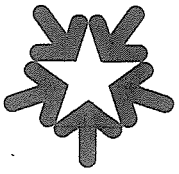
SHADOW OPEN MARKET COMMITTEE

Policy Statement and Position Papers

September 30-October 1, 1984

PPS-84-3



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Graduate School of Management
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SHADOW OPEN MARKET COMMITTEE

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1. Shadow Open Market Committee Members - September-October 1984
2. SOMC Policy Statement, October 1, 1984
3. Position Papers prepared for the September-October 1984 meeting:

   From the "Upper Tail Theory of Inflation" to the "Lower Tail Theory of Deflation", Karl Brunner, University of Rochester

   Budget (In)Activity and No Deficit "Policy", Mickey D. Levy, Fidelity Bank

   Monetary Policy and the Outlook--1984/85, Jerry L. Jordan, University of New Mexico

   Recent Behavior of the M_1 - Adjusted Monetary Base Multiplier and Forecasts for the Remainder of 1984, Robert H. Rasche, Michigan State University

Shadow Open Market Committee

The Committee met from 2:00 p.m. to 7:30 p.m. on Sunday, September 30, 1984.

Members of SOMC:

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. JERRY L. JORDAN, Anderson Schools of Management, University of New Mexico, Albuquerque, New Mexico.

DR. MICKEY LEVY, Chief Economist, Fidelity Bank, Philadelphia, Pennsylvania.

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. BERYL SPRINKEL, Executive Vice President and Economist, Harris Trust and Savings Bank, Chicago, Illinois.*

DR. JAN TUMLIR, Research Director, GATT, Geneva, Switzerland.

* On leave from the SOMC; currently Under Secretary of the Treasury for Monetary Affairs.

POLICY STATEMENT

Shadow Open Market Committee Meeting

October 1, 1984

Good economic performance continues. Real growth for the four quarters of 1984 is likely to be above 6%, far above consensus estimates of a standard second year recovery made at the beginning of the year, and far above the average long-term real rate of economic growth. The opportunity for a soft landing is good. We expect real growth to continue in 1985 at about the average long-term real rate of 3-4% if monetary and fiscal policies do not wrench the economy in one direction or another.

Inflation continues, but the reported rates of inflation remain below the trend rate of the late seventies. The reduction in inflation is most welcome, but we do not believe that the 3½ to 4% average rate of inflation for the most recent three quarters means either that inflation is whipped or that deflation has started. Nor do we expect inflation to continue at the low rates recently reported.

The Inflation Problem

The trend rate of inflation implied by past money growth remains in the 6 to 7% range. To move below that range money growth must remain well below the 7 to 8% rate of increase of the past five years. This is the challenge to the Federal Reserve and the next administration.

Monetary policy has not changed in a way that would fully account for the decline in the current inflation rate. Reported rates of inflation are a mixture of one-time changes in price levels and sustained rates of price change. When large price level changes occurred in the seventies following the oil shocks and the weakening of the dollar, we pointed out that the reported rates of inflation of 12% or 15% would not persist even if monetary and fiscal policies remained unchanged.

The strengthening of the dollar in the eighties has held the reported rate of inflation below the trend rate. When the dollar stops rising against foreign currencies, the reported rate of inflation will move toward its trend rate of increase. We estimate that if the dollar remains stable at its recent levels, the rate of inflation will rise by about 1½ percentage points if the longer-term money growth trend is maintained. If the dollar falls, reported rates of inflation may move above the 6 to 7% trend.

The inflation problem is not behind us. The Federal Reserve projects about 5½% inflation for 1985. This rate is above the rate of inflation that seemed so intolerable that President Nixon imposed price and wage controls in 1971.

Monetary Policy

The Federal Reserve has kept the rate of growth of M1, currency and checkable deposits, within its pre-announced target range for 1984. We commend them for their performance, and especially we applaud their *monetary* policy during the Continental Illinois crisis. They did not permit their large loans to Continental Illinois to increase growth of the monetary base and money. Instead, they offset Continental's increased borrowing from the discount window by reducing other sources of base money.

Despite the slower growth of money in 1984, money growth remains far above the path required for price stability. Further reductions are required.

The Federal Reserve has announced a modest reduction of M1 growth for 1985. The mid-point of their announced range is 5½%, only ½% below the mid-point of the 1984 range. Further, the 1985 range, 4 to 7%, permits the Federal Reserve to raise money growth while remaining within the announced range.

We challenge the Federal Reserve to show more concern about a return to long-term price stability. We urge them to announce a strategy for ending inflation within the decade.

Money growth in 1985 should not exceed the mid-point of the Fed's 1984 target range (6%). Fears that further gradual reduction of money growth next year will lead to recession are unwarranted. The adjustment costs associated with sustaining a long-run disinflation would be minimized if the Fed announced and adhered to a multi-year policy of continually decreasing money growth.

For 1985, if the reported rate of inflation rises as much or more than we presently expect, the Federal Reserve should *not* deviate from its money growth objective. Errors by the Fed in projecting output growth or the rate of inflation in any year should not cause overreaction. The Federal Reserve should follow the long-term strategy consistent with achieving stability.

Proposals to tie monetary policy to sensitive commodity prices are, in our judgment, destabilizing. Other proposals, which target on real growth and unemployment, ask the Fed to do what it is not capable of doing—controlling real activity.

The Federal Reserve's ability to keep money growth near the center of the range in 1984 showed a willingness to allow interest rates to move when required to change money growth. We believe that improved operating performance also reflects the introduction of contemporaneous reserve accounting, a reform that we have urged for many years.

Further improvements in monetary control are available, if the Federal Reserve chooses to reduce variability in money growth and the economy. The most important procedural reform is to control the monetary base. Current procedures often cause the Federal Reserve and market participants to misjudge events. The decline in member bank borrowing this summer is an example. The Federal Reserve interpreted the decline as a signal to *reduce* reserves so as to encourage borrowing by member banks. This response increases the variability of reserves, base money and economic activity. Control of the base avoids these excessive fluctuations and misleading signals.

Banking Policy

Deregulation was not responsible for the debacle at Continental Illinois. Proposals to re-regulate the banks misjudge the causes of recent bank failures and would be counter-productive.

The attempted rescue of Continental Illinois by guaranteeing all deposits failed. The regulators persisted, however, and all large depositors were protected from loss. The Comptroller has now extended this mistaken and discriminatory policy to the eleven largest banks.

The policy of guaranteeing large deposits at large banks encourages large banks to take excessive risks. The discipline of the market is reduced. Banks are encouraged to pursue the policies that resulted in the large volume of international debt to troubled debtors. Although international loans were not the main problem at Continental, the regulators' guarantee clearly applies to banks where international loans are the main cause for concern.

The FDIC also erred by accepting responsibility, as major shareholder, for the future of the bank. Political interference in lending decisions is difficult to avoid when a government agency has a major role in commercial banking, as shown by the history of the Reconstruction Finance Corporation.

The proper response to Continental's problem was to allow Continental to fail while preventing the effects of the failure from spreading to other banks. Banking history gives many examples to show that large failures do not bring on a financial panic if the authorities lend to the market to prevent a wave of failures. The most recent example in the U.S. followed the failure of Penn Central in the early 1970's.

We urge the Congress to restrict the power of the regulators to selectively guarantee deposits in excess of $100,000 and to prohibit them for assuming responsibility for bank holding companies.

Fiscal Policy

The "deficit" absorbs the attention of the press and financial markets. No one seems to notice that the widely promised clash in 1984 between fiscal and monetary policy has not occurred, and many who warned about the clash are now predicting lower interest rates and continued real growth in 1985. The budget deficit is not a cause of the strength of the dollar. It is principally the high expected rate of return on capital investment in dollar-denominated assets and lower expected rates of inflation that have strengthened the dollar over the last three years.

Budget deficits over a short period are not a problem. The problem is the long run. The main fiscal problem is the size and growth of public spending and the projected rise in the real stock of federal debt. These trends potentially can affect the path and composition of economic activity. Raising taxes is not a solution to the fiscal problem. Moreover, certain explicit taxes are worse than the implicit tax on money that inflation represents. Ending tax indexation, or restricting indexation, encourages the government to continue inflation. This, too, is a problem, not a solution.

To reduce deficits over the long term, spending cuts must take the lead. A budget compromise may involve tax increases as well as spending cuts. Any tax increase must avoid disincentives to saving, investment, and economic growth generally.

Higher tax rates lower interest rates by slowing the growth of output. Politicians who promise to reduce the deficit and raise growth of output while raising tax rates, either directly or by inflating, are promising more than they can deliver. Theirs is not a policy for restoring stability. It is a return to the policies of the 1970's.

The administration has not offered a medium-term fiscal program, and it has not reduced the growth of spending. We again urge the administration and the Congress to reduce outlays for defense, social security, agriculture, medicare and other, so-called, entitlements. The government must reevaluate the social contract implicit in the entitlement programs since past commitments are no longer affordable.

International Policy

Ancient myths attribute the position of the current account to the strength of the dollar and predict a weaker dollar as a necessary consequence of the current account deficit. We believe that the current account deficit is mainly a consequence of the high expected return to investment in dollar-denominated assets.

Debtor countries can service and repay debt only if we permit them to export goods and services to us. Policies that seek to close the current account deficit interfere with repayment. Efforts to restrict imports are short-sighted and self-defeating.

The administration deserves praise for avoiding protection of the copper industry. Recent decisions affecting steel and textiles are another matter. The use of voluntary export restraint agreements is in violation of the spirit and intent of GATT. Moreover, they move the world economy further along the path to cartelization.

An urgent task for the next administration is to reduce quotas. The U.S. should take the lead in reducing the creeping cartelization and growing subsidization that lowers the efficiency of the world economy.

FROM THE "UPPER TAIL THEORY OF INFLATION" TO THE "LOWER TAIL THEORY OF DEFLATION"

Karl Brunner
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and
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I. From the "Upper Tail Theory of Inflation" to the "Lower Tail Theory of Deflation"

Monetary policy continues to attract public attention. Some voices attempt to convince us that our economy suffers under deflationary strains resulting from a restrictive policy. They refer to the behavior of some sensitive commodity prices for support. They conclude that the Fed needs to reverse its course and initiate a more rapid monetary expansion.

This vision of deflation corresponds closely to the "upper tail theory of inflation" (UTTI) frequently encountered in the public arena during the last decade. The fallacy of the "utti" may be exposed by partitioning the observed price changes into two components. Let Δp_i denote the percentage price change of any commodity i. We write then $\Delta p_i = \pi + \delta_i$. The first component π expresses the general state occurring as a common element in the percentage price changes of all goods, commodities or services. The second component δ_i reflects specific allocative processes modifying the particular market conditions of commodity i. The two components can be usefully related to a distribution of all price changes. A graph clarifies the relevant issues. The horizontal axis represents percentage price changes. The distribution, described by the bell-shaped curve, is presented in a normal form. It is symmetric around the vertical located at π. The area under the distribution measures one. The magnitude π expresses the mean of the distribution of percentage price changes. This mean locates the position of the whole distribution. The price change of any particular commodity may be located anywhere along the horizontal axis. Consider the i'th commodity with price change $(\pi + \delta_i)$ located towards the right tail of the distribution. A small band around the vertical above $(\pi + \delta_i)$ describes the probability (i.e. relative frequency) of a price change δ_i units larger than the rate of increase of the general price level. The latter measures the common component of all price changes and is naturally interpreted as a measure of the rate of inflation. The inflation phenomenon refers to general and common aspects of all price

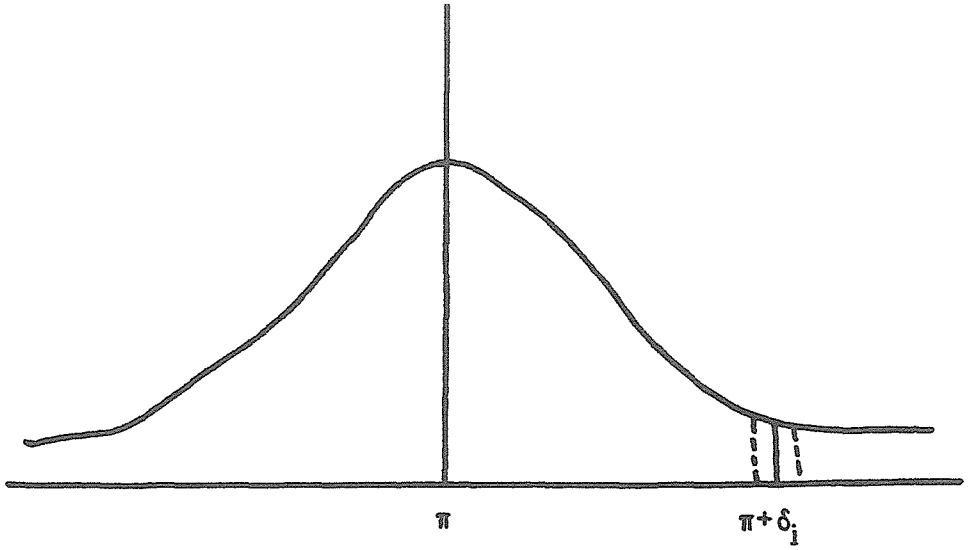


FIGURE 1

all price movements independent of specific and particular market conditions expressed by δ_i. These conditions are represented by specific positions along the horizontal axis under the distribution. The relevance of this distinction depends crucially on the fact that the forces which determine the location of the distribution operate in a first approximation independently from allocation processes yielding a variance price changes revealed by specific positions under the distribution.

The fallacy committed by the utti follows from a neglect of this important distinction. The interpretation of price changes located in the upper tail of the distribution as an indicator of inflation confuses essentially allocative aspects operating on specific markets with the inflation problem shaped by broad economy-wide forces. The larger the variance of δ_i the less informative and more distorted is $(\pi + \delta_i)$ as an indicator of π. This follows from the fact that the coefficient in a regression of π on $(\pi + \delta_i)$ is given by

$$0 < \frac{\text{variance of } \pi}{\text{variance of } \pi + \text{variance of } \delta_i} < 1$$

The larger $[(\text{variance } \delta_i) \cdot (\text{variance } \pi)^{-1}]$. The smaller is the regression coefficient. Larger allocative noise contained in $(\pi + \delta)$ obscure the information about inflation represented by π. The upshot is that an attention geared to observations placed under the upper tail of the distribution yields quite misleading information about inflation.

This argument extends to the "lower tail theory of deflation" (LOTTDE) recently advanced in the public arena. Sensitive commodity prices apparently declined this year. We were told therefore that deflation grips the economy. Monetary policy should

consequently be adjusted to a more expansionary stance. But all measures approximately representing the general price level show a positive π around 4% p.a. Sensitive commodity prices experienced a large negative δ_i. This negative component reveals the operation of substantial allocative forces on demand or supply side. These specific market forces may be transitory or permanent, in either case the operation of these forces lowers the information content of the selected price group with respect to the relevant inflation magnitude π. Observations under the lower tail are not representative with respect to the location of the distribution.

The emphasis on sensitive commodity prices as indicators of inflationary or deflationary drift may be justified in the mind of their advocates with the belief that sensitive prices systematically anticipate movements of the relevant general price level. Emphasis on the word "sensitive" seems to suggest that this group of prices leads in time the movement of the general price level. This would mean that $(\pi + \delta_i)$ or just δ_i contains information about subsequent π values. This hypothesis was tested against data based both on the consumer price index (CPI) and the GNP deflator representing the general price level. An index of spot market prices for raw industrial materials (SMP) was used to express "sensitive prices". Two regressions were used. One regressed the percentage change of SMP against its own lagged values, four lagged values of the CPI, the current value and four leading values of the CPI. The second regression reversed the procedure. It regressed the CPI against its own lagged values, four lagged values, the current value, and four leading values of the SMP. All terms appear in the regression as percentage changes. The hypothesis under consideration implies that the leading terms in the second regression occur with a sufficient significance level whereas the leading terms in the first regression are not significant. The result is however just the opposite. We obtain thus no support for the hypothesis attributing to "sensitive prices" an indicator role for potential deflation or inflation. This justification of the "lottde" fails when assessed against critical observations.

Another aspect of both "utti" and "lottde" deserves our attention. This view implies that the sensitive prices responding more rapidly to underlying changes move in a stationary pattern relative to the general price level. A non-stationary pattern exhibited by the ratio SMP/CPI determines that SMP contains little information about the CPI or the GNP deflator. An examination of the data rejects the hypothesis that the ratio SMP/CPI adheres to a stationary pattern. The same result holds for SMP divided by the gross-national product deflator. We conclude thus that the "lower tail theory of deflation", and its twin, the "upper tail theory of inflation", violates an elementary proposition of economics. They confuse allocative or comparative price aspects with

global movements of the general price level. This is a rather ancient confusion but still permeates the media. There is no substitute for the use of approximate measures of the price level whenever we wish to judge magnitude and drift of inflation or deflation. And the relevant measures indicate that we still suffer from an inflation found unacceptably high 30 or 13 years ago. A substantial increase of the percentage change in M-1 beyond the year-over-year change of about 7% recently observed would thus initiate, once more, a new inflationary surge.

II. The Choice of a Monetary Standard: "Price Rule" or "Quantity Rule"

Discretionary policymaking produced the Great Depression of the 1930s and determined the "age of permanent inflation" observed over the past eighteen years. This experience encouraged a reexamination of our monetary arrangements and the nature of our monetary policies. An increasing attention was addressed in recent years to the choice of a monetary standard as an alternative to discretionary policy-making. The justification of discretionary procedures essentially involves two crucial assumptions. One asserts that the monetary authorities do possess the detailed knowledge about the economy's response structure required for the execution of discretionary adjustments. The other postulates additionally that a political institution can always be expected to act in the "public interest" uncontaminated by the special interests of its bureaucracy. Both assumptions are blatantly falsified by our experience. Monetary authorities do not have the knowledge required for the efficient execution of an activist discretionary policy. Discretionary actions pursued in the context of incomplete and unreliable information offers no assurance of stabilization. It raises on the contrary the likelihood of destabilizing action and uncertainty about potential deflationary or inflationary drift. These consequences of inadequate information are reinforced by the incentives confronting a policy bureaucracy. These incentives do not guide behavior in a mode conformable to some "public interest".

The historical record of activist discretionary policy effectively reflects the irrelevance of its standard justification. This record also establishes the case for the choice of a monetary standard. A standard is designed to impose contraints on our monetary evolution. The constraints should lower the uncertainty associated with our monetary affairs and thus lower the shocks imposed by the monetary system on the economy. Such uncertainty unavoidably lowers an economy's performance level. The constraints of a standard need also be sufficient to prevent a longer run deflationary or inflationary drift. An array of different standards has been suggested in recent years, but only modest progress was made so far with any relevant comparison of their respective

properties. It seems that an evaluation of competing standards should foremost investigate the comparative level of monetary uncertainty characterizing each standard and the extent of drift still allowed to the price-level. These considerations will be applied to the choice between a "quantity-rule" and a "price-rule".

The "quantity-rule" has been proposed for many years by monetarists. Milton Friedman was the first to advocate a rule imposing a constant monetary growth. An implementation of this standard involves several important considerations which determine the detailed nature of the standard. First, the monetary aggregate to be controlled need be decided. Total transactions money expressed by M-1 appears in the USA as the best choice at this stage. Potentially disruptive variations in the currency ratio would be offset under the circumstances by suitable changes in the monetary base. We encounter secondly the perennial question about the controllability of M-1. The fact that the question is always raised in the public arena does not mean that it has not been answered quite decisively by the research developed at the Board of Governors of the Federal Reserve System and also by James Johannes in collaboration with Robert Rasche. Major results of the examinations made by Johannes-Rasche were incorporated into past documents distributed by the Shadow Open Market Committee. The examinations available indicate that controllability within a range of plus or minus one percentage point around a benchmark level is realistically feasible. Thirdly, the choice of a benchmark reflects the preferred long-run behavior of the price-level. A "price-rule" thus enters the specific formulation of the "quantity rule". But the operation of this price-rule differs substantially from the "price-rule" advocated as an alternative to the "quantity-rule". This aspect will be elaborated subsequently. The benchmark level is usually chosen to produce longer-run stability of the price-level. This goal implies for the USA a benchmark of 1% to at most 2% p.a. Lastly, a meta-rule need be added. The choice of the benchmark designed for longer-run price stability depends on assumptions about the economy's normal rate of real growth and the trend in monetary velocity. Changes over time in these determinants of the benchmark are quite possible. They would be revealed by a drift in the price-level observable over the years. Such a drift need be corrected with a suitable adjustment in the benchmark level. It is crucial however that the meta-rule be formulated with sufficient caution to prevent any backsliding of the authorities into discretionary activism. Rapid changes of the benchmark at frequent intervals could not be tolerated. At least several years' observations would be necessary before the benchmark could be modified.

A constant monetary growth standard would not remove all uncertainty with respect to the price-level. Some increases or decreases in the price-level over a shorter-run

covering several years are bound to occur. Such variations will remain small compared to the movements experienced over the past twenty years. A constant monetary growth would most particularly prevent a longer-run drift of the price-level observed for example under the gold standard in the USA. Permanent inflation or deflation would be effectively prohibited by the constraints of the standard. Whatever shorter-run uncertainty about the price-level still persists would be produced by shifting real conditions. They could not be attributed to uncertainty about monetary affairs. The constant monetary growth standard essentially removes this uncertainty additionally imposed beyond the "natural uncertainties" by an activist discretion on the economy. This additional uncertainty has no social function and actually impairs the efficient working of a market economy.

Consider now in contrast the "price-rule". This idea was pushed recently by the "supply-siders" and Congressman Kemp. The rule would postulate that monetary growth need be adjusted in response to the evolution of the price-index relative to a desired target level. The following formula may express a specific version of such a rule

$$\Delta \log m = c + \beta \, (\Delta \overline{\log p} - \Delta \log p)$$

It states that the growth rate $\Delta \log m$ of the money stock m consists of two components. The first component is a constant growth rate c. The second component modifies the actual growth rate in accordance with the deviations observed between the actual rate of price change $\Delta \log p$ and the target level $\Delta \overline{\log p}$. With the latter set at zero the expression becomes

$$\Delta \log m = c - \beta \, \Delta \log p$$

Similarity and difference with the constant monetary growth rule can now be explored. The first term expresses similar to the "quantity-rule" a benchmark. This benchmark is selected in accordance with the desired target level $\Delta \overline{\log p}$. The "price-rule" required thus similar to the "quantity-rule" a meta-rule specifying conditions for possibly resetting the benchmark. The same caution concerning opportunities for backsliding into discretionism need be applied here. The specification of the second term establishes on the other hand an important difference. It introduces beyond the longer term aspects reflected by the choice of c and $\Delta \overline{\log p}$ short-run adjustments alien to the "quantity-rule". Monetary growth is modified in response to quarterly or semi-annual observations about the movement of the price-level. This short-run feedback, explicitly exercised by the "quantity-rule", characterizes the properties of the "price-rule". It affects in particular

the peculiar uncertainties associated with the "price-rule". The result depends significantly on the choice of price index used to guide the short-run adjustments. Advocates of a price-rule seem to prefer an index of sensitive commodity prices. This index is understood to offer an early warning signal about general price trends requiring correction by an immediate suitable modification of money growth. The problems associated with such an index discussed in the previous section would carry over to the present case. The non-stationarity of the relation between sensitive material prices and a general price index seriously threatens the purpose of the price-rule. It produces substantial uncertainty for both longer-run price behavior and shorter-run monetary evolution. The two graphs attached to the position paper reveal the nature of the longer-run problem. We observe substantial cycles in the ratio of SMP to either the GNP deflator or the CPI. They reach over the period 1954 to 1972 magnitudes between about 10% to 30% in the case of the GNP deflator. The ratio fell moreover over the whole twenty years by approximately 25%. An adjustment of monetary growth in response to sensitive commodity prices would under these circumstances generate changes in monetary growth in excess to the requirements of a stable general price level. The emerging pattern can be recognized in the following way exploiting the feedback expression. The change in the money stock over an interval [0,t] appears as

$$\log m(t) - \log m(o) = ct + \beta [\log p(t) - \log p(o)]$$

Suppose now that p is an index of sensitive commodity prices. We can thus write

$$\log p = \log q + \log a$$

where q represents a general price index and a an index of the allocative term shaping the relative behavior of p.

The change in the money stock can thus be rewritten in the form

$$\log m(t) - \log m(o) = ct + \beta [(\log q(t) - \log q(o)] + \beta [(\log a(t) - \log a(o)]$$

The sum of the first two terms on the right side should determine over the longer-run the behavior of the money stock. The third term modifies however this result. The evidence revealed by the graphs and supported by a time series analysis of the ratios SMP/deflator or SMP/CPI informs us that the allocative magnitude is non-stationary. The last term

cannot be expected under the circumstances to remain bounded around zero. It may wander from zero in any direction over long intervals. The magnitude "a" fell from 1956 until 1972 by almost 40%. The money stock would have risen by β (40%) in excess of the benchmark required for long-run stability of the price-level. The general price-level would have been approximately β (40%) higher than desired and anticipated. A corresponding large increase in "a", expressed by the approximately 90% rise in the middle of the 1970s would have been translated into a comparatively small increase of the money stock resulting from a negative third term. The general price level would have suffered substantial deflationary effects. We observe thus that the operation of allocation (non-stationary) processes transmits via the feedback rule a wide array of non-stationary real shocks to the money stock. The resulting inflation (or deflation) of the general price level per annum may still be quite modest. But the longer-run uncertainty about the price-level blows up to very large proportions. The variance of the money stock and thus of the price level is essentially unbounded and increases as the horizon projects into the future. The characteristics of this variance determine the massive long term uncertainty about the price-level under the price-rule considered.

The rule produces also short-run uncertainty about monetary affairs. The real shocks operating on the general price-level q and the allocative term a are immediately reflected in short-run monetary growth. Agents thus suffer the same information and inference problem experienced under activist discretionism. Serially correlatred accelerations or decelerations of the money stock must be interpreted by market operators with respect to their comparatively transitory or permanent nature. This information and inference problem induces real fluctuations and adjustments avoided under a constant monetary growth standard.

The specific version discussed does not represent all possible "price rules". It corresponds however to the idea proposed by "supply siders". Other proposals would grant the central bank a weekly or monthly range of discretion with respect to changes in the monetary base. The range would extend from zero to an upper positive bound. This bound would be raised in response to a falling price index and lowered whenever the selected index rises. Even with the choice of an ideal general-index the permitted range of discretion usually specified would hardly remove the short-run monetary uncertainty or the longer-term price-level uncertainty prevailing under traditional activist discretionism. Such a price-rule would contribute little to the removal of monetary and price uncertainty.

The previous discussion suggests an obvious modification of the price-rule. The specific problems associated with the choice of a sensitive price index can be avoided with

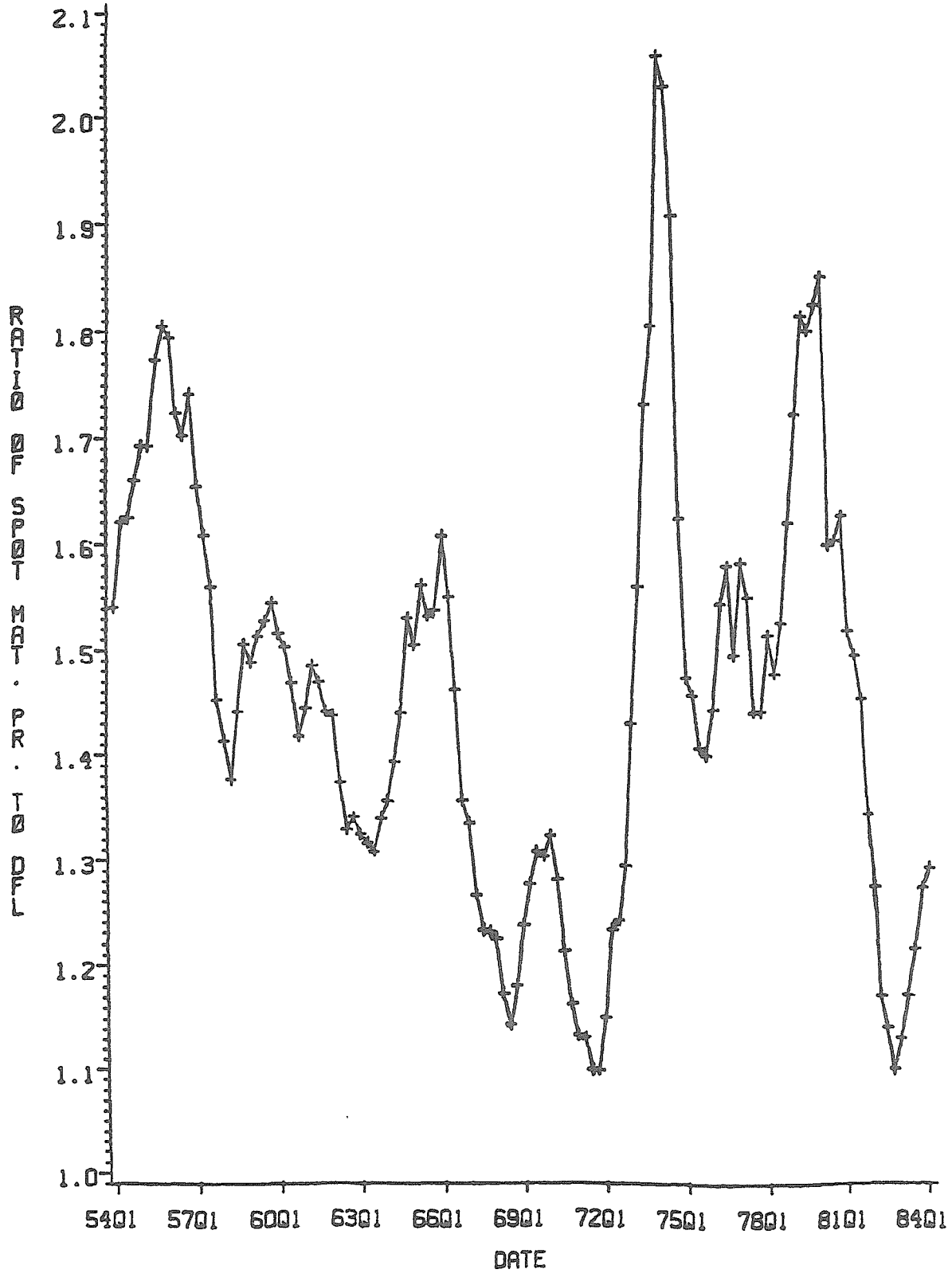
the selection of a suitable general price index. The non-stationarity vanishes under the circumstances. Long-run uncertainty about price behavior may actually be lowered in this case. Short-run monetary uncertainty is most likely also lowered compared to the choice of a sensitive price index. But there remains an uncertainty typically associated with discretionary procedures. The choice of β regulating the magnitude and speed of monetary responses may interact with the detailed but unknown dynamic structure of the economy. Different structures probably determine different optimal choices of β. The selection of any particular value in the context of our diffuse uncertainty about the economy's response structure poses the basic problem of activist discretionism. The suspension of any feedback (i.e. $\beta = 0$) avoids potential risks and sacrifices potential gains of performance. But the risks are real and the potential gains in the absence of adequate knowledge somewhat illusory.

Two remaining aspects need our attention. They pertain to the accountability of the central bank under a given standard and the sustainability of the rule imposed. The accountability under a constant monetary growth rule is simple and straightforward. Information about monetary growth is supplied to the public domain and the authorities' performance over each year can easily be checked. The constant monetary growth rule specifies a standard of comparison applying relevantly to annual data and the profile within the year. The accountability under a price-rule cannot meaningfully proceed within the same horizon in terms of the price-level selected or even the general price level. Modest variation extending to a few percentage points either way must be reasonably accepted over one or two years. Price movements would be less tightly controllable in the shorter-run than monetary growth. It follows that the public will be encouraged by a price rule to apply an irrelevant standard of comparison and expect the improbable (or impossible). This could affect the survival of the rule. Alternatively, accountability measured in terms of price behavior would be substantially lowered. A tighter accountability need be formulated in this case in terms of the observed monetary growth and its profile. Information about the feedback expression offers an opportunity to judge the authorities' behavior. A constant monetary growth rule avoids this problem with an explicit emphasis that price stability is a longer-run property and not to be literally applied to the shorter-run.

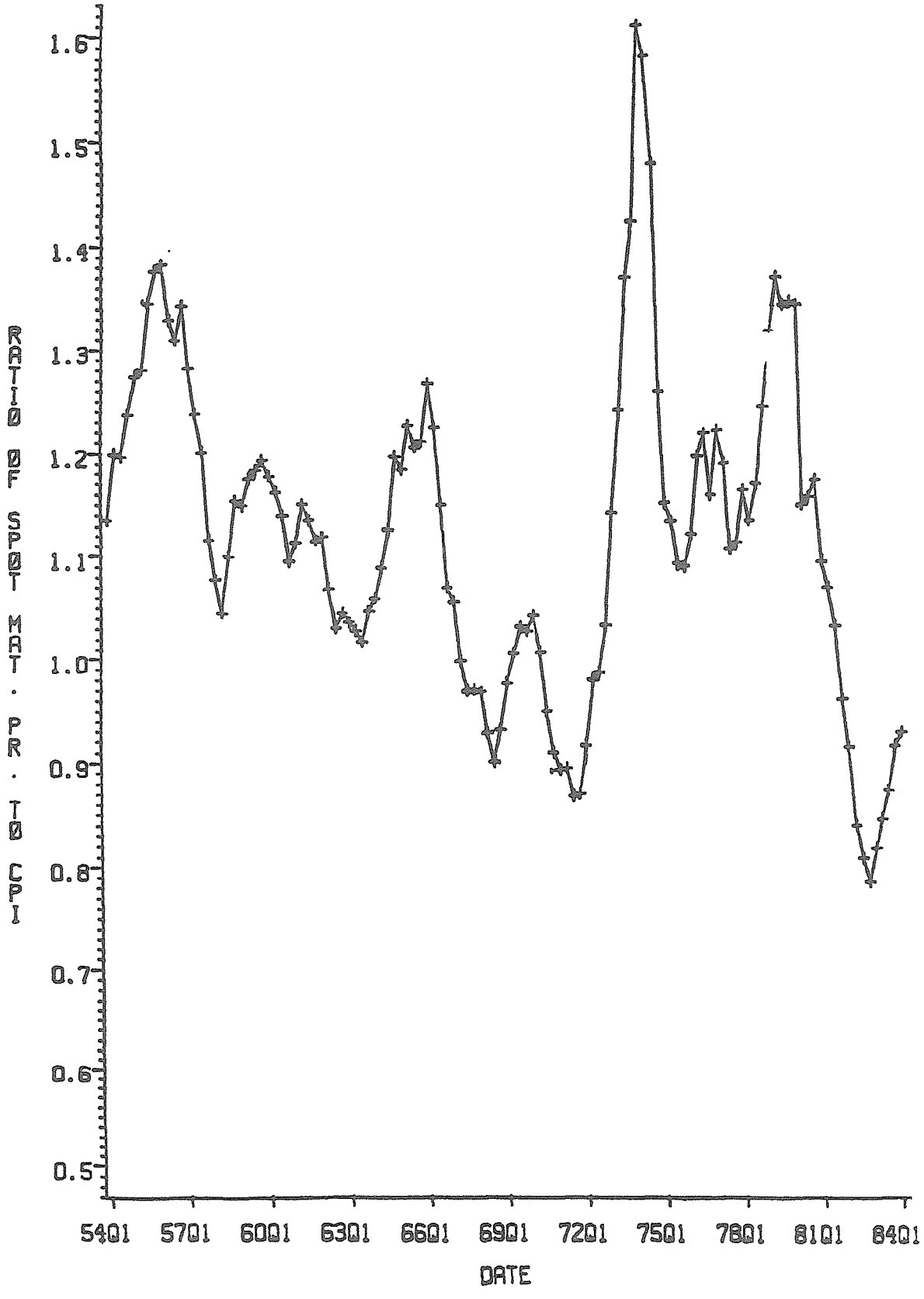
The issue of sustainability confronts all standards in a similar fashion. Effective accountability does introduce however some differences between alternative standards. But temptations to erode a standard and evade its discipline will perennially persist. With uncertain accountability and little appreciation of its relevance in the public domain no standard will survive for very long. It is thus an illusion to expect a higher chance of

survival from "combining quantity and price-rule". The price-rule adds nothing to raise the level of accountability. Ultimately, the sustainability of a standard is determined by its degree of accountability and the public's understanding of its importance.

MATERIALS PRICES OVER GNP DEFLATOR



MATERIALS PRICES OVER CPI



BUDGET (IN)ACTIVITY AND NO DEFICIT "POLICY"

Mickey D. Levy
Fidelity Bank, N.A.

After several years of progressively higher deficit projections, recent reports indicate that the budget imbalance in the next several years will not be as large as projected earlier and that the FY1984 unified budget deficit will be lower than FY1983 deficit. The budget outlook could be worse, of course, but there is little reason for a victory celebration. The outstanding federal debt still is forecast to rise dramatically in both absolute and real terms and relative to total economic activity. Major pending alternatives to reduce the deficit are not particularly inspiring. Perhaps most important is the glaring absence of rules or guidelines for establishing a deficit (fiscal) policy. Unfortunately, the Presidential campaign has not brought into focus these key budget issues. The candidates instead are entertaining us with debate about the apparently more pressing issue concerning the proper relationship between church and state.

The FY1984 unified budget deficit should be in the $170 to $175 billion range, more than 10% lower than the $195.4 billion deficit in FY1983. The FY1985 deficit should be slightly higher, approximately $175 to $180 billion, despite the sharp economic expansion in 1984 and expected continued growth in 1985. And under the most likely set of economic circumstances, the budget imbalance should remain at least that high in later years. This verifies what forecasters had asserted earlier -- that the economy cannot grow out of the deficits, and that cyclically-adjusted deficits will rise even as the economy moves back toward its potential growth path.

In FY1984, stronger-than-expected growth in real GNP and associated employment gains have increased revenues and reduced outlays, but other factors have offset their deficit reducing impacts. Revenue growth has been dampened by lower-than-anticipated information and a receding rate of nominal wage growth. In addition, while corporate economic profits have surged, large depreciation deductions and lower inventory profits have slowed the growth of taxable profits and corporate tax receipts to approximately one-quarter the rate of the growth in economic profits. Strong economic conditions have reduced outlays on cyclically-sensitive programs such as unemployment compensation, and defense outlays have been lower than earlier estimates, but the savings in these areas have been more than offset by sharply higher interest rates and interest expenses.

One of the most disturbing aspects of the FY1985 budget is that even with enactment of the Deficit Reduction Act of 1984 and passage of the remainder of the Reagan Administration's so-called downpayment program, outlays will expand sharply, and rise as a percent of GNP. FY1985 spending is estimated to climb 10.1% from FY1984 levels, according to the Administration's Mid-Session Review of the FY1985 Budget:

THE ADMINISTRATION'S MID-SESSION BUDGET OUTLOOK

	Fiscal Years				
	1984	1985		1986	
	$ bil	$ bil	% Chg.	$ bil	% Chg.
Outlays	845.0	930.6	10.1	997.3	7.2
Defense	233.6	266.2	13.9	294.6	10.7
(% of Total)	(27.6)	(28.6)		(29.5)	
Retirement, Disability, and Medicare (% of Total)	278.7 (33.0)	298.8 (32.1)	7.2	320.8 (32.2)	7.3
Unemployment & Low Income (% of Total)	88.3 (10.4)	89.4 (9.6)	1.2	91.5 (9.2)	2.3
Other Non-Defense (% of Total)	134.9 (16.0)	146.1 (15.7)	8.3	144.4 (14.5)	-1.2
Net Interest (% of Total)	109.4 (13.0)	130.2 (14.0)	19.0	145.9 (14.6)	12.1
Revenues	670.7	763.8	13.9	831.8	8.9
Deficits	174.3	166.9	-4.2	165.5	-0.8

Source: Mid-Session Review of the FY1985 Budget.
Note: Budget outlook is based on Mid-Session policy. Figures may not add due to rounding.

The growth in projected spending varies greatly by function: defense outlays are forecast to rise 13.9% in FY1985 and another 10.7% in 1986; and net interest expenditures by a staggering 19.0% in 1985 and 12.1% in 1986. Retirement, Medicare, and Disability programs are projected to rise 7.2% in 1985. Unemployment compensation and low income programs are the only area in which expenditures will rise by less than the projected rate of inflation, but that is due largely to the sharp decline in unemployment. Thus the change in the composition of total outlays associated with the Reagan Administration will continue: outlays for defense and interest will rise, and spending for the other major budget clusters will recede as proportions of the total.

In FY1985, revenues are estimated to rise 14.9%. As a consequence, the unified deficit should recede to 4.2% of GNP, down from 4.8% in FY1984 and a peak level of 6.1% in FY1983.

Without legislated changes, the deficit will decline in the longer run only under an improbable set of circumstances: continued rapid economic expansion (4% annually through the 1980s), a receding unemployment rate, declining inflation, and declining nominal and real interest rates. A number of factors could lead to higher deficits; as examples, in a low economic growth alternative presented in the Mid-Session Review, deficits are projected to exceed $200 billion by FY1987; under a scenario with continued rapid economic expansion but only modestly lower interest rates, annual deficits stabilize in the $180 to $185 billion range. A more pessimistic picture is painted by the CBO's baseline budget projections, which assume real GNP growth slowing to 3% annually, a stable long-run inflation rate of 4.8%, and little decline in real interest rates. Under these conditions, the deficit rises gradually, exceeding $200 billion in FY1987, and then accelerates to much higher levels in later years (CBO, The Economic and Budget Outlook: An Update, August 1984).

The key message of these budget forecasts is that the budget and deficit outcomes are undesirable even if economic performance is outstanding, and that the outcomes would sour quickly with only slightly less favorable economic performance.

Budget Projections Do Not Imply Deficit Policy

By traditional measures that focus on aggregate demand management, fiscal policy remains stimulative, but less so than in 1982-1983. The economy moving back toward its longer-run growth path (i.e., "potential", somehow measured) and the cyclical portion of the deficit eroding. Accordingly, the structural deficit is continuing to rise as a portion of benchmark GNP, but at a much slower rate than in 1983:

ALTERNATIVE DEFICIT PROJECTIONS AT MID-SESSION

	Fiscal Years, in $ Billions:					
	1981	1982	1983	1984	1985	1986
Administration, unified deficit	58	111	195	173	160	139
CBO, unified deficit	58	111	195	172	178	195
CBO, standardized deficit[a/]	14	20	83	112	146	167
Middle-expansion deficit[b/]	53	63	127	158	194	219
	Percent of Benchmark GNP:					
Administration, unified deficit	2.0	3.6	6.1	4.8	4.2	3.9
CBO, unified deficit	2.0	3.6	6.1	4.8	4.5	4.6
CBO, standardized deficit	0.5	0.6	2.4	3.0	3.6	3.9
Middle-expansion deficit	1.8	2.0	3.7	4.4	5.0	5.2

[a/] Based on a 6% unemployment rate.

[b/] Frank deLeeuw and Thomas Holloway, "Cyclical Adjustment of the Federal Budget and Federal Debt", Survey of Current Business, December 1983.

According to this trend, maximum fiscal stimulus was generated by the second and third years of the Reagan package of tax cuts and the sharp buildup in defense spending. A close look at the components of the structural budget indicates that cyclically-adjusted revenues stabilized after the 1983 tax cut, and are expected to remain basically unchanged as a percent of benchmark GNP through the 1980s. Thus, the entire rise in the structural deficit is attributable to the projected increase in cyclically-adjusted outlays:

THE CBO's STANDARDIZED-EMPLOYMENT BUDGET PROJECTIONS,
Percent of GNP Standardized at 6% Unemployment Rate

	Fiscal Years:					
	1982	1983	1984	1985	1986	1987
Revenues	21.0	19.5	19.3	19.4	19.3	19.3
Outlays	21.6	21.9	22.3	23.1	23.2	23.5
Deficit	0.6	2.4	3.0	3.6	3.9	4.2

But just what these budget figures mean is uncertain. First, there is the issue of the accuracy of the underlying economic assumptions and the budget projections based on them. Budget projections are extremely sensitive to economic performance and interest rate changes, and large revisions of the deficits occur in each new official document.

Second, these projections do not imply a federal deficit policy, let alone provide a guideline for evaluating that policy. The endless discussion about the deficit and many proposals to cut it elude the constraints of a plan of action that is a consistent part of a broader macroeconomic policy. This stems from a lack of understanding about how budget policy affects the economy; without an understanding of this interaction between budget policy and the macroeconomic environment, the government's action lacks the guidance of coherent objectives and the contraints to which they are subject. This unfortunate situation reflects the analytical controversy about the way monetary and fiscal policies affect macroeconomic variables.

Economists continue to grapple with the issue of the contribution and, indeed, even the objective of deficit policy. It is noteworthy that short-run stabilization concerns seem to be playing a less prominent role among fiscal policy analysts. For example, many traditional Keynesian economists in late 1982-early 1983 called for a tax <u>increase</u> in order to <u>stimulate</u> the economy, just the opposite of the traditional line of reasoning. Thus, the <u>sign</u> as well as the magnitude of implied fiscal policy multipliers has been called into question. In addition, nearly every conventional macroeconomic forecaster predicted a very sluggish and short economic recovery, despite the sharp rise in the structural budget deficit. (Monetarists correctly predicted the surge in aggregate demand growth, but so

far this expansion has missed on the composition of nominal growth as between real growth and inflation.)

While rising uncertainty about the short-run stabilization qualities of budget policy is calling into question the role of deficit policy in the context of traditional Keynesian demand management policies, there is a growing body of evidence that suggests undesirable long-run effects of persistent budget deficits and the mounting federal debt burden. The rising federal debt-to-GNP ratio has the potential to impinge dangerously on the credit available to finance private capital formation, and may indirectly generate inflation through monetization. The rise in federal debt is quite alarming: from FY1983, publicly-held federal debt (gross federal debt less debt held by government accounts) to FY1987, is forecast by the CBO to rise 69.5%, much faster than the projected 49.8% rise in GNP. As a consequence, the ratio of publicly-held federal debt-to-GNP would rise from 34.5% at year-end FY1983 to 42.1% at year-end FY1987. The relative debt burden also rises in the Administration budget proposals, but not as rapidly. The growing consensus of available research is strong enough to warrant budget policies that would stop the rising debt burden, but the evidence indicates the undesirable impact of the rising debt will not occur immediately.

Given the limited understanding of the short-run stabilization effects of discretionary changes in the deficit, and the heightened recognition of the adverse long-run impacts of the rising federal debt burden, halting the rise in the federal debt burden is the only prudent fiscal policy objective. Furthermore, whereas other fiscal policy objectives such as aggregate demand management have failed in the past and are highly uncertain for the future, limiting the rising federal debt burden is achievable. This suggested departure from the traditional role of fiscal policy involves redirecting the objective from short-run stabilization concerns to the goal of conducting budget policy in a way that provides an environment conducive to long-run economic growth. This change in focus of fiscal policy objectives appears to be gaining increased acceptance as a result of the recent research findings indicated above.

Recent Deficit-Cutting Efforts

Recent efforts to reduce the deficit have been less than inspiring, but perhaps not much could be expected for an election year. The Deficit Reduction Act of 1984 (and its primary component, The Tax Reform Act of 1984) included $51 billion in tax increases over the four fiscal years 1984-1987 (and $104 billion from FY1984 to 1989) and roughly

$12 billion in spending reductions ($21 billion through 1989). Many of the provisions of the tax package were sound public policy, albeit minor. Most importantly, the legislation avoided increases in the marginal rates on personal or corporate income, and it did not eliminate or postpone the indexation of personal income taxes scheduled to become effective in 1985. However, it was disappointing that the tax increases were not accompanied by more substantial spending cuts like those recommended in the Administration's "downpayment plan". The spending cuts were meager at best, and they would have been substantially lower if the legislated increases in Medicare premiums had been counted as revenue increases rather than as negative spending.

The debate on spending cuts currently is at an impasse. The remainder of Reagan's downpayment plan, which is represented by the Senate's budget proposal, includes $40 billion of spending cuts from defense in the FY1985-1987 period, and an additional $35 billion of cuts from non-defense domestic programs. The House plan involves total spending cuts that are larger in magnitude ($132 billion versus $93 billion over the three year period), and significantly different in compositon. It would cut $96 billion in defense outlays during the FY1985-1987 period, and make only minor cuts in non-defense domestic programs. Neither proposal involves cuts in the Social Security, Retirement or Medicare programs. Thus, reaching a spending cut compromise requires a resolution of the long-standing political debate concerning defense versus non-defense spending. Also, the compromise under consideration avoids entirely the issue posed by entitlement programs.

The stated goal of the Mondale budget program is to cut the deficit by two-thirds by FY1989. The Mondale budget would have little impact on the FY1985, but would trim the deficit to $146 billion in FY1987 and to $86 billion in FY1989. Mondale measures his budget proposal relative to the CBO baseline projection, which projects a deficit of $216 billion in FY1987 and $263 billion in FY1989. For FY1989, half of Mondale's proposed $177 billion saving from the CBO's deficit forecast is due to higher taxes (largely through a 10% surcharge on high income individuals and a 15% minimum corporate tax on economic income, plus limitations on tax shelters and "loopholes"), and an additional $25 billion would be from lower defense spending. Mondale proposes net increases in non-defense, non-interest expenditures, with sizeable increases in domestic discretionary programs. No cuts in social security, retirement, or Medicare are proposed. Nearly two-fifths of the deficit cutting would be "achieved" by a faster assumed rate of economic growth ($17 billion lower deficit) and lower interest rates and interest expenses ($51 billion). To me, anticipated faster economic growth and lower interest rates are wishful thinking, not viable budget policies. However, the approach is no different than that used by the Reagan Administration or, for that matter, most recent incumbents and presidential candidates.

The Mondale proposals would have no material short-run impact on the economy but would have some adverse consequences for long-run economic growth to the extent that the higher taxes on individuals and corporations deter saving and investment.

Suggestions on Deficit Cutting

Since the rising debt burden is a long-run problem that affects capital formation, economic growth, and the composition of that growth, the way in which the deficit cuts are achieved, is crucial. A quick fix of tax increases and/or spending decreases to reduce deficits immediately that would endanger the primary objective of capital formation must be avoided. Recent studies indicate that there is sufficient time to consider policy changes that may require several years to implement.

A compromise involving both spending cuts and tax increases is the only politically feasible avenue, but spending cuts should take the lead in the deficit-cutting effort. And since the primary concern about the federal debt buildup is its impact on long-run capital accumuatlion, any tax increases should avoid disincentives to saving, investment and economic growth generally. As recent tax proposals have illustrated the limitations of raising revenues through tinkering with the current tax structure, proposals involving a consumption-based tax or a broadening of the income tax base and a flattening of marginal tax rates deserve close attention.

No such central themes provide guidance for cutting spending. While individual spending programs may be expanded or contracted based on an objective set of criteria, the bottom line for total budget outlays is that, whether more or less defense spending or transfer payments is proper involves value judgments that must be resolved by budget policymakers. A spending cut compromise must involve cuts in defense, retirement programs, and Medicare, if only because they constitute nearly three-quarters of total budget outlays. Defense cuts must be achieved without sacrificing national security goals, which include maintaining a balance between military preparedness and longer-term weapons procurement. Regarding the government's retirement programs, social security, and Medicare, policymakers must reconsider the social contracts implicity in these programs, and strike a balance between what is fair to beneficiaries and what is economically viable, i.e., affordable without unhinging the structure of the economy that must produce the means to support these programs.

Certainly, solutions to the rising federal debt problem are available, but they must be achieved by Congress and the Administration. Currently, the incentive to address these issues is not strong; I hope it begins to rise in 1985.

MONETARY POLICY AND THE OUTLOOK--1984/85

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Unlike the Federal Reserve "Humphrey-Hawkins" Reports of the past two or more years, it would be hard to find fault with the Feds' latest Economic projections for 1984 and 1985, given the underlying assumptions. In the "Midyear Review" issued July 25, 1984, the Fed provided the following two tables:

TABLE 1

Economic Projections for 1984 and 1985 (percent)

		FOMC members and other FRB Presidents[a]	
1984		Range	Central Tendency
Change, fourth quarter to fourth quarter:	Nominal GNP	9½ to 11½	10½ to 11
	Real GNP	6 to 7	6¼ to 6¾
	Implicit deflator for GNP	3¼ to 4½	4 to 4½
Average level in the fourth quarter:	Unemployment Rate	6½ to 7¼	6¾ to 7
1985		Range	Central Tendency
Change, fourth quarter to fourth quarter:	Nominal GNP	6¾ to 9½	8 to 9
	Real GNP	2 to 4	3 to 3¼
	Implicit deflator for GNP	3½ to 6½	5¼ to 5½
Average level in the fourth quarter:	Unemployment rate	6¼ to 7¼	6½ to 7

TABLE 2

Ranges of Monetary Growth 1984 and 1985[1]

	1984 Range[2]	1984 Actual[2]	1985 Tentative[2]
	Percent	Percent	Percent
M1	4 to 8	7.5	4 to 7
M2	6 to 9	7.0	6 to 8½
M3	6 to 9	9.7	6 to 9
Total Domestic Nonfinancial Sector Debt	8 to 11	13.1[3]	8 to 11

The mid-point of the 1985 target range for M1, together with the mid-points of the "Central Tendency" ranges for income, output, and inflation would suggest the following for next year:

TABLE 3

	GNP	Output	Prices	M1	V1
Q4/84-Q4/85	8 1/2%	3 1/8%	5 3/8%	5 1/2%	3%

The CBO* projections are similar:

TABLE 4

	GNP	Output	Prices	M1	V1
Q4/84-Q4/85	8.2%	2.8%	5.3%	5.5%	2.7%

The key assumptions are that M1 growth slows further from 1984 to 1985, oil prices remain stable in nominal terms and the dollar's trade-weighted value in foreign exchange markets is stable at the levels prevailing at the time the forecasts were made. How the subsequent further appreciation of the dollar might affect the projections is not known.

Output growth is assumed to slow to roughly the long-run potential rate, velocity growth is approximately the long-run trend rate, and inflation is close to the rate of

*"The Economic and Budget Outlook: An Update", Congressional Budget Office, August 1984.

money growth. Certainly the SOMC would have little problem with these relationships as long-run averages. Whether or not they materialize in 1985 is somewhat of a different issue. Nevertheless, the Fed and the CBO are anticipating a "soft landing" in 1985.

Last February the Fed's numbers for 1984 were not near so appealing. Table 5 shows the February versus July projections for 1984:

TABLE 5

(Q4/83-Q4/84, Federal Reserve)

	GNP	Output	Prices	M1	V1
Feb. '84	9 1/2%	4 1/2%	4 3/4%	6%	3 1/2%
July '84	10 3/4%	6 1/2%	4 1/4%	6%	4 3/4%

The Fed began 1984 with one of the lowest inflation forecasts for the year, and is likely to end the year with about the most accurate projections of this year's price increases. In contrast, for the second year in a row, the Fed considerably underestimated real output growth, and therefore nominal income growth.

My own "highly probable" projection for 1984 at the time of the March SOMC meeting was close to what is now likely in terms of nominal income growth, but the division between output and prices were reversed. In March, I suggested that output growth was likely to slow to the 4-5% range while inflation rose to the 6-7% range. For all of 1984, it now appears that just the opposite will occur once again.

Looking ahead, there is no reason to doubt that long-run inflation will be about the same as the trend growth of M1 or the monetary base, as has been true in the past. The Fed and CBO projections for 1985 would be consistent with this proposition if next year were the long-run.

Viewing the long-run as being a period of several years, the growth of both M1 and the monetary base (MB) have averaged between 7.5% and 8% since the newly appointed Chairman Volcker announced a greater emphasis on the aggregates in October, 1979. From Q4/79 to Q2/84, M1 and MB have grown at 7.7% and 7.8% rates, respectively. By the end of this year, the growth of both M1 and MB will have averaged between 7.5% and 8% for the eight years since the end of 1976. Over extended periods, inflation has been about the same as M1 growth and about one percentage point less than the MB growth rate. Prior to the past few years, there was a long-run slightly downward trend in the money-base multiplier, so M1 growth was about one percentage point less than MB growth, and correspondingly, V1 growth was about one percentage point faster than VB growth. Regulations that have changed the structure of reserve requirements, together with the

introduction of new types of transaction accounts, have resulted in average M1 growth and MB growth being about the same.

Assuming that the trend growth of VB has not changed (about 2%), the trend rate of inflation would still be expected to average about one percentage point less than the trend rate of MB growth. If so, continuation of the average rates of money and base growth observed in recent years would produce the following relationships:

TABLE 6

GNP	Output	Prices	M1	V1	MB	VB
9-10%	3-4%	6-7%	7-8%	2%	7-8%	2%

For 1985, the 6 to 7% range for inflation still seems highly probably, with the odds equally good that it will exceed that range as fall short. A deceleration of monetary growth, depending on how much and when, would cause output growth to temporarily slow to a range below the long-run potential. The array of possible outcomes for 1985 would include:

TABLE 7

	GNP	Output	Prices	M1
Sharply Slower Money	6-7%	1-2%	5-6%	3-4%
Fed Money Targets	8-9%	2.5-3.5%	5.5-6.5%	5.5%
Past Money Trend	10-11%	3.5-4.5%	6-7%	7-8%

In view of the desirability of continuing to reduce monetary growth to a non-inflationary rate, a target range of M1 growth for 1985 of no more than 4 to 6% would be desirable. Since the rapid monetary growth of the past is going to inevitably result in more inflation in 1985 (and probably in 1986) than has been experienced in 1983 and 1984, a slower average growth of output is unavoidable.

RECENT BEHAVIOR OF THE M_1 - ADJUSTED MONETARY BASE MULTIPLIER AND FORECASTS FOR THE REMAINDER OF 1984

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At the last meeting of this committee, we presented forecasts for the M_1 - Adjusted Monetary Base Multiplier in seasonally adjusted form for the first time. The seasonal adjustment was accomplished by utilizing the published seasonal factors for various components of the monety stock as published by the Federal Reserve Board, and unpublished seasonal factors for the Adjusted Monetary Base provided by the St. Louis Federal Reserve Bank. Such seasonal factors are revised once each year, and the revision for 1984 was released almost simultaneously with our last meeting. Thus, the forecasts which we prepared for the last meeting are not directly comparable with the actual data that has been released since that time. In order to get some basis for evaluating those forecasts, I have reconstructed them using the same forecasts of the not seasonally adjusted multiplier components that were employed last February, but using the 1984 seasonal factors. The forecasts as prepared last February are presented in the first line of Table 1; the forecasts as revised by the application of the new seasonal factors are presented in line 2. As you can see, the change in the seasonal factors can significantly affect the forecasts, most notably in March.

Since the historical data for the 1984 revisions of the money stock data were released in March 1984, we have been updating the forecasts on a monthly basis. The forecasts have been constructed for a six month horizon and are presented in lines 3 -7 of Table 1. The current forecast is based on data through July 1984 which were released in August. By the time of the meeting, the data for August should have been released, and I will be able to bring an updated forecast.

The forecast error statistics speak for themselves; the performance over the past six months remains consistent with our observations over the past five years. It is notable that the switch from lagged reserve accounting to contemporaneous reserve accounting in February 1984, does not appear to have caused major difficulties for the forecasting models, even though the models are completely naive with respect to this change in

regulations. An examination of the decomposition of the forecast errors by multiplier component (not presented here) indicates that significant proportion of the forecast error in February and March was attributable to the underforecast of the reserve ratio. Thus the data suggest that there may have been some small reaction of the banking system to the new regulations in the form of an increase in the demand for excess reserves relative to total deposits, but if such a reaction did occur, it did not have a major impact on the behavior of the money stock, and the phenomenon was temporary at best.

Our current forecast, (line 7 of Table 1) suggests that the M_1 adjusted monetary base multiplier should be virtually constant over the next six months, so that the behavior of the monetary base should be almost exactly reflected in the behavior of M_1 over this period. Comparing averages of seasonally adjusted weekly data with forecasts of seasonally adjusted monthly data can be hazardous, but for what it is worth, the weekly data published to date for August, suggest that the forecast for August will be highly accurate.

Table 1
M_1 - Adjusted Monetary Base Multipliers
(Seasonally Adjusted)
1984-5

Forecasts Months of:

Base	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Jan
Jan (1)	2.6020	2.5976	2.5809	2.5970	2.5906	2.6028						
Jan (2)	2.6032 (-.24)	2.5694 (.33)	2.5920 (-.91)	2.5927 (-.66)	2.5800 (-.54)	2.6049 (-1.03)						
March	2.5969*	2.5780*	2.5856 (-.66)	2.5865 (-.37)	2.5759 (-.38)	2.5998 (-.83)	2.5871	2.5906				
April			2.5686*	2.5715 (.21)	2.5605 (.22)	2.5840 (-.22)	2.5716	2.5730	2.5697			
May				2.5769*	2.5722 (-.24)	2.5943 (-.62)	2.5834	2.5861	2.5804	2.5758		
June					2.5661*	2.5935 (-.59)	2.5816	2.5845	2.5785	2.5738	2.5712	
July						2.5782*	2.5627	2.5649	2.5583	2.5539	2.5516	2.5607

	Percent	Mean Error	RMSE
one month	(5)	-.30	.44
two months	(4)	-.11	.41

* = Actual Data.
Numbers in parantheses are percentage forecasts errors.