PROCEDURES FOR DETERMINING FEDERAL SPENDING PROGRAMS

THE HIDDEN EFFECTS OF FEDERAL CREDIT PROGRAMS

George F. Break, associate professor of economics, University of California, Berkeley [1]

In any appraisal of the impact of the Federal Government on private economic activity, on economic growth, and on price levels, a convenient and useful starting point has been, since its introduction in the budget for fiscal 1944, the consolidated cash budget. That it is no more than a starting point, however, is well illustrated by the Federal credit programs. The majority of these appear only on the payments side of the cash budget on a net basis—i. e., receipts are treated as negative expenditures and are subtracted from gross cash payments—even though, as we shall see later, there are good reasons for supposing that in some cases gross loans made are a better measure of economic impact than is the net change in credit outstanding.[2] In addition, a number of highly important credit programs are omitted almost completely. These are the ones that involve governmental insurance or guaranty of private loans, activities which result in only very small cash payments to the public although their impact on the private sector of the economy may be anything but small. It is the purpose of this paper to explore the problems involved in deriving a quantitative measure of the economic importance of these programs. Were such a figure, or perhaps a range of figures, available, its inclusion along with the consolidated cash budget and the other special analyses of the Bureau of the Budget would make possible a more comprehensive and realistic evaluation of the influence of the Federal Government on incomes, employment, and prices.

Federal Insurance and Guaranty of Private Loans

At the present time the Federal Government has a dozen or so programs under which private lenders are protected against default on the part of the borrower and sometimes against the risk of falling prices on the loan securities held. The Federal Housing Administration insures the principal amount of loans made to finance the acquisition of homes, the construction and operation of multifamily housing projects, and the improvement and repair of existing houses, while the Veterans' Administration guarantees housing, business, and farm

[1] The author is currently on leave from the University of California to direct for the National Planning Association a study of those governmental activities whose economic effects are reflected only partially or not at all in the Federal budget. This paper is an outgrowth of preliminary work on that project.

[2] Since 1952, fortunately, additional information covering the gross disbursements of the main credit-extending agencies has been made available in the Bureau of the Budget's special analysis of Federal credit programs.

loans extended by private lenders to veterans of World War II and the Korean war. Local governmental authorities engaged in urban renewal projects or in the construction and operation of low-rent public housing units may pledge as security for private loans the Federal Government's commitment to pay the debt charges (both principal repayment and interest) if the local agency is unable to do so. The Farmers' Home Administration not only insures private loans to farmers to buy and improve farms, to develop water facilities, and to carry out soil-conservation practices but also agrees to repurchase the loans at the request of the lender after the first 5 years of the loan contract. The Maritime Administration insures private construction loans and mortgages on cargo and passenger ships, and various Government agencies guarantee a portion of any defense loans made under the V-loan program. The Small Business Administration has carried on the Reconstruction Finance Corporation's deferred participation loan program whereby the private lender advances the full amount of the loan but the SBA agrees to purchase part of it at any time on demand. Finally, the Commodity Credit Corporation guarantees both principal and interest on private loans made to farmers under the CCC's price-support, farm-storage facility, and mobile drying equipment programs.

In table I both the total amounts of private loans made under these Federal loan guaranty and insurance programs and the net change in such loans outstanding (i. e., disbursements-repayments) are given for fiscal 1956. For various reasons to be discussed below, neither of these two sets of figures can be taken to measure the effects of the programs on the level of private incomes. Nevertheless, it is clear that the group as a whole is important enough to warrant careful consideration in any economic analysis of the Federal budget and that within the group the FHA and VA housing programs and the defense (V-loan) program far outstrip the others.

TABLE I.—*Gross and net volume of private loans insured or guaranteed by Federal agencies in fiscal 1956*

[Millions of dollars]

Agency or program	Gross volume of private credit insured or guaranteed	Net change in private credit insured or guaranteed
Federal Housing Administration: All programs	3,711	+1,186
Veterans' Administration:		
Home loans	6,776	+4,837
Business and farm loans	27	
Public Housing Administration	(1)	+83
Urban Renewal Administration	31	+18
Farmers' Home Administration	50	+41
Maritime Administration	17	+17
Small Business Administration	24	+9
Expansion of defense production (V-loans)	1,006	−11
Export-Import Bank	(1)	−62
Reconstruction Finance Corporation	(1)	−8
Commodity Credit Corporation	(1)	−401
Total	11,642	+5,709
Cash surplus (+) or deficit (−)		+4,473
Budget surplus (+) or deficit (−)		+1,600

[1] Not available.

Sources: Gross-volume data were supplied by the Federal agencies in question except that (1) the figure for the Small Business Administration was computed from the cumulated totals of deferred-participation loans approved, given in its semiannual reports, and (2) the volume of loans guaranteed under regulation V was supplied by the Board of Governors of the Federal Reserve System. Net-volume data were computed from the figures on outstanding guaranteed or insured loans given in special analysis F in the 1957 and 1958 Federal budgets.

Economic Effects of the Programs

The immediate effect of any governmental guaranty or insurance of private loans is to reduce default and liquidity risks borne by lenders. Chances of loss on loans held to maturity are lowered both directly, because the Government places its financial resources behind those of the borrower, and indirectly to the extent that the Government (as in the case of FHA's stimulus to the use of fully amortized home mortgages) induces changes in the lending market which facilitate repayment of principal by the borrower or uses its insurance programs effectively to stabilize the economy as a whole. Risks that loan securities will fall in market price while in the portfolios of the original lenders are reduced if Government guaranties stimulate the development of a private, nationwide, secondary market for such securities. Still more directly, agency agreements (such as those of the Small Business Administration) to purchase part of a private loan on demand eliminate completely the chance of a fall in market price on that portion of the lender's investment.

Lower lending risks as a result of a new Federal loan-guaranty program will bring about some increase in the volume of private lending. Lenders will be induced both to grant funds to people whom, without the Government action, they would have considered as unacceptable credit risks and to liberalize the terms (interest rates, maturities, and downpayments) on which they lend to all customers. Borrowers, in turn, will react to the changed terms on which loans become available. Some borrowers who wanted funds before but were unable to obtain them will now be satisfied, and others who did not wish to borrow will be induced by the more favorable market conditions to do so. On both counts, there is an extension of loans which otherwise would not have been made, and the loanable-funds market is widened. Finally, borrowers who would have obtained loans anyway may be induced by the more favorable terms to increase their demands for funds. To this extent, the market is deepened.

An increase in the volume of private lending will, presumably, raise to some extent the level of income-generating expenditures. It is in the magnitude of this rise that we are primarily interested. In estimating it, we may treat the widening and the deepening of the private loan market either separately or jointly.

The housing program

In the housing area, for example, the deepening effect would, in principle, be determinable from cross-sectional data such as are provided by the 1950 housing census. Families could be grouped according to the main variables affecting the demand for housing, and then the average amounts spent for new homes by groups having similar family incomes, family sizes, and, perhaps, also family types, but borrowing money under different contract-mortgage terms, could be compared. Market widening could be estimated from a multivariate statistical demand study, using the number of houses upon which construction was started each year as the dependent variable and incorporating into the analysis one or more variables measuring contract-mortgage terms. Alternatively, use of the dollar volume of expenditures on new houses as the dependent variable would yield an estimate

of the elasticity of demand with respect to mortgage terms which would include both the deepening and the widening effects.[3]

Given estimates of the sensitivity of housing demand to changes in contract-mortgage terms, the next step in the analysis is to determine the effects of the FHA and VA programs on mortgage terms. A minimum estimate can be derived from the differences between the terms on insured and guaranteed mortgages and those on conventional mortgages. These differences will not tell the whole story, since the government programs have, undoubtedly, induced a liberalization in conventional-mortgage terms themselves. It is not likely, to be sure, that any very precise estimate of this effect can be obtained. Nevertheless, it should be possible to derive a maximum measure of the governmental influence on contract-mortgage terms. In this way the true answer can at least be placed between two boundaries.

From these two steps, then, emerge both maximum and minimum estimates of the direct and immediate impact of the Government guaranty program on the housing industry. The indirect effects, however, will be much more difficult to assess, since they are far reaching, both in distance and in time.

In the first place, people employed in the construction and sale of new houses will be induced by their increased incomes to spend more money on various goods and services; these expenditures will raise incomes elsewhere; still more spending will be induced, and so on, in the familiar multiplier fashion. These additional rounds of spending, which will spread their effects throughout the economic system, may be expected to occur largely within a 1- to 2-year period after the original increment in spending on housing and to equal or exceed the amount of that initial impact.

Secondly, any loan-financed increase in private-housing expenditures will lead to later repayments of principal which may induce (or force) borrowers to reduce their spending on consumer goods and services.[4] These deflationary effects, however, are likely to be rather slow in making their appearance. Consider, for example, a new housing program which is expected to increase the demand both for mortgage credit and for new homes by 100 each period. Table II shows the pattern of repayments which will result if the loans all carry 20-year maturities and require the repayment of an equal amount of principal each period. The last line of the table will also show the way in which the deflationary effects of the program will increase over time if every dollar of principal repayments induces a decrease of $1 in the borrower's spending on current output.[5] The induced decrease, however, is unlikely to be this large. Many borrowers, if they did not have to make the principal repayments, would save at least part of the funds thus freed, and, to this extent, the repayments will

[3] None of these approaches takes explicit account of the effects of a reduction in the nonprice rationing of loanable funds—i. e., the extent to which Government guaranties induce lenders to grant mortgage funds to submarginal borrowers—on the housing market. Since, however, changes in mortgage terms and in nonprice rationing are likely to be closely correlated, the separate effects of the two factors would not be determinable statistically, and the mortgage-term variable could be taken to incorporate the influence of the other factors.

[4] Increased interest payments may also induce borrowers to cut their spending on current output, but, unlike principal repayments, these transfers represent income to the lenders and, hence, are likely to lead to increases in their spending, which will offset the reductions made by borrowers.

[5] The shorter the maturity of the loans, of course, the more rapid the increase in these effects.

not depress the level of consumer spending. Other borrowers may have been induced by the Government guaranty program to buy houses sooner than they otherwise would have done. In these cases, the deflationary effect of the program is concentrated entirely in some later year. Whenever these induced cuts in spending do occur, they will, of course, lead to a further succession of rounds of reduced spending on the part of other consumer units.

TABLE II.—*Pattern of repayments of principal accompanying a stable credit program of 20-year loans amortized on a straight-line basis*

	Period								
	1	2	3	4	5	18	19	20	21
Additional loans induced	100	100	100	100	100	100	100	100	100
Repayments of principal on additional loans	5	10	15	20	25	90	95	100	100

In summary, then, governmental guaranties of home mortgages stimulate the housing industry directly to the extent that they induce spending which otherwise would not have taken place, and other industries indirectly because an increment in spending on housing will generate waves of additional spending on all kinds of goods and services. In opposition to these forces, however, are the depressing effects on spending which flow from the additional repayments of mortgage principal. Together, these two sets of effects, neither of which is likely to be closely related to the actual amount of loans disbursed or principal repayments made, determine the total impact of the Government program on the economic system.[6] The marginal impact (and this is the aspect of the program in which makers of fiscal policy are primarily interested), however, is largely a function of the first set of effects. At any given moment the volume of new loans to be made in the near future under the guaranty program may be altered by changing the program;[7] repayments of principal within the same period, however, are mostly a result of loans already made in the past and hence are not subject to control. Short-run fiscal policy, then, may largely neglect the potential deflationary effects of principal repayments. The controllable effects of a mortgage insurance or guaranty program are predominantly those flowing from the increase it induces in spending on new homes.

The business and farm programs

In principle, the same techniques of analysis are applicable to the remaining Federal loan insurance or guaranty programs which aid either business or farm groups. In some cases, however, a considerably simpler procedure may yield adequate answers. Agencies such as the Small Business Administration, the Reconstruction Finance Cor-

[6] In the 20th year of the program illustrated above in table II, for example, gross loans disbursed and repaid might be 250 (i. e., no new credit is extended under the program) at the same time that the direct expansionary effect of the loan guaranties is 100 (as already assumed above), and the direct contractionary effect is, say, 75. Each of these direct changes in the level of private spending will have its own multiplier effects. If, for simplicity, we assume that each multiplier is equal to 2, we can estimate the total expansionary influence of the housing program, most of which will be felt during years 20 and 21, at 2 (100−75)=50.

[7] The old program will, of course, exert some carryover effects as a result of loan commitments which have not yet resulted in actual credit disbursements.

poration, and the Farmers' Home Administration were set up specifically to service submarginal borrowers, and if they are efficient in accomplishing this purpose, the main effect of their activities is to make private loans available to people who otherwise would have been unable to obtain credit. The extent to which this does, in fact, occur may be estimated approximately by an analysis of the terms of the loans made and of the financial characteristics of the borrowing groups in relation to similar data for nonguaranteed loans made by the same lending institutions.

Given such an estimate of the additional loans stimulated by government guaranties, the next two steps are: (1) to classify the loans according to the extent to which the proceeds are used to generate additional incomes, and (2) to estimate the probable depressing effects of loan principal repayments on the spending of the borrowers. On the first score, all loans obtained in order to acquire newly produced goods and services may be classified as income generating and distinguished from credit which refinances old loans or pays for the acquisition of land or old assets. Refinancing loans generate no increments to private incomes, and although loans used to purchase old assets do generate income in the form of capital gains by bidding up the prices of the assets in question, they may be classified as non-income-generating without serious loss of accuracy. From the total amount of additional income-generating loans induced by the Government program must then be subtracted any depressing effects flowing from the corresponding repayments of loan principal. As in the case of the housing programs, this final subtraction is not likely to be important to makers of fiscal policy unless they are taking a relatively long-range view into the future or unless the loans guaranteed by the Government are largely very short-term loans.

The Available Empirical Evidence

The literature on Federal credit programs contains numerous qualitative judgments on the effects of those activities, but quantitative evidence is sparse indeed. There appears to be virtually unanimous agreement among the experts that the loan and guaranty programs do have net expansionary effects but that one cannot simply use as measures of their influence the gross or net sums of money disbursed under the programs without running the risk of overestimating that influence. Grebler, Blank, and Winnick, for example, conclude that "It would be rash to assume that all of the new construction financed with FHA and VA loans represented additional volume that would not have been produced without these aids. Much of the building sponsored under the FHA and VA programs would probably have occurred without them, for the two facilities have operated largely in a period when rising or high incomes have increased demand for new residential construction. It would be equally rash to deduce that these programs have had no influence on the volume of residential construction." [8]

Two postwar studies will illustrate the kinds of quantitative evidence now available. In a survey of the credit restrictions imposed

[8] Leo Grebler, David M. Blank, and Louis Winnick, Capital Formation in Residential Real Estate: Trends and Prospects (Princeton: Princeton University Press, 1956), p. 148.

by regulation X, drawn from personal interviews with 1,368 randomly selected persons who had purchased 1- or 2-family nonfarm houses for owner occupancy between mid-October 1950 and mid-March 1951, the Federal Reserve Board found that the median price of houses purchased by veterans was $9,650 and by nonveterans $9,250, and that "* * * veterans generally paid lower interest rates, had longer maturities, and obtained higher loan-price ratios on their mortgages than was the case for nonveterans." [9] It is, of course, possible that the higher price paid by veterans is attributable not to the more liberal mortgage terms which they enjoyed, but to a higher average income among them than among the nonveteran group. The relevant income data, unfortunately, are not given in the study, but the reported fact that the veterans were, on the average, younger than the nonveterans casts considerable doubt upon that possibility. The Federal Reserve study further showed that when the median prices of new and existing houses were compared for home purchasers within a given income group, the new house price was typically the higher of the two. Since mortgage terms were generally more liberal on new houses, these data suggest the extent to which changes in credit terms may deepen the market for houses.[10] In addition, it was found that the distributions of monthly payments on new and old houses were similar, a result which is consistent with E. M. Fisher's hypothesis that in a sellers' market the level of debt service tends to remain constant as mortgage terms are relaxed.[11]

A second study, by Herbert Shapiro, contains evidence that changes in contract mortgage terms may widen or narrow the housing market.[12] Liberalized terms on lower priced houses in 1948 and 1950, for example, led to a decline in the median new-home property value and in the median mortgagor's income in 1949 and 1950 as compared to 1948. Conversely, the fact that property values in 1951 and 1952 on FHA-insured homes rose faster than construction costs and that the median mortgagor's income rose faster than median nonfarm income suggests that the larger downpayments and shorter maturities required under regulation X may have narrowed the market as far as FHA-insured transactions were concerned.

Finally, three recently published studies of installment credit extended to finance the purchase of consumer durables highlight the importance of the terms on which that credit is available with evidence that, while not directly related to mortgage credit terms, is nevertheless highly suggestive of the influence that changes in those terms may have. A comprehensive statistical analysis made by Avram Kisselgoff for the 1929–41 period showed that both the size of monthly installment payments and the length of the installment contract had significant effects on the demand for installment sales credit.[13] On the average he found that a 10-percent increase in the size of monthly payments decreased the demand for credit by 11 to 14 percent, while

[9] House Purchases in the Five Months Following the Introduction of Real Estate Credit Regulations, Federal Reserve Bulletin (July 1951), pp. 787–789.

[10] Ibid., pp. 783 and 795. For similar results over the 1938–41 period see Ernest M. Fisher, Urban Real Estate Markets: Characteristics and Financing (New York: National Bureau of Economic Research, 1951), pp. 83–84.

[11] Fisher, op. cit., p. 82.

[12] Herbert Shapiro, Characteristic of 1-Family Houses With FHA Mortgages, 1949–54, Construction Review, I (November 1955), pp. 4–9.

[13] Avram Kisselgoff, Factors Affecting the Demand for Consumer Installment Sales Credit, Technical Paper No. 7 (New York: National Bureau of Economic Research, 1952).

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a 10-percent increase in the length of the credit contract increased the demand by approximately 11 percent. Milton Moss, concentrating on automobile installment credit, found that between 1954 and 1955 when new-car prices were declining somewhat, the average maturity on installment contracts for new cars increased from 24½ months to 28 months while the average monthly payment remained constant at $80.[14]

In other words, the increased credit granted in 1955 on the average installment contract was $3.5 \times \$80 = \$280$, of which approximately $80 went into increased finances and insurance charges. If other factors affecting the demand for new cars were either constant between 1954 and 1955 or offsetting in their influences, it would be possible to derive from these figures, together with the numbers of new cars purchased on credit in the 2 years (3 million in 1954 and nearly 4,500,000 in 1955), an estimate of the extent to which the increase in contract maturities deepened the market for new cars. Since the number of new cars that would have been purchased on credit in 1955 if maturities had not been lengthened at all must lie somewhere between the figures of 3 and 4½ million given above, this estimate must be at least $600 million but less than $900 million. Finally, a national sample survey covering the 1954–55 period found, by means of extensive personal interviews, that larger downpayments on new cars would have discouraged 49 percent of the new-car buyers interviewed from buying at that time and that larger monthly payments would have removed almost 60 percent of them from the new-car market.[15] Of those buyers who indicated that they would not have bought the same car under tighter credit conditions, 79 percent said that they would have bought no car, and 17 percent that they would have purchased a cheaper car, either new or used.

Statistical investigators of the demand for housing have been virtually precluded from measuring the effects of contract mortgage terms by the absence of comprehensive and consistent time series for mortgage interest rates, downpayments, and maturity lengths. The series for these variables compiled recently by the National Bureau of Economic Research for the 1920–47 period come closest to filling the void, but the Bureau's sample was biased by a high degree of nonresponse among the smallest lending institutions.[16] Furthermore, since its data are confined to first mortgages, they undoubtedly underestimate the costs of credit during the 1920's when short maturities on first mortgages forced the extensive use of higher-cost second mortgages and frequent expensive refinancing on the part of homeowners unable to repay in full at maturity. The National Bureau's mortgage-terms series has so far apparently been included in only one statistical demand study for housing—that of John Mattila, and he was prevented from obtaining significant results by a high degree of intercorrelation between that variable and two other independent variables.[17]

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[14] Milton Moss, Effects of Changes in Installment Credit Terms, in Board of Governors of the Federal Reserve System, Consumer Installment Credit, pt. I, vol. I (Washington: Government Printing Office, 1957), p. 128.

[15] Board of Governors, Federal Reserve System, Consumer Installment Credit: Pt. IV, Financing New Car Purchases, A National Survey for 1954–55 (Washington: Government Printing Office, 1957), pp. 98–100.

[16] J. E. Morton, Urban Mortgage Lending: Comparative Markets and Experience (Princeton: Princeton University Press, 1956), appendix A.

[17] John M. Mattila, An Econometric Analysis of Construction (Madison: University of Wisconsin, 1955), especially pp. 73–76.

The empirical evidence so far available concerning the effects of the Federal loan insurance and guaranty programs, then, is far from satisfactory. A detailed exploration of methods of filling the gaps is to be undertaken as part of a research project which the author is carrying out for the National Planning Association. Although work on this study has just begun, one example of the use of statistical demand studies to estimate the effects of changes in contract mortgage terms on housing demand may be given.

In his study of interwar business cycles in the United States Lawrence Klein derived estimates of the influence on expenditures for owner-occupied, single-family, nonfarm houses of changes in rents, construction costs, disposable income, and the number of new nonfarm families.[18] On the basis of these estimates we may compare, for the 1936–41 period, the actual increase in housing expenditures from one year to the next with the increase that should have occurred as a result of the concurrent changes in rents, construction costs, disposable income, and the number of new nonfarm families. This has been done in the second column of table III. It will be noted, for example, that between 1937 and 1938 housing expenditures increased by $430 million more than Klein's equation predicted they would increase. If Klein's measures of the influence of rents, construction costs and the other two variables on housing expenditures are accurate, this discrepancy must be the result of the operation of factors which were omited from his equation. The omitted variables in which we are interested, of course, are the various terms on which residential mortgages were granted between 1936 and 1941. Three different measures of the year-to-year changes in these terms are given in the remaining columns of table III. In column (3) we have the annual increase in the mean duration of FHA-insured mortgages on new homes, in column (4) the increase in the mean percentage of the new home value borrowed under the FHA program, and in column (5) a composite "conditions of credit" variable constructed by Mattila from National Bureau data on both FHA-insured and conventional mortgages. Each of these variables has been ranked, from the greatest liberalization in contract mortgage terms to the least, and when these gradations are compared with Klein's predictions, ranked from his greatest underestimate of the increase in housing expenditures to the least, it will be noted that the correlations are remarkably close. Klein's greatest underestimate (that for 1937–38), for example, coincided not only with the largest increases in the mean length of FHA mortgages (3 years) and in the mean loan-to-value percentage (7.1 percent), but also with the greatest liberalization in the terms of both FHA and conventional mortgages as shown by Mattila's composite variable.

There is a strong suggestion, therefore, that liberalization of the terms on which mortgage credit was granted during the late 1930's did stimulate expenditures on new housing. When the influence of other factors is allowed for on the basis of Klein's estimates, unexplained increases in housing expenditures still remain for those years when mortgage terms were liberalized most. These results must, of

[18] Lawrence R. Klein, Economic Fluctuations in the United States, 1921–41 (New York: Wiley, 1950).

course, be regarded as highly tentative until other demand equations have been analyzed, other variables included, and the data obtained from cross-sectional sample surveys of housing scrutinized.

TABLE III.—*A comparison of Klein's predictions of the increase in housing expenditures, 1936–41, with changes in the terms on FHA-insured mortgages and on all mortgages included in the National Bureau's 1947 sample*

(1)	(2)		(3)		(4)		(5)	
Period	Actual increase in housing expenditures minus Klein's estimate of the increase		Mean duration of FHA-insured mortgages on new homes		Mortgage as a percent of FHA-determined new-home value		Mattila's "conditions of credit" variable= mortgage interest rate / loan-to-value ratio×duration	
	Millions of dollars	Rank	Change in years	Rank	Change in percent	Rank	Change	Rank
1936–37	−70	3	+0.7	3	+1.4	2	−1.0	2½
1937–38	+430	1	+3.0	1	+7.1	1	−1.3	1
1938–39	−170	5	+.6	4	+1.3	3	−.3	4
1939–40	+90	2	+1.0	2	+1.0	4	−1.0	2½
1940–41	−130	4	+.3	5	+.8	5	+.2	5

CONCLUSIONS

The last two decades have witnessed the introduction and rise to prominence of a number of Federal programs involving the insurance or guaranty of privately made loans. Since these programs, typically, involve little use of Federal funds, their expansions and declines have occurred without significant effects on either the regular or the cash budget. Yet, presumably, these Federal operations do have important effects on the level of economic activity. To the extent that they do, a significant portion of the influence of the Federal Government on incomes, spending, and prices is hidden from view by being omitted from budgetary figures. Some information about these activities is now included in the Bureau of the Budget's special analysis of Federal credit programs, but there is need of further supplementary material—an expansion of this special analysis to include gross private loans authorized and disbursed through the insurance and guaranty facilities, an economic classification of the main purposes for which the funds are to be used, and, in addition, a comprehensive, quantitative analysis of the effects which these money flows are likely to have on various parts of the economic system.

It need hardly be stressed that fiscal policy should take these extra-budgetary programs into account. In a period of threatening inflation, either the introduction of new loan guaranties or the expansion of existing programs will tend to increase the rate of price rise unless offsetting adjustments are made in cash expenditures or tax revenues. At the moment, only very rough estimates of the size of the needed adjustments are possible. Recent improvements, both in the quality of the available data and in the statistical techniques of analyzing them, however, promise a steady refinement as fiscal research is continued. The hidden hands of Federal credit agencies may yet have their fingerprints taken.