

**SHADOW OPEN MARKET COMMITTEE
Policy Statement and Position Papers**

September 18-19, 1983

PPS-83-5



**CENTER FOR
RESEARCH IN
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Graduate School of Management
University of Rochester

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1. Shadow Open Market Committee Members - September 1983
2. SOMC Policy Statement, September 19, 1983
3. Position Papers prepared for the September 1983 meeting:

The Politics of Myopia and Its Ideology, Karl Brunner, University of Rochester

Recent Behavior of Base Velocity, Allan H. Meltzer, Carnegie-Mellon University

Oops, Another Money Demand Shift, Jerry L. Jordan, University of New Mexico

Monetary Policy Options and the Economic Outlook, Jerry L. Jordan, University of New Mexico

Analysis and Forecasts of Money Multiplier Behavior 1982-4, James M. Johannes and Robert H. Rasche, Michigan State University

Federal Budget Outlook -- A Report to the SOMC, Mickey D. Levy, Fidelity Bank

Economic Projections, Burton Zwick, Prudential Insurance Company of America

Statement on Protectionism to SOMC, Jan Tumlir, GATT, Geneva, Switzerland

Shadow Open Market Committee

The Committee met from 2:00 p.m. to 7:30 p.m. on Sunday, September 18, 1983.

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.

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

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

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

Policy Statement
Shadow Open Market Committee
September 19, 1983

At our first meeting, ten years ago, we offered a medium-term strategy for ending inflation and restoring productive growth to its long-term average. The rate of inflation for the previous three years was, then, about 5½%. The average rate of money growth -- currency and checkable deposits -- for the previous three years was then reported as 6½%. Currently, the corresponding numbers are, respectively, 6½% and 9%.

We warned, then, that unless the Federal Reserve adopted a disciplined, medium-term strategy to end inflation, inflation would rise and economic instability and unemployment would increase. Looking back, we see a record of failed policies, fiscal and monetary indiscipline and growing trade restrictions in many countries. Recent mismanagement of the international debt problem has led governments and central banks to seek short-term stopgaps to delay, but not avoid, the consequences of mistaken policies.

For the past year, money growth in the United States, Canada, Germany, Holland, France, Italy and the United Kingdom has been between 10% and 15%. These policies are short-sighted. There is no reason to doubt that the combination of these monetary policies, accompanied by contractive trade and debt policies, will produce renewed inflation, slow growth and low investment. They will fail to produce sustained real growth with low or falling inflation.

Discretionary monetary policy has failed in the United States and in most other countries. Most central banks and governments have shown themselves incapable of maintaining financial discipline long enough to restore economic growth with low inflation. The lack of discipline is, currently, a cause of the short-sighted policies that are a major reason why the world economy faces severe problems.

Currently, the world's largest economy, ours, pursues policies that drain an extraordinary share of the world's savings to finance domestic budget deficits and to maintain domestic consumption. At the same time, the U.S. government and the International Monetary Fund urge less developed countries to tighten their belts, reduce their consumption and export capital.

The International Monetary Fund urges debtor countries to adopt policies that -- however, sensible or successful when applied by one single, small country -- make little little sense when applied by several relatively large debtors simultaneously. These policies, requiring reductions in imports and expansion of exports by all the debtor countries, are mistaken. They fail to recognize that the economies of the principal debtor countries are interrelated and related to the United States and the world economy. Each country's effort to reduce imports and expand exports forces contraction on others. The effect is a contractionary policy made more severe by growing import restrictions in the United States and Western Europe.

Inflation, trade restrictions, and IMF loans are not a solution to the international debt problem. That problem cannot be solved unless international trade increases, protectionism is reduced, and debtors and creditors adopt a medium- or long-term program that distinguishes loans that are likely to be repaid from loans that are, de facto, in default.

Monetary Policy

Most forecasters now expect a modest increase in the rate of inflation in 1984. Others, including members of the Federal Open Market Committee, project an inflation rate of 6% to 7% in 1984. Higher rates of inflation are highly probable if money growth in 1984 were to remain at the 1983 rate.

No one can be very certain about these forecasts of inflation as long as monetary growth swings over the wide range experienced in recent years, as the accompanying table shows.

<u>Quarterly Periods</u>	<u>M1</u>	<u>Monetary Base</u>	<u>Policy</u>
Q4/77-Q4/78	8.2%	9.3%	GO
Q1/79	5.6	7.1	SLOW
Q1/79-Q3/79	10.3	8.6	GO
Q3/79-Q2/80	2.2	7.4	STOP
Q2/80-Q4/80	13.3	9.5	GO
Q4/80-Q2/81	7.1	7.2	SLOW
Q2/81-Q4/81	3.2	4.4	STOP
Q1/82	11.0	10.1	GO
Q1/82-Q3/82	4.7	7.4	SLOW
Q3/82-Q2/83	13.8	10.3	GO
Q3/83?			SLOW
Averages	7.9	8.0	

Current policy procedures expose the economy to the continuing risk of alternating periods of excessive expansion of money followed by excessive contraction. These procedures contribute to uncertainty and thus to high interest rates, low investment and stagnation.

The annual growth rate of the monetary base -- currency and bank reserves -- has been over 9% over the past year. This is one of the highest rates of growth in the ten years that this committee has been meeting. It is imperative that this rate of increase be reduced. Fortunately, Federal Reserve actions have resulted in somewhat slower growth of the base during the third quarter.

We urge the Federal Reserve to hold the growth rate of the monetary base to 6% from fourth quarter 1983 to fourth quarter 1984. This will be consistent with a growth rate of M1 of 6-7%, and if followed by further deceleration, would prevent a renewed burst of inflation and would help the economy to return to stable real growth with falling inflation in subsequent years.

Medium-Term Monetary Strategy

The present period of comparable rates of inflation in the major countries offers an opportunity to increase the stability of the world economy, reduce world inflation, and increase the stability of exchange rates. These desirable goals can be achieved without fixing exchange rates if principal countries agree to consistent monetary policies.

We urge the governments of the United States, Germany, Japan and the United Kingdom to agree to set the growth rate of the monetary base equal to a moving average rate of growth of real output with adjustment for a moving average growth of base velocity. Such a policy would bring relatively stable prices in all countries and would increase the stability of exchange rates. Further, it would provide a disciplined approach that is easily monitored. It would provide targets that even incompetent central banks could achieve and facilitate a gradual adjustment to changes in relative rates of financial intermediation. A transition period is required to move from present rates of inflation to this stabilizing policy.

Targets for nominal GNP growth have been proposed as an alternative to monetary targets. The idea is that the Federal Reserve would adjust the growth of money to achieve targets for GNP growth.

We find no merit in proposals of this kind. They would increase economic instability and make money growth even more unstable than under current procedures. Further, they are based on incorrect interpretations of the recent behavior of velocity.

There is no evidence that velocity is now more volatile, once allowance is made for the effects of increased variability of monetary policy and the decline in inflation.

Other Medium-Term Policies

We repeat some of our earlier recommendations for fiscal policy, trade and international debt.

Fiscal Policy

Based on our current economic forecasts, we continue to project deficits in the range of \$175-200 billion in fiscal years 1984 and 1985. These deficits reflect the continued high level of government spending. The path of total government spending for the remainder of the decade will be largely determined by spending for defense, pensions (mostly social security), and health care services. Together with interest on the debt, outlays on these programs will account for about 80% of total government spending in the future. Congress and the Administration should reduce the growth rate of real Federal outlays on these programs below the rate of sustainable GNP growth. This would require a re-examination of the defense spending path, and significant structural reforms in retirement and health programs.

Current deficit projections constitute a policy of deindustrialization. Financing the U.S. deficit absorbs savings from the rest of the world. The other side of this capital transfer is an enormous U.S. trade deficit. Business and political leaders conclude wrongly that U.S. goods cannot compete in world markets. They urge protection to slow imports and subsidies to encourage exports. These recommendations are based on an incorrect diagnosis of the problem. Tariffs and protection will not eliminate the problem but will reduce efficiency and further misallocate resources and lower standards of living. Reversing the current deindustrialization requires reducing government spending. That is the proper solution to the budget deficit and the trade deficit.

We strongly oppose repeal of tax indexation. Increasing taxes through inflation does not solve any real problem.

International Indebtedness

The international debt problem requires a temporary (self-liquidating), not a permanent, increase in the lending capacity of the International Monetary Fund. We oppose a permanent increase in the IMF quota.

International loans should be valued on the books of the lenders to reflect their real economic value. Outstanding loans that are unlikely to be repaid in full should be written down, over time, to current economic value.

Central banks and governments should announce in advance that they will accept the responsibility to serve as lender of last resort to banks or branches operating in their countries, regardless of the nationality of the owners. Central banks of major countries bear the responsibility to prevent a financial panic stemming from failures of banks that they control.

Trade Policy

Growing restrictions on international trade in agricultural and manufactured goods reduce opportunities for debtor countries to earn foreign exchange. These restrictions lower standards of living in debtor and creditor countries alike and prevent debtors from earning the resources for investment in growth.

The United States should take the leadership in international economic policy by calling for another round of phased reductions in barriers to capital movements and reductions of quotas, tariffs and other restrictions affecting trade in agricultural and manufactured goods.

THE POLITICS OF MYOPIA AND ITS IDEOLOGY

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I. The Politics of Myopia as Usual

The last twenty years offer remarkable evidence about the irrelevance of some political labels. The drift into permanent inflation, initiated by a "liberal" Administration under President Johnson, was continued under three "conservative" Administrations. The drift in our budget "policies" even gained momentum under the current conservative Administration.

President Reagan was elected on his promise to cope with inflation and the increasing burden of government. We may reasonably believe that Presidential-Candidate Reagan understood the basic economic nature of both problems. We may also reasonably believe that his understanding was matched by a sincere conviction about the required course of our monetary and budget policies. Still, two and a half years after the President's inauguration his program vanished in a limbo of political oblivion. It actually died, after some successes, already last year.

There occurred one outstanding success. The reduction of inflation from a rate above 10% p.a. to about 4% p.a. in the first half of 1983 was a noteworthy achievement. The Federal Reserve Authorities deserve full recognition on this count. They managed to lower monetary growth from 1979 to 1982 by more than half. By July 1982 monetary growth measured year over year sank to 4.5% p.a. Few observers expected in the early months of 1981 such a rapid response of inflation to monetary retardation.

A major inflation battle had been won. But the war on inflation had meanwhile been lost. The Administration, Congress and the Fed all decided in the late summer (or early fall) of 1982 to abandon the anti-inflationary concept pursued since 1980. The change was marked by the Fed's shift from a policy of "monetary control", to the old pattern of explicit interest rate targeting. There ensued beyond July 1982 one of the largest accelerations in monetary growth observed in the postwar period. Monetary growth, measured year over year, expanded almost three-fold from July 1982 to July 1983. It rose from about 4.5% p.a. to about 12% - 13% p.a.

The reversal to the Fed's accustomed pattern unavoidably produced a serious dilemma. Persistent monetary growth of 14% p.a. observed from July 1982 into the spring of 1983 would revive inflation over the next two years and bring it back to double-digit levels. Interest rates would move to corresponding levels and their variability approach the magnitudes experienced in 1980-1982. On the other hand, any substantial correction of the course pursued since the second half of 1982 induces most likely another recession in 1984. The Administration thus became confronted this summer with a difficult question: How should it shape monetary policy in order to hold the revival of inflation to a modest level and simultaneously avoid a recession in 1984. A substantial retardation has already been initiated in June. Monetary growth, measured year over year, already dropped by 2 percentage points over the past three or four months.

The phase of retardation seems unlikely to continue beyond this fall. But nobody really knows. Even the members of the FOMC hardly know what they will do in three or six months. This uncertainty is the necessary consequence of the policymaking procedure favored by the Fed's bureaucracy. The choice of procedure reveals the bureaucracy's total opposition to any pre-committing policy expressing a generally understood long-range strategic conception. The bureaucracy appreciates quite well that any pre-commitment, expressed for instance by a constant monetary growth rule, lowers its status in the political market and its attractiveness to a potential clientele. The political commitment to discretionary policymaking with its inherent uncertainties serves the bureaucratic interests much better. Thus emerges a "politics of myopia" confined to tactical manipulation for the day, dominated by reactions to immediate states and events with little thought or attention to longer-run consequences. Discretionary management concentrates thus on specific actions addressed to at most a few weeks.

The Fed's policy conception is not, *per se*, a sufficient condition for an inflationary bias. It actually explains the behavior of the Fed in the 1930's and the deflationary momentum produced by the Fed at the time. Our Central Bank effectively contributed to the debacle of 1929-1933 and the second recession in 1937/38. Once inflation has been set in motion however, the politics of myopia built into discretionary management lowers the likelihood of a non-inflationary state to a very low level. The politics of myopia thus converts monetary policymaking to a "random walk through history".

The social cost associated with a politics of myopia is quite substantial. It produces unnecessary short-run losses in output and lowers incentives for long-range investments. But the political process creates no feedback from these costs to the bureaucratic agency responsible for their occurrence. The effect produced by this absence of a useful "feedback control" is reinforced by the approval generally encountered by discretionary management on the media and political market. The media market thrives on the frequent appearance of "fresh and new" events. This demand is satisfied by discretionary management, but not by a pre-committing strategy. The operators on the political market understand on the other hand that a politics of myopia offers opportunities to exploit the government's monetary powers for purposes of wealth redistribution closed off by pre-committing strategies.

Several strands in the nature of the political process explain the absence of a political feedback. The ideological defenses erected on behalf of discretionary policymaking should be especially noted at this stage. The Fed naturally contributed over the past decades a major portion to the ruling ideology. It has been supported time and again, and most particularly over the recent past, by an array of professional articulators in Wall Street, the media or political market. Some strands of this ideology shaping recent attitudes will be further examined.

II. Strands of the Current Ideology

1. The Cost of Anti-Inflationary Politics are Too High

The successful reduction of inflation imposed its social costs on our society. The recession of 1981/82, predicted by the Shadow in early 1981, was the consequence of the monetary retardation observed at the time. Complaints about the social cost associated with an anti-inflationary policy increased as the recession unfolded. One heard more and more that the social cost of anti-inflationary monetary policies are "simply too high".

Several issues involved in this context need our attention. We just note in passing that such arguments frequently cover an essentially inflationist bias occasionally associated with some massive economic or political interests.

A prevalent fallacy requires more explicit consideration. A Keynesian tradition suggests that monetary policy can only lower inflation by setting off a recession. A recession appears thus as a sufficient and necessary condition of declining inflation. This view is usually supported by the notion that the economy, and particularly

movements of the price-level, are controlled by strong exogenous inertial forces. These forces are supposed to distribute the effects of monetary retardation over a long series of years.

Monetary analysis emphasizes that men operating on the market place are motivated to learn about new events and grope for adequate interpretations. This analysis emphasizes thus that monetary retardation is a sufficient and necessary condition for declining inflation. Whether or not a recession emerges depends on the credibility of the anti-inflationary policy. With a highly credible policy strong motives operate to adjust price movements rapidly to the new environment. The recession will be small and short under the circumstances. With low credibility agents require convincing information before they modify their price setting behavior. But the accrual of such information requires time. The recession will be comparatively deep and long in this case. The social cost of an anti-inflationary policy is thus not simply a function of magnitude and speed of monetary deceleration. The credibility of the policy regime crucially affects the outcome, and this credibility is shaped by the history of inflationary policies and agents' knowledge of policymaking procedures.

Two additional aspects need our attention. The argument advanced to justify a policy of permanent inflation often attributes the full rate of unemployment (say 10.8% in the USA) to the anti-inflationary policy. This practice appears most particularly in the media. Associated with this practice is the claim that the recent recession was the largest since the 1930's. This view is however quite false and thoroughly misses important aspects of the unemployment problem. My last position paper prepared for the meeting of March 6-7, 1983 (PPS-83-2) presented data showing that the last recession was smaller than the recessions of 1953/54 and 1957/58 but larger than those of 1960/61 and 1970/71. Its magnitude occurred thus well within the range of postwar recessions. The dramatic exaggerations perpetuated on the media market resulted of course as an immediate impressionistic response to the high rate of unemployment observed in 1982. This rate was certainly the highest since the 1930's. But its nature hardly compared relevantly with the unemployment experience of the Great Depression from 1929 to 1933. Episodes beyond 1933 associated with the NIRA and the new labor market legislation contained some elements similar to those conditioning unemployment in the 70's. The cyclic component reflecting monetary retardation measured probably at most 3 percentage points of the 10.8% reached in 1982. The large remainder expresses the normal rate of unemployment determined by "real conditions" independent of monetary events. The evolving pattern of welfare

arrangements affecting the relative (private) cost of unemployment supplemented by union and other government policies determined the trend in the more permanent component of normal unemployment. Pervasive structural changes in all Western economies requiring large reallocations of human and non-human resources add a more transitory component to the basic normal rate of unemployment. An array of rigidities introduced by government or unions which prevent the necessary adjustment transform a potentially transitory event into a permanent feature of the economy. A crucial consequence of this analysis is the fact that a dominant portion of current unemployment in the Western democracies cannot be lowered by exercises in monetary expansionism.

Lastly, are the social costs of anti-inflationary policy "too high"? In order to answer the question we need to know what "too high" means. In particular, we need to know what is the relevant comparison? No relevant explanation is usually offered and it is simply contended that "it is too high" without ever considering the social costs associated with the relevant alternative rarely explicitly mentioned, viz. a policy of permanent inflation. Some contend that a policy of stable and anticipated permanent inflation invokes much lower social costs than an anti-inflationary policy. This could indeed be the case. But the comparison is quite irrelevant. A policy of stable and fully anticipated inflation belongs to the Never-Never Land of romantic illusions. The reality is controlled by a politics of myopia and discretionary management. The monetary authorities operating in our reality staunchly oppose the pre-commitment required for a stabilized and fully anticipated policy of permanent inflation. A policy of permanent inflation thus imposes in fact a series of real shocks and most particularly intermittent declines in output. This aspect was developed in greater detail in previous position papers. These papers argued that the social costs associated with a once-and-for-all anti-inflationary policy were probably substantially lower than the present value of the social costs built into a policy of permanent inflation. Advocates of permanent inflation should at this stage seriously consider this issue before we grant them any intellectual respectability.

2. The Slack (or Gap) Makes Monetary Expansion Innocuous and Even Desirable

The current state of the economy seems to justify, so we hear, a large increase of monetary growth. The high level of unemployment and a comparatively low level of output defuses apparently any potentially inflationary dangers associated with a massive monetary acceleration. The pervasive slack in the economy controls the price movements and monetary acceleration will be absorbed by a corresponding expansion

of output with negligible inflationary effect. We are assured moreover that at some indefinite point in the future monetary growth need be lowered. Advocates of this policy never experience any doubts that they will know when to apply the monetary brakes in time to prevent the resurgence of inflationary drift.

We note that this argument was forcefully advanced in the summer of 1975 and 1976. It justified the abandonment of the anti-inflationary episode introduced in 1974 and supported the monetary expansion of 1977 and 1978. The consequences became clearly visible on the international currency and the domestic financial markets in the second half of 1978 and 1979. These events, produced by the policymaking of previous years, prompted the change in policy introduced in October 1979.

The argument, plausible as it may sound, must be recognized as an expression of the politics of myopia. Little attention is directed to the state expected beyond the immediate monetary acceleration. But the acceleration imposes a dilemma. Sustained acceleration revives inflation and a subsequent retardation lowers the momentum of economic activity. The argument thus supports the yo-yo game typically fostered by the politics of myopia. It is a game which confronts agents operating in the market place with great uncertainty about the course of monetary affairs. Monetary evolution contributes under the circumstances to substantial variations in output. It also raises the level of real interest rates and increases the variability of nominal rates. The dominant political concern addressed to recessions and rising unemployment whenever inflation receded produces moreover under this policymaking procedure a systematic inflationary bias. An inflation rate (say 4% p.a.), low compared to the prior peak (above 10% p.a.), tends to divert political attention to the "gap and slack" in the economy. The inflation issue lost political significance at this stage and "moving the economy again" is the new key word. As this process unfolds over time the critical level of comparatively low inflation tends to drift higher. A politics of myopia is basically incapable to cope with the long-run requirement of a non-inflationary policy minimizing destabilizing monetary shocks on the economy.

3. The KKM Syndrome

The assertion that "nobody knows what money is" emerged as the simplest and most radical expression of the politics of myopia. This extreme position has been propagated by Irving Kristol on the intelligentsia market, by Henry Kaufman on Wall Street, and Frank Morris (President of the Boston Fed) in the banking community.

The protagonists of the "death of money" hardly bother to develop an argument or even an approach to an analysis. Their cogitations remain at an impressionistic

media level. None has ever produced, even approximately, an articulated piece acceptable by any professional standards. But one wonders whether any contribution to knowledge or any relevant information is really intended by the protagonists. It would appear that some of these verbal exercises are mostly motivated to discredit "monetarism", understood to mean a view advancing the idea of a long-range pre-committing strategy of monetary control. It certainly offers a useful excuse for the politics of myopia.

The assertion that "nobody knows what money is" is well designed to tickle the media market's attention. The political market can usefully exploit this line to justify essentially inflationary policies. But some simple reflections should alert us that the statement makes little sense.

A general pattern characterizes all trading economies beyond the most primitive level. Among all the assets (or resources) of the economy occurs without exception a small subset with a very distinctive property. The items of this subset are typically used as a general medium of exchange. Transactions are typically settled by a transfer of such items. Transactions are thus not settled by random transfers of assets. This distinctive occurrence of general media of exchange constitutes the characteristic feature of a monetary economy and "money" consists of all items typically and generally used as a medium of exchange.

So much should really be quite clear but obviously needs to be reemphasized. With this as our background what is the meaning of the assertion that "nobody knows what money is"? Consider the implication of such an assertion. If nobody knows what money is, then nobody knows about the existence of any generally used media of exchange. This means however that no such distinctive assets will exist. When "nobody knows what money is" transactions are settled by random transfers of assets. But we do not observe this pattern. Most agents, including even Kristol, Kaufman and Morris, exhibit little difficulty in distinguishing between the majority of items in the small monetary subset and all other non-monetary assets. Kristol should, according to his own assertion, be indifferent between receiving currency, a check on a deposit account, a car load of eggs or cucumbers for his learned contribution to the Wall Street Journal. His actual behavior hardly reveals such indifference, i.e. he knows, as most everybody else, what is money and what is not money.

Some elaborations occasionally made by the protagonists of the "death of money" suggests that they do not really mean what they say. Morris exemplifies for instance his point with a reference to money market fund accounts. He refers especially to some prevailing uncertainty about the behavior of such accounts. Such uncertainty

indeed exists and will frequently exist around the boundary line between two classes of phenomena. But this kind of uncertainty offers no rational basis whatsoever for the sweeping assertion so cavalierly and repetitively offered to the media market.

The inference from a degree of uncertainty about the boundary line to the assertion of total ignorance may satisfy the standards of the intelligentsia market. But its general application would yield some weird results. The boundary line between Canada and the USA is hardly specified to the last millimeter. The KKM inference thus assures us that nobody knows really about Canada and the USA. The political undertone implicitly justifying a politics of myopia is further revealed by the remarkable fact that this inference is suspended on many occasions involving comparatively substantial uncertainties about the boundary line (e.g. inflation rate, components of national income accounts, current account deficits, etc.).

4. Velocity, the Demise of Monetarism and Flexible Action

The relevant issue obscured by the choice of language expressed by the KKM syndrome is the magnitude and behavior of the measurement error. The impressionistic hyperbole suggests at best that "something" happened to this measurement error over the past few years. But we obtain no clear indication about the precise content of the vague suggestions made. A very similar situation can be observed with the confused discussion about velocity. Somehow the behavior of velocity was radically changed in such a manner as to spell the "demise of monetarism" (Robert J. Gordon). But the nature of the assertion, while conveying an emotionally satisfying ring reinforced by a small number of observations, remains quite obscure. We are not really told what has changed, what properties of the stochastic process governing velocity were modified in which way. It is not possible to infer from the vague allusions whether the level of velocity suffered a once-and-for-all permanent change, or whether the trend growth increased (or decreased), or possibly the variance of the stochastic term increased. In a similar vein we do not learn what the contention about the measurement error really is. Has its average increased, or its variability, or both? Interestingly enough, no evidence has so far been presented by the protagonists bearing on any of the aspects. "Eyeball" observations covering just a few quarters offer simply no relevant information for our purposes. There is, so far, no evidence that the variance of the stochastic term increased or the trend growth substantially shifted. Allan H. Meltzer's position paper suggests however the possibility of a once-and-for-all drop in the level of the base velocity. It is noteworthy that the estimated variance of the base velocity was lower for the 1970's than for the 1950's (excluding the Korean war experience).

Much attention was directed to the apparently peculiar behavior and large decline in velocity observed over the past six quarters. Robert J. Gordon detected in this behavior the "demise of monetarism". An editorial writer of the Wall Street Journal attributed moreover to "monetarists" all kinds of propositions apparently inconsistent with the observed behavior of velocity or the monetary multiplier. The significant aspect of all this contentious dispute is the simple fact that the propositions occasionally attributed to monetarists (e.g. predictable velocity and stable multiplier) are just the opposite of what has been said (most particularly by the Shadow). The statistical record repeatedly surveyed over the past years by the Shadow essentially emphasized two facts: first, that the monetary multiplier is "not stable" (i.e. not constant) but effectively predictable, whereas secondly, velocity is neither stable nor predictable. The pattern traced by velocity is best approximated by a random walk. On other occasions, as in the case of Robert J. Gordon, there occurs no reference to any "monetarist proposition" apparently invalidated by the "velocity recession." The whole verbal exercise exhibits consequently no relevant intellectual content, whatever its media or political value may be.

Professor Gordon's critique could possibly be interpreted to be addressed to the monetarist policy rule without however any bearing on monetary analysis. He may convey a frequent impression that large unexpected movements in velocity require a flexible and "non-dogmatic" response by the Central Bank. Such flexibility in response is suggestively offered as a strategy necessary to cope with the velocity problem. Gordon pleads in particular, as some others, for a nominal GNP rule. We may explore the implication of this strategy with the aid of the following formulation. Let m stand for the rate of monetary growth, g a target rate of increase in nominal GNP, v the rate of change in velocity, β the adjustment coefficient to target deviations, c a constant representing desired "average" monetary growth, and lastly ϵ a random shock modifying the monetary control process; we write then

$$m_t = c + \beta (g - m_{t-1} - v_{t-1}) + \epsilon_t \quad (1)$$

We proceed moreover under the best assumption about velocity. This means that v is controlled approximately by a white noise process. Monetary growth moves under the circumstances according to the following pattern

$$m_t = \frac{c + \beta g}{1 + \beta} + \sum_{i=0}^{\infty} (-\beta)^i \left[\epsilon_{t-i} - \beta v_{t-1-i} \right]$$

The variance of monetary growth can be lastly derived

$$V(m) = \frac{1}{1-\beta^2} \left[V(\epsilon) + \beta^2 V(v) \right] \quad (2)$$

where $V(x)$ indicates the variance of x . A positive contemporaneous covariance between ϵ_t and v_t adds a positive term on the right side raising $V(m)$. A negative contemporaneous covariance lowers on the other hand $V(m)$.

Expression (2) shows that flexible adjustment expressed by a positive β converts velocity shocks into monetary shocks. The variance $V(m)$ rises with the variance $V(v)$. This dependence of $V(m)$ increases moreover with β . The larger the response of the monetary authorities to a target deviation, the greater is the variance of monetary growth. Advocates of "flexible action" may argue that this result is quite irrelevant. The larger variance of m is designed to offset the variance of v in order to produce a smaller variance on the growth rate of nominal GNP. This contention is easily demonstrated to be false. The growth rate of nominal GNP, indicated by gnp , is given by

$$gnp = m_t + v_t$$

or

$$= \frac{c+\beta g}{1+\beta} + \sum_{i=0}^{\infty} (-\beta)^i \left[\epsilon_{t-i} - \beta v_{t-1-i} \right] + v_t$$

This expression implies that the variance of gnp , disregarding covariances between ϵ and v , is given by

$$V(gnp) = \frac{1}{1-\beta^2} \left[V(\epsilon) + V(v) \right]$$

The lowest variance is achieved under the circumstances with $\beta = 0$, i.e. with a strategy of constant monetary growth.

It could be argued that a complex structure of serially correlated ϵ 's and correlated ϵ' and v 's could conceivably justify the choice of a positive β . Such arguments typically overlook the information level required for their case. Indeed, if such complex structure prevailed with all the proper covariances and serial correlations necessary to yield a positive optimal β -value, the policymakers would have to possess reliable knowledge about this structure. This knowledge assumption is

hardly tenable. But an optimal choice of β made relative to a false specification of the relevant stochastic processes yields little expectation of true optimality. We have no basis under the circumstances to expect an improvement over a constant monetary rule.

This point can be elaborated in the context of a modified Gordon rule. Suppose planned monetary growth mp depends on the deviation of expected gnp instead of the last observed gnp , from target, i.e.

$$mp_t = c + \beta (g - mp_t - E_t^* v_t) \quad (3)$$

The magnitude $E^* v$ describes the perceived expectation of v for the current quarter on the basis of information available at the beginning of quarter t . This perceived expectation diverges in the context of very incomplete information about the stochastic processes from the true expectation. This happens in particular whenever one wishes to impose a systematic pattern on a serially uncorrelated v . The magnitude $E^* v$ should be considered as a random term in this case. It is not a constant maintained over time. Actual monetary growth can be written as

$$m_t = mp_t + \epsilon_t \quad (4)$$

where ϵ signifies against the random component in monetary control. The growth rate of nominal GNP satisfies thus

$$gnp = \frac{c+\beta g}{1+\beta} - \frac{\beta}{1+\beta} E^* v + \epsilon_t + v_t \quad (5)$$

The variance of gnp is given by

$$V(gnp) = \left(\frac{\beta}{1+\beta} \right)^2 V(E^* v) + V(\epsilon) + V(v) \quad (6)$$

The first term expresses the increment in the variance of gnp attributable to incomplete and risky information about the expectation of v in the context of flexible adjustment policies. A random walk of v (even with drift) clearly implies that β be set equal to zero. Once again the underlying velocity problem determines a constant monetary growth rule as an optimal strategy. The much advertised velocity problem yields no case for a "policy of flexible action" which usually produces the reality characterized by the politics of myopia.

RECENT BEHAVIOR OF BASE VELOCITY

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The Federal Reserve is back with its usual claim that the demand for money shifted in 1982. The alleged shift is used to justify a return to the money growth rates typical of the middle, and late seventies, the Burns and Miller years of highly inflationary monetary policy. This time the claim seems more substantial, or at least is more obvious to the naked eye, so it has been treated as an established fact by Wall Street and Washington.

A common explanation of the shift is that deregulation of the banking system reduced the demand for time deposits relative to the new, interest earning demand deposits. This answer may be correct, as far as it goes, but it is surely incomplete. Most of the observed decline in velocity in 1982 and early 1983 cannot be explained in that way.

The reason is that the velocity of the monetary base -- currency and total bank reserves -- declined relative to trend also. The Federal Reserve Bank of St. Louis adjusts the base by the amount of reserves released or impounded by changes in reserve requirements, so the recent regulatory changes that lowered the banks' average reserve requirement are treated by St. Louis as a release of reserves and a reduction in the demand for base money. The reduced demand for base money taken alone, has the effect of increasing measured base velocity. This effect of regulation takes us in the wrong direction. The introduction of super-Now accounts raises the demand for base but has too little effect on required reserves to explain the decline in base velocity.

Deregulation and other institutional changes may have increased the demand for currency to be used as vault cash (reserves) of depository institutions. Much of the recent decline in base velocity (relative to trend) is concentrated in the first quarter of 1982, well before major regulatory changes took effect, however. This timing of the drop in velocity would seem to rule out a major effect on deregulation, although deregulation may have contributed to the decline in velocity in the fourth quarter of 1982 and the first quarter of 1983.

*I am grateful to David Santucci for his assistance with the computations.

Other proposed explanations include the decline in expected inflation and the variability of monetary growth and of expenditure. A drop in the expected rate of inflation lowers the cost of holding cash balances, so cash balances per unit of output rise and velocity falls. Rapid accelerations and decelerations of money (or spending) introduce unanticipated changes into the growth of money and economic activity. Some of these unanticipated, transitory changes are held as cash balances. In addition, increases in the unanticipated components of money and spending increase uncertainty and, thus, lower velocity relative to trend.

Deviations from Trend: First Results

In "Strategies and Tactics for Monetary Control", Karl Brunner and I report estimates of the trend in base velocity computed from quarterly data, using time series analysis, for the period 1951-2 to 1981-3. The computed trend is .0061 per quarter or approximately 2.5% per year. For a more recent period, 1971-1 to 1981-3, the estimated trend is very similar, .0059 per quarter. I have used the trend computed for the longer period (.0061) to obtain trend values for velocity and extended the time period to include the first quarter of 1983. The observations we seek to explain are deviations from the computed trend of base velocity. Let DV denote these deviations.¹⁾

As a first effort to test whether there has been a systematic change in base velocity, I estimated (t-values in parentheses),

$$DV = -0.04 - 0.02 DB + 0.02 \hat{p} \quad (1)$$

$(0.22) \quad (4.08) \quad (3.04)$

$$\rho = 0.94, R^2 = 0.19$$

(31.31)

where DB is the acceleration of the base, computed as the difference between the current rate of change and a moving twelve quarter average rate of change, \hat{p} is the current (actual) rate of price change, and ρ measures first order serial correlation of the residuals.

1. The hypothesis is:

$$EV = V_0 e^{.0061t}$$

with EV denoting the expected (trend) value of velocity, and

$$V - EV = DV.$$

$DV = f(DB, \pi)$ where π is the expected rate of inflation and EV is independent of the expected rate of inflation. Changes in the expected rate of inflation induce one-time changes in the demand for money and in velocity.

The first effort produced findings broadly consistent with all subsequent efforts. The estimates suggest that accelerations of the base and reductions in the rate of inflation reduce velocity relative to trend; decelerations of the base and increases in inflation raise velocity relative to trend. These findings are consistent with a very large literature. Further, there is strong first-order serial correlation, a finding consistent with the often stated view that there is a lag before changes in money growth are fully reflected in the growth rate of spending. The coefficient of first-order serial correlation is close to unity, in this and most other estimates, suggesting that the equation could be estimated by taking first differences of the deviation from trend, DV, and other variables.²⁾ Finally, the equation suggests that most of quarterly DV is random, or at least not explained by DB, $\hat{\rho}$ and the lagged error.

The purpose of the estimates is to judge whether the trend of velocity has changed in recent quarters, after taking account of the factors included in (1). The answer given by the regression is that there is at most a one-time decline in the level of velocity. Two estimates of the size of the decline are shown in Table 1. The first is the error from equation (1) computed for the full period, 1952-1 to 1983-1. The second is the error computed from the same equation estimated for the shorter period, 1971-2 to 1983-1, inclusive. In both columns, the error in estimating DV becomes negative in 1981-4 and remains negative through 1983-1. Table 1 shows these residual errors.

Table 1
Residual Error in DV Computed from
Equation 1

Quarter	1951-2 to 1983-1	1971-2 to 1983-1
1981-4	-.114	-.072
1982-1	-.333	-.189
-2	-.233	-.253
-3	-.218	-.282
-4	-.305	-.349
1983-1	-.270	-.334

The columns are essentially the same. Both suggest that the residual remained in a narrow range and has not increased. These data suggest that a one-time drop in the level of velocity of about -0.3 may have occurred early in 1982.

2. The value of ρ suggests that DV is a random walk (hence not stationary) but ΔDV is likely to be stationary.

Even this conclusion is much less than a certainty. The standard errors of estimate for the two equations are 0.13 for the longer period and 0.17 for the shorter, so the residual error is within a range that can arise from sampling error. The conclusion that the level of velocity has changed is an interpretation of the persistence of the error, not the size.

To gain some perspective about size, note that the average level of base velocity is about 17.15 for the five quarters ending in 1983-1. The average residual error (0.28) is about 1.6% of the level for this period, but it is nearly three times the trend increase in velocity at recent levels. In 1983-1, base velocity is 1.36 (almost 8%) below its previous trend, but most of the decline is predicted by the variability of monetary policy, the decline in inflation, and the lagged residual (including effects of lagged responses to inflation and monetary policy.)

Some Further Results

The measurement of DB and inflation are open to obvious criticisms. To see whether these criticisms affect the result, I replace DB and \hat{p} , in equation (1), with DBMA2 and π in equation (2). DBMA2 is the residual from an ARIMA (0, 1, 2) model for $\ln B$ and π is the expected rate of inflation computed from an ARIMA (0, 1, 1) model estimated on computed quarterly rates of price change of the GNP deflator.

$$DV = -0.23 - 0.016DBMA2 - 0.010\pi \quad (2)$$

(0.67) (3.70) (0.49)

$$\rho = 0.94, R^2 = 0.21$$

(16.85)

The measure of current expected inflation has no significant effect on DV. In other respects the equation is similar to equation (1) in its implications.

A further step permits unanticipated changes in spending to affect DV. DYAR1 is the difference between actual $\ln GNP$ and the value predicted using an AR1 time series model.

$$DV = -0.45 - 0.017DBMA2 + 0.005DYAR1 + 0.018\pi \quad (3)$$

(1.20) (4.42) (3.41) (0.88)

$$\rho = 0.96, R^2 = 0.38$$

(21.06)

The residuals from equation (2) and (3) and the standard errors of estimate for the two equations is shown in Table 2. These are not substantially different from the residuals reported in Table 1. They suggest, at most, that there may have been a one-time drop in the level of base velocity of about 1.5%. The inference is a bit weaker, given the possible tendency of the residual to decline. There is no evidence of a substantial change in the behavior of velocity once allowance is made for the effects of unstable monetary policies, the decline in inflation, and lagged effects.

Table 2
Residuals from Equations (2) and (3)

Quarter	Equation (2)	Equation (3)
81-4	-0.09	-0.03
82-1	-0.29	-0.28
82-2	-0.29	-0.32
82-3	-0.22	-0.19
82-4	-0.28	-0.23
83-1	-0.16	-0.16
Standard Error	<u>±0.17</u>	<u>±0.15</u>

A Change in Trend?

The persistence of the negative error, and the relative large decline in measured velocity may be the start of a lower "trend" in velocity. A lower trend rate of increase could occur, for example, if the instability of monetary policy encourages people to hold more money (here mainly currency) per dollar of GNP. My previous estimates are based on the assumption that the trend has remained unchanged. Is there evidence of a change in trend?

Table 3 presents some data for earlier (old) more recent (current) estimates for the ARIMA 011 model, with a constant, used to compute the trend.

Table 3

	Old	Current
1951-2 to 1961-1	.0073	.0067
1961-1 to 1971-1	.0055	.0051
1971-1 to 1981-3	.0059 \pm .0012	
1971-1 to 1983-1		.0044 \pm .0018

The hypothesis that the trend has changed is rejected for the sample observations. Measuring "trends" always depends on starting and ending points chosen, so a different sample may give a different result.

Conclusion

There is no doubt that base velocity declined in 1982 and early 1983 and is lower than the value expected from its prior trend. The issue is whether the trend of base velocity has changed, or whether there has been a one-time drop in base velocity, or whether the recent behavior of base velocity is consistent with its past behavior when account is taken of the factors determining that behavior.

There is, as yet, no reliable evidence of a change in trend. Arguments that base growth can be raised to offset the faster trend rate of increase in base velocity appear to rest on a weak foundation, or no foundation at all.

There is slightly more evidence suggesting a one-time decline in the level of velocity in the first quarter of 1982. The evidence is weak and consists mainly of a persistent residual equal to about -0.3, 1.5% of the recent value of base velocity. If true, this finding might have been used to justify a one-time increase in the level of the monetary base in early 1982, but it cannot serve as the reason for faster base growth now.

Most of the decline in base velocity appears to be the result of the variability of monetary policy, a decline in the expected and actual rates of inflation and the delayed effect of past changes in these and possibly other factors. The analysis suggests that a more reliable consistent monetary policy that reduced the variability of the base would also reduce the variability of base velocity.

OOPS, ANOTHER MONEY DEMAND SHIFT

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Late in 1982, the growth of the money supply (M1) accelerated sharply while nominal GNP growth declined. The ratio of GNP to M1 is referred to as the "income velocity of money" and the inverse of velocity is the "demand for money." So when income growth slowed while money growth increased, it was said that the demand for money increased "causing" a decline in the velocity.

In the first quarter of 1983 the growth of income increased, but money growth was faster, so the ratio continued to decline and it was asserted that the "demand for money" was still increasing. However, in the second quarter of 1983 nominal income growth was very rapid while money growth slowed somewhat, so the ratio increased slightly. Now, in the second half of 1983, money growth is supposed to be sharply reduced, while GNP is expected to continue rising at a rapid rate. Presumably, the implied increase in the velocity of money will be "caused by" a decline in the demand for money balances.

Or is it? Maybe the whole episode reflects not much more than the fact that there are lags between changes in the rate of change of money growth and nominal income growth. Let's look at the recent record.

Following the imposition of a pervasive set of credit controls early in 1980, the level of M1 declined in the second quarter of that year. However, GNP declined by even more, so the ratio of GNP to M1 also declined. Some observers, including Federal Reserve Board staff members, said the decline in the money stock was caused by a decline in the demand for money balances, but the decline of velocity implied an increase in the demand for money! Which was it? Trying to explain what is happening to the money supply by making assumptions about what is happening to money demand is a tricky business.

During the first quarter of 1981, nominal income growth was almost 20%, while M1 growth slowed to only about one-third that rate. Since the ratio of income to money went up, the apparent rise in velocity meant the demand for money declined, right? Not necessarily. Interest rates also fell in the first quarter of 1981, which

might imply a greater demand for money balances. Those who "explain" what happened in the first quarter of 1981 by references to "shifts in the demand for money" have a problem in reconciling their argument with what happened in the spring of 1980.

The alternative explanation for what happened in early 1981 is quite straight forward. In the second half of 1980, money growth accelerated to a 13% annual rate. After the normal lags, income growth also accelerated. Meanwhile, money growth was reduced, so the ratio of the two increased. The apparent increases and decreases in velocity reflect nothing more than the presence of lags.

For all of 1981, money growth was sharply reduced compared to the previous year, while nominal income growth did not slow as rapidly. The result was an apparent increase in velocity, since the ratio GNP/M1 rose about 4.5%. Then, 1982 was the mirror image of 1981. Money growth reaccelerated, while income growth declined in lagged response to the sharply slower money growth in mid-1981. Once again, Fed staff members concluded that the observed decline in the ratio GNP/M1 reflected an increase in the demand for money balances, and they "explained" the rapid growth of money supply as being appropriate because of the assumed increase in money demand.

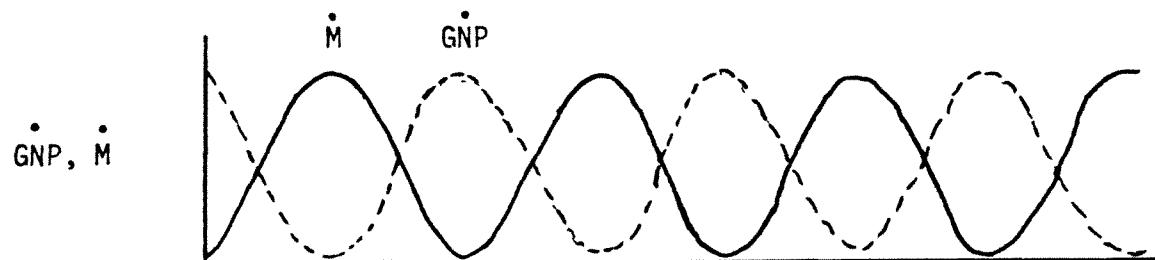
Following similar logic, the central bank in Germany observed that even during the hyperinflation of the early 1920's, the people always demanded more money than was being printed. Central bank officials concluded that they would have to buy bigger and faster printing presses if they were going to be able to create new money as fast as the demand was growing.

During the past few years, U.S. monetary growth has been more volatile than at any other time in recent history. The "explanations" offered by the Fed for this increased volatility have been couched in terms of "money demand shifts," and an effort has been made to convince outside observers that these accelerations and decelerations of monetary growth have little economic significance. In 1981, it was argued that more attention should be paid to broader measures of money or credit because of the declining importance of M1-type money. Then in 1982 and 1983, it has been argued that the public's increased preference for M1-type money meant that its rapid growth rate could not be taken as a reliable indicator of the thrust of money policy actions. Again, which story are we supposed to believe -- M1 is not reliable because people don't want to hold it, or M1 is not reliable because people do want to hold it. The Fed has tried to have it both ways.

The logic of these ad hoc arguments is that as long as accelerations and decelerations in money growth are attributed to shifts in money demand, it is impossible to conclude that there is either an excess supply of or excess demand for money balances.

Consequently, there can be neither expansionary nor contractionary impulses arising from the monetary growth fluctuations. Consistent with past behavior, continued rapid growth of GNP in the second half of 1983 (around 12%), while M1 growth is supposed to be slower (about 7%), will be attributed to an increase in the velocity of money "caused by" a decline in the demand for money. Early in 1983, they said rapid M1 growth did not suggest a vigorous recovery. Soon we can expect them to be saying that slow M1 growth doesn't suggest slower economic growth.

As long as the extreme volatility of money continues and there are lags between monetary growth and income growth, there must be considerable short-run volatility in observed velocity. For illustration, suppose the lag from changes in monetary growth to changes in income growth was exactly two quarters. Suppose further that monetary accelerations and decelerations lasted exactly six months. A chart of money growth in income growth would look something like the following:



[\dot{M} refers to money growth and \dot{GNP} refers to income growth.]

If one computed the ratio of GNP/M for each quarter, the series would rise and fall very sharply every other six-month interval. A naive interpretation would be that "velocity is unstable" (because the "demand for money" is unstable) while actually the volatility in the data series was produced by a highly stable relationship between money and income in the presence of lags and volatile monetary growth.

The lesson from recent experience is that the monetary authorities are simply unwilling to produce stable monetary growth and they do not want outside observers to conclude that the volatility of monetary growth reflects stop-and-go policy actions. Two years ago the Reagan Administration advocated a monetary policy consisting of a slow, steady, and predictable growth of the money supply. It has not been slow, it has not been steady, and it has not been predictable. Worst of all, there is absolutely no reason to assume the future will be any different than the past.

MONETARY POLICY OPTIONS AND THE ECONOMIC OUTLOOK

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There are no good monetary policy options. Since policymakers must choose between alternative policies with undesirable consequences, there is no reason to assume that a single option will be selected and adhered to. Rather, policies will continue to alternate between "spurts" of monetary growth for six to twelve months, followed by restrained monetary growth for another six months or more. Such a pattern has been observed since late 1978, and is a "best guess" about what the future will be like.

Some observers have concluded that sustained monetary expansion, lasting for two years or more, is now underway. Previous periods of sustained rapid monetary growth were 1963-65, 1967-68, 1971-72 and 1977-78. Each of those periods ended in a major "credit crunch" and a recession,* and I would assume that continued rapid monetary growth in 1983 and through 1984 would result in another severe credit crunch and recession in 1985. Some sectors and industries would be prudent to incorporate such an assumption into their strategic plans, but I do not believe it is the most likely course of policy actions.

Recent Developments

Quarterly average data for the past few years reveal the following growth rates for M1 and the monetary base:

	<u>M1</u>	<u>MB</u>	<u>POLICY</u>
Q4/77-Q4/78	8.2%	9.3%	GO
Q1/79	5.6	7.1	SLOW
Q1/79-Q3/79	10.3	8.6	GO
Q3/79-Q2/80	2.2	7.4	STOP
Q2/80-Q4/80	13.3	9.5	GO
Q4/80-Q2/81	7.1	7.2	SLOW
Q2/81-Q4/81	3.2	4.4	STOP
Q1/82	11.0	10.1	GO
Q1/82-Q3/82	4.7	7.4	SLOW
Q3/82-Q2/83	13.8	10.3	GO
Q3/83-?			SLOW
AVERAGES	7.9	8.0	

*The first credit crunch in 1966 was followed by an unofficial "mini-recession."

After an approximate two-quarter lag, nominal and real GNP growth rates have undergone similar accelerations and decelerations. Over the period since Q3/79 when the Fed allegedly adopted a more strict monetary control procedure, the following average rates of increase have prevailed:

	<u>M1</u>	<u>MB</u>	<u>INFLATION</u> ⁺
Q3/79-Q2/83	7.6%	7.6%	7.3%

Using the rough rule of thumb that inflation reflects monetary growth two years earlier, there is not much to be optimistic about. Prior to 1982, the highest rate of monetary growth occurred in 1978. Two years later, the rate of inflation hit a historic peak. Somewhat slower average monetary growth on average in 1979 and 1980 was reflected in slower average inflation in 1981 and 1982, and the sharply slower monetary growth in 1981 provides a leading indicator of the slower inflation we are experiencing in 1983. Unfortunately, the sharp acceleration of monetary growth beginning in the second half of 1982 serves as a warning that inflation is going to begin accelerating sometime in the next year. Even if we are now in or we enter another "stop" cycle for monetary growth, the seeds of increasing prices in 1984 have been sown.

The behavior of "money-income velocity" has played a significant role in discussions about monetary policy in the past few years. Interpretations of observed movements in velocity and arguments about alleged "money demand shifts" have been presented by SOMC members at previous meetings and on other occasions. Our conclusion, and that of others such as the economists at the St. Louis Fed and Milton Friedman, has been that conjectures about shifts in "money demand" do not justify the sharp accelerations and decelerations of monetary growth that we continue to observe. To the extent that the most recent explosion of monetary growth has been rationalized on the basis of an alleged shift in the demand for money, the monetary authorities have taken a very large gamble. If they are wrong, they will have thrown away all the progress made against inflation and inflationary psychology and the cost will be another recession and further upward ratcheting of unemployment.

⁺GNP implicit price deflator.

Assumptions for 1983-84

The range of forecasts for the next 15 months is not exceptionally great compared to the past few years. However, it would be a mistake to be sanguine about the outlook. There is almost no dissent from the view that real output growth in 1984 will be less than in 1983, and inflation next year will be higher than this year. How much less output and how much more inflation is influenced by assumptions about policies as well as potential shocks.

A. Underlying assumptions:

1. world oil prices change very little;
2. no significant crop failures;
3. no significant changes in the Federal budget prospects;
4. no wage and price nor credit controls;
5. no disruptive defaults on international debt.

B. Variable assumptions:

1. monetary growth in the second half of 1983 and in 1984 is steady at the mid-point of the Fed's announced target ranges;
2. alternatively, monetary growth continues to fluctuate over a wide range;
3. historic M1 velocity growth rates are resumed;
4. alternatively, the level of velocity returns to historic trend;
5. alternatively, M1 velocity grows at rates similar to historic M2 velocity trend rates;
6. alternatively, monetary base velocity growth rates follow the historic cyclical pattern, but a permanent shift in the level of the multiplier is associated with a permanent shift in the M1 velocity level (but not its growth rate).

Economic Projections

At the March 1983 meeting of the SOMC, the following table was presented:

	<u>GNP</u>	<u>OUTPUT</u>	<u>PRICES</u>	<u>M1</u>	<u>V1</u>	<u>BASE</u>	<u>VB</u>
Q4/82-Q4/83	11.2%	5.9%	5.0%	5.5%	5.4%	6.1%	4.9%
Q4/83-Q4/84	8.7	2.5	6.0	4.9	3.6	5.4	3.1

At that time it was projected that "at least two quarters of 7% plus real growth would occur in 1983." It was also projected that the rate of inflation in the first half of 1983 would be the low for the cycle and that the rate of inflation would rise in the second half of 1983 and further in 1984.

Monetary growth has been considerably higher than the SOMC assumed as well as much faster than the FOMC had set as a target. However, during such an acceleration phase of monetary growth it is typical that the contemporaneously measured velocity growth declines below trend. The growth rates of GNP, output and prices in 1983 have been similar to what was projected by the SOMC in March. It now appears that nominal income and output growth will be somewhat greater and prices about the same as we thought six months ago.

Because of the lagged effects of the sustained acceleration in monetary growth and the typical cyclical increase in velocity, it now seems likely that nominal income growth and inflation in 1984 will be greater than projected last March.

1. Variable assumptions 1 and 3 would imply the following optimistic outcome:

	<u>GNP</u>	<u>OUTPUT</u>	<u>PRICES</u>	<u>M1</u>	<u>V1</u>	<u>MB</u>	<u>VB</u>
Q4/82-Q4/83	11.4%	6.1%	5.3%	10.2%	1.2%	9.3%	2.1%
Q4/83-Q4/84	9.2	3.7	5.5	6.0	3.2	6.5	2.7

2. Alternatively, if M1 velocity were to grow at rates similar to historic M2 velocity, the projections for 1984 would be:

	<u>GNP</u>	<u>OUTPUT</u>	<u>PRICES</u>	<u>M1</u>	<u>V1</u>
Q4/83-Q4/84	8.0%	2.0%	6.0%	6.0%	2.0%

3. Another alternative would be that by Q4/84 the historic trend of velocity for M1 is re-established, which would imply:

	<u>GNP</u>	<u>OUTPUT</u>	<u>PRICES</u>	<u>M1</u>	<u>V1</u>
Q4/83-Q4/84	18.0%	?	?	6.0%	12.0%

A recession in 1985 would be almost a certainty.

4. Continuation of the stop-go pattern of monetary growth of the past several years would mean M1 growth rates of:

Q4/83 = 3.0%
Q1/84 = 3.0%
Q2/84 = 8.0%
Q3/84 = 8.0%
Q4/84 = 3.0%

Such a pattern would imply:

	<u>GNP</u>	<u>OUTPUT</u>	<u>PRICES</u>	<u>M1</u>	<u>V1</u>
Q4/83-Q4/84	10.0%	3.0%	7.0%	5.5%	4.5%

However, such a stop-go monetary policy would produce one or two quarters of zero or negative real growth next spring or summer. Interest rates would continue to be highly volatile, and domestic investment spending would continue to be anemic.

5. The acceleration of money growth in the past year was too much for too long even if M1 velocity declined to a trend rate similar to historic M2 velocity. Inflation in 1984 will be faster than in 1983. The range for inflation next year is 6% to 8%, with some probability that a quarter or two may exceed 8%.

6. Real output growth next year is not likely to exceed 4% even if the very rapid M1 growth of the past year were to be continued through 1984. Sustained rapid monetary growth has never produced sustained rapid real growth. The most likely range for real growth next year is 2-4%.

7. If variable assumption 4) is accepted (historic velocity trend is re-established), the monetary growth range the Fed has announced for 1984 would be much too high. A sharper reduction in monetary growth would be necessary to avoid a return to double-digit inflation in the next two years. Unfortunately, sharp reduction in monetary growth has an adverse short-run impact on output and employment. Given what the Fed has done in the past year, they must choose for the next year between accelerating inflation or a return to recession.

8. If the level of the monetary base velocity in Q4/84 is such that the growth of base velocity for the period Q4/80 to Q4/84 is about the historic trend (about 2%), the implied growth of GNP from Q2/83 to Q4/84 would be about 11.6% a.r. This implies a pro-cyclical acceleration of VB growth to about a 5% rate over the six quarter period, which would not be unusually high by historical standards. For 1984, the following would be implied:

	<u>GNP</u>	<u>OUTPUT</u>	<u>PRICES</u>	<u>MB</u>	<u>VB</u>
Q4/83-Q4/84	10.8%	4.3%	6.5%	6.0%	4.8%

If M1 growth continues to be somewhat faster than Base growth, M1 velocity growth would be somewhat less than Base velocity growth, and V1 would not return to historical trend by the end of 1984.

Policy Recommendations

Sorting through all the alternative assumptions, the relationship between monetary base growth and GNP growth over the four-year period is most likely to prove to be reliable. As reported at the March 1983 meeting, the pro-cyclical movements in Base velocity have tended to average out over four-year cycles, and there is no evidence to support the view that such will not be the case this time. Average growth of the Base of 6.5% in the second half of 1983 and about 6% in 1984 would minimize the risk of either a sharp acceleration of inflation or a return to recession.

ANALYSIS AND FORECASTS OF MONEY MULTIPLIER BEHAVIOR 1982-4

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In our last report to this committee, we noted that we had changed our forecasting methodology, and were updating our data set each month to reflect the data that existed at that time, and then constructed truly ex-ante forecasts based on these data sets. Our analysis of the behavior of autocorrelation functions of these updated estimations indicated that the estimated residuals of some of the component models were not behaving as white noise. As a result, we have specified most of our component models (the exceptions are those for t_2 and $r+l-v$). The revised models, which are the basis for the forecasts below, are given in Table 1. At first glance it appears that these models are considerably different and in some cases more complicated than the previous specifications. However, if we invert the moving average portions of the new models so that they are written in the form of infinite autoregressive models, and compare these with the equivalent form of our earlier models, the differences between the old and new specifications can be seen to be relatively minor.

The forecasts based on data through July 1983, for the twelve month period August 1983 through July 1984, for the M_1 -adjusted monetary base multiplier are given in Table 2. For the remainder of this year, the difference between the forecast value for each month and the actual value for the corresponding month of 1982 is quite large, on the order of 2-3 percent. However, it is important to note that these differences are declining as the end of 1983 approaches. In large part these differences represent the impact of the rapid increase in the M_1 -adjusted monetary base multiplier that occurred in the last several months of 1982, and do not reflect forecasts of any major changes in the multiplier in the near future. By the second quarter of 1984, the forecast year over year change in the multiplier is on the order of one percent. It should be remembered, of course, that forecasts nine to twelve months

into the future using these time series models have considerably less precision than one to two month forecasts from the same models. However, it seems appropriate to interpret these forecasts as suggesting that the M_1 -adjusted monetary base multiplier behavior in the next twelve months will show a slight upward trend.

Analysis of Recent Behavior of the M_1 -Adjusted Monetary Base Multiplier

In our last report to this committee, we provided an extensive analysis of multiplier forecasts for various money stock concepts and various reserve aggregates. From that analysis we concluded that any distortion in the behavior of M_1 growth over the period October through December 1982 that was uniquely and hence unpredictably associated with "parking" of All Savers funds, introduction of MMDA accounts, or the introduction of "Super NOW" accounts was minimal. This analysis is extended in condensed form in Table 3. The first three lines reproduce the one month forecasts of the M_1 -adjusted monetary base multiplier for the period October-December 1982 from our previous report. It can be seen from those results that subsequent data revisions have not substantially changed our earlier conclusions. The multiplier was somewhat underestimated in October and November, but the forecast errors were not highly unusual by historical standards. The fourth rows of the table reproduces the forecasts that we prepared for the last meeting of this committee through July 1983. Over the seven month forecast period for which data have become available since the last meeting, the largest forecast error that we have observed is .97 percent, and the mean error averaged over the entire forecast period has been close to zero. The remaining row of the table give the one month ahead forecasts updated each month since the last committee meeting. The experience here is consistent with that of the October-December 1982 period: none of the errors appears to be highly unusual by historical standards. The root-mean-squared forecast error for the ten one month ahead forecasts in Table 3 measured as a percent of the actual multiplier is .77 and the mean forecast error measured as a percent of the actual multiplier is .25. The largest absolute forecast error occurred in May 1983, by which time it is generally agreed that any distortions to M_1 behavior from the introduction of new financial instruments had long since disappeared.

TABLE 1

Revised Time Series Models for Multiplier Components
July, 1983

$(1-B)(1-B^{12}) \ln k =$	$(1 + .1786B + .1478^9)(1 - .0992B^4 - .5863B^{12})a_t$
	$(.0601) \quad (.0634) \quad (.0535) \quad (.0523)$
$(1-B)(1-B^{12}) \ln t_1 =$	$(1 + .2263B)(1 + .1508B^3 + .1954B^6 + .1785B^9 - .5074B^{12})a_t$
	$(.0606) \quad (.0549) \quad (.0553) \quad (.0563) \quad (.0571)$
$(1-B)(1-B^{12}) \ln g =$	$(1 - .4288B - .1248B^2 - .1645B^4)(1 - .6696B^{12})a_t$
	$(.1246) \quad (.0638) \quad (.0569) \quad (.0481)$
$(1-B)(1-B^{12}) \ln r+t =$	$(1 - .1157B + .0839B^6 - .1813B^9 + .6909B^{12})(1 - .3565B)a_t$
	$(.0838) \quad (.0620) \quad (.0925) \quad (.0652) \quad (.1072)$
$(1-B)(1-B^{12}) \ln z =$	$(1 + .2722B + .1362B^2 + .1411B^3)(1 - .7560B^{12})a_t$
	$(.0606) \quad (.0301) \quad (.0614) \quad (.0420)$
$(1-B)(1-B^{12}) \ln t_c =$	$(1 - .5315B)(1 - .6250B^{12})a_t$
	$(.0681) \quad (.0663)$

Note: Models for k , t_1 , g , and z are estimated with an intervention for the introduction of nationwide NOW accounts over the period Jan-Apr, 1981. For a description of this intervention see Johannes & Rasche, "Forecasting Multipliers for the 'New-New' Monetary Aggregates", September, 1981.

TABLE 2

**M_1 -Adjusted Monetary Base Multiplier
(Not Seasonally Adjusted)**

	Actual 1982-3	Forecast 1983-4	Year Over Year Percent Difference
August	2.5339	2.6251	3.54
Sept.	2.5663	2.6486	3.16
Oct.	2.5990	2.6655	2.53
Nov.	2.6098	2.6669	2.16
Dec.	2.6251	2.6829	2.18
Jan.	2.6253	2.6834	2.19
Feb.	2.5956	2.6449	1.89
March	2.6100	2.6530	1.63
April	2.6499	2.7023	1.96
May	2.6060	2.6366	1.17
June	2.6224	2.6533	1.17
July	2.6255	2.6553	1.13

TABLE 3

**Summary of Recent Ex-Ante Forecasts of M_1 -Adjusted Monetary
Base Multipliers (Not Seasonally Adjusted)
(Percent Errors in Parentheses)**

	Oct 1982	Nov 1982	Dec 1982	Jan 1983	Feb 1983	Mar 1983	Apr 1983	May 1983	June 1983	July 1983
Actual (July 1983)	2.5990	2.6098	2.6251	2.6253	2.5956	2.6100	2.6499	2.6060	2.6224	2.6255
Forecast 9/82		2.5778								
Data		(.82)								
Forecast 10/82			2.5775							
Data			(1.24)							
Forecast 11/82				2.6230						
Data				(.08)						
Forecast 12/82					2.6408	2.5902	2.5999	2.6542	2.6261	2.5972
Data *					(-.59)	(.21)	(.39)	(-.16)	(-.77)	(.97)
Forecast 1/83						2.5754				
Data						(.78)				
Forecast 2/83							2.6070			
Data							(.11)			
Forecast 3/83								2.6731		
Data								(-.87)		
Forecast 4/83									2.5708	
Data									(1.36)	
Forecast 5/83										2.6339
Data										(-.44)
Forecast 6/83										2.6234
Data										(.08)

*Forecasts prepared for March, 1983 Shadow Meeting.

FEDERAL BUDGET OUTLOOK-- A REPORT TO THE SOMC

Mickey D. LEVY
Fidelity Bank

The federal budget deficit for fiscal year 1983, which is drawing to a close, will be approximately \$207 billion, nearly double the record-setting \$110.6 billion deficit in 1982. (The total rise in publicly-held debt, including deficits incurred by off-budget entities, will exceed \$225 billion.)

Projections of the FY1984 budget deficit have been revised downward, to \$179.7 billion by the Administration in its Mid-Session Review of the 1984 Budget, and to a range of \$183-\$192 billion by the Congressional Budget Office (The Economic and Budget Outlook: An Update, August 1983). The Administration also forecasts deficits to decline to \$129 billion in FY1986, while the CBO forecasts slightly higher budget imbalances in future years:

Projected Unified Budget Deficits (\$Bil)

	Fiscal Year			
	1983	1984	1985	1986
Administration	210	180	170	129
CBO	207	183-192	176-180	143-146

Any optimism about these forecasts of declining deficits, however, must be tempered. Both forecasts assume the enactment of substantial deficit-cutting legislation, and such action may not be politically feasible, at least on the short-term horizon. Also, although there is much uncertainty about the economic outlook, some of the assumptions underlying these projected budget outcomes may be too optimistic. Consequently, budget deficits may be higher than these projections indicate.

Budget Proposals and Current Services Budget Outcomes

Unless proposed legislation is enacted, unified budget deficits are projected to remain above \$200 billion for years to come, even if a strong economic expansion is

sustained, inflation remains modest, and interest rates decline. The Reagan Administration's budget calls for deficit-reducing legislation of \$21 billion in FY1984, \$36 billion in 1985 and \$90 billion in 1986:

The Reagan Administration's
Current Services and Proposed Deficits (\$Bil)

	1984	Fiscal Year 1985	1986
Expenditures			
Current Services	866	948	1032
Proposed	848	918	991
Difference	-18	-30	-41
Revenues			
Current Services	666	742	813
Proposed	668	748	862
Difference	3	6	49
Deficits (-)			
Current Services	200	206	219
Proposed	180	170	129
Difference	-21	-36	-90

*Figures may not add due to rounding

The Congressional budget plan, as adopted in the First Concurrent Resolution on the Budget for Fiscal Year 1984, also includes significant deficit-cutting legislation. However, the proposals by the Administration and Congress involve major differences in policy mix that will be difficult to reconcile. The Administration's budget calls for large reductions from current services in non-defense expenditures, slight increases in defense outlays, and only modest rises in tax revenues. (For FY1986, the Administration's proposed \$129 billion deficit hinges critically on its contingency tax plan, which will generate \$46 billion in additional revenues.) In contrast, the Congressional budget plan relies very heavily on legislated tax increases, and it would cut scheduled defense spending. The first Concurrent Resolution also would set up a "reserve fund" for new spending initiatives in domestic programs.

Passage of \$21 billion worth of deficit-cutting legislation for FY1984 seems unlikely given the conflicting composition of the proposed cuts and the fact that 1984 is an election year. The beginning of FY1984 is rapidly approaching and little effort has been made to reconcile the conflicting policy approaches. The Administration's proposed outlay cutbacks in Medicare, Medicaid, farm price supports, and other non-defense expenditure programs require Congressional approval. Moreover, one-quarter

(\$4.5 billion) of the Administration's proposed \$17.9 billion in outlay cuts in FY1984 is in a category entitled "All other-mostly non-defense discretionary", which is less-than-encouraging (over one-third of the proposed \$88.7 billion outlay cuts in fiscal years 1984-86 is in this category). While many of the Administration's proposals represent sound public policy, it is uncertain whether Congress will have any appetite for such legislation during the election season. Even more uncertainty surrounds Congress's plans to cut defense spending (by \$29.5 billion in fiscal years 1984 to 1986) and to increase tax receipts (by \$12 billion in 1984 and \$15 billion in 1985), particularly since the First Concurrent Resolution did not specify how these changes would be accomplished.

Economic Outlook and Budget Outcomes

Budget outcomes depend heavily on economic performance and, in this regard, the budgets of the Administration and CBO are based on economic performance that in certain aspects is more optimistic than the SOMC forecasts. The Administration forecasts a strong, sustained economic expansion, accompanied by only modest rises in inflation, and continuous declines in interest rates through 1986 (the CBO is only slightly more pessimistic, with marginally lower real growth and modestly higher inflation and interest rates):

Economic Assumptions Underlying Budget Forecast

	Fiscal Year			
	1983	1984	1985	1986
GNP (%chg. 4th Qtr-to-4th Qtr)				
Real \$	5.5	4.5	4.0	4.0
Current \$	10.4	9.7	9.0	8.7
CPI (%chg. 4th Qtr-to-4th Qtr)	3.1	4.4	4.7	4.5
Unemployment Rate (% 4th Qtr)	9.6	8.6	8.0	7.3
Interest Rates (% annual average)				
91-day Treasury Bill	8.6	8.5	7.8	7.2
10-Year Treasury Note	10.6	10.1	9.3	8.7

Source: Mid-Session Review of the 1984 Budget

These patterns of inflation and interest rates would be different than the climbing rates that have accompanied previous post-war expansions; additionally, they are seemingly inconsistent with the expansive monetary and fiscal policies that have been in place since mid-1982.

The SOMC forecasts 4% real GNP growth from the fourth quarter of 1983 to the fourth quarter of 1984 (slightly lower than the Administration's 4.5% and the CBO's 4.3%), but anticipates higher inflation and interest rates in 1984 and beyond. A half-percentage point slower economic growth, if sustained into 1985, would raise the deficit by approximately \$2 billion in FY1984 and \$7 billion in FY1985. Higher inflation would partially mitigate this impact in FY1984 by raising tax collections by more than outlays. However, beginning in 1985, when personal income taxes are indexed for inflation, the deficit-reducing characteristics of higher inflation will be diminished.

The Administration's forecast of \$103.5 billion in net interest payments in FY1984 (12.2% of total budget outlays) also may be too low, according to the SOMC forecast of higher interest rates. Budget deficits are increasingly sensitive to interest rates, given the magnitude of deficits and the rapidly mounting outstanding debt, a large portion of which must be refinanced in each of the next several years. The CBO estimates that one-percentage point higher-than-forecasted interest rates beginning in October 1983 would increase the deficit by \$3 billion in 1984, \$8 billion in 1985, and \$11 billion in 1986. (Since early July, interest rate yields have averaged 9½% on 91-day Treasury bills and 11½% on the 10-year notes, both well above their respective forecasted levels for 1984.)

There is a strong need to narrow the current and projected budget imbalance, but skepticism that a consensus on constructive budget policy can be reached prior to the election is warranted. Only partial legislative success, combined with forecasted economic growth and slightly higher-than-projected inflation and interest rates would result in a deficit in the \$190 to \$200 billion range for FY1984. Slower economic growth or continued modest inflation but persistently high real interest rates would push the deficit closer to the \$200 billion level.

Slowing the growth of government outlays clearly is the wisest policy alternative, but it may be the most difficult politically. In FY1984, a scheduled 83.8% of total outlays are for income security and health (42.9%), defense (29.1%), and net interest (11.8%). Congress will be slow to cut payments-for-individuals, particularly on the heels of the enactment of earlier non-defense spending cuts and the Social

Security Amendments of 1983, and the Reagan Administration likely will be just as unyielding in its opposition to cutting scheduled defense spending. On the other hand, while raising taxes would temporarily reduce deficits and ease financial market pressures, it would have undesirable economic consequences. Any effort to raise taxes must take a back seat to slowing spending growth and, above all, must not involve tampering with legislation that indexes personal income taxes for inflation, even though such action would reduce the structural budget imbalance.

The silver lining in the budget outlook is that with the proposed legislation, deficits would begin to recede, absorb less saving, and reduce upward pressure on interest rates. The need to do so is immediate, in light of anticipated increases in capital spending and renewed rises in business loan demand. However, the dark clouds of reality are ominous: legislative inaction would prevent deficits from declining below \$200 billion annually, and the various consequences of that for any extended period could only be negative.

ECONOMIC PROJECTIONS

Burton ZWICK*

Prudential Insurance Company of America

The annual growth of real output exceeded 9% in the second quarter of 1983, and the most recent statistics suggest very strong growth in the current quarter as well. Though the inflation rate has bottomed out, it does not yet show any major reacceleration. With unemployment declining in line with rapid output growth, the sum of the unemployment and inflation rates -- the late Arthur Okun's misery index -- should continue to decline over the next six to twelve months.

Economic cycles -- including those periods of declining misery -- strongly reflect the actions of the Federal Reserve. In earlier cycles, the Federal Reserve remained too tight for too long, causing needlessly severe and prolonged recessions of the economy. Declining misery phases occurred when the Fed stimulated to hasten the economy's return toward full employment. Unfortunately, the Fed allowed their stimulus to become excessive, causing inflation to accelerate and ultimately creating the need for another round of restraint.

Insofar as the economy and monetary policy are different this time, the Fed remained tighter for longer during the last phase of restraint -- causing an even sharper downturn -- and has moved toward rapid stimulus earlier in the recovery. As summarized in Table 1, M1 has grown about 13% in the last year. Many analysts believe that 1983 M1 growth may be overstated by 2 or 3 percentage points because of the introduction of Super Now accounts in January 1983. An M1 Divisia measure -- designed to reflect the effects of Super Nows and any offsetting effects of MMDAs on M1 -- shows twelve month growth of 11.0%. This is close to those estimates including a 2-3% adjustment in M1, and it is also closer than reported M1 growth to the 9.4 growth rate of the monetary base. Even after adjustment via the Divisia measure, the past year's growth in M1 raises annual M1 growth since the fourth quarter of 1980 to the 7½% area, offsetting the bulk of the decline in M1 growth that occurred in 1981 and early 1982.

*The views expressed here are mine alone and should not be interpreted as the official forecast of Prudential. I gratefully acknowledge the helpful comments of Jason Benderly and Michael Hamburger.

While the monetary expansion has almost certainly contributed to the rapid improvement in the economy in recent quarters, it again places the Fed in a no win situation. On the one hand, Federal Reserve efforts to offset the recent growth in money run the risk of sharply slower output growth, possibly including a recession before the end of 1984. On the other hand, continued monetary expansion at anywhere near the level of the past year -- even M1 growth in the upper half of the 5-9% target recently announced for the second half of 1983 -- will result in 1983 growth of 9-10% for both Divisia M1 and the monetary base. Following growth of about 8% in 1982, this 1983 growth will leave longer run money growth at a rate that has historically been associated with 10-12% growth in nominal GNP and 7-9% growth in inflation. When combined with enormous fiscal policy imbalance whether measured by expenditures or budget deficits, this monetary expansion is likely to heighten concern about inflation and encourage investors to shift their wealth from financial assets back into real estate and commodities.

Given these alternatives, it is difficult to predict which way the Fed will turn. Recent votes show unusual division within the FOMC, and the recent reserve statistics make near term monetary policy extremely difficult to interpret. Reserve growth has slowed to the 5% area over the last three months, and both the St. Louis and Board of Governors' measures of the monetary base have slowed to the 6-7% area over this period. At the same time, the yield curve has a pronounced upward slope, and M1 growth -- though slower than in early 1983 -- still remains above 8% for the past three months. The one unambiguous feature of monetary policy is the Fed's careful management of the federal funds rate. The Federal Reserve seems determined to resist any upward pressure on the funds rate for fear of aborting the recovery. They also seem unlikely to allow any major downward move in the funds rate for fear of adding to the bond market's concern that the Fed is unwilling to curb inflation.

The most probable forecast as reported in Table 2 assumes 7-9% growth in M1 and the monetary base for the second half of 1983 and 6-8% growth in 1984. In this scenario, annual output growth runs about 7% in late 1983, slows to the 5% area in early 1984, and falls to the 4% area in late 1984. The inflation rate gradually accelerates -- to over 5% in late 1983, to 6-6½% in early 1984, and to over 7% by late 1984. The federal funds rate remains in the 9-11% range, while government bonds trade between 11% and 13%. The dollar declines but not dramatically over the period.

Since M1 velocity declined by about 5% in 1982, the velocity numbers in the most probable scenario -- between 0% and 1% in 1983 and slightly over 4% in 1984 -- imply zero velocity growth over the 1982-84 period. Even with adjustments for the effects of News and Super News introduced over the 1982-84 period, predicted velocity (1982-84) is below the 3-3.5% post World War II trend in M1 velocity. (Corresponding monetary base velocity growth, 1982-84, is about 0.5% per year compared with post World War II trend growth of about 2%.) The low level of predicted velocity, relative to trend, suggests that the greatest risk to this forecast is that the economy will grow faster than in the most probable scenario. Particularly if the Federal Reserve resists the upward rate pressure likely to arise under this scenario with faster growth, monetary growth will reaccelerate. The bond market will weaken further and the dollar will decline sharply. The Fed will then be forced toward extreme monetary restraint -- possibly before the end of 1984.

A lesser risk, but one that cannot be ignored so long as the Fed continues to target the funds rate, is that the economy and associated credit demand will run weaker in late 1983 and early 1984 than generally expected. In this case, the 9-11% range on the funds rate (or even a funds rate as low as 8%) could be associated with 3-6% money growth. With policy much tighter than intended by the Fed, the economy will weaken -- possibly falling into recession before the 1984 election. Given the political pressures from both the President and Congress, we view this scenario as less likely than either our most probable scenario or the scenario with more rapid expansion over the next twelve months.

WEEKLY SUMMARY OF MONETARY STATISTICS
FOR THE WEEK ENDED AUGUST 31, 1983

<u>Aggregate (SA)</u>	<u>Annual Growth Rates</u>		
	<u>13 Week</u>	<u>26 Week</u>	<u>52 Week</u>
M1 (M1:Divisia)	8.6 (10.0)	11.1 (9.8)	12.9 (11.0)
St. Louis Monetary Base	6.4	8.7	9.4
FRB Monetary Base (Adjusted)*	6.8 (6.2)	8.9 (9.1)	8.7 (10.1)
Total Reserves (Adjusted)*	5.8 (3.2)	6.9 (7.7)	6.5 (12.6)
Nonborrowed Reserves (Adjusted)*	-0.3 (-2.7)	2.1 (4.1)	3.8 (10.9)

NOTES:

*Figures in parentheses represent the growth rates of the FRB monetary base and reserves adjusted for our estimate of the ongoing net release of reserves resulting from the shifting of deposits into the new MMDAs and Super NOW accounts. We estimate that a total of approximately \$2.4 billion of reserves have been released since November 1982. Additionally, adjusted nonborrowed reserves include extended credit of about \$0.5 billion.

Prudential Economic Research
September 6, 1983

Table 1

ECONOMIC PROJECTIONS
(1972\$, Seasonally Adjusted Annual Rates of Change Except Where Noted)

	1982		1983		1984				Annual: 4th Qtr. to 4th Qtr.				
	Q3A	Q4A	Q1A	Q2A	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E	1982A	1983E	1984E
Real GNP	-1.0	-1.3	2.6	9.2	7.0	6.0	5.3	4.6	4.0	4.0	-1.7	6.2	4.5
GNP Deflator	3.7	3.8	5.5	3.5	5.0	5.5	6.0	6.5	7.0	7.5	4.4	4.9	6.7
Nominal GNP	2.7	2.5	8.2	13.0	12.4	11.9	11.6	11.4	11.3	11.8	2.6	11.4	11.5
Final Sales	-1.5	4.5	0.6	5.9	4.5	5.5	4.4	3.7	4.0	3.7	0.2	4.1	4.0
Money Supply (M1)											8.5	11.0	7.0
Velocity of M1											-5.4	0.4	4.2
Monetary Base											7.9	9.5	7.0
Vel. Monetary Base											-4.8	1.7	4.2
Real GNP Components:													
Consumption	0.9	3.6	2.9	9.7	6.3	5.8	4.7	4.6	3.9	3.7	2.5	6.2	3.5
Durables	-3.7	15.2	7.6	32.0	10.0	12.0	7.0	7.0	5.0	3.8	6.2	15.0	4.7
Nondurables	1.3	1.5	3.2	5.8	5.4	4.9	4.6	4.5	3.8	3.8	0.6	4.8	3.4
Services	2.1	1.9	1.4	6.5	5.9	4.6	4.0	3.8	3.7	3.7	2.9	4.6	3.2
Business Inv.													
Structures	-8.8	-6.7	-1.5	6.1	10.9	13.0	10.6	10.1	9.6	8.7	-9.0	7.0	9.7
Equipment	-7.2	-5.5	-13.9	-15.1	0.8	5.6	8.8	7.8	9.3	9.1	-4.2	-6.1	8.7
Residential	-9.5	-7.1	4.9	16.6	15.7	16.2	11.4	11.1	9.7	8.5	-11.1	13.2	10.2
Residential	-13.1	53.1	57.7	75.9	13.0	8.5	4.5	1.5	0.0	0.0	3.0	35.8	1.5
Federal	26.2	28.2	-17.9	-2.7	8.5	8.3	4.5	4.1	4.3	4.0	8.6	-1.6	4.2
State & Local	-0.2	-0.2	-1.6	-0.5	-1.1	-2.3	0.0	-1.1	-0.5	-0.7	0.1	-1.4	-0.6
Net Exp (Bi.72\$)	24.0	23.0	20.5	11.0	4.5	3.0	1.5	-1.0	-1.0	-1.0	—	—	—
Invent (Bi.72\$)	-1.3	-22.7	-15.4	-4.0	5.0	7.0	10.5	14.0	14.2	15.5	—	—	—
Addenda:													
Unemp Rate (%)	9.8	10.5	10.2	10.0	9.5	9.0	8.6	8.2	8.0	8.0	—	—	—
Funds Rate (%)	11.0	9.3	8.7	8.8	9.5	10.0	(9-11)	(9-11)	(11-13)	(11-13)	—	—	—
30-Yr Gov't. (%)	12.8	10.8	10.7	10.6	11.5	11.5	(11-13)	(11-13)	(11-13)	(11-13)	—	—	—
Ind. Prod.	-3.4	-8.1	9.9	17.9	16.0	11.0	9.0	9.0	7.0	5.0	-7.5	13.7	7.5
CapUtil Mfg. (%)	71.1	69.0	70.7	73.7	76.5	78.5	80.0	81.0	80.0	82.0	—	—	—
DPY72\$	-0.3	2.6	2.9	3.3	8.1	5.8	4.5	4.5	4.5	3.5	0.2	5.0	4.3
PretxProf W/IVACCA	4.1	-14.8	59.0	94.5	45.0	30.0	24.9	22.0	19.3	13.9	-15.7	55.4	20.0
Auto Sales*	5.6	6.0	6.1	6.9	7.2	7.6	7.8	8.0	8.2	8.3	—	—	—
Housing**	1.12	1.26	1.69	1.69	1.75	1.80	(1.7-1.9)	(1.7-1.9)	(1.7-1.9)	(1.7-1.9)	—	—	—

*Millions of domestic units.

**Millions of starts.

Prudential Economic Research
September 6, 1983

STATEMENT ON PROTECTIONISM TO SOMC

Jan TUMLIR
GATT (Geneva, Switzerland)

There is an illusion fostered by governments (whether they want to believe it themselves or want us to believe it I don't know; probably both) that the contemporary and still growing protectionism has been a pragmatic -- or at any rate inevitable -- response to the high unemployment levels prevailing since 1974. This is factually uncorrect for the protectionist pressures have been growing, and governments yielding to them, since the late 1960s. A much stronger case could be made to the effect that the origins of contemporary protectionism have been ideological; but I do not want to argue that case now. It is more important to point out the dangers of the illusion. It implies that, as recovery proceeds, protectionism will begin to wane and eventually disappear by itself. To believe that is foolhardy and dangerous. The main force behind protectionism today is the formidable force of precedent. The more groups have already obtained protection, the stronger case can be made by any new claimant for "equal treatment". Democratic societies are not notable for their tolerance of privilege. To arrest and reverse the protectionist trend, will require great political effort and, above all, courage. The governments revealed preference for illusions does not suggest that the requisite courage is there. The Western governments do not seem so much protectionist as helpless.

We in the GATT have been arguing that the causal relations run the other way: not that recovery will, by itself, dispel protectionism but that we shall not have an enduring recovery until something is done first to secure and liberalize the conditions of international trade. The argument is that by now the whole price system of our economies is distorted and rigid, that the pervasive influence of governments throughout national economies has led not only to a decline in savings but to a misallocation and waste of such investment as can be financed without inflation, and that these rigidifying distortions can exist only because national economies are protected against external competition. Rehabilitation of the price system cannot be expected under present conditions of international trade. This is why arresting protectionism, and dismantling the barriers put into place in the last, say, 15 years, is so important.

But we cannot make much headway with this argument because people think that trade restrictions, though they have multiplied in recent years, are still largely exceptional. So this requires some measurement of the levels of protection, and here is the economist's dilemma. Strictly speaking, such a measurement is impossible for the index number problem is essentially involved here. For several reasons, to be given immediately, what you can have is a very rough estimate and even that must be qualified in several respects, if you have any professional self-respect, that is. Even so, journalists invariably make a mess of such estimated figures as are provided. Given the caution with which one has to argue this point, there is little left in the end in the way of an effective political argument.

There is, first of all, the problem of definition. What is it we are going to measure? Even with respect to tariffs and quotas, the simplest of trade barriers, there is no simple way of measurement and comparison. Yet this is only the beginning of the difficulty. What about subsidies, and subsidy-countervailing and anti-dumping measures? Bilateral agreements? Intra-industry agreements and international industry agreements, in other words, national and international cartels? Tolerated and supported by governments they can represent as effective a restriction of trade as anything a government can impose on the border. But this is not all: a government can promulgate internal regulations of production which are more or less perfect substitutes for protective measures imposed at the border. And how does one agree on, and measure, bureaucratic chicanery and intimidation of potential importers? What to include in the measure of protectionism is a problem prior to any difficulty of measurement. There is a simple reason why GATT cannot provide an authoritative indication of the existing levels of protection, or how they have increased over some recent period. The representatives of member countries would never agree on what was to be considered protection for the purposes of such measurement.

Second is the problem of knowledge. Not all trade restrictive measures come to our attention, in fact the ones we know of are likely to be only a small fraction of those actually in force. Bilateral agreements -- voluntary export restraints and orderly marketing arrangements -- are the most frequent and most rapidly multiplying forms of restriction. They are the exact equivalent in international trade law of the problem that extortion by threat of violence poses in criminal law. They are negotiated in the following way. A large importing country says to the smaller exporting country: "We are having a difficulty in our widget industry, we think you are a part of the difficulty, and there are two possibilities. We can enact a quota which will halve your export of widgets to us. Alternatively, you can restrict, from your own

side, your exports to us to two-thirds of the present volume -- we can live with that, provided you don't complain." Which is like the Mafia soldier saying to the shopkeeper or restaurant owner: this is a very rough neighbourhood, I strongly recommend you buy yourself some protection. Both transactions are clearly illegal but they do have an undeniable aspect of voluntariness: where there is no complaint, the law cannot be enforced. And most restrained countries do keep their restraints secret.

The third difficulty is that even where we know which trade flows are subject to which kind of restriction, we do not know the degree of restrictiveness. A good example here is the Multi-Fibre Agreement: it subjects to quantitative restrictions all exports of textiles and clothing from developing to developed countries. Without its coverage changing, it has been renegotiated twice, becoming each time much more restrictive. Another example may be the arrangements the US and various European countries have made with Japan concerning automobile imports. The quantitative limits set in 1981 were above what could be sold in the 1982 declining market. So one might say they were not restrictive; but in fact their very existence changed the behaviour of both buyers and sellers.

It is here that the index number problem enters. Because of the problem of weighting we cannot calculate even a meaningful tariff average, let alone the average restrictive effect of many different kinds of non-tariff barriers. The only proper weighting system would be one in which each tariff rate, or each restriction, was weighted by the amount of imports it keeps out. That we cannot know and weighting by the amount of imports that actually come in subject to these barriers is strictly speaking meaningless. Normally you would expect that when world trade is growing, the proportion of imports under quantitative restrictions would be falling. In the mid-1970s, however, I looked at imports under some forty plus officially notified Japanese restrictions, and over the preceding decade they had been growing as total imports, their share was constant -- which does not mean, of course, that there was no restrictive effect.

Still, even by these crude measures one could show that the extent of restriction in international trade has been growing in the last fifteen years or so, and at an accelerated pace since the mid-1970s. For this meeting, I could prepare only a point estimate, the whole thing being -- as you may appreciate from the appended tables -- extremely laborious.

In this case we set out to measure "imports under non-liberal arrangements", "liberal" defined as imports transacted among independent firms and encountering no worse obstacle than a tariff. Thus we include imports from centrally planned

economies and imports of OPEC oil in "non-liberal trade", but no imports from or to various known cartel arrangements in the industrial countries. The definition captures quantitative restrictions on the export side but subsidies are wholly ignored. Note that the table does not give estimates; it tabulates trade under known restrictions, which means the minimum of what can be considered non-liberal trade.

The proportion, in the three main trading powers, of total imports under some kind of restriction is horrifying, even though OPEC oil accounts for the bulk of these figures. But even the proportion of restricted imports of manufactures is pretty bad, if you consider what these restrictions do to the price system of the importing economies. And -- to be emphasized all the time -- keep in mind that subsidies to export and import-competing industries, and their distorting effects, are not considered here. From the viewpoint of overall distortions, the fact that Japan has a lower proportion of manufactured imports under restriction means little, for Japan also has a higher proportion of exports under restraint. The distortion of the price mechanism in Japan is at least comparable in extent to that in the other two large economies.

There exists a range of (even more tenuous) independent estimates of the proportion of total world trade that is conducted under various restrictions or non-liberal arrangements. At the upper end are Francois David, a high official of the French Ministry of Trade, who puts this figure at 60% (Le commerce mondial à la dérive, Paris, Calman-Lévy, 1982, p. 225) and S. Page (UK National Institute for Economic and Social Research) with an estimate of 48% ("The Revival of Protectionism and its Consequences for Europe", Journal of Common Market Studies, September 1981, p. 29). My own estimate is in the range of 41-44%. Note that virtually nothing can be said at this time about international trade in services and the degree of restrictions here.

Whatever the value and shortcomings of estimates of this kind, they are useful at least for the education of economists. American economists in particular, accustomed to think in terms of a vast national market in which competition is vigorous and commodity imports account for only 7-8% of GNP (an exaggerated fraction to boot, for trade is measured in gross values, GNP is value added), tend to underestimate the importance of trade restriction. Yet trade is what combines the national price systems into the international price system without which we could not speak of economic rationality. It is what makes the national price systems function; and the information conveyed by the international system is the most important part of all the information that the national price systems process.

From the extent of trade restrictions we can therefore guess at the degree of impairment of the price system. And the proportions suggested here appear to be roughly confirmed when we enumerate the industries in which pricing is either strongly influenced or fully determined by trade and other policy measures, officially tolerated cartels and so forth, and when we think of the relative importance of these industries in the GNP. The count is drearily familiar; crude oil (which influences the pricing of other sources of energy), virtually all of agriculture, textiles and clothing, several branches of petrochemicals, iron and steel, ballbearings, automobiles, television sets and components, many high technology industries (especially those with military application), and armaments in general. Industrial machine tools remain perhaps the only major industry under unimpeded world-wide competition. For how long?

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What can a group like ours propose in the way of remedies?

There is, I am convinced, only one solution to the problem of protectionism but it will take at least another decade before the political conditions will be ripe for it. The essence of the problem is this. The international trade policy rules which for some two decades held protectionism at bay and made trade liberalization possible have been both negotiated and subsequently administered by diplomats. In the last fifteen years or so, so many breaches have been made in these rules that today we can say that the liberal trade system is eroding mainly by the cumulative force of precedent. The only stable, long-term solution is that, eventually, these international rules will be accepted by governments in a legal form which will establish private rights in or to the conditions of trade specified by the international agreement. That would mean that the international treaties on which the trade system would rest would be interpreted, no longer by diplomacy (i.e. the executive branch of government), but by national courts.

In the present conditions, this ultimate solution cannot but appear visionary and utopian. While pointing to it, we should also propose some more practical measures. Since no government can arrest protectionism on its own, the only hope for the near and intermediate future lies in a new trade negotiation through which at least the governments of industrial countries could support each other in their resistance to protectionist pressures. My suggestion is to combine the urgency of a policy action on trade with the urgency of articulating and negotiating a real solution to the problem of international indebtedness.

By a real solution I mean one that does not consist of financial gimmicks. The real problem here is a declining availability of, or increased competition for, real savings, due in large part to the high level of inefficiency which has crept into the economies of both the creditor and the debtor countries in the 1970s. The innumerable inefficiency-causing national arrangements are the ultimate cause of protectionism; they now require a rising level of trade barriers to be sustained at the national level. In other words, both the creditor and the debtor countries need, almost equally, a trade liberalization to restore to them a degree of economic efficiency sufficient for the existing debt burdens to be carried and serviced without a political disruption on the debtor, or a new wave of inflation on the creditor side.

It is unlikely that a new full-scale round of GATT negotiations could be arranged to produce useful results in the time available for mere "management" of the debt problem. The present situation demands prompt action. Is it possible to think in terms of a trade negotiation limited to a maximum of 15-20 countries, main creditor and debtor countries, exchanging trade concessions on an MFN basis?

WT/jf
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IMPORT RESTRICTIONS BY TYPE OF MEASURE^a IN SELECTED INDUSTRIAL COUNTRIES

	United States	Japan	EC(9) ^b
<u>TOTAL IMPORTS UNDER RESTRICTION</u> (billion dollars in 1980)	109.4	87.9	154.4
(Percentage shares)			
<u>TYPE OF MEASURE</u>			
Prohibitions	½	0	0
Quotas	12	25½	7½
Licences	70	1	16
Voluntary Export Restraints	12	0	3
State trading	0	2½	16½
Cartels ^c	5	67	45
Non-specified	1	4	12

^a Import restrictions as at the end of 1981. Trade figures refer to 1980.

^b Excluding internal trade.

^c Mainly imports of fuels from OPEC.

Sources: IMF, Exchange Arrangements and Exchange Restrictions, International Financial Statistics, Direction of Trade Yearbook; UN, Yearbook of International Trade Statistics, Commodity Trade Statistics, trade data tapes; GATT, Inventories on non-Tariff measures, International Trade; National trade returns and press clipings.

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COMMODITY PATTERN OF IMPORT RESTRICTIONS^a IN SELECTED INDUSTRIAL COUNTRIES

Total imports in 1980	(Billion dollars)						Imports assumed to be under restriction			(Percentages)	
	Imports found to be under restriction									Share of imports under restriction in total imports	
	Food	Fuels	Other primary	Iron & steel	Textiles & clothing	Other manufactures	Other fuels ^b	All commodities	Manufactures		
United States	253.0	4.8	76.4	-	5.2 ^d	6.9	10.3	5.8	109.4	43	18
Japan	139.9	5.9	11.1	8.5	-	0.3	3.2	58.9	87.9	63	14
EC(9) ^c	371.7	3.0	54.5	1.2	6.7	9.8	9.6	69.6	154.4	42	18

^a Import restrictions as at the end of 1981. Trade figures refer to 1980.

^b Fuels not found to be under any specific restriction in importing countries but "restricted" from the export side (unilateral price fixing by a cartel of oil-exporting countries).

^c Excluding internal trade.

^d Including restrictions introduced during 1982.

Note: - "Other Primary" refer to products such as: Hides and skins, wood, crude fertilizers and metal scrap.

- "Other Manufactures" refer to products such as: certain chemicals (mainly ethyl alcohol, medicinal products, essential oils and manufactured fertilizers), leather, ball bearings, passenger cars and motor cycles, ships and boats, radio and television receivers, thermionic etc. valves and tubes, photocells etc., footwear, travel goods.

Sources: IMF, Exchange Arrangements and Exchange Restrictions, International Financial Statistics, Direction of trade Yearbook; UN, Yearbook of International Trade Statistics, Commodity Trade Statistics, trade data tapes; GATT, Inventories on non-tariff measures, International Trade; national trade returns and press clipings.

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