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Inspectors General

Subject: Financial Audit: Auditing Use of OMB's Credit Subsidy Model

Federal agencies use the Office of Management and Budget's (OMB) Credit Subsidy Model (CSM) to calculate credit subsidies for federal direct loan and loan guarantee programs. With outstanding balances for federal credit programs approaching a reported $1 trillion, accountants and auditors preparing and auditing agency financial statements, as well as CSM users, need to have assurance that the CSM calculates a reliable subsidy cost in compliance with applicable legislation and accounting standards.

In order to provide such assurance on a governmentwide basis, we undertook a review and are issuing the results today in a report to the Director of OMB, Credit Reform: Review of OMB's Credit Subsidy Model (GAO/AIMD-97-145). As a result of this work, certain issues surfaced related to the use of the CSM that need to be addressed as part of the financial statement audits of user agencies. Thus, with assistance from the Federal Audit Executive Council, credit agencies' inspectors general, representatives of the Governmentwide Credit Reform Subgroup, and OMB's credit reform staff, we prepared a list of supplemental audit procedures to help provide assurance that federal credit agencies are using the CSM properly. These audit procedures, included as the enclosure to this letter, should be used in conjunction with more comprehensive guidance on auditing credit reform subsidy estimates found in Preparing and Auditing Direct Loan and Loan Guarantee Subsidies Under the Federal Credit Reform Act, a draft issue paper prepared by the Governmentwide Credit Reform Subgroup, which is expected to be issued during fiscal year 1998.

The collaborative approach used to develop the CSM audit procedures is similar to the process that we used recently to prepare our letter to you, Financial Audit: Reconciliation of Fund Balances with Treasury (GAO/AIMD-97-104R, June 24, 1997). In both instances, the process worked well and we appreciate the assistance we received. As other audit issues surface during the audit of the Consolidated Financial Statements of the U.S. Government, we plan to follow the same approach in obtaining input from the inspector general community before finalizing any material.

Copies of the report on the CSM, including the supplemental audit procedures, have been sent to the Office of Management and Budget and the chief financial officers at federal credit agencies. If you have any questions regarding the information in this letter or the enclosure, please contact me at (202) 512-2600, Linda Calbom, Director, Civil Audits, at (202) 512-8341, or McCoy Williams, Assistant Director, at (202) 512-6906.

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Enclosure

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AUDIT PROCEDURES TO VERIFY PROPER USE OF THE CREDIT SUBSIDY MODEL

Proper use of the Office of Management and Budget's (OMB) Credit Subsidy Model (CSM) requires that user agencies correctly install the appropriate CSM version, make correct choices from available CSM options and commands to accurately reflect specific credit program characteristics, control access to the CSM, and understand the CSM's capabilities and limitations.

With the assistance of the Federal Audit Executive Council, credit agencies' inspectors general, representatives of the Governmentwide Credit Reform Subgroup, and OMB's credit reform staff, we identified the following audit procedures that should be performed to ensure proper use of the CSM. Comprehensive guidance on auditing credit reform subsidy estimates is included in Preparing and Auditing Direct Loan and Loan Guarantee Subsidies Under the Federal Credit Reform Act, a draft issue paper prepared by the Governmentwide Credit Reform Subgroup, which is expected to be issued during fiscal year 1998. Audit procedures discussed below should be used in conjunction with those presented in the issue paper. Additionally, these procedures are intended to provide audit guidance that may or may not be applicable in all situations. The auditors should use professional judgment in determining which are applicable to the agency they are auditing.

Ensure Use of an Appropriate and Unmodified Version of the CSM

Since 1990, OMB has periodically revised the CSM to add enhancements, make methodology changes, and otherwise improve its operation. Different versions of the CSM may produce slightly different subsidy rates. As of July 1997, the current version of the CSM was Version r.9, dated August 1, 1994. We expect that OMB will, on occasion, release new versions of the CSM. In addition, although it may be unlikely, the agency's computer file of the CSM may become modified intentionally or accidentally. Therefore, the auditor should obtain the appropriate version of the CSM for the fiscal year under audit by contacting the agency's OMB budget examiner.[1] This version should be compared with the version used by the agency in its subsidy calculations. To verify that the agency's version of the CSM is unmodified, the auditor should use the "file compare" feature of desktop operating software to compare the agency's version with the OMB official, approved version. If the two versions are the same, the auditor can conclude that the agency's version is unmodified. If they differ, the auditor should bring this to the

[1]The auditor may also wish to obtain from the OMB budget examiner information on past errors in agency use of the CSM and a copy of the most recent or appropriate version of the CSM User's Guide.

attention of agency management and the OMB budget examiner and obtain an explanation for the differences. Finally, as the ultimate check, the auditor can calculate the subsidy rate using the agency's cash flows, the agency's version of the CSM, and OMB's version of the CSM and compare the results.

Verify That Approved Cash Flow Data Are the Same Data Used by the CSM to Calculate the Subsidy Rate

The user agency should provide the auditor with the approved cash flow data that support its credit program subsidy rate for each of the credit programs selected for internal control and substantive testing. (Cash flow data will be available from electronic spreadsheet files in a format prescribed by the CSM User's Guide.) The auditor should verify that these data were, in fact, the same data used by the CSM to calculate the applicable subsidy rate. The spreadsheet file name, the range name, and the date and time the spreadsheet was last changed are included in the printed CSM output. The auditor can check this information against the named spreadsheet file provided by the agency to verify the cash flow data used in the CSM's subsidy calculation. However, if the spreadsheet file provided by the agency was changed after the subsidy calculation, the date and time stamp on the spreadsheet file will not match what is on the CSM output. In this case, the CSM output will not provide sufficient information to verify the cash flow data used by the CSM. Therefore, the auditor will need to use other methods. One method is to recalculate the subsidy rate using the cash flow data provided by the agency and the auditor's copy of the appropriate version of the CSM obtained from the applicable agency's OMB budget examiner. If the recalculated subsidy rate is the same as the subsidy rate under audit, the auditor should be able to conclude that the cash flow data provided by the user agency was the same data used by the CSM. If the recalculated subsidy rate is different, the auditor should bring this to the attention of agency management and the OMB budget examiner and obtain an explanation for the difference.

Follow Up on Error Messages

Prior to calculating a subsidy rate, the CSM performs several edits on agency-generated cash flows to help ensure that cash flow data do not contain obvious errors. If the CSM edit process identifies a serious error, the CSM will issue an error message and terminate its operation without calculating a subsidy. However, if the CSM edit process determines an error to be less serious, it will issue a "warning" but will not terminate the program. Warnings will be listed with the subsidy rate calculation on CSM output sent to a printer. The auditor should review CSM output to identify whether any warning messages are listed and follow up with agency management to determine why the situation causing the warning message was not resolved and whether not eliminating the error could have any impact on the subsidy rate calculation.

In addition, the CSM provides options for the user to suppress certain warning messages. For example, when cumulative scheduled principal payments do not equal disbursements, a warning message is normally issued. If the agency has suppressed this warning, auditors should determine whether this suppression is appropriate. This concern applies to other warning messages as well. Specifically, the auditor should check the agency's cash flow spreadsheet to determine whether the "suppress warnings" command was used. If so, the auditor should request that the agency explain why warning messages were suppressed and, if certain warning messages are suppressed, whether conditions exist that would cause those messages to be generated, and whether the warning indicates a material problem in the cash flows.

Ensure That Options Chosen Properly Reflect Specific Characteristics of Each Credit Program

Proper use of the CSM requires that the agencies select the appropriate options from those available (see Chapter III of the CSM User's Guide, Version r.9) and use the appropriate Treasury rate to discount cash flows to net present value. Particular care should be used in reviewing the choice of timing options for the principal and interest payments in direct loan programs. When a row of cash flows for scheduled principal or interest payments is prepared using standard financial formulas (which assume disbursements at the beginning of the period and payments at the end of the period), the "simple annual" option should be used. In contrast, when estimates of interest and principal payments are based on the assumption that these payments occur continuously throughout the year, the timing option row of cash flows should be "continuous." When the wrong timing option is used for scheduled principal or interest payments, the financing subsidy may be materially distorted. The auditor may also want to review the choice of timing options for payments and receipts other than principal and interest, although the effects of these distortions are generally smaller.

Care should also be exercised when reviewing cash flows for loan guarantee programs that guarantee less than 100 percent of the face value. As indicated in the User's Guide, the amount in the cash flow row for "disbursement of loans by private lenders" is the total amount disbursed by the lenders, regardless of how much is guaranteed by the credit agency. The amount of disbursed loans guaranteed by the government is included in the row of the cash flow representing the estimate of claims made against the government. For example, if an agency has a program that guarantees 75 percent of loans disbursed, and the lenders disburse $100,000 in loans that immediately default, the agency should put $100,000 in the disbursement by private lenders cash flow row and $75,000 in the cash flow row for defaults.

Ensure Proper Scale Has Been Used in Cash Flow Spreadsheets

OMB's assertions state, "The model rounds cash flows to three decimal places when read from spreadsheet files. Because of the rounding, and particularly in programs that have disbursements over several years, the calculated subsidy can change slightly with the scale of the program. This effect is most pronounced when many of the cash flow items are very small after rounding (.005 or .011, for instance). Small values are especially sensitive to the hazards of rounding." Therefore, agency controls should be in place to ensure that rounding to three decimal places has no significant effect on the spreadsheet values and, in turn, the calculated subsidy. For example, if a series of underlying values, in millions of dollars, are 0.0054, 0.0054, 0.0054, the CSM will round each to 0.005–losing 0.0004 in each case, which could be significant. In this situation, the agency should express values in thousands of dollars so that the underlying values are 5.400, 5.400, 5.400–losing nothing in the rounding–in order to obtain a more precise subsidy rate calculation. The auditor should confirm that management controls are adequate to ensure that the cash flows contain the proper scale and that rounding has no significant effect on the subsidy calculation. If these controls are not adequate, the auditor should review the cash flow spreadsheet to ensure that the scale used is appropriate. The auditor should also bring the situation to the attention of agency management.

Determine Whether Cash Flows Are Prepared at Appropriate Level of Detail

The CSM permits spreadsheet cash flow data to be prepared on a disbursement year basis or a cohort basis. (A disbursement year consists of all loans from a given cohort that are disbursed in a given fiscal year.) For the special case in which all disbursements occur during a single fiscal year, the disbursement year includes the entire cohort and these bases do not differ. However, for loan programs with cohorts that disburse over more than one year, the disbursement year includes just part of the cohort. For such programs, the cash flows for each disbursement year of a given cohort are necessary to precisely calculate subsidies at the time of disbursement. Because agencies cannot always provide such detail, the CSM permits less detailed cohort level data–combinations of 2 or more disbursement years–to be used as an approximation. But the use of cohort level data can introduce distortions. For example, a loan program can be expected to have a zero financing (interest rate) subsidy if the borrower rate is the same as the discount rate. However, if a program disburses loans over 2 or more years, cohort rather than disbursement year cash flows are used, and the discount rates are not held constant in all disbursement years, the CSM will calculate a non-zero subsidy.

Therefore, whenever a loan program has substantial disbursements in 2 or more years and the agency has prepared cash flows using cohort level rather than disbursement year data, the auditor should determine why disbursement year cash flows were not used. Specifically, if there are reasons why disbursement year cash flows cannot be prepared, these reasons should be documented. On the other hand, if disbursement year cash flows are available, the auditor should determine whether the use of cohort level cash flows has had a material effect on the subsidy calculation. A determination that an effect is material should take into account the size of the difference in absolute terms and relative to the subsidy, the effect on the level of loans supported by the subsidy, and other factors the auditor may consider important. If the auditor determines that the effect is material, the auditor should recommend that the agency prepare cash flows on a disbursement year basis to eliminate the problem. If the agency is unable to do this, the auditor should exercise professional judgment to determine whether there is a potential for material misstatement and whether this situation would affect the ability to conclude on the fairness of the amounts in related accounts.

Compare Cash Flow Spreadsheet and Related Subsidy Rate With Prior Years

Credit reform and the CSM require credit agencies to develop spreadsheets of projected cash flows, which must be presented in a prescribed format and require the spreadsheet preparer to choose among various commands and options that properly characterize each credit program. Once an auditor has determined that a spreadsheet contains the proper format, commands, options, etc. for the credit program, then the auditor can have some assurance about future years' cash flows with the same formats, commands, options, etc. If changes in formats or commands on the cash flow spreadsheets have been made, auditors should discuss with agency officials why such changes were made, including what the changes are intended to accomplish. An auditor may wish to use analytical procedures each year to confirm that any changes to the credit program are properly reflected in the spreadsheet and that changes to the spreadsheet and associated subsidy rate, including components, are reasonable. For example, if an agency's fee structure has not changed, the auditor should expect the subsidy rate component attributable to fees to remain the same.

Evaluate Agency Security Controls Over CSM Access

OMB's assertions state that agencies are responsible for ensuring that the CSM has not been corrupted or otherwise inappropriately changed. Such assurance requires that agencies have procedures in place to limit access to the CSM to authorized personnel only.[2] For example, the auditor might expect to find procedures to ensure password protection on the desktop workstation where the CSM resides. The auditor should review these procedures and determine if they adequately protect the CSM from unauthorized use and corruption.

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[2]Agency access controls should be implemented for the CSM copy that is used to produce the agency's official subsidy rate calculations.

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