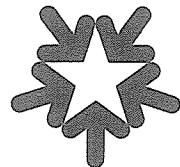


SHADOW OPEN MARKET COMMITTEE  
Policy Statement and Position Papers

September 13-14, 1981

PPS-81-8



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SHADOW OPEN MARKET COMMITTEE  
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1. Shadow Open Market Committee Members - September 1981
2. SOMC Policy Statement, September 14, 1981
3. Position Papers prepared for the September 1981 meeting:

TRANSITION TO A NEW REGIME - Karl Brunner, University of Rochester

FISCAL POLICY OUTLOOK: A REPORT TO THE SHADOW OPEN MARKET COMMITTEE - Rudolph G. Penner, American Enterprise Institute

RISK and FEDERAL RESERVE ACTION AND MONETARY GROWTH - H. Erich Heinemann, Morgan Stanley & Co., Incorporated

FORECASTING MULTIPLIERS FOR THE "NEW-NEW" MONETARY AGGREGATES - James M. Johannes and Robert H. Rasche, Michigan State University

FEDERAL BUDGET OUTLOOK and ECONOMIC PROSPECTS THROUGH 1982 - Robert R. Davis and Robert J. Genetski, Harris Trust and Savings Bank

ECONOMIC PROJECTIONS - Burton Zwick, Prudential Insurance Company of America

SHADOW OPEN MARKET COMMITTEE

The Committee met from 2:00 p.m. to 8:00 p.m. on Sunday, September 13, 1981.

Members:

PROFESSOR KARL BRUNNER, Director of the Center for Research in Government Policy and Business, Graduate School of Management, University of Rochester, Rochester, New York.

PROFESSOR ALLAN H. MELTZER, Graduate School of Industrial Administration, Carnegie-Mellon University, Pittsburgh, Pennsylvania.

DR. ROBERT J. GENETSKI, Vice President and Chief Economist, Harris Trust and Savings Bank, Chicago, Illinois.

MR. H. ERICH HEINEMANN, Vice President, Morgan Stanley & Co., Incorporated, New York, New York.

DR. HOMER JONES, Retired Senior Vice President and Director of Research, Federal Reserve Bank of St. Louis, St. Louis, Missouri.

DR. RUDOLPH G. PENNER, American Enterprise Institute, Washington, D.C.

PROFESSOR ROBERT H. RASCHE, Department of Economics, Michigan State University, East Lansing, Michigan.

DR. ANNA J. SCHWARTZ, National Bureau of Economic Research, New York, New York.

DR. BURTON ZWICK, Vice President, Economic Research, Prudential Insurance Company of America, Newark, New Jersey.

The Committee notes with great sadness the death in a tragic accident of its former member, PROFESSOR WILSON SCHMIDT of the Virginia Polytechnic Institute. At the time of his death, Professor Schmidt was on leave of absence, pending his appointment by President Reagan as United States Executive Director of the International Bank for Reconstruction and Development. Wil was a fine economist and a good friend. We shall miss him.

**POLICY STATEMENT**  
**Shadow Open Market Committee**  
September 14, 1981

Economic policies do not work instantly. Reductions in the growth of government spending that shift resources to more efficient uses do not immediately trigger equal or greater increases in private spending. Tax cuts that encourage saving and effort do not generate instant responses. Reductions of monetary growth do not instantly reduce inflation. All these policies have their expected lasting effects only if people believe the policies will remain in effect.

An immediate problem the administration faces is to enhance the credibility of its commitment to its economic program. This cannot be done by the quick fixes suggested recently. Credibility can be enhanced only by making the administration's and the Federal Reserve's commitment firmer. Greater certainty about the continuation of these policies is more likely to lower nominal interest rates than reinstitution of credit controls, ceilings on interest rates, and similar discredited remedies. Other options, which hold far greater promise, are suggested in this statement.

For many years, this Committee has advocated policies similar to those that have now been adopted. We said that, if the size of the government were reduced, sustained higher productivity growth, increased employment, and lower inflation would follow within two years. We have emphasized that a more rapid response could be achieved only if the policies remained credible and commitment to the policies were sustained through the difficult months following their adoption.

The policies we have advocated are now in place. Currently, the most reliable indicators of money growth are substantially below their past peak rates of increase. The growth of government spending is slower, and tax rates will be lower.

A widespread belief persists that the administration and the Federal Reserve will not sustain these policies. Projected growth rates of defense spending, Social Security outlays and Medicare costs appear to many observers to be incompatible with the projected real growth of the economy at lower rates of inflation. The conflict between the budget and the economic forecasts has stimulated daily discussion about the prospects for a budget deficit instead of a small surplus in 1984. Cries of failure are rising.

Intense concentration on a particular value of the budget surplus or deficit for 1984 misplaces attention. We wrote in our March statement:

"Doubts about the size of the deficit will not be removed even if Congress approves the entire program. The administration's forecast of the growth of nominal income for 1982-1986 appears to us inconsistent with its assumptions about monetary and fiscal policies and the historical record of performance of the American economy. The estimates of real growth are more optimistic and estimates of the slowing of inflation more pessimistic than we believe the administration's policies will achieve."

There is a growing conflict between the policies pursued and the forecasts of their effects. The problem is that presently no one knows which course the administration will follow. The conflict heightens current uncertainty and sustains those who believe that the lower rates of inflation we now observe are a temporary pause in the long uptrend.

## TWO OPTIONS

The members of the administration have two options. They can choose to realize their budget forecasts for 1983 and 1984 by inflating the economy in line with their forecasts of nominal income growth. Or, they can continue present policies. This option requires additional spending cuts to achieve a falling share of government.

The first option is to maintain the current forecasts — that the average growth of nominal and real GNP remain at 12 percent and 4.5 percent, respectively, for the next three years. This forecast of real growth is well above the historical average achieved by the U.S. economy, and the projected nominal growth is inconsistent with a continued and sustained decline in the rate of inflation. The projected rate of nominal income growth cannot be achieved with the monetary policies that the President, leading members of his administration — and we — have urged the Federal Reserve to follow. The forecasts fail to recognize the considerable progress toward lower inflation that has been achieved this year.

Under the second option, the administration can reduce the burden of regulation and the growth of government spending to stimulate real growth while supporting the Federal Reserve's announced policies of sustained, gradual reduction of money growth. This option discards the administration's February and July forecasts and thereby reduces uncertainty about the administration's intentions as to future policy.

We prefer option two. A substantial reduction in the measured rate of inflation has been made. The reduction in inflation lowers the nominal growth of GNP and increases the size of the deficit. This result should not be scorned but should be followed by further

reductions in spending. The additional reductions in spending should be made to enhance efficiency — not solely for the purpose of achieving a particular value for the budget surplus or deficit on a given date. We believe that more efficient use of resources, including resources devoted to defense, can be achieved by shifting resources from public to private hands.

### ENHANCING CREDIBILITY

Years of failed promises have engendered skepticism about the durability of current policies. Skepticism is the principal reason that financial markets continue in disarray and interest rates, after adjustment for current inflation, remain at extraordinary levels. Decisive actions are required now to deal with the dilemma.

In addition to consideration now being given to the restoration of some type of commodity standard for money, government should consider one or more of the following actions:

- (1) legislative limits for monetary expansion;
- (2) a requirement that Federal Reserve governors offer their resignations if monetary targets are not achieved within reasonable tolerances;
- (3) endorsement of a constitutional limit on the size and growth of government;
- (4) budgetary projections constrained by historical experience of the economy, instead of political fancy;
- (5) flexibility in Treasury debt management techniques perhaps including:
  - (a) the issue of inflation-indexed bonds and advance refunding of existing long-term debt into the indexed bonds;
  - (b) greater use of call provisions;
  - (c) less reliance on the sale of long-term debt;
  - (d) publication of a long-term Treasury financing calendar;
- (6) removal of all limits on the payment of interest on financial assets;
- (7) adoption of a simple and uniform system of reserve requirements applicable to all competing financial institutions; and
- (8) immediate outright repeal of the Credit Control Act of 1969.

### BUDGET POLICY

The administration has made substantial progress toward a more effective fiscal policy by reducing the growth of government spending and by reducing tax rates. The reductions were offered as first steps toward a long-term solution of neglected economic problems.

Yet, within a few weeks of Congressional passage of the budget resolution, and before the program is to take effect, it has frequently and incorrectly been described as a failure.

The administration should not allow current, excessive emphasis on the size of the deficit, temporary changes in stock prices, or forecasts of the future deficit to dominate current concerns or obscure the goals of economic policy. A balanced budget in 1984 is not a goal of policy — and should not be made a goal of policy. A balanced budget should be achieved in 1984 only, if at all, by following policies that lead to accepted goals of more employment, less inflation, higher productivity growth, and greater freedom and efficiency.

Budget reductions should be made in any category of spending that permits the administration's defense and nondefense programs to be achieved in ways that are consistent with these long-term goals. The administration's July projections show an increase of \$118-billion in defense outlays, a rise of 17 percent a year from 1980 to 1984. It seems likely that a more efficient use of resources can be achieved at a slower rate of increase.

The administration should make clear that a budget deficit resulting from slower inflation is preferred to a budget that is balanced by high or rising inflation. The recent experience of Japan shows that deficits do not prevent the central bank from controlling money growth and reducing inflation. However, reduced inflation lowers tax receipts and so prevents the deficit from falling as a percentage of GNP. In Japan, deficits as a fraction of GNP are about twice U.S. deficits. Nevertheless, money growth has been lowered from more than 12 percent in 1978 to minus 2 percent in 1980. Inflation has been reduced as the economy has expanded.

Inflation is caused by excessive monetary expansion, not by Federal deficits per se. So long as the Federal Reserve conducts its operations to achieve noninflationary rates of monetary growth — and does not set targets for interest rates — Federal deficits will not cause inflation.

#### MONETARY POLICY

The Federal Reserve repeats frequently that it is committed to sustained gradual reductions of money growth, the policies we have advocated. In its recent statement, the Federal Open Market Committee (FOMC) indicated a preference for growth of M-1B — currency and checkable deposits — in the range of 6 percent to 8 1/2 percent from fourth quarter 1980 to fourth quarter 1981 and a further reduction to the range of 2 1/2 percent to 5 1/2 percent in the following four quarters. These targets would permit M-1B to average

more than \$450-billion in the fourth quarter of 1981 and make \$463-billion the midpoint of the range reached by the fourth quarter of 1982.

The FOMC's proposed rate of monetary growth for the remaining months of 1981 would reaccelerate money growth. This would be undesirable. Progress in reducing money growth this year has made the Federal Reserve's current targets too high.

For 1982, we urge the Federal Reserve to increase the monetary base, as reported by the Federal Reserve Bank of St. Louis, by no more than 5 percent. Our targets bring the level of the monetary base to \$171-billion in fourth quarter 1981 and \$180-billion in fourth quarter 1982.

#### PROGRESS AGAINST INFLATION

Greater progress has been made toward price stability than we, or others, anticipated six months ago. The lower-than-anticipated rate of inflation reported for 1981 means that growth of nominal GNP is lower than anticipated because inflation is lower. The unemployment rate is now lower than at the start of the year, and a larger fraction of the population is employed. To date, the costs of disinflation have been much lower than anyone anticipated.

Slower inflation in 1981 is a response to firmer and better policies. Decontrol of oil prices, the decision to allow the exchange rate to appreciate without intervention, and tighter monetary policies have helped to lower the measured rate of inflation this year. These gains must not be thrown away.

The cost of ending inflation can be reduced dramatically if the public becomes convinced that inflation has fallen and will continue to fall. Anticipation of slower inflation means that real wage demands can be achieved with smaller increases in current wages. So far this year, the rate of increase of hourly earnings has generally fallen from late 1980. Simultaneous reductions in rates of change of wages, as well as other costs and prices, lower the costs we pay to reduce inflation.

No country can costlessly end fifteen years of inflation and low productivity growth. What is needed now is a strong commitment to continue and strengthen the policies to which the administration is pledged. The administration should not back away from policies that are working better than anyone anticipated. The costs we are experiencing now are transitory. The benefits of persistence will be permanent.



## TRANSITION TO A NEW REGIME

Karl Brunner  
University of Rochester

### I. THE LEGACY AND THE REAGAN PROGRAM

Erratic stagnation, inflation and volatile interest rates characterize the recent state of the US economy. This state is neither preordained nor the random product of a mysterious stochastic process unfolding over history. It was conditioned to a major extent by the pattern of policies, and administrative and court decisions evolving over the past twenty years. A reversal of the trend experienced during the last decade requires under the circumstances a radical change in basic policy conceptions and the nature of policymaking.

The Reagan Administration's program offers a new direction with a different thrust. Its objectives are clear enough and well known. Inflation should be lowered with the expectation of eventually achieving a stable price level. Normal output and the rate of growth need both be raised. The strategy addressed to the pursuit of these objectives has also been well presented to the public. Monetary policy need be adjusted to a systematic control over monetary growth. This control should moreover be used to produce a pre-committed and publicly announced decline in monetary growth. The reliable and recognized performance of this new approach in monetary policy is also expected to lower the level and volatility of interest rates. Stimulation of output and growth is expected to result on the other hand from a "lower level of government". Lowering the level of government involves two dimensions: it bears on the execution of budget powers and the application of police powers. A reduction of marginal tax rates with a corresponding containment and restructuring of expenditure programs raises the incentives to work, save and invest. The redirection in fiscal policy should also eliminate over four years the entrenched budget deficit. The stimulation of output and growth requires however more than a new approach to the use of budgetary powers. An overregulated economy impairs the efficient use of our resources and obstructs innovative developments of new resources. A new approach will also be required in our regulatory policies. This redirection ought to attend with greater care and explicit awareness to the social costs (i.e. the human values forfeited) by any kind of existing or intended regulatory activity.

## II. SOUND AND CONFUSION OF A TRANSITION PERIOD: MONETARY POLICY

A familiarity with objectives and general strategy seems hardly sufficient to assure a smooth transition to a new regime characterized by a new policy conception and a different pattern of policymaking. The erratic behavior of our financial markets, so generally commented upon, dramatically reveals the difficult problems encountered over the transition period produced by a radical change in policy conceptions. The tactical execution of the general strategy unavoidably produces in the context of the inherited problems diffuse uncertainties and shifting apprehensions. The "sound and confusion" produced by the markets' efforts to absorb the new information becomes amplified by the media process. Changing uncertainties about the detail of the tactical course or about its path over time, anxieties about the reliability and commitment to the strategy, or an unstable spectrum of apprehensive and confused interpretations of current events and conditions affect all markets, but most visibly the financial markets.

Much of the "sound and confusion" reflects a sense of disorientation and doubtful reservations. Some of this disorientation expresses persistent ignorance, confusion or uncertainty bearing on monetary matters. The market for words and interpretations abounds with assertions that we hardly know what money is, or that for one or the other reason it is really impossible to control its magnitude or rate of growth within any useful tolerance band. Both groups of claims possess however no relevant foundation or justification. The first group frequently confuses the definition of money in terms of its crucial behavior characteristics (generally used means of making payment, i.e. comprising any object used with dominant frequency as a means of settling transactions) with the specification and procedures required for its adequate measurement. The behavior of peasants, retailers, workers and of most any other agents unmistakeably reveals that they do systematically distinguish between "money" and "non-money credit", or between money and bonds or many other assets. The agents' skill at differentiation between market objects with distinctive characteristics does not resolve however the measurement problem. Attention to this problem forms an essential strand of the responsibility assigned to monetary authorities. The Federal Reserve Authorities increasingly recognized this obligation in recent years. The specification and procedures have been repeatedly adjusted to represent the innovations produced by the financial markets. There still remain some problems requiring future attention. But the emergence of major problems would be signalled by significant breaks in the behavior pattern of the respective monetary velocity as expressed by trend and variance around trend (or more

generally by the nature of its time series structure). We may note that no significant breaks in the patterns have been observed so far. The controllability of monetary growth seems sufficiently assured in this context relative to the magnitude of the problem to be addressed.

The other denials of effective monetary control made in the public arena fare no better. Their suppliers hardly ever appear to know the accumulated scholarly work analyzing the structure of the money supply process and the major determinants of observed money stock behavior. The denials involve usually no more than sweeping impressions unsupported by any analysis or evidence. The reader may examine in contrast the empirical investigations prepared over the past three years on behalf of the SOMC by James Johannes and Robert Rasche. We also note that the examination of the control problem prepared by the staff of the Board of Governors essentially confirms the contention advanced over many years by the SOMC in this matter.

Controllability does not assure its exercise by the authorities. Some Central Banks fully recognize the technical feasibility of monetary control but find it politically difficult, for some reason, to pursue such control. The behavior of financial markets suggests that this political question probably governs the erratic skepticism expressed by agents on the market place. The behavior of the Fed still encourages doubts about its commitment to a longer-run anti-inflationary monetary policy. This doubt is nurtured by a tactical procedure and by arrangements under the control of the Fed lowering the reliable delivery of an effective monetary control strategy. These reservations are reenforced by apparently conflicting statements made by various officials over the past two years. Ultimately, there is only one solution to this problem: the Fed needs to institutionalize more definitely its acknowledged strategy of monetary control. In particular, the doubts and reservations addressed to the Fed will vanish with the increasing length of time that the Fed adheres to an effective anti-inflationary commitment of monetary control.

### III. SOUND AND CONFUSION OF A TRANSITION PERIOD: FISCAL POLICY

The behavior of the financial markets and the related discussions in the public arena directs our attention however beyond the Fed and the immediate prospects of monetary policy. Doubts and apprehension about the course of the Federal budget and budgetary policies appear to dominate the market's erratic drift at the high level of interest rates. The current phase emerged in a difficult transition to a state with a lower real magnitude of a balanced budget (relative to national income). These objectives of the Reagan

Administration are not ends in themselves. They are designed to shift resources from the public to the private sector and encourage a more efficient use. They will also lower consumption and encourage private investment in productive capital. This change in the use of our resources with the resulting effects on normal output and normal rate of growth essentially determines the Reagan Administration's fiscal strategy. But the strategy requires some tactical procedures and the tactical aspects with their public discussion seem to have obscured the ultimate strategy and its purpose in the public arena. The "supply side story" dramatized by the media market contributed most particularly to general confusions and irrelevant expectations. It concentrated public attention on tax policies and neglected expenditure policies. It conveyed thus a false sense about the real tax burden imposed by government. It also neglected the consequences of a persistent large deficit, or promised miraculous effects on output growth to be expected just only from lowered marginal income tax rates.

#### IV. ALTERNATIVE TACTICAL PROCEDURES OF FISCAL ADJUSTMENTS

The hesitations and reservations were reenforced by the disjointed set of forecasts published by the Reagan Administration earlier this year. This incoherence between the forecasts for output, price-level and the monetary evolution was explicitly noted at the occasion of the meeting held by the SOMC last March. The Shadow decided at the time to disregard this set of essentially irrelevant data and invited all interested parties to direct their attention to the program itself and its consequences. The irreconcilable forecast patterns supplied by the Administration appeared to emerge from a compromise between two alternative tactical conceptions submitted to the Reagan Administration's attention.

One conception argued that nominal gross national product should continue to grow for this and (at least?) the next year at a rate well beyond 10 percent p.a. The rate should be sufficiently high in order to prevent recessionary effects imposed by a restrictive monetary policy. A figure of 13 percent p.a. was mentioned in this context. Monetary policy need be geared to accommodate this target. Substantial tax reductions would stimulate a large increase in real growth according to the supply side story. Output experiences under the circumstances an unobstructed opportunity to grow into the range provided by the nominal expansion assured by an accommodating monetary policy. The accelerated rise in output is expected moreover to depress the inflation rate point for point. This strategy would also assure that the "supply side policies" can be executed without endangering the goal of a balanced budget.

The alternative conception emphasizes a simultaneous attack on tax rates and expenditure programs combined with an anti-inflationary monetary policy systematically lowering monetary growth over four years. This proposal recognizes that it probably involves a recession. The magnitude and duration of this recession is essentially determined by the degree of credibility attributed by the market at this stage to the policymakers. A larger degree of credibility induces more rapid revisions of price-wage setting in response to the announced anti-inflationary policy. And a more rapid revision lowers both the magnitude and duration of the temporary retardation of output and employment. Whatever the retardation may be, it does not obstruct the gradual emergence of the longer-term supply side responses induced by the reversal in fiscal and regulatory policies. An imbalance of the budget could persist however for some time under the second approach. Its magnitude and duration depends on the recession and the nature of the revision procedure in fiscal policy. A larger recession combined with a concentration of political effort on tax reductions could create for some time a substantial deficit. This result does not endanger the eventually dominating effect of a maintained anti-inflationary monetary policy.

The first procedure essentially assures approximate balance in the budget by suspending or postponing for years any serious anti-inflationary policy. Budget balance is achieved by offsetting the nominal reduction in tax rates with the inflation induced "bracket creep". But this implies that the reduction in nominal tax rates would not produce a corresponding real rate reduction. The intended incentives and the corresponding stimulus would hardly materialize under the circumstances. The prevalent skepticism expressed by the behavior of credit markets with respect to the future course of monetary policy would moreover be substantially confirmed by this approach. Interest rates would continue in this case to move erratically for a long time along a high level.

The Administration may have settled for some compromise of the alternative proposals. It certainly determined quite early in its operation to work with the Federal Reserve Authorities in order to develop an anti-inflationary course of monetary policy. The required retardation of monetary growth is well under way at this stage. It has also managed successfully the major tax reductions bearing on personal income and business investments of various kinds. The approach to the expenditure side has been substantially less sweeping though certainly commendable. This compromise may well have been unavoidable under the circumstances. It would appear very difficult, if not politically impossible, to launch a total revision of the budget all at once in one single package. But

the compromise produces its own problems which the Administration needs to consider. It yields in particular a large deficit encouraging a variety of fears about the future course of our financial policies. Some of these fears are poorly founded and somewhat exaggerated. But the fears do include a relevant core. Without a determined effort to contain the expenditure programs we will experience either a reversal of monetary policy or a "crowding-out" of the private sector from the capital market of major magnitude. The objectives of the Reagan Administration are best served under the circumstances by maintaining the anti-inflationary stance in monetary policy and forcefully addressing the expenditure side of the budget. This need not involve a "social dismantling", but does require a resourceful reexamination of the social programs and eventually a substantial restructuring of their operation.

#### V. THE CHOICE OF A MONETARY STANDARD

A Presidential Commission was appointed earlier this year in order to appraise the merits of a gold standard. The advocates of a gold standard argued their case over recent years with an increasing intensity. Their program frequently combined the Kemp-Roth fiscal strategy with a return to the gold standard. This program was motivated by the erratic social cost increasingly imposed by the government's fiscal and monetary policy. The Great Depression of the 1930's and the permanent inflation generated over the past 16 years by our monetary authorities reveal a fundamental flaw in our monetary arrangements. These major social failures of our policy agency were not prevented under the existing institution of an "independent Central Bank". This institution emerged in response to pervasive experiences with the political misuse of the Central Banks' money creating potential. Central Banks offer opportunities to finance expenditures in circumvention of parliamentary revenue approvals. An independent monetary authority separated from the government's fiscal operation was supposed to pursue policies in the best long-run interest of the nation. This independence provided however little guidance to the Central Bank. It failed moreover to constrain an extended political interaction between an "independent monetary agency" and a broader political market place. "Independence" could ultimately not separate a Central Bank from some political interaction so long as the policy agency was assured any range of discretionary action. It only modified the nature of the political interaction.

The lessons from past centuries combined with the social failures in our monetary policymaking in this century direct our attention once again to the social role of a monetary standard. The Shadow Open Market Committee should thus acknowledge the importance of such reexamination. It would seem useful at this stage to clarify first the social role of a monetary standard and secondly to evaluate the performance of alternative standards in the contexts of the pattern of underlying shocks typically affecting our economic life.

A standard constrains the "double temptation" encountered by a monetary agency in the political process. It obstructs the exploitation of money creating potential by the government for convenient financing of its expenditures. It also constrains on the other side the "discretionary exploitation" of its powers by the monetary agency. This second constraint appears at this stage at least as important as the first bearing on the fiscal temptation of government. The social failures of our century remind us that we can hardly expect a policy institution to behave in accordance with our favored social welfare function.

The choice between alternative standards should of course rely on a systematic assessment of their respective performance characteristics. Such assessment may increasingly attract the profession's interest in the near future. This interest would certainly be welcomed by the Shadow Open Market Committee. A rough comparision between three standards is outlined for our purposes at this stage. This sketch should really be understood in the nature of a research program. A fixed exchange rate standard (CEX) is juxtaposed to a constant monetary growth standard (CMG) and a domestic commodity reserve standard. The gold standard may appear in this context as a particularly important form of the first and the third standard, depending on whether the gold standard is an international or an isolated national arrangement.

The various standards differ most particularly in terms of their respective risk combinations and the determinacy of the long-run price-level. Under a CMG standard the generally perceived strategy prevents the emergence of fluctuations in real variables due to misperceived monetary shocks. This statement holds irrespective of short run deviations of monetary growth from target path, provided the general public firmly expects the long-run maintenance of the CMG standard. This standard involves on the other side the risk of fluctuations in real exchange rates with corresponding effects on domestic economic conditions. The CEX standard lowers the risk of real exchange rate movements with their specific real consequences. It accepts in contrast a large risk of substantial variations in misperceived or unanticipated short-run monetary growth inducing fluctuations in output,

employment and the price-level. Under a CMG standard foreign real shocks will be absorbed by the exchange rate. The same real (and nominal) foreign shocks will be converted under a CEX standard into accelerations (and decelerations) of the domestic money stock. It follows under the circumstances that fluctuations in output and employment proceeding in the context of the CMG standard essentially result from domestic real shocks, not amplified by monetary responses, and adjustments in the allocation of resources imposed by variations in the real exchange rates induced by foreign shocks. Under the CEX standard, variations in output and employment are produced by domestic real shocks and the accelerations of monetary growth, yielding misperceived or unanticipated components of the monetary evolution, attributable to foreign nominal and real shocks.

Another major difference between the two standards should be noted. The CEX standard provides no anchor for the price level. Its rules impose a constraint on the inflation rates within the system but not on the system's price level. The inflation rates may deviate over time only in response to the operation of real shocks modifying the real rates of exchange within the CEX system. The CMG standard on the other hand can be explicitly designed to stabilize the price-level. This opportunity to anchor the price-level, built into the CMG standard, can be used to determine the benchmark level of monetary growth characterizing the standard. We note lastly that the CMG standard is not incompatible with the persistence of pegged exchange rates over wider areas. The reliable adherence to a CMG standard by a "Central economy", e.g. the USA, offers strong inducements to other countries to peg their currencies to the US dollar. An implicit division of responsibilities will spontaneously emerge under the circumstances. The "central economy" assumes responsibility for a non-inflationary monetary growth and the "participating nations" accept responsibility for their respective exchange rates. The formation of such a cluster will hardly encompass all nations. There may also emerge various regional currency areas committed to different levels of inflation policies. The important aspect to be emphasized in this context however is the compatibility of a CMG standard with a system of pegged, or intermittently fixed exchange rates.

Our attention turns lastly to a purely domestic gold (or commodity reserve) standard supplemented with a floating exchange rate. Whatever the specific form of the arrangement consistent with the general idea it would involve a relation between the value of the gold stock and the monetary base. This relation will control money stock and monetary growth in terms of the evolving behavior of the gold stock and its valuation. This valuation and the

reserve ratio against base money can be used as a policy variable. The base moves under the circumstances in response to these policy variables and the underlying shocks modifying the real cost of producing (or acquiring) gold. In order to ensure longer-range stability in the price-level and minimize unanticipated or misperceived monetary movements affecting output and employment this domestic version of the gold standard would appear as a clumsy and expensive version of the CMG standard.



FISCAL POLICY OUTLOOK:  
A REPORT TO THE SHADOW OPEN MARKET COMMITTEE

Rudolph G. Penner  
American Enterprise Institute

INTRODUCTION

This report is written more than a month before the SOMC's September 13 meeting. Neither the reconciliation bill nor the tax bill have been completed, and the Administration may update its own budget estimates prior to the completion of the Second Congressional Budget Resolution. The analysis in this report is based on the Administration's Mid-Session Review of the 1982 Budget issued on July 15, 1981.

ADMINISTRATION ESTIMATES FOR 1981 AND 1982

The July estimates assume that the "bipartisan" tax bill passed by the Senate is enacted and that with a few minor exceptions, the Administration will be successful in obtaining all the budget cuts advocated in March plus the social security cuts advocated in May.

The economic assumptions underlying the estimates are provided in Table 1.

The resulting estimates are as follows:

	<u>1981</u>	<u>1982</u>
Receipts	\$605.6 billion	\$662.4 billion
Outlays	<u>661.2</u>	<u>704.8</u>
Budget deficit	55.6	42.4
Off-budget deficit	<u>24.0</u>	<u>18.2</u>
Total financing requirement	\$079.6	\$060.6

ADJUSTING THE ESTIMATES

1981 - Because of higher than expected interest rates, and because I think it wise to assume a somewhat weaker economy than in the Administration forecast, I think it

Table 1.--SHORT-RANGE ECONOMIC FORECAST  
(calendar years; dollar amounts in billions)

	Actual 1980	Forecast 1981	Forecast 1982
<u>Major Economic Indicators</u>			
Gross national product (percent change, 4th quarter over 4th quarter):			
Current dollars.....	9.4	11.8	12.9
Constant (1972) dollars.....	-0.3	2.5	5.2
GNP deflator (percent change, 4th quarter over 4th quarter).....	9.8	9.1	7.3
Consumer Price Index (percent change, 4th quarter over 4th quarter).....	12.6	8.6	6.2
Unemployment rate (percent, 4th quarter)....	7.5	7.7	7.0
<u>Annual Economic Assumptions</u>			
Gross national product:			
Current dollars:			
Amount.....	2,626	2,951	3,296
Percent change, year over year.....	8.8	12.4	11.7
Constant (1972) dollars:			
Amount.....	1,481	1,519	1,570
Percent change, year over year.....	-0.2	2.6	3.4
Incomes:			
Personal income.....	2,160	2,401	2,677
Wages and salaries.....	1,344	1,495	1,668
Corporate profits 1/.....	246	252	281
Price level:			
GNP deflator:			
Level (1972=100), annual average.....	177.4	194.3	209.9
Percent change, year over year.....	9.0	9.6	8.0
Consumer Price Index 2/:			
Level (1967=100), annual average.....	247.0	271.3	290.2
Percent change, year over year.....	13.5	9.9	7.0
Unemployment rates:			
Total, annual average.....	7.2	7.5	7.3
Insured, annual average 3/.....	3.8	3.7	3.9
Federal pay raise, October 4/ (percent) 4/:			
Civilian.....	9.1	4.8	7.0
Military.....	11.7	14.3	8.9
Interest rate, 91-day Treasury bills (percent) 5/.....	11.5	13.6	10.5

1/ Excludes the direct accounting effect of the Administration's depreciation proposal on business income, although all categories of economic assumptions do reflect the economic impact of this proposal.

2/ Two versions of the CPI are now published: one measures the cost of living for urban wage earners and clerical workers in urban areas; the other, more recently developed, is more comprehensive, covering all urban dwellers. The index shown here is the CPI for urban wage earners and clerical workers, which is the one used, as required by law, in calculating automatic cost-of-living increases for indexed Federal programs.

3/ This indicator measures unemployment under State regular unemployment insurance as a percentage of covered employment under that program. It does not include recipients of extended benefits under that program.

4/ Pay raises become effective in October of each year -- the first month of the new fiscal year. Thus, the October 1981 pay raise will set new pay scales that will be in effect during fiscal year 1982.

5/ Average rate on new issues within period. These projections assume, by convention, that interest rates are linked to the rate of inflation. They are not forecasts of interest rates.

reasonable to add at least \$5 billion to the above deficit estimate. This yields a unified budget deficit of something over \$60 billion and total financing requirements close to a record breaking \$85 billion.

1982 - Despite the Administration's magnificent success in the Congress thus far, it would be unwise to assume that they will get all of the budget cuts that they hope for. The entire \$3.8 billion proposed cut in social security faces a particularly difficult time though minor cuts are possible. It is also possible that some already enacted cuts will be reversed as the 1982 election approaches. I would add \$10 billion to outlays because of such changes in policy.

There are a number of areas in which Administration estimates seem overly optimistic given their economic assumptions. I would add \$2 billion for the cost of current agricultural programs and \$4 billion for unanticipated national disasters and outflows from the FHLBB, FSLIC, and FDIC, resulting from the problems of the thrift institutions. Most outside budget analysts also believe that the Administration's requested appropriations will be spent at a faster rate than they anticipate. Estimates of as much as a \$15 billion overrun can be found, but I suspect that the amount will be much less than that. In fact, I would not completely rule out the possibility of a major under-run in defense. However, I shall add \$4 billion to the estimates as a best guess of the net overrun. Thus, my guesses regarding factors unrelated to the economic assumptions add \$20 billion to 1982 outlays.

Note from table 1 that the Administration assumes nominal GNP growth of 12.4 percent in 1981 and 11.7 percent in 1982. Given Fed money growth targets, the assumptions imply an extraordinary increase in velocity. If instead the middle of the Fed's own July forecast range for real growth and inflation is used, the net effects of lower growth and lower inflation adds about \$2 billion to outlays and reduces receipts by \$12 billion. The Administration's assumptions are compared with the mid-points of the Fed's ranges below:

	<u>1981</u>		<u>1982</u>	
	<u>Admin.</u>	<u>Fed.</u>	<u>Admin.</u>	<u>Fed.</u>
Nominal GNP growth	12.4%	10.75%	11.7%	10.88%
Real GNP growth	02.6%	02.25%	03.4%	02.50%
Implicit deflator	09.6%	08.75%	08.0%	07.50%
Unemployment rate	07.5%	07.90%	07.3%	07.75%

There was a lot of controversy regarding the Administration's March interest rate assumptions. For the purpose of the July update they raised the 1982 average 91-day bill rate from March's 8.9 percent to 10.5 percent. In adjusting Administration estimates to the Fed forecast, I assumed that the 10.5 percent bill rate prevailed even though the inflation forecast was lowered slightly.

After all of the adjustments discussed above, the resulting totals are:

	<u>1982</u>
Outlays	\$727 B.
Receipts	<u>650</u> B.
Unified deficit	\$ 77 B.
Off-budget	<u>18</u> B.
Total financing requirement	<u>\$ 95</u> B.

The resulting estimate of the financing requirement may be overly pessimistic, since this Administration has already exceeded everyone's expectations in their ability to control outlays. Nevertheless, it is clear that they have a good chance to exceed 1981's record financing requirement which I am guessing will be \$85 billion. (The previous record of \$73.8 billion was set in 1980 marginally edging out 1976's \$73.7 billion.)

For those who would like to make their own budget forecast using a different economic assumption, I have added tables 2 and 3 which illustrate the sensitivity of the budget to the economy.

#### THE LONGER RUN

It is the Administration's goal to balance the unified budget in 1984. The July estimates project a surplus of \$0.5 billion in that year.

Two factors play a crucially important role in attaining that tiny surplus. First, nominal GNP is assumed to grow at 11.5 percent per year in 1983 and 1984 after growing more than 12 percent per year in 1981 and 1982. Second, the Congress must pass yet unspecified program cuts totalling \$30 billion in 1983 and \$44 billion in 1984.

Nominal GNP growth of the assumed magnitude is not likely if the Administration achieves its monetary targets. Also, a large portion of the unspecified cuts will have to be voted before the 1982 election, which is no easy task. Without going into elaborate detail regarding assumptions, it is my own judgment that the current policy stance is moving us toward unified deficits in the range of 2 to 2 1/2 percent of GNP for the 1983-84 period.

TABLE 2  
 SENSITIVITY OF FY 1982 BUDGET OUTLAYS TO ECONOMIC ASSUMPTIONS  
 (in billions of dollars)

	<u>1982 Outlays</u>
<u>Prices</u> (effect on indexed programs only)	
One percent increase in CPI level by:	
First quarter, CY 1981.....	1.9
Third quarter, CY 1981.....	0.7
First quarter, CY 1982.....	0.4
<u>Interest Rates</u>	
One percentage point increase in interest rates by:	
January 1, 1981.....	4.2
July 1, 1981.....	3.3
October 1, 1981.....	2.6
January 1, 1982.....	1.6
July 1, 1982.....	0.3
<u>Unemployment Rate</u>	
One percentage point increase in average rate for FY 1982:	
Unemployment benefits,.....	5.5
Other.....	1.5
<u>Civilian and Military October 1981 Pay Raises</u>	
One percentage point increase.....	0.7

NOTE: For changes in economic assumptions in the opposite direction, outlay decreases would be of similar magnitude with the opposite sign.

Source: Office of Management and Budget

TABLE 3  
 SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS  
 (fiscal years; in billions of dollars)

	1981			1982		
	Outlays	Receipts	Deficit	Outlays	Receipts	Deficit
<b>Effect of one percentage point higher annual rate of inflation beginning 1/:</b>						
January 1981.....	2	3	-1	6	11	-5
January 1982.....	---	---	---	+2	3	-1
<b>Effect of one percentage point lower annual rate of real growth beginning:</b>						
January 1981.....	1	-3	4	4	-13	17
January 1982.....	---	---	---	1	-3	4

22  
 1/ Includes the effect of higher inflation on indexed programs, interest outlays, and medicare/medicaid; excludes effects on discretionary programs.

NOTE: If the rate of inflation were lower or the rate of real growth higher by one percentage point, the changes in outlays and receipts would be of the opposite sign but of similar magnitude to the figures shown above.

Source: Office of Management and Budget

That, of course, assumes that the Administration sticks with its monetary targets and does not use inflation to balance the budget. Indeed, about one-third of my projected deficit is the result of inflation being lower in the 1980-1984 period than the 7.6 percent annual rate assumed by the Administration. In other words, it is not assumed to be an inflationary deficit. It is a deficit caused, in part, by a lack of inflation.

In searching for future budget cuts, it is interesting to note that under the Administration's July projections, the total budget rises from \$579.6 billion in 1980 to \$802.7 billion in 1984 (before subtracting the \$44.2 billion in unspecified cuts for 1984) or by \$223.1 billion. The increase in three functions — defense, health, and social security — is \$206.1 billion, an amount equal to 92.4 percent of the total increase. This already presumes major cuts in health and social security which are not very popular to say the least. The absolute increase in defense is \$118.3 billion or 17 percent per year. Even the most devoted hawk has to feel uneasy about that increase and it is essential to examine it critically.

#### ADJUSTMENT FOR A PESSIMISTIC FORECAST

I was asked to provide an alternative budget forecast for a more pessimistic outlook than that assumed by the Fed. That forecast is compared to the Administration's below.

	<u>1981</u>	<u>1982</u>
Nominal GNP (4th q over 4th q)		
Admin.	11.8	12.9
Pessim.	8.2	10.2
Deflator (4th q over 4th q)		
Admin.	9.1	7.3
Pessim.	8.2	7.1
Real GNP (4th q over 4th q)		
Admin.	2.5	5.2
Pessim.	-0.1	2.9
Unemployment (4th q average)		
Admin.	7.7	7.0
Pessim.	8.2	8.0

Assuming the same policy changes and non-economic estimating adjustments assumed before, the fiscal 1981 deficit would only be increased marginally. The 1982 totals would be:

Outlays	\$733 B.
Receipts	<u>632</u>
Budget deficit	\$101
Off-budget deficit	<u>18</u>
Total financing requirement	\$119 B.

## RISK and FEDERAL RESERVE ACTION AND MONETARY GROWTH

H. Erich Heinemann  
Morgan Stanley & Co., Incorporated

Background paper prepared for the September 13-14, 1981 meeting of the Shadow Open Market Committee and distributed earlier by Morgan Stanley



## MONEY AND THE ECONOMY

August 24, 1981

RISK

The risk premium has risen sharply in the nation's financial markets. This is the message to be drawn from the significant rise in interest rates in recent days -- notwithstanding a stagnant economy, slowing inflation, and credit demands which, overall, are only moderate. The economy is clearly moving sideways. Inventories are, indeed, too high in some sectors and are being reduced. But this does not seem likely to trigger a sustained and substantial contraction in real business activity. In large part, this is so because final demand, buoyed by a sharp increase in transfer payments in July, is holding up reasonably well. Weekly indicators of production, employment, and prices suggest a lateral pattern, not a sharp decline (see page 4). The inflation news, meanwhile, is good. Our estimates suggest that the rate of increase in consumer prices through July this year was about 8.25%, down considerably from the 12.3% rate of gain in the comparable period last year. Moreover, it seems likely that the reduction in inflation represents a systematic response to prior monetary restraint and is not simply the result of essentially random movements in food and fuel prices. In financial markets, the expansion of total credit outstanding has not been particularly rapid, despite the strong demand for funds from large corporations and the U.S. Treasury. For example, total bank credit rose at an annual rate of less than 6% in July, even though business loans at large banks rose at a rate in excess of 30%. We expect that the Federal Reserve's latest estimates of the overall flow of funds -- which are due to be published later on this week -- will show only modest changes in the second quarter.

Nevertheless, interest rates are rising, especially in long-term markets. The proximate cause of this most recent episode appears to have been the significant easing in monetary policy that developed during July and the first part of August. The authorities have sought to offset the effect of what they regarded as an unacceptable shortfall in money growth in the second quarter. The actual growth rate of the money supply, adjusted for shifts into NOW accounts, was 5.4% in the April-June period. As policy has eased, the short-run growth rate of the monetary base and bank reserves has jumped up into double digits. For portfolio managers, the appropriate question

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is not whether the Federal Reserve intends to ease its policy stance, but rather whether the easing that has already occurred is excessive. Unfortunately, it appears that the answer to the latter question is "Yes."

## MONETARY DATA

(Weekly Averages of Daily Figures in Millions of Dollars)

	Latest Week	Change From Previous Week	Rates of Change Over-----		
			3 Months	6 Months	1 Year
Money Supply (M-1A)*(1)	\$364,300	\$+ 300	- 4.9%	- 4.1%	- 4.6%
Money Supply (M-1B)*(1)	434,700	+ 800	- 2.6	+ 6.0	+ 7.1
Expanded Money*(1)	546,400	+ 700	+ 9.8	+20.4	+14.4
Adjusted Monetary Base*(2)	168,900	+ 300	+ 5.4	+ 7.1	+ 6.5
Adjusted Federal Reserve Credit*(2)	147,200	+ 700	+ 5.4	+ 7.6	+ 7.7
Total Adjusted Reserves*(1)	47,500	+ 600	+ 4.4	+ 6.7	+ 5.4
Member Bank Borrowing(2)	1,457	+ 186	NA	NA	NA

## Wednesday Figures

Short-Term Business Credit*(1)	334,308	+1,783	+34.3	+20.4	+17.9
Total Commercial Paper Outstanding*(1)	157,099	+1,917	+62.0	+41.5	+26.0
Business Loans					
All Large Banks*(1)	184,480	- 305	+22.5	+12.9	+14.4
New York City Banks* ***(1)	52,621	- 385	+13.8	+ 9.3	+14.4
Chicago Banks*(1)	19,952	- 66	+31.1	+15.1	+15.7

\*Seasonally Adjusted

NA = Not Applicable

\*\*Excludes bankers' acceptances and commercial paper

Rates of change are compound annual rates. Expanded money consists of M-1B plus overnight RPs and Eurodollars, and 50% of money market mutual fund shares. Short-term business credit includes commercial and industrial loans at large banks plus loans sold to affiliates less bankers' acceptances and commercial paper held in portfolio plus loans at large banks to finance companies and nonbank financial institutions plus nonbank commercial paper.

(1) August 12

(2) August 19

By pumping up the reserve base of the banking system, the Federal Reserve has introduced a new and significant element of risk into the near-term outlook for the valuation of financial assets. In effect, the increase in short-run inflationary expectations that has resulted from the acceleration in growth of the monetary base and bank reserves (the high-powered raw materials that form the basis for expansion in the money stock) has offset, and then some, whatever "beneficial" effect might have been anticipated from the increased availability of funds in credit markets.

These conclusions, and the irony they imply, are amply supported by the minutes of the Federal Open Market Committee's meeting that was held in early July. Here are some key points from the summary of the FOMC's debate:

- "The members were in agreement on the need to maintain a policy of restraint." However, the summary suggests that there was a consensus that a "significantly more rapid increase in narrowly defined money would be required to meet the Committee's objective for the year [1981]."
- To implement this judgment, the FOMC decided to aim for monetary growth during the summer months that would "promote achievement of the monetary objectives for the year as a whole." The FOMC said it wanted expansion of M-1B to be fast enough to "permit growth of this monetary aggregate toward the lower end of its range for the year [3.5%, from fourth-quarter 1980 to fourth-quarter 1981]." At the same time, however, the committee decided to "avoid generating an excessively rapid rebound in growth of M-1B, both because the pace would need to be sharply reduced later and because such a rebound might tend to raise the growth of M-2 above the upper end of its range for the year."
- The committee debate plainly recognized the risks in seeking faster monetary expansion and the benefits in keeping growth in the money stock under tight control. FOMC members argued that the "present situation provided a critical opportunity that could be lost if monetary growth in the months ahead became too rapid. Even if rapid monetary expansion should lower interest rates, which was debatable, such effects would likely be temporary, and latent demands for goods and services would be released at the potential cost of a still more difficult period of high interest rates and financial strains later. The point was made that lasting declines in nominal interest rates and a solid base for sustained growth would depend on convincing progress in reducing inflation."

The risks implied in this commentary seem to have surfaced rather more quickly than most members of the FOMC would have imagined at their meeting in early July. The question then becomes critical: What happens if sentiment in the financial markets continues to deteriorate?

## ECONOMIC DATA

	Change From ----- Rates of Change Over -----					
	Latest Week	Previous Week	3 Months	6 Months	1 Year	Date

## OUTPUT

## Goods Production:

Auto* (Units)	180,400	+53,031	+	47.5	+65.3	+27.9	8/15
Truck* (Units)	27,720	+12,668	-	54.3	-46.9	+ 1.9	8/15
Lumber ** (Millions of Board Feet)	314.315	- 6.813	-	28.4	-17.3	+ 6.5	8/ 8
Paper* (Thousands of Tons)	591	- 32	+	7.2	+13.5	+ 8.4	8/ 8
Paperboard* (Thousands of Tons)	594.0	- 3.3	-	6.8	- 3.7	+ 2.6	8/ 8
Raw Steel* (Thousands of Short Tons)	2,329	+ 12	-	15.3	-10.8	+44.2	8/15

## Energy Production:

Bituminous Coal* (Thousands of Short Tons)	17,345	- 604	+2,503.3	-10.5	+21.8	8/ 1
Crude Oil Refinery Runs* (Daily Average; Thousands of BBLs)	12,843	+ 286	- 4.7	-10.0	- 0.2	8/15
Electric Output Index* (1967=100)	192	+ 7	- 7.5	+ 2.9	- 3.5	8/ 8

## TRANSPORTATION

Revenue Ton-Miles, Class I Railroads* (Billions)	17.7	- 0.3	+ 80.5	-20.7	+ 4.6	8/ 8
--	------	-------	--------	-------	-------	------

## PRICES

## Spot Price Index (1967=100)

All Commodities	271.6	- 3.0	+ 5.3	+ 1.0	- 3.4	8/18
Foodstuffs	248.0	- 5.3	+ 13.6	- 4.1	- 9.9	8/18
Raw Industrials	289.2	- 0.9	- 0.1	+ 4.8	+ 1.3	8/18

## EMPLOYMENT

Initial Unemployment Claims* (Thousands)	421.2	+ 3.4	- 16.6	+ 2.9	-19.0	8/15
Claimant Level* (Thousands)	2,900.9	+ 138.1	- 16.2	- 5.0	-25.1	8/ 8

\*Seasonally Adjusted

\*\*Data subject to final revision

All data are reported for the week ending Saturday except price data which are for the week ending on Tuesday.

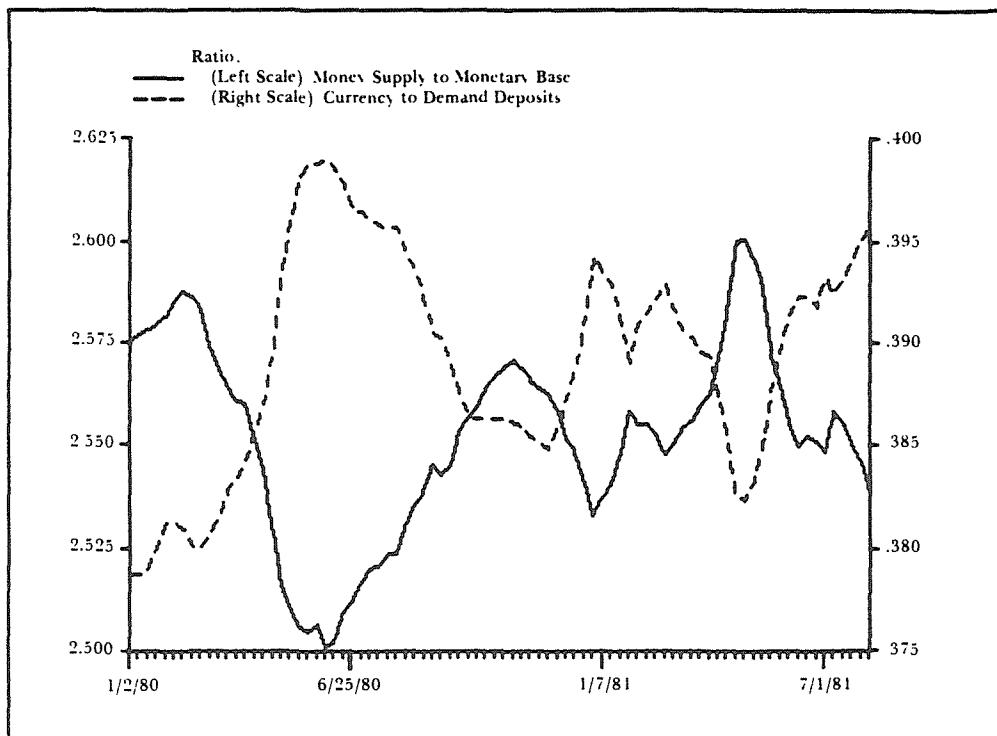
Sources: Chase Econometric Associates Data Base; Morgan Stanley Research

In particular, how would the Administration respond? Moves in four major areas seem promising (not necessarily listed in order of importance):

- Technical reforms in the implementation of monetary policy -- floating discount rate, contemporaneous reserve accounting, and monetary base targeting (among others) -- could be instituted to minimize the risk of unintended spurts in monetary growth. The Federal Reserve would have to adopt such changes, but the Administration could increase sharply its pressure to do so.
- A dramatic limitation could be put on current Federal spending to reduce sharply the Treasury's borrowing needs. This would be difficult politically, but is probably technically possible.
- A formal link of the dollar to gold could be reestablished to eliminate much of the uncertainty in the current conduct of monetary policy. Such an approach, which Barton Biggs has discussed at length elsewhere this week, is plainly being considered. It would represent, in effect, a "super-monetarist" approach to the problem of getting interest rates down, promising lower and more stable rates of growth in the money stock than most monetarists (myself included) believe would be feasible. In any event, there are major technical and political difficulties involved in any reopening of the gold window which may make an approach of this sort impractical. On the technical side, presumably the price of gold in the open market would have to be stabilized somehow; on the political side, if a renewed gold standard were deflationary in the short run (which is quite possible) it might be hard to sell.
- Finally, there is always a possibility -- remote as it might be -- that the Administration could seek to reimpose direct credit controls, as President Carter did last spring. This would also carry huge problems -- philosophical, political, and practical. Widespread Government intervention in private decision-making is foreign to President Reagan. The President promised to move away from techniques of this sort in his quest for the White House. Lastly, credit controls don't work to produce sustained improvements in the performance of financial markets. They didn't work in 1980, and they won't work in 1981 or 1982. Even so, however improbable, portfolio managers should not dismiss a decision to move in this direction as impossible.

Figure 1

A Retreat Into Cash Lies Behind the Slowdown in Monetary Growth



Data are four-week moving averages.

Sources: Econalyst Data Base, Morgan Stanley Research

#### FEDERAL RESERVE ACTION AND MONETARY GROWTH

Over the past one and one-half years, the short-run growth rate of the money supply (defined as M-1B, not adjusted for shifts into NOW accounts) has averaged within about one percentage point of that of the monetary base. Moreover, the bulk of the variance in the linkage between these key variables is accounted for by transitory shifts in the relationship between the public's holdings of cash and its holdings of demand deposits. These are the key findings to emerge from Morgan Stanley's most recent analysis of actions by the Federal Reserve (measured by changes in the monetary base) and movements in the money supply.

Figure 1 on page 6 shows the contrasting movements of the money multiplier (the ratio of the money supply to the monetary base) and the currency ratio (the ratio of the public's holdings of currency to its holdings of demand deposits). Parts I, II, and III of Table 1 trace the quantitative relationships between the Federal Reserve's management of its own balance sheet (the monetary base) and the subsequent movements of the money supply. Extensive research has shown (1) that the growth of the monetary base bears a stable and predictable association with total spending in the economy (more stable, in fact,

TABLE 1 - PART I  
 FEDERAL RESERVE ACTION AND MONETARY GROWTH  
 (\$ BILLIONS)

DATE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FOUR WEEKS ENDED	MONETARY BASE	CURRENCY	TOTAL ADJUSTED BANK RESERVES	DEMAND DEPOSITS	SAVINGS & SMALL TIME DEPOSITS	LARGE TIME DEPOSITS	NON- DEPOSIT LIAB.	TREASURY DEPOSITS	FOREIGN DEPOSITS	TOTAL DEPOSITS*
<b>1981</b>										
JAN 7	162.80	116.40	46.10	296.00	478.00	216.20	61.60	13.20	16.30	1081.10
14	162.80	116.50	46.10	296.60	478.50	219.00	61.70	13.10	16.20	1085.10
21	162.80	116.60	46.20	298.10	479.10	220.60	62.90	11.90	16.00	1088.60
28	162.70	116.60	46.10	299.60	479.60	222.00	63.70	10.80	15.50	1091.20
FEB 4	162.40	116.60	45.80	298.30	480.00	223.60	64.10	11.70	15.40	1093.00
11	162.40	116.70	45.60	298.10	480.10	225.00	63.70	12.00	16.00	1094.80
18	162.60	116.90	45.70	298.00	480.30	226.50	62.80	11.50	16.40	1095.50
25	163.10	117.10	45.90	298.10	480.40	227.50	62.10	11.60	16.50	1096.30
MAR 4	163.60	117.30	46.20	299.60	480.80	227.40	62.10	11.20	16.50	1097.50
11	163.80	117.50	46.30	300.80	481.30	226.40	62.40	10.90	16.10	1097.90
18	164.00	117.60	46.30	301.30	482.00	226.00	62.10	11.80	15.50	1098.60
25	164.10	117.60	46.30	302.10	482.60	225.00	61.20	12.90	15.20	1099.00
APR 1	164.20	117.90	46.30	302.80	483.10	224.40	61.10	13.50	15.60	1100.50
8	164.50	118.10	46.30	304.80	483.60	223.80	60.40	14.60	15.50	1102.60
15	164.80	118.30	46.40	307.10	483.90	223.00	60.70	13.80	15.90	1104.30
22	165.10	118.60	46.30	310.20	483.80	222.50	61.40	13.90	16.30	1108.10
29	165.30	118.90	46.40	310.90	483.90	222.70	62.20	15.20	16.30	1111.10
MAY 6	165.70	119.10	46.50	310.80	484.00	223.40	64.00	17.30	16.40	1115.70
13	166.00	119.30	46.50	310.00	484.20	225.30	64.80	19.40	16.00	1119.70
20	166.20	119.40	46.80	308.00	484.80	227.50	66.10	18.70	15.70	1120.70
27	166.50	119.70	46.70	307.00	485.50	229.60	66.50	16.80	15.60	1121.00
JUN 3	166.40	119.60	46.80	305.60	486.20	232.70	67.20	13.60	15.80	1121.10
10	166.60	119.70	46.90	305.00	487.00	234.60	68.70	11.50	16.10	1122.90
17	166.50	119.70	46.80	305.20	487.60	236.00	69.90	11.50	16.60	1126.70
24	166.60	119.60	47.00	305.40	488.00	237.00	70.50	13.60	16.60	1131.00
JUL 1	166.70	119.90	46.80	305.00	488.20	238.50	69.90	16.10	16.50	1134.10
8	166.70	120.20	46.50	306.30	488.50	239.50	68.90	17.50	16.40	1137.10
15	167.00	120.40	46.60	306.20	489.00	240.70	68.00	17.10	16.50	1137.50
22	167.30	120.60	46.70	306.10	489.70	242.10	67.50	15.40	16.00	1136.80
29	167.70	120.90	46.80	306.00	490.60	242.60	68.00	13.80	16.00	1137.00
AUG 5	168.00	121.00	47.10	305.60	491.50	244.40	68.50	13.20	15.90	1139.10

NOTE: DEMAND DEPOSITS DO NOT INCLUDE OUTSTANDING TRAVELERS CHECKS OF NONBANK ISSUERS.  
 THE OMISSION DOES NOT AFFECT THE ANALYSIS.

\* 4+5+6+7+8+9

SOURCES: ECONALYST DATA BASE; MORGAN STANLEY RESEARCH

TABLE 1 - PART II  
FEDERAL RESERVE ACTION AND MONETARY GROWTH

DATE	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
FOUR WEEKS ENDED	ADJUSTED RESERVE RATIO	CURRENCY DEPOSIT RATIO	TIME DEPOSIT RATIO	LARGE LIAB. RATIO	NON- DEPOSIT LIAB. RATIO	TREASURY DEPOSIT RATIO	FOREIGN DEPOSIT RATIO	MONEY MULTI- PLIER
(3/10)	(2/4)	(5/4)	(6/4)	(7/4)	(8/4)	(9/4)	(24/1)	
1981								
JAN 7	.0427	.3934	1.6151	.7306	.2082	.0446	.0549	2.5369
14	.0425	.3929	1.6133	.7384	.2080	.0443	.0546	2.5404
21	.0424	.3913	1.6073	.7402	.2109	.0400	.0538	2.5477
28	.0423	.3891	1.6005	.7410	.2124	.0361	.0517	2.5581
FEB 4	.0419	.3909	1.6090	.7494	.2150	.0392	.0516	2.5552
11	.0417	.3915	1.6109	.7549	.2137	.0401	.0536	2.5553
18	.0417	.3922	1.6115	.7600	.2108	.0386	.0549	2.5528
25	.0418	.3929	1.6115	.7631	.2084	.0389	.0553	2.5475
MAR 4	.0421	.3916	1.6047	.7588	.2072	.0372	.0551	2.5502
11	.0421	.3906	1.6001	.7528	.2075	.0363	.0534	2.5542
18	.0421	.3902	1.5999	.7503	.2061	.0392	.0513	2.5560
25	.0422	.3895	1.5977	.7448	.2025	.0428	.0503	2.5597
APR 1	.0421	.3893	1.5954	.7410	.2019	.0446	.0515	2.5624
8	.0420	.3876	1.5867	.7341	.1983	.0478	.0509	2.5716
15	.0420	.3854	1.5759	.7262	.1976	.0449	.0519	2.5827
22	.0418	.3825	1.5596	.7172	.1978	.0447	.0525	2.5996
29	.0417	.3823	1.5565	.7165	.2001	.0489	.0524	2.6007
MAY 6	.0417	.3832	1.5572	.7189	.2058	.0556	.0526	2.5955
13	.0416	.3850	1.5621	.7267	.2091	.0627	.0515	2.5885
20	.0417	.3877	1.5742	.7386	.2145	.0608	.0509	2.5722
27	.0417	.3898	1.5812	.7479	.2164	.0546	.0510	2.5647
JUN 3	.0417	.3914	1.5912	.7616	.2200	.0445	.0517	2.5554
10	.0418	.3923	1.5967	.7691	.2252	.0376	.0528	2.5497
17	.0415	.3923	1.5978	.7735	.2290	.0377	.0542	2.5520
24	.0415	.3918	1.5982	.7762	.2309	.0445	.0543	2.5509
JUL 1	.0413	.3932	1.6009	.7820	.2292	.0529	.0540	2.5482
8	.0409	.3924	1.5946	.7818	.2249	.0570	.0536	2.5583
15	.0409	.3931	1.5969	.7860	.2221	.0558	.0537	2.5553
22	.0411	.3941	1.6001	.7911	.2206	.0503	.0523	2.5504
29	.0412	.3950	1.6032	.7929	.2221	.0449	.0522	2.5460
AUG 5	.0413	.3958	1.6083	.7997	.2242	.0433	.0521	2.5385

SOURCES: ECONALYST DATA BASE; MORGAN STANLEY RESEARCH

TABLE 1 - PART III  
FEDERAL RESERVE ACTION AND MONETARY POLICY

COMPOUND ANNUAL RATES OF CHANGE TO THE AVERAGE OF THE FOUR WEEKS ENDED ON THE DATES SHOWN IN THE TABLE FROM THE FOUR-WEEK AVERAGE FOR THE PERIOD ENDED FOUR WEEKS EARLIER.

		THIS IS ACCOUNTED FOR BY CHANGES IN THE										
DATE	FEDERAL	CONTRI-	SAVINGS									
FOUR	RESERVE	BUTION	OF THE	S & SMALL		LARGE		NON-		TREASURY	FOREIGN	
WEEKS	MONETARY	ACTIONS	MONEY	ADJUSTED		TIME	TIME	DEPOSIT	DEPOSIT	LIABILITY	DEPOSIT	DEPOSIT
ENDED	GROWTH	(MONETARY	MULTI-	RESERVE	CURRENCY	DEPOSIT	DEPOSIT	DEPOSIT	DEPOSIT	DEPOSIT	DEPOSIT	DEPOSIT
	(M-1B)	(LESS)	BASE)	(EQUALS)	PLIER	RATIO	RATIO	RATIO	RATIO	RATIO	RATIO	RATIO
1981												
JAN 7	-9.07	0.20	-9.27	14.37	-11.78	-2.84	-6.08	-0.29	-2.36	-0.28		
14	-5.01	0.80	-5.81	15.41	-9.33	-2.20	-6.88	0.01	-2.48	-0.34		
21	4.38	0.60	3.78	8.23	-0.25	0.05	-3.32	-0.40	-0.55	0.02		
28	16.31	1.00	15.31	5.73	8.93	2.22	-2.10	-0.46	0.50	0.49		
FEB 4	10.23	-2.76	12.99	9.43	4.98	0.83	-2.53	-0.91	0.73	0.45		
11	9.19	-3.34	12.53	11.56	3.27	0.38	-2.61	-0.91	0.68	0.16		
18	5.58	-1.39	6.97	15.94	-3.18	-1.03	-4.83	0.01	0.35	-0.29		
25	2.67	2.83	-0.17	0.12	-0.18	-0.04	-0.07	0.01	-0.01	-0.01		
MAR 4	11.77	9.83	1.94	1.28	0.76	-0.33	0.71	-0.60	-0.15	0.26		
11	14.72	12.25	2.46	NM	NM	NM	NM	NM	NM	NM	NM	
18	15.76	11.35	4.41	-10.23	7.28	2.94	2.45	1.19	-0.15	0.92		
25	15.11	8.49	6.62	-2.72	5.26	1.44	1.91	0.61	-0.40	0.52		
APR 1	10.64	5.29	5.35	0.01	2.89	0.79	1.53	0.45	-0.63	0.30		
8	13.34	5.91	7.43	0.98	3.72	1.13	1.57	0.78	-0.95	0.21		
15	17.15	6.53	10.62	1.00	5.68	1.88	1.89	0.66	-0.44	-0.04		
22	25.44	8.01	17.43	2.53	9.20	3.29	2.36	0.40	-0.16	-0.18		
29	27.19	9.07	18.12	2.64	9.88	3.64	2.27	0.16	-0.39	-0.08		
MAY 6	22.03	9.91	12.12	2.72	6.58	2.98	1.53	-0.74	-0.77	-0.17		
13	15.28	9.89	5.39	7.07	1.10	2.54	-0.09	-2.09	-3.22	0.07		
20	0.91	9.66	-8.76	0.54	-4.87	-0.96	-1.41	-1.10	-1.06	0.10		
27	-3.76	9.22	-12.97	0.52	-7.75	-1.84	-2.34	-1.23	-0.43	0.11		
JUN 3	-10.59	5.63	-16.23	-0.18	-9.49	-2.83	-3.55	-1.20	0.95	0.08		
10	-12.86	5.01	-17.87	-1.79	-9.64	-3.24	-3.97	-1.53	2.43	-0.13		
17	-10.22	2.17	-12.39	2.22	-8.08	-2.93	-4.31	-1.82	2.95	-0.42		
24	-10.57	1.18	-11.75	1.91	-4.81	-2.85	-4.73	-2.44	1.73	-0.56		
JUL 1	-6.16	2.37	-8.53	9.57	-6.09	-2.33	-4.89	-2.22	-2.02	-0.56		
8	0.61	1.18	-0.57	-0.95	0.02	-0.03	0.15	-0.00	0.23	0.01		
15	1.68	3.57	-1.89	-5.44	1.25	-0.10	1.29	-0.71	1.86	-0.05		
22	3.39	5.60	-2.21	NM	NM	NM	NM	NM	NM	NM		
29	5.04	7.67	-2.62	2.74	-6.26	-0.55	-2.59	1.70	1.91	0.44		
AUG 5	-0.08	10.62	-10.70	-3.88	-5.20	-1.43	-1.88	0.08	1.46	0.16		

NM = NOT MEANINGFUL

SOURCES: ECONALYST DATA BASE; MORGAN STANLEY RESEARCH

than any other monetary aggregate), and (2) unless and until the Federal Reserve decides to manage the monetary base explicitly (and not as an accidental residual), it will continue to produce unstable results in monetary policy. Indeed, international experience has shown that those central banks which seek directly to control their monetary bases (the Germans and the Swiss in particular) generally do a better job in controlling monetary expansion.

The purpose of this analysis is to separate, or "decompose," monetary change into those components for which the Federal Reserve is responsible directly and those components which can be traced to actions by the public over which the authorities have no direct control -- at least over short periods of time. This is not to argue that these two "components" of monetary change are in any meaningful sense independent one of the other. Obviously, actions the Federal Reserve takes influence the public's choices as to the form in which money assets are held, and likewise changing public desires will have an important bearing on the central bank's decisions. Nonetheless, I have found the decomposition analysis to be very helpful in understanding temporary movements in the monetary aggregates. (Long-run, most of the change in the money supply is a function of the rate of increase in the monetary base.)

The focus, as I have already indicated, is the behavior of the monetary base, which in effect represents the raw material for monetary expansion. The base is a double-entry concept -- not unlike a corporate balance sheet -- whose sources (assets) and uses (liabilities) are defined as being equal. The principal sources of the monetary base are the Federal Reserve System's portfolio of securities, the monetary gold stock, loans by the Federal Reserve to depository institutions, miscellaneous items including the Treasury's deposit balance at the Federal Reserve banks and Federal Reserve float, and finally a statistical adjustment for changes in bank reserve requirements. The monetary base, as published, assumes a constant reserve ratio. The two uses of the monetary base are bank reserves and currency. Thus, my assumption is that the Federal Reserve can manage the size of its own balance sheet, and in particular the size of its portfolio of securities, which accounts for almost four-fifths of the total monetary base. Put another way, these totals can be controlled explicitly (since all Federal Reserve policy actions, by definition, affect the monetary base), provided those responsible for policy have the will to do so.

The interest rates regularly monitored by the Federal Reserve were as follows:

<u>Rate</u>	<u>Daily Average</u> <u>August 12</u>	<u>Week Ended</u> <u>August 19</u>	<u>Change in</u> <u>Basis Points</u>
Federal Funds	18.29%	18.19%	-10
90-Day Treasury Bills	15.23	15.61	+38
90-Day Commercial Paper	17.23	17.36	+13
90-Day CDs (Secondary Market)	17.91	18.01	+10
90-Day Eurodollars	18.78	18.73	- 5
20-Year Governments	14.23	14.24	+ 1

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## FORECASTING MULTIPLIERS FOR THE "NEW-NEW" MONETARY AGGREGATES

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About the only certainty in dealing with monetary aggregates these days is that something will change every time one's back is turned. Recent experience is no exception. In the last few months we have seen (1) the adjustment of monetary data to new benchmarks, (2) a conceptual revision to include traveler's checks issued by nonbank institutions in the various measures of money and (3) the construction of shift adjustments to abstract from the effect of portfolio shifts subsequent to the extension of NOW accounts nationwide. All of these changes could be a source of difficulty for the prediction, control and interpretation of monetary growth rates. Our concern here is the significance of recent changes for the first two of these issues.

### I. BENCHMARK REVISIONS

A year ago we reported the results of the reestimation of our money multiplier component models after the introduction of the "new money stock" concepts. Those results are reported in table 1 for purposes of comparison. Our sample at that time was truncated at 1978.12, because we observed some drift in our parameter estimates when 1979 data were added that we felt might have been caused in part by "unseasoned" data. We have now reestimated our models through 1979.12 on the most recently available (July, 1981) data. These estimates appear in table 2. It should be noted that recent revisions have introduced changes in the checkable deposits series all the way back to January, 1959. In spite of the revisions, the models demonstrate a remarkable stability as more data are added to the sample period. All the properties which led us to the choice of the particular models initially are preserved in the new estimates. Indeed, the structure of 4 of 6 original component models (Johannes and Rasche, 1979) has remained unchanged for three years in spite of all the conceptual change and financial innovations that have been introduced over that time.

Table 1 Component Models

k	$(1-B)(1-B^3)(1-B^{12}) \ln k = (1 - .70581B^3)(1 - .66907B^{12})a$	
	$\chi^2 = 37.8 \quad df = 28 \quad S.E.E. \quad .556 \times 10^{-2}$	SAMPLE: 59.1 - 78.12
g	$(1-B)(1-B^{12}) \ln g = (1 - .38067B)(1 - .21252B^2)(1 - .50131B^{12})a$ (.0675) (.0734) (.0632)	
	$\chi^2 = 31.6 \quad df = 27 \quad S.E.E. \quad .181$	SAMPLE: 59.1 - 78.12
z	$(1 - .36188B)(1-B)(1-B^{12}) \ln z = (1 - .69992B^{12})a$ (.0640) (.0501)	
	$\chi^2 = 36.5 \quad df = 28 \quad S.E.E. \quad .273 \times 10^{-1}$	SAMPLE: 59.1 - 78.12
$t_1^*$	$(1-B)(1-B^3)(1-B^{12}) \ln t_1^* = (1 - .64701B^3)(1 - .61528B^{12})a$ (.0531) (.0587)	
	$\chi^2 = 29.9 \quad df = 28 \quad S.E.E. \quad .549 \times 10^{-2}$	SAMPLE: 59.1 - 78.12
$t_2^*$	$(1-B^{12})[(1-B) \ln t_2^* + .00224D_1^a + .4750D_2 - .08269D_3]$ (.0186) (.0133) (.0168) $= (1 - .53840B^{-1})(1 - .65984B^{12})a$ (.0617) (.0565)	
	$\chi^2 = 31.0 \quad df = 28 \quad S.E.E. \quad .298 \times 10^{-1}$	SAMPLE 61.1 - 78.12
r+1	$(1-B)(1-B^{12}) \ln(r+1) = (1 - .61654B + .21149B^2 - .41122B^{12})a$ (.0887) (.0885) (.0757)	
	$\chi^2 = 31.0 \quad df = 27 \quad S.E.E. \quad .887 \times 10^{-2}$	SAMPLE: 68.10 - 78.12
r+1-v	$(1-B)(1-B^{12}) \ln(r+1-v) = (1 - .23795B - .51541B^{12})a$ (.0841) (.0891)	
	$\chi^2 = 21.4 \quad df = 28 \quad S.E.E. \quad .704 \times 10^{-2}$	SAMPLE: 68.10 - 78.12
b	$(1-B) \ln b = a$	
	$\chi^2 = 35.6 \quad df = 30 \quad S.E.E. \quad .460$	SAMPLE: 68.10 - 78.12
a	D <sub>1</sub> is a dummy for the period 1966.7 to 1966.12, D <sub>2</sub> is a dummy for the period 1968.12 to 1970.6 and D <sub>3</sub> is a dummy for the periods 1967,1-2 and 1970,7-8.	

Table 2 Component Models

June 1981 Revisions

k	$(1-B)(1-B^3)(1-B^{12}) \ln k = (1 - .7396B^3)(1 - .6239B^{12})a_t$ (.0460) (.0598)	$\chi^2 = 36.21 \quad df = 28 \quad S.E.E. = .566 \times 10^{-2}$	SAMPLE: 59.1 - 79.12
g	$(1-B)(1-B^{12}) \ln g = (1 - .4134B)(1 - .1322B^2)(1 - .6311B^{12})a_t$ (.0655) (.0742) (.0544)	$\chi^2 = 34.28 \quad df = 27 \quad S.E.E. = .200$	SAMPLE: 59.1 - 79.12
z	$(1 - .3484B)(1-B)(1-B^{12}) \ln z = (1 - .6912B^{12})a_t$ (.0627) (.0497)	$\chi^2 = 34.53 \quad df = 28 \quad S.E.E. = .269 \times 10^{-1}$	SAMPLE: 59.1 - 79.12
$t_1^*$	$(1-B)(1-B^3)(1-B^{12}) \ln t_1^* = (1 - .6761B^3)(1 - .5738B^{12})a_t$ (.0494) (.0603)	$\chi^2 = 33.82 \quad df = 28 \quad S.E.E. = .551 \times 10^{-2}$	SAMPLE: 59.1 - 79.12
$t_2^*$	$(1-B^{12})[(1-B) \ln t_2^* + .00232D_1 + .0474D_2 - .0828D_3]$ (.0159) (.0130) (.0164) $= (1 - .5369B)^{-1} (1 - .6597B^{12})a_t$	$\chi^2 = 30.65 \quad df = 28 \quad S.E.E. = .292 \times 10^{-1}$	SAMPLE: 61.1 - 79.12
$r+\ell$	$(1-B)(1-B^{12}) \ln(r+\ell) = (1 - .6748B + .2449B^2 - .3713B^{12})a_t$ (.0823) (.0834) (.0702)	$\chi^2 = 35.13 \quad df = 27 \quad S.E.E. = .952 \times 10^{-2}$	SAMPLE: 68.10 - 79.12
$r+\ell-v$	$(1-B)(1-B^{12}) \ln(r+\ell-v) = ((1 - .3114B - .5220B^{12})a_t$ (.0734) (.0745)	$\chi^2 = 27.93 \quad df = 28 \quad S.E.E. = .712 \times 10^{-2}$	SAMPLE: 68.10 - 79.12
tc	$(1-B)(1-B^{12}) \ln tc = (1 - .5432B - .1730B^3 + .1770B^9 - .6038B^{12})a_t$ (.0540) (.0490) (.0405) (.0507)	$\chi^2 = 39.27 \quad df = 26 \quad S.E.E. = .330 \times 10^{-1}$	SAMPLE: 69.1 - 79.12

## II. CONCEPTUAL REDEFINITIONS

The current definitions add a new component to the  $M_{1B}$  money stock: travelers checks. On first glance it is tempting to lump these with one of the two original components, probably currency, redefine component ratios, and hide the problem in the traditional symbols. Some reflection suggests that this is not appropriate. Travelers checks, at least those issued by non banks, differ from deposits in that they are not subject to reserve requirements.<sup>1)</sup> Alternatively, travelers checks differ from currency in that they are not a use of the monetary base. We have chosen to model the problem with a new component ratio,  $tc$ , defined as the ratio of travelers checks to the currency component of  $M_{1B}$ . With this definition, a typical  $M_{1B}$  multiplier can be written as

$$m_{1B} = \frac{1+(1+tc)k}{(r-b)(1+t_1^* + t_2^* + g + z) + k}$$

The most casual examination of the time series for  $tc$  reveals a distinct change in the behavior of the series around 1968-69. We have not tracked down an explanation for this, but feel that it is likely that part or all of it can be attributed to changes in the quality of the data sources. Whatever the cause, we concluded that it would be futile to model the history of the series from 1959 to the present as a stable ARIMA process, and have concentrated our efforts on the 1969.1 - 1979.12 sample. Our current model for this component ratio is given at the bottom of table 2. Judged by the usual standards for ARIMA models, these estimates appear quite acceptable. The model has a very simple structure, though it requires more parameters than our other models, and the residuals pass the usual  $\chi^2$  test. Two cautions should be observed. First, there are several individual "spikes" in the autocorrelation function that appear quite large even though the overall test statistic for autocorrelation is acceptable. Second, we have not had the opportunity to subject this specification to the stability tests that have been applied to the other component models in the past. Thus, we do not have any information on the robustness of the specification to sample changes or data revisions.

## III. NOW ACCOUNT SHIFTS

An important question for the stability of our forecasting models, as well as for the interpretation of monetary policy in general, is the nature and extent of portfolio shifts that occurred subsequent to the authorization of NOW accounts nationwide on January 1, 1981.

We discussed this in our report to the last meeting of the Shadow Committee, though the experience available under the new regime was minimal at that time. The important question is the extent to which the public shifts from assets that are excluded from  $M_{1B}$  (presumably savings deposits for the most part) into checkable deposits. Shifts from demand deposits into other checkables would have no impact as far as the performance of our models is concerned, since the components that we use include only the sum of demand deposits and other checkable deposits.

Since the last Shadow meeting, the Staff of the Board of Governors has produced (and released) a measure for "shift adjustment  $M_{1B}$ " that reflects their estimate on the size of the portfolio shift into other checkable deposits from non demand deposit sources. These estimates reflect the assumption that 77.5 percent of net inflows to other checkable deposits in January, 1981 came from demand deposits and 72.5 percent of new inflows into OCD in the remainder of the first half of 81 came from demand deposits.<sup>2)</sup> These estimates were constructed from information from several sample surveys (including some very small samples) and information from cross section regressions on deposit flows.

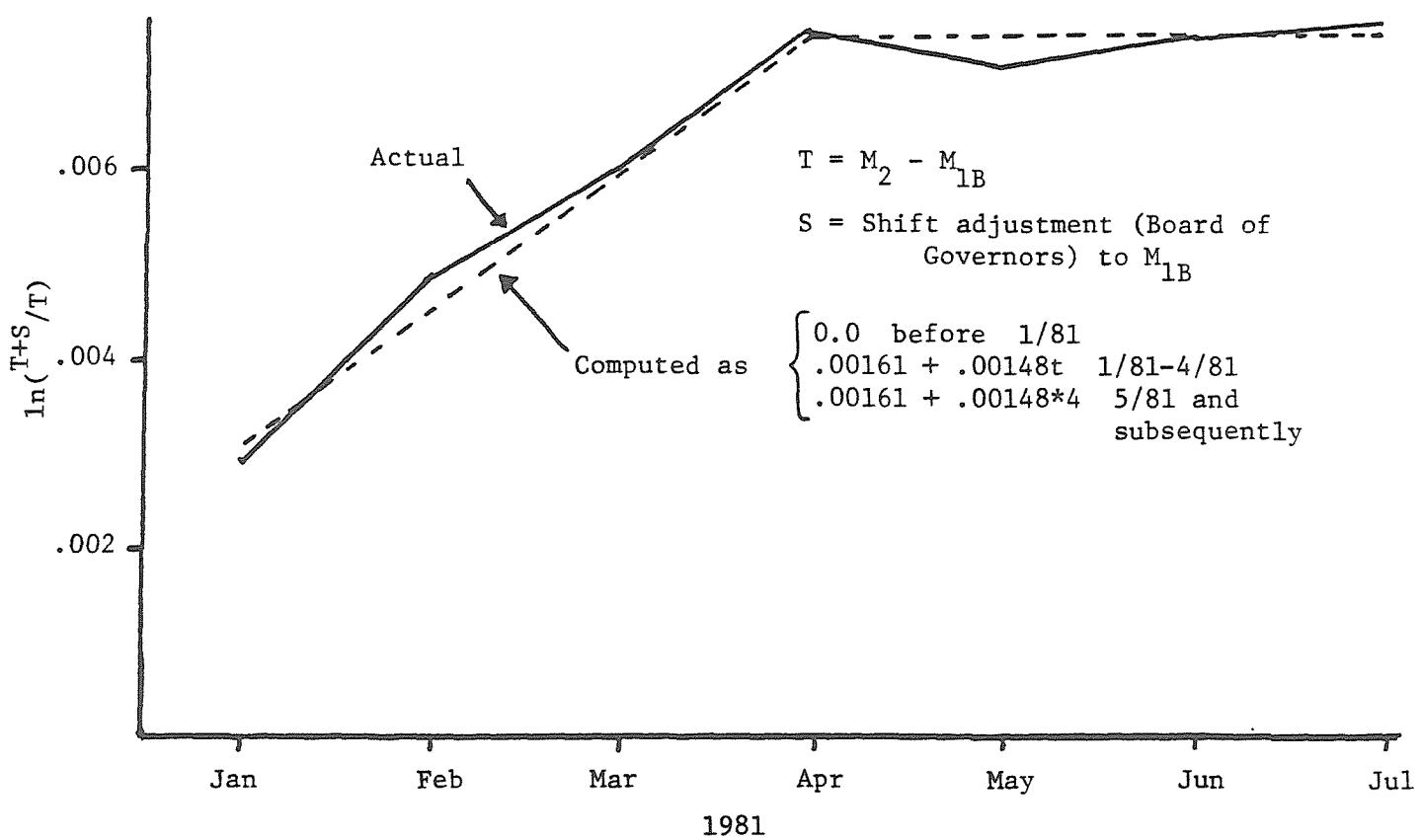
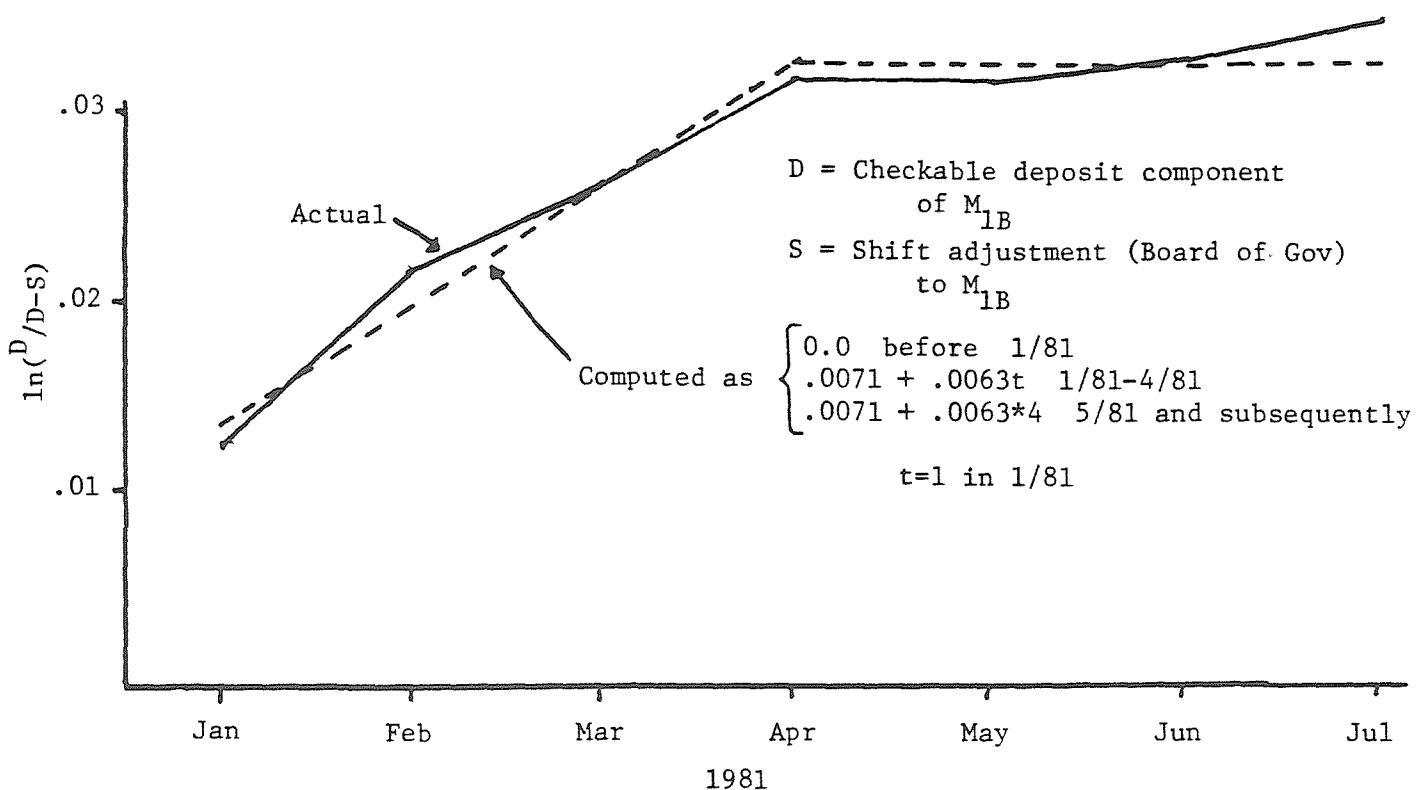
It is interesting to examine the magnitude and pattern of the computed shift adjustment. Let  $D$  be the demand deposit component of  $M_{1B}$  (as measured),  $T$  be the difference between  $M_2$  and  $M_{1B}$ , and  $S$  be the difference between  $M_{1B}$  (as measured) and "shift adjusted  $M_{1B}$ " all not seasonally adjusted.<sup>3)</sup> Particularly interesting is the time pattern of the estimated  $S$  as shown below:

	<u>S</u>
January 1981	3.7
February	6.2
March	7.7
April	9.8
May	9.3
June	9.7
July	10.3

The  $\ln(\frac{D}{D-S})$  and  $\ln(\frac{T+S}{T})$  are plotted as the solid lines in the two halves of figure 1. Note that in both cases, the  $\ln$  of the adjustment is basically a constant starting in April, 1981. We have estimated two linear regressions on the January, 1981 - April, 1981 sample (4 observations) as:

$$(1) \quad \ln(\frac{D}{D-S}) = .0071 + .0063t$$

FIGURE 1



$$(2) \quad \ln\left(\frac{T+S}{T}\right) = .00161 + 00148t$$

The predicted values from these regressions are plotted as the broken lines in figure 1. Our conclusion is that the shift adjustment as measured by the Board of Governors is very close to an exponential trend over the four month period January-April, at which point the portfolio adjustment for all practical purposes can be regarded as completed.

Given the simple formulation in time of the shift adjustment, represented by (1) and (2), we are able to use our models to attempt to independently verify the nature of the portfolio shift into NOW accounts. First, given a portfolio shift such as that in (1) and (2) our models should tend to overpredict the measured component ratios (without shift adjustment) for  $k$ ,  $t_1^*$ ,  $t_2^*$ ,  $g$  and  $z$  during the first half of 1981, and consequently we should consistently underpredict the measured  $M_{1B}$  multipliers during this period. If, however, a portfolio shift such as that in (1) and (2) actually occurred, then forecasts from our component models for  $k$ ,  $t_1^*$ ,  $t_2^*$ ,  $g$  and  $z$ , supplemented by an intervention in the form of (1) for  $k$ ,  $t_2^*$ ,  $g$  and  $z$  and in the form of (2) for  $t_1^*$ , should eliminate the bias from the  $M_{1B}$  forecasts. We have constructed one month forecasts over the period January-June, 1981, under both of these assumptions. The results are tabulated below for the monetary base multiplier (the results for other multiplier concepts are consistent with these):<sup>4)</sup>

	Actual $M_{1B}$ Multiplier	Forecast $M_{1B}$ Multiplier (No Intervention)	Forecast $M_{1B}$ Multiplier (With Intervention)
January, 1981	2.5609	2.5379	2.5626
February	2.5276	2.5151	2.5257
March	2.5541	2.5129	2.5239
April	2.6270	2.5889	2.5938
May	2.5446	2.5643	2.5609
June	2.5528	2.5813	2.5783

The results of the forecasts are consistent with a portfolio shift such as that hypothesized by the Board's staff. Forecasts from our component models consistently underestimate the observed monetary base multiplier from January through April. The mean error over the entire first half of 1981 is .0111, or about .4 percent. Much of this bias is eliminated by using the intervention variable derived from the Board of Governors shift adjustment. Under these conditions the mean error of the one month forecasts over the first half of 1981 is only .0035, or about .1 percent of the monetary base multiplier, and the standard deviation of the forecast errors is about .9 percent. Both of these results are quite

consistent with the forecasting experience of the models since October, 1979. (See Johannes and Rasche, 1981, table 4, p. 307.)

We constructed a second test of the Board of Governors shift adjustment using time series techniques. First we assumed an intervention variable of the form described above. Rather than constraining the coefficient of this variable to -1.0, we estimated the coefficient along with the parameters of the ARIMA models for each of the five component models. In each case we fail to reject the hypothesis that the coefficient on the intervention variable is -1.0; however in no case is the estimate very precise and in several cases the point estimate is quite far from -1.0 (in one case it is even positive). In summary all the evidence we have examined appears consistent with the shift adjustment published by the Board of Governors.<sup>5)</sup> Therefore we have assumed the intervention consistent with this shift adjustment in the forecasts below.

#### IV. FORECASTS

Our forecasts through June, 1982, for the net monetary base and adjusted unborrowed reserves multipliers are given in tables 3 and 4, respectively. These forecasts are for the current  $M_{1B}$  concept including travelers checks. The tables follow the same presentation as last time in presenting year over year predicted percentage changes to abstract from month to month seasonal changes. These forecasts suggest a slight increase in both multipliers during the third quarter of 81 (attributable in large part to the observed increase in July, 1981) but then diverging behavior for the two concepts. The net base multiplier is forecast to decline during the fourth quarter of 81 and the first quarter of 82. The adjusted unborrowed reserves multiplier on the other hand is forecast to increase slightly over this period. The forecasts of substantial decline for both multipliers for second quarter of 82 is so far in the future that it should not be treated seriously at this point.

Table 3

$M_{1-B}$  Net Monetary Base Multipliers (NSA)  
 (Forecasts Based on Information Through July, 1981)

	<u>Actual</u> <u>1980</u>	<u>Predicted</u> <u>1981</u>	<u>% Change</u>
July	2.5594	2.6037*	1.72*
August	2.5727	2.5891	.64
September	2.6124	2.6044	-.31
October	2.6254	2.6104	-.57
November	2.6080	2.5834	-.95
December	2.5973	2.5946	-.10
		<u>1981</u>	<u>1982</u>
January	2.6064	2.5895	-.65
February	2.5715	2.5438	-1.08
March	2.5942	2.5416	-2.05
April	2.6731	2.5829	-3.43
May	2.6021	2.5076	-3.70
June	2.6096	2.5269	-3.22

\* Actual

Table 4

**M<sub>1-B</sub> Adjusted Unborrowed Reserve Multipliers (NSA)**  
 (Forecasts Based on Information Through July, 1981)

	<u>Actual</u> 1980	<u>Predicted</u> 1981	<u>% Change</u>
July	9.9923	10.3153*	3.18* }
August	10.1383	10.3185	1.76 } 1.76
September	10.2864	10.3243	.36 }
October	10.3275	10.2950	-.32 }
November	10.2925	10.2136	-.77 } .96
December	10.0790	10.2360	1.55 }
		<u>1982</u>	
January	9.7363	9.8664	1.33 }
February	9.9922	10.0520	.60 } .75
March	10.0600	10.0912	.31 }
April	10.4329	10.2556	-1.71 }
May	10.3218	9.9962	-3.21 } -2.45
June	10.4302	10.1736	-2.42 }

\* Actual

## FOOTNOTES

- 1) This is not necessarily an overwhelming reason for dealing with them separately. As we mentioned last year, we resorted to expediency in defining our  $t_1^*$  and  $t_2^*$  ratios as they appear in the denominator of our multiplier expressions to include all items in the difference between  $M_{12}$  and  $M_{1B}$  or  $M_3$  and  $M_2$ , respectively, even though many of these items are not reservable.
- 2) See T.D. Simpson and others, "Recent Revisions in the Money Stock: Benchmark, Seasonal Adjustment, and Calculation of Shift-Adjusted  $M_{1B}$ ."
- 3) Our source for these numbers is the H.6 release for August 14, 1981, Table Ia.
- 4) These multipliers are constructed for the "old-new"  $M_{1B}$  concept, that is they exclude the travelers check component. This was done in order to provide comparability to our previous forecasting results.
- 5) A third approach to verifying the shift adjustment is to estimate all parameters in a coefficient of an intervention variable of the form  $w_0 + w_1 B + w_2 B^2 + w_3 B^3$  in each of the five component models and check for consistency across equations as well as consistency with the estimated parameters in figure 1. We have not yet completed this test.



FEDERAL BUDGET OUTLOOK  
and  
ECONOMIC PROSPECTS THROUGH 1982

Robert R. Davis  
and  
Robert J. Genetski  
Harris Trust and Savings Bank

Background paper prepared for the September 13-14, 1981 meeting of the Shadow Open Market Committee and distributed earlier by Harris Trust and Savings Bank



August 28, 1981

## FEDERAL BUDGET OUTLOOK

The federal budget deficit for fiscal 1982 is expected to expand to a record of \$77 billion. However, comparisons indicate that by some measures the deficit will be smaller than others experienced during the last decade. The deficit is not expected to interfere with the conduct of monetary policy, and while anticipation of the deficit may have contributed to record high interest rates, the deficit should not significantly alter the course of interest rate declines projected for this year and next.

### A Larger Budget Deficit for Fiscal 1982

Before the end of the year, the Administration is likely to announce an expected budget deficit for fiscal 1982 (FY1982) that is significantly larger than the \$41 billion national income account figure released with the July Midsession budget. The expenditure side of the new budget will remain unchanged for the most part, but projected tax receipts will fall as the government abandons the hopelessly optimistic growth assumptions that were part of the Administration's early euphoria. Moreover, budget revisions apparently are being hampered by bureaucratic techniques which prevent the rapid adjustment of budget projections, and political gamesmanship probably demanded that such adjustments be delayed until passage of the tax cut bill was assured.

The government's revised deficit for FY1982 should exceed \$60 billion. Even this substantial increase would fail to capture the full effects of the expected economic slowdown. If constant dollar GNP continues to fall in the second half of 1981 at a 2.8 percent annual rate and inflation slows in 1982 to 7.5 percent, as forecast by the Harris Economic Research Office, tax receipts in FY1982 will grow by 6 percent to \$644 billion. In spite of the recent budget reductions, expenditures are set to increase 8 percent to \$721 billion. Without further outlay reductions, the FY1982 budget deficit will set a new record of \$77 billion (Table 3).

Federal tax receipts will decline by 2 percent in real terms in FY1982. Of the four major components of receipts, only social insurance contributions will show an inflation adjusted increase. Personal taxes, corporate taxes, and indirect business taxes will decline in real terms, with corporate taxes declining in nominal terms as well.

Budgeted federal expenditures will increase by 8 percent in FY1982, roughly unchanged after adjusting for inflation. Of the different expenditure categories, national defense, transfer payments, and net interest payments will increase in real terms. Because net interest payments depend on a combination of current portfolio costs and future interest rate changes over which the government has no control, national defense and transfer payments appear to be the only growth areas in which further budget cuts are feasible. These areas represent 66 percent of total budgeted expenditures. If it were possible to hold defense and transfer spending constant in real terms through further legislation, the projected FY1982 deficit would drop from \$77 billion to \$58 billion.

## The Deficit and Monetary Policy

The large deficit for the next fiscal year can be financed by issuing government debt to the private sector, by issuing government debt which is absorbed by the Federal Reserve through open market purchases, or by a combination of the two. To the extent that debt is issued and held by the public, less creditworthy or productive borrowers will be crowded out of the debt market. If the Federal Reserve purchases debt, the deficit will be monetized, monetary reserves will expand more rapidly, money supply growth will accelerate, and inflationary pressures will build.

A fear is frequently expressed that the Fed will have little choice in the decision to monetize the deficit. In this scenario the large budget deficit is expected to put intense pressure on credit markets. The Fed would be "required" to buy government debt to accommodate credit demands in an attempt to ease interest rates, money supply growth would soar, and rising inflationary expectations would raise interest rates regardless of Fed intentions. The economy would thus be caught in a vicious cycle from which no escape is possible unless the deficit is reduced.

TABLE 1

### FEDERAL DEFICITS AND MONETARY POLICY (IN BILLIONS OF DOLLARS)

<u>Fiscal Year</u>	<u>Budgeted Federal Outlays*</u>	<u>Budget Deficit*</u>	<u>Federal Debt Purchased by Federal Reserve</u>	<u>Percentage of Deficit Monetized</u>
1971	212.9	-20.5	7.6	37%
1972	232.7	-19.2	7.5	39%
1973	255.7	-14.9	4.5	30%
1974	278.2	-6.6	7.5	114%
1975	328.8	-45.4	8.4	19%
1976	370.7	-55.8	3.6	6%
1977	411.7	-45.8	8.4	18%
1978	450.5	-36.3	13.6	37%
1979	494.7	-14.0	0.9	6%
1980	578.2	-50.9	7.8	15%
1981 (Harris est.)	668.2	-58.6	5.2	9%

\*National income account basis

An examination of the evidence quickly dispels the notion that expansion of the money supply has been dictated by Federal deficits. Table 1 indicates that the Fed has enjoyed great discretion in the conduct of monetary policy over the last decade, choosing to monetize as much as 114 percent of the deficit in 1974 and as little as 6 percent in 1976 and 1979. Moreover, there has been no tendency to monetize increasing portions of the deficit during years that had greater red ink. The Fed chose to monetize only 6 percent of the deficit in 1976 when the government experienced the largest deficit to date.

The Federal Reserve has monetized 22 percent of budget deficits on average over the last 11 years (excluding 1974, when 114 percent of a small deficit was purchased by the Fed). Given this track record and evidence that the monetary authority has great discretion in choosing what amount of the deficit to monetize, there is no reason to believe that the large FY1982 deficit should prevent the Fed from achieving its 1982 money supply growth targets. In fact, for M1-B to reach the upper end of the 1982 target range of 5.5 percent, the Fed should be expected to purchase about 14 percent of the projected \$77 billion deficit. This percentage is somewhat below the Fed's past average, but is well within the demonstrated range of discretionary action.

## The Deficit and the Economy

Even if the FY1982 budget deficit does not unduly hamper the conduct of monetary policy, many observers fear that demands on private credit markets will be severe, insuring continued high interest rates and economic chaos. Although evidence suggests that these fears are largely unfounded, the climate of uncertainty surrounding the impact of the budget deficit and the Administration's economic program has had a pronounced effect on interest rates. Interest rates are currently at their highest levels relative to inflation in 50 years, and the sizable real return can only be explained by incorporating a premium for perceived financial risk.

The marketplace is uncomfortable with a budget deficit that is correctly anticipated to set a new record in nominal terms. There is certainly no reason to be complacent with the deficit, because it means that government continues to overspend its means, erode capital formation, and jeopardize future economic growth. However, the specific effects of the FY1982 deficit should be analyzed by comparison to other periods of major deficit financing. Only in this manner is an objective opinion likely to be generated.

The \$77 billion deficit forecast for the next fiscal year is much less ominous when compared with the deficit of FY1976. As indicated in Table 2, the FY1976 deficit exceeded the projected deficit for FY1982 as a percentage of GNP, as a percentage of personal saving, as a percentage of government spending, and after adjusting for inflation. These comparisons suggest that the markets should handle the upcoming government financing with no more difficulty than occurred in FY1976. Moreover, the FY1976 financing was hampered by a real economic growth rebound of 6 percent which tended to raise credit demands. Even so, interest rates in FY1976 posted moderate declines as inflation rates fell.

TABLE 2  
COMPARISON OF FISCAL 1976 AND 1982 BUDGET DEFICITS

	<u>1976</u>	<u>1982</u>
Deficit/GNP	3.4%	2.5%
Deficit/Personal Saving	66.1%	56.9%
Deficit/Government Outlay	15.1%	10.7%
Deficit in 1982 dollars	\$88.2 billion	\$77.0 billion

In conclusion, the budget deficit expected for FY1982 is not likely to pose an insurmountable problem. The Federal Reserve has sufficient flexibility and discretion to meet its money growth targets, and the deficit, though large, is relatively less than other deficits which the economy has taken in stride. Uncertainty surrounding the size and impact of the deficit has resulted in a risk premium that partially explains the current record interest rate levels. However, if the fourth quarter financing proceeds in an orderly manner as expected, the risk premium should fall, contributing to a general interest rate decline.

Robert R. Davis  
Vice President and Economist

TABLE 3

NATIONAL INCOME ACCOUNT BUDGET  
FEDERAL GOVERNMENT RECEIPTS AND EXPENDITURES  
(in billions of dollars—fiscal years)

	Actual 1980	Midsession Budget <sup>a</sup> 1981	1982	Harris Estimates 1981	1982
Receipts	526.0	620.8	678.3	609.6	643.9
% Ch		18.0	9.3	15.9	5.6
Personal Tax	251.4	291.5	309.9	288.5	299.2
% Ch		16.0	6.3	14.8	3.7
Corporate Profits Tax	70.6	74.0	80.6	67.8	59.8
% Ch		4.8	8.9	-4.0	-11.8
Indirect Business Tax	35.8	57.2	61.3	58.0	61.3
% Ch		59.8	7.2	62.0	5.7
Social Insur. Contributions	168.3	198.1	226.5	195.4	223.7
% Ch		17.7	14.3	16.1	14.5
Expenditures	576.4	667.3	719.3	668.2	720.9
% Ch		15.8	7.8	15.9	7.9
Purch of Goods & Services	190.4	219.3	247.4	219.5	247.6
% Ch		15.2	12.8	15.3	12.8
National Defense	126.0	147.0	171.7	146.9	171.8
% Ch		16.7	16.8	16.6	17.0
Nondefense	64.5	72.3	75.7	72.6	75.8
% Ch		12.1	4.7	12.6	4.4
Transfer Payments	238.0	278.4	301.4	278.3	303.7
% Ch		17.0	8.3	16.9	9.1
Grants-in-Aid to S&L Govt.	86.3	89.7	82.1	89.8	82.2
% Ch		3.9	-8.5	4.1	-8.5
Net Interest Paid	50.7	67.4	77.0	67.4	76.0
% Ch		32.9	14.2	32.9	12.8
Subsidies Less Curr Surplus	11.1	12.5	11.4	13.3	11.4
% Ch		12.6	-8.8	19.8	-14.3
Wage Accruals Less Distr.	0	0	0	0	0
Deficit	-50.4	-46.5	-41.0	-58.6	-77.0

Preliminary Estimates from Bureau of Economic Analysis

August 28, 1981

## ECONOMIC PROSPECTS THROUGH 1982

Although the economy turned down in the second quarter, various pockets of strength continue to bolster business activity. Still, downward pressure is building, and recessionary signals will become clearer in the months ahead. The Fed's latest decision to promote faster growth in the narrowly defined money supply (M1-B) raises the prospects of a recovery next year. However, this decision, supported by the Administration, represents the first sign that political forces may keep the Administration from meeting its anti-inflation goals.

### The Economy—Down But Not Yet Out

While second quarter real GNP was reported down 2.4% at an annual rate, industrial production was actually up 2.4% at an annual rate. Moreover, in the period since the second quarter, no clear trend has emerged. Auto sales are up, interest rates are higher, and personal income is showing surprising strength. In contrast, the index of leading indicators fell 2 1/2% from April to June, and while the index is expected to have been essentially flat in July, seven of the eight measures available pointed toward weakness. Furthermore, in August two reliable leading indicators—stock prices and commodity prices—were down sharply. On balance, in spite of some areas of strength, the economy remains under extensive recessionary pressure.

### Money, the Economy, and Inflation—What's Happening?

Some efforts to explain the strength in the economy and the high interest rates have focused on the broader measure of money, M2, which has grown at a 8 1/2% annual rate since November. However, the behavior of M2 does not explain the slow 4% annual pace of spending in the second quarter, nor the sharp downtrend in commodity prices and stock prices. These developments are consistent with the type of highly restrictive monetary policy reflected in the performance of M1-B.

While the economy and inflation appear to be responding to monetary growth, interest rates are not. This time it has taken significantly higher rates relative to inflation to induce slower spending. The public refuses to believe that a prolonged period of sluggish spending and lower inflation lies ahead. Many businessmen have apparently decided not to make the same mistake that they made in 1980 and lay off workers in response to the economic weakness, only to find sales and orders picking up several months later. In addition, the tax cut makes immediate layoffs less compelling than they would otherwise have been. The decision to maintain production and employment for a longer period of time suggests that profits will be worse and the downturn more severe than previously had been anticipated.

## A Sustained Fight Against Inflation?

Indications have emerged that the fight against inflation may be temporarily ending. The two-year annual average of money (M1-B) has gone from 8½% in August, 1979 to 6%. Now, both the Administration and the Fed have agreed to boost money growth to reach the bottom of the targeted range. If the Fed is to reach the bottom of its range for M1-B, growth between June and December would have to average 7.3% at an annual rate. Some argue that the reasoning behind this proposed acceleration is tied to hitting the Fed's money targets, while others are concerned with the prospects of a Federal deficit that may exceed \$75 billion. Still others argue that an acceleration in money is necessary to prevent a sharp rise in unemployment as the Administration fights for further budget cuts.

While all of the above arguments have merit, none represents a valid reason for once again embarking on a course of monetary stimulus. After two years of monetary growth averaging 6% per year, the economy has fully adjusted to this rate. Any acceleration from this rate, regardless of the justification, will create greater problems for policymakers in the future. Furthermore, if political pressure leads to stimulus at this point in time, it is almost certain to prevent a slowdown in money as the 1982 Congressional elections move closer.

The recent calls for faster money growth suggest that market participants may have been correct in their skepticism concerning a sustained anti-inflation program. The latest move on the part of the Fed and the Administration marks a major setback in the effort to alter inflationary expectations. By justifying greater monetary stimulus, both the Fed and the Administration are needlessly encouraging a greater premium on interest rates. In order for this premium to be reduced substantially in the immediate future, it may be necessary to remove the political discretion over future monetary growth. In this regard, speculation over the return to a gold standard is likely to intensify. Although moving toward an effective gold standard would have considerable drawbacks, it may be the only practical way to contain future money creation and to convince the public that inflationary policies will not be pursued in the decade ahead.

Robert J. Genetski  
Vice President and Economist

**ECONOMIC OUTLOOK**  
(BILLIONS OF DOLLARS--SEASONALLY ADJUSTED ANNUAL RATES)

	ACTUAL					FORECAST				YEARS			
	1980:4	1981:1	1981:2	1981:3	1981:4	1982:1	1982:2	1982:3	1982:4	1979	1980	1981	1982
GROSS NATEL PRODUCT \$CH	2730.6	2853.0	2881.6	2915.5	2954.9	3010.4	3095.7	3179.6	3258.5	2413.9	2626.1	2901.3	3136.0
	14.9	19.2	4.1	4.8	5.5	7.7	11.8	11.3	10.3	12.0	8.8	10.5	8.1
CONSTANT DOLLAR GNP \$CH	1485.6	1516.4	1507.4	1496.4	1485.8	1489.0	1505.1	1520.0	1529.2	1403.0	1480.7	1501.5	1510.8
	3.8	8.6	-2.4	-2.9	-2.8	0.8	4.4	4.0	2.4	3.2	-0.2	1.4	0.6
PRICE DEFULATOR \$CH	1.8381	1.8815	1.9117	1.9484	1.9887	2.0218	2.0568	2.0919	2.1309	1.6276	1.7738	1.9326	2.0753
	10.7	9.8	6.6	7.9	8.5	6.8	7.1	7.0	7.7	8.5	9.0	9.0	7.4
CONSUMPTION EXPENDITURES \$CH	1751.0	1810.1	1831.0	1877.0	1907.4	1941.4	1990.1	2047.5	2095.0	1510.9	1672.7	1856.4	2018.5
	17.4	14.2	4.7	10.4	6.6	7.3	10.4	12.0	9.6	12.0	10.7	11.0	8.7
DURABLES \$CH	223.3	238.3	227.0	238.0	238.0	249.6	263.6	277.2	287.3	212.3	211.9	235.3	269.4
	30.9	29.7	-17.6	20.8	0.0	21.0	24.4	22.3	15.4	6.5	-0.2	11.1	14.5
NONDURABLES \$CH	703.5	726.0	734.6	745.3	756.1	763.5	775.6	792.9	806.0	602.2	675.7	780.5	784.7
	18.5	13.4	4.8	6.0	5.9	4.0	6.5	9.2	7.2	13.7	12.2	9.6	6.0
SERVICES \$CH	824.2	845.0	869.4	893.7	913.3	928.3	950.9	977.4	1000.9	696.3	785.2	880.6	964.4
	13.1	10.9	11.6	11.7	9.1	6.7	10.1	11.6	10.0	12.4	12.8	12.1	9.5
INVESTMENT EXPENDITURES \$CH	397.7	437.1	455.8	437.7	430.4	437.4	456.7	473.7	490.0	415.8	395.3	440.3	464.4
	23.7	45.9	18.2	-15.0	-6.5	6.7	18.9	15.7	14.5	10.8	-4.9	11.4	5.5
NONRES FIXED EXPEND \$CH	302.1	315.9	323.3	327.5	327.1	324.3	327.2	332.3	337.4	279.7	295.9	323.4	330.3
	11.5	19.6	9.7	5.3	-0.5	-3.4	3.6	6.4	6.3	15.6	5.8	9.3	2.1
PRODUCERS DUR EQUIP \$CH	190.7	198.7	200.7	203.7	202.7	202.2	204.3	208.0	213.6	183.4	187.1	201.4	207.2
	8.7	18.0	4.0	6.2	-1.9	-1.0	4.2	9.1	9.5	12.3	2.0	7.6	2.9
BUSINESS STRUCTURES \$CH	111.5	117.2	122.7	123.8	124.4	122.1	122.9	123.5	123.8	96.3	108.8	122.0	123.1
	16.5	22.3	19.9	3.8	2.0	-7.2	2.6	2.0	1.0	22.4	13.0	12.1	0.9
RES FIXED EXPEND \$CH	113.0	116.7	111.3	100.0	96.8	105.9	119.2	130.8	140.8	118.6	105.3	106.2	124.2
	68.4	13.8	-17.3	-34.8	-12.2	43.2	60.5	45.0	34.3	6.6	-11.2	0.9	16.9
INVENTORY CHANGE	-17.4	4.5	21.2	10.2	6.5	7.2	10.3	10.6	11.8	17.5	-5.9	10.6	10.0
NET EXPORTS	23.3	29.2	17.7	12.0	8.0	6.3	8.7	3.5	-2.4	13.4	23.3	16.7	4.0
GOVT PURCHASES \$CH	558.6	576.5	577.1	588.8	609.1	625.3	640.2	654.9	675.9	473.8	534.7	587.9	649.1
	20.2	13.4	0.4	8.4	14.5	11.1	9.9	9.5	13.5	9.5	12.9	9.9	10.4
FEDERAL \$CH	212.0	221.6	219.4	224.9	236.8	244.7	251.1	257.6	269.9	167.9	198.9	225.7	255.8
MILITARY \$CH	40.0	19.4	-3.9	10.4	22.9	14.0	10.9	10.8	20.5	9.5	18.5	13.5	13.4
OTHER	141.6	145.2	148.1	152.5	163.0	168.8	174.6	180.6	190.7	111.2	131.7	152.2	178.7
										11.3	18.4	15.6	17.4
STATE & LOCAL \$CH	346.6	354.9	357.7	363.9	372.3	380.6	389.1	397.3	406.0	305.9	335.8	362.2	393.3
	9.8	9.9	3.2	7.1	9.6	9.2	9.2	8.7	9.1	9.6	9.8	7.9	8.6

NOTE: PERCENTAGE CHANGES AT ANNUAL RATES

**ECONOMIC OUTLOOK**  
(BILLIONS OF DOLLARS--SEASONALLY ADJUSTED ANNUAL RATES)

	ACTUAL					FORECAST					YEARS			
	1980:4	1981:1	1981:2	1981:3	1981:4	1982:1	1982:2	1982:3	1982:4	1979	1980	1981	1982	
PRETAX PROFITS	249.5	256.9	224.9	212.7	206.7	209.3	220.9	231.3	237.4	255.3	245.5	225.3	224.7	
\$CH	21.6	12.4	-41.3	-20.0	-10.8	5.1	24.1	20.2	11.1	14.4	-3.8	-8.2	-0.3	
PRETAX PROFITS ADJ 1)	183.3	203.0	187.0	177.9	173.7	177.7	190.8	203.1	211.7	196.8	182.7	185.4	195.8	
\$CH	12.7	50.4	-28.0	-18.1	-9.1	9.5	32.9	28.4	18.0	6.1	-7.2	1.5	5.6	
TAX LIABILITY	85.2	87.7	74.8	71.2	69.0	68.0	71.6	74.7	76.2	87.6	82.4	75.7	72.6	
\$CH	38.8	12.3	-47.1	-17.7	-11.8	-5.8	22.6	18.7	8.3	5.6	-6.0	-8.1	-4.1	
AFTER TAX PROFITS	164.3	169.2	150.1	141.4	137.7	141.3	149.3	156.6	161.2	167.8	163.2	149.6	152.1	
\$CH	13.7	12.5	-38.1	-21.2	-10.2	10.8	24.8	20.9	12.4	19.5	-2.7	-8.3	1.7	
AFT TAX PROF ADJ 1)	98.1	115.3	112.2	106.7	104.7	109.7	119.2	128.4	135.5	109.2	100.3	109.7	123.2	
\$CH	-5.5	90.8	-10.3	-18.4	-7.3	20.6	39.6	34.5	24.0	6.5	-8.1	9.3	12.3	
PERSONAL INCOME	2256.2	2319.8	2360.9	2433.8	2475.3	2521.6	2582.5	2643.5	2704.2	1943.8	2160.3	2399.5	2613.0	
\$CH	14.3	11.8	8.7	11.4	7.0	7.7	10.0	9.8	9.5	12.9	11.1	11.1	8.9	
TAX & MONTAX PAYMENT	359.2	372.0	382.7	397.3	390.8	396.8	409.5	388.1	398.7	302.0	338.5	385.7	398.3	
\$CH	22.4	15.0	12.0	16.2	-6.4	6.3	13.4	-19.3	11.4	16.7	12.1	13.9	3.3	
DISPOSABLE INCOME	1897.0	1947.8	1986.2	2036.5	2084.5	2124.8	2173.0	2255.4	2305.5	1641.7	1821.7	2013.8	2214.7	
\$CH	12.8	11.1	8.1	10.5	9.8	8.0	9.4	16.1	9.2	12.2	11.0	10.5	10.0	
PERSONAL OUTLAYS	1799.4	1858.9	1881.0	1927.6	1958.4	1993.0	2043.0	2101.8	2150.4	1555.5	1720.3	1906.5	2072.0	
\$CH	17.3	13.9	4.8	10.3	6.5	7.3	10.4	12.0	9.6	12.2	10.6	10.8	8.7	
PERSONAL SAVINGS	97.6	88.9	105.2	108.9	126.1	131.8	130.0	153.6	155.1	86.2	101.4	107.3	142.6	
\$CH	-41.1	-31.2	96.1	14.8	79.7	19.3	-5.1	94.8	3.9	12.9	17.6	5.8	33.0	
SAVING RATE(%)	5.1	4.6	5.3	5.3	6.0	6.2	6.0	6.8	6.7	5.3	5.6	5.3	6.4	
EMPLOYMENT	97.3	98.0	98.9	99.4	99.3	99.4	100.1	100.5	100.9	96.9	97.3	98.9	100.2	
\$CH	0.9	3.1	3.5	2.2	-0.4	0.4	2.8	1.6	1.6	2.7	0.3	1.7	1.3	
LABOR FORCE	105.2	105.8	106.8	107.3	107.7	108.0	108.4	108.8	109.3	102.9	104.8	106.9	108.6	
\$CH	0.7	2.4	3.7	2.0	1.5	1.1	1.5	1.5	1.9	2.5	1.8	2.0	1.6	
UNEMPLOYMENT RATE(%)	7.5	7.3	7.4	7.4	7.8	8.0	7.7	7.6	7.7	5.8	7.1	7.5	7.7	
PRODUCTIVITY-NONFARM	0.990	1.000	0.998	0.992	0.986	0.986	0.990	0.994	0.996	0.991	0.988	0.994	0.992	
\$CH	0.0	4.1	-0.8	-2.4	-2.4	0.0	1.6	1.6	0.8	-0.7	-0.3	0.6	-0.3	
INDUSTRIAL PRODUCTION	1.491	1.518	1.527	1.520	1.459	1.456	1.479	1.500	1.509	1.525	1.471	1.506	1.486	
\$CH	21.2	7.4	2.4	-1.8	-15.1	-0.8	6.5	5.8	2.4	4.4	-3.6	2.4	-1.3	

1) PROFITS ARE ADJUSTED TO EXCLUDE INVENTORY PROFITS AND ALLOW FOR DEPRECIATION AT REPLACEMENT COST.

## ECONOMIC PROJECTIONS

Burton Zwick\*

Prudential Insurance Company of America

Over the years, monetarists on this Committee and elsewhere have emphasized and documented a familiar Federal Reserve behavior pattern -- official statements about controlling inflation followed by rapid acceleration of money. It is somewhat ironic that a major forecasting error of many of these same monetarists occurred in October 1979 when they interpreted an official Federal Reserve policy statement about controlling inflation as evidence of the Fed's determination to control money growth. Contributing to the optimism of monetarists and many other economists at that time was a Federal Reserve announcement concerning operating procedures, namely that policy operations would henceforth be directed at controlling money rather than interest rates.

As we of course know, the Fed followed anything but a monetarist operating approach in 1980, with the money supply declining early in the second quarter and then soaring at a 15 percent annual rate from May to November. Part of the acceleration presumably reflected Carter administration concern about rising rates before the election. But part of the acceleration -- as well as the earlier decline -- was probably an unintended consequence of operating procedures that continue to limit the movement of rates. Whatever the cause of the monetary fluctuations in 1980, they have reinforced skepticism about the Federal Reserve's commitment to controlling money and inflation on a long-term basis.

Since the election, the Federal Reserve has moved aggressively, as in late 1979, to control money. From the fourth quarter of 1980 through mid-August, a nine month period, annual growth of the monetary base has declined to about 5 1/2 percent, M1B to about 4 percent, and adjusted M1B to less than 1 percent (see chart 1). Relative to previous 3 year growth rates, these represent the sharpest declines in several decades (see table 1). The economy has responded somewhat to this monetary deceleration, with final sales though not production and employment declining since January. In line with moderate slowing in longer term money growth, the inflation rate has also begun to drop into single digits.

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\*The projections presented here reflect my own personal views and should not be interpreted as the official view of Prudential. I appreciate the comments of J. Robert Ferrari and Michael J. Hamburger.

CHART 1

## ANNUAL TARGETS MONETARY BASE AND MIB

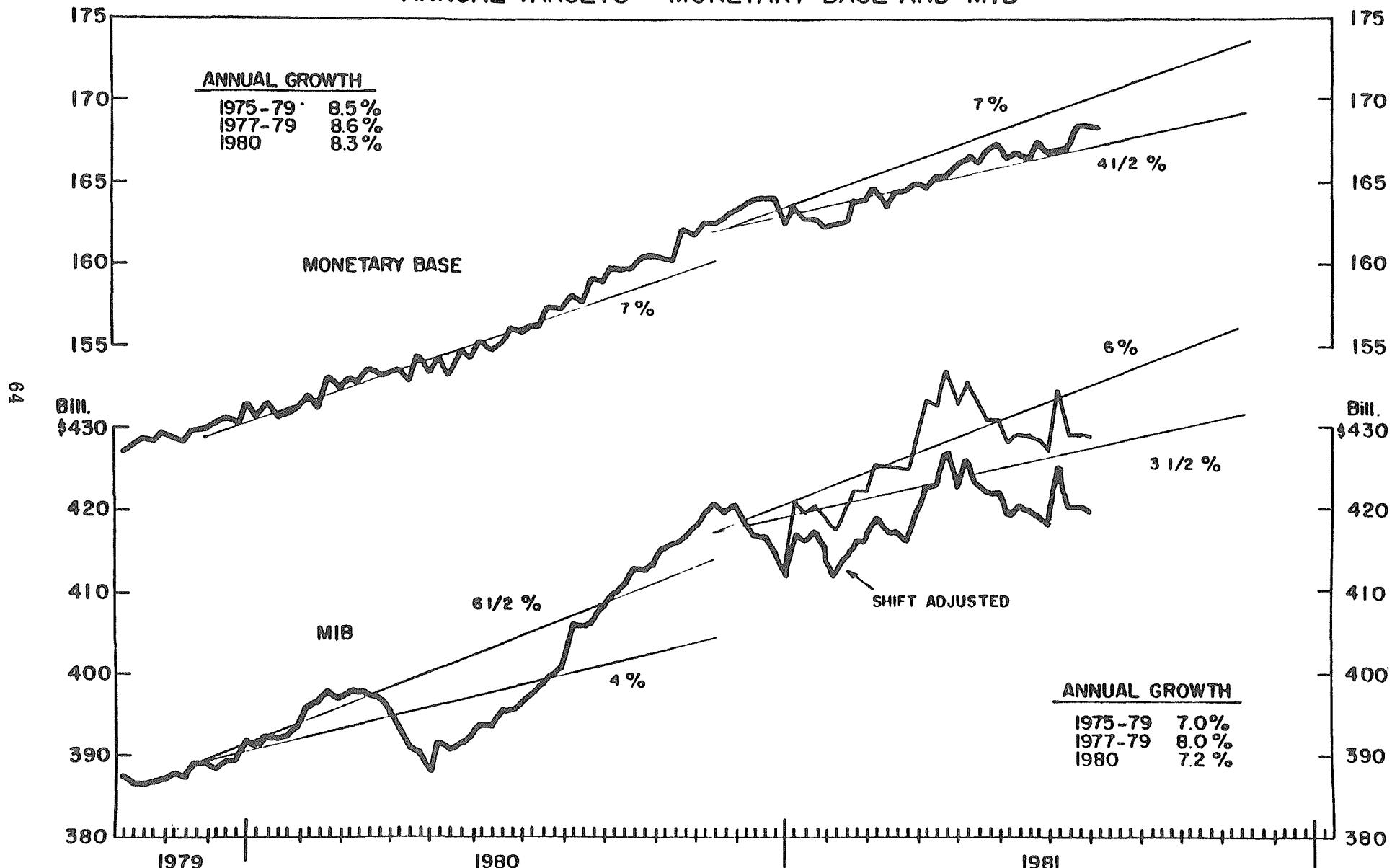


TABLE 1

MONETARY GROWTH RATES 1951-80  
(4TH QUARTER TO 4TH QUARTER)

	M1B			Monetary Base		
	Current Growth	Annual Growth in 3 Previous Years	Current Less Lagged 3 Year Growth	Current Growth	Annual Growth in 3 Previous Years	Current Less Lagged 3 Year Growth
1951	5.1	0.8	4.3	4.0	-0.1	4.1
1952	4.2	2.9	1.3	5.0	1.8	3.2
1953	1.3	4.6	-3.3	1.3	4.0	-2.7
1954	2.5	3.6	-1.1	1.2	3.4	-2.2
1955	2.4	2.7	-0.3	0.9	2.5	-1.6
1956	1.1	2.1	-1.0	0.6	1.1	-0.5
1957	-0.3	2.0	-2.3	0.9	0.9	0.0
1958	3.3	1.1	2.2	1.9	0.8	1.1
1959	2.1	1.4	0.7	1.8	1.1	0.7
1960	0.6	1.7	-1.1	1.1	1.5	-0.4
1961	2.7	2.0	0.7	2.4	1.6	0.8
1962	1.8	1.8	0.0	3.3	1.8	1.5
1963	4.0	1.7	2.3	4.9	2.3	2.6
1964	4.4	2.9	1.5	5.5	3.5	2.0
1965	4.4	3.4	1.0	5.6	4.6	1.0
1966	2.8	4.3	-1.5	4.4	5.3	-0.9
1967	6.3	3.8	2.5	6.5	5.2	1.3
1968	7.4	4.5	2.9	7.1	5.5	1.6
1969	3.9	5.5	-1.6	4.0	6.0	-2.0
1970	5.0	5.8	-0.8	6.3	5.8	1.5
1971	6.7	5.4	1.3	7.7	5.8	1.9
1972	8.5	5.2	3.3	8.0	6.0	2.0
1973	5.8	6.7	-0.9	7.7	7.3	0.4
1974	4.8	7.0	-2.2	8.8	7.8	1.0
1975	5.1	6.3	-1.2	7.2	8.2	-1.0
1976	6.2	5.2	1.0	7.7	7.9	-0.2
1977	8.2	5.3	2.9	8.6	7.9	0.7
1978	8.2	6.5	1.7	9.2	7.8	1.4
1979	7.5	7.5	0.0	8.1	8.5	-0.4
1980	7.3	8.0	-0.7	8.4	8.6	-0.2
1981	4.5*	7.7	-3.2	5.7	8.6	-2.9
	2.1**	7.7	-5.6			

\*Reported M1B, assuming 4 1/2% annual growth from June to December.

\*\*Adjusted M1B, assuming 4 1/2% annual growth in reported M1B from June to December and no further shift of savings accounts into NOW accounts.

TABLE 3

ANNUAL GROWTH RATES OF GNP, M1B,  
AND MONETARY BASE  
(4TH QUARTER TO 4TH QUARTER)

	<u>Growth Rate of Nominal GNP</u>	=	<u>Growth Rate of M1B</u>	+	<u>Growth Rate of Velocity of M1B</u>	=	<u>Growth Rate of Monetary Base</u>	+	<u>Growth Rate of Velocity of Base</u>
1960	2.0		0.5		1.5		1.1		0.9
1961	7.5		2.8		4.6		2.4		5.0
1962	5.8		1.8		3.9		3.3		2.5
1963	6.6		4.0		2.6		4.9		1.6
1964	5.9		4.4		1.5		5.5		0.4
1965	10.5		4.4		5.9		5.6		4.7
1966	8.0		2.7		5.2		4.4		3.5
1967	6.2		6.3		-0.1		6.5		-0.2
1968	9.4		7.4		1.8		7.1		2.1
1969	6.9		3.8		2.9		4.0		2.8
1970	4.9		4.8		0.0		6.3		-1.3
1971	9.6		6.7		2.8		7.7		1.8
1972	11.5		8.5		2.8		8.0		3.3
1973	11.6		5.8		5.5		7.7		3.6
1974	7.1		4.7		2.3		8.8		-1.6
1975	10.0		4.9		4.9		7.2		2.7
1976	9.3		6.0		3.1		7.7		1.5
1977	12.2		8.1		3.8		8.6		3.3
1978	14.2		8.2		5.6		9.2		4.6
1979	9.9		7.7		2.1		8.2		1.5
1980	9.4		7.3		1.9		8.3		1.0
1960-80	8.5		5.3		3.1		6.3		2.1
1960-70	6.7		3.9		2.7		4.6		2.0
1971-80	10.5		6.8		3.5		8.1		2.2
1971-75	10.0		6.1		3.7		7.9		2.0
1976-80	11.0		7.5		3.3		8.4		2.4

TABLE 4  
INFLATION RATE OF GNP DEFLATOR  
(4TH QUARTER TO 4TH QUARTER)

As Predicted Using 3-Year  
 Lagged Growth of:

<u>Actual</u>	<u>M1B (error)</u>	<u>Monetary Base (error)</u>
1963 1.5	0.9 (0.6)	0.5 (1.0)
1964 1.4	1.6 (0.2)	2.2 (0.8)
1965 2.5	2.6 (0.1)	3.1 (0.6)
1966 3.7	3.7 (0.0)	4.0 (0.3)
1967 3.1	3.9 (0.8)	3.5 (0.4)
1968 4.8	4.2 (0.6)	4.3 (0.5)
1969 5.5	5.4 (0.1)	4.4 (1.1)
1970 5.0	6.8 (1.8)	4.4 (0.6)
1971 4.7	5.4 (0.7)	5.0 (0.3)
1972 4.3	5.2 (0.9)	5.4 (1.1)
1973 7.0	7.8 (0.8)	7.4 (0.4)
1974 10.1	7.9 (2.2)	7.4 (2.7)
1975 7.7	6.7 (1.0)	7.6 (0.1)
1976 4.7	4.8 (0.1)	7.4 (2.7)
1977 6.1	5.6 (0.5)	7.2 (1.1)
1978 8.5	7.4 (1.1)	8.0 (0.5)
1979 8.1	9.0 (0.9)	8.3 (0.2)
1980 9.8	9.0 (0.8)	8.4 (1.4)

FORECASTED INFLATION RATE OF GNP DEFLATOR  
(4TH QUARTER TO 4TH QUARTER)

	Assumed Growth of:		Inflation Implied by Growth of:	
	<u>M1B</u>	<u>Monetary Base</u>	<u>M1B</u>	<u>Monetary Base</u>
1981	4.5	5.5	8.4	7.3
1982	5.0	6.0	7.0	6.1
1983	5.0	6.0	5.9	4.8

1983. The major reason to believe that the Reagan administration will adhere to a program of monetary restraint is that voters may in fact be willing to accept relatively high unemployment for a while if the inflation and interest rates decline as much as in the table 2 projections. Also, any move toward stimulus would almost inevitably lead to further weakness in the financial markets.

Another risk to the forecast is that the Fed may remain too tight over the next few weeks. While the Federal Reserve does not target the funds rate as explicitly as before November 1979, the weekly average of the funds rate has remained between 18.21 percent and 19.33 percent for 14 of the past 16 weeks. (This tendency to keep the weekly average within narrow limits for several months at a time occurred in 1980 as well.) The funds rate pattern suggests that the new operating procedures may still not be sufficiently flexible to permit the rate decline that may be needed in the next few months if the monetary restraint since last November causes the economy to weaken. A grudging decline in the funds rate would represent yet another instance of procyclical monetary policy, in this case causing a moderately severe recession extending into early 1982. Such a policy would increase the pressures on the Reagan administration to stimulate in 1982.

A final word about budget deficits. Deficits are going to be in the \$75-\$100 billion range in 1982 and 1983, particularly if the economy is as sluggish as projected in table 2. While skepticism about the Reagan administration's willingness to accept protracted economic weakness accounts for much of the weakness in the bond market, at least some of this weakness reflects concern about budget deficits, particularly if follow up budget cuts are not forthcoming or if defense spending increases are permitted to offset the nondefense budget cuts. At present levels of inflation and nominal rates, market rates are presumably affected more by money and inflation than by the effects of deficits on the level of real rates. Even so, because many believe that budget deficits encourage faster money growth, efforts to reduce budget deficits would be extremely helpful to Administration efforts to change inflationary expectations.

INTEREST RATES	ACTUAL									FORECAST									YEARS																																																																
	1980:4				1981:1		1981:2		1981:3		1981:4		1982:1		1982:2		1982:3		1982:4		1979		1980		1981																																																										
	NEW ISSUE AA INDUS BONDS	13.3	13.9	14.8	15.9	18.3	12.7	11.7	11.2	10.5	9.7	12.3	14.7	11.5	NEW ISSUE AA UTIL BONDS	14.4	15.1	15.9	17.1	15.5	13.7	12.7	12.2	11.5	10.3	13.3	15.9	12.5	PRIME RATE	16.7	19.2	18.9	19.8	16.5	13.0	11.0	9.7	9.5	12.7	15.3	18.6	10.8	COMMERCIAL PAPER 4 MOS 1)	15.0	15.1	15.9	16.3	13.5	10.5	9.0	8.2	8.0	11.0	12.6	15.2	8.9	3 MONTH T-BILLS	13.6	14.4	14.9	15.3	12.5	9.7	8.5	7.7	7.5	10.1	11.4	14.3	8.3	PRIMARY 90 DAY CDS	15.6	15.8	16.6	17.2	14.2	10.9	9.3	8.4	8.2	11.1	12.9	15.9
MONEY AND VELOCITY																																																																																			
MONETARY BASE-(MB)	161.9	163.3	166.2	168.5	171.8	174.7	177.7	180.7	183.8	184.9	156.6	167.5	179.2	179.2	179.2	179.2	179.2	179.2	179.2	179.2	179.2	179.2	179.2	179.2	179.2	179.2																																																									
\$CH	9.8	3.6	7.4	5.6	8.1	6.9	7.0	6.9	7.0	8.3	8.1	6.9	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0																																																									
VELOCITY OF MB <sup>a</sup>	17.689	18.042	17.802	17.854	17.776	17.866	18.019	18.200	18.337	17.322	17.443	17.868	18.106	18.106	18.106	18.106	18.106	18.106	18.106	18.106	18.106	18.106	18.106	18.106	18.106	18.106																																																									
\$CH	8.1	8.2	-5.2	1.2	-1.7	2.0	3.5	4.1	3.0	2.9	0.7	2.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3																																																									
MONEY SUPPLY-(M1-B)	417.0	422.1	431.3	433.3	440.6	447.1	453.6	460.3	467.0	378.9	402.7	431.8	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0																																																									
\$CH	11.3	4.9	9.1	1.8	6.9	6.0	5.9	6.0	6.0	7.8	6.3	7.2	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8																																																									
VELOCITY OF M1-B <sup>a</sup>	6.959	7.027	6.910	6.908	6.851	6.948	7.026	7.112	7.184	6.616	6.729	6.924	7.067	7.067	7.067	7.067	7.067	7.067	7.067	7.067	7.067	7.067	7.067	7.067	7.067	7.067																																																									
\$CH	18.5	4.0	-6.5	-0.2	-3.3	5.8	4.6	5.0	4.1	3.6	1.7	2.9	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1																																																									
MONEY SUPPLY-(M2)	1664.0	1698.4	1743.6	1765.1	1803.5	1838.5	1874.3	1910.7	1947.8	1473.0	1603.9	1752.6	1892.8	1892.8	1892.8	1892.8	1892.8	1892.8	1892.8	1892.8	1892.8	1892.8	1892.8	1892.8	1892.8	1892.8																																																									
\$CH	8.4	8.5	11.1	5.0	9.0	8.0	8.0	8.0	8.0	8.9	8.9	9.3	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0																																																									
VELOCITY OF M2 <sup>a</sup>	1.739	1.749	1.732	1.717	1.695	1.706	1.716	1.729	1.739	1.712	1.712	1.723	1.722	1.722	1.722	1.722	1.722	1.722	1.722	1.722	1.722	1.722	1.722	1.722	1.722	1.722																																																									
\$CH	9.2	2.5	-4.0	-3.4	-5.0	2.6	2.6	3.1	2.1	3.2	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																																																									
CPI-ALL URBAN	2.569	2.636	2.684	2.751	2.804	2.845	2.894	2.943	2.995	2.176	2.470	2.719	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919																																																									
\$CH	12.9	10.8	7.5	10.3	7.9	6.0	7.1	6.9	7.3	11.3	13.5	10.1	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4																																																									
AUTO SALES 2)	9.065	10.100	7.800	8.630	8.219	8.796	9.301	9.645	9.820	10.559	8.978	8.687	9.390	9.390	9.390	9.390	9.390	9.390	9.390	9.390	9.390	9.390	9.390	9.390	9.390	9.390																																																									
DOMESTIC	6.584	7.400	5.567	6.300	6.000	6.597	6.976	7.330	7.463	8.230	6.588	6.317	7.092	7.092	7.092	7.092	7.092	7.092	7.092	7.092	7.092	7.092	7.092	7.092	7.092	7.092																																																									
IMPORTS	2.481	2.667	2.233	2.330	2.219	2.199	2.325	2.315	2.357	2.332	2.394	2.362	2.299	2.299	2.299	2.299	2.299	2.299	2.299	2.299	2.299	2.299	2.299	2.299	2.299	2.299																																																									
HOUSING STARTS 2)	1.535	1.391	1.170	1.000	1.100	1.300	1.400	1.500	1.600	1.716	1.303	1.165	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450																																																									

NOTE: VELOCITY IS MEASURED AS GNP DIVIDED BY MONEY SERIES LAGGED TWO QUARTERS

1) PRIOR TO NOVEMBER 1979, COMMERCIAL PAPER 4-6 MOS

2) IN MILLIONS OF UNITS-SEASONALLY ADJUSTED ANNUAL RATES