#### HAS MONETARISM FAILED?

#### Karl Brunner

## I. Introduction: Intellectual Activity in a Political Context

Herman Hesse's last book, *The Glass Bead Game*, explores an old dream. Intellectuals pursue their activities in some indefinite future protected and separated from the "world" engrossed with its narrow interests. Resources are somehow supplied to the vast establishments constituting the intellectual order. This social allocation occurs (miraculously) without exposure to the game of power and wealth associated with such decisions in the political process.

Alas, this is not our world, and men will never experience it. The purity of our intellectual efforts is forever endangered. They proceed in the context of social institutions interacting with an encompassing political process. Our intellectual life is forever exposed to the incentives characterizing the public arena. "Truth" may be the guiding principle of intellectual endeavors and cognitive truth the ultimate criterion directing scientific understanding. But cognitive pursuits and intellectual discussions never evolve in a social vacuum. They proceed in a context exposed to the appeals of power and wealth. The contamination probably rises with the proximity to the power game constituting the political process. Words and sentences are not necessarily used to inform, nor are they advanced to be assessed against critical observation. Power, wealth, and ideological commitments shape the use of language and the supply of words in the public arena.

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The ambivalence of intellectual experience with the associated ambiguity of language permeates recent debates about our current economic policies. The social problems are real and serious, and the private stakes in the debate correspondingly high. The ambivalent pattern emerges with particular force in contentious discussions about the alleged "failure of monetarism." My theme addresses this ambivalence controlled by a political game bearing on the future course of our society.

#### II. The Content of Monetarist Analysis

The attribution of "failures" can hardly be assessed, or its possible meaning understood, without an explicit framework of reference. This reference is provided by the writings of leading monetarists over the past decades including, in particular, the semiannual assessments and statements prepared by the Shadow Open Market Committee (SOMC) since September 1973. The SOMC has offered evaluations of current and future trends in monetary policy and has advanced specific proposals that can be examined in retrospect.

Twelve years ago I presented a paper at the Weltwirtschaftliches Institut (Universität Kiel) exploring the content of monetarist ideas under four topics (Brunner 1971). The paper was published at the time with the hope of rectifying the insistent misperception of the monetarist renaissance of the classical program exhibited by many Keynesians. A somewhat modified organization of the material appears to be required for the present paper.

#### 1. Some General Characteristics

The difference between Keynesian and monetarist analysis reaches beyond some narrow "technical" issues. The two intellectual positions are separated by fundamentally different visions of the economy and substantially different views about the political economy of institutions and policymaking. They also determine very different approaches to the range of macro-economic problems. The sharp contrast between the alternative visions, however, allows some variations on the basic theme with occasionally common strands in some particular dimension of vision or analysis.

Both visions recognize the social process as a vast system of interacting agents. Keynesians are inclined to suggest that this complexity of the phenomenon must be reflected by a correspondingly complex analytic schema. Their cognitive context emphasizes that all macrophenomena are a function of this complex interaction. An understanding of macro-theoretic issues thus requires that the economic

process be represented by a huge (and even larger) model. Several crucial properties attributed to the economy need be incorporated into the model. The economic process is swayed by shocks and suffers either from a dynamic instability or under an inherent disposition to settle around states substantially below "full employment." This instability of the process, at least with respect to a full employment solution, is combined with a belief about the comparative invariance of the system's deterministic structure. These properties justify together with an essentially sociological view of political institutions an activist approach to policymaking. Such activism is both a sufficient and necessary condition for maintaining economic performance within a tolerable range.

Keynesian policy discussions frequently proceed within some modified intellectual schema. The interaction between an IS and LM relation represents for purposes of a rough approximation the relevant aspects of the complex process. In the standard diagram the IS-LM curves are moved by the dynamics of the total process and disturbed by ongoing shocks. Nevertheless, many Keynesians implicitly, and sometimes quite explicitly, assert that they possess knowledge about the position and movements of these curves. Indeed, they proclaim to possess specific knowledge about the mix of fiscal and monetary policies that at any moment would guide the curves to a "full employment" equilibrium. This presumed knowledge about the IS-LM curves and the deviation from "full employment" determines the required path of activist policy misuses.

The monetarist vision, in contrast, emphasizes the shock-absorbing property of the economic process. It also rejects the comparative invariance of a deterministic structure and emphasizes the inherent improbability of successfully formulating a large model with stable parameters. This also means that the knowledge proclaimed by many Keynesians is judged to be thoroughly unrealistic, and this unrealism extends to the political economy of Keynes ("the Harvey street syndrome"). Monetarists applaud efforts to subsume discussions of *macro*politics under a broad summary representation of the economic process, but they find the standard paradigm seriously flawed.

We can now view the monetarist position in somewhat more detail by considering five topics: the nature of the transmission mechanism, the internal stability of the system, the impulse problem, the money-

 $<sup>^1\</sup>mathrm{It}$  is somewhat ironic to note that monetarist's views on this point may be more closely attuned to Keynes' than are the "Keynesians."

supply process and monetary policy, and aspects of political economy.<sup>2</sup>

#### 2. The Nature of the Transmission Mechanism

Monetarists argued at an early stage that the paradigm formulated in terms of an IS-LM diagram was not well suited to cope with important aspects of monetary mechanisms (Brunner 1961, 1976; Friedman and Schwartz 1963; Brunner and Meltzer 1968, 1972, 1976). Two strands constituting the traditional Keynesian framework in our judgment obstruct an adequate explanation of important monetary problems. These strands bear on the emasculated representation of financial markets and the treatment of price-wage determination. The Keynesian analysis can be consistently developed under either one of two alternative assumptions: Only nonmoney financial assets are substitutes for money or all nonmoney assets (financial and real) form a Hicksian composite good that substitutes for money. Both assumptions reduce the representation of financial markets to a single equation. This representation neglects important issues associated with the interaction between credit markets and the money market.

The restriction to two assets in the context of an IS-LM world (Brunner 1971) involves more than an esoteric exercise or analytic convenience with little consequence. The Keynesian analysis and the alternative approach that regards both financial and nonfinancial assets as substitutes for money yield very different implications bearing on the role of money demand disturbances, the choice of monetary strategy, the real effects of monetary impulses, the nature of "reverse causation," and the questions formulated to guide empirical research on monetary policy effects.

The nature of the transmission mechanism surrounding the pricewage adjustments explored in monetarist writings also implies that monetary impulses do not produce permanent real effects on output, employment and real interest rates, apart from longer-run real effects exerted via the expected inflation rate or distortionary institutional constraints (e.g., tax rates specified in nominal terms). This means,

<sup>2</sup>James Tobin recently attributed to monetarists some rigid methodological rules expressed by "reduced-form procedures" and "positive economics." He also finds their procedures in violation of the "canons of the profession" (Tobin 1981). These aspects are not included in this paper. They will be examined in another paper. I simply mention at this point that Tobin fails to understand the nature of the logical issue raised by Milton Friedman's critique of prevalent practices. He fails, moreover, to understand that reduced-form procedures are appropriate in tests about properties characterizing classes of hypotheses. No general rule was ever enunciated by monetarists. Lastly, the so-called "canons of the profession" represented by mainstream econometric practice combine a remarkable statistical sophistication with a singular logical illiteracy.

in particular, that recognized monetary growth patterns are fully absorbed by movements of the price level. Real effects can only be produced by monetary accelerations (or decelerations). This idea was further explicated by the subsequent evolution of the rational expectations analysis (Lucas and Sargent 1981). This development also clarified the nature of another major difference with the Keynesian tradition bearing on the interpretation of (apparently) inertial processes shaping price-wage movements. Monetarist thought emphasizes the operation of feedbacks over an intermediate run from the state of the economy and the perceived policy regime to the structure of the inertial process. Keynesians, in contrast, deny the occurrence of a feedback or assert its irrelevance due to its slow effect spread over decades.<sup>3</sup>

## 3. The Internal Stability of the System: Occurrence of a Normal Level of Output, Employment, and Unemployment

Monetarist analysis stresses the shock-absorbing character of the economic system. This property assures the internal dynamic stability of the system. This does not imply absence of economic fluctuations. The system adjusts to all ongoing shocks by market adjustments producing fluctuations in aggregate output and employment. The observation of such fluctuations offers, moreover, no prima facie evidence of inefficiency in the utilization of available resources.

The issue centering on the system's internal stability gradually changed its focus. It is probably more usefully addressed as the occurrence and relevance of a normal level of output, which depends on underlying preferences, technology, and the prevailing institutional structure. The concept conveys the idea that the economy's shock-absorbing property holds it within some range around the normal level of output. Sustained and large deviations (the Great Depression) thus require a succession of serially correlated shocks.

Monetarist analysis also emphasizes that the production function is not simply a description of technology. It is conditioned by institutional arrangements, especially by the range of admissible organizational forms and the structure of property rights. Institutional changes modify the space of production possibilities expressed by the normal level of output (Jensen and Meckling 1979). This level of

<sup>3</sup>Some Keynesians, exemplified by James Tobin, represent conflicting positions on our first topic. Tobin repeatedly emphasized in work distributed over two decades a broader view of the transmission mechanism. This view appears whenever Tobin addresses financial markets, but disappears in his analysis of the general equilibrium of interacting output and asset markets. In the latter case Tobin retreats to the IS-LM framework. Aspects associated with this issue will be considered later in the paper.

normal output, of normal employment and normal unemployment, reflect the incentives built into the prevailing institutional structure.

The underlying differences in the approach to supply behavior and the price-wage process determine the specific Keynesian vision about the stability of the economic system. Keynes emphasized the occurrence of a stable underemployment equilibrium (Meltzer 1981) substantially below a "maximum employment" determined by preferences and technology. The system, however, remains globally (i.e., relative to maximum output) unstable. The occurrence of a normal output does not fit the Keynesian scheme of persistent underemployment equilibrium, and maximum output (or employment) cannot accommodate the notion of a normal level of output with its institutional conditioning. Some neo-Keynesians generalized Keynes' idea into a system of multiple underemployment equilibria. A stable process controls the system's behavior over a neighborhood of each position of underequilibrium. But the system is not stable with respect to movements between underemployment equilibria or relative to the maximum position. Its global stability around "full employment" can only result from deliberate designs built into an activist policy regime.

The difference between the two approaches also implies that the Keynesian concept of "full employment" determined by technology and preferences has no room in monetarist analysis, or need be redefined. Keynesian "full employment" emerges from technology and preferences cast into an institutional vacuum inherited from the full information world of general equilibrium theory. In contrast, monetarist analysis stresses the institutional conditions shaping the level of normal output. Keynesians and monetarists, therefore, approach employment policy from very different perspectives. Keynesians typically are inclined to exploit apparent opportunities of "demand management" to push the system towards "full employment." This magnitude of employment, however, remains an extraneous element not specified by the analysis. Monetarists, on the other hand, emphasize a non-activist regime bearing on aggregate normal demand supplemented by an "institutional policy." This policy is designed to adjust normal employment and normal output to a social optimum. This social optimum could be defined as "full employment." A Keynesian vision of the world seems to foster institutional developments that raise the normal level of unemployment and lower (relatively) the normal level of output. This consequence produces, in the context of the same vision, attempts to lower unemployment by means of more active demand management.

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#### 4. The Impulse Problem

Attention to the impulse problem originated with the discussion of the comparative thrust of monetary and fiscal impulses. Monetarist analysis typically asserted the relative dominance of monetary impulses with respect to short-run (temporary) output movements. Fiscal policy was acknowledged to have real effects. The *aggregate* real effects were considered, however, to be comparatively small and temporary, except with respect to the real rate of interest and the long-run stock of real capital.

The evolution of events and analysis modified the formulation and content of the prior impulse problem. The emerging analysis differentiated between the results bearing on price-level and output effects. Elementary price theory informs us that a wide array of real conditions jointly determines with the money stock the movement of the general price level. But *persistent* monetary impulses dominate the inflation rate. The movement of output, meanwhile, reflects an interaction of monetary and real shocks. Real shocks probably dominate the stochastic trend which determines the evolution of normal output. Monetary conditions may contribute to this trend, especially as a result of distortionary taxes imposed on nominal values and the pattern of uncertainty associated with the prevailing policy regime. The stationary component of output movements is maintained by the joint impact of monetary and real shocks. The recession of 1973-75 exemplified the interaction between the shocks. There exists a crucial difference between the monetary conditions shaping the stochastic trend and the stationary component. The latter is controlled by unanticipated and misperceived monetary shocks evolving within a given policy regime, whereas the trend properties are more conditioned by the *characteristics* of the regime. The acceptance of a stochastic trend compared with a deterministic trend, lowers the contribution of the cyclical component to the observed fluctuation in output. It thus directs attention away from the role of short-run stabilization policy towards longer-run "institutional policy" (Nelson and Plosser 1982).

#### 5. The Money-Supply Process and Monetary Policy

a. Money and the Money-Supply Process. Monetarist analysis examined in some depth and detail the nature of money and the money-supply process. Money appears as a social device lowering both transaction and information costs (Brunner and Meltzer 1970; Alchian 1976). The analysis implies in particular that the social productivity of money is hardly represented by the "shoe-sole theory"

interpretations implicit in some inventory approaches. The monetarist analysis offers, as a result, a different interpretation of the role of real income in money-demand functions. Variations in real income (including the "nonmonetized" part of an economy) raise the marginal productivity of money. The underlying analysis, moreover, emphasizes that money emerges, like many social institutions, from the spontaneous interaction between optimizing agents (Schotter 1981). The analysis establishes that there exists no *unique* solution to the social-coordination problem fostering the emergence of "transaction dominating assets." Theoretical questions directed to the *specific* items forming money at any particular time or in the future are thus in principle unanswerable and pointless, in contrast to questions about the existence of some assets with the characteristics of money.

More detailed attention to the money-supply process grew naturally from contentious problems associated with specific issues. Keynesians usually disregarded the money-supply process and its interaction with the real sector. The reader may compare Tobin-Buiter (1976) with Brunner-Meltzer (1976). It is hardly a coincidence that "A Monetary History of the United States" did not emerge from Keynesian explorations. Some of the issues motivating the analysis include: The role of "reverse causation"; the importance of the properties and disturbances associated with money demand; the role of various institutions; the comparative role of public, banks and monetary authorities in the money-supply process; the role of the public demand for credit; the role of interest rates; and, specifically, the controllability of monetary growth. Keynesians hardly hesitated to offer opinions on all these issues even in the absence of systematic work bearing on the money-supply process.

The occurrence of reverse causation is of course consistent with the persistent correlations between income and money. To assess the importance of reverse causation, a detailed analysis of the money-supply process is required. Such an analysis establishes that a policy of interest rate targeting is the most important condition contributing to "reverse causation." Interest rate policy converts the monetary base, and consequently the money stock, into an endogenous magnitude sensitively exposed to all ongoing shocks affecting market rates of interest. These shocks are transmitted via interest targeting into accelerations or decelerations of monetary growth. This effect may, by good fortune, offset the simultaneous effect of the shock on velocity. But this *possible* offsetting depends on a very specific shock mixture with at most very transitory character and offers poor justification for an interest targeting policy. Other institutional arrangements may create additional channels of reverse causation without

contributing to (more or less contemporaneous) positive correlation between income and money. A secondary influence operates via the "Hawtrey effect" on the currency ratio and the monetary multiplier over the cycle. But this channel of reverse causation cannot explain the positive money-income correlation. The prevailing policy institutions thus determine the comparative magnitude and also the direction of reverse causation. The latter is consequently very sensitive, in contrast to the "direct" causation, to variations in institutional arrangements controlling the supply function of base money.

The deterministic and stochastic properties of money demand were usually assigned a major influence by the Keynesian tradition of the Federal Reserve System, However, once portfolio processes move beyond the single LM equation—so that the money stock and interest rates emerge from the joint interaction of asset markets-the role of money-demand properties is much altered (Brunner 1973). It also follows that shocks operating on the credit and money markets influence the money-supply process very differently. A comparatively large variance of shocks modifying credit-market conditions strengthens the case for monetary targeting, whereas a relatively large variance of money-market shocks suggests the choice of interest rate targeting. This aspect is neglected by the IS-LM tradition. This analysis of a policy trade-off between the variance of monetary growth and the variance of "interest rates" also fails once we move beyond the standard IS-LM framework. An asset market interaction incorporating the rudiments of a term structure of interest rates reveals the flaws of the traditional argument (Brunner and Meltzer 1983; Mascaro and Meltzer 1983).

Lastly, much work has accumulated bearing on the controllability of monetary growth. No monetarist ever expected or asserted that monthly or even quarterly magnitudes could be very closely controlled. The extensive studies prepared for the SOMC (Johannes and Rasche 1980–1982): see also Schiltknecht 1979; Bomhoff 1977) demonstrate the monetarists' central contention that monetary growth can be controlled over two quarters to one year within a small margin compared to the problem observed over the past 12 years.

b. Monetary Policy. The controllability of monetary growth is a necessary but not a sufficient condition for the monetarist case on behalf of a non-activist regime characterized by a constant monetary growth (Brunner 1980). Other conditions are still required to com-

<sup>4</sup>Steve Axilrod attributed this position to unspecified monetarists (1983). A survey of the SOMC's position papers shows that this is hardly an adequate description of the facts.

plete the case. A second condition bears on the information required for the rational execution of an activist regime. Every single argument advanced in support of an activist regime postulates the policymakers' full knowledge about the deterministic and stochastic structure of the economy. Such knowledge does indeed offer the possibility of activist exploitation for stabilization purposes. Monetarist analysis emphasizes in contrast that such detailed and reliable knowledge is not available (Friedman 1953). The argument carries actually beyond this and asserts that the nature of the economic process, continuously modifying the accumulated information capital, will never produce such information. But an activist policy proceeding with uncertain information produces just as likely a reinforcing instead of an offsetting covariance between monetary and real shocks. A constant monetary growth regime emerges under the circumstances as an optimal risk-minimizing strategy in a state of uncertain and shifting information (Brunner 1980).

#### 6. Aspects of Political Reality

A third condition supporting the case for non-activist regimes involves considerations of political economy. Advocates of activist policymaking combine the required information assumption with a "goodwill or public interest theory" of government. They may accept the core of economic analysis in relation to market phenomena but adopt an essentially sociological view in relation to the behavior of non-market institutions. A public interest theory of governmental behavior assures us, of course, that the full information available will be faithfully exploited for the social benefit. Full information and a public interest theory are thus sufficient conditions for socially productive activist regimes. But both components of the sufficiency condition are thoroughly contradicted by relevant observations. Political reality, especially, can hardly be described in terms of a "public interest" theory. Policy bureaucracies and politicians are entrepreneurs in a political market in which information is costly. These political entrepreneurs are deeply involved with their own political interests and influence. Their own preferences dominate the pattern of activist discretion (Brunner 1983; Cukierman and Meltzer 1983). A monetary standard, and most particularly a constant monetary-growth rule, is an institutional arrangement constraining the behavior of monetary authorities. The constraint raises the predictability of the regime and lowers the level of monetary shocks produced by an unconstrained discretionary policy.

The rationale for a monetary standard forms a special case of a more general approach to political economy. The analysis of monetary and "socio-political" phenomena is systematically linked in the monetarist vision and not the chance product of Milton Friedman's idiosyncratic behavior (Tobin 1981). Both fields involve the systematic application of economic analysis, and most particularly, the unifying perception of man underlying economic analysis (Brunner and Meckling 1977). Many Keynesians, in contrast, resort to an implicit sociological view in discussions bearing on aspects of political economy. They frequently "explain" the monetarists approach to the political economy of a society as an expression of "ideological" commitment or personal idiosyncrasy. This "explanation" simply reflects the failure to recognize (or acknowledge) an essentially cognitive issue, namely that monetarists at least attempt to provide a systematic and unified framework for the understanding of social reality.

#### III. The Media and the Political Market

The "voices of failure" in the past year have increasingly dominated the news. "Monetarism" is alleged on various grounds to have failed. But the array of castigations and objections to monetarism advanced by "supply-siders," Keynesians, or socialists exhibit no coherent pattern. They are not systematically addressed to the basic core of monetarist analysis or to the published statements of monetarists. A recently published book written by a businessman exemplifies this class of purported failure. The author finds the monetarists "wonderfully correct in defining inflation's underlying causes." But he finds them "less than efficient in their efforts to curb it without excessive and unnecessary pain" (Wall Street Journal, January 4, 1983, p. 29). A pervasive pattern characterizes the laments of failure heard in the public arena. The nature of the failure or its criterion frequently remains obscure. Alternatively, the failure is claimed relative to an irrelevant ideal state or without adequate examination of crucial data or important comparisons bearing on the recent recessions.<sup>5</sup> Still, many allusions and allegations of failure involve a range

<sup>5</sup>The media usually deplore the recent occurrence of the "largest recession or depression" since the 1930s. They hardly notice that total private employment fell *less* than in the recessions of 1953–1954, and 1957–58. Real GNP dropped in 1981–82 by 2.6 percent over the recession, but fell 3.4 percent in 1953–54 and 1957–58. Industrial production declined in 1981–82 by about 12 percent, exceeding the 8.8 percent of 1953–54 and the 10.5 percent of 1957–58. The relative divergence of real GNP and industrial production reveals the difference between the early 1980s and the 1950s in the prevailing mix of more permanent allocative adjustments (steel, automobiles) and transitory cyclical movements. A similar problem applies to the rate of unemployment. The much higher level observed in 1982 is associated with an increase measured in percentage points practically equal to the increase in 1953–54 and 1973–75.

of issues associated with the monetarist analysis. The following sections examine the most common assertions and their relations to monetarist propositions. This examination seems particularly important as the alleged failure is rarely, if ever, supported by juxtaposing the underlying monetarist analysis with relevant facts.

#### 1. The Recession of 1981-82

a. The Failure That Wasn't and The Success That Was. The Shadow Open Market Committee in March 1981 appraised the economic prospects of the U.S. economy. Its members argued at the time and during the spring and summer of 1981 that the shift to an antiinflationary monetary policy expressed by a retardation (in the average) of monetary growth would initiate a recession in 1981. They also predicted a larger decline of inflation in 1982 than the consensus forecast and a lower inflation rate for late 1982 than most other forecasters. Some voices joining the chorus shouting "failure" of monetarism in 1982 failed to recognize the direction of the economy, even by late summer of 1981, that was initiated with the monetary policy advocated by the Reagan administration. Shifting from an accelerating to lower monetary growth made a recession (almost) inevitable. The Shadow Open Market Committee, moreover, publicly criticized the optimistic forecasts published by the administration in early 1981 and in 1982.

The SOMC's assessment was certainly confirmed on all these points by actual developments. The media, however, did not acknowledge this confirmation; instead, they reported a recession "unforeseen, not forecasted" that surprisingly emerged on the economic horizon, and attributed it to "monetarist" policies. Such policies were indeed, as we recognized before the event, the cause of a recession. But for the media the very occurrence of the recession became the prima facie, immediate and direct evidence of a failure of monetarism. In the media's view, no policy should ever be adopted that risks a recession and rising unemployment. Of course, such a view is inherently flawed. Whatever one's emotional reaction may be, the analysis could still be correct and even the associated policy proposal the best choice in a very bad world. The occurrence of a recession offers, per se, no support for the allegation of the failure of monetarism. Nevertheless, some supply-siders and Keynesians also joined forces in questioning the "necessity" of a recession.

b. The Supply-Side Story. Some supply-siders had no interest in changing the course of monetary policy. A lower monetary growth was apparently for them not a necessary condition to achieve a decline

in inflation. On the contrary, they contended that monetary growth at a high rate would produce an increase of about 13 percent per annum, in nominal GNP. Inflation could be lowered "without tears" (without a recession) as a result of the supply-side incentives unleashed by lower private and corporate taxes. Lower tax rates were expected to raise the rate of real growth and thus squeeze the inflation margin in a given rate of increase of nominal GNP. Monetary acceleration was actually required in order to allow the expected output expansion. It was therefore felt that the control of monetary growth along a declining path endangered the results promised by the supply-siders.

If there was a "failure," it rested with the miraculous output effects promised by the supply-side story. But that story was quite incomplete. Expenditure programs and regulatory policies do indeed produce important supply-side responses shaping the behavior of normal output—effects that were systematically neglected in the supply-side story some advocates told. But even a complete and competent account of the welfare-raising effects produced by supply responses, due to the radical change in fiscal policy (including both expenditure and tax programs), would not make a declining monetary growth irrelevant as an instrument of anti-inflationary policy, as some "supply-siders" appeared to believe.

c. The Keynesian Case. The Keynesian objection to monetarist anti-inflationary policy, best expressed by James Tobin, centers on the social cost of this policy. Three strands compose the Keynesian claim of "monetarist failure." One strand involves Tobin's accusations (1981) that "monetarist propaganda" promised a costless transition to a non-inflationary world solely with the instrument of monetary control. The second strand emphasizes the exorbitant level of social costs associated with a disinflationary monetary control strategy compared with the social costs of permanent inflation. Tobin phrased this idea by stressing the large number of "Bailey triangles" fitting into an "Okun gap." The third strand is that a disinflationary monetary policy supplemented by a "tax-based income policy" would effectively lower the social cost of the transition.

The first strand should be recognized as a remarkable fabrication. It thoroughly distorts monetarist arguments bearing on the social costs of disinflation—arguments that the SOMC has consistently stated.

Monetarist analysis, however, differs from Keynesian analysis with respect to the conditions controlling the social cost of disinflation. A Keynesian view of an inertial price-wage process embedded in the social fabric beyond the relevant influence of monetary regimes necessarily associates high social costs with any disinflationary policy. The association occurs irrespective of the history of monetary policymaking and the mode of executing the policy shift. Monetarist arguments, on the other hand, emphasize the importance of the credibility of "disinflationary announcements." Credibility depends, at least in part, on the history of policymaking and the behavior of the policy institution. Low credibility offers little incentive to modify price-wage setting behavior, and the social cost of disinflation rises correspondingly. According to monetarist analysis of the transmission mechanism, the social cost of a disinflationary policy is not predetermined by the magnitude or duration of monetary retardation. It may vary substantially even between episodes exhibiting the same pattern of monetary deceleration. The social cost depends crucially on the public's belief in the persistence of the disinflationary action.

The second strand of the Keynesian objection juxtaposes the costs of a steady, permanent inflation compared with the disinflationary loss of output. But the political reality of a policy of permanent inflation is associated with intermittent and temporary phases of "anti-inflationary" policies (remember 1969, 1971, 1974–75, and now possibly 1981–82). The relevant comparison thus involves the social cost of a single disinflation on the one side and the discounted value of the social costs associated with a series of disinflationary phases in the future. This point has been emphasized repeatedly in position papers prepared for the SOMC. The public interest theory of government or policy institutions that guides much Keynesian thinking may subtly influence the nature of the comparison made. A policy of permanent monetary expansion, executed in accordance with the "public interest," as expressed by a social cost function, could be relied upon to produce a steady inflation.<sup>6</sup>

According to the third strand, monetarists are accused of opposing price-wage controls on essentially ideological grounds without looking at the merits of each individual case. A charitable interpretation of such "ideological condemnations" would attribute them to a failure to recognize the difference in the underlying *theory* of political economy. Tobin's proposal of income policies to supplement anti-inflationary monetary policy seems conditioned by two related com-

The unsubstantiated sociological view underlying this Keynesian strand is only one of its empirical problems. It disregards an empirical regularity connecting the rate of inflation and price dispersion (Cukierman 1983). This pattern produces a more diffuse uncertainty about relative prices, the general price level, and market conditions. It makes it more difficult for agents to infer the mix of more transitory and more permanent shocks shaping the economic scene. The real effects of this increased uncertainty add to the social costs of inflation.

ponents of his view of the political economy. One component is the inertial price-wage process, and the other, the public interest theory of government. The first component, in contrast to the Keynesian position of the 1950s or early 1960s, now attributes to monetary impulses a dominant and rather durable role with respect to output movements. Monetary decelerations (even when accompanied by "massive tax cuts"?) produce a large cumulative loss in output, a loss that can be lowered by price controls. The second component—that this institutional apparatus will operate just for the purpose designed and will be dissolved after this purpose is satisfied—is assured by the public interest theory of political processes. But the analysis of a society's political economy, accepted by at least some monetarists, yields a different evaluation. It implies that irrespective of official motivation for establishing price controls, their operation is only marginally directed to the inflation problem. The price-control apparatus will be dominated by groups that seek the redistribution of wealth. Moreover, the political reality lowers the likelihood that the price control system will ever be dismantled once it has been set up. "Monetarist" analysis thus recognizes social costs associated with "supplementary price controls" that are not recognized by some Keynesians.

The SOMC expressed from its inception in September 1973 concern about the social cost of an anti-inflationary program. This concern, combined with advocacy of a risk-minimizing and predictable course of policy, increasingly induced the SOMC to emphasize the "institutionalization" of monetary policy in contrast to the whims and fragile judgments made by specific persons under "discretionary" policymaking.

#### 2. The High Level and Volatility of Interest Rates

The behavior of interest rates has for good reasons attracted public attention over the past three years. Nominal and real rates moved to levels never observed in the past. The variance of interest rates over the whole spectrum of the yield curve was unprecedented. The experience was generally attributed, with some encouragement by the Federal Reserve authorities, to the change in policy officially announced on October 6, 1979. The "monetarist conversion" of the Fed was seen to be the cause of high and erratic interest rates. The Fed's intellectual tradition anchored in a standard IS-LM paradigm supports this view (Board of Governors 1981). The IS-LM framework implies, as shown in the Fed's staff work, a trade-off between the variance of monetary growth and the variance of "interest rates" represented by a single rate. The "failure of monetarism" thus became

clearly visible; interest rates "misbehaved" after the Fed instituted a "monetarist" policy of monetary control. So it follows, post hoc ergo propter hoc.

The following questions require our attention: Did the Fed pursue a "monetarist policy"? Is there a trade-off between the variances of interest rates and monetary growth? Does a monetary deceleration systematically raise real rates of interest over a long period?

The first question will be investigated later in a broader context, but some comments may be made at this point. A reliable answer to the question, of course, requires some reference point characterizing a "monetarist policy." Fortunately, a reference point is provided by the writings of Milton Friedman, my paper on monetary policymaking (1981), and the statements or position papers offered over the past eight years by the SOMC. On various occasions the SOMC actually presented in some detail the tactical procedure required for an effective and reliable policy of monetary control. The SOMC, moreover, argued with increasing emphasis that the tactical aspects, while necessary, were not sufficient. They needed to be integrated into a strategic conception expressed by the "institutionalization" of monetary policy represented by the choice of a standard. A constant monetary growth standard was the choice advocated by members of the SOMC. When measured against this reference point, little remains of the "monetarist content" of Fed policy. What remains is the rhetoric of monetary targeting and the observed average decline of U.S. monetary growth from the end of 1979 until last summer. From 1979 to the summer of 1982, the strategic conception expressed by determined adherence of the Fed to discretionary policymaking (Brunner 1983) persisted with an unbridgeable difference relative to monetarist ideas. And so did the tactical procedures preferred by the Fed. The media may experience difficulties in recognizing and appreciating this substantive fact behind the rhetoric. But any comparison between the record of the Fed and the material offered by monetarists yields little support for an affirmative answer to the first question.

The alternative answers to the next two questions are crucially conditioned by the intellectual paradigm controlling the Keynesian view. The view is well represented by the IS-LM framework and its characterization of the transmission mechanism. But an affirmative answer to questions two and three is difficult to reconcile with two important observations cast up during the last three years. First, there occurred no trade-off between the variances of monetary growth and interest rates; they both increased simultaneously. Second, the comovements between interest rates over the whole spectrum of the yield curve were higher than ever before. The first fact immediately

rejects the implication of the standard IS-LM model. The second fact is inconsistent with the proposition that the Fed pursued an anti-inflationary policy of monetary control that had achieved substantial credibility. Such a policy would have produced at most some variability at the *shortest* end of the yield curve with vanishing correlation over the yield curve (SOMC position papers; Brunner and Meltzer 1983). The IS-LM analysis fails to integrate aspects of the term structure and its interaction in response to transitory and permanent shocks. Reliance on this analysis precludes a proper understanding of the events observed since 1979.

The answer to the last question is similarly dependent on the view about the transmission mechanism. A standard IS-LM model will tell us that a retardation of monetary growth raises real interest rates for a long time. The inertial properties of the system assure this result. Older monetarist analysis implied a temporary effect concentrated mostly on short-term rates. Even this "moderate" position is increasingly questioned by apparently "neutral" economists (Mishkin 1981; Shiller 1980). There is little empirical support for a thesis that monetary retardation produces *persistently* high (short- and long-term) real rates of interest. So what accounts for the behavior of interest rates? The SOMC offered a tentative answer consistent with the evidence of the last three years. The low credibility and diffuse uncertainty associated with financial policies generated a high and volatile risk premium that was built into the gross real rates of interest (Brunner, Shadow position paper 1981–1982). A detailed theoretical and empirical study supports this analysis (Mascaro and Meltzer 1983).

#### 3. The "Definability" and Controllability of Money

Regulations and inflation encourage financial innovations. Such innovations modify the composition of "money" and possibly change the substitution relations between money and non-money financial assets. A host of voices have asserted in the past three years that financial innovations have destroyed the concept of money, made it undefinable or unmeasurable, or measurable with a large error. Monetary control has thus become impossible or exceedingly unreliable, making "monetarist ideas" obsolete.

The fact of innovation is incontestable. But financial innovation is not a new experience. It characterized the 1950s when shares in savings and loan institutions grew much more rapidly than the stock of money did (remember Gurley and Shaw?). But the observation of financial innovation by itself establishes very little. It does not establish indefinability or unmeasurability; neither does it establish

uncontrollability of the money supply, or if controllable, the irrelevance of such controls. The complex of problems requires somewhat more care than discussions supplied to the public arena were apparently able to provide.

Let us turn first to the contention so blithely advanced that we (!) do not know what money is, or that money and credit lack individual qualities. This point covers both the definition and measurement of money, failure to distinguish between the two producing much confusion. Financial innovation does not affect the definition of money. but does require adjustments in measurement procedure. The definition remains basically the same: Money consists of any item which is used with great regularity to settle transactions, i.e., as a generally accepted medium of exchange. The relevance of this definition rests on two observations. First, that most societies exhibit a small group of goods or assets satisfying this general exchangeability criterion in contrast to most other assets, and second, that economic agents do not behave randomly with respect to "transaction dominating assets" and other assets. Innovations over time change the composition of items satisfying the condition laid down by the definition. The composition was indeed affected by recent developments, and measurement procedures have been adjusted by the Fed, as they will have to be intermittently adjusted in the future.

Every measurement, no matter how closely it conforms with the definition, will involve an error. Such errors certainly crept into measures of M-1 and M-2 by the late 1970s. No evidence has been adduced, however, to support massive errors in the measures of these magnitudes in the past three years, whereas the error in the defunct M-1A was probably quite large. It is interesting to note that those who find money undefinable and unmeasurable hardly hesitate to use the CPI or components of national income accounts that are probably subject to substantially larger measurement errors.

It should be emphasized that a constant or proportionate measurement error poses no problem for monetary control. A volatile measurement error together with an array of other conditions is alleged, on the other hand, to have lowered or destroyed the controllability of money. If so, the result would be revealed by the behavior of the money multiplier. Lowered controllability of monetary growth in particular implies that the stochastic process governing the money multiplier has changed in recent years. This change would lower its predictability, or raise the variance of the forecast error of the money multiplier.

James Johannes and Robert Rasche have prepared ex ante forecasts of the money multiplier for each semiannual session of the SOMC

for the last five years.<sup>7</sup> The accumulated pattern of forecast errors offers no support for the contention of lowered controllability. The patterns, on the contrary, support the monetarist assertion of controllability with a small margin of error within one year. This controllability also is confirmed by the Board of Governors staff studies (1981).

The relevance of controllability of monetary growth has been questioned on the ground that financial innovations have modified the behavior of monetary velocity. The link between money and national income expressed by velocity, it is argued, has become more uncertain in recent years. Has the stochastic process controlling velocity changed over the last several years? Some preliminary time series studies described in recent position papers of the SOMC report two crucial statistics. The trend estimate increased somewhat over the 1970s compared with previous decades. But this appearance of an increasing trend is quite tenuous. The 95 percent confidence intervals for the trend parameters derived for the 1950s, 1960s and 1970s overlap. The overlapping is consistent with the hypothesis that the trend parameter remained unchanged. However, even an increasing trend would pose no real problems for the relevance of monetary control. More interest attaches in this respect to the variance of the innovation expressing unforeseen changes in the velocity of several monetary aggregates. The variance of the innovations in base velocity and M-1 velocity measured over the 1970s does not exceed the level estimated for the 1950s, whereas the variance of the innovation in the velocity of M-2 rose slightly in the 1970s. Projections of innovations into 1980 and 1981 beyond the sample period (terminated at the end of 1979), moreover, yield no patterns that are substantially improbable (say at most 5 percent) under the maintained hypothesis of an invariant stochastic process. The regulatory changes initiated in the winter of 1982–83 may affect velocity and permanently modify its level, trend, or variance. Neither of the first two modifications pose any serious problem for long-term monetary policymaking once the pattern is recognized. And speculative adjustments in the transition period with substantial ignorance offer no assurance of "stabilizing actions." Moreover, suppose that it were confirmed at some point in time that the link between money and national income "became looser" and the variance of the innovation significantly larger. We cannot rationally deduce from this fact that monetary control, and most particularly a constant monetary growth control, is irrelevant. A discretionary policy would probably produce a larger

<sup>&</sup>lt;sup>7</sup>The statements and position paper of the SOMC are available upon request.

variance of monetary innovations with an unlikely offsetting (i.e., negative) covariance between the innovations that would otherwise occur (Brunner 1983). Well-meaning intentions at "flexible adjustments" do not assure the reliable knowledge required for successful activism. Flexible actions sensitively dependent on erroneous information and speculative assumptions cannot be expected to lower the variance of aggregate nominal demand. Lastly, the fact that velocity is well approximated by a random walk implies that discretionary policies attempting to offset observed or anticipated changes in velocity most probably raise, on the average, the variability of changes in nominal GNP.

#### 4. Monetary Rules and Monetary Standards

The marketing ingenuity of some "supply-siders" has been remarkable. As their story based on tax cuts faded, they shifted attention to monetary problems. They claimed that the "gold standard" or price rules offered a superior arrangement to exorcise both inflation and deflation than the monetarists' emphasis on the "quantity side." They juxtaposed the "quality" to the "quantity" of money.

a. Quality Versus Quantity of Money. The "quality of money" was presented as the answer to the problem of inflation. Termination of inflation required no control over the quantity of money with the corollary danger of recession. Policymakers need only to improve the quality of money and inflation would end. And the quality would be radically improved by instituting a gold standard. A "gold standard" assures the "quality of money" which stabilizes the price level.

The rise in quality can only mean, at least in the context of economic analysis, an increase in money demand. The increase is produced by the institution of a gold standard which induces expectations of a stable price level. The price level, of course, adjusts to the interaction between money supply and money demand. It may deserve some emphasis in this context that monetarists originally pioneered most of the empirical studies of money demand. A large increase in money demand relative to monetary growth would indeed dampen inflation temporarily and lower the price level permanently. Still, raising the "quality of money" in the sense defined irrespective of the behavior of monetary growth offers no assurance of a stable price level. The policymakers still need to control the magnitude of monetary growth.

b. The Gold Standard. The invocation of "quality" is not a sufficient argument for a gold standard. This standard must also constrain the behavior of monetary growth. In the absence of an effective

constraint, expectations of a stable price level and a "quality jump" would not occur. But even the occurrence of a quality jump does not remove the need for a reliable and persistent monetary constraint. The "quality jump" is at best a once and for all event whereas inflation depends on the *persistent* monetary growth pattern.

A survey of the discussion concerning the gold standard, whether in the media or the political market (Gold Commission), offers little enlightenment. Advocates of a gold standard are quite vague about the institutional arrangements of a "gold standard." They also leave rather unclear how the arrangements would function to confine monetary growth on the average to a non-inflationary level. Some proponents visualize the gold standard as the definition of the *unit of account* in terms of a quantity of gold. It remains a mystery how this specification affects any transactions and thus the behavior of the money stock and the price level.

c. The Price Rules. The political debacle of the supply-side story required some diversionary action on the media market. This was achieved with the promise that a monetary standard anchored by some price rule could be expected to improve our economic prospects. Some argued that monetary growth should be adjusted inversely to the movement of the gold price. Others argued on behalf of a general price index rule or an index of sensitive commodity prices. These proposals did not emerge from a careful analysis of their consequences. No supporting analysis was ever produced in a professional context or referred to. Some analytic probing establishes unambiguously that a price rule of the kind proposed and based on a general index would produce a non-stationary drift of the price level. It would not assure the prevalence (on the average over time) of a non-inflationary state. The use of price rules based on specific price groups would actually worsen the situation. Allocative or real shocks affecting the relative position of these price groups would be translated into monetary shocks and aggravate the non-stationary drift of the general price level. It should perhaps be noted at this stage that an *indirect* price rule is indeed built into the constant monetary growth regime. The benchmark guiding the choice of monetary growth is determined with the view to assure on the average (say, over four years) a stable price level. The benchmark depends consequently on the trend in velocity and in normal output. The crucial difference between this "indirect price rule" and the "supply-siders' price rule" is this: The latter involves an activist short-run feedback from movements in specific price measures, whereas the former rejects such a feedback and modifies the benchmark only after substantial evidence of *permanent* changes in the underlying determinants.

#### 5. General Remarks on the Nature of the Discussion

The questions addressed thus far all involve empirical issues. Any answer to these questions can conceivably be false. In particular, monetarist analysis could be empirically untenable, but so could the critics' views. But the major thrust of my discussion does not address the correctness or empirical falsehood of the contentions advanced. My emphasis is rather on the quality of the arguments encountered. They hardly satisfy professional standards. The level of impressionistic language occasionally appearing corresponds to arguments advanced by members of the flat earth society. Similar arguments could "conclusively" establish that the sun rotates around the earth or that the universe is recreated at the beginning of each millenium. The quality of the typical argument is probably most revealing presented in discussions bearing on definability, measurability, and controllability of money.<sup>8</sup>

My introduction to this paper may suggest that it is "unfair" to criticize the linguistic exercises cultivated by the public arena. They may actually be quite clever, sophisticated, and exceedingly well written, but they frequently exhibit, in spite of their English literacy, a remarkable level of logical illiteracy. But then, should we really expect the public arena to assign much weight to cognitive issues? Frank Knight seemed to express some doubts about this matter in his Presidential address to the American Economic Association in December 1950.

#### IV. The Academic Market

No clean white line separates the political from the academic market. A simple criterion may suffice for our purposes, however. This part of my paper uses arguments advanced in a professional context. Two papers constitute my material, one by Harry Johnson addressed more than 10 years ago to the American Economic Association (1971), and a paper by James Tobin evaluating the monetarist counter-revolution (1981). My discussion is organized into four sections.

#### 1. "Monetarism" and Monetarism

a. A Distorted Focus. Harry Johnson's Richard T. Ely lecture to the American Economic Association on "The Keynesian Revolution and the Monetarist Counter-Revolution" addressed the problem of

<sup>8</sup>Articles in the *Wall Street Journal* by Frank Morris, President of the Federal Reserve Bank of Boston, and Irving Kristol on monetary control and monetary policy, published in 1982, are noteworthy examples of the quality of the product offered in the public arena.

changing paradigms, particularly the conditions favoring the "marketability" of a new paradigm. Among these conditions, Johnson assigned particular weight to the occurrence of a dominant socioeconomic problem. In his view, the marketing of the Keynesian Revolution was facilitated by prevailing mass unemployment, while the marketing of monetarist ideas was aided by the increasing drift into an apparently permanent inflation. Johnson may have correctly sensed the conditions favoring monetarist ideas, but I believe his argument projecting the long-run victory of Keynesian ideas focused on the wrong conditions. This issue, however, may be suspended for the moment.

Independently of the truth or falsehood of Johnson's argument, it contributed to a limited vision of monetarist thought, covering little beyond money, inflation, and some technical aspects of monetary policymaking. Tobin essentially reinforces this view when he complains that Friedman turned "exclusively monetarist" after he had published a more broadly conceived "A Monetary and Fiscal Framework for Economic Stability" (1948). This attribution is unfortunately a remarkable distortion of monetarist ideas which were offered as an alternative to the Keynesian vision bearing on socioeconomic and socio-political issues as a whole, whatever the dimension that appealed to the market. The general survey in section II was deliberately incorporated to make this point. Some of the following discussion elaborates several aspects of this broader range related to specific criticisms advanced by Tobin.

b. The Transmission Mechanism. Two issues appear under this heading—the price-output responses of nominal shocks and the role of asset markets. Tobin (1981) raises the first issue with the claim that monetarists "defined away" the problem of the "missing equation" and "escaped the messy groundwork in which Johnson expected them to lose their identity" (p. 37). Tobin thus repeats, after about 10 years, Johnson's (1971) view about monetarists' "abnegation of responsibility for explaining the division of the effects of monetary change between price and quantity movement" (p. 10).

Johnson's evaluation missed some important strands of monetarist thought. But Tobin's repetition of the claim without apparent regard for the professional discussion over the past 20 years is, to say the least, quite remarkable. Johnson's projection about the "identity loss" was falsified by subsequent experience and reveals, once more, the distorted focus on the structure of the monetarist vision that obscured its central cognitive thrust.

(i) The "Missing Equation" and Unemployment. Monetarist analysis presented a view of the transmission mechanism centered on the play of relative prices on asset and output markets. Supply responses thus formed an integral part of the view that money substitutes in all directions over all goods. This view implied the monetarist proposition bearing on price and output responses advanced in the early 1960s: Persistent monetary growth determines approximately the movement of the price level and monetary acceleration (or deceleration) conditions output movements relative to normal output. This proposition survived the facts of the past decades substantially better than did the Keynesian Phillips Curve with its implicit denial of a normal level of output or its explicit (associated) denial of the accelerationist thesis. The evolution of a rational-expectations analysis, pioneered by Jack Muth and Robert Lucas, subsequently provided an analytical approach to tighten the original idea. It offered in the logician's sense a careful explication for the initial explicandum. That analytical approach should not be understood to depend on the standard market-clearing assumption.

Tobin's recent remark appears even more peculiar when contrasted with the discussion of monetarism in the middle of the 1970s. Tobin co-authored a paper with Willem Buiter "defining away" any price-level problem (Tobin and Buiter 1976). In contrast, Brunner and Meltzer integrated output and price-level responses into the analysis (Brunner 1976; Brunner and Meltzer 1976). Their analysis also stated the conditions under which nominal shocks would be fully absorbed by the price level or partly by output. A first complete formulation of this output-price and asset-market interaction was presented in 1970 at the first Konstanz Conference (Brunner and Meltzer 1972).

It is difficult to fault Johnson for lack of perfect foresight, but Tobin's hindsight should have been better. Monetarists engaged in detailed empirical work bearing on price behavior (implicitly on the "division" of shocks) and also explicitly on output responses. Such work was developed by economists at the Federal Reserve Bank of St. Louis, by the Manchester group of economists, and by an international group associated with Allan H. Meltzer and myself.<sup>9</sup> Tobin's

<sup>9</sup>The studies prepared at the Federal Reserve Bank of St. Louis include papers by Karnosky (1976) and by Rasche and Tatom (1977). The work of the Manchester group is summarized by Laidler and Parkin in an *Economic Journal* piece, "Inflation: A Survey" and related work listed in the bibliography of this piece. The studies resulting from the international group associated with Brunner and Meltzer are The Universities-National Bureau Conference Volume published by the *Journal of Money, Credit, and Banking* in February 1973, and the Carnegie-Rochester Conference Series volume on "The Problem of Inflation" published in 1978.

assertion, advanced with astonishing carelessness, is thoroughly contradicted by the facts. And so is Johnson's prediction about the "identity loss" suffered by monetarist analysis as a result of work on the price-output response problem. This statement reveals a subtle misconception of the structure of monetarist thinking. The broad structure of monetarism had been sufficiently delineated in the writings referred to by Johnson. He failed, however, to recognize the interrelations between crucial strands of this thought, as summarized in part II.

The basic structure of monetarist thought defines an "identity of vision" hardly affected by the *fact* of empirical work on price-output responses. The crucial aspect remains in this context that explicit attention to price-output responses actually sharpened, in contrast to Johnson's prediction, the conflicting interpretations offered by Keynesians and monetarists of the inertial process. The evolution of monetarist analysis, including the most recent extensive work by Milton Friedman and Anna Schwartz, contradicts Johnson's speculation. Subsequent events also contradict his forecast that "we will vanquish inflation at relatively little cost or we will get used to it" (Johnson 1971, p. 12). We have neither vanquished it nor have we become used to it. This dilemma, built into the political process, creates incentives to persist with a stop-go pattern of highly *erratic* but *permanent* inflation.

"Mass unemployment" is cited by Johnson, with Tobin's approval, as the social problem that will undermine the relevance of monetarist thought. We need to appraise this point very carefully. In some sense, as I interpret Johnson, we should agree. The current state of the economy seems to confirm his judgment. But it is important to understand that Johnson refers to the political marketability of monetarist ideas, "The key determinant to success or failure lies not in the academic sphere, but in the realm of policy" (1971, pp. 11-12). Political marketability depends, however, very little on the cognitive relevance of the ideas to be marketed. Apart from the reality of comparative and shifting political appeal there is still the cognitive issue bearing on the employment-unemployment problem. The historical motivation of Keynesian analysis yields neither assurance nor confirmation for its approach to the unemployment problem. A "demand deficiency" that is widely recognized by Keynesians and monetarists indeed occurred in the early 1930s. The recognition of such a problem does not support, per se, the Keynesian approach to unemployment. It can be subsumed under a monetarist framework (Friedman and Schwartz 1963; Brunner 1981). Finally, the unemployment pattern that has evolved over the past decade in Western

nations seems to a large extent beyond the scope of the traditional Keynesian analysis. A large portion of current unemployment (in 1983) and the rising trend observed over many years cannot be intelligently interpreted as a result of "demand deficiency." It is essentially a relative-price problem produced by demographic and institutional changes supplemented by major allocative shocks that have raised the level of normal unemployment. The cyclical component of unemployment superimposed over the past two years, on the other hand, is indeed a consequence of monetary deceleration. The intellectually remarkable event in this context is the surreptitious conversion of the Keynesians expressed by their "single-minded" attention to the effects of restrictive monetary policy, and their hope for salvation by monetary expansion. This "conversion" reveals both their persistent emphasis on independent inertial processes and a noteworthy shift in their assessment of the relative role of monetary policy, compared to the 1950s or 1960s.

(ii) Asset Markets and the Substitution Realm of Money. The reader of Tobin's piece will encounter some surprising allegations and comments when examined against the background of the structure of monetarist thought. "[M]onetarists made quantity leaps from general asset preference theory to special monetarist propositions. However stable 'the' money demand function may be, equating it to money supply cannot describe the whole economy if the function contains more than one endogenous variable. How Friedman and Brunner-Meltzer could turn multi-asset systems of equations into single equation monetarism remains a mystery I do not fathom." We further read: "Popular rational expectations macro-models, from which strong propositions about policy are derived, are underdeveloped on the financial side. They too neglect to describe the monetary transmission process. They assume a single sovereign M, unspecified as to concept, properties and measures." 10

These statements grotesquely distort the pertinent facts of monetarist work. The survey of the constituent strands of monetarist thought in part II emphasized the role of an open-ended substitution process of money over the whole spectrum of assets. This emphasis motivated our insistence to move beyond the IS-LM paradigm and to stress the interaction between money, non-money financial assets, and real assets. It was shown that this interaction radically modifies the nature of the transmission mechanism compared with the standard properties of the IS-LM model. Some tentative empirical work based on

<sup>10</sup> James Tobin (1981, pp. 40, 44).

this view was explored in the 1960s (Brunner and Meltzer 1966. 1968). More extensive work along the same lines was developed in Europe (Korteweg and van Loo 1977). Tobin's statement is even more inexplicable when confronted with his own work represented. for example, by the paper he co-authored with Willem Buiter (1976), which was contributed to the conference on monetarism in 1975. Tobin-Buiter presented a standard IS-LM framework with a fixed price level (over parts of the paper) and a *single* portfolio equation expressing the narrow Keynesian substitution assumptions. Brunner-Meltzer, in contrast, argued at great length why this "single equation approach" to financial markets misrepresented the transmission mechanism. In particular, they discussed a list of problems obscured by this Keunesian procedure. It is noteworthy that Tobin has recently elaborated, in contrast to his prior Keynesian commitments, the need for a less emasculated analysis of financial markets (1981). Tobin's comment that the rational expectations literature relies on an "undeveloped financial market" ignores the fact that this literature proceeds within the framework extensively advocated by Tobin, but augmented by a supply function.

What is the "unfathomable" mystery mentioned by Tobin? He attributes to monetarists "a quantity leap" from asset preference to specific monetarist propositions or a mysterious reduction of multiasset equations to a single equation. But the latter procedure typically characterizes the Keynesian work and not our multiple asset-market analysis, which explicitly includes the interaction between a credit market and the money market. The meaning of the "quantity leap" is not clear and what proposition is leapt to by monetarists remains obscure. No references help the reader, as Tobin's whole paper omits references to any supporting material. As we have in all our analysis used a multi-asset equation system, as contrasted with Tobin's usual lapse into a single-asset equation system when discussing outputmoney interaction, I am at a loss to understand the nature of the "leap" attributed to us. One possible interpretation may involve the proposal of a "monetarist monetary rule." Should this be the case, then Tobin's assertion is bizarre. We did not derive this rule just from asset preferences. A paper I presented at a conference, with Tobin as a discussant, developed the two necessary and sufficient conditions for an activist regime. The empirical falsehood of these conditions determines the case for a non-activist regime represented by a constant monetary growth standard (Brunner 1981). This analysis does not depend on specific assumptions about asset preferences and such, but depends crucially on the diffuse uncertainty bearing on the detail of the economy's response structure. It is shown that a riskminimizing strategy pursued under these conditions yields a constant monetary growth policy.

One last clarification of a long-maintained misinterpretation that Johnson's article reinforced: Friedman's discussion of the quantity theory within the frame of a money demand function has frequently been interpreted as a simple "generalization of Keynes." The critique overlooks Friedman's use of a full array of asset yields as arguments of money demand. Aspects of term structure are explicitly recognized. His formulation thus rejects the Keynesian substitution assumptions enshrined in textbooks. His formulation is not subsumable under a Keynesian view of the transmission mechanism.

c. Normal Output and Impulses. Some of the arguments contained in Tobin's text address the joint topics of normal output and impulse forces essential to monetarist analysis. We read: "With stable policies, they (i.e., monetarists) say, the economy itself will be stable. Exogeneous non-policy shocks, including entrepreneurial expectations and spirits, are assigned comparatively little empirical importance." This contrasts with another statement deploring the emerging emphasis on real shocks as possibly major influences of business cycles. Regarding "entrepreneurial spirits": Monetarists would say that, in the absence of any reliable theory about their occurrence and behavior, these kinds of real shocks can hardly be dealt with by finetuning monetary policy. Fine-tuning under a state of ignorance or uncertainty raises the likelihood of a destabilizing regime, whatever the degree of dynamic stability of the economy otherwise may be.

But consider specifically the assertion that monetarists assign little importance to non-policy shocks. Once again the facts seem to be inverted. The SOMC was among the first groups to emphasize in 1975 that the "quantum jump" in the real price of oil simultaneously caused a permanent increase in the price level, a temporary increase in the rate of inflation, and a permanent reduction in normal output. Tobin denies this effect, as he has on previous occasions denied that the OPEC real shock severely lowered normal output. But it happened to be the monetarists who emphasized the role of this non-policy real shock. It also follows that Tobin vastily overestimates the cyclical decline in 1974–75.

d. Money and Money-Supply Theory. A variety of obiter dicta bear on the nature of money and the structure of the money-supply process. Tobin complains that "concept, property and measure" of money

<sup>&</sup>lt;sup>11</sup>James Tobin (1981, p. 34).

are unexamined and left obscure by the monetarists. They (i.e., the monetarists) "were impatient with requests to define conceptually the 'money' whose quantity was the alleged fulcrum of the economy. What properties of liabilities payable in the unit of account are essentially monetary? What characterizes money?" Tobin continues with some other questions and ends the series with the assertion that "monetarists preferred not to hear these questions." Beyond the nature of money Tobin addresses the structure of the money-supply process. He argues that strong swings in the demand for money and credit produce variations in monetary growth. "Sometimes these were 'IS' shocks whose accommodation intensified boom or recession. Sometimes they were "LM shocks that, according to William Poole's paradigm, should be accommodated." He continues his comments on cyclical behavior: "The inevitable short-run pro-cyclical elasticity of money supplies gives ready alibis to those monetarists who are not actually running Central Banks."13 Lastly, we note Tobin's claim that the short-run relation of M's and MV's to reserve stocks, as subsequent events illustrate, are no tighter than their relation to the Federal Funds rate.14

In summary, the quoted material bears on the nature of money and on the money-supply process. These are matters to which Keynesians, including Tobin, hardly contributed very much. Consider the first quote referring to "concept, property and measure." Monetarists have substantially explored these questions, unlike Tobin who occasionally commented, without further analysis, on the inherent difficulties in recognizing "money" in the array of "liquid assets." This should be contrasted with his use of a "single sovereign M" in the context of an IS-LM approach. We start from the observation that most people find little difficulty in distinguishing items which are a generally accepted medium of exchange from those which are not. Most agents easily distinguish between claims representing credit which are not used in general to make payments and those which are so used. The ability to distinguish is clearly revealed by agents' behavior expressed by a non-perfect substitutability between items with different "exchange-ability properties."

But there is more to be said in this context. More than 10 years ago Allan H. Meltzer and I published an article on "The Use of Money" (Brunner and Meltzer 1970). This paper explored the conditions of a monetary economy and explained money as a social device that

<sup>&</sup>lt;sup>12</sup>James Tobin (1981, p. 32).

<sup>&</sup>lt;sup>13</sup>James Tobin (1981, p. 33).

<sup>&</sup>lt;sup>14</sup>James Tobin (1981, p. 32).

reduces information and transaction costs. It explained in particular the nature of money's social productivity and the consequences of hyperinflation and hyperdeflation on the search for new types of money. An article by Alchian subsequently explored similar lines (Alchian 1977). Neither Tobin nor the Keynesians, in general, made any attempt to cope with the nature (concept and property) of money.

The quoted statements that bear on the money-supply process are similarly noteworthy. Tobin seems totally oblivious to the discrepancy between the effort invested by monetarists into analytical and empirical studies of the money-supply process and the comparative disregard of the subject in the Keynesian literature. His attribution of inevitability to pro-cyclical movements of money supplies is without foundation in analysis and fact pertaining to the money-supply process. Systematic pro-cyclicality results from deliberate policy or the institutional choices made by policymakers (e.g., the structure of refinancing arrangements for banks). The cavalier attribution of alibiseeking by monetarists (which ones? the SOMC?) in order to cover up the failure of "their policy" ignores the results of the Johannes-Rasche forecasts of the monetary multiplier. These forecasts yield serially uncorrelated errors and establish that monetary control within a band of two percentage points centered around the target is quite feasible over one year. Monetarist studies have yielded important insights into the role of the Central Bank, the public, and the banks in shaping the behavior of monetary growth and the growth rate of bank credit. This analysis establishes that in the absence of an interest-rate policy, shocks to money demand exert a negligible effect on monetary growth in the context of the interaction between a credit and money market. We note as a curiosity Tobin's reference to swings in M's due to swings in demand for money and credit in relation to Poole's analysis. But Poole's IS-LM model contains no credit market. An explicit incorporation of such a market yields implications bearing on credit-market shocks radically different from the results obtained for money-demand shocks. A large variance of credit-market shocks produces a result with respect to the choice of monetary strategy which is opposite that produced by a large variance of money-demand shocks. Monetary policy analysis proceeding within the IS-LM framework disregards this issue. Lastly, Tobin asserts that the relation between the monetary base and monetary growth is no tighter than the relation between the latter and the federal funds rate. The results of the Johannse-Rasche analysis, compared with the historical record of the Fed based on either strategic or tactical use of the federal funds rate, contradict this assertion.

#### 2. Rewriting History

The most astonishing portion of Tobin's diatribe against "monetarism" is the asserted historical record of failure produced by "monetarist" policymaking. The section opens with one of the most remarkable sentences of his piece: "It is not surprising that the Central Bank fraternity embraced monetarism." This assertion is followed by a singularly shallow supporting argument. "Monetary targeting" became last decade, after the collapse of the Bretton Woods system, "the vehicle of discipline." Central Banks were, so we are told, increasingly influenced by monetarist principles and "sensitive to monetarist criticisms." Tobin finds the record of performance produced by an obviously monetarist policymaking simply "dismal." "Monetarists are" moreover "in a poor position to shift blame to the inflationary legacy of the 1960s, or to OPEC or to fiscal policy." We also learn that the Fed was "not wholly monetarist." It "moved its short-run money growth target with eyes on national and international economic variables, actual and projected, and did not completely abandon its old strategy of 'leaning against the wind'...."15

The assertion that the Fed and all other Central Banks pursued a monetarist regime remains a flagrant falsehood even if propagated in the media and by academic Keynesians. But the prevalence of this assertion justifies a more detailed discussion.

Tobin admits that the Fed "pragmatically modified" its "monetarist policy," but staunchly maintains that this offers no excuse for "alibi-seeking monetarists." We should note in passing the subtle questioning of motives which erodes the possibility of rational discourse. But the "pragmatic modification" involving changes in target, an ex post facto adjustment of targets to overshoots, a systematic positive bias in realizations, and the generally inflationary drift of monetary policy, reveal the truth of the matter. Monetary targeting was a hoax, a tactical device to defuse outside pressure on the Fed to initiate a policy of monetary control (Brunner 1983). The tactical use of targeting designed to protect the traditional range of discretionary policy is well understood by former members of the Fed's staff and close observers of the scene. This fact explains the prompt appearance of a multiplicity of M's, the weights assigned to specific M's shifting with the perceived political convenience and the "target drift" mentioned above.

Other aspects of the Fed's behavior may be considered. Its strategic conception centered on activist policymaking, and its tactical pro-

 $<sup>^{15}{\</sup>rm The~quotes}$  are selected from pages 30 to 34 of Tobin's piece in the  $Economic\,Journal$  (1981).

cedures anchored by the federal funds rate essentially were unchanged. The Fed's dominant conception remains anchored until this day by a very traditional IS-LM framework supplemented by a Phillips relation representing a process with massive inertia (Board of Governors 1981; Lombra and Moran 1980). This Keynesian vision reminiscent of the 1960s conflicts on all counts with the monetarist analysis summarized in section II. The changes introduced after October 1979 actually offered even better protection for the traditional policymaking with the aid of a more subtle rhetorical curtain to filter outside pressures (Brunner 1982, Shadow position paper; Brunner and Meltzer 1983). A careful and honest observer would want to compare the actual behavior of the Fed with the record (in the public domain) of the SOMC. The comparison would show that the Fed adamantly opposed any constraint on its "discretionary tradition" by any kind of "institutionalized policy," and most particularly by a predictable monetary control policy. Any precommiting regime remained anathema to the Federal Reserve bureaucracy. The Fed refused to supply a useful discussion in its publication of the arguments advanced by the SOMC (Brunner and Meltzer 1983). The hypothetical observer also would want to compare the tactical implementation favored by the Fed with the specific proposals advanced by the SOMC and some of its members (Brunner 1981). This comparison would reveal that monetary targeting exercises cultivated by the Fed contained a good measure of public-relations efforts.

The institutional behavior of the Fed reinforces my argument. The Fed religiously, and with remarkable effort and effectiveness, opposed any appointments to the Board or to the presidency of regional Federal Reserve Banks of persons with known "monetarist contamination." This fact is well established. One should also mention that the game of regular meetings with outside consultants was hardly designed to present "balanced views." Sufficient information about the control of dissent inside the Federal Reserve System has filtered to the outside. The control does not bear so much on disagreements within the FOMC as on any sign of serious, independent questioning, or any work, which might drift too much toward aspects reflecting monetarist thought or emphasis. A staff member with monetarist interest will find his survival in the organization difficult indeed.

A comparison of the SOMC's statement, or Friedman's columns in *Newsweek*, with the reality of policymaking exhibits one last but fundamental discrepancy ignored by Tobin. The 1970s exhibited a rising trend in the rate of inflation produced by repeated and increasing accelerations of monetary growth. This crucial observation of *actual* policymaking proceeding under the targeting game thor-

oughly conflicts with monetarist proposals. The Shadow insistently argued against this trend and explicitly objected against the target drift engineered by a pattern of discretionary policymaking favored by our Central Bank, Such policies cannot be reconciled with monetarists' proposals without a radical distortion of the facts. A characterization of actually experienced "monetary targeting as a vehicle of discipline" is really a strange description of reality. Similarly strange is the innuendo that monetarists blamed the inflation of the 1970s on the "legacy of 1960's, OPEC and fiscal policy." None of these assertions is true, and Tobin will not find any evidence in Friedman's columns or articles, the SOMC statements, or position papers to support his contention. It was a Keynesian, President Carter's chairman of the Council of Economic Advisers, who attributed a part of the inflation occurring at that time to the Vietnam War. So much about alibi-seeking. The inflation in the 1970s was never attributed by monetarists to fiscal policy and certainly not to a legacy of the 1960s. And most particularly, the SOMC objected to interpretations of *persistent* inflation in terms of OPEC price actions.

Nothing has been mentioned so far about other Central Banks. With the exception of the Swiss National Bank, the situation is quite similar to that at the Fed. The Bank of England's strategy and tactics remain far removed from monetarist ideas. The Bank's tactical implementation of "monetary control" revealed their opposition to monetarists' central policy ideas. Likewise, the Banque de France, the Banco de Espagna, the National Bank of Belgium, and the Swedish Riksbank are far removed from monetarist proposals. Even the Bank of Canada and the German Bundesbank cultivate some rhetorical association that is not extended to the substance of policymaking. Quite generally, whatever the differences between the many Central Banks may be, they share a basically discretionary approach even to monetary targeting and most particularly to its execution. They uniformly oppose, explicitly or tacitly, any precommitting strategy. Lastly, the fact of worldwide monetary retardation since 1979–1980 is clearly established. This retardation does indeed correspond to monetarist proposals, but not its speed, magnitude, or erratic execution. Some Keynesians also agreed that such retardation was a necessary condition for a declining rate of inflation. Monetarists, however, remained deeply worried about the discretionary, and thus essentially unreliable, context of the policymaking process. This concern seems justified once again by the most recent shift (in the late fall of 1981) in the Fed's strategy back to interest rate control. This concern is reinforced by the events observed since July 1982.

#### V. Johnson's Prediction and the Relevant Failure of Monetarism

Johnson's prediction offers a good point of departure for a final assessment of the alleged failure of "monetarism." The reader may be reminded that according to Johnson, a decline of monetarist ideas and a corresponding reemergence of Keynesian analysis would occur with the reappearance of a stubborn unemployment problem. <sup>16</sup> It was noted before that this statement requires some interpretation because it is unclear whether it refers to the cognitive content or the "political marketability" of monetarist analysis.

The cognitive issue associated with the so-called "Keynesian character" of the unemployment problem was discussed in part IV, where it was shown that there was little reason to recognize in the current state of the labor market the *dominant* occurrence of a "Keynesian problem." Other dimensions, associated with relative prices and wages, probably constitute the major portion of the measured rate of unemployment and of the rising trend of normal unemployment experienced in most Western nations. But this trend is hardly explainable in terms of the Keynesian framework. The unemployment problem that has evolved over the past 15 years thus offers no good grounds to embrace Keynesian theory as a guide to understanding the real world.

The cognitive interpretation of Johnson's prediction is further eroded by intellectual developments over the past 10 years. The monetarist position described in my old paper (1971) has changed in several aspects. The analysis of the transmission mechanism benefited from the emergence of rational expectations. The analysis of impulse shocks and the operation of a normal level of output was altered in response. And quite importantly, increasing concern about the background of policymaking led monetarists into a more extensive analysis of a society's political economy and the political economy of political institutions. All this involved a systematic evolution of earlier ideas even while it required much change in detail and technology of analysis. It can hardly be described as a "fading away," expressing a

i<sup>6</sup>Johnson also argued that monetarists' attempts to correct their alleged neglect of price-output problems would lure them "into playing in a new ball park, and playing according to a different set of rules than it initially established for itself' (1971, p. 13). Johnson seriously misunderstood the logical issues involved in this context. The rules he attributes to monetarists were essentially an invention of the Keynesians who bothered little to appreciate the conditions under which reduced forms offer valid tests for propositions bearing on classes of hypotheses. The projected "loss of identity" was thus based on a substantial analytic confusion. This point will be elaborated in a subsequent paper together with the methodological injunctions advanced by Tobin.

gradual "loss of identity" in a "Keynesian mainstream." This applies in particular to the reconciliation of "equilibrium analysis," associated with a generalization of "market clearing," with institutional facts surrounding price and wage setting behavior. Monetarist analysis from its inception accepted Henry Thornton's emphasis on comparatively "inflexible" prices or wages; i.e., it argued that prices and wages do not fully reflect all current shocks. Older monetarists found the "flexible price equilibrium model" of the younger generation a useful device to introduce and elaborate the idea of rational expectations, but also quite problematic as an approach to the observable world. It would appear that at this stage professional research has shifted again in the direction of the initial intuitive stirring of monetarist ideas, viz. to integrate institutional aspects of price-wage setting into a generalized equilibrium analysis. This would still be far removed from the traditional Keynesian approach expressed by a comparatively invariant inertial process controlled by institutional patterns that are hardly subject to feedback from the process described or the pattern of evolving shocks.

The Keynesian position has also experienced major modifications. Common ground emerged between many Keynesians and monetarists in their respective approach to inflation. A core with correspondingly small variance determined by a longer-run monetary regime is distinguished from more transitory components suffering a higher short-run variance associated with an array of real shocks. Modigliani's Presidential address to the American Economic Association (1977) hardly expresses the Keynesian position of the 1950s or even the 1960s. Tobin recognizes, at least in principle, the relevance of our critique addressed to the IS-LM framework (1981). He seems to accept at this stage the accelerationist thesis and the general idea of rational expectations. Governor Wallich recently presented ideas pertaining to anti-inflationary policies and interest-control policies which are centerpieces of monetarist policy analysis (1982).

It is an interesting question whether Johnson's "loss of identity" should rather be addressed to the Keynesian position. Keynesians need not worry, however. Leading Keynesians implicitly reject the extension of economic analysis to the working of the political process or the functioning of political institutions. They are basically committed to some version of a sociological vision of the socio-political process (Brunner and Meckling 1977). This strand appears most

<sup>&</sup>lt;sup>17</sup>Herschel Grossman recognized these changes in his review of Tobin's Asset Accumulation and Economic Activity: Reflections on Contemporary Macroeconomic Theory. Review in Journal of Monetary Economics 10 (July 1982).

explicitly in Okun's work (1975), but also is exemplified in Tobin's and Modigliani's arguments concerning the political sector and government policy. The approach to political institutions and the assessment of the role of government differs basically from the approach and assessment developed by a systematic extension of economic analysis. This difference moreover reflects, in contrast to the standard response of some Keynesians, substantive issues beyond ideological considerations. In my judgment it will increasingly affect the discussion of public policy. "Keynesians" and "non-Keynesians" basically offer a radically different vision (both normatively and "positively") of the future course of Western societies. This will be the central issue in the future. Questions of monetary control and stabilization policies form incidental aspects of the basic problem.

At this point we acknowledge the ultimate and permanent failure of monetarism, in the sense that policymakers will not constrain themselves by its principles. Keynesian political economy combined with major strands of Keynesian macro-analysis provides a highly marketable product to the political market. The Keynesian approach offers an excellent framework for the rationalizations of activist pursuits of redistributive schemes under one guise or another. Keynesian ideas do not sway the political market with their cognitive force. They find a political constituency because they fit so well the interests of agents in the public arena. Monetarist thought, in contrast, has little marketability on the political market and little persistent appeal to the intelligentsia. It therefore has little to offer any potential political constituency.

The story of inflation and anti-inflation policies illustrates this point. The benefits of inflation are generally well understood by the beneficiaries, whereas the costs are widely dispersed. The costs of disinflation, meanwhile, are well recognized by the social groups involved, but the benefits accrue gradually, are diffuse, and are not clearly or immediately visible to the public. Sustained inflation thus creates political interests favoring policies of permanent inflation. Against this background of political circumstances monetarist proposals of anti-inflationary monetary policy have at most temporary political appeal and arouse at best a passing interest among the

<sup>&</sup>lt;sup>18</sup>Tobin's ambiguous use of the word "ideology" is noteworthy in this context. When be speaks about the "ideology of monetarism" in the piece published in the *Economic Journal* (1981), his use of the word could be usefully replaced by a more neutral term, e.g., by Carnap's reference to an explicandum idea. Such usage would require a balancing contraposition with "the ideology of the Keynesians." The meaning of the term, however, shifts on occasion to the standard pejorative use applied by the intelligentsia. This shift can be observed in oral discussions.

media. The combination of costs and benefits of inflation and disinflation obstructs the emergence of a sustained political constituency actively supporting the monetarist approach to the inflation problem.<sup>19</sup>

Monetarist thought, with its dominant constitutionalist emphasis on limited government and with its emphasis on "institutionalization" of policy, offers no saleable product to political entrepreneurs acting in the public arena. Such entrepreneurs need a supply of new programs or modifications and extensions of already existing programs for their strategy of competitive survival. In contrast to the failure of monetarism to penetrate the political market, the longerrun political success of Keynesian thought seems assured by the nature of this market and by the competing intellectual product. Monetarism does involve a *political* failure as envisioned by Johnson, but, in my judgment, for entirely different reasons. The monetarist analysis, however, will better explain the long-run consequences of the Keynesian *political* victory that may be expected to dominate the rest of this century.

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<sup>19</sup>The Swiss exception in the middle 1970s and its "fall from grace" in the winter of 1978–79 deserve some attention in this context. Anti-inflationary policy found a constituency encompassing employers' associations and labor unions. This constituency was ruptured for a while by the threat to Swiss exports caused by the fall of the deutsche mark and the dollar. The conditions shaping this constituency and the role of the Central Bank as a leader of this coalition, together with its temporary rupture, invite a detailed exploration. In retrospect, this coalition will probably appear by the end of this decade as a passing and peculiar historical episode.

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