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A SAMPLE SURVEY OF THE COMMISSION ON MONEY AND CREDIT RESEARCH PAPERS

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I.

THE Commission on Money and Credit has laid its 285-page egg [1] and gone over like a lead balloon — choose your own metaphor — with both the economists and the general public. Certain of its administrative suggestions, notably those involving reconstitution of the Federal Reserve System's Board of Governors, have attracted a significant modicum of attention.[2] On the substantive side, however, the Commission's main body of work appears already *spurlos versenkt*, in unhappy contrast with both the National Monetary Commission of fifty years past, whose influence it was intended to rival, and the Radcliffe Report of 1959,[3] its closest contemporary transatlantic equivalent.

This unhappy fate rather befits a series of attempted least common denominators between unreconciled and possibly unreconcilable special interests, which turned out to be meaningless verbal compromises as often as anything more. Indeed, the least uninteresting feature of the report to this reader was the triangular running battle between the predominantly "sound finance," "don't rock the boat" position of its text and the two accompanying sets of mutually contradictory footnote dissents. Set 1, contributed primarily by the "labor bloc" (Lubin, Nathan, Rieve, Ruttenberg, and Thorp, with Ruttenberg the principal spokesman), stands for guaranteed full employment and a 5 per cent annual growth rate, at any cost in direct controls over everyone but organized labor, and over everything but wages. Set 2, contributed by a mixed bag of business, finance, and agricultural [4] spokesmen (Black, Lazarus, Miller, Schwulst, Shuman, Thomson, and Yntema) stands for Free Enterprise in the economic aggregates — McKinley minus the gold standard.[5]

Rather than aim a supernumerary nail at the Commission's coffin, I propose to examine a biased sample of the professional papers submitted for the Commission's use, and to all appearances neglected by the Commission in favor of cliches and weasel words masquerading as common sense.[6] The papers are to an econo-

[1] The Report of the Commission on Money and Credit, *Money and Credit, Their Influence on Jobs, Prices, and Growth* (Englewood Cliffs, N.J., Prentice-Hall, 1961), is referred to below as C.M.C. Report. (A summary pamphlet was also published by the Commission.)

[2] The 1962 *Economic Report of the President* devotes approximately 2½ pages (pp. 21–23) to the Commission's report. The bulk of this space and the only positive recommendations relate to "two reforms of clear merit . . . which are of direct concern to the President in the exercise of his responsibility to appoint the members and officers of the Board of Governors of the Federal Reserve System" (p. 22). The first of these is a salary increase!

[3] For a summary account of the National Monetary Commission and its work, see Milton Friedman, "The Report of the Commission on Money and Credit; An Essay in *Petitio Principii*," *American Economic Review*, May, 1962, pp. 291–301. The official title of the Radcliffe Report is: Committee on the Working of the Monetary System, *Report* (Cmd. 827), London, H.M. Stationery Office, 1959.

[4] The alliance of agriculture with business and finance, rather than labor, calls for comment. The principal agricultural spokesman (Mr. Shuman) is affiliated with the American Farm Bureau Federation, generally classed among the more conservative farm organizations. An agricultural spokesman affiliated with the rival Farmers' Union might have sided more frequently with the other set of footnote writers.

[5] Apropos of blocs and spokesmen, Friedman comments ("An Essay in *Petitio Principii*," p. 295): ". . . I do not believe any member of the Commission was deliberately seeking to promote the special interest he represented. No doubt each member would have leaned over backward to avoid such action if the conflict between special and general interest had been clear. What the warping of the recommendations by the special interest character of the Commission reflects is something very different and more subtle. First, each of us knows and is acutely aware of his own special problems; these are real and concrete; effects elsewhere are hypothetical and vague. Second, there is an enormous temptation to identify our own interest with the general interest, and the man who can avoid this temptation is rare or non-existent. As teachers, we are surely in no position to cast the first stone. How shall we interpret the readiness of so many of us to proclaim that the national interest requires higher salaries for teachers and more money for schooling whatever its source?" Pending further evidence on the first two sentences, I accept this position.

[6] A noteworthy exception is the reference (C.M.C. Report, p. 34) to the paper by J. W. Kendrick on "Concepts and Measures of Economic Growth." More typical is a standard textbook statement that monetary policy is weak as a stimulator of demand (*ibid.*, p. 53 f.), when at least one staff paper (Milton Friedman and David Meiselman, "The

mist more meaty and meaningful than the report itself, and the question arises whether the latter could substantially have been salvaged by greater attention to them. To this question, however, my summary answer must be a regretful negative. The papers are too numerous, too uneven, too long, sometimes too late, and generally too technical for the busy and part-time Commission, even when filtered through its small full-time professional economic staff.

I cannot claim to have surveyed the entire volume of unpublished staff papers, nor yet every *n*th one of them. My "methodolgy" was merely to select contributions from writers I respect or on subjects I hoped might be related to my own idiosyncratic views on monetary, fiscal, and allied policies for full employment, price stability, economic growth, and heaven on earth quite generally.

II.

Let me devote this section to what I have just called "my own idiosyncratic views on monetary, fiscal, and allied policies," both to bring these views to a wider professional audience and to indicate the biases from which the papers themselves will unavoidably be viewed and reviewed.

1. On the *fiscal policy* side, adopt the following rule for changes in the real (deflated) gross national product (GNP) as a target variable, to be implemented by changes in the basic rate of the federal personal income tax as an instrument variable,[7] and if necessary by changes in exemption levels as well, all without regard to budgetary balance but taking account of "autonomous" fiscal changes:

$$(dY/Y)_t = [(dN/N) + (d\pi/\pi)]_{t-1} \qquad (1)$$

Here Y is of course deflated GNP, N the labor force, and π an index of man-week labor productivity [8] in the private sector of the economy. This rule provides for income growth rate adjustments to changes in the growth rates of the labor force and of labor productivity. Interpreted to permit compensation in period $(t + 1)$ for the inevitable errors in applying the rule in period (t) and for underemployment in the beginning period (t_0), it amounts to a full-employment guarantee under conditions of wage flexibility. The rule also requires an adjustment period (lag) between $(t - 1)$ and (t), which should be as short as possible, so as to minimize oscillations of the hysteresis type in the income growth rate; a three-month lag is probably the practicable minimum at the present time, suggesting corrections of (dN/N) and $(d\pi/\pi)$ for seasonal variations.[9] Unlike a few extreme suggestions in the C.M.C. Report,[10] this rule involves no active attempts to raise the rate of productivity increase at the expense of current consumption.

2. On the *monetary policy* side, adopt the following rule for changes in the money supply:

$$(dM/M)_t = [(dN/N) + (d\pi/\pi) - (dV/V)]_{t-1} \qquad (2)$$

where the target variable M is the nominal money supply (including time deposits),[11] V

Relative Stability of Monetary Velocity and the Investment Multiplier in the United States, 1897–1958") says the precise opposite.

[7] Both the Administration (*Economic Report of the President*, pp. 18 ff. and 74–76) and the Commission (C.M.C. Report, pp. 129 ff., 135) favor tax rate variability, the former across the board and the latter much as suggested here. Both variability suggestions, however, are completely discretionary and involve no rule of any sort.

Indeed, one lacuna in the C.M.C. Report is its failure to face up to the issues raised by Simons in his "Rules versus Authorities" paper of 1936 (Henry C. Simons, *Economic Policy for a Free Society* [University of Chicago Press, 1948], Ch. 7). The Report's closest encounter with these issues (pp. 131–133) is relevant only to *inflexible* rules — an x per cent annual increase in instrument variable y, *ruat caelum* — rather than to the rules suggested either by Simons or the present reviewer.

[8] The suggestion to use man-week rather than man-hour productivity estimates in (1) is deliberate, although it requires revision of existing productivity series. The suggestion is intended to avoid bias in $(d\pi/\pi)$ resulting from the long-run decline in the working week, which is expected to continue.

It may be desirable at some future date to substitute over-all factor and productivity figures for the labor-force and productivity figures suggested in (1), but these over-all series are still in their infancy. (See Kendrick, "Concepts and Measures," pp. 21–23, for a defense of their use.) Labor representatives generally oppose this substitution, since it results in a considerable lowering of the rate of apparent productivity increase.

[9] As far as I am aware, official productivity series in the United States are not yet corrected for seasonal variations.

[10] *Op. cit.*, p. 31 (comment by Ruttenberg and Nathan), p. 37 (comment by Sonne).

[11] The inclusion of time deposits follows Friedman's suggestion in *A Program for Monetary Stability* (New York, Fordham University Press, 1959, referred to below as *Monetary Stability*), p. 88 f., although the Federal Reserve System does not yet publish seasonally adjusted monthly series for the money supply in this expanded definition. The

its corresponding velocity of circulation measured against the money GNP, and the other variables and lags are as outlined in the last paragraph. This rule provides monetary adjustments to changes in the growth rates of N, π, and V. The rule should be enforced primarily by purchases and sales of government securities of all terms, with operations concentrated in issues with interest-elastic demand [12] in order to minimize interest-rate changes for given monetary effects. Should open market operations prove an inadequate instrument variable, as for example after complete repayment or monetization of the federal debt, they may be supplemented by changes in primary and secondary (public security)[13] bank-reserve ratios which should be extended in any case from commercial-bank members of the Federal Reserve System to their principal competitors.[14]

These two rules assign separate and complementary roles to fiscal and monetary policy. Taken together, they provide full employment at stable price levels, in the absence of cost inflation. They minimize conflict between the partisans of fiscal and monetary policy, and likewise between partisans of income-expenditure and quantity-theory analysis. Relating the instrument to the target variables in (1) and (2) does, however, involve a modicum of short-period forecasting; even one quarter in advance, this is taboo in some circles. It is, however, high time to forget about the failures of the "new era" forecasters of the twenties and the "prosperity just around the corner" forecasters of the thirties, and concentrate on the relative success shown by the "Michigan" and "Pennsylvania" methods in the later fifties and early sixties.[15]

3. Should cost inflation in the real world be the same bogey that it is along the Midway, or should it be exorcised under our rules (1) and (2), so much the better. Under less sanguine assumptions, nobody has devised any equally simple rules to combat it. The most heroic attempt to date is, so far as I know, Lerner's.[16]

C.M.C. Report follows the conventional restricted definition excluding all time deposits (p. 46).

[12] Arthur M. Okun's "Monetary Policy, Debt Management, and Interest Rates: A Quantitative Appraisal" (in the present series of C.M.C. Research Papers) assembles the materials from which estimates of the interest-rate elasticities of long-term, intermediate-term, and short-term debt could be computed and compared, but concentrates primarily on the problem of interest-rate determination. Using r as the short-term rate and b as the long-term rate, Okun estimates $\partial r/\partial (S+I)$ as 0.022 and $\partial b/\partial L$ as 0.41 in equation systems not involving potential full employment GNP. When this variable is added, the respective coefficients become 0.022 and 0.034 respectively. (S, I, and L are the volumes of short-, intermediate-, and long-term debt outstanding.) For the complete equations, from which these coefficients have been taken, as well as others involving different monetary variables, see Okun, pp. 15–36, particularly Tables I–II (pp. 27, 34).

[13] Although there is much to be said for secondary-reserve proposals, the Commission rejects them out-of-hand on ideological grounds, Nathan and Ruttenberg dissenting (C.M.C. Report, pp. 67 ff., 101–102). As a useful concession to hard-pressed state and local authorities, their securities, as well as federal ones, should perhaps be legitimized for inclusion in secondary reserves against deposits. Another type of secondary reserve proposal involves special backing for particular types of assets, such as commercial loans, as per M. Bronfenbrenner, "A Loan Ratio for Inflation Control," *Journal of Political Economy* (Oct., 1951).

[14] The Commission (*op. cit.*, p. 70), in a surprisingly bold moment, proposes that all commercial banks be required to join the Federal Reserve System as a condition for insurance of their deposits by the Federal Deposit Insurance Corporation. I should go further, along with Ruttenberg (*ibid.*, p. 170), to require federal insurance of deposits in all savings banks and shares in all savings and loan associations — with reserve requirements for membership in the appropriate federal agencies. J. M. Henderson has proposed yet further that all such reserve ratios be uniform (in "Monetary Reserves and Credit Control," *American Economic Review*, June, 1960, pp. 362–368). Compare also Friedman's proposed compromise with the traditional Chicago "Hundred-Percent Reserve" position (in *Monetary Stability*, pp. 49 ff., 88).

[15] These methods are essentially developments of the Klein-Goldberger model of 1955 (L. R. Klein and A. S. Goldberger, *An Econometric Model of the United States, 1929–1952*, Amsterdam, North-Holland, 1955). The "Michigan" forecasts, on an annual basis, are developed by a staff headed by Daniel B. Suits and presented at annual Conferences on the Economic Outlook. The most recent one is Suits, "The Outlook for 1962 as Forecast by an Econometric Model of the U.S. Economy" (Ninth Annual Conference on the Economic Outlook, University of Michigan, Nov., 1961), pp. 59–63, which does not reproduce the statistical framework found, e.g., in his similar forecast in the Eighth Annual Conference (1960), pp. 53–60. The "Pennsylvania" forecasts have the advantage of being quarterly rather than annual, but experience with them is just beginning. See L. R. Klein's paper "A Postwar Quarterly Model: Description and Applications," presented to the National Bureau of Economic Research Conference on Research in Income and Wealth, Feb., 1962. (The Social Science Research Council is sponsoring a larger-scale cooperative venture in econometric forecasting models, in which workers in other institutions are joining with the Michigan and Pennsylvania groups.)

[16] A. P. Lerner, "Inflationary Depression and the Regulation of Administered Prices," in *The Relationship of Prices to Economic Stability and Growth* (Compendium of Papers Submitted by Panelists Appearing Before the Joint Eco-

It suffers from the ambiguity of his basic "capacity" concept, from the possibility of forcing prices to move in the opposite direction to costs however defined, and from enforcement difficulties particularly as against organized labor. My own thinking on cost inflation has become steadily more pusillanimous as hard-boiled audiences have batted down successive trial balloon "rules" one after the other. I must limit myself to four suggestions, all with discretionary elements.

a. That the antitrust laws be amended to explicitly define price increases and price maintenance in recessions as evidence of antisocial performance for purposes of antitrust suits, unless justified by the behavior of short-run variable cost.

b. That either the President or the Tariff Commission be empowered to suspend tariff or quota protection from products whose administered prices rise, without justification in costs not subject to collusive bargaining.

c. That "pitiless publicity" be given flagrant sectoral cost inflationary behavior by segments of either business, labor, or agriculture, either singly or cooperatively.

d. Finally and most drastically, that public authorities stand ready to provide and operate "yardstick" capacity with unorganized labor, a kind of "stand-by Socialism," should pressure groups insist on cost-inflationary privileges as their price for expanding capacity in line with general economic growth.

4. A comforting official line is that the unfavorable American balance-of-payments position, and its resultant periodic gold drain, will right itself as soon as we put our domestic economy in order, without deflation, unemployment, or reduced international commitments.[17] This may indeed prove true, but we should consider also such possibilities as deflation abroad, increased U.S. capital exports (to penetrate, for example, customs-union tariff walls), or increased U.S. public expenditures abroad, both military and developmental. If one or more of these changes occur on a major scale, I should suggest letting the gold flow out, reducing and eventually eliminating the required gold backing from our money supply, and preparing to embark, like Canada, on a system of flexible exchange rates.

5. It will be necessary to explain to the public the purposes and rationale of (1) to (4) above, in terms of providing stability and high employment while preventing both demand or cost inflation. This will be hard to do, because the package is not so simply "sloganized" as "guaranteed full employment," "doubling our growth rate," "stable prices," "defense of the dollar," "Free Enterprise," nor yet "national economic planning(!)" are. The explanation job should be done by someone in the upper reaches of the Treasury, the Council of Economic Advisers, the Federal Reserve Board of Governors, or elsewhere in the government, with enough prestige to speak authoritatively, enough economic competence to talk economic sense "on his feet," and enough public-relations "savvy" to be convincing to audiences suspicious of economic eggheads. This is both a large order and a necessity, in view of the probable pressure-group reaction to some of these proposals and the possible "advertiser" attempt to keep the case for (3), the group of measures against cost inflation, from reaching the public ear at all.

III.

Two of the most "fundamental" of this sample of C.M.C. papers dealt with the trade-off, or Phillips, problem. How much does price stability cost in terms of unemployment or retardation, or both, given some rate of increase in average

nomic Committee), 85th Congress, 2d Sess., Mar. 31, 1958 (usually referred to as Price Compendium), p. 267 (abbreviated quotation):

"1. Permit an administered price increase only when production and sales are at capacity.

"2. Enforce decreases in administered prices whenever production and sales are significantly below capacity . . . as long as the price more than covers current operating costs.

"3. Permit increases in administered wages in general at a rate equal to the average trend of increase in national productivity.

"4. Permit increases in administered wages greater than this wherever the labor market is tight — with, say, less than half the national average rate of unemployment.

"5. Permit only smaller increases in administered wages . . . where the labor market is slack — with, say, more than twice the national average rate of unemployment."

[17] For a current example of official optimism, see Walter W. Heller (Chairman of the Council of Economic Advisers), "Business Activity and Public Policy: What's Ahead for '62?" an address before the Economic Club of Detroit (Feb. 19, 1962, mimeographed), pp. 9–11.

productivity? Harris has put the issue succinctly in his "Incidence of Inflation" study: [18] "We would all acknowledge a 10-percent rise of output and a 1-percent inflation as splendid public policy, just as we would all denounce a policy that yields a 10-percent inflation and a 1-percent increase of output."

There are other trade-off problems between and among price stability, high employment, economic growth, and balanced international accounts, but this one is by all odds the most important. The "Phillips" problem, so-called following Phillips' extraordinarily influential 1958 paper,[19] can be stated: How much unemployment (as a percentage of the labor force) is required to keep money wages from rising more rapidly than labor productivity, and thus imparting to the economy an element of cost inflation — along with whatever income redistribution may result? [20] The standard type of study like Phillips' is a time series for some economy; some studies add additional variables, such as corporate profits and the cost of living, or recompute unemployment net of unfilled vacancies, when the latter are reported. W. G. Bowen, H. M. Levinson and Philip Ross have also made cross-section analyses, using U.S. data by industries and labor-market areas,[21] but the statistical fits have not been encouraging concerning the unemployment variable.

Relying considerably upon earlier work of his own, Klein in his "Trade-Off" paper [22] summarizes usefully a great deal of data on comparative growth rates, Phillips curves, and allied phenomena. I found useful his assembly of Phillips curves (with an additional price-level variable) for seven advanced countries other than the United States and United Kingdom,[23] his use of Goldberger's dynamization of the Klein-Goldberger model to add a new angle to the "stability-versus-growth" debate: [24] "Price increase and real output increase go hand-in-hand . . . [but] no causality is implied, for both variables are assumed to change together as a result of common cause," and his statistical evidence — not however extending to a numerical trade-off ratio or marginal rate of substitution — of a negative relationship between international balance and the over-all growth rate.[25] Insofar as full employment is associated with high consumption while rapid

[18] Seymour E. Harris, "The Incidence of Inflation: Or Who Gets Hurt?" Study Paper 7, Prepared in Connection with the Study of Employment, Growth, and Price Levels for Consideration by the Joint Economic Committee, U.S. Congress (Nov. 26, 1959), p. 3. (Papers in this series will be referred to as J.E.C. Study Papers.) It is in fact rather uncertain whether the late Henry Simons would have approved Harris' "splendid public policy" (as against an alternative, providing no change in either price levels or output), or whether the Scitovskys would "denounce" Harris' opposite extreme (as against the same alternative).

[19] A. W. Phillips, "The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861–1957," *Economica* (Nov., 1958). For a treatment of the subsequent literature through approximately the first half of 1961, see George L. Perry, "Aggregate Wage Determination and the Problem of Inflation" (unpublished doctoral dissertation, Massachusetts Institute of Technology, Aug., 1961), Chap. 1.

The theoretical background of the Phillips analysis has been set forth with particular clarity by Bent Hansen, "Full Employment and Wage Stability" (in *Theory of Wage Determination,* John D. Dunlop, Ed., London, Macmillan, 1957), pp. 66–78.

[20] The evidence on the distribution of national income in the postwar inflation does not show any large-scale shift among the major income categories. The wage and salary share gained about 4.5 percentage points between 1947 and 1956; corporate profits did not change perceptibly; the relative loss fell heavily upon unincorporated business along with interest and rent receivers. "During World War II the increase in farm proprietors' income . . . was more than three times the employees' gain. The relative decline after the war years may, therefore, reflect some catching-up on the part of employees" (Alfred H. Conrad, "The Share of Wages and Salaries in Manufacturing Incomes, 1947–56," J.E.C. Study Paper 9, p. 141). Cf. also G. L. Bach and Alfred K. Ando, "The Redistributional Effects of Inflation," *Review of Economics and Statistics,* Feb., 1957, p. 4 ff.; and R. M. H. Hashimi, *Studies in Functional Income Distribution,* Michigan State University, Bureau of Business and Economic Research, Occasional Paper 3, 1960, pp. 30–43.

[21] Bowen, *Wage Behavior in the Postwar Period. An Empirical Analysis* (Princeton University Press, 1960); Levinson, "Postwar Movement of Prices and Wages in Manufacturing Industries (J.E.C. Study Paper 21, Jan. 30, 1960, p. 21); Philip Ross, "Labor Market Behavior and the Relationship Between Unemployment and Wages" (mimeographed, pp. 6–8, scheduled for publication in a forthcoming issue of the *Industrial and Labor Relations Review*).

[22] L. R. Klein (with the collaboration of M. Abe and R. Bodkin), "Empirical Aspects of the Trade-Offs Among Three Goals: High Level Employment, Price Stability, and Economic Growth." The earlier work referred to is primarily L. R. Klein and R. J. Ball, "Some Econometrics of the Determination of Absolute Wages and Prices," *Economic Journal,* Oct., 1959.

[23] Klein, "Trade-Offs," p. 43 ff. (The seven countries are Australia, Belgium, Canada, France, Italy, Japan, and West Germany; the period covered is 1952–59.)

[24] *Ibid.*, p. 64 ff., citing Goldberger, *Impact Multipliers and Dynamic Properties of the Klein-Goldberger Model,* Amsterdam, North-Holland, 1959.

[25] Klein, "Trade-Offs," pp. 66–70.

growth requires high saving and investment, there is a trade-off here too.

Klein comments critically upon the declining American saving ratio and the rising American capital-output ratio as combining to lower the national growth rate.[26] He also derives from his Phillips-curve analysis an estimate of nearly 7 per cent of the labor force as the degree of unemployment required for price stability in America (as against perhaps 3 per cent in Britain), fears that this figure, decidedly higher than most earlier estimates, may be rising over time, and inveighs somewhat unfairly (in my opinion) against "planned unemployment" in the interests of price stability.[27] These passages aside, Klein's contribution is a statistical rather than a policy paper. The essay by Tibor and Anne Scitovsky, on the other hand, is a "public policy pamphlet" or "tract for the times," disguised under the forbidding title of welfare economics.[28] Their conclusion invokes little of the specialized apparatus of welfare economics either old or new (to which Scitovsky has made outstanding contributions), and is more inflationist than Sumner Slichter at his most heretical.[29] Going beyond the Harris judgment rule, they propose guaranteed full employment at any cost — until prices rise by from 10 to 15 per cent per year, at which point they agree that the traditional textbook preachments become relevant, mainly in the form of a flight from money.[30] Their point is based to some extent on Phillips-type analysis; price stabilization involves a great welfare loss in unnecessary unemployment and growth foregone, but inflation (below their critical level) involves relatively little welfare loss to relatively few people.[31]

Not only do the Scitovskys discount the costs of inflation, but they also ascribe to it welfare benefits of an essentially static nature, involving improved resource allocation. Given the rigidity of money prices in a downward direction, they argue, citing Schultze's theory of sectoral inflation, inflation is required to impart downward flexibility to real prices and make the market mechanism work.[32] Similarly, on the aggregative side, long-run inflation increases the effectiveness of monetary policy to check depressions with the same effectiveness as it can check booms, and lessens the danger of "pushing on a string." [33]

My principal criticism of the Scitovsky argument is aimed at its sharp distinction between plain inflation, which they support, and hyperinflation, which they oppose — and never the twain shall meet. We can all (or nearly all) [34] agree that inflation at the pace they consider need result neither in an off-setting depression like 1920–1921 nor in hyperinflation on any German, Hungarian, or Chinese model. We should however consider more carefully than they the cost involved in maintaining the distinction between the plain and hyperinflation and holding down the inflation rate to their acceptable level in practice, in an economy of organized pressure groups, once pressure-group leaders' and members' money illusions are eroded to the extent that further inflation becomes prominent in their standard expectational pattern.

Suppose, for example, that inflation at an approximate 10 per cent rate has proceeded for

[26] *Ibid.*, pp. 72 ff.

[27] *Ibid.*, pp. 38 ff., 82. The attack seems unfair since no stabilizationist proposes to "engineer" unemployment, but merely to live with it for the short run if it results from bargained wage or administered price inflation.

[28] Tibor and Anne Scitovsky, "Welfare Aspects of Economic Growth, High Level Employment, and Price Stability."

[29] Before his death in 1959, Slichter may have to some extent retreated from his characteristic inflationism of 5–7 years before. In his posthumous Tulane lectures, *Economic Growth in the United States* (Baton Rouge, Louisiana State University Press, 1961), Slichter treats inflation as "a symbol of the excessive strength of the unions of manual workers" (p. 187), a relatively cheap price of a "free" trade union movement, and a nuisance which may disappear with the rising numbers of unorganized while-collar workers relative to the organized blue-collar ones.

[30] Until the onset of hyperinflation psychology, the Scitovskys argue that "flight from money" is self-defeating because it overvalues inflation hedges like common stocks and real estate (*op. cit.*, p. 25).

[31] On the costs of inflation, the Harris study ("Incidence of Inflation," Chaps. 5–9) does not seem to have been available to the Scitovskys.

[32] Scitovskys, pp. 37 ff. The subsidiary reference is to Charles L. Schultze, "Recent Inflation in the United States," J.C.S. Study Paper 1 (Sept., 1959), pp. 1–3.

[33] Scitovskys, *ibid.*, p. 23, citing William Vickrey, "Stability Through Inflation," in *Post-Keynesian Economics*, K. K. Kurihara, Ed. (New Brunswick, Rutgers University Press, 1954), Chap. 4.

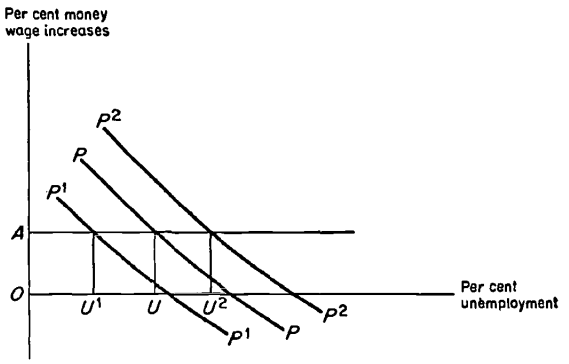
[34] Two important exceptions are the Economists' National Committee on Monetary Policy and E. C. Harwood of the American Institute for Economic Research. Compare the Institute's review of the C.M.C. Report, "'Cooked' a la Keynes," *Economic News* (September, 1961).

long enough for sellers' wage and price demands to include adjustments for inflation anticipated during the months and years until the next round of negotiations. And suppose further that the granting of these sellers' demands, and their validation by easy money, credit, and taxes, will carry us above the Scitovskys' 15 per cent inflation rate limit, even unaided by any "flight from money." Then, if I interpret them correctly, the Scitovskys would perforce accept tight money and fiscal policies, designed either to force modification of these demands or to their invalidation by underemployment and growth retardation. If this interpretation is correct, all the Scitovskys really propose is to cross that bridge when they come to it, to shift the burden of inflation control to "future generations," and gain a few years of general economic whoopee at the expense of the slowest escalating income groups in the economy. If so, they are talking less about monetary or fiscal policy in general than about a short-run policy for the United States as of 1961–62, designed less to increase the long-term employment and growth rates than to "make a record" for the next couple of elections.

Be it short or long run, the advice to make peace with inflation in the interest of fuller employment, higher growth rates, or industrial peace,[35] runs counter to Section 2 of the present paper. The Phillips curve and its unemployment intercept have become an important element in such advice.[36] Let me therefore offer a conjecture that this curve may have quite different parameters depending upon the anticipated pattern of public monetary and fiscal reactions, and through these reactions upon the strength of employer resistance to union wage demands.[37]

Specifically, the "observed" or statistically fitted Phillips curve PP (in Figure 1) with the

FIGURE 1



relatively high unemployment rate OU required to hold the money-wage increase to the average productivity-increase rate OA is, in my view, a weighted average of curves P^1P^1, with a substantially lower critical unemployment rate OU^1, and curve P^2P^2, with a substantially higher critical unemployment rate OU^2. Curve P^1P^1 prevails under gold-standard or other tight-money conditions, and curve P^2P^2 prevails when the monetary and fiscal authorities are captive parties of the pressure groups. If so, adoption of rules such as our (1) to (4) will shift PP to P^1P^1 — although the critical rate OU^1 may still be too high to satisfy the Scitovskys, the "labor minority" of the Commission, the A.F.L.-C.I.O., the Conference on Economic Progress, or the Lerner definition of high full employment.[38] By the same token, however, adoption of some rule involving mini-

[35] For a general and somewhat abstract theory of inflation as a short-run social lubricant, see M. Bronfenbrenner, "Some Neglected Aspects of Secular Inflation," in *Post-Keynesian Economics* (p. 35 f.) and "The American Distribution and Inflation Problems," *Annals of the Hitotsubashi Academy* (April, 1959), pp. 186–191. A blunter and more concrete example is given by John T. Dunlop, in "What Price Stability?" *The Reporter* (May 28, 1959): "How high a price in terms of more labor strife is the community willing to pay for price stability? If managements are to secure settlements below an average figure of four or five percent a year, there will probably be more strikes about money at contract-renewal time."

[36] The Scitovskys estimate this intercept at 5–6 per cent of unemployment, as against Klein's estimate of 7 per cent; their source is Paul A. Samuelson and Robert A. Solow, "Analytical Aspects of Anti-Inflation Policy," *American Economic Review* (May, 1960), p. 192. Like Klein, they see this figure as rising over time. (Scitovskys, pp. 1, 17, 20.)

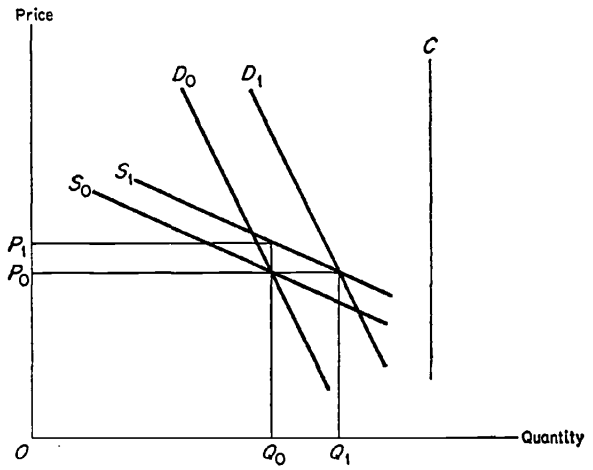
[37] I understand this modification of the Phillips analysis as a rephrasing of Morton's long-time attack on wage inflation hypothesis (which antedates the Phillips curve), and also as equivalent to the frequent suggestions that the Phillips analysis should be re-worked in real rather than money terms. Compare Walter A. Morton, "Trade Unionism, Full Employment, and Inflation" (*American Economic Review*, March, 1950); and more explicitly, "Keynesianism and Inflation" (*Journal of Political Economy*, June, 1951). For attacks on this position, see Lerner, "Inflationary Depression," p. 264, and H. S. Houthakker, "Protection Against Inflation" (J.E.C. Study Paper 8, Nov. 26, 1959), p. 125.

[38] Lerner, *Economics of Employment*, New York, McGraw-Hill, 1961, Chap. 13.

mal unemployment or a target growth rate at any cost will shift PP to P^2P^2 and raise the critical unemployment level above OU^2, quite as feared by Klein and the Scitovskys.

Frequently accompanying the re-inforcing of the Phillips-curve objections to monetary controls, particularly, but not discussed adequately by the Commission or by the research papers I sampled, is an essentially microeconomic analysis, which I have diagrammed as Figure 2 and presented to classes as the "C.I.O." or

FIGURE 2



"Madison Avenue" supply curve.[39] Here supply (curves S_0, S_1) is taken to mean average explicit or accounting cost, plus a conventional mark-up, in any of a number of industries. It is presumed to be falling until capacity output C is reached or approached. Under these circumstances:

1. Increases in wage rates and wage bills (in several industries together, of course) raise demand from D_0 to D_1, which permits the increase in cost from S_0 to S_1 to be borne without a price increase above the original level P_0 unless the industry raises its profit margin.

2. Once higher wages have raised costs from S_0 to S_1, a cutback in demand from D_1 to D_0 by monetary and fiscal policy will raise rather than lower price. Monetary policy is especially suspect, since it may add substantially to interest costs.[40] For monetary policy to be effective requires a depression sufficiently substantial and protracted to lower wage rates and profit margins.

Let us use η to represent the elasticity of demand for the representative commodity whose market is illustrated in Figure 2; η may be measured *along* either D_0 or D_1 in the neighborhood of P_0, ignoring differences between the elasticities of the two curves. Let us use E to represent the income elasticity of demand *between* D_0 and D_1, and e to represent the elasticity of supply *along* either S_0 or S_1, still in the neighborhood of P_0. What the expansionists argue, in elasticity terms, is that dQ/Q_0 in Figure 2 $\geqslant e\ dP/P_0$, where $dQ = (Q_1 - Q_0)$ and $dP = (P_1 - P_0)$.[41] The larger the income-elasticity of demand E, the greater the probability that this is true; and likewise, the larger the income-elasticity of the wage bill $(dV/Y) \div [d(NW)/(NW)]$, where N is employment and W the wage rate. The income-elasticity of the wage bill, in turn, depends on the wage-bill elasticity of the wage rate $[(N\ dW + W\ dN)/NW] \div (dW/W)$, which reduces to $\lambda + 1$, where λ is the industry's elasticity of demand for labor, a complex expression depending not only on η, the elasticity of demand for the product concerned, but also on the elasticity of substitution between labor and other inputs and on the elasticity of supply of these other inputs.[42] The economic analysis underlying

[39] The A.F.L.-C.I.O. uses this argument, or rather its verbal equivalent, to justify the position outlined in the text. Compare, e.g., the A.F.L.-C.I.O. statement to the Joint Economic Committee Hearings on *Employment, Growth, and Price Levels* (86th Congress, 1st sess., Nov. 23, 1959), pp. 3095 ff. A.D.A. and its economic affiliate, the Conference on Economic Progress, have also expressed the same view. "Madison Avenue" uses a parallel argument to prove that advertising does not increase prices. I presume that neither side would accept the validity of the argument as used by the other.

[40] This stress on interest cost is the particular contribution of Representative Wright Patman (D., Tex.). See his Supplemental Views, appended to the Report of the Joint Economic Committee on *Employment, Growth, and Price Levels* (86th Congress, 2d sess., Jan. 26, 1960), p. 63.

[41] As drawn, the diagram illustrates the equality case, where $dQ/Q_0 = e\ dP/P_0$ and price remains constant at P_0. Had D_1 been drawn further to the right, $dQ/Q_0 > e\ dP/P_0$ and increased wages would have lowered price below P_0. Had D_1 been drawn further to the left, $dQ/Q_0 < e\ dP/P_0$ and increased wages would have raised price above P_0, as in conventional orthodox analysis.

[42] J. R. Hicks, building on Marshall's *Principles of Economics*, has derived the most general formula for L in his *Theory of Wages* (London, Macmillan, 1932), Appendix iii. The formula is:

$$L = \frac{\sigma(\eta + e) + ke(\eta - \sigma)}{\eta + e - k(\eta - \sigma)}$$

Figure 2 is therefore no simple matter, even assuming "accounting cost plus conventional markup" as equivalent to supply, a heresy more popular outside than within the economists' professional ranks. My personal view is that the basic condition $dQ/Q \geqslant e\ dP/P$ represents more rationalism than realism for most imperfectly competitive industries, but there is authoritative opinion to the contrary and I may just be wrong-headed. What we have on this issue is a body of "liberal" and "laboristic" thought assuming the realism of the analysis of Figure 2, a body of conservative and orthodox thought assuming the reverse (except for the "Madison Avenue" variant) and, to my limited knowledge, no mutual confrontation.

IV.

We owe to Milton Friedman and his Chicago colleagues our most widely known contemporary proposals for fiscal and monetary reform along the lines of rules as against authorities. These proposals are also more inflexible than my own suggestions of Section II above, and place less reliance on short-term forecasting. On the fiscal side, Friedman proposes a budget slightly over-balanced at full employment.[43] This requires tax recomputations as public expenditure policies change and as the economy grows, but relies on built-in flexibility over the business cycle with no rate changes. On the monetary side, Friedman proposes a money supply, using his expanded definition including time deposits, which will grow by ⅓ of 1 per cent per month and 4 per cent per year, regardless of business conditions.[44] Friedman is more willing than most other writers, including myself, to write off cost inflation as unimportant especially under such a "religion of money."[45]

Although the C.M.C. Report takes seriously neither the Friedman proposal nor an alternative by E. S. Shaw which resembles it on the monetary side,[46] two of the most important research papers do. Friedman himself, with David Meiselman, marshals statistical evidence that the parameters of the classical quantity theory relating money to income and prices, notably the velocity of circulation, are more stable than the parameters of the Keynesian theory relating autonomous expenditures to income, notably the multiplier.[47] A combined M.I.T.-Minnesota task force criticizes, again primarily statistically, Friedman's contention that monetary policy acts on the economy with a lag which is at once both too long and too variable to permit reliance upon discretionary action by the monetary authorities.[48] (If Friedman is correct here, this also militates against the usability of short-term forecasting in con-

where σ is the elasticity of substitution, e the elasticity of supply of substitute inputs (not of the product), η the elasticity of demand for the product (as in the text), and k the proportion of the payroll to total cost. For further discussion of this formula, comparison with certain simplifications and development of implications, see M. Bronfenbrenner, "Notes on the Elasticity of Derived Demand," *Oxford Economic Papers* (Oct., 1961).

[43] Friedman, "A Monetary and Fiscal Framework for Economic Stability," *American Economic Review* (June, 1948), reprinted in *Readings in Monetary Policy*, F. A. Lutz and L. W. Mints, Eds. (Philadelphia, Blakiston, 1951), selection 17; and *idem*, *Essays in Positive Economics* (Chicago, University of Chicago Press, 1953), pp. 133–156.

[44] Friedman, "The Supply of Money and Changes in Prices and Output," in Price Compendium, pp. 241–256; *idem*, *Monetary Stability*, Chap. 4.

[45] As a sample of the evidence on which Friedman relies for this position, see Martin J. Bailey, "Administered Prices in the American Economy," Price Compendium, pp. 89–106; Richard T. Selden, "Cost-Push versus Demand-Pull Inflation, 1955–57," *Journal of Political Economy* (Feb., 1959), and George J. Stigler, "Administered Prices and Oligopolistic Inflation," *Journal of Business* (Jan., 1962). In the present series of C.M.C. Research Papers, Jesse W. Markham's "Administered Prices and the Recent Inflation" (p. 34) leads to a similar result with the important exceptions of the automobile and steel industries. Among the J.E.C. Study Papers, compare Otto Eckstein and Gary Fromm, "Steel and the Postwar Inflation" (Study Paper 2, Nov. 6, 1959) with Thomas A. Wilson, "Analysis of the Inflation in Machinery Prices" (Study Paper 3, Nov. 6, 1959). (The Eckstein-Fromm paper has invoked substantial criticism from labor circles in particular.)

[46] E. S. Shaw, "Money Supply and Stable Economic Growth," in *United States Monetary Policy*, Neal H. Jacoby, Ed. (New York, American Assembly, Columbia University, 1958), Chap. 2; also Shaw, "Monetary Policy in a Growing Economy," in Moses Abramovitz *et al.*, *The Allocation of Economic Resources* (Stanford University Press, 1959), pp. 218–235.

[47] Friedman and Meiselman, "The Relative Stability of Monetary Velocity and the Investment Multiplier in the United States, 1897–1958." The argument of this paper is to some extent foresbadowed in Friedman and Gary S. Becker, "A Statistical Illusion in Judging Keynesian Models," *Journal of Political Economy* (Feb., 1957).

[48] E. Cary Brown, Robert M. Solow, Albert Ando, and John Kareken, "Lags in Fiscal and Monetary Policy," a paper prepared for the CMC. Friedman has replied to this criticism along with others in "The Lag in Effect of Monetary Policy," *Journal of Political Economy* (Oct., 1961).

nection with my "lag" rules in Section II, above.)

Let us consider first the Friedman-Meiselman paper. Their test is the prediction of conventional consumer expenditures, *not* the more controversial "consumption" of the Friedman "permanent income hypothesis." [49] They conclude that: [50] ". . . for the 62 years as a whole, for all but one of the 12 overlapping periods we have distinguished, and for both annual and quarterly data after 1946, the stock of money is more highly correlated with consumption than is the level of autonomous expenditures." (Autonomous expenditures are defined as net private domestic investment *plus* the government deficit on income and product account *plus* the net foreign balance, while the money stock again includes time deposits in commercial banks.) [51]

Having supervised some much cruder work along similar lines — inspired by discussion with Friedman in 1958, but conducted independently — I can state quite unequivocally that Friedman and Meiselman are right, in the sense that their results do not depend on peculiar statistical "gimmicks" in their models. In my own variant, selected graduate students fitted by ordinary least squares the following elementary models, using American annual data in real terms over the period 1946–60: [52]

Keynesian Model:

$Y = C + I + G + X$ (X = Net exports of goods and services)

$C = C_0 + c(Y - T)$ (T = Taxes net of transfer payments, interest, and subsidies)

$T = T_0 + t\,Y$

$I, G, X = I_0, G_0, X_0$ (Autonomous)

whence:

$$Y_1 = \frac{C_0 + I_0 + G_0 + X_0 - c\ T_0}{1 - c\ (1 - t)}$$

(Y_1 = "Keynesian" estimate of Y)

Classical Model (Quantity Theory):

$V = Y/M$ (M = Currency plus demand deposits)

$V' = V_0 + v\ n$ (n = Time in years)

$Y_2 = MV'$ (Y_2 = "Classical" estimate of Y)

whence

$Y_2 = M(V_0 + v\,n)$

Y_2 gave a better approximation to Y (actual GNP) than did Y_1, as measured either by a smaller variance $\Sigma(Y_i - Y)^2/n$ or by a larger correlation coefficient r_{YY_i}, quite along the lines of the Friedman-Meiselman study. This result surprised my students, who came imbued with Keynesian viewpoints and suspected tautologies lurking somewhere along the line. It also surprised me and still surprises me, in view of the success of Keynesian models in short-term forecasting.[53] It is noteworthy that these models of mine and likewise those of Friedman and Meiselman involve observations at given points of time; they are *static* or *consistency* models. The Klein-Goldberger model and its descendants, on the other hand, include equations relating observations at different time periods; they are *forecasting* models in the true sense. Can it be that, while classical quantity theory models show superior consistency, Keynesian ones show superior forecasting power? If this is so, what does it mean? I merely pose this quesetion; I cannot answer it.

Turning to the task force report on lags in monetary and fiscal policy, we find the longest, most ambitious, least conclusive, and least effectively organized papers of our sample. I have not been able to master it in detail, and it would require this entire paper to review it point by point. I shall therefore confine myself to its discussion of the "outside" lags between monetary or fiscal actions and their effects on the economy. About these outside lags more can perhaps be said professionally by economists than about the "inside" lags between changes in the economic climate and shifts in policy; also, in an economy of rules rather than authorities, only the outside lags are important.

The task force estimates the outside lag in

[49] Friedman, *A Theory of the Consumption Function* (Princeton for NBER, 1957), p. 11.

[50] Friedman and Meiselman, "Monetary Velocity," p. 31.

[51] *Ibid.*, p. 26.

[52] One group of five graduate students from overseas carried out these tests at the Economic Institute, University of Colorado (summer, 1961), under the direction of Professor Irving Morrissett. Thomas Supel carried out the same tests at the University of Minnesota (autumn, 1961).

[53] See Section 2, footnote 15.

monetary policy at no more than three months between changes in the money supply (ΔM) and changes in the F.R.B. index of industrial production (ΔQ), whether the lag be estimated between turning points only or for entire statistical series.[54] Between the entire series, over a forty-year period and using Friedman's expanded definition of the money supply, the correlation coefficient between (ΔM) and (ΔQ) is .31 when the series are taken consecutively, .25 when (ΔM) leads by one quarter, and .27 when (ΔQ) leads by one quarter. The average lag in fiscal policy is somewhat longer, with approximately half the total effect on demand obtainable within 6 months of the initial request for tax legislation and no equally satisfactory conclusions on the expenditure side.[55] More precisely, "if taxes are reduced or increased in a particular quarter and held at this new level thereafter, consumer expenditures will respond by 60 per cent of the change in the same quarter, by 76 per cent in the second quarter, and by 86 per cent in the third quarter," with an element of further variability introduced depending on the quarter in which the tax change takes place. In general, insufficient work has been done on the variability of all of these lags; the report admits as much, and stresses throughout the tentative nature of most of its conclusions.

On the monetary side, this is in deliberate contradiction to Friedman's estimate of a long and variable lag (16–22 months) between peaks and troughs in (ΔM) and Q. The length and variability of this lag are fundamental to Friedman's distrust of discretionary monetary policy, and possibly likewise to such flexible rules admitting compromise as we suggested in Section 2. The task force, while understressing Friedman's argument from variability, attacks his lag estimate as "a statistical artifact," [56] primarily because the Q series includes effects of (ΔM), which presumably delay its peaks and troughs. The critics use a *reductio ad absurdum* to put their complex methodological issue unusually clearly: [57]

> Imagine an economy buffeted by all kinds of cyclical forces, endogenous and exogenous. Suppose that by heroic (and perhaps even cyclical) variation in the money supply and its rate of change, the Federal Reserve manages deftly to counter all disturbing impulses and to stabilize the level of economic activity absolutely. Then an observer following the Friedman method would see peaks and troughs in monetary change accompanied by a steady level of aggregate activity. He would presumably conclude that monetary policy has no effects at all, which would be precisely the opposite of the truth.
>
> This hypothetical example illustrates by an extreme case an important truth. One cannot deduce conclusions about the effects of monetary policy or about their timing without making some hypothesis, explicit or implicit, about what the course of events would have been had the monetary authorities acted differently.

To summarize in some haste: The task force's case against Friedman's long lags seems more convincing than its case for its own short ones (with which case, as distinguished from the task force's confidence in discretion, I instinctively agree). The task force's case against Friedman's variable lags, which are almost equally important to his argument, is likewise unconvincing. Much more work needs to be done along this line on both the monetary and the fiscal sides. On the monetary side, two forthcoming National Bureau monographs by Friedman and Anna J. Schwartz promise to present much of the necessary basic data on the American money supply over a period extending for nearly a century from the end of the Civil War.[58]

V.

The Commission assigned a number of specialized quantitative and statistical subjects for papers, elucidating special aspects of monetary economics, fiscal economics, and economic growth. The present sample includes several of these. Some, such as the papers by Kendrick, Klein, and Okun, have already been considered.

I have been unable to obtain one study (by Eisner and Strotz, on investment functions) in time for inclusion here. This section is therefore limited to consideration of two papers, O. H. Brownlee and Alfred Conrad, "Effects

[54] Brown, *et al.*, pp. 33–38. (The correlations are taken from pp. 36 ff.)

[55] *Ibid.*, p. 3. (The quotation is from pp. 16 ff.)

[56] *Ibid.*, p. 4.

[57] *Ibid.*, p. 27 f.

[58] For details, see Friedman, "The Lag in Effect of Monetary Policy," p. 447, footnote 2.

Upon the Distribution of Income of a Tight Money Policy"; [59] and G. L. Bach and C. J. Huizenga, "The Differential Effects of Tight Money".[60]

The charge of inequitable (meaning disequalizing) income effects is often made against tight money because of its effect on interest rates. (It is also made against inflation as well.) The Brownlee-Conrad paper subjects this charge to detailed statistical scrutiny under conditions as of the United States in 1957. Brownlee and Conrad first estimate the size of the interest-rate increase which would under those conditions have been required to reduce the money supply sufficiently to prevent a 3 per cent price increase. (This turns out to be 1.7 per cent.) They then estimate the size of the federal tax increase which, under the same conditions, would have been required to reduce money GNP sufficiently to prevent the same price increase. (This turns out to be $13 billion.) Then the effects of the price increase, the interest-rate increase, and the tax increase were compared, by income classes, with results which I have summarized in Table 1.[61] From the viewpoint of equality in the personal income distribution, these results are clearly favorable to tight money and unfavorable to inflation, to an extent greater than is likely to be offset by any later estimates based on reasonable alternative assumptions. Being based on totals and averages, however, such results are to some extent irrelevant, insofar as the incidence of tight money may depend primarily on debtor-creditor status and only secondarily on personal income, or the incidence of inflation may depend primarily on the income distribution by ages rather than by income brackets.

Another charge against restrictive monetary policy involves unfairness as between large and small business. The Board of Governors surveyed business loans on a sample basis in 1958, with results summarized by that inveterate foe of tight money, Congressman Patman: [62]

TABLE 1. — PER CAPITA GAINS AND LOSSES, BY INCOME CLASSES, FROM ALTERNATIVE MONETARY-FISCAL POLICIES, 1957 BASE
(dollars)

Income Class	3 Per Cent Price Increase		1.7 Per Cent Interest Rate Increase		$13 Billion Federal Tax Increase	
	Assumption I[a] (net worth, 1957 price)	Assumption II[b] (net worth, 1957 price)	Assumption I[a] (net interest receipts)	Assumption II[b] (net interest receipts)	Proportional Increase and Taxes[a] (disposable income)	Personal Income Tax Increase (disposable income)
$1999 or under	−96	−86	70	61	−29	−10
2000 − 2999	−77	−66	52	41	−60	−46
3000 − 3999	−61	−43	35	18	−90	−74
4000 − 4999	−64	−41	37	15	−116	−106
5000 − 5999	−53	−24	25	−3	−151	−153
6000 − 7499	−9	23	−14	−45	−199	−211
7500 − 9999	19	58	−45	−82	−265	−286
10,000 − 14,999	74	98	−108	−131	−409	−449
15,000 − 19,999	98	66	−150	−119	−730	−821
20,000 and over	667	540	−795	−701	−3487	−3367

[a] Two-thirds of federal corporate income tax allocated proportionately to dividend receipts, one-third proportionately to consumer expenditures.
[b] Two-thirds of federal corporate income tax allocated proportionately to consumer expenditures, one-third proportionately to dividend receipts.
SOURCE: Brownlee and Conrad, Tables 2, 3, 4, pp. 79, 81, 83.

The Federal Reserve was finally prevailed upon to make a survey to see what happened to bank loans to business firms as between October 1955 (an easy credit period) and October 1957 (a very tight credit

[59] Page references will be made to a preliminary version, *American Economic Review* (May, 1960), which however omits much of the detail of statistical derivation.

[60] Published in *American Economic Review* (Mar., 1961). See also Duane Carson, "The Differential Effects of Tight Money: Comment," and Bach and Huizenga's "Reply," *ibid.* (Dec., 1961).

[61] In preparing this table, I have adjusted the Brownlee-Conrad "interest rate" figures to refer to the comparable 1.7 per cent rate increase rather than the standard 1.0 per cent figure which they present.

[62] Report of Joint Economic Committee, *Employment, Growth, and Price Levels* (Jan. 26, 1960), p. 64, footnote 86-a.

period). Small firms with less than $50,000 of assets had 3 percent less bank credit in the latter period, and the corporate giants with more than $100 million of assets, had 66 per cent more bank credit. And in between these extremes, the various sizes of firms fared disproportionately according to their size.

This indictment implies that the difference is explained entirely from the supply side, by discriminatory shifts in commercial bank supply of credit as between large and small firms. Bach and Huizenga, however, use the same data to develop the opposite case. They believe the difference is explained primarily from the demand side, by differential shifts in the demand for bank credit by large and small firms. Their method involves a division of the universe of reporting banks into three classes of tightness or looseness (in 1957), and a demonstration that the loose banks behaved much like the tighter ones during the two-year period under study. While the data are not completely unequivocal and formal tests of significance are not employed, Bach and Huizenga conclude that: [63] "although tight money in 1955–57 may have led to little 'unfair' discrimination against particular borrower groups, it did permit funds to go extensively to the same borrowers who would have obtained them in the absence of tight money. Whether the marginal borrowers shut out by tight money would have contributed significantly to either undesirable investment or inflation cannot be told from these data. Probably at least as much (more, on the objective evidence) of the marginal credit shut off was to large as to small firms."

It is conceivable, although I suspect unlikely, that the Bach-Huizenga results might have been different from some reasonable alternative definitions of "business loans" or classifications of individual banks as "tight" or "loose." Somewhat more important, to my way of thinking, is the difficulty of distinguishing between those small firms that are truly independent and those that are only captive suppliers or sales outlets for larger ones.[64] It is possible that tight money may lead to credit discrimination against the former class, without the discrimination being reflected in the Bach-Huizenga statistics. In the same way, as Bach and Huizenga themselves point out,[65] "it was impossible to test the hypothesis that tight money leads banks to discriminate against new business."

[63] Bach and Huizenga, "Reply," p. 79.

[64] I have made this point earlier in a Japanese setting, where it is probably more important than in America. M. Bronfenbrenner, "Monopoly and Inflation in Contemporary Japan," *Osaka Economic Papers* (Mar., 1955), pp. 41 ff.

VI.

A final class of C.M.C. reports is the textbook chapters, which one might expect to be adapted better to the needs of the Commission members themselves than to those of their permanent staff or to the tastes of carping professional critics. The present sample contains three textbook chapters, James Tobin's "An Essay on the Principles of Debt Management," [66] Lester V. Chandler's "Potentialities and Limitations of Monetary Policy," and Charles P. Kindleberger's "Flexible Exchange Rates."

Of the three chapters, Tobin on debt management is at once the most advanced, the most original, and the most paradoxical.[67] (These very qualities may have detracted from the usefulness of the paper to the Commission.) Three main features of the 120-page contribution stand out in this reader's mind: (1) the treatment of the public debt's effect on private investment in equities; (2) the presentation of the case for interest rate minimization; [68] and (3) the argument in favor of price index or purchasing-power securities as one means of lowering interest charges. Tobin does not consider (4) the Simons case for a sharp division of the debt into money (at one extreme of liquidity) and consols (at the other).[69] I propose to comment here on points (1), (3), and (4).

[65] "Reply," p. 79, footnote 28.

[66] An unfortunate duplication is Thomas Mayer's "Interest Minimization as a Criterion of Federal Debt Management Policy," which, although not a textbook chapter, loses much of its impact by overlapping with section 3 of the Tobin paper.

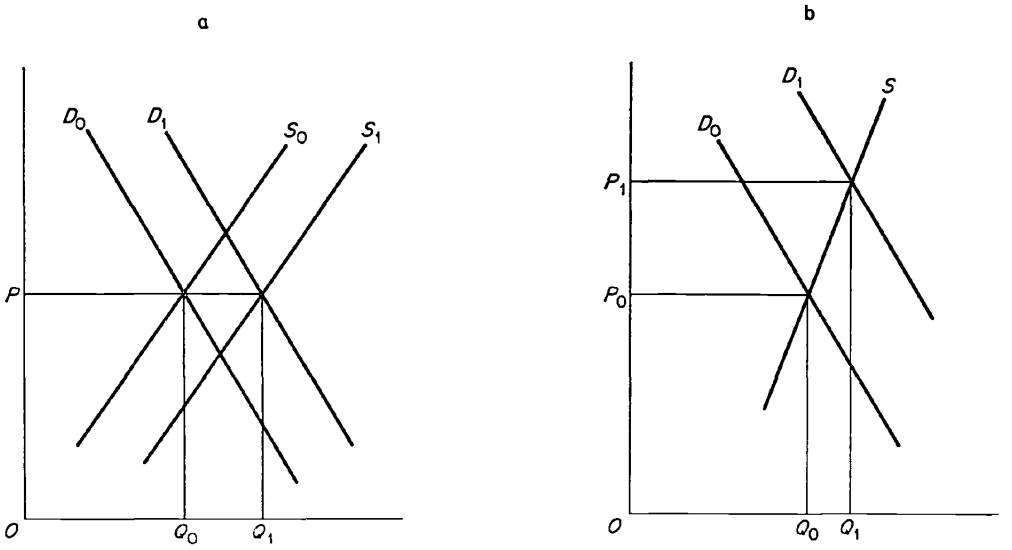
[67] "Federal debt instruments serve so many purposes in the contemporary monetary and financial system that observers sometimes wonder what the system would do if the debt were eliminated by a miraculous series of budget surpluses. What would we do for a currency supply, for bank reserves, for the money market, for secondary reserves of all kinds?" Tobin, p. 45.

[68] Tobin, "Principles of Debt Management," section 3; with this section compare Mayer, Chaps. 1, 6.

[69] Mayer, however, considers the Simons proposal (pp. 6 ff.); the C.M.C. Report does not. For the proposal itself, see Simons, *Economic Policy*, Chaps. 9 ff.

1. If an increase in real public expenditures, leading to an increase in the real national income, is financed by an increase in the public debt, Tobin's analysis (section 2.1–5) of the effects of these transactions on the markets for public debt securities (repayable in money) and private equity securities (representing real capital) can be presented diagrammatically in oversimplified form in Figure 3. The volume

FIGURE 3



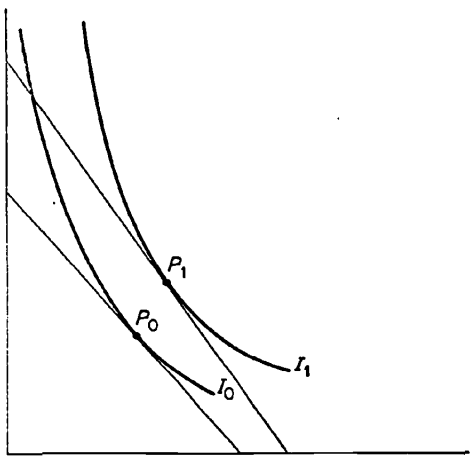
of securities demanded and supplied is plotted in each case along the horizontal axis, and the security price along the vertical one. There is in each case an increase in demand from D_0 to D_1, because of the increase in the national income. In Figure 3-a (public debt securities), there is likewise an increase in supply from S_0 to S_1. The effect on price is indeterminate, and in the diagram we have held the price constant at OP, while the volume of sales rises from OQ_0 to OQ_1. In Figure 3-b (private equity securities), the supply function is unchanged at S, and the price rises from OP_0 to OP_1. This rise in price involves a fall in the private interest rate on real capital relative to the public interest rate on money capital, and thus encourages private real investment. This encouragement is reinforced because public and private securities are substitutes on the demand side. The interest-rate differential will lead to further shifts of the demand curves D_1 in Figure 3, to the left in Figure 3-a and to the right in Figure 3-b. These shifts will reduce the size of the rate and price differentials, while increasing private investment still further. The encouragement of private investment by increased public debt will be weaker for long-term debt than for short-term debt, and strongest of all for what Tobin calls "demand debt" or monetized debt, but Tobin is quite certain that his paradox will hold even for completely long-term debt in monetary form. It may not hold, however, when the debt is in "real", or purchasing-power, form. This is one reason for Tobin's advocacy of purchasing-power or index bonds, to permit of debt expansion in an inflationary situation while minimizing the shift to private investment.

There has arisen concern recently, following publication of James M. Buchanan's *Public Principles of the Public Debt*,[70] about an offset which may more than overbalance Tobin's encouraging paradox as to the effect of public debt on private investment. Oversimplifying drastically once more, the argument is that a rising public debt increases the proportion of "assets" (securities of all kinds, both money and "real") to consumption goods. The result will be an all-round fall in the price of assets

[70] Homewood, Ill., Irwin, 1958. For subsequent bibliography, and also restatement and extension, see Franco Modigliani, "Long-Run Implications of Alternative Fiscal Policies and the Burden of the National Debt," *Economic Journal* (Dec., 1961).

(rise in interest rates). This is illustrated diagrammatically by Figure 4, which represents a community indifference map involving present consumption goods (horizontal axis) and the future income from securities (vertical axis). The slope of a price line in the diagram $= (1 + r)$, where r is the interest rate. A steeper slope implies a higher rate of interest, and a lower price for a dollar of future income.

FIGURE 4



Suppose a simultaneous rise in income and the public debt, moving the optimum point on Figure 4 from P_0 (on indifference curve I_0) to P_1 (on indifference curve I_1). In order that P_1 be an equilibrium point consistent with the community's preferences between present and future (as indicated by the indifference map), the price line through P_1 must be steeper than that through P_0. This implies a higher interest-rate level all round, and therefore some discouragement of private investment. While Tobin does not seem to have taken this possibility into account, we do not yet know its quantitative significance.

3. Tobin's advocacy of purchasing-power, index, or escalating public securities is not claimed to be original with him.[71] He gives it more serious consideration, however, than do most other writers, devoting to it the entire fourth section of his paper. The proposal is too radical for more than an off-hand rejection in the C.M.C. Report,[72] but it is taken seriously before rejection in the Report's British contemporary: [73]

> Once it was put into practice, however, it seems certain that the plan would spread to other interest payments, and it would not be easy to restrain extension to a wide range of other payments hitherto fixed in money. Such an extension would very soon constitute a major alteration in the working of our economic system, and inevitably tend to accelerate inflation. A Treasury driven into a tight corner in its debt management might do worse, but we hope that the Government of the United Kingdom will not be driven to resort to an expedient which would too plainly be a confession of failure to maintain a reasonable degree of stability in the value of money and might easily have disruptive consequences for our economic system.

Tobin's reply in section 4.3 is effective against the "confession of failure" argument, but relapses into wishful thinking as against the "acceleration of inflation" argument: [74]

> No government, whatever may be its intentions and financial scruples, is able to guarantee the constancy of the price level even for its own tenure of office, much less for all time. No government has ever been able to do so, and none ever will be. It is just beyond the power of government in a free and decentralized economy with a democratic political order. It is sufficient to recall that war and its aftermath are the main generators of changes in the price level. No one, alas, can guarantee perpetual peace . . . Evidently for many people the clinching argument against purchasing power bonds would be a signal that the government had given up its battle to control the price level. Similarly unemployment insurance might be interpreted as a signal that the government had given up the battle to prevent unemployment. Civil defense might be regarded as an indication that the government no longer believed it possible to keep the peace or to defend the country from hydrogen bombing. To take precautions to

[71] Franklyn D. Holzman, "Escalation and Its Use to Mitigate the Inequities of Inflation," a paper in the present series which reached me too late to receive the attention it deserves, collects (pp. 16, 18) a number of examples of and proposals for index bonds. The oldest ones, incidentally, date from Colonial America and implicate the Founding Fathers of the 18th century.

[72] *Op. cit.*, p. 107.

[73] Radcliffe Report, para. 573, p. 212.

[74] Tobin, "Principles of Debt Management," pp. 99, 108, 105–107. Compare also Holzman, "Escalation," pp. 41 ff., 56–58. Holzman also proposes extending the escalation principle to savings deposits, public salaries, insurance policies, pensions, and other types of "fixed" assets and incomes. His treatment of the "acceleration of inflation" argument is concentrated in the pages dealing with wage escalation (pp. 33–41). On the theoretical side, Holzman's treatment is no more conclusive than Tobin's, but he marshals a certain amount of inductive evidence which suggests that such acceleration has been negligible in recent American experience (pp. 38 ff.).

protect people from unfortunate events does not mean that the government regards the events as inevitable, or even that the government intends to slacken its own efforts to prevent them. The public can understand that.

The purpose of purchasing power bonds . . . is precisely to avoid the redistributions of wealth and income that are the principal objections to inflation. If this purpose is attained, inflation is no longer such a danger. It is circular, therefore, to object to purchasing power bonds on the grounds that they are inflationary.

Nevertheless, it is far from clear that a regime with purchasing power bonds would actually be more susceptible to inflation than the present financial regime. In the first place, purchasing power bonds would strengthen the controls over the economy possessed by the monetary and debt management authorities. In the second place, the availability of a more satisfactory menu of assets might well increase non-inflationary saving, encouraging the saving appetites of individuals and households of modest incomes . . . The political argument is more difficult to assess. The allegation is that escalation will vitiate the strength of political forces opposed to inflation. Presumably these now consist of people who stand to lose from inflation . . . The advent of purchasing power bonds will not mean that no one stands to lose from inflation. As at present, it will still be possible to bet that the accumulation of interest on fixed-money-value assets will outrun the price level. Those who take that side of the bet will favor anti-inflationary governmental policies. But in any case economists are probably inclined to exaggerate the degree to which positions on government economic policy reflect calculated self-interest with respect to inflation or deflation. To a large degree they seem to reflect ideological or moral attitudes, primitive economic reasoning, and entrenched political positions.

These and other arguments of Tobin's would I think be more convincing if the introduction of index bonds were coupled with some sort of major monetary and fiscal reform to reduce the economy's susceptibility to inflationary pressure. Substitution of rules for discretionary authorities, as by either the Friedman and Shaw proposals or the suggestions in Section II above, would help in this connection.

4. We may vouchsafe the hypothesis that the Simons debt-policy proposals have been largely forgotten and laid aside because their emphasis on consols maximizes interest rates rather than minimizing them,[75] especially in a period of inflation. The appeal of the proposal comes from its elimination of any danger of debt monetization as a counter pressure to discretionary action by monetary authorities with weak powers and limited mandates for action. With the authorities given both greater power (as, for example, over the reserve ratios of both commercial banks and financial intermediaries) and a clear mandate to regulate the growth rate of the money supply, the Simons proposals lose their point.

The Chandler chapter is a thoroughly competent, reasonably complete, but generally unexciting presentation of a position which comes as close as any other to being current American monetary orthodoxy. Less venturesome than some of the Chandler proposals of the later 1940's, his paper ends up fairly close to the relevant portions of the C.M.C. Report itself. I was struck, for example, by the bland assurance that, during an inflationary boom, "there is a broad middle ground between a monetary policy so weakly restrictive as to be ineffective and one so excessively restrictive as to precipitate panic and depression"; [76] considering the number who disagree, a certain amount of evidence would have been desirable. In bringing about an upturn from a recession, however, Chandler would have monetary policy play second fiddle to fiscal policy, despite his belief that its lags are shorter.[77] He favors monetary discretion as against monetary rules,[78] accepts the notion of a velocity ceiling (except in hyperinflation),[79] and gives mild approval to proposals for greater authority by the Federal Reserve System over financial intermediaries.[80] The argument is almost entirely nonquantitative, even when considerable quantitative material is available regarding the functions and effects with which Chandler is dealing.

Kindleberger's treatment of exchange rate flexibility likewise falls short of "vintage Kindleberger," although it includes an excellent review of the literature and furnishes the first draft for a future contribution. Kindleberger makes much of the fact that flexible rates vary more than fixed ones, which should occasion

[75] "Subject to . . . obvious reservations, the Treasury should seek always to pay as much interest as possible." Simons, *Economic Policy*, p. 225.

[76] Lester V. Chandler, "Potentialities and Limitations of Monetary Policy," p. 10 f.

[77] *Ibid.*, pp. 32–34, 37.

[78] *Ibid.*, pp. 38–40.

[79] *Ibid.*, p. 19.

[80] *Ibid.*, pp. 19–21.

little surprise. He goes on to worry about the possible instability of foreign exchange markets, without explaining why such instability is more likely there than in other free commodity and security markets. Actually, some short-run instability is not fantastically uncommon in other markets, which have developed a variety of institutional arrangements for mitigating it — temporary shutdowns, "specialists" who "make markets," limitations on daily price movements, and so on. Why, one wonders, are similar arrangements impossible on foreign exchanges with flexible rates? Furthermore, abandonment of fixed rates need not imply complete absence of government and central bank transactions, any more than abandonment of "pegging" government securities required the Federal Reserve System to abandon open-market operations. Once again, is there no intermediate zone between pegged rates and "disorderly markets?" [81]

In fact, we have had for a number of years international exchanges with flexible rates (including flexible gold prices) in such places as Tangier and Hong Kong, with specialized problems of cross rates, multiple currencies, arbitrages, forward exchanges (?), and what not. It might prove useful for enthusiasts on both sides of the flexible exchange question to observe these markets, and the peculiar institutions developing in them. They could see for themselves which are the real difficulties and which the bogeys, in addition to theorizing *in vacuo* as Kindleberger does (atypically for him) in the greater part of this essay.

VII.

The predominant intellectual atmosphere of our monetary and fiscal institutions is an uneasy reconciliation with the *status quo*. This is slightly better than "quiet desperation," but only slightly. Everyone agrees, as an academic matter, that our performance could be improved regarding employment, price stability, and growth — all three. But at least the present is preferable to the recent past. On occasion, the egghead, crackpot, or ineffectual will risk rocking the boat with major changes, which might return us to the thirties or the wartime *économie dirigée*, accelerate the pace of inflation, or disturb the tenuous stability of equilibrium between agricultural, business, and labor pressure groups. This atmosphere of reluctant reconciliation and foot-dragging conformity dominates the C.M.C. Report, and likewise a minority of the C.M.C. research papers sampled here. If it does not dominate the majority of the papers or their present reviewer, so much the worse for the papers and the reviewer.

What sort of circumstances, if any, are likely to disturb the apologetic smugness of practical men regarding our monetary and fiscal arrangements, and permit reform proposals to be considered with biases in their favor rather than the reverse? I can envisage three such circumstances, and shall close their over-long sample study by considering them separately, although they may of course befall us in combination.

1. Our periodic recessions and abortive recoveries may produce something like "creeping stagnation," [82] or we may undergo one or more serious depressions. This sort of development seems most likely in the event of any sharp reduction in defense expenditures, such as might result from a disarmament agreement or the outbreak of a genuine peace. I do not wish to be interpreted as implying that disarmament must inevitably mean depression under capitalism; even the Party Line seems to be wavering on that point, in the Soviet Union if not in this country. I mean only that peace and disarmament, if they come, may conceivably mean blundering into stagnation or depression while we argue in semiparalyzed fashion, *what* taxes (if any) we should cut, *what* welfare expenditures (if any) we should increase, and *how fast* (if at all) we should reduce the national debt.

2. The pace of inflation may accelerate beyond the 10–15 per cent annual rate that the Scitovskys suggest as the upper limit of tolerance, not to mention the lower estimates of

[81] Kindleberger ("Flexible Exchange Rates") is aware of the possibilities of these intermediate-zone operations but concerned with possible chaos should governments bid against each other. "If any but an occasional intervention occurred, it would be necessary to evolve an international management of exchange rates" (p. 23), particularly if *no* rate were tied to an international standard such as gold.

[82] I believe this phrase was first used, either prophetically or prematurely, as the case may be, in *Monthly Review* (June, 1958) as the title of a leading editorial.

other writers.[83] This is most likely to occur under conditions of increased military activity at a sustained level, even considerably short of all-out war. As this is written (March, 1962), Indo-China and Latin America seem to be the principal danger spots in this connection, but tomorrow's headlines from Germany, the Middle East, Korea, or any of a number of African areas can change or add to these. Even without a military pretext, however, inflation can be accelerated by greater monetary and fiscal ease in the quest for fuller employment and-or faster growth, or as the price for industrial peace at collective-bargaining time.

3. Price stability, actual and not "reasonable," may enter the cold war and competitive coexistence, much as full employment entered in the forties and growth rates entered in the fifties. Thanks at least partially to direct controls, several of the Iron Curtain countries, including the Soviet Union, have combined full employment and rapid growth rates of national income (if not of consumption) with price stability or even price decline.[84] If this development spreads, if its accompanying controls become less stringent, and if it is reflected in undercutting of "capitalist" prices in neutral countries, it may also be necessary to rethink our present monetary and fiscal arrangements. I refer particularly to those arrangements which, in the interests of employment, growth, and peace between pressure groups, result in definition of "reasonable price stability" to mean a doubling of the price level approximately every generation.

Entry of the price level into competitive coexistence seemed to be already at hand in the latter half of 1958 and the beginning of 1959, with Soviet and Chinese trade expansion campaigns. It has been postponed subsequently, primarily (it would appear) by Soviet and Chinese agricultural difficulties. I should like to claim that we have used the resulting breathing spell intelligently for purposes of monetary and fiscal reform and reconstruction, but that does not yet seem to be the case. Rather, reform and reconstruction must await a crisis situation at whatever time the price level enters competitive coexistence more firmly and decisively — assuming neither serious depression nor galloping inflation occurs first.

[83] For example, Chandler ("Potentialities and Limitations," p. 4) suggests an upper limit of only 5 per cent.

[84] See Thomas Wilson, *Inflation*, Harvard University Press, 1961, Chap. 8.