April 2000

UNDERSTANDING MONETARY POLICY.
CAUTION: CRITICAL REALISTS AT WORK.

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For the conference on

Critical Realism in Economics: What difference does it make?

Cambridge, 5-7 May 2000.

Helpful comments by Mike Lawlor are gratefully acknowledged.

> Our detailed study of the Federal Reserve's procedures reveals that their knowledge of the monetary process is woefully inadequate, unverified, and incapable of bearing the heavy burden that is placed upon it…. The Federal Reserve does not have a rational foundation for policymaking. Two features of the Federal Reserve System seem to account for their failure to analyze and test their conception of the monetary process. First, their analysis and their approach to monetary policy is dominated by extremely short-run week-to-week, day-to-day, or hour-to-hour events in the money and credit markets. Second, their viewpoint is frequently that of a banker rather than that of a regulating authority for the monetary system and the economy.
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> Allan Meltzer, *Hearings*, Subcommittee on Domestic Finance, U.S. House of Representatives, Feb. 11, 1964.

For as long as they have been recognized as supreme monetary authorities, central bankers have been almost universally criticized by economists -- from the left for their timidity in support of economic stability and growth, and from the right for over-active policies generating instability and inflation. Both sides condemn central bankers' "money-market myopia," their obsession with smooth financial markets, particularly as reflected in their resistance to movements in interest rates. Monetary theories of the trade cycle have focused on the failure of interest rates to adjust to changing economic conditions (Thornton, 1802; Wicksell,1898; Fisher, 1930; Hawtrey, 1938; Friedman and Schwartz, 1963). The view that this is a form of market failure caused or exacerbated by central banks is still prevalent. The "inertia" in their application of policy instruments remains "an apparent paradox" (Duecker, 1999; Blinder, 1998).

These economists have submitted general equilibrium models based on rational, informed choice from which unique monetary policies that optimize macroeconomic objective functions are derived. The models vary, and are contradictory, in many details, but they share two vital features: certainty, or at least statistical certainty equivalence, and abstraction from information and

transaction costs, including the operations of financial and other markets and institutions, for which there is no role. Economists' analyses of central banking exclude banks and their services, which are dismissed as "frictions."

These two assumptions bear most of responsibility for the intellectual gulf between central bankers and their academic advisors (a gulf not unique to monetary policy) because the former, in common with other economic agents, act in an open social system of considerable (true) uncertainty. Economists regard central bankers as obstinate, even pathological, for their unwillingness to be restricted by, and accept the implications of, their closed (certainty-equivalent general-equilibrium) models (Mayer, 1990). Academic criticisms of central bankers rest at bottom on their tendency to behave like economic agents, although it applies equally to economists when they leave the blackboard for the marketplace.

Man in the ordinary business of life (the study of which Marshall called economics) is not an automaton interacting impersonally by formulae with other automatons. He is a complex combination of self-interest and sentiment, a creature of habit but also a student (to paraphrase Lawson (1997, 20) of (real) underlying structures, powers, and mechanisms that govern or facilitate events. He is perforce a *transcendental realist*: a *realist* because he believes that there is a reality to be discovered, and a *transcendentalist* because he is convinced that there is a reality beyond what he has so far observed. He economizes thought and effort by means of black boxes and event regularities as long as he is able, but in a changing, open, uncertain system, these sooner or later become inadequate guides to action.

Why should we expect central bankers to be any different? Their unsurprising similarity to bankers, rather than butchers or bakers, is consistent with their realism. Their view of the world has been molded, and is revised, by their experiences and continuing involvement in the financial markets -- which brings us to the purpose of this paper: the application of a realist perspective to an examination of the beliefs and actions of central bankers as distinct from the implications of economists' policy models. It is not a general study. We have to be selective, and concentrate on a few events that illustrate the epistemological differences between economists and central bankers cited above. Sections I and II are addressed first to recent policy disputes arising from the unwillingness of central bankers to subscribe to a closed and certain system, and then to their inability to abstract from the financial markets.

The realist nature of this study proceeds at two levels. I approach central bankers as realists, ordinary social agents who happen to occupy particular positions. In addition to being realists, they are proper subjects of realist inquiry. They are skeptical of economists' claims of "constant conjunctions of events," but "it does not follow that the only alternative is an inchoate random flux…. Although the social world is open, certain mechanisms can come to dominate others over restricted regions of time-space, giving rise to rough and ready generalities or partial regularities," to "stylized facts." (Lawson, 1995). Central bankers and other agents pursue these facts and their underlying structures, and on the basis of what they think they have learned, act within and affect markets in ways that social scientists might seek to understand.

I proceed by example, with two illustrations of central bankers' involvement in the structures underlying events, unrecognized in economists' closed, market-free models. But these illustrations are typical and point to the possibility of a more general realist approach to the study of policymakers and the markets that affect and are affected by them. The last section raises the question whether bankers and central bankers, even if less articulate, understand financial markets better than academic economists.

I. Wait and see.

> At the time of the February *Report*, the balance of risks in the projection implied that it was more likely than not that a modest further rise in interest rates would be necessary at some point to hit the inflation target …. There were, however, very significant uncertainties about the magnitude of the slowdown in the economy. The considerations that affected monetary policy were finely balanced, and the Committee voted to leave rates unchanged.
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> *Inflation Report*, Bank of England, May 1998, p. 36.

The Monetary Policy Committee of the Bank of England was charged with the responsibility for an inflation target of 2½ percent.[1] After it had split equally for and against the proposition that the Bank's lending rate not be changed, the Governor cast his deciding vote for the proposition. Four members of the Committee were academic economists in the sense that, although they had significant Bank and Treasury experience, they had been situated primarily in universities where they engaged in research and wrote for other economists. Their careers depended on the development and application of economic models. All four voted to raise the rate of interest. The four professionals, on the other hand -- an accountant, a business economist, and two career Bank employees, including the Governor -- voted for no change.

The market professionals were in favor of "delaying any rise in interest rates, even if a rise were necessary" and spoke of the "unusually large" near-term uncertainties. They did not "feel very confident about the outlook and it would not necessarily be right to draw policy conclusions mechanically from the [staff's] projection. In these circumstances there was a case for delay so as to allow judgment to be made later in the light of more information." If the downturn proved sharper than expected, an increase in interest rates might have a severe negative effect on output "and would have to be quickly reversed. Such a reversal could impair confidence in the economy" and create "confusion about monetary policy…. There was thus a strong case for waiting to get a clearer impression of the extent of the slowdown in the economy before taking policy action."

On the contrary, the economists argued, "the sheer degree of uncertainty did not represent a proper justification of delay. Uncertainty was a normal state of affairs in economic policy-making and there was no particular reason to believe that uncertainty would be any less in a few months' time." Failure to act when expected inflation exceeded the target would suggest that the Committee did not mean business and might make an even larger increase necessary in the future.

The scene was reenacted in March. The "market professionals" -- whose careers had consisted primarily of direct experience of financial and other markets as distinct from those who view the economy through theoretical constructs -- still believed that "the benefits of waiting to gather information to help resolve the particular uncertainty about the current position of the economy could outweigh the costs," while the economists remained convinced that "policy should reflect the latest news and that uncertainty in itself was no reason for delay." The delay of decisions in order to reduce the risks of reversal was "irrational." "So long as any policy reversals could be properly explained by new developments or improved analysis of the outlook, they need not create confusion about policy…. [T]he desire to minimise the risk of policy reversals was likely to mean that interest rate changes would, on average, be made too late."

The different attitudes toward uncertainty and its relationship to action -- the decisiveness of the theoretical economists compared with the caution of the market practitioners – during the debates of 1998 are not new. In 1819 the Bank's directors, "a company of merchants" who according to the high economic authority, David Ricardo, knew nothing of "the true principles of the currency," protested against a strict monetary rule "fraught with very great uncertainty and risk" in which "discretionary power is to be taken away from the Bank" and might, because of the impossibility of

deciding “beforehand what shall be the course of events,” impose “an unrelenting continuance of pecuniary pressures upon the commercial world of which it is impossible for them either to foresee or estimate the consequences.”[2]

"Irrational" the Monetary Policy Committee's experts would have responded, because the future *is* known, at least up to a well-behaved stochastic error. An economist never has to look before he crosses the road. All the relevant information about traffic, past and future, has been pasted onto his brain. The attitude of the MPC’s experts toward the economy is precisely analogous to the random-walk theory of stock prices and its implication that one cannot improve on the selection of a portfolio by throwing darts at the stock page. If stock prices behave like the toss of a true coin, the “information” conveyed by more tosses will not help. It would be “irrational” to delay the decision for few more tosses. We already have complete information about the probabilities of the outcomes.

This contrasts with the concerns expressed by Federal Reserve Board Chairman Alan Greenspan during the Asian financial crisis of 1998. He saw a dramatic shift in bankers’ attitudes towards risk. A "fear-induced psychological response is provoking a sudden rush to liquidity that poses a threat to world economic growth…. When human beings are confronted with uncertainty … they disengage." Comparing investors to pedestrians, "When … you're uncertain as to whether a car is coming, you stop."[3] This is the metaphor used by critical realists when making the point that real-life economic agents behave as if the economy was a complex open system that is constantly changing in unforeseeable ways. Wait and see, as long as possible, before acting. Intervals between cars may not be perfectly predictable. It may not be irrational, despite the experts, to Stop, Look, and Listen.

II. Just a bond man

William McChesney Martin, Jr., was the longest-serving Chairman of the Federal Reserve Board, 1951-70, guiding the reestablishment of the Federal Reserve as an independent force after its domination by the Treasury from the New Deal through World War II and into peacetime, until the Treasury-Federal Reserve Accord of March 1951. He grew up in the financial community. His father was head of the Federal Reserve Bank of St. Louis, where the son was employed as a bank examiner after graduating from Yale in 1928. The next year, he joined the St. Louis securities firm, A. G. Edwards & Sons, and in 1931 was made a partner and manager of its New York business. In the course of macroeconomic discussions in later years, he would self-deprecatingly describe himself as "just a bond man." (Kettl, 1973, 82)

Untainted by the crash and later stock-market scandals, young but serious, a reformer but not a revolutionary, he quickly rose in the establishment, and "the boy wonder of Wall Street" became President of the New York Stock Exchange in 1938. He showed great political skill in protecting and even enhancing the position of the NYSE while overseeing mainly cosmetic changes sufficient to keep the Securities and Exchange Commission at bay. A Democrat, he held various Government positions after military service, and as Assistant Secretary of the Treasury (1949-51) earned the confidence of the Secretary, St. Louis banker, John Snyder. Martin handled the Treasury's side of the negotiations when the Federal Reserve rebelled against the administration's bond support program, and upon their conclusion was appointed Chairman of the Federal Reserve Board.

Martin authored the phrase if not the practice of "leaning against the wind," earning the criticism of politicians and economists in the process. Friedman claimed that because of lags in recognition, decisions, and effects, this policy exacerbated economic fluctuations and was inferior to a rule (1960). The "look at everything" necessitated by the Fed's approach to policy was also derided by the rational expectationists (Sargent and Wallis, 1978). But we are

concerned here with Martin's interest in the stability of the financial markets, unrecognized in his critics' models.

The development of open market operations in Government securities as the primary instrument of monetary policy under the direction of the Federal Open Market Committee consisting of the seven members of the Federal Reserve Board, the President of the Federal Reserve Bank of New York, and four of the other eleven Reserve Bank Presidents on a rotating basis (instead of the discounting of private bills of exchange by the Reserve Banks), had already led to an interest at the Fed in the performance of that market. Fed officials wanted a deep, efficient market for their own purposes of monetary control. They wanted to be assured of the continuous availability of buyers and sellers. But just as important was a fear, as the bull in the china shop, of the unsettling effects of their own actions. They wanted good prices on their own account, but also desired order fulfillment and price continuity in the public interest, which depended on the safety and soundness of the financial firms running the market. In 1944, the FOMC had decided

> … to formalize rules and regulations governing System transactions with Government securities dealers. The Manager [of the open-market "desk"] was directed to execute transactions for System Account only with brokers and dealers in Government securities who met certain qualifications. Knowledge and experience of management, integrity and observance of high standards of honor, willingness to make a market under all ordinary conditions; and volume and scope of business, amount of capital and financial condition were among the qualifications to be considered.[4]

Problems of instability and disorder were in abeyance under the Treasury-imposed interest-rate peg. But after the return to more-or-less free-market fluctuations an FOMC subcommittee chaired by Martin was formed "to study and report on the operations and functioning of the Open Market Committee, in relation to the Government securities market." The Report of the ad hoc subcommittee was delivered to the FOMC in November 1952 and made public in December 1954 in the course of Martin's appearance before the Subcommittee on Economic Stabilization. The Report began with a statement of the dependence of monetary policy on open market operations, which "provide a continuously available and flexible instrument of monetary policy for which there is no substitute, an instrument which affects the liquidity of the whole economy. They permit the Federal Reserve System to maintain continuously a tone of restraint in the market when financial and economic conditions call for restraint, or a tone of ease when that is appropriate. They constitute the only effective means by which the elasticity that was built into our monetary and credit structure by the Federal Reserve Act can be made to serve constructively the needs of the economy. Without them, that elasticity would often operate capriciously and even perversely to the detriment of the economy."[5]

To be effective, open market operations "require an efficiently functioning Government's securities market characterized by depth, breadth, and resiliency. It is with these characteristics of the market that this report is mainly concerned." The market's importance could not be overemphasized. It was the focus of the economy's management of its money balances. The "daily turnover of securities in the market is enormous. It reflects the transactions by which thousands of individual financial institutions and business organizations keep their funds fully employed at interest, without sacrifice of their ability to meet the changing financial requirements of their more basic business operations."

These agents were highly sensitive to changes in interest rates. "Arbitrage transactions" were enormous. "The relative prices at which different issues trade … reflect predominantly changes in the demand for and the supply of loanable funds in the money market as a whole and also as between the various short-term, intermediate, and long-term sectors of the market. Since trading is done at commissions or spreads as small as one sixty-fourth ($156.25 per million) and even smaller in very short issues, there are constant opportunities for arbitrage of small differentials in prices when the

impact of buying or selling is especially heavy in some particular sector of the market."[6]

> [T]hese basic features of the money market help to explain why relatively small operations, sometimes even rumors of operations, by the Federal Open Market Committee may give rise to such quick and pervasive response not only throughout the money market and the investment markets generally but also in business psychology.… A relatively small injection of funds through the purchase of bills will ordinarily find a response in the market for long-term securities. Large purchases of bills could scarcely fail to elicit such a response.[7]

Because "transactions for the Committee's account exert a powerful impact on the market,"

> … it is important that they be so conducted as to avoid disruptive technical repercussions. In particular, it is important that technical operating procedures and practices, conceived in the atmosphere of war finance and developed to maintain a fixed pattern of prices and yields in the Government securities market, be reviewed to ascertain whether or not they tend to inhibit or paralyze the development of real depth, breadth, and resiliency in today's market that operates without continuous support.
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> This is the problem with which the committee has been most concerned. The absorption and release of reserve funds which results from Federal Open Market Committee transactions should constitute a constructive factor in the Government securities market, as well as in the economy generally. Without open market operations appropriately conceived and executed when there is need to absorb or release funds it would sometimes be impossible for the market to evaluate correctly fundamental trends in the economy as they affect the supply of money relative to its demand.
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> It is evident, therefore, for the well-being of the Government securities market itself, that the possibility be minimized of disruptive technical market repercussions from Committee transactions. It is also evident that the Federal Open Market Committee should be in a position to operate promptly and in appropriate volume at all times, without fear of such adverse technical market repercussions, when the need for operations exists. This requires a Government securities market characterized by great depth, breadth, and resiliency.[8]

The Subcommittee's goals for the Government securities market were remarkably similar to those of the New York Stock Exchange, which regularly publishes "indicators of market performance" consisting of *price continuity*, *market depth*, and *quotation spreads*.[9] The Subcommittee asked whether the structure and psychology of the market for Government securities were sufficient for the Fed's objectives, and regarding the former answered in the affirmative. In particular, it was "sufficiently broad, experienced, competitive, and arbitrage minded as to minimize the success of attempts of private operators to 'rig' the market." On the other hand, it "would be inaccurate" to say that the market possessed the "depth, breadth, and resiliency to the full degree that would be desirable for the efficient conduct of effective and responsive open market operations." The Subcommittee was not referring here to the price fluctuations occurring since the Accord, which had been "moderate," but "rather to the psychology that still pervades the market, to the confusion among professional operators in the market with respect to the elements they should take into consideration in the evaluation of future market trends, and to their apprehension over the attitude toward prices in the market on the part of the Federal Open Market Committee and of its representatives on the trading desk. This psychology would not characterize a market that possessed real depth, breadth, and resiliency."[10]

> In strictly market terms, the inside market, i.e., the market that is reflected on the order books of specialists and dealers, possesses depth when there are orders, either actual orders or orders that can be readily uncovered, both above and below the market. The market has breadth when these orders are in volume and come from widely divergent investor groups. It is resilient when new orders pour promptly into the market to take advantage of sharp and unexpected fluctuations in prices.

> These conditions do not now prevail completely in any sector of the market. They are most nearly characteristic of the market for Treasury bills, but even in that market reactions have been sluggish on more than one occasion since the accord. They are least characteristic of the market for restricted bonds. In these issues, there has prevailed persistently since the accord a wide gap between the prices at which the least firm holders are willing to sell and potential buyers are willing to purchase. Within this gap, quotations have fluctuated widely, either in response to relatively small buy or sell orders, or, more frequently, as a result of professional efforts to stimulate interest by marking quotations up or down.[11]

What was the remedy? The committee tried to put itself in dealers' shoes.

> It is in the nature of a dealer's business that he is constantly exposed to market risk from both sides of the market. One test of his professional skill and, indeed, of his fitness to be in the market at all is the ability to judge the factors in a free market with sufficient foresight and prudence to preserve or even augment his relatively thin margin of capital, whichever way the market turns. He does this by reversing or covering his positions at times or by alert arbitrage of markets for particular issues that are out of line. Thus he is able to function continuously and to make markets. He cannot do this, however, with anything like the same degree of skill in a market that is subject to unpredictable and overpowering intervention by the Federal Open Market Committee. The Committee, with practically unlimited resources to back up its intervention, is not guided in its operations by considerations of profit, and unlike other investors, is not forced to cover its operations to minimize loss. Such intervention can impose drastic risks on a dealer or other holders, particularly if the intervention is in intermediate or long securities where the dollar impact on the capital position of modest changes in yields is large.[12]

This explains "why dealers, with their lack of confidence in the Committee's intentions to restore a free market, would be reluctant to go very far in taking positions" that would enhance the depth, breadth, and resiliency of the market.[13] The Subcommittee concluded:

> When intervention by the Federal Open Market Committee is necessary to carry out the System's monetary policies, the market is least likely to be seriously disturbed if the intervention takes the form of purchases or sales of very short-term Government securities.[14]

The Subcommittee argued that "bills only" -- which the policy came to be called because 13-week Treasury bills were the shortest-term Government securities -- would not interfere with its central banking functions. As many reserves could be inserted into or removed from the monetary system by purchases and sales of bills as by longer-term bonds.

> It would simply guarantee that the first impact of such purchases and sales would fall on the prices of very short-term issues where dollar prices react least in response to a change in yield, and where the asset value of a portfolio is least affected. A dealer organization, even though it operates on thin margins of capital, can live with impacts such as these and consider them a part of its normal market risks.

"Nor would such an assurance prevent the effects of open market operations, initiated in the short-term sector, from spreading to other sectors of the market" -- meaning other maturities -- through the arbitrage activities of the market professionals "who are constantly balancing their investments to take advantage of shifts in prices and yields between the different sectors of the market."

Assurance that the FOMC "would limit its intervention to the very short-term market" would not, in general, limit its effectiveness. The assurance was within "the best central banking traditions…. In fact, most effective central banks have operated within this restriction, imposed either by tradition or by law. Traditional principles of central banking made no provision for operations in the intermediate or long maturities of any borrower."

The Fed's announcement of "bills only" found no sympathy, and considerable hostility, in the academic community, for whom

monetary policy meant a readiness to force sudden and substantial changes in interest rates, especially long-term rates. The traditional disapproval held by economists for central bankers' desire for stable interest rates had been reinforced by recent events and theory. Keynes had written in the *Treatise on Money* that

> The main direct influence of the Banking System is over the short-term rate of interest. But when it is a question of controlling the rate of investment, not in working capital but in fixed capital, it is the long-term rate of interest which chiefly matters (ii, 352).

Under slump conditions, therefore, it becomes necessary to "impose on the Central Bank the duty of purchasing bonds up to a price far beyond what it considers to be the long-period norm" (373). He expanded on this theme in *The General Theory*:

> Perhaps a complex offer by the central bank to buy and sell at stated prices gilt-edged bonds of all maturities, in place of the single bank rate for short-term bills, is the most important practical improvement that can be made in the technique of monetary management…. The monetary authority often tends in practice to concentrate on short-term debts and to leave the price of long-term debts to be influenced by belated and imperfect reactions from the price of short-term debts. (206)

As the quotation indicates, Keynes himself was acutely aware of the complexities of interest rate policies.[15] But his "Keynesian" followers have generally believed that market characteristics such as "breadth, depth, and resiliency" either were irrelevant to monetary policy, or when notice was taken of them, that they limited its effectiveness:

> Sizeable price changes and difficulty in selling securities -- both conditions which would not exist in a market with depth, breadth, and resiliency -- may at times be of great help in achieving credit policy objectives…. Difficulties in completing security transactions and in financing dealer positions -- in a word, impairment of the bond market's ability to function, temporarily at least -- are an essential part of a restrictive credit policy. Thus the "bills only" policy was not only poorly designed to achieve its purpose; its very purpose was wrong (Ahearn, 65).

The FOMC seemed more interested in the welfare of securities dealers than an effective credit policy -- similar to the "paternalistic support accorded to the bankers' acceptance market" in the 1920s, when "credit policy [was] jeopardized by the assumed need of protecting" that market.[16] Hansen thought the FOMC's concern misplaced. "The notion that Fed intervention in the market has the effect of increasing risk and uncertainty is certainly one of the most curious arguments I have ever encountered." Supporting Hansen's "rightful dismay," Weintraub wrote:

> Economic stabilization would suffer a sharp setback if the view took root that the central banking mechanism was designed to protect bondholders from changes in capital values rather than reserved for broader conceptions of economic policy.

He derided as "cajoling oratory" Martin's statement "that 'the credit and money of this country is at the grass roots,' and that 'the composite judgments which come up through … groups in various towns and hamlets … has more to do with the credit basis of this country than the influence of the Treasury and the Federal Reserve put together'; but the job of controlling monetary phenomena still remains with the Reserve System and cannot be farmed out to the mythical 'grass-roots'."[17]

As far as standard monetary theory and the textbooks are concerned, bank reserves might be dropped from helicopters or handed out as dimes by John D. Rockefeller. The FOMC might as well buy cabbages as Government securities. The markets lurking behind economists' supply and demand X-diagrams are presumed to be irrelevant to their price and quantity outcomes. Or worse. Henry Simons, for example, found the financial markets an obstacle to his proposal for "a simple mechanical rule of monetary policy." The presence of money substitutes interfered with the control and even

the definition of money. He preferred to prevent a recurrence of the panics of the 1930s by eliminating debt. "The danger of pervasive, synchronous, cumulative maladjustments would be minimized if there were no fixed money contracts at all -- if all property were held in a residual-equity or common-stock form. With such a financial structure, no one would be in a position either to create effective money substitutes … or to force enterprises into wholesale liquidation."

Next best to this system, which Simons admitted to be a "dream," was one in which "all borrowing and lending takes the form of contracts in perpetuity -- contracts on which repayment of principal can never be demanded." A gradual movement toward such a system "would seem feasible…. This would mean, above all, the abolition of banking, that is, of all special institutional arrangements for large-scale financing at short term." Nothing valuable would be lost, and much would be gained. He attacked the notion that "somehow has become prevalent that banks ought to invest only or largely in short-term commercial paper."

In his zeal for the rule, Simons' student, Friedman (1960), claimed that it could be made effective without eliminating banking and short-term debt. But this was a political concession for the policy, and meant less a difference with Simons about the dangers of debt markets than greater optimism that they could be overcome. The important step was the erection of a wall between central bankers' decisions and the financial markets.

> [E]ach of us is very much affected by the environment in which we are and know best those things which we are familiar with. And there is no doubt that from the point of view of the bankers, what they are individually familiar with is the credit and investment market.
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> To them it seemed perfectly natural and understandable in trying to serve the public interest to place major emphasis on interest rates and credit conditions rather than on the aggregate quantity of money…. I think it has been an unfortunate thing that we have had a Reserve bank which has been as closely linked to the banking community and to the lending and investment process as it has …
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> Milton Friedman, *Hearings*, Subcommittee on Domestic Finance, U.S. House of Representatives, March 3, 1964.

The record of monetary rules holds little hope for Friedman's approach, however. The money rule legislated for the Bank of England in 1844 was suspended three times in the next quarter-century, and perhaps with that in mind, Hayek said of the Chicago plan:

> I would not like to see what would happen if under such a provision it ever became known that the amount of cash in circulation was approaching the upper limit and therefore a need for increased liquidity could not be met.

The 1844 Act was eventually made to work "satisfactorily because it did not work in the way designed," that is, because the men on the spot, who shared the Act's objectives, were able to make the necessary adjustments because of their links to the financial markets (Whale, 1944).

III. Will the real economists step forward.

"Bills only" was interrupted in 1961 under pressure from an administration that wanted operations over the entire range of maturities to twist the yield curve, specifically to narrow the spread between long and short rates. The policy's lack of success was probably owed to the "arbitrage" of which the FOMC Subcommittee had warned (which may also explain the Fed's unenthusiastic implementation).

A more extreme abstraction from investor price sensitivity was Ricardo's 1819 resumption plan, which was the first legislated monetary rule, if only for a transition. The rule was intended to forestall interference from the Government as well as the Bank, and provided for a known, gradual appreciation of the currency: beginning February 1, 1820, the Bank was to be liable to deliver gold on demand in exchange for its notes at the rate of £4 1s. per ounce,

£3 19s. 6d. from October 1, 1820, and finally £3 17s. 10 1/2d (the old par) from May 1, 1821. Ricardo had expected a small (no more than 5 percent) and gradual decline in the price level. But the market price of gold fell to its final (par) value almost immediately after announcement of the plan, gold flowed into the Bank, and between 1819 and 1822 bank credit and the price level fell by more than a third. Ricardo blamed the deflation and economic distress on the Bank's mismanagement of a perfectly sound plan, that had been "the triumph of science and truth over prejudice and error."[18]

The resumption plan was another scene in the continuing conflict between central bankers and economic theory that in 1810 had taken the form of the Bullion Committee's criticism of the Bank for refusing to accept the quantity theory of money, specifically a proportional (inverse) relation between the quantity and value of its the currency. This criticism was misplaced. A currency's value is unlikely to vary closely with its quantity when there is an expectation -- variable in confidence and date of realization -- of redemption at, in this case, the pre-suspension par. Mitchell (1903) made the same point about the sensitivity of the gold value of greenbacks to the fortunes of the Federal armies, and they rapidly approached par in 1865 -- before any significant change in quantity -- when moves were made toward resumption.

The oversights of economic theory noted here occurred at a very basic level -- for the most part, simply letting price differences go unnoticed by agents -- but they are enough to raise the question of who is entitled to wear the economist's mantle. If "the coordination of economic activity is, for most economists, the central issue in our subject" (Loasby, 1989) we are interested primarily in the structures and social interactions that make up *markets*. Hicks compared the outstanding analyses of markets and price determination: the general equilibrium of Walras in which prices are solutions of simultaneous equations independently of actual transactions, and the "less peculiar" approach of Marshall, for whom the "key figure is the merchant, wholesaler, or shopkeeper, who buys in order to sell again," who "must therefore have a buying price as well as a selling price." (1977, ix) He discusses the determination of merchants' margins, that is, the spreads between their buying and selling prices, a narrow margin being the sign of a "highly competitive market."[19]

This latter dynamic market approach is in the spirit of Adam Smith, whose *Inquiry into the Nature and Causes of the Wealth of Nations* opened with a discussion of the division of labor, which is the consequence of the human "propensity to truck, barter, and exchange one thing for another" in light of "their own interest." His book consists largely of the analysis of human interactions in the marketplace. Wage differences, for example, are explained by degrees of hardship, ingenuity, and training, "not by any accurate measure, but by the higgling and bargaining of the market, according to that sort of rough equality which, though not exact, is sufficient for carrying on the business of common life." Official interferences with markets might be disastrous. Smith compared the high prices of corn dealers/speculators in years of scarcity to the decision of the "prudent master of a vessel" who puts his crew on short rations when "he foresees that provisions are likely to run short," and believed that "a famine has never arisen from any other cause but the violence of government attempting by improper means to remedy the inconveniences of a dearth." The discouragement of imports from more plentiful regions by means of price ceilings arising from hostility to dealers' profits "may be compared to the popular terrors and suspicions of witchcraft."[20]

The statements of Chairman Martin in the 1950s and 1960s and the general attitude of the Federal Reserve -- similar to the New York Reserve Bank's Benjamin Strong in the 1920s, reflecting the "grass roots," "mythical" or not, and subjecting them to accusations of "money market myopia" and psychopathic behavior -- are closer to Smith, Marshall, and the later Hicks than are the mechanical general equilibria of Walras, the quantity theorists, and others.

Curves and equations can be efficient expressions of our understanding of market processes and results. But if they are

treated simply as physical objects, without regard to the sensitivities of economic agents, forgetting that economics is a *social* science, their manipulations are irrelevant to actual markets. Operation twist and Ricardo's resumption plan were examples, and the MPC staff's econometric forecast is another.

The static Keynesian model might sometimes be appropriate. In deep-depression circumstances of unusual uncertainty, markets might cease effective operation. Prices might fail to respond to shocks because traders are afraid to act. In such cases, curves might be moved about without inducing offsetting actions by the public. This is the situation upon which Keynes focused in *The General Theory*. However, "a theory which seeks to explain how an economy can get stuck is not likely to be very good at explaining movement." (Loasby, ix). Or of situations where the central bank guarantees differential asset returns. "Unfortunately, economists, like economies, can get stuck." (Loasby, x)

Martin's abilities as an economist were dismissed by economists. "It is hard to know what Bill was really driving at in his speech," Council of Economic Advisors Chairman Gardner Ackley told President Johnson.[21] Martin had found "disquieting similarities between our present prosperity and the fabulous twenties," which might call for restrictive monetary policy to ward off inflation. His warnings that the Federal Reserve could not control interest rates -- meaning that the price changes caused by attempts to force rates on the market would eventually force a retreat -- fell on the uncomprehending ears of those brought up on the static liquidity-preference theory of interest rates. Martin's superior understanding of dynamic markets suggests that economists' charges of shortsightedness might be aimed in the wrong direction. Under the heading of "Money Market Myopia," the Federal Reserve Bank of St. Louis recently suggested:

> The view that open market purchases lower interest rates is shortsighted. *Monetary policy cannot lower interest rates in any long-term sense, except by actions that lower inflation.*[22]

I have been sympathetic with central bankers and critical of economists, but this was more in the interests of balance of intellectual respectability than in judgment of right and wrong. I do not know whether economic stability would have been improved by less central bank inertia and more reliance on econometric models. In any case, such policy questions are meaningless if, for structural and social reasons, they cannot be implemented. There may be fundamental reason for interest rate inertia, with or without central bankers. To begin with, credit is a social activity. "Lend to the man, not the collateral," is a frequent comment. Bankers do not like to change rates. An interest rate, even on a short-term loan, is part of a long-term relationship. Low rates attract borrowers that might not survive normal rates. Rate increases spell trouble. Keynes's position that workers' resistance to wage cuts are not "sins against economic law" might be applied to interest rates. "I do not think it is any more economic law that wages should go down easily than that they should not."[23] It is the economist's task to try to understand the social structures underlying interest rates instead of merely pointing to policy prescriptions derived from abstractions.

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References

Ahearn, D. 1963. *Federal Reserve policy reappraised*. New York: Columbia Univ. Press.

Anderson, C. 1965. *A Half-Century of Federal Reserve policymaking, 1914-64*. Federal Reserve Bank of Philadelphia.

Blinder, A. 1998. *Central banking in theory and practice*. Cambridge, MA: MIT Press.

Clark, L. 1935. *Central banking under the Federal Reserve System*. New York: Macmillan.

Cottrell, A., and Lawlor, M. 1991. "Natural rate' mutations: Keynes, Leijonhufvud and the Wicksell connection, *History of political economy* 23, Winter, 625-43.

Duecker, M. 1999. Measuring monetary policy inertia in target fed funds rate changes, Federal Reserve Bank of St. Louis *Review* 81, no. 5, 3-9.

Fisher, I. 1930. *The theory of interest*. New York: Macmillan.

Friedman, M. 1960. *A program for monetary stability*. New York: Fordham Univ. Press.

Friedman, M. and Schwartz, A. 1963. *A monetary history of the U. S., 1867-1960*. Princeton, NJ: Princeton Univ. Press.

Hansen, A. 1955..Monetary policy, *Rev. econ. & statistics* 37, May 110-19.

Hargrove, E., and Morley, S. 1984. *The President and the Council of Economic Advisers: Interviews with CEA Chairmen*. Boulder, CO: Westview Press.

Harrod, R. 1947. Keynes the economist, in S. Harris, ed., *The new economics*. New York: Knopf.

Harris, S. 1933. *Twenty years of Federal Reserve policy*. Cambridge, MA: Harvard Univ. Press.

Hawtrey, R. 1938. *A century of Bank rate*. London: Longmans, Green.

Hayek, F. A. 1990. *The denationalisation of money*, 3rd ed. London: Institute of Economic Affairs.

Hicks, J. 1977. *Economic perspectives*. Oxford: Clarendon Press.

Horwich, G. 1964. *Money, capital and prices*. Homewood, IL: Irwin

Keynes, J. 1930. *A treatise on money*. London: Macmillan.

_____. 1936. *The general theory of employment, interest and money*. London: Macmillan.

_____. 1971-89. *Collected writings*, D. Moggridge, ed. London: Macmillan.

Kettl, D. 1973. *Leadership at the Fed*. New Haven, CT: Yale Univ. Press.

Lawson, T. 1995. A realist perspective on contemporary "economic theory," *J. economic issues* 29, March, 1-32.

_____. 1997. *Economics and reality*. London: Routledge.

Loasby, B. 1989. The working of a competitive economy: G. B. Richardson's post-Marshallian analysis, in Loasby, *The mind and method of the economist*. London: Edward Elgar.

Mayer, T. 1990. Minimizing regret: cognitive dissonance as an explanation of FOMC behavior, in Mayer, ed., *The political economy of American monetary policy*. New York: Cambridge Univ. Press.

Mitchell, W. 1903. *A history of the greenbacks*. Chicago: Univ. of Chicago Press.

Ricardo, D. 1951-73. *Works and correspondence*, P. Sraffa, ed. Cambridge, UK: Cambridge Univ. Press.

Sargent, T., and Wallis, N. 1978. Rational expectations and the theory of economic policy, *Studies in monetary economics*, Federal Reserve Bank of Minneapolis.

Simons, H. 1936. Rules versus authorities in monetary policy, *J. political economy* 44, Feb., 1-30.

Smith, A. 1776. *An inquiry into the nature and causes of the wealth of nations*. London: Strahan and Cadell.

Thornton, H. 1802. *An enquiry into the nature and effects of the paper credit of Great Britain*, ed. with Intro. by F. A. Hayek (1939). London: George Allen & Unwin.

U. S. Congress. 1954. *U. S. monetary policy: Recent thinking and experience*, Hearings before the Subcommittee on Economic Stabilization of the Joint Committee on the Economic Report, 83rd Cong., 2nd sess.

_____. 1964. *The Federal Reserve after fifty years*. Hearings before the Subcommittee on Domestic Finance of the House Committee on Banking and Currency, 88th Cong., 2nd sess.

Weintraub, S. 1955. Monetary policy: comment, *Rev. econ. & statistics* 37, May, 292-96.

Whale, P. 1944. A retrospective view of the Bank Charter Act of 1844, *Economica* 11, Aug., 109-11.

Wicksell, K. 1898. *Interest and prices*. Trans. by R. F. Kahn (1936). London: Royal Ecoc. Soc.

ENDNOTES

[1] The Bank of England Act of 1998 established the Monetary Policy Committee in the Bank as the group responsible for formulating and implementing monetary policy. The Government sets the goals -- primarily the target rate of inflation, but the MPC is free to pursue those goals as it sees fit. When at full strength the MPC consists of the Governor and the two Deputy Governors of the Bank, two members appointed by the Bank after consultation with the Chancellor of the Exchequer, and four members appointed by the Chancellor with knowledge and experience "relevant to the Committee's functions." The two Bank appointees are full-time employees, one responsible for monetary analysis and the other for monetary operations.

[2] House of Commons, June 12, 1822, *Works*, *v*.

[3] *Wall Street Journal*, Oct. 8, 1998, p. A2.

[4] Anderson, p. 113.

[5] Report of FOMC Ad Hoc Subcommittee, in *U.S. Monetary Policy*, p. 259.

[6] Ibid., pp. 257-58.

[7] Ibid., p. 258.

[8] Ibid., pp. 259-60.

[9] *Price continuity* is the size of the price variation from one trade to the next in the same stock; in 1998, 97% of transactions occurred with no change or the minimum change of 1/8 point. *Market depth* indicates the amount of buying and selling pressure a stock will withstand before its price changes significantly; the average stock showed no price change or the minimum 1/8-point change on 85% of 3,000-share trades. The *quotation spread* is the difference between the bid and offer prices on a stock, and was 1/4 point or less in 92% of quotes (*NYSE Factbook*, annual).

[10] Ad Hoc Subcommittee, p. 265.

[11] Ibid., pp. 265-66.

[12] Ibid., pp. 266-7.

[13] Ibid.

[14] Ibid., p.267.

[15] Horwich (416) and Cottrell and Lawlor discuss the importance of the financial markets in Keynes's theory of employment.

[16] Clark (378) and Harris (i, 428), quoted in Ahearn (68).

[17] The quotation is from Martin's speech to the Bond Club of New York reported in the *Commercial and Financial Chronicle*, Dec. 23, 1954.

[18] Letter to Hutches Trower, May 28, 1819, and House of Commons, June 12, 1822, *Works*, v and viii.

[19] This is in the context of Hicks' rejection of the static general equilibrium analysis of *Value and Capital*, for which he was awarded the Nobel Prize but had come to believe was nonsense because "It does deliberate violence to the *order* in which the real world (in *any* real world) events occur." (p. vii)

[20] From pp. 1, 13, 14, 31, 492-93, and 500 of the Modern Library edition.

[21] Kettl, *Leadership*, p. 103.

[22] William Dewald, *Monetary Trends*, July 1995, p. 1; author's emphasis.

[23] In response to Lord Macmillan's suggestion that the dole interfered with "economic laws" by increasing workers' resistance to wage cuts. *Collected writings*, xx, pp. 83-84. Also see Harrod's argument that the "theory of interest is … the central point in [Keynes's] scheme. A "wrong rate of interest [that is, one "inconsistent with full activity"] is not itself a rigidity or inflexibility. It is natural, durable, and in a certain sense in the free system inevitable." At least, it may be enduring (see Horwich and Cottrell and Lawlor).

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