a coordinated use of both fiscal and monetary policy for this purpose, the timing of financial developments was such that the decision was made to proceed with monetary restraint. This was signaled by an increase in the discount rate in early December of 1965.

Not only was the rise in defense expenditures large during the twelve months following the acceleration of military activity, but it helped to create additional bottlenecks, because the composition of military demand had changed from sophisticated aerospace products to

the more conventional armaments more typical of past conflicts. The result was a strong shift in demand from the West Coast to the Great Lakes region which was already nearing optimal capacity utilization with a good automobile year and plant and equipment orders.

Yet, despite a 40 per cent increase in production in the previous 4-1/2 years of expansion, output was able to surge another 6 per cent in the half year following September, 1965. This sizable increase in production, however, seeded a resurgence in plant and equipment expenditures. The two forces together -- that is, the actual current demand for defense products and the additional facilities to produce a larger future stream of these products -- created serious labor and capacity bottlenecks. These were especially severe in the metal working and construction industries at a time when the unemployment rate was below 4.5 per cent of the labor force and capacity utilization in primary producing industries was above 90 per cent. An inventory build-up also got underway, which by the end of 1966 accounted for 2.4 per cent of GNP. During the post-World War II period, inventories had fluctuated considerably, but in general they had averaged only 1 per cent of GNP.

The December increase in the rediscount rate had been followed up by a request from the Federal Reserve that banks carefully screen loan requests, and over the year the volume of nonborrowed reserves and the rate of growth of the money supply were reduced considerably. By the end of the year, it had become increasingly difficult for the banks to accommodate business loan demands, and the Federal Reserve did not provide relief through an increase in the maximum interest rates payable on negotiable certificates of deposit.

In this environment, the thrift institutions, particularly savings and loan associations, experienced a sharp curtailment in the inflow of funds; withdrawals became very large as savers switched their assets to higher yielding securities. Under these circumstances, a sharp decline also occurred in the availability of mortgage financing. In response, residential construction contracted noticeably. The annual rate of new housing starts declined from an average of about 1.5 million in the previous year to 900 million units in December, 1966. This represented a decrease in expenditures on residential construction of \$6 billion at an annual rate compared with the previous year.

A number of fiscal actions were taken early in 1966 to slow the expansion of the economy, but they were insufficient to shift the main burden from monetary policy. The President's budget introduced a new graduated withholding on individual income taxes, certain excise taxes were reimposed, and there was a substantial speedup in the collection of corporate income taxes. A previously scheduled rise in payroll taxes for social security of \$6 billion also helped the situation. In October 1966, the investment tax credit was suspended. Expenditures for various Federal programs were also pruned.

The tempo of activity moderated in the first quarter of 1967 as inventories were clearly regarded as excessive, and plant and equipment expenditures responded to monetary restraint and the loss of the investment credit. The Federal Reserve moved in an expansionary direction. During the first 11 months of 1967, total bank reserves, the money supply, and bank credit expanded at rates very notably above those of the previous year.

However, after the middle of last year, it became evident that the economy was again expanding too rapidly. In fact, this possibility had been anticipated in January, and the President had recommended a 6 per cent surtax to become effective after the middle of the year. The request to Congress to bring the tax into force was made in August -- and the response was not at all hospitable. While the debate unfolded over the need for or desirability of the surtax (which had been raised to 10 per cent), inflationary pressures accelerated. Our balance of payments position deteriorated further. Under these circumstances, it became evident that a restrictive monetary policy was necessary, and it was adopted last November. The history of monetary actions carrying out this policy need not be repeated here.

The pattern of events described above is familiar terrain to anyone who follows the monetary and financial scene. But this experience -- in fact -- is a manifestation of a more basic disequilibrium in the domestic economy: the Vietnam War has resulted in an expansion of aggregate demand far exceeding the growth of our resources.

Mainly in response to the expansive fiscal policies discussed above, by mid-1965, the gap between potential and actual GNP had virtually disappeared. In the third quarter of that year, the full employment budget surplus was roughly \$600 million; by the fourth quarter, it had shrunk further to only \$100 million. Thus, by this standard, our stabilization policies had just about accomplished the central objective toward which they had been aiming for 4-1/2 years. However, the unemployment rate was still above 4 per cent until the very end of 1965. Moreover,

the full employment budget surplus widened somewhat to \$1.6 billion in the first quarter of 1966 and to \$3.8 billion in the second quarter. Yet, these potential budget surpluses were certainly modest compared with the enormous short-falls which occurred through the first 5-1/2 years of this decade.

Beginning in mid-1966, demands certainly have been excessive, though it is difficult to tell by how much. In particular, we have not had a reservoir of skilled labor on which to draw for some time, while many relatively untrained people have been incorporated into the working labor force. Basically, a shortage of manpower rather than plant capacity has been our problem.

#### Monetary Policy and the Behavior of Money and Credit Flows

While some observers may accept the evidence demonstrating that excessive claims have been made on our resources since the acceleration of the Vietnam War, many of them still argue that the domestic inflation has resulted primarily from the growth of the money supply and bank credit. I personally find it much more helpful (and enlightening) to probe the reasons why the leading monetary variables behave in a given manner over a specified period of time. Moreover, I find it especially helpful to select reference points in time which, because of basic changes in the economy or in public policy, should have significance for monetary authorities.

Applying this approach, I have tried to unravel the behavior of money and credit flows since a policy of monetary restraint was adopted last November. Given the fact that the U.S. Government, mainly because of the Vietnam War, ran a budget deficit of \$25.4 billion in the fiscal



year ending last June, I began on the assumption that the financing of this deficit was a major factor in the money and capital markets. In fiscal year 1968, the Federal Government borrowed \$28.4 billion; of this amount \$10.8 billion was absorbed by Federal Reserve Banks and Government agencies and trust funds, and \$17.6 billion was financed in the money and capital markets. The effects on the publicly held Government debt were substantial. For example, in the January-June period of calendar 1968, the publicly held debt rose by \$1.0 billion, following a previous rise of \$15.9 billion in the July-December months of 1967. In the first half of calendar 1967, the publicly held debt declined by \$13.7 billion.

To trace the effects on money and credit flows of U.S. Treasury financing during calendar 1968, I analyzed the behavior of the principal monetary variables since last November. The results are summarized in Table 1. This table shows the seasonally adjusted annual rates of change in total reserves, nonborrowed reserves, the bank credit proxy, the money supply and U.S. Government deposits during the period November 29, 1967 through September 11, 1968. Separate calculations were made for periods of Treasury financing and for periods free of such financing. The sub-periods are composed of groupings of reserve adjustment weeks beginning shortly before Treasury financing announcements and ending shortly after issue date. In addition, the periods of large gold outflow were identified, because these also have a substantial effect on reserves.

As I examine the rates of change in these monetary variables a central conclusion stands out: the efforts of the U.S. Government to finance its deficit have been major influences on the behavior of money

Table 1. Changes in Monetary Variables During Periods of  
U.S. Treasury Financing\* and of Large Gold Outflow#  
November 28, 1967 - September 11, 1968

Reserve weeks ending	Seasonally adjusted annual rates of change, in per cent						
	Total reserves	Nonborrowed reserves	Bank Credit proxy	Money supply		U.S. Gov't. deposits at member banks	
					(%)	(\$ amount billions)	
Nov. 29, '67 - Jan. 24, '68	5.3	1.2	5.7	3.9	+225.5	(+1.7)	
Jan. 24, '68 - Mar. 27, '68*#	7.3	-1.4	4.2	4.4	- 52.5	(-0.6)	
Jan. 24, '68 - Feb. 28, '68*	12.5	9.9	14.3	4.0	+362.4	(+2.3)	
Feb. 28, '68 - Mar. 27, '68#	2.2	-12.6	-8.4	5.0	-423.6	(-2.9)	
Mar. 27, '68 - Apr. 24, '68	-8.8	-9.4	-3.7	1.4	- 65.0	(-0.3)	
Apr. 24, '68 - May 22, '68*	4.1	2.2	3.3	21.9	-593.0	(-2.6)	
May 22, '68 - July 24, '68	4.9	10.6	10.6	5.6	+186.4	(+1.0)	
July 24, '68 - Aug. 21, '68*	23.5	23.3	18.4	13.1	+190.2	(+0.6)	
Aug. 21, '68 - Sept. 11, '68	-0.6	1.3	3.6	-3.6	- 36.9	(-0.1)	
Nov. 29, '67 - Aug. 21, '68	6.1	4.1	6.7	7.1	- 5.6	(-0.2)	
Nov. 29, '67 - Sept. 11, '68	5.4	3.8	6.5	6.3	- 7.8	(-0.3)	
<b>MEMO:</b>							
Nov. 29, '67 - Dec. 27, '67	-5.8	-14.0	-0.5	+2.2	+577.8	(+2.0)	
Dec. 27, '67 - Feb. 28, '68* (includes Jan. 15 TAB)	14.6	13.4	+13.3	+4.8	+195.5	(+2.2)	
June 26, '68 - Aug. 21, '68* (includes July 11 TAB)	14.3	19.0	+14.4	+9.7	- 94.5	(-0.8)	

\* - Periods approximating Treasury financing.

# - In the three weeks ending March 27, Treasury gold stock declined by \$1.4 billion.

NOTE: Annual rates of change for bank credit proxy, money supply, and U.S. Government deposits are based on seasonally adjusted weekly data for the reserve weeks indicated. These weeks were chosen to approximate periods beginning shortly before Treasury financing announcements and ending shortly after issue date. Annual rates of change for total and nonborrowed reserves are based on seasonally adjusted monthly average data that most closely correspond to the periods of Treasury financing.

and credit flows during 1968. Whether one focuses on bank reserves, the bank credit proxy or the money supply, most of the really noticeable deviations from the pattern of changes during the 9-1/2 months under review came in periods of Treasury financing.

For example, total reserves rose at an annual rate of 5.4 per cent during the November-September months. However, during the three periods when the Treasury was borrowing through the sale of securities involving coupon issues, the annual rates of change in total reserves were 12.5 per cent, 4.1 per cent and 23.5 per cent, respectively. Two of those periods were preceded by large sales of tax anticipation bills (TAB) and if these two coupon financing periods are extended to cover the TABs as well, total reserves expanded at an annual rate of over 14 per cent. Non-borrowed reserves rose at an annual rate of 3.8 per cent during the 9-1/2 months. But again the annual rates of expansion during periods of Treasury coupon financing (with one exception) were considerably larger: 9.9 per cent, 2.2 per cent, and 23.3 per cent. A similar pattern held for the periods including TABs. Bank credit, as approximated by the bank credit proxy, rose at an annual rate of 6.5 per cent during the November-September months. But during the periods of Treasury coupon borrowing, the annual rates of increase were 14.3 per cent, 3.3 per cent, and 18.4 per cent, with rates of 13.3 per cent and 14.4 per cent for the extended periods including TAB financing. The corresponding annual rates of growth of the money supply were 6.3 per cent for the 9-1/2 months, and for the periods of Treasury financing: 4.4 per cent, 21.9 per cent, 13.1 per cent (4.8 per cent and 9.7 per cent including TABs). The dollar-amount of changes in

U. S. Government deposits at member banks during each period provide an additional perspective.

It should be noted that, between the third week in August and mid-September -- total reserves and the money supply declined -- at an annual rate of 0.6 per cent and 3.6 per cent, respectively. It will be recalled that the last Treasury financing during the period under review was completed in mid-August. Moreover, although the time periods in Table I were not designed to highlight the behavior of the monetary variables during the reserve adjustment periods in the few weeks following each Treasury financing, the rates of increase in the variable tended to decline as the new issues were being distributed.

In pointing to the impact of Treasury financing on the behavior of money and credit flows, I do not wish to over-emphasize its significance. To a considerable extent, the growth in total bank reserves during periods of Treasury borrowing is similar to what occurs whenever there is an expansion of credit demands, whether from the Government or sources in the private economy. However, Federal Government cash financings and refunding operations are very much larger than private financing and are concentrated in shorter time periods so that their short-run effects on monetary variables can be quite marked. Because of the large size and critical nature of Treasury financing operations, the Federal Open Market Committee would ordinarily refrain from initiating policy changes between the announcement of a Treasury financing and the date the securities are issued. In addition, the System would normally permit some temporary expansion in Federal Reserve

credit to facilitate the distribution of new issues. While some observers may not see the appropriateness of the Federal Reserve's taking account of Treasury financing in carrying out its own responsibilities, I do. In fact, I cannot visualize the conditions that would call for the central bank to make its policy without any recognition of an ongoing and sizable Treasury financing. On the other hand, I certainly do feel that the Federal Reserve should have flexibility in modifying its policies and need not be completely bound by Treasury financing considerations if there are not in tune with overriding monetary policy objectives.

But in the final analysis, the real question does not arise with respect to the role of the Federal Reserve during periods of particular Treasury financings. Rather, it arises from the fact that when the Federal Government runs persistent large deficits during a period of inflation, fuel is added to excessive demand pressures and this will require either fiscal restraint, or monetary restraint in the form of permitting or encouraging tighter credit conditions so as to moderate credit-financed spending.

#### A Personal View of Monetary Management

Although I recognize that an excessive growth of bank credit and the money supply does facilitate the propagation of inflation, I am personally convinced that it would be a disastrous error to try to conduct monetary policy on the basis of a few simple rules governing the rate of expansion of the money supply. In the first place, I find serious deficiencies in the theoretical and empirical analysis on the basis of which the advocates of such rules reach their conclusions and policy recommendations. Put quite simply, they have not demonstrated convincingly that

the relationship between the money supply (usually defined as private demand deposits and currency in the hands of the public) and economic activity is especially close. Or, more importantly, they have not convincingly shown that money is more a cause than it is an effect of economic activity. While fluctuations in monetary conditions have undoubtedly contributed to economic instability on some occasions in the past, nonfinancial factors (such as wars, variations in the rate of business investment, and changes in consumer spending/savings behavior) have also been a principal source of fluctuations in output and employment.

Furthermore, the effects of monetary conditions on economic activity have not invariably been mirrored accurately in fluctuations in the money supply. Instead, the linkages between changes in the demand for goods and services and changes in the money supply should be sought in the behavior of other financial market conditions -- such as interest rates and prices of financial assets, and the availability of credit -- which occur in conjunction with changes in the money supply. Given the great complexity of our financial system, in which commercial banks and a variety of savings institutions live guardedly together in an increasingly competitive environment, I think it would be not only misleading but also extremely risky for the monetary authorities to settle on the money supply or any other single factor as the exclusive target and guide for monetary policy.

Instead of encouraging belief in such a simple view of the structure and behavior of our monetary system, I believe that those of us who share responsibility for the formulation and conduct of stabilization policies also have the responsibility to help broaden the public's appreciation of the limitations as well as the potentialities of our policy instruments. Above all, I think we have the responsibility to encourage the pursuit of policies -- in both the public and private sectors -- which enhance prospects for achieving and maintaining domestic stability -- rather than policies which aggravate the instability caused by nonmonetary factors.