



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

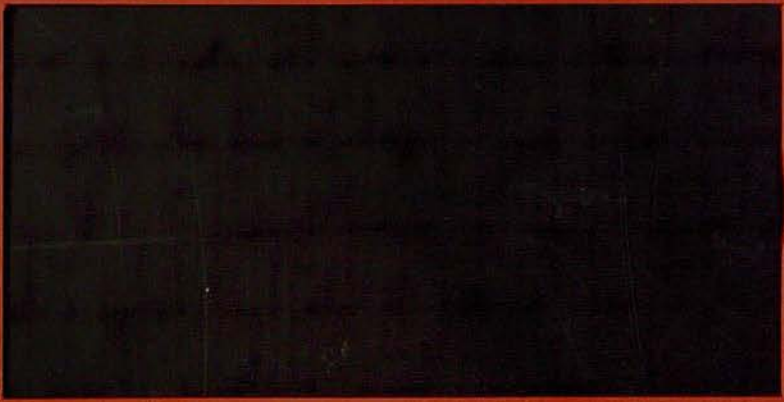
<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

88-52

UNIVERSITY OF CALIFORNIA
DAVIS
SEP 15 1988
Agricultural Economics Library



Working Paper Series

**Research Program in
Applied Macroeconomics and
Macro Policy**

University of California, Davis

1988

Federal Reserve System

#1332

"Interpreting Federal Reserve Behavior"

by

Thomas Mayer*

✓ Working Paper Series
No. 52

January 1988

Note: These working papers are preliminary materials circulated to invite discussion and critical comment. These papers may be freely circulated but to protect their tentative character they are not to be quoted without the permission of the author.

*Professor, Department of Economics and an Associate in the Research Program in Applied Macroeconomics and Macro Policy and Institute of Governmental Affairs, University of California, Davis, California 95616.

1/24/88

INTERPRETING FEDERAL RESERVE BEHAVIOR

Thomas Mayer*

Hard-core monetarists believe that the Fed lacks the efficiency required for effective counter-cyclical policy. Although the best-known monetarist argument is the existence of long and variable lags in the impact of monetary policy, Friedman (Modigliani and Friedman, 1977, p. 18) places "at least as much" emphasis on the Fed's inefficiencies, and its susceptibility to political pressures. Thus, suppose that somehow it could be shown conclusively that the Fed's forecasts are accurate enough for monetary policy to be stabilizing, if the Fed would adopt the policies that its forecasts show to be appropriate. Monetarists would still oppose counter-cyclical policy because they believe that the Fed would not follow those policies that its forecasts imply. Disagreement about how the Fed functions is therefore not just a technical issue of interest only to Fed-watchers, but is basic for the "rules vs. discretionary policy" debate.

Economists approach the study of Fed behavior in six distinct ways. Some argue that Fed behavior primarily reflects the wishes of its political masters. Others focus on time-inconsistency theory. The majority probably accept what I will describe as the "well-intentioned automaton" explanation, while a distinct minority employ a public-choice approach. In addition, several economists look to the personal characteristics of Fed policy-makers, while a few explain certain dysfunctional behavior of the Fed by organizational or psychological factors.

Although it deals with all six explanations, the second part of this paper is devoted to Fed dysfunction, because this explanation has been largely neglected. A basic question about monetary policy is

whether discretionary policy should be replaced by some rule. The well-intentioned-automaton explanation suggests that it should not. I will therefore see whether the other explanations raise enough doubt about the well-intentioned automaton explanation to raise serious questions about the desirability of discretionary policy.

OUTSIDE PRESSURES

According to one interpretation of Fed policy, although the Fed might occasionally indulge in acts of minor rebellion, such as the 1965 increase in the discount rate despite presidential objections, it is the president who determines the major thrust of monetary policy. The Fed obeys the president because it fears his displeasure, or because of the powers of moral suasion that an elected president has over unelected governors (See Maisel, 1973, Thomas Havrilesky 1988, Donald Kettl, 1986, Robert Weintraub, 1978 and John Woolley 1984).

An extensive literature on political business cycles goes further, and argues that the Fed gives the president the policy he wants even when his suasion is hardly moral suasion. This literature, and its conflicting empirical evidence, is hard to interpret. Does the hypothesis that "there are political business cycles" mean that before every presidential election the Fed adopts unduly expansionary policies? If so, it is easy to refute. Or do the proponents of political business cycles claim merely that the Fed has behaved in accordance with political business-cycle theory at least once, a proposition that is harder, or perhaps impossible, to refute. Presumably, the debate centers on what happens "normally". But, so far in the postwar period, only eight presidential elections have occurred since the Fed was able to pursue an independent policy.¹ This may not be a large enough sample to decide

what happens "normally".²

Another, generally neglected, version of the outside-pressures hypothesis is that it is public opinion that constrains the Fed, either directly, or through the potential impact of public opinion on congress and the White House. Thus William Poole (1986) has argued that the Fed has to be seen fighting whatever currently bothers the public the most, unemployment during recessions, and inflations during booms. Hence, public opinion makes it hard for the Fed to take the lag of monetary policy into account. The public objects if, in anticipation of excessive demand, the Fed becomes restrictive when unemployment is still high, or if it turns expansionary before current conditions seem to warrant this (Lombra and Moran, 1980). If so, and this does seem plausible, then the view that the Fed bases its policy on sophisticated analysis is seriously at fault. The Fed may know what to do, but cannot always act of its knowledge.

Two other variants deal, not with the choice of policy per se, but with the way political pressures impinge on policy-making. As described below, despite the high caliber of Fed policy-makers, FOMC discussions are characterized by only casual analysis. Robert Hetzel (forthcoming) explains this as due to political pressures. He argues persuasively that, having to bend to these pressures prevents the FOMC from using coherent economic analysis, because such an analysis would become embarrassing when it implies a policy that is politically unpalatable. Hence the FOMC prefers to "hang loose" and use an analytic framework broad enough to be consistent with just about any conclusion that it may wish to reach in the future. To a considerable extent, instead of economic analysis driving policy, policy drives economic analysis.

Finally, Robert Shapiro (1982) has tried to explain the FOMC's

tendency to procrastinate when changing policy. FOMC votes are published, and to avoid giving ammunition to its critics, the FOMC wants to reach its decisions by unanimous or near-unanimous votes. Hence it delays changing to a more restrictive policy until all, or most, liberal FOMC members are persuaded that a more restrictive policy is needed, and a similar situation applies when switching to a more restrictive policy. But this explanation is unconvincing. What is to prevent those who want a change in policy from threatening to vote against a continuation of the old policy? If they do this, the FOMC's wish for unanimity gives it no reason to stay with its current policy?

All in all, political pressures do limit Fed policy-making. One may well argue that this is as it should be; in a democracy elected officials, and hence the wishes of the public, should govern monetary policy. But if one accepts that argument one cannot, at the same time, argue that discretionary policy will be necessarily successful because the Fed possesses the required technical skills. Moreover, there is at least the danger of a political business cycle. In addition, the public's pressures on the Fed may well be due to ignorance of such "technical details" such as that monetary policy operates with a significant lag. The politically-induced vagueness of FOMC meetings too, is hardly desirable. Hence, the "outside pressures" view of the Fed raises serious questions about the efficacy of discretionary monetary policy.

TIME INCONSISTENCY

Many recent papers have discussed the hypothesis that the Fed's inflationary bias is due to time inconsistency. This literature has been capably summarized by Blackburn and Christensen (1987), and I will discuss it only briefly. It sees the Fed as trying to raise output

above its equilibrium level, because equilibrium output is too low, due to distortions created by taxes and unemployment compensation. Hence, the Fed has an incentive to raise output temporarily by generating an unexpected inflation. This incentive may, or may not, be held in check by the Fed's wish to maintain its reputation. Minor changes in initial assumptions can generate either result.

To someone who has read FOMC minutes, the hypothesis that the FOMC is worried about taxes holding equilibrium output below optimal output must seem strange. Such subtle ideas do not arise at FOMC meetings. Presumably time-inconsistency theorists would reject such criticism as a naive demand for descriptive realism. But when one relies on "as if" reasoning, one should verify that the data actually behave as the hypothesis implies. Leaving aside inflations that are war-connected, since the founding of the Federal Reserve System in 1914, persistently inflationary policies have been followed only during the 1960s and 1970s. This one instance is hardly convincing evidence of a pervasive inflationary bias.³ Moreover, if the Fed does have an inflationary bias, explanations other than time inconsistency could readily account for it. As far as monetary policy is concerned, time-inconsistency theory is a solution in search of a problem.

THE FED AS A WELL-INTENTIONED AUTOMATON

Perhaps the most common explanation of the Fed's behavior sees the Fed as an agency maximizing a utility function that has the public welfare as its dominating element. The Fed's own welfare, and the special interests of the Fed's constituencies, play only a subordinate role. Moreover, Fed policy-makers are capable, and their thinking is not distorted by myopia, by a wish to avoid cognitive dissonance, or by

similar "irrationalities".⁴ The Fed acts like a well-intentioned highly intelligent robot. Suppose it somehow were shown that the FOMC's predictions are good enough for policy based on them to reduce the variance of GNP by, say, 20 percent. The Fed would then actually reduce GNP variance by close to 20 percent.

Not much can be said about the underlying reasoning of this view of the Fed. Its proponents have not explained it, and have generally not even made it explicit. They have treated it as though it were self-evident, and hence not worth discussing. If pressed, they would presumably argue that the selection process for Fed governors and Reserve Bank presidents ensures that Fed policy-makers are highly capable, and are strongly motivated to further the public welfare. Moreover, Fed policy-makers have few, if any chances, to advance their own welfare at the public's expense. It is hard to imagine a governor thinking: "Even though this policy will result in much unneeded unemployment, I will support it because it will enhance my prestige."

But such a justification of the well-intentioned robot theory of Fed behavior is unconvincing. First, as discussed below, self-interested behavior does not require that persons are consciously motivated by self-interest. Second, the fact that policy-makers are capable does not mean that the pressures of making important decisions under great uncertainty will not force them into some inefficient behavior patterns. Students of organizational behavior and psychologists have described numerous ways in which organizations fail to operate with maximum efficiency. This literature is surely relevant when, as in the case of the Fed, no Darwinian mechanism operates. It suggests that Fed policy might be destabilizing even if forecast errors by themselves do not prevent some degree of stabilization. Further, as

I will argue below, the very fact that policy-makers are selected on the basis of their past successes, biases them towards making certain inappropriate decisions.

PUBLIC CHOICE THEORY AND THE FED

The public choice approach explains Fed behavior very differently. It too accepts the assumption that the Fed behaved entirely rationally, but introduces the Fed's own welfare into its utility function. It is not entirely clear whether proponents of this approach assume a lexicographic utility function in which the Fed's own welfare always dominates the public's welfare, or whether, as seems more likely, they merely claim that on some issues the Fed gives priority to its own welfare. This is so because what the public-choice economists have often done is to pick some particular Fed decision and explain it by the Fed's self-interest. In some cases, though certainly not in all, that decision is a relatively minor detail, such as the Fed's open-market "churning" or the delay in publishing the FOMC's Record of Policy Actions. It is therefore not always clear whether these public-choice theorists believe that monetary-policy decisions are dominated by the Fed's self-interest, or whether they claim that self-interest explains some part of Fed behavior.

The public-choice analysis of Fed behavior has been developed in a number of papers, mostly reprinted in Toma and Toma (1987). Three papers in this collection (by Mark Toma, by William Shuggart and Robert Tollison and by Stewart Mounts and Clifford Sowell) argue that the Fed follows too expansionary policies, at least in part, because the greater are its open-market purchases, the greater are its interest receipts, and hence the greater can be its expenditures.⁵ In two other papers John Chant and Keith Acheson explain the choice of the Bank of Canada's

target variables and instruments by its self-interest. They argue that the Bank of Canada prefers to use moral suasion because use of such a covert tool makes it more difficult to monitor the Bank's actions. Moreover, self-interest induces it to select targets that minimize its conflicts with powerful groups, and that allow it to blame others if it misses its targets. Milton Friedman's paper attributes to the Fed's concern about its prestige a wide variety of its decisions, such as excessive defensive open-market operations, and undue concern about the size of its membership.⁶ But Friedman goes beyond a self-interest interpretation of Fed behavior since he focuses on the Fed's inability to learn from either history or from its critics, stating (p. 27) that, "the most fundamental explanation for the persistence and importance of bureaucratic inertia in the Federal Reserve System is the absence of a bottom line." This makes Friedman's criticism, at least partially, a part of the dysfunction approach discussed below.

Despite the importance of the challenge that public-choice theorists have mounted to the well-intentioned-automaton theory, it has generally been ignored by mainstream macro-economists. Presumably, it has not been considered worthy of response because most economists find it hard to believe that if they were Fed governors, they would act in a self-interested way. Despite the (spurious) claim of adhering to positivistic methodology, in this case most economists appear to have rejected positivism in favor of "Verstehen" (Blaug, 1980). Moreover, most of those who know the Fed's policy-makers personally, probably find it hard to imagine them disregarding the public interest. In addition, since, at least on the surface, the Fed is able to set its own budget, it seems to lack the incentive that other agencies have to take undesirable actions because they generate greater congressional appro-

priations.

But to reject the public-choice interpretation of Fed actions, because it is hard to imagine Fed governors consciously acting contrary to the public interest, is to misunderstand public-choice theory. This theory does not claim that policy-makers maximize their personal welfare directly. Instead, policy-makers maximize the welfare of their agency for two reasons. One is that they believe the work of their agency to have greater value than its superior, e. g. Congress, realizes, so that actions that enhance its power and autonomy serve the public welfare indirectly. The second is that they put great weight on the welfare of the staff and clients of their agency. Neither is a case of pure selfishness, and neither requires that policy-makers undertake actions they consider "bad."⁷ It is a familiar saying that "where you stand depends upon where you sit." Since it is hard for anyone to evaluate objectively the work of his or her agency, and the importance of its staff and clients, even dedicated policy-makers may act as though they were pursuing their self-interest.⁸ As Milton Friedman (1987, p. 30) has remarked: "All of us know that what's good for us, is good for the country.... The human species is distinguished from animals much more by its ability to rationalize than to reason."

The validity of the public-choice interpretation of Fed actions must therefore be settled by empirical tests. While public-choice economists have presented such tests, their critics have not. However, as is common in economics, these tests have been more successful in showing that a public-choice hypothesis can explain Fed behavior, than in showing that it can explain the Fed's behavior better than can a rival hypothesis, such as the well-intentioned automaton.

THE CHARACTERISTICS OF FED POLICY-MAKERS

A fifth explanation of Fed actions looks at the backgrounds of Fed policy-makers. Thus, Richard Pluckett (1984) found that dissents at FOMC meetings are not random. Governors appointed by Democratic presidents dissented more frequently on the expansionary side, while those appointed by Republican presidents, as well as Reserve Bank presidents, dissented more frequently on the restrictive side.⁹ Ray Canterbery (1967), who analyzed FOMC discussions and dissenting votes in 1955-65, found that the high degree of unanimity at FOMC meetings is probably explained best by FOMC members having similar utility functions, but that the small number of professional economists then on the FOMC, had a different utility function. A more detailed analysis by John Gildea (1987, p. 18) shows that the personal background of FOMC members matters:

Governors tended to cast their split decision votes along party lines. ... Fulfilling a partial term appointment, Federal Reserve Board and government experience, along with a background in private industry tended to impart a relatively liberal voting behavior. Conversely, an Ivy League education, a Ph.D. in economics, and being a Federal Reserve Bank President tended to describe those FOMC members who voted more conservatively. ... Despite their technical expertise, FOMC members seemed to be unable to avoid the subjectivity that inherently accompanies policymaking.

Moreover, Thomas Havrilsek and Robert Schweitzer (1988) argue that those governors who have had a closer connection with the federal government tend to dissent on the side of ease, while those who with a lesser connection tend to dissent on the restrictive side.

FEDERAL RESERVE DYSFUNCTION

A different way to interpret some, or much (?) of the Fed's behav-

lor is to look for psychological and organizational problems that inhibit efficient decision-making. While the public-choice approach abandons the "well-intentioned" component of the standard well-intentioned automaton assumption, the dysfunction approach accepts the "well-intentioned" part, but drops the "automaton" part. Two factors make this approach plausible. One is the evidence from empirical studies of Fed thinking and behavior in specific situations, which many observers interpret as showing inefficient policy-making. The other consists of developments in cognitive psychology and in the study of organizational behavior.

In principle, to document this interpretation of Fed functioning, one should take some specific instances of Fed behavior, and show how they result from the cognitive and organizational biases that have been unearthed by psychologists and organizational theorists. This would be difficult, in part, because of disagreement about what is a rational response of monetary policy to specific events, and in part, because the reasoning described in the FOMC minutes is often hard to interpret. No such study has been published, and it cannot be undertaken here. However, it is possible to cite experimental evidence that cognitive biases and organizational problems affect the judgment of even highly education people. Hence, while one cannot provide conclusive evidence that cognitive biases play an important role in the making of monetary policy, one can show that such biases may well lead to substantial errors in monetary policy, and that they may account for some of the characteristics of Fed policy that many economists have criticized. The argument to be presented is therefore not an assertion that cognitive and organizational problems necessarily prevent the Fed from carrying out effective stabilization policy. Instead it is a claim that

Fed policy may be irrational and destabilizing; that despite the high caliber of its policy-makers the Fed does not necessarily behave like a well-intentioned automaton.

Any claim that Fed policy-makers suffer from cognitive or organizational biases is likely to be challenged on the ground that these policy-makers have a large and competent staff to advise them. But the staff's influence on Fed decision-making is relatively small because FOMC decisions are made in a technically unsophisticated "seat of the pants" way that provides relatively little room for the staff's sophisticated analysis. (See Mayer, 1982b.)

Empirical Studies of the Fed's Economic Analyses

Empirical studies of the Fed often show it functioning on a much lower level than one would expect from the quality of its policy-makers. Thus Friedman and Schwartz (1963), Clark Warburton (n.d.) and Elmus Wicker (1966) demonstrate the poor quality of the Fed's economic analysis during the Great Depression. Then, for the 1950s and early 1960s, Karl Brunner and Allan Meltzer (1964) show that the FOMC had no understanding of economic analysis, relied on unverified hypotheses, and lacked understanding of the impact of its actions on the economy. It calibrated its policy by a set of indicators that would usually give wrong signals (See also Edgar, 1975). Raymond Lombra and Michael Moran (1980) who studied the FOMC minutes for the early 1970s provide a picture of policy-making that is "seat of the pants" making little use of modern economic analysis. My own analysis (Mayer 1982a) of the FOMC minutes for the 1973-75 recessions confirmed this judgment. The Board's discussion of Regulation Q in 1966 also exhibits an apparent unfamiliarity with basic microeconomics. (Mayer, 1982b). To be sure, not all

students of Fed thinking reach a negative verdict. Former governor Sherman Maisel (1973) certainly does not.

The evidence for a negative verdict is strong enough that some explanation of the Fed's way of making policy is needed. This explanation certainly cannot be that the Fed's policy-makers lack ability. Starting in the 1960s several highly capable economists, some with outstanding academic reputations, were appointed to the Board, and most Reserve Bank presidents are now also professional economists. The research staff at the Board and at the Reserve banks is superb.

Hetzel's hypothesis that the Fed wants to keep its options open plausibly explains much of the weakness of the Fed's analysis, but it is probably not the entire explanation. It cannot explain directly why the Board's discussion of Regulation Q was so simple-minded. It can do so only indirectly by invoking a possible psychological explanation, that the constraints on FOMC discussions created a "corporate culture" that discourages serious economic analysis, even when such analysis would not close off any options. Hence, it is worth seeing if there are psychological pressures and organization problems that generate FOMC dysfunction.

The Principle of Dysfunctional Behavior

That there are so few attempts to relate Fed behavior to specific characteristics of the Fed's organization, and to the way decision-makers act under pressure is surprising, because there is an extensive literature on organizational dysfunction, and on how the psychological pressures inherent in making decisions under great uncertainty, distort judgment. Thus, Shelley Taylor (1982, pp. 190 & 198) wrote:

Even in the absence of motives, judgments are often made on the basis of scant data, which are seemingly haphazardly combined and influenced by preconceptions... The past few decades have witnessed a shift away from a view of judgments as the product of rational, logical decision

making marred by the occasional presence of irrational needs and motives towards a view of the person as a heuristic user.

This passage describes the behavior of sophisticated as well as ignorant decision-makers. Tversky and Kahneman (1982, p. 18) report that: "The reliance on heuristics and the prevalence of biases are not restricted to laymen. Experienced researchers are also prone to the same biases - when they think intuitively." And, as glance of the FOMC minutes shows, the FOMC does think intuitively.

Some of the problems that arise at FOMC meetings are best seen as problems of individuals suffering from information overload, and others as problems of decision-making by a committee.

Biases in Individual's Decision-Processes

One set of biases are due to the wish to avoid cognitive dissonance, by putting conflicting, and hence unwelcome information out of one's mind (See Kahneman, 1980). George Akerlof and William Dickens (1982) provide examples of such biases in the private sector.

One implication of cognitive dissonance theory is that people seek out information that supports their previously-made decisions, and reject conflicting information. Irving Janis and Leo Mann (1977, p. 205) present a modification of this theory in which people become intolerant of conflicting evidence when they realize that all the alternatives to their policy have serious costs, and that they have no hope of finding a good alternative. Janis and Mann also describe a state of "hypervigilance" which occurs if there is much conflict, but people also believe that a good solution exists. It results in information-overload, a state in which people are too open to information and fail to distinguish valid and relevant, from invalid and irrelevant information. In a companion paper (Mayer, forthcoming a) I show how

such behavior can help to explain, in part, several major characteristics of Fed behavior: the way it uses its technical staff, its preference for an interest-rate target, its unwillingness to admit that its current policy is wrong, and the way it responds to the existence of a lag in the effect of monetary policy.

Another source of bias is myopia. Janis and Mann (1977 p. 255) argue that people tend to treat as trivial losses that will not materialize in the foreseeable future. This might help to explain the Fed's myopia that Brunner and Meltzer (1964) found in their classic study. It might also explain, in part, the Fed's inflationary bias in the 1960s and 1970s. A major cost of inflation to the Fed was the loss of its reputation. This loss was not immediate since a few years of inflation would not overcome the memory of price stability in the 1950s and early 1960s. Hence, if as Janis and Mann state, losses in the distant future are treated as trivial, this might help to explain why the Fed followed such inflationary policies in the late 1960s. It is certainly not the only explanation - it seems plausible that the critical force was political pressure (See Mayer, forthcoming b) - but it may have been a significant factor.

Still another factor that probably contributed to inflation is "anchoring". This refers to excessive reliance on the current value of a variable as a guide to its appropriate level (See Tversky and Kahneman, 1982, pp. 14-15). It was probably one reason for the Fed's reluctance to raise interest rate sufficiently in the 1960s and 1970s. Similarly, it may have induced the Fed to tolerate a monetary growth rate that, though lower than the previous growth rate, was still too high.

Social psychologists have elucidated an "availability heuristic" .

People judge the probabilities of events by the ease with which they can recall instances of these events. Tversky and Kaheman (1982, pp. 11-13) show that, as a result, events that are memorable and easily retrieved have a disproportionate impact on our thinking. Shelley Taylor (1982 p. 192) points out that "colorful, dynamic, and other distinctive stimuli disproportionately engage attention, and accordingly disproportionately affect judgments." This too, may well be a partial explanation of the Fed's inflationary bias in the 1960s and early 1970s when the deleterious effects of inflation were vaguer and harder to visualize than the deleterious effects of unemployment. Moreover, credit crunches are more dramatic events than rising inflation rates, and that may have biased the Fed against curbing the monetary growth rate. Moreover, since the immediate and disruptive effects of rapid increases in interest rates are more dramatic than the immediate effects of sharp rises in the monetary growth rate, the availability heuristic tends to bias the Fed towards keeping interest-rates relatively stable.

Psychologists have also shown that people make serious mistakes in evaluating probabilities (Tversky and Kaheman, 1982, pp. 4 -11). One error is to judge the probability that a particular observed event, A, is a member of class X primarily on the basis of A's resemblance to other events in class X, while ignoring the frequency of with which events in class X actually occur.¹⁰ This might be one reason why the Fed has sometimes believed that the demand function for money had shifted, when it had not. Moreover:

misconceptions of chance are not limited to naive subjects. A study of the statistical intuitions of experienced research psychologists ... revealed a lingering belief in what may be called the "law of small numbers" according to which even small samples are highly representative of the populations from which they are drawn (Tversky and Kaheman, 1982, p. 7)

In addition, people do not take regressions towards the mean sufficiently into account, and also tend to see correlations where none exist (Tversky and Kahneman, 1982, pp. 10, 13-14). Such errors could readily lead the FOMC to make wrong decisions."

Particularly disturbing is that in estimating probability, people overestimate the probabilities of conjunctive events, while underestimating the probabilities of disjunctive events. Similarly, even sophisticated people set confidence limits too low (Tversky and Kahneman, 1982, pp. 10, 13-17). Since the success of Fed policies often depends upon the compounded probability of disjunctive events, such errors would give the FOMC an unwarranted faith in its policies, if it frames the issue as follows: "Our policy will succeed only if all the following events occur". By contrast, if it frames the issue as: "our policy will fail only if the following events occur", then it will derive a too pessimistic conclusion. In either case, errors in combining probabilities could, at times, lead to serious errors in policy.

It is likely that the Fed, like other organizations, suffers from over-optimism. As Cyert and March (1963, p. 81) point out "expectations are by no means independent of such things as hopes, wishes and the internal bargaining needs of subunits." Moreover, there is a general tendency to overestimate one's predictive powers (Tversky and Kahneman, 1982, pp. 8-9), as well as the control one can exercise. According to Ellen Langer (1982, p. 238): "People are motivated to control their environment. . . . Most social scientists agree that there is motivation to master one's environment, and a complete mastery would include the ability to 'beat the odds', that is to control chance events."

It seems plausible that policy-makers are particularly likely to overestimate their own abilities. They attained their positions through success in prior work. This success is likely to have resulted both from ability and luck, so that they tend to be people who have had more than average luck. There is considerable evidence that people attribute too much of their success to ability, and too little to luck. (See Ellen Langer and Jane Roth, 1975, Siegfried and Susan Streufert, 1969.) The resulting exaggerated belief of policy-makers in their abilities could induce them to try overly ambitious tasks, e. g., to reduce the variance of GNP by more than is feasible, with the result that the variance of GNP actually increases. (Such overconfidence of policy-makers is, of course, a problem, not just for the Fed, but for any organization that selects its leaders on the basis of past achievements.)

Moreover, the way Fed policy-makers are selected is likely to bias monetary policy towards activism. Most governors could earn more in private pursuits, but became Fed governors because they want to serve the public, or because they like to exercise power. A wish to serve the public is more likely to be associated with a "can do" attitude than with a belief that the Fed should do little.

Biases Partly due to Organizational Problems

The FOMC receives a vast amount of information on current and projected conditions; given the pervasive uncertainty about what it is that really "matters", and disagreements among FOMC members about the importance of various types of information, "information flooding" is almost inevitable. But it can degrade judgement. Irving Janis (1982 p. 196) states:

The mere fact that a huge overload of complicated information has to be processed in order to arrive at an optimal choice is sufficient to induce competent and

highly efficient decision-makers to resort to simple decision rules that fail to take account of the full complexity of the issues at hand. Then too, there are ego-defensive tendencies and all sorts of self-serving biases that incline a person to lapse into wishful thinking....

Then there is the finding that groups make riskier decisions than its individual members would make on their own (Bazerman, 1986, p. 153). It is not clear whether such greater willingness to take risk enhances or degrades the quality of FOMC decisions, but it does suggest that the FOMC might be willing to take excessive risk.

Decisions are also affected by the way the problem is framed for committee discussion (Bazerman 1986). Consider, for example, how the FOMC might respond to a supply shock. If the question before it is whether to allow a temporary rise in the inflation rate, or to generate additional unemployment, the FOMC may well prefer the temporary rise in the inflation rate. But the question could just as well have been posed as a permanent rise in the price level versus a temporary rise in unemployment.¹² If so, the FOMC might make the opposite choice.¹³

Finally, there is "groupthink" defined by Janis (1982, p. 9.) as a "mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when member's striving for unanimity overrides their motivation to realistically appraise alternative courses of action." Janis (1982, p. 243) argues that "a sizable percentage" of the errors made by a policy-making group that is "moderately or highly cohesive" are "at least partly attributable to groupthink." The FOMC is certainly cohesive, and it meets some of the other characteristics that Janis believes conducive to groupthink.

CONCLUSION

The various factors discussed here qualify the widely-held view that the Fed functions like well-intentioned automaton. Political pressures to which the Fed bends provide one major qualification. The factors stressed by the public choice school probably degrade Fed policy-making to some extent, though, plausibly not by as much as political pressures. Finally, there are strong reasons for expecting substantial dysfunction in Fed policy-making. The impact of each of these qualifications is hard to quantify, but it seems highly probable that jointly they are important enough to make the well-intentioned automaton view of Fed behavior untenable.

Whether they are also strong enough to make counter-cyclical monetary policy infeasible is hard to determine, because the success of such a policy also depends on the length and variability of the lag in monetary policy, and on the Fed's ability to forecast. If the Fed were technically able to eliminate, say, 90 percent of the variance of GNP, then, despite the problems discussed here, counter-cyclical policy may well succeed. However, if, even in the absence of these problems, the Fed could reduce the variance of GNP by only, say, 5 percent, then counter-cyclical policy is likely to be destabilizing. But while lags and forecast errors obviously matter, the debate about discretionary monetary policy should not be carried out as though only they matter.

FOOTNOTES

* I am indebted for helpful comments to T.Y. Shen.

1. The Fed obtained genuine freedom from the Treasury domination only with the election of President Eisenhower in 1953. The hypothesis that there is a political business cycle could, of course, be applied also to mid-term elections, but is usually applied only to presidential elections.

2. It might seem that the small size of the sample does not matter if the hypothesis is confirmed at the, say 5 percent level. But this is not so if the significance test requires the assumption of a normal distribution.

3. Given the use of the dollar as a reserve currency, the Fed faced little constraint on inflationary policies even prior to 1971. (See Briggs, Christenson, Martin and Willet, forthcoming.)

4. This is similar to what James Buchanan and Richard Wagner (1977), following Sir Roy Harrod, have referred to as the "presuppositions of Harvey Road", and to what Graham Allison (1971) calls the "rational actor" model.

5. This argument seems implausible on the surface because the Fed sets its own budget, but it should be evaluated by empirical tests.

6. Other papers in the Toma and Toma volume discuss such issues as the relation of the Fed and Congress, and the Board's treatment of Federal Reserve Banks that publicly disagree with it. An interesting application of public-choice theory not included in the Toma and Toma volume is Sanford Borins (1972)

7. That maximizing the welfare of a government agency is frequently altruistic rather than selfish behavior weakens the claim of public choice theory that it explains public and private actions in the same way.

8. Allison (1977, p. 93) reports that during World War II, "when a breakthrough cracked the Japanese codes the question in the Navy was less 'What do these messages mean?' than 'Who would perform the task of serious evaluation of enemy intention?'".

9. See also William Yohe (1966)

10. The experiment cited by Tversky and Kahneman is one in which the subjects were given a description of someone resembling the stereotype of a librarian and asked if that person was more likely to be a librarian than a farmer, salesman, etc. The subjects disregarded the fact that there are more farmers and salesmen than librarians.

11. In an experiment using an artificial market Colin Camerer (1987) found that, while there was some apparent bias in estimating probabilities, the bias was not large, at least by some measures. But the way the Fed makes decisions may be less conducive to rational decision-

making than Camerer's experiment.

12. The price level, and not just the inflation rate matters because of long term contracts. If prices rise in, say 1985, and stabilize at the higher level in 1986, those who bought long-term bonds in 1984 are worse off in 1987 as well as in 1985.

13. Another example of the importance of framing is provided by the way the FOMC arrives at its Directive for open-market operations. The Staff prepares (or prepared, FOMC minutes have not been kept since 1976) three alternative Directives of different degrees of restrictiveness. Not surprisingly, the FOMC then tends to choose the middle one. Since the chairman can work with the staff in developing these Directives, this procedure enhances the chairman's power.

REFERENCES

- Akerlof, George and Dickens, Williams (1982) "The Economic Consequences of Cognitive Dissonance," American Economic Review, 72, June, 307-19.
- Allison, Graham, (1971) The Essence of Decision, Boston, Little, Brown.
- Arenson, Elliot (1980) The Social Animal, San Francisco, W. H. Freeman
- Bazerman, Max (1986) Judgment in Managerial Decision Making, New York, John Wiley.
- Blackburn, K. and M. Christensen (1987) "Monetary Policy and Policy Credibility," unpublished ms.
- Blaug, Mark (1980) The Methodology of Economics, New York, Cambridge University Press.
- Borins, Sanford (1972) "The Political Economy of the Fed," Public Policy, 20, 175-98.
- Briggs, John, Christenson, D.B, Martin, Pamela and Willett, Thomas (forthcoming) " The Decline of Gold as a Source of Monetary Discipline," in Thomas Willett (ed.) Political Business Cycles,. Raleigh, N.C., Duke.
- Brunner, Karl and Meltzer, Allan (1964) Some General Features of the Federal Reserve Approach to Policy, U.S. Congr., House, Committee on Banking and Currency, Subcommittee on Domestic Finance, 8th Congr., 2nd. sess.
- Buchanan, James and Wagner, Richard (1977) Democracy in Deficit, New York, Academic Press.
- Canterbery, E. R. (1967) "A New Look at Federal Open Market Voting," Western Economic Journal, 6, December, 25-38.
- Camerer, Colin, " (1987) Do Biases in Probability Judgments Matter in Markets?: Experimental Evidence." American Economic Review, 77, December, 981-997.
- Cyert, Richard and March, James (1963) A Behavioral Theory of the Firm, Englewood Cliffs, N.J. Prentice-Hall.
- Edgar, S. M. (1975) "Testing the Importance of 'Money Market Pressure'" Journal of Money, Credit and Banking, 1, January, pp. 79-93.
- Friedman, Milton (1987) "Monetary Policy: Theory and Practice," reprinted in Eugenia and Mark Toma, Central Bankers, Bureaucratic Incentives, and Monetary Policy,. Dortmund, Kluwer, pp. 11-36.
- Friedman, Milton and Schwartz, Anna (1963) A Monetary History of the United States, Princeton, Princeton University Press.
- Gildea, John (1987) "A Theory of FOMC Policymaking Behavior," unpublished ms.

- Havrilesky, Thomas (1988) "Monetary Policy Signaling from the Administration to the Federal Reserve" Journal of Money, Credit and Banking, February.
- Havrilesky, Thomas and Schweitzer, Robert (1988) "A Theory of FOMC Dissent Voting with Evidence from Time Series," unpublished ms.
- Hetzel, Robert (forthcoming) "Political Constraints on Fed Policy," in Thomas Mayer (ed.) The Political Economy of American Monetary Policy, New York, Cambridge University Press.
- Janis, Irving (1982) Groupthink, Boston, Houghton Mifflin
- Janis, Irving and Mann, Leon (1977) Decision Making, New York, The Free Press.
- Kettle, Donald (1986) Leadership at the Fed, New Haven, Yale.
- Langer, Ellen (1982) "The Illusion of Control," in Daniel Kahneman, Paul Slovic and Amos Tversky, Judgment under Uncertainty, New York, Cambridge.
- Langer, Ellen and Roth, Jane, (1975) "Heads I Win, Tails its Chance," Journal of Personality and Social Psychology, 31, 951-5.
- Lombra, Raymond and Moran, Michael (1980) "Policy Advice and Policymaking at the Federal Reserve," Carnegie-Rochester Conference Series on Public Policy, 12, Autumn, 9-68.
- Maisel, Sherman (1973) Managing the Dollar, New York, W. W. Norton.
- Mayer, Thomas (1982a) "A Case Study of Federal Reserve Policymaking: Regulation Q in 1966," Journal of Monetary Economics, 10, September, 259-72.
- Mayer, Thomas (1982b) "Federal Reserve Policy in the 1973-75 Recession," in Paul Wachtel, Crises in the Economic and Financial Structure, Lexington, Lexington Books, 41-84.
- Mayer, Thomas (forthcoming a) "Minimizing Regret as an Explanation of Fed Policy," in Thomas Mayer (ed.) The Political Economy of American Monetary Policy, New York, Cambridge.
- Mayer, Thomas (forthcoming b) "U.S. Monetary Policy, 1973-87," in H.C. Cheng (ed.) Challenges to Monetary Policy in the Pacific Basin Countries, Kluwer.
- Modigliani, Franco and Friedman, Milton, (1977) The Monetarist Controversy, San Francisco, Federal Reserve Bank of San Francisco, Economic Review Supplement
- Pluckett, Richard (1984) "Federal Open Market Committee Structure and Decisions," Journal of Monetary Economics, 14, July, 97-105

Poole, William (1986) "Monetary Control and the Political Business Cycle," Cato Journal, 5, Winter, 685-700.

Shapiro, Robert (1982) "Politics and the Federal Reserve," Public Interest, # 66, 119-39.

Streifert Siegfried and Susan (1969) "The Effects of Conceptual Structure, Failure and Success on Attribution of Causality and Interpersonal Attitudes," Journal of Personality and Social Psychology, 11, 138-47.

Taylor, Shelley (1982) "The Availability Bias in Social Perception and Interaction," in Daniel Kahneman, Paul Slovic and Amos Tversky, Judgment under Uncertainty, New York, Cambridge Press.

Toma, Eugenia and Mark (1987) Central Bankers, Bureaucratic Incentives, and Monetary Policy, Dordrecht, Kluwer.

Tversky, Amos and Kahneman, Daniel (1982) "Judgment under Uncertainty" in Daniel Kahneman, Paul Slovic and Amos Tversky, Judgment under Uncertainty, New York, Cambridge University Press, 3-20.

Warburton, Clark (n.d.) Depression, Inflation and Monetary Policy Baltimore, Johns Hopkins.

Weintraub, Robert (1978) "Congressional Supervision of Monetary Policy," Journal of Monetary Economics, 4, April, 341-63.

Wicker, Elmus (1966) Federal Reserve Monetary Policy, 1917-33, New York, Random House.

Woolley, John (1984) Monetary Politics, New York, Cambridge University Press.

Yohe, William (1966) "A Study of Federal Open Market Voting," Southern Economic Journal, 32, April, 396-45.

RESEARCH PROGRAM IN APPLIED MACROECONOMICS AND MACRO POLICY

Working Paper Series

1. Steven M. Sheffrin, "Accommodation, Supply Shocks and Real Wage Resistance," February 1983.
2. Thomas Mayer, "Forecast Errors and the Efficacy of Countercyclical Policy," June 1983."
3. Steven M. Sheffrin, "The Dispersion Hypothesis in Macroeconomics," June 1983.
4. Steven M. Sheffrin, "Are Risk Spreads Rational?" July 1983.
5. Art Havenner and L. Karp, "Toward the Resurrection of Optimal Macroeconomic Policies," August 1983.
6. Steven M. Sheffrin and Thomas Russell, "Sterling and Oil Discoveries: The Mystery of Nonappreciation," September 1983.
7. Thomas Mayer, "Does Countercyclical Policy Pay its Way?" September 1983.
8. Thomas Renaghan, "A New Look at Fiscal Policy in the 1930's," October 1983.
9. L. Jay Helms, "State Expenditure Patterns, Revenue Structures, and Economic Performance," October 1983.
10. Thomas Mayer, "The Status of the Monetarist Debate in the United States: an Evaluation," January 1984.
11. Mark Dynarski and Steven M. Sheffrin, "Housing Purchases and Transitory Income: A Study with Panel Data," December 1983.
12. Leon Wegge, "Identifiability of Structural Models Containing Muth-Rational Current and Future Expectations," January 1984.
13. Alain Ize, "Competing Income Claims and Price and Wage Determination in a Macroeconomic Framework," November 1983.
14. Alain Ize, "A Dynamic Model of Financial Intermediation With Perfect Foresight," January 1984.
15. L. Jay Helms and Armen Sedrakian, "Preferences for State and Local Governmental Services: An Assessment with Pooled Data," August 1984.
16. Thomas Mayer, "The Seasonal Adjustment of the Money Stock: A Normative Analysis," October 1984.
17. Thomas Mayer, "The Debate About Monetarist Policy Recommendation," October 1984.

18. Thomas Mayer, "Disclosing Monetary Policy," January 1985.
19. Wayne Joerding, "Do Non-Fundamentals Affect Stock Prices?" October 1984.
20. Wayne Joerding, "Are Stock Prices Excessively Sensitive to Short Run Returns?" October 1984.
21. Wayne Joerding, "Do Non-Fundamentals Affect Stock Prices: Direct Tests," January 1985.
22. Bagher Modjtahedi and Art Havenner, "Foreign Exchange Rates: A Multiple Currency and Maturity Analysis," October 1984.
23. Bagher Modjtahedi, "On Time Series Modeling of Time Varying Risk Premia," November 1984.
24. Thomas Mayer, "Regulating Banks: Some Comments on John Kareken's Paper," February 1985.
25. Robert A. Driskill and Steven M. Sheffrin, "Is Price Flexibility Destabilizing?" March 1985.
26. Bagher Modjtahedi, "An Empirical Investigation into the International Real Interest Rate Linkages," March 1985.
27. Wayne Joerding and Steven M. Sheffrin, "Consumption Spending and Output Fluctuations: A Multi-Country Study," May 1985.
28. Steven M. Sheffrin, "Long Run Effects of Budget Deficits," May 1985.
29. Steven M. Sheffrin and Mark Dynarski, "Consumption and Unemployment," June 1985.
30. Steven M. Sheffrin, "Have Economic Fluctuations Been Dampened? A Look at Evidence Outside the United States," October 1985.
31. Kevin D. Hoover, "Money, Prices and Finance in the New Monetary Economics," November 1985.
32. Steven M. Sheffrin, "Joan Robinson and the New Classical Economists as Critics of Keynesian Economics," December 1985.
33. Kevin D. Hoover, "Econometrics as Observation: An Investigation of the Logic of Causal Inference," December 1985.
34. Wing T. Woo, "Some Evidence of Speculative Bubbles in the Foreign Exchange Markets," December 1985.
35. Wing T. Woo, "The Impact of U.S. Policy Mix on European Policy Choices," February 1986.
36. Mark Dynarski and Steven M. Sheffrin, "New Evidence on the Cyclical Behavior of Unemployment Durations," March 1986.

37. Wing T. Woo, "The Impact of U.S. Policy Mix on the ASEAN Economies, 1980-1984: The Neglected European-Japanese Connection," May 1986.
38. Thomas Mayer, "Replacing the FOMC by a PC," June 1986.
39. Steven M. Sheffrin, "Fiscal Policy Tied to the Mast: What Has Gramm-Rudman Wrought?" July 1986.
40. Thomas Mayer, "Federal Reserve Policy Since October 1979: A Justified Response to Financial Innovations?" March 1984.
41. Wing T. Woo, "What Kind of Structural Adjustment Policies for U.S. Trade Difficulties?" March 1987.
42. Mark Dynarski and Steven M. Sheffrin, "Unemployment Durations Over the Business Cycle," April 1987.
43. Wing T. Woo, "The Dead Hand of History in Indonesian Economic Policymaking," April 1987.
44. Thomas Mayer, "Alternative Policies to Counter Political Business Cycles," July 1987.
45. Peter H. Lindert and Peter J. Morton, "How Sovereign Debt has Worked," Aug. 1987.
46. Peter H. Lindert and Peter J. Morton, "Appendices to 'How Sovereign Debt has Worked'," Aug. 1987.
47. Thomas Mayer, "U.S. Monetary Policy, 1973-1987," Sept. 1987.
48. Wing T. Woo, "The External Debt Situation in Indonesia: Performance and Prospects," October 1987.
49. Thomas Mayer, "Minimizing Regret as an Explanation of Fed Policy: An Application of Cognitive Dissonance Theory," November 1987.
50. Steven M. Sheffrin and Wing T. Woo, "Testing An Optimizing Model of the Current Account Via the Consumption Function," November 1987.
51. Marlene Cerchi and Arthur Havenner, "Cointegration and Stock Prices: The Random Walk on Wall Street Revisited," October 1987.
52. Thomas Mayer, "Interpreting Federal Reserve Behavior," January 1988.

