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The Fiscal and Economic Effects of Federal
Credit Assistance Programs

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Abstract

While federal credit programs are varied in form, their fiscal and economic effects arise primarily from the same source--each program's subsidy component. Recent credit reform proposals would make control of credit subsidies the primary focus of budgetary efforts. By subjecting these subsidies to annual appropriations, the Government would gain more effective means to control the long-run fiscal effects of credit programs. Such reforms also would represent an important first step in improving their economic effects by eliminating unintended subsidies. However, many high subsidy-rate programs appear to have a significant effect on the allocation of credit without yielding clearcut efficiency gains.

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	<u>Contents</u>	<u>Page</u>
Summary		iii
I.	Introduction	1
II.	An Overview of Federal Credit Assistance Programs	2
III.	The Current Budgetary Treatment of Programs	4
IV.	Estimating the Subsidy Component and Fiscal Impact of Programs	5
V.	Economic Effects of Programs	8
VI.	Reform Proposals	11
VII.	Conclusion	14
Tables		15
References		22

Summary

The U.S. Government is extensively involved in the allocation of capital and is rapidly expanding some forms of this involvement. Through direct loans, loan guarantees, and the activities of government-sponsored enterprises, the Government is seeking to make more credit available for certain target groups, such as homebuyers, students, and agricultural enterprises, and thereby to increase their investment expenditures.

While the form of federal credit assistance programs varies, the source of their fiscal and economic effects is the same: each program's subsidy component. The subsidy component, rather than annual cash flows, determines the program's long-run impact on the fiscal deficit. Moreover, programs affect economic efficiency to the extent that the subsidies alter the allocation of capital.

Current budgetary practices, however, emphasize the cash flows of federal credit assistance programs rather than their subsidy components. Because short-run cash flows bear little or no relationship to credit-program subsidies, this practice can render ineffective the Government's control of credit programs as the 1988 bailout of the Farm Credit System and recent losses in federal mortgage insurance programs evidence. These failures highlight the lack of effective budgetary control over credit programs and intensify concerns about their effect on the allocative efficiency of credit markets.

Recent proposals by the Administration and Senate to reform the credit programs would focus budgetary efforts on the control of credit subsidies. By subjecting these subsidies to annual appropriations, the Government would more effectively control the long-run fiscal effects of credit programs. Such reforms would also begin to improve the economic effect of credit programs by eliminating unintended subsidies. Similarly, measures, such as risk-adjusted mortgage insurance premiums, to manage program risks more effectively would target resources better.

Many programs with a high subsidy rate seem, however, to allocate capital without yielding clear-cut efficiency gains. If the policy behind these programs seeks mainly to redistribute income, more direct means exist to achieve this goal.

I. Introduction

The U.S. Government's involvement in the allocation of credit to the private sector is extensive and in some forms is expanding rapidly. Through direct loans, loan guarantees, and activities of government-sponsored enterprises (GSEs), the Government aims to increase credit availability to certain target groups--such as homebuyers, students, agricultural enterprises, small businesses, and exporters. However, in the wake of the savings and loan crisis and bailout of the Farm Credit System, as well as evidence of rising losses in federal mortgage insurance programs, all areas in which the Government may be exposed to significant financial risk have come under increased scrutiny. A priority in this regard is federal credit reform to improve control of program risks and to target resources more effectively. 1/

While the form of federal credit assistance programs is varied, their fiscal and economic effects arise primarily from the same source, i.e., each program's subsidy component. For a direct loan, a subsidy exists to the extent that the credit terms offered by the Government are more favorable than those available from a private lender, provided that the Government's cost to originate and service the loans equals that of a private lender. A guaranteed loan conveys a subsidy when the Government charges a fee for its commitment to pay all or part of the loan principal and interest in the event of default that is less than the amount implied by actuarial considerations. A GSE, which is a federally chartered but (with one exception) privately owned corporation, receives a subsidy because its borrowing costs do not fully reflect the riskiness of its asset portfolio and contingent commitments. In each case, it is the subsidy component that determines the program's long-run fiscal impact in terms of the Government's net claim on private savings. Moreover, the program's effect on economic efficiency stems from the extent to which the subsidies alter the allocation of capital.

Under current budgetary practices, however, the cash flows of federal credit assistance programs are emphasized rather than their subsidy components. 2/ Because short-run cash flows bear little or no relationship to credit program subsidies, this practice can render ineffective the Government's control of credit programs. For example, the Farm Credit System, a GSE that provides loans to agricultural enterprises, required in 1988 an infusion of federal funds to cover losses on its loan portfolio. 3/ More recently, the Federal Housing Administration reported significant losses in its Mutual Mortgage Insurance Fund, which

1/ Other areas in which the Government may be exposed to significant financial risks are the deposit insurance system and the insurance of private pension plans. The former is examined in Fries (1990).

2/ While GSEs are off-budget entities, their cash flows have been recorded in recent years in a supplement to the budget.

3/ Department of the Treasury (1990), Part D, pp. 9-14.

provides mortgage insurance for low- and moderate-income homebuyers. ^{1/} These failures highlight the lack of effective budgetary control over credit programs and intensified concerns about their effect on the allocative efficiency of credit markets.

The purpose of this appendix is to examine recent credit reform proposals by the Administration and Senate. The essential ingredient in each proposal is to separate the estimated subsidy costs from the non-subsidized cash flows of the credit assistance programs. This change would make control of subsidies the primary focus of budgetary efforts. In addition, the Administration has proposed several reforms for particular credit programs that aim to improve their management of risk and targeting of resources.

The remainder of the appendix is organized as follows: section 2 provides an overview of federal credit assistance programs. The third section describes the current budgetary treatment of programs, while section 4 explains various methods to estimate the subsidy components of existing credit programs. The fifth section considers the possible effects of current programs on the allocation of capital. Section 6 examines the proposed credit reforms. The seventh section offers some conclusions about the fiscal and economic effects of the proposed reforms.

II. An Overview of Federal Credit Assistance Programs

A substantial portion of funds that flow through the credit markets receives government assistance. In the period FY 1982 to FY 1989, federally assisted loans net of repayments averaged \$110 billion a year, or 16 percent of total net lending in credit markets to the private sector. ^{2/} At the end of FY 1989, the outstanding amount of such loans totaled \$1,558 billion. ^{3/} In comparison, the largest U.S. commercial bank had assets totaling \$231 billion at the end of 1989. ^{4/}

The form of government involvement in credit markets is varied. For example, several federal agencies originate and service direct loans. These programs are designed to redirect economic resources by providing credit on more favorable terms than would otherwise be available from private lenders. While the repayment of direct loans has exceeded disbursements in recent years, the outstanding amount of such loans totaled \$207 billion at the end of FY 1989 (Table 1). The Department of Agriculture and the Export-Import Bank operate the largest direct loan programs.

^{1/} General Accounting Office (1989).

^{2/} Office of Management and Budget (1990), p. A-97.

^{3/} Office of Management and Budget (1990), p. 229.

^{4/} Moody's Bank and Finance News Report, June 17, 1990.

Guaranteed loans, which grew steadily during the 1980s and totaled \$588 billion at the end of FY 1989 (Table 2), are privately held loans that the Government guarantees to pay in the event of default. The guarantee can cover all or part of the loan principal and interest, and thus transfer at least some of the default risk from the lenders to the Government. Guaranteed loans also include insured loans, where the Government pledges to use accumulated insurance premiums to secure lenders against default. The largest guaranteed loan programs are the mortgage insurance funds of the Department of Housing and Urban Development and the Department of Veterans Affairs. The troubled Mutual Mortgage Insurance Fund of the Federal Housing Administration alone covered \$326 billion in loans at the end of FY 1989. Guarantees of loans to students and small businesses also represent substantial contingent commitments of the Government. 1/

Government-sponsored enterprises (GSEs) are financial intermediaries that have been established and chartered by the Federal Government, but that are now, with one exception, privately owned. 2/ Despite their private status, these enterprises maintain several links to the Government (Table 3). Because of these links with the Government, GSEs can borrow in private capital markets at interest rates just slightly above those on Treasury securities of comparable maturity. While these obligations do not carry an explicit guarantee, investors perceive that GSE debt is implicitly backed by the Government, a perception reinforced by the Government's bailout in 1988 of the Farm Credit System. In addition to providing loans to agricultural enterprises, GSEs participate in the secondary markets for mortgages and student loans (as purchasers of loans for their own portfolios and issuers of pass-through securities) as well as provide loans to private financial intermediaries (primarily savings and loans). 3/ GSE loans outstanding, which include pass-through securities, grew rapidly during the 1980s and totaled \$880 billion at the end of calendar year 1989 (Table 4). The largest GSEs are those that are active in the secondary mortgage market, the Federal National Mortgage Association and Federal Home Loan Mortgage Corporation.

1/ In addition to the guarantee, the Government pays an interest subsidy on student loans.

2/ This appendix does not include as GSEs the Farm Credit System Financial Assistance Corporation, Financing Corporation, nor Resolution Funding Corporation. These entities were created by the Government to finance through the issue of nominally private bonds the resolution of insolvent farm credit and thrift institutions.

3/ Pass-through securities are claims to an underlying pool of loans. The GSEs that issue pass-through securities insure them against default risk from the underlying loans.

III. The Current Budgetary Treatment of Programs

The current budgetary measures for direct and guaranteed loan programs emphasize the amounts of cash actually paid or received in the fiscal year. While a cash basis budget provides a comprehensive system for recording and controlling many receipts and outlays, it is an incomplete system when applied to federal credit programs because many economically significant aspects of the transactions are omitted. Most credit contracts and guarantees involve obligations for payments to or by the Government in future fiscal years. Thus, when the Government enters into credit commitments, many of the obligated amounts are excluded from that year's budget. This emphasis on cash flows in the current fiscal year tends to divert attention from the long-run costs of credit programs when budgetary priorities are being set.

That cash-basis accounting for credit programs creates distortions in budgetary efforts is evident in several ways. For example, the full amounts of direct loans are recorded as outlays when disbursed by federal agencies, while guaranteed loans have no positive outlays until defaults occur. Consequently, loan guarantees have been growing much faster than direct loans in recent years. Cash-basis accounting also results in treating equally some direct loans that differ in cost, since all loans of equal amounts have the same budget outlay in the disbursement period. A distinction is made neither between high- and low-risk loans, nor between loans provided on highly subsidized terms and those given on or near market terms. Similarly, under most guaranteed loan programs, the fees charged by the Government are not adjusted for risk of the loans that are backed.

The federal budget has a second instrument of budget control through annual appropriations that confer budget authority. This authority is the lawful permission to obligate federal financial resources. However, budget authority is ineffective in controlling credit programs for two reasons. First, the largest direct loan programs are currently financed by revolving funds in which disbursements for new loans are offset by repayments on existing loans. Congressional appropriations of budget authority for these funds are required only when new disbursements exceed available funds, which can be augmented by loan sales and in some cases borrowing from the Treasury. Second, guaranteed loan commitments were excluded from the definition of budget authority by the Congressional Budget Act of 1974. ^{1/}

^{1/} The federal credit budget, which places limits on new direct loan obligations and guaranteed loan commitments, is a third instrument of budgetary control. However, since the credit budget measures levels of credit activity rather than costs, it does not encourage the tradeoffs among programs against an overall constraint that occurs for other types of federal programs.

The financial transactions of GSEs are excluded altogether from the federal budget both in terms of budget outlays and authority. The reason for this exclusion is the private ownership of GSEs. However, a supplement to the federal budget does contain summary financial information for each GSE, including a projection of its aggregate borrowing and lending through the fiscal year.

The systematic problems in the budgetary control of federal credit assistance programs are highlighted by the Government's bailout of the Farm Credit System in 1988 and the large losses recently reported by the Federal Housing Administration's Mutual Mortgage Insurance Fund. The Farm Credit System's recourse to federal funds could total \$4 billion through 1992, while a recent actuarial study of the Mutual Mortgage Insurance Fund found a capital shortfall of over \$2 1/2 billion. ^{1/} Moreover, the write-off of direct loans and termination of loan guarantees due to defaults rose sharply during the 1980s (Table 5). The value of loan write-offs increased six-fold with credits to agricultural enterprises accounting for much of the rise. At the same time, the value of guaranteed loans terminated by the Government rose nearly four-fold as defaults on student loans and mortgages backed by The Federal Housing Administration and Department of Veterans Affairs increased.

IV. Estimating the Subsidy Component and Fiscal Impact of Programs

An essential ingredient in credit reform is a reliable method to estimate the subsidy components of credit assistance programs, since their long-run fiscal impact in terms of the Government's net claim on private savings arises from these subsidies. A program subsidy exists if the cash or financial asset received by the Government is worth less than the cash paid out or the contingent liability incurred by it plus the program's administrative costs. ^{2/} The subsidy calculation requires an estimate of the value of the Government's financial asset or contingent liability because its market value is generally unobservable. ^{3/}

On a direct loan, the Government incurs a subsidy cost if the loan amount less any fee paid by the borrower at the time of disbursement is

^{1/} See Department of the Treasury (1990), Part D, pp. 9-14, and Price Waterhouse (1990), respectively.

^{2/} A second-order cost of a federal credit program is the foregone tax revenue if a similar service would have been provided otherwise by a taxable financial intermediary.

^{3/} One approach to credit reform is to use market transactions such as loan sales and reinsurance to convert the subsidy component of credit assistance programs into budget outlays under current budgetary practices. However, legislative attempts to implement this approach have been unsuccessful. See Office of Management and Budget (1987), Part 2, pp. 42-43, and Congressional Budget Office (1989), pp. 22-24.

greater than the present value of the borrower's principal and interest payments net of the Government's cost of servicing the loan. The Government loses money on a guaranteed loan if any initial fee, or present value of any future fees, is less than the present value of administrative expenses and an allowance for default net of amounts recovered. Similarly, the Government incurs a subsidy cost from its implicit guarantee of GSE liabilities that equals the present value of defaulted payments.

To estimate the subsidy component of direct loans and loan guarantees, the Office of Management and Budget (OMB) developed a valuation model based on the credit terms of comparable private sector loans. ^{1/} An advantage of this valuation procedure is that it does not require estimates of the most likely future cash flows from federal loans and guarantees which would require detailed histories on the performance of similar credit commitments. Rather, the model uses market yields on related private sector loans to discount the contractual cash flows of federally assisted credits. ^{2/} The assumption behind this approach is that the pricing of private credit transactions yields a return that just covers the private costs of the loan, including administrative expenses, default losses, and the lender's cost of capital. Credit terms below those available in private markets are expected to impose losses on the Government provided that its costs are equal to those of a private lender.

The OMB model for measuring the subsidy component of direct loans contains four steps. First, the federal credit contract is used to project the future cash flows from this loan, assuming all repayments are made as scheduled. Second, the internal rate of return (IRR) on a comparable private sector loan is calculated based on the contractual repayments. ^{3/} Third, this IRR is used to discount the scheduled repayments from the government loan to determine its approximate market value. Finally, the estimated market value of the loan is subtracted from the present value of amounts disbursed to determine the subsidy component of the government loan.

For a guaranteed loan, the OMB model uses the contractual terms of the government-backed loan and the IRR of a comparable, unguaranteed loan. This IRR is used to discount the cash flows to the lender of the guaranteed loan. The difference between the estimated present value of the loan and the present value of the amounts disbursed is the increase

^{1/} Office of Management and Budget (1984a). A similar discounting procedure was used by Baron (1983).

^{2/} The Congressional Budget Office (1989) supports this valuation procedure and in Congressional Budget Office (1990) provides a detailed example of how to implement the OMB model.

^{3/} The internal rate of return is the discount factor that equates the present value of the scheduled loan repayments to the present value of disbursements.

in market value of the loan from the guarantee. The subsidy component is the value of the guarantee less the present value of any fees charged by the Government for its guarantee.

The OMB approach is not without its drawbacks, however. Most importantly, comparable private sector loans do not exist for all types of federal credit assistance programs. For example, the absence of private sector loans to students (because of the lack of marketable assets to pledge as collateral) can be a source of error in measuring the subsidy cost of guaranteed student loan programs. Moreover, some contend that the differences in credit terms between comparable government and private sector loans overstate the subsidy because the Government can borrow at substantially lower interest rates than private financial intermediaries. ^{1/} Much of this difference though can be attributed to taxpayer backing of government debt compared to the limited liability of corporate equity holders. Both debt and equity claimants of a private financial intermediary bear the default risk of its asset portfolio, while taxpayers bear all the risks of federal credit programs. Thus, a measure of the subsidy component of federal credit assistance programs should reflect at least in part the higher cost of capital to a private financial intermediary.

The Department of the Treasury recently proposed a method similar to that of the OMB for estimating the subsidy imparted by the implicit guarantee of GSE liabilities. ^{2/} The Treasury recommends that each GSE be required to obtain a credit rating for its liabilities from at least two nationally recognized credit rating agencies based on the assumption that the debt has no implicit government backing. The difference between the GSE's actual borrowing costs and interest rates paid by similarly rated private corporations is a measure of the interest subsidy received by the GSE. An advantage of the Treasury proposal is that the rating of GSE liabilities readily identifies comparable private sector debt to be used in a subsidy calculation. However, the GSEs also receive subsidies as a result of their other links to the Government. The extent of such benefits would not be captured by the Treasury's proposed subsidy measure.

In recent years, the OMB has reported the results of its subsidy calculations for new direct loan obligations and loan guarantee commitments in the budget or its supplements. The estimates for FY 1989 to FY 1991 are shown in Tables 6 and 7. The subsidy cost rate on direct loans, expressed as a percent of loan principal, tends to be higher than on loan guarantees. In terms of dollar amounts, however, the subsidy costs of guaranteed loans substantially exceed those of direct loans. Because of the high volume of guarantees, even some relatively low subsidy rate programs, such as guarantees of the Federal Housing

^{1/} See Bosworth, Carron, and Rhyne (1983), pp. 30-33, and General Accounting Office (1989).

^{2/} Department of the Treasury (1990), pp. 7-11.

Administration and Government National Mortgage Association, involve significant costs to the Government. According to the OMB's estimates, the primary target group toward which the subsidies are directed are students and homebuyers.

While no estimate of the subsidy created by the Government's implicit backing of GSE liabilities is available, some of these enterprises are among the economy's most thinly capitalized financial institutions. The ratios of capital to assets and mortgaged-backed securities for the Federal National Mortgage Association and Federal Home Loan Mortgage Corporation were 0.9 and 0.6 percent, respectively, at the end of 1989. The Farm Credit System also is thinly capitalized given the large losses it incurred in the 1980s and the riskiness of an asset portfolio concentrated in agricultural loans. The degree of leverage achieved by these enterprises is made possible largely by the Government's implicit backing of their liabilities.

V. Economic Effects of Programs

Any analysis of the economic effects of federal credit assistance programs in a general equilibrium framework involves several steps, in addition to calculating the programs' subsidy components. 1/ The first step considers how the subsidy of a program is allocated between borrowers and lenders. This allocation determines the degree to which the cost of capital in the target activity is affected by the subsidy. To the extent that credit is inelastically supplied, there would be a tendency for the subsidy to accrue to lenders, reducing the incentive impact of the subsidy on the targeted activity.

While a range of outcomes are possible, a useful benchmark to consider is the case where credit is elastically supplied, at least after the introduction of the credit assistance programs. A reason for emphasizing this case is that many federal credit assistance programs are either entitlements or serve to transform the often unique risk characteristics of loans into those similar to more liquid assets. For example, a government loan guarantee tends to make the risk of the targeted loan similar to that of a Treasury security. 2/ To the extent that investors can obtain close substitutes for federally assisted credits, their supply would tend to be relatively elastic. Given the significant reliance on loan guarantees and activities of GSEs in recent years, as opposed to direct loans, the supply of credit to target groups may well be relatively elastic.

1/ For related discussions, see Bosworth, Carron, and Rhyne (1983), pp. 23-46, and Gale (1990).

2/ See Penner and Silber (1973).

If the subsidy tends to accrue to borrowers, attention can focus on the incidence effects of the subsidies on capital markets in general. ^{1/} Any general equilibrium incidence analysis of the subsidies is sensitive to the assumptions made concerning the economic framework in which they are placed. Again, a benchmark model that provides a useful first pass at analyzing the incidence effects is the (Harberger) two-sector model of tax incidence. ^{2/} Briefly, this model assumes that there are two perfectly competitive industries producing two distinct commodities with constant returns to scale technologies and both capital and labor as factors of production. These factors are fixed in total supply and mobile between sectors.

While credit assistance programs vary significantly in detail, for the purpose at hand their common impact can be modeled as reducing the cost of capital in one sector, with the cost of the subsidy assumed to be raised in a neutral way. At this basic level, the total impact of the subsidy can be decomposed into two effects. The first is a factor substitution effect which depends on the ease with which capital can be substituted for labor in the subsidized sector. If this elasticity of substitution is positive, the demand for capital as a whole would tend to increase, and the greater the elasticity the more significant would be this effect.

The second effect is the output effect. In the simplest case of a zero elasticity of factor substitution in the subsidized industry, the full impact of the targeted subsidy would occur via an increase in demand for the output of that industry. In effect, a subsidy to a factor of production would be equivalent to subsidizing the output of the targeted industry, with the interest elasticity of the targeted expenditure determining the increase in output. The consequences for factor demand would depend on the relative factor intensities of the two industries.

A recent simulation study examines the effect of the federal credit assistance programs on the allocation of capital for those programs with the highest subsidy rates, assuming a Leontief production technology. ^{3/} Based on available estimates of the interest elasticity of the targeted expenditures, credit programs were found to increase the flow of funds to the targeted groups, primarily agricultural enterprises, students, and small business, by between 20 percent and 37 percent.

^{1/} A further assumption needed before proceeding to this incidence analysis is that the subsidized borrowings are not fungible. In some cases, this assumption is open to question. See Bosworth, Carron, and Rhyne (1983), p. 34.

^{2/} See Atkinson and Stiglitz (1980), pp. 160-226, for a further discussion of this approach.

^{3/} See Gale (1990).

As previously emphasized, this incidence analysis is a first-pass and numerous other factors should be taken into account. For example, the analysis assumes that there are no other taxes or subsidies in the economy. In the case of U.S. capital markets, this assumption is clearly untenable. Pre-existing distortions can significantly alter the comparative static results in this type of model. Moreover, the framework takes the supply of capital to the economy as a whole to be fixed, although the consideration of international capital flows could justify a relaxation of this assumption. ^{1/} With open capital markets, the subsidized sector would be small relative to the whole, and, as a result, the overall rate of return on capital would be unaffected by the subsidies. Increased investment in the subsidized sectors would drive down the gross rate of return in those sectors until the corresponding net rates of return equal the economy wide rate of return.

To this point, the focus has been on the incidence effects of federal credit assistance programs. The conclusion would appear to be that programs are likely to have as significant effect on the allocation if not the level of credit, although the precise nature of the allocation effects and their implications for the return to capital and labor cannot be identified with accuracy. Similarly, the efficiency implications of these programs are not clearcut. Any welfare analysis would need to account for the pre-existing distortions in U.S. capital markets. Moreover, the welfare gains or losses associated with the subsidies depend in part on the extent to which the subsidies serve to correct market failures that would exist in their absence. For example, a well-targeted subsidy could in theory reduce the incidence of credit rationing due to borrowers' lack of collateral. ^{2/} However, many high subsidy rate programs are directed at borrowers such as agricultural enterprises and small businesses that could pledge real assets as collateral. If credit programs target primarily inframarginal borrowers, they would produce few efficiency gains as they redistribute wealth. ^{3/}

Finally, credit programs may help to overcome private market failures even without imparting subsidies. For example, the rationale for many GSEs is to link the primary and secondary markets for certain types of loans, such as those to homebuyers, students, and agricultural enterprises. By exploiting arbitrage opportunities, GSEs are intended to improve the credit markets' allocative efficiency and at the same time to operate essentially on a commercial basis. However, if there are

^{1/} Empirical evidence on the interest-sensitivity of private domestic savings and the openness of capital markets is inconclusive. With respect to the former issue, see Boskin (1978) and Bovenberg and Evans (1990). Regarding the latter, see Feldstein and Horioka (1980), and Bayoumi (1990).

^{2/} See Gale (1989).

^{3/} Externalities associated with targeted expenditures may provide a rationale for subsidies, however credit programs are an indirect means to achieve such a policy objective.

arbitrage opportunities left unexploited by the private sector, these enterprises should be able to operate without subsidies.

VI. Reform Proposals

The main objective of the credit reform proposals of the Administration and Senate is to measure the long-run subsidy costs to the Government of the credit programs and to make these costs the basis for setting budgetary priorities. ^{1/} The two proposals contain several common budgetary procedures to implement this essential ingredient of credit reform. First, both would delegate to a central authority in the Executive branch responsibility for the establishment of a method to calculate the subsidy costs and the oversight of its use. Second, credit program accounts in the budget would include the subsidy costs of the programs. Finally, control of federal credit activity would occur through appropriations of budget authority for the programs' subsidy costs. ^{2/} By making the subsidies subject to annual appropriations, the costs of programs could be controlled at the time of the decision to extend credit. Those programs without subsidy components would be subject to limits on the level of direct loan obligations or loan guarantee commitments set in the federal credit budget.

While there is agreement on the key aspects of credit reform, several problems remain in the budgetary treatment of the programs, such as the reporting of nonsubsidized cash flows and the recognition of unrealized losses from past credit assistance. Both the Administration and Senate propose to create separate financing accounts for the nonsubsidized cash flows of programs. For direct loan programs, these accounts would disburse new loans, financing these cash flows with receipts from the subsidy accounts and Treasury borrowings. The debt to the Treasury would be retired as the federal agencies receive debt service payments. For guaranteed loan programs, the financing accounts would receive payments from the subsidy accounts and guarantee fees from the agencies. These funds would be invested in Treasury securities and be held as a reserve against future defaults. Agencies would be permitted to retain a fraction of the debt service repayments and guarantee fees to cover

^{1/} The current Administration's proposal is the same as that in the two previous budgets. See, for example Office of Management and Budget (1989), Part 6, pp. 23-27. The Senate version was passed on July 31, 1987, as an amendment to H.J. Res 324 (a joint resolution raising the statutory limit on the public debt), but was deleted in the House and Senate conference. For a discussion of its key provisions, see Congressional Budget Office (1989), pp. 25-31.

^{2/} Budget authority would need to be extended to guaranteed loan programs. Moreover, if a credit program is regarded as an entitlement with a permanent, indefinite appropriation to cover annual subsidy costs, it would be subject to oversight by the relevant authorizing committees in Congress.

administrative expenses. However, the Administration and Senate proposals differ in how to treat the financing accounts, which reflect primarily changes in the Government's balance sheet, for the purpose of the Graham-Rudman-Hollings (GRH) deficit reduction targets. Under the Senate proposal, the nonsubsidized cash flows in the financing account would be excluded from net budget outlays for GRH purposes, while the budget deficit measure would include the financing accounts under the Administration's proposal. 1/

Although credit reform mainly applies to new loans and guarantees, the outstanding loans and guarantees at the time of reform must also be considered. The Administration and Senate proposals differ in which accounts the old loans and guarantees would be reported and in whether their cash flows would be included in budget outlays for GRH purposes. Under the Administration's proposal, all loan obligations and guarantee commitments made before credit reform would continue to be recorded in the existing program accounts and would be included in net budget outlays. These accounts would effectively become liquidating accounts and would eventually expire. Under the Senate's proposal, loans issued before credit reform would be accounted for in the financing accounts that would be created for the nonsubsidized cash flows of new obligations and commitments. In this case, the cash flows associated with the old loans would be excluded from net budget outlays for GRH purposes. Since several outstanding direct loans and loan guarantees have large unrealized losses, their associated cash flows reflect both changes in the Government's balance sheet and the realization of subsidies conveyed in the past. While these subsidies are beyond the Government's control, their magnitude may be important in setting future budgetary priorities. 2/

In addition to measures directed at strengthening the budgetary treatment of federal credit assistance programs, the Administration has proposed several reforms to improve the management of risks and target-

1/ Because the financing accounts reflect primarily changes in the Government's balance sheet, the Congressional Budget Office (1989), p. 51, recommended that the financing accounts be treated as a means of financing the deficit rather than as budget outlays. As a further alternative, the General Accounting Office (1989) proposed to include the financing account in a comprehensive capital budget.

2/ Net unrealized losses on outstanding direct loans and loan guarantees totaled \$21.6 billion at the end of FY 1988 (primarily in agricultural credit programs), according to the Congressional Budget Office. It proposes to create liquidation accounts for old obligations and commitments and to record these cash flows as a financing item provided that these accounts receive sufficient appropriations to restore their financial balance. See Congressional Budget Office (1989), pp. 56-60, and 97.

ing of resources by certain programs. 1/ One such proposal would require all GSEs to obtain a credit rating equivalent to triple-A, absent any implicit government guarantee, from at least two of the nationally recognized credit rating agencies. 2/ If a GSE is rated below triple-A, it would be required to develop and implement an acceptable business plan that aims to achieve this rating within a five-year period. Failure to adopt an acceptable plan would result in the GSE losing its ties to the Government. This credit rating standard in effect would force a thinly capitalized GSE to increase substantially its equity. Moreover, since even a triple-A rated GSE would continue to benefit from its links with the Government, the Treasury recommended the annual disclosure of the estimated financial subsidy to GSEs and greater regulatory oversight of these enterprises, which often has been ineffective or absent altogether. 3/

With respect to the troubled Mutual Mortgage Insurance Fund of the Federal Housing Administration, the Administration proposed a set of measures to restore its financial soundness and to improve its management of risks. 4/ The main objective is to implement a premium structure for mortgage insurance that covers expected and normal operating costs. The new premium structure would be risk related, with higher premiums for loans with lower down payments, and all homebuyers would be required to invest at a minimum 2 percent of equity in their homes. In addition, administrative reforms would be designed to improve underwriting practices and to prevent fraud.

The Administration's budget recommended changes to the Department of Veterans' Affairs (VA) home loan mortgage program and the Farmers' Home Administration (FmHA) direct loan programs, as well. 5/ The budget proposes to strengthen the VA program by requiring veterans to make a small downpayment (4 percent of the loan amount in excess of \$25,000) and charging a 1.75 percent loan fee which may be financed. The budget proposes to reduce the highly subsidized direct loan programs of the FmHA and to replace them with loan guarantees and housing vouchers. These changes are directed at improving the targeting of resources to low- and moderate-income borrowers.

1/ The Office of Management and Budget also has implemented revised credit management standards for all direct and guaranteed loan programs aimed at improving the origination of federally assisted credit. See Office of Management and Budget (1988a).

2/ Department of the Treasury (1990), pp. 7-11.

3/ For a discussion of issues in the regulation of GSEs, see Stanton (1989).

4/ See Kemp (1990).

5/ Office of Management and Budget (1990), pp. 237-238.

VII. Conclusion

The essential ingredient of the credit reform proposals of the Administration and Senate regarding the budgetary treatment of federal credit assistance programs is to make program subsidy costs the focus of budgetary efforts. By subjecting these subsidies to annual appropriations, the Government would gain a more effective means to control the long-run costs of direct and guaranteed loan programs. Moreover, a credit rating standard for the liabilities of GSEs along with enhanced regulatory oversight, as recommended by the Administration, would serve to limit the ability of these enterprises to expose the Government to significant financial risks. If enacted, such measures would help to contain the long-run fiscal effects of credit programs.

Reforms to enhance the Government's control over existing credit programs would represent an important first step in improving their economic effects by eliminating unintended subsidies. Similarly, measures to improve the management of risks in programs, such as risk-adjusted mortgage insurance fees, would improve the targeting of resources. However, while the high subsidy-rate programs appear to have a significant effect on the allocation of capital, the efficiency gains from these programs is less clearcut. If the policy objective is mainly redistributive, more direct means exist to achieve this goal.

Table 1. Federal Direct Loans Outstanding
(In millions of dollars, end of fiscal year)

	1982	1983	1984	1985	1986	1987	1988	1989
<u>Funds appropriated to the President</u>								
International security assistance	17,358	20,722	24,037	26,532	29,849	32,570	30,365	22,422
Agency for International Development	11,762	11,840	11,866	11,855	11,919	11,706	12,411	11,853
<u>Department of Agriculture</u>								
Agriculture credit insurance fund	24,207	24,385	25,927	28,563	28,698	27,600	25,481	22,547
Rural housing insurance fund	24,368	26,022	27,201	28,860	29,295	26,510	27,098	27,867
Rural development insurance fund	6,556	7,013	7,333	7,708	7,957	6,431	5,141	3,798
CCC commodity loans	12,484	16,007	9,759	15,105	21,608	18,577	11,999	8,904
Public Law 480 long-term export credits	8,307	8,801	9,269	10,046	10,622	11,219	11,632	12,204
Rural electric and telephone revolving fund	29,180	32,285	34,287	35,636	35,941	34,323	34,354	35,129
Rural Telephone Bank	1,173	1,254	1,327	1,383	1,434	1,447	1,413	1,485
<u>Department of Education</u>								
Direct and guaranteed student loans	11,315	11,816	12,439	13,336	14,418	10,389	11,107	11,983
College housing loans	3,045	3,025	2,676	2,300	2,229	1,194	705	679
<u>Department of Housing and Urban Development</u>								
Low rent public housing	1,786	2,270	3,394	2,146	2,111	2,074	2,037	1,995
Housing for the elderly or handicapped	3,641	4,470	5,155	5,667	6,189	6,566	6,863	7,220
CNMA special assistance	3,298	3,002	2,165	1,634	884	457	34	0
FHA mutual mortgage insurance fund	4,150	5,044	4,166	4,204	4,246	4,645	5,123	5,158
<u>Department of Transportation</u>								
MARAD ship financing fund	158	222	270	597	1,475	1,612	1,294	1,261
<u>Department of Veterans Affairs</u>								
Loan guarantee revolving fund	1,561	1,496	1,066	1,211	1,188	1,204	1,288	1,188
Export-Import Bank	16,565	16,883	17,504	16,860	14,351	11,202	9,905	9,385
<u>Small Business Administration</u>								
Business loan and investment fund	3,096	4,328	4,595	4,873	4,950	4,515	4,149	3,871
Disaster loan fund	6,073	5,496	4,960	4,557	4,222	3,719	3,260	2,868
Other programs and agencies	17,612	18,894	19,905	17,366	18,008	16,279	16,314	15,409
Total federal direct loans	207,695	223,005	229,301	240,439	251,594	234,239	221,973	207,226

Source: Office of Management and Budget (1983-90).

Table 2. Federally Guaranteed Loans Outstanding
(In millions of dollars, end of fiscal year)

	1982	1983	1984	1985	1986	1987	1988	1989
<u>Funds appropriated to the President</u>								
International security assistance	257	227	200	180	160	140	2,600	8,650
Agency for International Development	967	1,073	1,105	1,176	1,216	1,328	1,409	1,555
<u>Department of Agriculture</u>								
Agricultural credit insurance fund	1,132	1,025	1,128	1,385	2,161	2,488	3,507	3,708
Rural housing insurance fund	1,068	998	993	755	617	177	50	41
Rural development insurance fund	3,387	3,389	3,206	2,912	2,626	1,918	1,688	1,440
CCC export credits	2,650	4,357	4,690	5,094	3,609	3,723	4,919	7,240
Rural electric and telephone revolving fund	1,004	862	910	1,045	1,030	1,434	2,868	2,557
<u>Department of Education</u>								
Guaranteed student loans	22,700	26,490	31,962	35,807	37,482	40,067	47,610	48,522
<u>Department of Housing and Urban Development</u>								
Low rent public housing	20,770	19,935	19,985	8,887	8,612	6,252	5,998	5,734
FHA mutual mortgage insurance fund	142,252	160,985	170,032	195,480	223,520	275,417	300,758	326,036
<u>Department of Transportation</u>								
MARAD ship financing fund	7,176	7,320	7,046	6,444	4,995	4,279	3,864	3,602
<u>Department of Veterans Affairs</u>								
Loan guarantee revolving fund	108,784	119,933	125,383	130,591	142,562	146,319	149,705	152,099
Export-Import Bank	6,069	5,439	5,684	5,127	4,785	5,079	5,703	4,836
<u>Small Business Administration</u>								
Business and investment loans	9,947	8,457	8,534	8,782	8,362	9,014	9,711	10,801
Other departments and agencies	3,041	3,352	5,803	6,777	8,071	9,394	9,576	10,848
Total federally guaranteed loans (net) ^{1/}	331,204	363,842	386,661	410,442	449,808	507,029	549,966	587,669
<u>Memorandum item</u>								
GNMA guarantees of FHA/VA/FmHA pools	115,537	152,339	176,485	201,026	241,230	308,997	333,445	361,291

Source: Office of Management and Budget (1983-90).

^{1/} Excludes GNMA guarantees of FHA/VA/FmHA mortgage pools.

Table 3. Government-Sponsored Enterprise Links to the Federal Government

Feature	Federal National Mortgage Association	Federal Home Loan Mortgage Corporation	Federal Home Loan Banks	Farm Credit System	Federal Agricultural Mortgage Corporation	Student Loan Marketing Association	College Construction Loan Insurance Association
Chartered by Act of Congress	Yes	Yes	Yes	Yes	Yes	Yes	No
Ownership	Private	Private	Private	Private	Private	Private	Federal & Private <u>1/</u>
President or presidential appointees appoint some board members	Yes (5/18)	Yes (5/18)	Yes (6/14) <u>2/</u>	No	Yes (5/15)	Yes (7/21)	Yes (4/11)
Treasury lending authorized	\$2.25B	\$2.25B	\$4.0B	No <u>3/</u>	\$1.5B <u>4/</u>	\$1.0B	No
Treasury approval of debt insurance	Yes	Yes	Yes	No	No	Yes	No
Eligible for Federal Reserve open market purchases	Yes	Yes	Yes	Yes	n/a <u>5/</u>	Yes	No
Use of Federal Reserve as fiscal agent	Yes	Yes	Yes	Yes	Yes	Yes	No
Eligible to collateralize public deposits (all U.S. Government; most state & local)	Yes	Yes	Yes	Yes	Yes	Yes	No
Exempt from Securities and Exchange Commission registration (1933 Act)	Yes	Yes	Yes	Yes	No	Yes	No
Government securities for purposes of the Securities Exchange Act of 1934	Yes	Yes	Yes	Yes	No	Yes	No
Eligible for unlimited investment by national banks and state bank Federal Reserve members	Yes	Yes	Yes	Yes	Yes	Yes	No
Eligible for unlimited investment by thrifts regulated by Federal Deposit Insurance Corporation or Office of Thrift Supervision	Yes	Yes	Yes	Yes	Yes	Yes	No
Exemption of corporate earnings from federal income tax	No	No	Yes	Yes <u>6/</u>	No	No	No
Exemption of corporate earnings from state and local income tax	Yes	Yes	Yes	Yes	No	Yes	No
Exemption of interest paid from state income tax	No	No	Yes	Yes	No	Yes	No
Subject to General Accounting Office audit	Yes <u>7/</u>	Yes <u>7/</u>	Yes	No	Yes	No	No
Federal regulator	HUD <u>8/</u>	HUD	FHFB <u>9/</u>	FCA <u>10/</u>	FCA	None	None

Source: Department of the Treasury (1990), p. 4.

1/ Federally owned stock may be sold after five years from date of incorporation.

2/ Each bank.

3/ Treasury is authorized to guarantee up to \$4 billion of Financial Assistance Corporation bonds.

4/ Upon required certificates from Federal Agricultural Mortgage Corporation, borrowing from Treasury authorized to make payments under guarantee.

5/ Entity newly created.

6/ Federal Land Banks, Farm Credit Banks, and Financial Assistance Corporation.

7/ Mortgage transactions may be subject to General Accounting Office audit under rules that may be prescribed by the Comptroller General.

8/ Department of Housing and Urban Development.

9/ Federal Housing Finance Board.

10/ The Farm Credit System Assistance Board also has certain powers with respect to the Financial Assistance Corporation and the system institutions financial assistance.

Table 4. Securities of Government-Sponsored Enterprises Outstanding

(In millions of dollars, end of calendar year)

	1982	1983	1984	1985	1986	1987	1988	1989
College Construction Loan Insurance Association	—	—	—	—	—	—	—	—
Farm credit system	76,225	74,405	74,248	68,851	62,478	55,275	54,621	56,739
Federal Agricultural Mortgage Association	—	—	—	—	—	—	—	—
Federal Home Loan Banks	55,967	48,931	65,085	74,460	89,590	116,386	136,513	136,086
<u>Federal Home Loan Mortgage Corporation</u>								
Debt securities	4,988	7,273	10,999	12,747	15,375	19,547	26,882	26,149
Mortgage-backed securities	42,952	57,990	70,920	100,507	169,186	212,635	226,406	272,870
<u>Federal National Mortgage Association</u>								
Debt securities	69,614	74,594	83,719	93,985	93,563	97,057	105,459	116,064
Mortgage-backed securities	14,450	25,121	36,215	54,987	97,174	139,960	178,250	228,232
Student Loan Marketing Association	—	—	10,545	13,195	16,941	21,243	26,783	33,588
Total credit market borrowing of government-sponsored enterprises	264,196	288,314	351,731	418,732	544,307	662,103	754,914	869,728

Sources: Office of Management and Budget (1983-85) and Department of the Treasury (1990).

Table 5. Direct Loan Write-Offs and Guaranteed Loan Terminations for Defaults

(In millions of dollars, fiscal years)

	1982	1983	1984	1985	1986	1987	1988	1989
<u>Direct loan programs</u>								
Agency for International Development	—	—	308	—	—	99	147	20
Agricultural credit insurance	20	31	46	114	205	865	1,282	2,475
Rural housing insurance fund	—	—	—	—	16	31	50	60
Direct and guaranteed student loans	—	172	65	6	7	121	52	282
Other Department of Education loans	—	—	—	—	15	24	20	193
FHA mutual mortgage insurance fund	132	632	152	55	82	65	32	114
MARAD ship financing fund	—	—	—	—	—	196	359	23
Small Business Administration	308	378	429	499	554	592	493	455
Other	147	191	213	98	67	4	97	65
Total write-offs	607	1,404	1,213	772	946	1,997	2,532	3,687
<u>Guaranteed loan programs</u>								
Agricultural credit insurance	—	—	—	26	61	90	94	64
Rural development insurance fund	—	—	—	—	82	57	52	105
CCC export credits	—	—	—	185	317	456	272	4
Guaranteed student loans	286	486	749	1,018	1,475	1,382	1,438	1,960
FHA mutual mortgage insurance fund	890	1,484	1,756	2,234	2,906	4,433	6,178	5,881
MARAD ship financing fund	—	—	93	321	1,243	342	181	—
VA loan guarantee revolving fund	709	1,056	1,121	1,353	1,541	1,898	2,322	2,116
Export-Import Bank	25	14	461	258	—	—	—	—
Small Business Administration	845	790	613	476	457	548	465	479
Other	98	409	344	206	53	370	193	125
Total terminations <u>1/</u>	2,853	4,239	5,137	6,077	8,135	9,576	11,195	10,734

Source: Office of Management and Budget (1983-90).

1/ Excludes foreign military sales credits and grants to AMTRAK.

Table 6. Estimated Subsidy Costs for Federal Direct Loan Obligations

	1989	1990	1991	1992	1993	1994
	(In percent of direct loan obligations)				(In millions of dollars)	
<u>Funds appropriated to the President</u>						
Agency for International Development	8.3	3.3	...	0.4	0.1	—
Overseas Private Investment						
Corporation	14.5	15.4	12.6	2.5	2.6	2.9
<u>Department of Agriculture</u>						
Agriculture credit insurance fund	13.1	20.8	20.7	74.7	187.3	137.2
Rural housing insurance fund	...	17.9	50.6	—	98.4	729.2
Rural development insurance fund	13.6	17.6	19.9	40.9	35.2	68.9
Rural development loan fund	...	67.4	51.3	—	9.4	15.4
Public Law 480 long-term export credits	70.0	71.2	72.7	517.1	531.9	540.0
Rural electric and telephone revolving fund	...	15.3	29.9	—	0.3	60.3
Rural Telephone Bank	15.2	15.3	8.0	26.9	19.2	10.0
<u>Department of Housing and Urban Development</u>						
Housing for the elderly or handi- capped	21.7	20.0	20.0	72.5	6.4	56.5
FHA mutual mortgage insurance fund	3.1	3.1	3.1	3.2	2.7	4.7
<u>Department of Veterans Affairs</u>						
Loan guarantee revolving fund	16.0	6.6	11.0	0.2	64.0	80.6
Export-Import Bank	11.6	...	7.8	82.0	—	30.0
<u>Small Business Administration</u>						
Business loan and investment fund	...	...	42.6	—	—	2.1
Disaster loan fund	14.2	...	27.8	37.7	—	79.2
Other programs and agencies	...	...	...	26.6	47.3	22.5
Total subsidy cost of federal direct loan program	...	...	...	884.7	1,004.8	1,839.5

Source: Office of Management and Budget (1988-90).

Table 7. Estimated Subsidy Costs for Federal Guaranteed Loan Commitments

	1989	1990	1991	1989	1990	1991
	(In percent of direct loan obligations)			(In millions of dollars)		
<u>Funds appropriated to the President</u>						
International security assistance	7.5	...	...	155.2	—	—
Agency for International Development	14.5	19.4	29.8	21.4	25.6	31.6
<i>Overseas Private Investment</i> Corporation	13.1	14.7	12.2	22.9	25.7	22.6
<u>Department of Agriculture</u>						
Agriculture credit insurance fund	0.8	4.2	3.8	0.1	124.9	104.5
Rural housing insurance fund	...	...	25.7	...	...	152.4
Rural development insurance fund	0.9	2.0	4.8	0.9	3.4	7.7
CCC export credits	13.7	14.5	14.0	554.0	798.0	749.0
Rural electric and telephone revolving fund	17.3	4.2	11.7	80.7	77.8	128.6
Rural Telephone Bank	...	...	5.6	...	...	11.2
<u>Department of Education</u>						
Guaranteed student loans	33.6	32.3	35.5	3242.3	4043.7	3924.3
<u>Department of Housing and Urban Development</u>						
FHA mutual mortgage insurance fund	1.2	1.2	1.2	900.0	804.0	900.0
GNMA secondary mortgage guarantees	1.9	1.9	1.9	1900.0	1425.0	1520.0
<u>Department of Veterans Affairs</u>						
Loan guarantee revolving fund	6.6	5.2	8.3	1184.0	769.1	1257.7
Export-Import Bank	2.5	1.3	1.4	254.0	136.4	151.3
<u>Small Business Administration</u>						
Business loan and investment fund	9.1	0.7	10.2	327.3	25.6	450.2
Other programs and agencies	...	...	...	100.0	31.6	83.4
Total subsidy cost of federal guaranteed loan programs	8,742.8	8,290.8	9,494.5

Source: Office of Management and Budget (1988-90).

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