



Federal Accounting Standards Advisory Board

Auditing Estimates for Direct Loan and Loan Guarantee Subsidies
under the Federal Credit Reform Act
*Amendments to Technical Release 3: Preparing and Auditing Direct Loan
and Loan Guarantee Subsidies under the Federal Credit Reform Act*

Federal Financial Accounting and Auditing

**Technical Release 3
(Revised)**

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THE FEDERAL ACCOUNTING STANDARDS ADVISORY BOARD

The Federal Accounting Standards Advisory Board (FASAB or "the Board") was established by the Secretary of the Treasury, the Director of the Office of Management and Budget (OMB), and the Comptroller General in October 1990. It is responsible for promulgating accounting standards for the United States Government. These standards are recognized as generally accepted accounting principles (GAAP) for the Federal Government.

An accounting standard is typically formulated initially as a proposal after considering the financial and budgetary information needs of citizens (including the news media, state and local legislators, analysts from private firms, academe, and elsewhere), Congress, Federal executives, Federal program managers, and other users of Federal financial information. The proposed standard is published in an exposure draft for public comment. In some cases, a discussion memorandum, invitation for comment, or preliminary views document may be published before an exposure draft is published on a specific topic. A public hearing is sometimes held to receive oral comments in addition to written comments. The Board considers comments and decides whether to adopt the proposed standard with or without modification. After review by the three officials who sponsor FASAB, the Board publishes adopted standards in a Statement of Federal Financial Accounting Standards. The Board follows a similar process for Statements of Federal Financial Accounting Concepts, which guide the Board in developing accounting standards and formulating the framework for Federal accounting and reporting.

Additional background information is available from the FASAB:

- *"Memorandum of Understanding among the General Accounting Office, the Department of the Treasury, and the Office of Management and Budget, on Federal Government Accounting Standards and a Federal Accounting Standards Advisory Board."*
- *"Mission Statement: Federal Accounting Standards Advisory Board."*

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The Accounting and Auditing Policy Committee

The Accounting and Auditing Policy Committee (AAPC) was organized in May 1997 by the Department of the Treasury, the Office of Management and Budget (OMB), the General Accounting Office (GAO), the Chief Financial Officers' Council (CFOC), and the President's Council on Integrity and Efficiency (PCIE), as a body to research accounting and auditing issues requiring guidance.

The AAPC serves as a permanent committee sponsored by the Federal Accounting Standards Advisory Board (FASAB). The mission of the FASAB is to set accounting standards after considering the financial and budgetary information needs of congressional oversight groups, executive agencies, and the needs of other users of Federal financial information. The mission of the AAPC is to assist the Federal government in improving financial reporting through the timely identification, discussion, and recommendation of solutions to accounting and auditing issues as they relate to the specific application of existing authoritative literature.

The AAPC is intended to address issues that arise in implementation, which are not specifically or fully discussed in Federal accounting and auditing standards. The AAPC's guidance is cleared by FASAB before being published.

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Introduction

1. The purpose of this technical release is to amend the guidance for auditors to audit credit subsidy estimates provided in Technical Release 3: *Preparing and Auditing Direct Loan and Loan Guarantee Subsidies under the Federal Credit Reform Act (TR3)*, July 1999. The original technical release (July 1999) contained both audit and accounting guidance. The most significant changes made in this amended TR 3 are 1) the removal of the preparation guidance from this amended TR to only include the audit guidance and 2) procedural changes updating the document to reflect new guidance and changes in terminology in the area of credit reform (e.g., SFFAS 18 & 19; and OMB Circular A-11). Concurrent with the issuance of this amended technical release on auditing guidance, Technical Release 6 is being issued and will contain only the guidance for preparing estimates.
2. Readers of this technical release should first refer to the hierarchy of accounting standards in Statement on Auditing Standards (SAS) 91, Federal Generally Accepted Accounting Principles Hierarchy (or see AU411).
3. This technical release includes sections on:
 - Planning the Credit Subsidy Audit
 - Testing Internal Control
 - Substantive Testing of Subsidy Estimates
4. It also presents four appendices on:
 - Acceptable Sources of Documentation for Subsidy Estimates and Reestimates
 - Technical Glossary
 - Summary of Reestimate Requirements
 - Summary of Reporting Requirements
5. This technical release does not address loan asset sales and does not provide complete guidance for administrative expenses and pre-1992 direct loans and loan guarantees. Guidance on these areas can be found in SFFAS Nos. 2, 18, & 19 and OMB Circular No. A -11 and OMB Bulletin No. 01-09. Additional guidance on loan asset sales will be addressed separately in the future.

Background

6. This technical release is designed to provide guidance on the audit of credit subsidy estimates. There are three parts of subsidy: initial subsidy, modifications of subsidy and reestimates of subsidy. This technical release discusses audit methods, both internal control and substantive procedures, that may be used to audit credit subsidy estimates, modifications and reestimates. As complex and varied as credit subsidies are within Government, auditor judgment is essential to

implementing this guidance. This technical release also provides guidance on acceptable sources of documentation for subsidy estimates and reestimates.

Accounting and Budgeting Guidance

7. Federal agencies are required to account for direct loans and loan guarantees in accordance with Statement of Federal Financial Accounting Standards No. 2, *Accounting for Direct Loans and Loan Guarantees* (SFFAS No. 2), SFFAS No. 18, *Amendments to Accounting Standards for Direct Loans and Loan Guarantees*, and SFFAS No. 19, *Technical Amendments to Accounting Standards for Direct Loans and Loan Guarantees*.
8. OMB Circulars A-11 *Preparation, Submission, and Execution of the Budget* and A-129 *Policies For Federal Credit Programs and Non-Tax Receivables* provide guidance to agencies on definitions, procedures and rules for calculating subsidy estimates and reestimates for the President's Budget and modification cost estimates, obligation of budget authority for the credit program's cost, and credit and receivables policy.
9. The Credit Subsidy Calculator (CSC) is a computer program provided to the agencies to calculate the cost of direct loans and loan guarantees using the agencies' cash flow estimates. The OMB Circular A-11 requires that all agencies with credit programs must use the CSC to discount the credit subsidy estimate and reestimate cash flows that they are responsible for generating.

Materiality

10. The provisions of this guidance need not be applied to immaterial items.

Effective Date

11. The guidance outlined in this technical release is effective immediately.

Audit Tests for Direct Loan and Loan Guarantee Subsidy Estimates

12. The overall purpose of auditing the subsidy estimation and re-estimation process is to provide reasonable assurance that the reported credit program receivables and related foreclosed property and related allowance for subsidy, liabilities for loan guarantees, and subsidy expense, are reasonably stated in the financial statements and provide reliable and useful information for decision makers. Since the audit should be conducted in three phases--planning, internal control, and substantive testing--this technical release is organized in the same way. Due to the complexity of credit subsidy estimates, thorough planning is key to an effective and efficient audit. The auditor must also assess the agency's internal control and the risk of errors and irregularities that may cause a material misstatement in the financial statements. Based on this assessment, the auditor can determine the nature, timing, and extent of substantive testing to determine whether the credit subsidy estimate is reasonable in the context of the financial statements taken as a whole.

Planning the Credit Subsidy Audit

13. The audit of credit subsidy estimates should be considered in conjunction with other audit areas, e.g., claims, insurance in force, foreclosed property, premium receipts, and loan sales. In this way, the auditor will be able to leverage off the other audit areas to maximize audit efficiency and effectiveness. When planning the audit of credit subsidy estimates, the auditor must consider the budget preparation process, which generally occurs during the same time as the planning phase, and the impact audit adjustments may have on the budget submission. When planning the nature, timing, and extent of the audit of credit subsidy estimates, the auditor is encouraged to perform the review and testing of the cash flow models, as described throughout this section, early in the audit process. By performing these audit procedures early in the agency's audit, any necessary adjustments to the cash flow model can also be made in time to be included in the budget cash flow model. In this way, the audit of the credit subsidy estimates will fulfill the intent of paragraph 17 in SFFAS No. 2 which states that "The Board recognizes the value of having financial accounting support the budget. It endorses the logic underlying credit reform, and it recommends that accounting standards for credit be consistent with budgeting under credit reform." Auditors are encouraged to use their judgment when determining the nature, timing, and extent of tests that will be performed. Not all of the tests contained in this Technical Release will be applicable to all credit programs.
14. During the planning phase, the auditor should focus on four primary objectives: (1) understanding the agency's credit subsidy estimate process, (2) identifying

key estimate assumptions, (3) identifying material and high risk credit programs, and (4) assessing inherent risk and the effects of information technology on inherent risk.

Understanding the Credit Subsidy Estimate Process

15. Without a thorough understanding of the agency's credit subsidy estimate process, the auditor is unable to efficiently and effectively audit the loans receivable and the related allowance, the liability for loan guarantees, and the subsidy expense, in accordance with applicable auditing standards. To gain an understanding of the credit subsidy process, the auditor should
 - a. Review the documented subsidy estimation procedures to gain an understanding of the process, including the types of underlying data used to develop cash flow assumptions, key formulas used in cash flow worksheets, and the person responsible for each phase of the process.
 - b. Identify significant external and internal factors that may affect the credit subsidy process. External factors may include economic conditions, current political climate, and relevant legislation. Internal factors may include the size of the agency's budget and accounting staff, qualifications of key personnel, turnover of key personnel, and systems capabilities.
 - c. Develop a high-level understanding of the agency's use of information technology, how information technology affects the subsidy estimate process, and which systems should be included with the general and application control review.¹
 - d. Determine, with the assistance of a systems audit specialist as necessary, whether systems-related controls are likely to be effective.² If controls are not likely to be effective, the auditor should determine the impact on control risk, appropriately adjust substantive testing, and focus on testing the effectiveness of manual controls during the internal control phase of the audit.

¹ The auditor should actively coordinate general and application control reviews of financial management systems to ensure that they focus on controls over key cash flow reports such as defaults or prepayments as well as the controls over the cash flow spreadsheets. Further, the auditor should consider evaluating controls over the agency's use of the OMB Credit Subsidy Calculator. For a detailed discussion of the audit procedures related to the OMB Credit Subsidy Calculator, refer to the Report of Independent Accountants and Independent Verification and Validation (Y2K) Documents Pertaining to the Credit Subsidy Calculator, available on OMB's Federal Credit Support Page prepared by the Budget Analysis Branch: <http://www.omb.gov/credit>. These audit procedures have been included in this technical release in summary form.

² Although the actual testing of technical system-related controls should generally be performed by a systems audit specialist, the financial statement audit team should participate in identifying and testing general controls, user controls, and application controls to tentatively conclude on the effectiveness of systems-related controls.

16. The auditor may gather planning information through different methods such as observing agency operations, interviewing agency staff, reviewing procedures manuals, and conducting walk throughs. In addition, the auditor may gather information from relevant reports, including prior year financial statements, Federal Managers' Financial Integrity Act (FMFIA) reports and supporting documentation, Inspector General and internal audit reports, and congressional hearings and reports.

Identifying Key Assumptions

17. One way for the auditor to maximize audit efficiency is to focus on the key assumptions, i.e., those assumptions that have the greatest impact on the credit subsidy rate and hence, the credit subsidy amount. To identify key assumptions, the auditor should evaluate and retest selected areas of management's credit subsidy sensitivity analysis. For example, in performing this analysis, agency management may have varied the subsidy estimate assumptions by a fixed amount, such as 10 percent in either direction, and was thus able to identify the degree to which the subsidy rate was sensitive to different assumptions. These assumptions often require greater audit effort because minor variations may have material effects on the subsidy amount. The auditor should review this sensitivity analysis carefully and retest selected portions as necessary to gain comfort with management's work before relying on it. In resetting the agency's sensitivity analysis, the auditor should consider recalculating the impact that changes in key assumptions have on a credit program's subsidy amounts.
18. When identifying key assumptions, additional consideration should also be given to those assumptions that fluctuate significantly. These assumptions may be more difficult to predict, and their normal fluctuation may materially affect the credit subsidy amount even though the credit subsidy amount may not change significantly during the sensitivity analysis. For example, prepayments may be difficult to predict since historically they fluctuated ten percent or more over the past five years. Thus, even though the auditor did not identify prepayments as a key assumption during the review of the agency's sensitivity analysis, prepayments should be considered a key assumption because their normal fluctuation may materially affect the credit subsidy amount.
19. If management has not performed sensitivity analysis of the credit subsidy assumptions, the auditor may consider performing a sensitivity analysis or other analysis to identify the key cash flow assumptions. This analysis will allow the auditor to focus on key areas and will increase the auditor's efficiency in the substantive testing phase of the audit.

Identifying Material and High Risk Credit Programs for Internal Control and Substantive Testing

20. In order for the auditor to maximize efficiency and effectiveness when selecting programs for internal control testing and substantive testing, the auditor should focus efforts on material programs. Generally, material programs have higher inherent risk than immaterial programs. Materiality is defined in Financial Accounting Standards Board Statement of Financial Concepts No. 2, Qualitative Characteristics of Accounting Information, as "the magnitude of an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement." Thus, items of little importance are less likely to affect the financial statement users' judgment. Materiality has both qualitative and quantitative factors, since certain types of relatively immaterial misstatements from a quantitative standpoint could be significant for other reasons. For example, some programs that are immaterial in amount could be sensitive because of Congressional interest.
21. According to Statement on Auditing Standard 47, AU Section 312, Audit Risk and Materiality in Conducting an Audit, "audit risk and materiality, among other matters, need to be considered together in determining the nature, timing, and extent of auditing procedures and in evaluating the results of those procedures." The following list includes some of the factors that the auditor should consider in determining which direct loan or loan guarantee programs are material and/or high risk and therefore should be selected for testing.
- The amount of subsidy expense for a given program,
 - The dollar value of the program's direct loans on the balance sheet,
 - The dollar value of the program's loan guarantees and their related liability for default,
 - The dollar amount of subsidy expense, magnitude of transactions, and variance of past reestimates,
 - Past audit experience for the program,
 - The auditor's preliminary assessment of risk,
 - Recent significant changes in economic conditions,
 - The complexity of the program (the number, size, and technical difficulty of the loans),
 - The age of the program (new programs may have more risk than older established programs, other things being equal),
 - The degree to which sub-recipients, contractors, and private lenders make decisions about implementing the program, and
 - Congressional and other public policy interest in a given program.

22. This list is designed to assist the auditor in identifying material and/or high-risk programs. The above list is not designed to replace professional judgment. For example, a credit program could have a relatively small subsidy expense because the agency nets gross subsidy expense components with offsetting fees, in accordance with SFFAS No. 2 and the Credit Reform Act. However, the auditor should not focus solely on the net subsidy expense. Rather, the auditor should consider the gross amounts of the subsidy expense and fees, the total loans receivable, and/or the total liability for loan guarantee account when determining whether the program is material.
23. Past audit experience should be considered since it may indicate that the program should be retested again this year when, for example, significant internal control weaknesses were discovered in the prior year's audit. Conversely, past audit experience may allow the auditor to reduce the level of current year testing for the program. Factors that should be considered in determining the appropriate level of detailed substantive testing for material programs include:
 - The number of years since the last time the program was included in internal control and substantive testing,
 - The results of the preliminary assessment of risk,
 - Changes in economic events that affect the current cash flow assumptions,
 - The level of employee turnover, and
 - Changes in program characteristics, terms of credit, or implementation.
24. Finally, when inherent risk is low and the agency's control environment is strong, the auditor may consider testing credit programs on a rotating basis. In determining whether rotational testing is appropriate, the auditor should consider (1) the results of prior audit experience, (2) the length of time since the program was tested, (3) the materiality of the program, and (4) the auditor's assessment of inherent and control risk.
25. Upon completion of the internal control testing, the auditor may wish to revise the assessment of which programs are material and/or high risk. For example, the auditor's preliminary risk assessment may not be supported by the results of the internal control testing. When the results of the internal control testing lead the auditor to conclude that the internal control is not operating effectively, the auditor may revise the risk assessment for programs originally expected to have low risk. As a result, the auditor should include these programs in the detailed substantive testing. On the other hand, the auditor may decide to reduce the extent of detailed substantive testing for a material program based on the results of internal control testing.

Assessing Inherent Risk and the Effects of Information Technology

26. Based on the auditor's understanding of the credit subsidy estimation process, the auditor identifies specific inherent risks³ and control environment weaknesses. To identify inherent risk factors, the auditor generally focuses on (1) the nature of the agency's program, (2) prior history of audit adjustments, and (3) the nature of material transactions. The nature of an agency's program may increase inherent risk. For example, some loan guarantee programs may be more susceptible to errors because of loans issued and serviced by third parties. Significant audit adjustments in previous audits often identify problem areas that may continue to result in financial statement misstatements. Accounts involving subjective management judgments, such as credit subsidy estimates and the liability for loan guarantees, are usually higher risk than those involving objective determinations.
27. Information Technology can also introduce inherent risk factors. The auditor should assess systems-related factors and determine the overall impact of information technology on inherent risk. For example, unusual or non-routine transactions generally increase inherent risk. Programs or systems developed to estimate credit subsidy amounts, e.g., the agency's cash flow spreadsheets, may not be subjected to the same procedures and controls as EDP programs and systems developed to process routine transactions. The degree of existence and completeness of the audit trail may also increase inherent risk. The audit trail demonstrates how a specific transaction was initiated and processed. Some EDP financial management systems are designed so that the audit trail exists only for a limited period, only in electronic format, or only in summary form. Uniform processing of transactions may also increase inherent risk because a programming error will consistently misstate transactions. For example, if an agency misstates a cash flow assumption, such as defaults, recoveries, or the interest rate, in a cash flow spreadsheet that has been electronically linked to other cash flow spreadsheets, the error will affect all of the linked cohorts or programs. As a result, the auditor must be aware that some errors may be systemic rather than isolated incidents and the auditor should be careful to distinguish between the two.

³ Inherent risk is the susceptibility of a financial statement assertion to a material misstatement, assuming that there are no related internal controls. Financial statement assertions are representations by management that are embodied in financial statement components. See Codification of Statements on Auditing Standards, AU Section 326.

Testing Internal control

28. As noted above, the auditor should select material programs for internal control and detailed substantive testing. In this way, the auditor will more effectively and efficiently focus audit efforts on the programs that are most significant to the users of the financial statements. In some instances, more than one program will utilize the same system of internal control. Thus, the auditor would need only test the system once to gain assurance on all related programs. This section provides guidance for the auditor to use in evaluating the agency's internal control for material and/or high-risk credit programs so that the auditor can determine the nature, timing, and extent of substantive tests to perform on credit reform related accounts such as subsidy expense, allowance for subsidy, and liabilities for loan guarantees. The auditor needs to evaluate the agency's internal control before updating the preliminary assessment of the control risk.⁴
29. Due to the complexity of credit reform, it is necessary for the auditor to obtain a good understanding of the internal control components to design effective substantive tests. If, after evaluating the agency's internal control, the auditor assesses control risk at a high level, the auditor will need to obtain most, if not all, of the audit assurance from substantive tests. Thus, the auditor will need to expand the level of detailed substantive testing. However, if the auditor determines that control risk is low based on the evaluation of the agency's internal control, the auditor has more assurance concerning the accuracy of the information generated within that structure. Thus, the auditor may be able to reduce the level of detailed substantive testing.
30. Internal control is a process--affected by an agency's management⁵ and other personnel--to provide reasonable assurance regarding the achievement of reliable financial reporting, effective and efficient operations, and compliance with applicable laws and regulations. Internal control consists of the control environment, control activities, information and communication, risk assessment, and monitoring. The auditor should consider the following when obtaining an understanding of the agency's internal control.

⁴ Control risk is the risk that a material misstatement could occur in a financial statement assertion and will not be prevented, detected, and corrected on a timely basis by the entity's internal control structure.

⁵ In this technical release, the term "agency management" is used in the same context as it is used in OMB Circular A-123 and may include any individual Federal manager responsible for ensuring that credit reform is implemented efficiently and effectively to achieve intended program results. Agency management could include, but is not limited to, the Chief Financial Officer, Director of Budget, and Controller.

Assessing the Control Environment

31. The control environment sets the tone of an organization, influencing the control consciousness of its people. It is the foundation for all other components of internal control, providing the discipline and structure. When assessing the control environment, the auditor should consider management's philosophy and operating style (done elsewhere in the audit) and generally perform the following steps for the material programs' systems of internal control.
 - a. Determine whether the same estimation process was used for other programs by comparing the documented procedures between programs. If the same process was used between programs, the results of the internal control testing for this program may help the auditor gain comfort with other programs.
 - b. Determine how management assures itself that established procedures and internal control have been consistently implemented among the various divisions/branches responsible for preparing subsidy expense estimates.
 - c. Determine how management assures itself that the historical data used as the basis for the subsidy amounts accurately supports the cash flow assumptions.
 - d. Determine whether the agency has the appropriate supporting documentation for key assumptions as outlined in Appendix A of this technical release.
 - e. Determine how management assures itself that assumptions or data requirements which are based on conditions affecting multiple programs and cohorts are uniformly applied. For example, identify and test the controls in place that management relies on to ensure that:
 - Similar assumptions are made concerning economic conditions for a particular business sector where both direct and guaranteed credit programs are delivered,
 - Historical data for subsidy expense components are consistently collected and interpreted among similar programs, and
 - Options chosen for the OMB Credit Subsidy Calculator properly reflect the specific characteristics of the applicable credit program.
 - f. Review management's comparison of projected cash flows to actual cash flows from the accounting department. Determine whether management (1) appropriately identified material variances and the cause of these variances, (2) performed trend analysis of the credit subsidy components, (3) adjusted future cash flow estimates of those cohorts to reflect these variances, (4) determined whether there was a flaw in the cash flow spreadsheet that caused the variance and, if so, determined the impact this flaw had on all cohorts, and (5) reestimated subsequent years' subsidy amounts, as appropriate.

- g. Determine whether the agency is appropriately using the latest version of the OMB Credit Subsidy Calculator by recalculating the subsidy rate with the agency's estimated cash flows.⁶
- h. If applicable, determine whether waivers were obtained from OMB for years in which subsidy reestimates were not performed in accordance with OMB guidance.
- i. Determine how management assures itself that the agency used the proper scale for the cash flow spreadsheets. Some program subsidy rates, particularly those for programs disbursing over several years, may be influenced significantly by the scale for cash flow values. Therefore, management should determine whether an appropriate scale has been used so that rounding to three decimal places has no significant effect on the cash flow spreadsheet values and the subsidy rate.
- j. Determine how management assures itself that the agency has appropriately prepared cash flows using a cohort basis or disbursement year basis. For example, when a program disburses over more than one year, the auditor should determine whether the agency used a disbursement year basis. If the agency used a cohort basis, the auditor should determine why the agency did not use a disbursement year basis and whether the use of cohort level cash flows has had a material effect on the subsidy calculation. If the effect is material, the auditor should recommend that the agency prepare cash flows on a disbursement year basis to eliminate the problem.
- k. Determine whether agencies have controls over access to the OMB Credit Subsidy Calculator, e.g., confirmation of passwords, and determine whether these controls adequately protect the model from unauthorized use and corruption.

Control Activities

- 32. Control activities are the policies and procedures designed to ensure that management directives are carried out. Control activities have various objectives and are applied at various organizational and functional levels. Control activities can include physical controls, segregation of duties, performance reviews, and information processing. When assessing management's assignment of responsibility and delegation of authority for ensuring the efficient and effective implementation of credit reform, the auditor should consider doing the following.

⁶ A copy of the model is available from OMB's Budget Analysis Branch.

- a. Assess management's control methods for monitoring and following up on the agency's ability to prepare reliable subsidy estimates by reviewing, on a test basis for material programs, management's comparison of projected net cash flows with actual cash flows to determine whether over time projected cash flows are becoming more representative of actual cash flows and whether reestimates are the result of controllable factors (technical cash flow assumptions) or uncontrollable factors (discount rate assumptions).
- b. Verify that the cash flow assumptions that the agency used in developing its cash flow estimates were reviewed and approved by the appropriate agency management.
- c. Determine how management assures itself of the reliability and logic flow in formulas and mathematical functions within agency initial cash flow worksheets.
- d. Assess the internal control used by management to ensure that changes made to cash flow spreadsheet formulas are appropriate. For example, if changes made to one cash flow spreadsheet need to be carried forward to other spreadsheets, determine whether this is done automatically or if each spreadsheet must be updated individually. Assess the risk of errors being introduced during this process.
- e. Determine whether management has a systematic process in place to identify significant changes in economic or other assumptions that will affect subsidy rates of existing cohorts. Determine whether management has a systematic process in place to calculate the differences between actual and estimated cash flows and the possible effect of these differences on the future cash flows of existing cohorts. Determine whether this process assesses the materiality of these changes on the cash flow estimates and the subsidy expense and appropriately concludes whether reestimates are required under OMB guidance. In evaluating potential changes in cash flow assumptions, the process should assess the impact that various factors may have on the program (which also may affect subsidy rates), such as:
 - Legislative program changes,
 - Administrative program changes,
 - Environmental changes,
 - Operational changes, e.g., a reduction in employees because of budgetary constraints that would impact the servicing of loans,
 - War, and
 - International economic factors.
- f. Determine how management assesses the impact of changes in laws or regulations on the reliability of estimates. For example, a legislative program change may include provisions about maturity or type of borrowers that are outside the scope of past agency experience or may include program changes that shift the composition of new lending toward more or less risky borrowers. Stratification of the portfolio by risk category may enable management to assess the effect of the changes on the estimates. If the

- agency's databases do not permit such stratification, the uncertainty associated with the estimates may increase.
- g. Determine whether management has a systematic process in place to estimate the effect of the factors considered in paragraph (e) above on the cash flows of new cohorts.
33. Once specific controls related to the above activities have been identified, additional tests should be designed to ensure that the agency's controls are operating as designed. The auditor should consider using dual purpose testing to combine the internal control testing with substantive testing as appropriate. Dual purpose testing is discussed in more detail in the section on substantive testing of subsidy estimates in this technical release.

Information and Communication

34. The quality of system-generated information affects management's ability to prepare reliable financial reports. Communication involves providing an understanding of individual roles and responsibilities pertaining to internal control over financial reporting. The auditor should obtain an understanding of (1) the classes of transactions in the agency's operations that are significant to credit reform accounting in accordance with Treasury case studies, (2) how those transactions are initiated, (3) the accounting records, supporting information, and specific accounts in the financial statements involved in the processing and reporting of the transactions, (4) the accounting process involved from the initiation of a transaction to its inclusion in the financial statements, and (5) the financial reporting process used to prepare the agency's financial statements, including significant accounting estimates and disclosures. When assessing controls over information and communication, the auditor should consider doing the following:
- a. Identify and test the controls in place designed to ensure that appropriate personnel are made aware of any concerns that result from reviewing key cash flow assumptions and comparing estimated to actual cash flows as well as the actions taken to resolve the concerns and update the subsidy estimate as appropriate.
- b. Determine whether internal control are in place to ensure that the data supporting the cash flow identifiers⁷ used in the spreadsheets are appropriate and consistent with the description of the identifier contained in the applicable user's guide of the OMB Credit Subsidy Calculator. Effective internal control are needed to ensure that disclosures concerning the amount of subsidy expense related to interest differential (direct loans), interest supplement

⁷ Cash flow identifiers are listed in the document, "How to organize cash flow estimates in a spreadsheet file," which is available on the Federal Credit Support Page (<http://www.omb.gov/credit>). The document includes various elements the agency must consider when estimating net cash flows, such as disbursements, principal payments, interest payments, fees and other income, defaults, etc.

(loan guarantees), defaults (net of recoveries), fees, and other are reasonable. For example, the auditor should identify and test controls designed to ensure that the amount estimated for recoveries is based on reliable, complete information from the agency's past experience. For example, the auditor should also identify and test controls designed to ensure that, when compiling the information upon which the estimate is made, transactions have been properly classified as a recovery rather than a reduction in the amount of another cash identifier such as "defaults" or "losses other than default."

- c. Determine whether controls are in place to ensure that all applicable credit program cash flows are addressed in the subsidy estimation process. For example, cash flows should be estimated for all transaction types that affect Standard General Ledger Account nos. 1399, Allowance for Subsidy, and 2180, Loan Guarantee Liability. Conversely, transactions in unrelated accounts should be excluded from the subsidy calculation. To test these controls, the auditor should consider reviewing the cash flow worksheet input and the program description to determine whether all applicable cash flow types have been included. In addition, the auditor should review the transaction types included in the Allowance for Subsidy and the Liabilities for Loan Guarantees accounts on a test basis to determine whether these transactions are appropriate.

Risk Assessment

35. The risk assessment process is an internal process used by the agency to (1) identify and analyze the relevant risks to achieving its objectives and (2) develop a plan to mitigate the identified risk. The auditor should obtain sufficient knowledge of the agency's risk assessment process to understand how management identifies, evaluates, and mitigates risks relevant to developing reliable credit subsidy estimates. In evaluating the risk assessment process, the auditor should determine if management developed a strategic plan with goals and objectives for ultimately improving the reliability of estimates. The auditor should determine whether this plan addresses (1) clearly defining the data requirements, (2) developing an effective information store and modeling methods as described in issue paper 96-CR-7 [Model Credit Program Methods and Documentation for Estimating Subsidy Rates and the Model Information Store](#), available from the AAPC web page (<http://fasab.gov/aapc/cdreform/othercrddoc.htm>), (3) improving the methods of estimating cash flows, and (4) step-by-step resource allocations and target completion dates to meet the goals and objectives of the strategic plan. Also the auditor should assess management's progress at meeting the plan's goals and the targeted completion dates.

Monitoring

36. Management should monitor controls to determine whether they are operating as intended and that they are modified as appropriate for changes in conditions. Monitoring is a process that assesses the quality of internal control performance over time. OMB Circular A-123, Management Accountability and Control, is issued under the authority of the Federal Managers' Financial Integrity Act (FMFIA) of 1982 and provides guidance to federal managers on improving the accountability and effectiveness of federal programs and operations by establishing, assessing, correcting, and reporting on management controls. During federal financial statement audits, the auditor is required to assess the agency's compliance with the FMFIA. The auditor should obtain sufficient knowledge of the major types of activities the entity uses to monitor internal control over financial reporting, including how those activities are used to initiate corrective actions. When assessing control risk, the auditor should be cognizant of any material weaknesses reported in the agency's FMFIA report that relate to the efficient and effective implementation of credit reform.

Substantive Testing of Subsidy Estimates

37. Agencies are required by SFFAS No. 2 to account for subsidies at the cohort level in their accounting systems. This information is then aggregated for inclusion in the financial statements. As previously noted, footnote information related to credit programs is typically reported at the fund or program level and the total subsidy expense for the year is divided among three categories: the current year's direct loans or loan guarantees, modifications, and reestimates. The subsidy expense for the current year's direct loans or loan guarantees is segregated into four categories consisting of interest differential or supplement, defaults, fees, and other. The auditor needs to gain assurance about these cost categories at the aggregated fund/program level; however, it is difficult for the auditor to apply adequate procedures for summary amounts which represent numerous cohorts. It would be difficult to explain variations in aggregated amounts without addressing the more detailed cohort level. Determination of what level to disaggregate subsidy information for the purposes of an audit will vary for each agency and will be contingent on current practice and available information.

General Approach to Substantive Testing

38. The following four steps provide a general approach for performing substantive testing. Detailed guidance on implementing these four general steps follows. The nature, timing, and extent of substantive tests will be significantly influenced by the auditor's assessment of the internal control environment. **This section is**

written under the premise that the agency has established effective internal control. The next section includes a discussion of the impact of ineffective controls on the nature, timing, and extent of substantive testing as well as the impact on the audit opinion.

- a. Select a representative sample of cohorts for detailed testing, for those material programs selected for internal control testing.⁸
- b. Test sampled cohort estimates to determine whether the credit reform process is working as defined and whether the account balance is reasonably stated.
- c. Perform analytical review procedures to gain assurance that the estimates are reasonable for lines of business, funds, programs, or cohorts not selected for detail testing.
- d. Conclude on audit differences identified during the test work and determine the financial statement impact.

Impact of Ineffective Internal control on Substantive Testing

39. The auditor's assessment and conclusions regarding the effectiveness of the agency's internal control structure, including computer security and the effectiveness of edits and other system controls, will significantly impact the level of substantive testing. If the agency's internal control structure is not effective (i.e., does not adequately reduce the risk that a material misstatement related to credit reform in the financial statements would be detected and corrected), the auditor will need to design substantive tests to gain assurance on the account balance and propose audit adjustments as necessary.
40. For example, if there is no system in place to trigger reestimates, the auditor will need to review management's comparison of actual cash flows for material programs to projected cash flows to search for and identify material variances. In addition, the auditor will need to determine whether the agency identified other factors that may materially affect future cash flows, e.g., economic downturn, program changes, or drought, and may require a reestimate. If the budgeted to actual cash flow comparison was not done by the agency, the auditor should consider performing this analysis based on resource availability. Based on the auditor's analysis of the identified variances and other changes that may affect future cash flows, the auditor should determine whether a reestimate is necessary and urge the agency to calculate the reestimate. Once the reestimate is made, the auditor is then able to assess the impact of the reestimate on the financial statements.
41. If in the auditor's opinion (1) the internal control weaknesses are so significant that the subsidy expense is likely to be materially misstated, (2) resource constraints make it unreasonable for the auditor to conduct the level of

⁸ Professional standards stated in AU Section 350.24 that "sample items should be selected in such a way that the sample can be expected to be representative of the population. Therefore, all items in the population should have an opportunity to be selected."

substantive testing necessary to determine the possible audit adjustments, or (3) resource constraints at the agency make it unreasonable to calculate all the necessary material reestimates and include them in the financial statements, the auditor would likely be required to modify the audit opinion. For example, the monitoring process to determine whether reestimates are necessary is a key internal control. Without effective monitoring, the agency may not have reasonable assurance that material reestimates will be made timely and the auditor would need to expand the level of substantive testing. When an agency does not (1) reestimate credit subsidies for the most recently completed fiscal year and include the reestimate in the current year's financial statements or (2) provide assurance that there is no material financial statement impact (as specified in TR 6 paragraphs 47 – 58), the auditor should consider modifying the audit opinion.

42. When assessing the financial statement impact of subsequent events related to credit subsidies, the auditor should follow the guidance in AU Section 342.13 for events occurring after the reestimate date but before the end of fieldwork. In addition, auditors should consider AU Sections 508.19 and .29 - .32 when assessing the effect of uncertainties on the agency's financial statements and the auditor's opinion.

Selecting the Sample of Cohorts

43. The procedures for selecting a sample of cohorts depend upon the type of information to be gleaned from the sample and the desired precision of sample estimates. The sampled cohort is tested to determine whether the credit reform process is working as defined and more specifically, whether the related balance sheet and statement of net cost line items are reasonably stated. In order to gain audit efficiencies, the auditor should consider utilizing dual purpose testing⁹ for a representative sample of cohorts selected from material credit programs. In this way, the auditor will be able to gain assurance from the same sample that both the internal control structure is effective and that the account balance is reasonably stated in relation to the financial statements taken as a whole. When more than one program utilizes the same system of internal control, the auditor should only test the system once to gain assurance on all related programs and their cohorts. To utilize representative sampling, the auditor must select sample items in such a way that each item in the population has an opportunity to be selected and the estimators are appropriate for the selection methods. In this way, the sample and the resulting estimate or projection are expected to be representative of the population from which the sample was selected. In addition, sufficient sample sizes are necessary in order for the auditor to arrive at meaningful conclusions.

⁹ Dual purpose testing often improves audit efficiency by performing multiple audit procedures on a single sample, e.g., internal control attribute and substantive testing.

44. The auditor may wish to stratify the population of cohorts into homogeneous groups prior to selecting the sample to improve sampling efficiency. For example, the auditor may stratify the cohort population into the following three significant groups: (1) material cohorts of such a magnitude that the auditor will test them all, (2) material cohorts that the auditor will sample for testing, and (3) immaterial cohorts that will be subjected to analytical review procedures. For some agencies, the small number of cohorts may prohibit using this sampling approach. In these instances, the auditor should focus on selecting a representative sample in a nonstatistical manner, i.e., using auditor's judgment to select material cohorts for testing to obtain sufficient coverage of the balance being audited or doing a 100 percent sample.

45. Alternatively, when the agency's control environment is strong and inherent risk is low, the auditor may test cohorts on a rotating basis. In determining whether rotational testing is appropriate, the auditor should consider (1) the results of prior audit experience, (2) the length of time since the cohort was tested, (3) the materiality of the cohort in terms of the relative effect of the cohort on total program expenditures or the size of the program in absolute dollars, and (4) the auditor's assessment of inherent and control risk. The auditor may wish to score these factors in determining the cohort's relative risk. Based on the cohort's score, the auditor may establish a rotation matrix for substantive testing. For example, all cohorts above a predetermined score would be considered high risk and selected for substantive testing while other cohorts below this score could be tested on a rotating basis.

Testing Sampled Cohorts

46. Professional standards call for the auditor to "analyze historical data used in developing the assumptions to assess whether the data are comparable and consistent with data of the period under audit, and consider whether such data are sufficiently reliable for the purpose."¹⁰ In the planning phase, the auditor identified the key assumptions as those whose variation had the greatest impact on the subsidy rate or which varied significantly. Based on this work, and the results of the internal control analyses, the auditor should be able to focus on the key assumptions. However, these key assumptions may be tested in conjunction with the audit of other financial statement line items. For example, the default rate assumption for guaranteed loans can be tested as part of the audit of claim payments, recovery rate assumptions can be tested during the audit of foreclosed property, fees can be audited in conjunction with insurance premium or other cash receipts, and prepayments can be audited during the audit of

¹⁰ Codification of Statements on Auditing Standards, AU Section 342, Auditing Accounting Estimates.

insurance in force. In these cases, the auditor must carefully plan the audit samples for these areas in order to include information that will be applicable to the credit subsidy audit and gather sufficient evidence for the auditor to determine the reasonableness of the credit subsidy. For example, when auditing credit subsidy default, prepayment, and recovery assumptions, it is important to determine for which cohort the claim payment was made.

47. The following are examples of the types of tests the auditor can perform on a representative sample of cohorts selected for dual purpose testing:
 - a. Collect projected cash flow worksheets used for budget execution and the most recent reestimates for each cohort selected for testing to determine whether the program assumptions are utilized at the cohort level. Trace and compare key cash flow assumptions to the agency's supporting data, including reports on defaults, prepayments, recoveries, etc.
 - b. Verify the reliability of the data used in developing the assumptions and ensure that key assumptions are sufficiently reliable by
 - Comparing the reports to similar reports tested in related audit areas to assess consistency and
 - Tracing summary reports to historical supporting documentation, on a test basis, to determine whether the reports are complete and accurate.
 - c. Determine whether management used reasonable and systematic methods to project key cash flow assumptions by reviewing, assessing, and recalculating, on a test basis, key portions of the cash flow worksheets.
 - d. Based on the results of system-related control tests, the auditor should consider obtaining an appropriate, unmodified version of the OMB Credit Subsidy Calculator, downloading the agency's cash flows into this version, and comparing the output to the agency's subsidy calculation. In performing these procedures, it is important for the auditor to use the same cash flows as those used to calculate the subsidy rate. Thus, the auditor should verify that the file name, range name, and the date and time the spreadsheet was last changed matches the information on the model output. If differences are identified through this comparison, the auditor should consider recalculating the subsidy rate using the agency's data and an appropriate copy of the model.¹¹ Differences between the auditor's recalculated rate and the agency's rate should be investigated and explained.
 - e. The auditor should review the OMB Credit Subsidy Calculator output to determine whether any warning messages are listed and, if so, 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. Also, if applicable, auditors should determine whether the suppression of any error messages was appropriate by checking the agency's cash flow spreadsheet to determine whether the "suppress warnings" command was used and assess the impact these suppressed error messages could have on the subsidy rate.

¹¹ A copy of the model is available on OMB's Federal Credit Support Page (<http://www.omb.gov/credit>) or from OMB's Budget Analysis Branch.

- f. The auditor should determine whether the OMB Credit Subsidy Calculator options that were selected properly reflect specific characteristics of the applicable credit program. For example, the OMB Credit Subsidy Calculator options for the timing of principal and interest payments for direct loan programs and the timing of commitments and disbursements by the private lender of a loan guaranteed should agree with the program's credit terms.
- g. Verify that reestimates were performed under the conditions specified in Technical Release 6. Determine whether reestimates were performed in addition to those required in Technical Release 6. For example, reestimates required for budgetary purposes may not be material to the financial statements.
- h. Determine that these reestimates were completed, included in the financial statements, and submitted to OMB.
- i. Determine whether the re-estimation process included adjustments to subsequent years' estimates of cash flows for this cohort.
- j. Determine why reestimates were not calculated¹² and included in the financial statements, if applicable. When reestimates are not prepared for the most recently completed fiscal year, the agency must document the reason for forgoing the reestimate otherwise required in Circular A-11 and SFFAS No. 2 and provide the necessary supporting documentation to OMB and the auditor. The documentation should address the requirements prescribed in Technical Release 6.
- k. Trace interest rates to approved OMB rates to ensure that interest expense and income are calculated in accordance with OMB Circular A-11.
- l. Determine if the reestimates recorded in the accounting records were submitted to OMB.
- m. Determine whether modifications occurred as defined in SFFAS No. 2 and OMB Circulars A-11 and whether the modification cost was estimated.
- n. Verify whether the cash flows and discount rates used to calculate the pre-modification and post-modification values of the direct loans (or values of the loan guarantee liability) were determined appropriately.
- o. Verify whether the modification cost was submitted to OMB, recorded in the accounting records, and included in the financial statements.

Analytical Review Procedures

48. Analytical review procedures can be performed on lines of business, funds, programs, or cohorts not selected for detailed testing. Generally, these procedures consist of comparing recorded balances of subsidy expense, fund balance with Treasury, debt owed to Treasury, credit program receivables and related foreclosed property, and the liabilities for loan guarantees, with the

¹² OMB has established a four-step process, outlined in Circular A-11, for agencies to calculate technical reestimates for the budget less often than every fiscal year—subject to OMB approval. However, this guidance does not allow agencies to omit material technical reestimates from the current year financial statements or to postpone including material technical reestimates in the financial statements until a subsequent year. Conversely, the OMB process may require agencies to make technical reestimates for the budget that are not material to the financial statements.

auditor's expectations. The basic premise of analytical review procedures is that plausible relationships among data may be expected to continue unless conditions are known that would change the relationship. Based on the results of the analytical review procedures outlined below, some programs may be selected for detail substantive testing. In applying analytical review procedures, the auditor should consider the following procedures.

- a. Based on the information gathered during the internal control phase of the audit, including the auditor's understanding of the estimation process and economic events affecting the period under review, develop an expectation or estimate of what the recorded amount should be. For example, the auditor could compute an estimate of the subsidy expense by using averages as an overall test of reasonableness, i.e., average loans outstanding, average interest rate, average default rate, and average fees. Compare the results of the auditor's estimate to the actual recorded balance to identify significant differences that require investigation. When making estimates of an account balance, the auditor should assess the reliability of the data used and the impact faulty data could have on the auditor's expectation of the subsidy amount.
- b. Compare the subsidy amounts for lines of business, funds, programs, or cohorts not selected for sampling for three or more years to identify trends and significant fluctuations in the subsidy rates.
- c. Obtain explanations for these fluctuations from management to determine whether the fluctuations are reasonable. Scan¹³ cash flow worksheets/reports to search for unusual items and investigate significant fluctuations.
- d. Corroborate management's explanations as necessary. Corroboration generally consists of reviewing related supporting documentation or obtaining explanations from accounting or budget personnel or from the appropriate program department. These explanations should be quantified and address the direction and magnitude of the event causing the fluctuation.
- e. If the explanation and/or corroborating evidence do not adequately explain the fluctuation, the auditor should consider
 - Increasing the precision in the auditor's expectations,
 - Increasing the extent of detailed testing for the cohorts discussed above and not relying on the analytical procedures, or
 - Treating the difference as a misstatement.
- f. Review and recalculate selected portions of the agency's trend analysis of the credit subsidy expense components to determine whether the agency identified and explained unusual or significant fluctuations in interest, defaults, fees, and other. If the agency has not done the credit subsidy

¹³ Although scanning is not usually considered an analytical procedure on its own, this technique could be used to investigate unusual fluctuations in subsidy amounts or corroborate management's explanation of variances between projected cash flows and actual cash flows.

component trend analysis, the auditor should consider performing this analysis. Once unusual or significant fluctuations have been identified, the auditor should obtain and corroborate management's explanation.

Compliance with Laws and Regulations

49. By using the audit approach described in this technical release, the auditor will test compliance with the Federal Credit Reform Act of 1990, as amended. Thus, no separate audit procedures are necessary to test compliance with this act.

Concluding on the Reasonableness of Estimates

50. Statement on Auditing Standard No. 57 Auditing Accounting Estimates, AU 342, states that the auditor evaluates the reasonableness of accounting estimates in relationship to the financial statements taken as a whole. It goes on to state:
"Since no one accounting estimate can be considered accurate with certainty, the auditor recognizes that a difference between an estimated amount best supported by the audit evidence and the estimated amount included in the financial statements may be reasonable, and such difference would not be considered to be a likely misstatement. However, if the auditor believes the estimated amount included in the financial statements is unreasonable, he should treat the difference between that estimate and the closest reasonable estimate as a likely misstatement and aggregate it with other likely misstatements. The auditor should also consider whether the difference between estimates best supported by the audit evidence and the estimates included in the financial statement, which are individually reasonable, indicate a possible bias on the part of the entity's management. For example, if each accounting estimate included in the financial statements was individually reasonable, but the effect of the difference between each estimate best supported by the audit evidence was to increase income, the auditor should reconsider the estimates taken as a whole."
51. Uncertainties, among other qualitative aspects of information in financial reports, are discussed in Statement of Federal Financial Accounting Concepts (SFFAC) No. 1, Objectives of Federal Financial Reporting. According to SFFAC No. 1, "Reliability [of financial information] does not imply precision or certainty, but reliability is affected by the degree of estimation in the measurement process and by uncertainties inherent in what is being measured." Thus, an amount reported in the financial statements may be "fairly stated," but still imprecise. In addition, SFFAC No. 1 states that "Financial reporting may need to include narrative explanations about underlying assumptions and uncertainties inherent in this process. Under certain circumstances, a properly explained estimate provides more meaningful information than no estimate at all." In other words, imprecision of accounting estimates can be overcome, to some extent, by appropriate financial statement disclosures. In determining whether (1) the credit

program receivables and related foreclosed property and the liabilities for loan guarantees line items on the balance sheet, (2) the subsidy expense included in the statement of net costs, and (3) related footnote disclosures regarding credit reform are reasonably stated, the auditor must evaluate and carefully consider all of the audit evidence gathered, including the results of the internal control testing, system reviews, detailed substantive testing, analytical review procedures, as well as the above authoritative guidance.

Appendix A: Acceptable Sources of Documentation for Subsidy Estimates and Reestimates

52. Documentation must be provided to support the assumptions used by the agency in the subsidy calculations. This documentation will not only facilitate the agency's review of the assumptions, a key internal control, it will also facilitate the auditor's review. Documentation should be complete and stand on its own, i.e., an independent person could perform the same steps and replicate the same results with little or no outside explanation or assistance. If the documentation were from a source that would normally be destroyed, then copies should be maintained in the file for the purposes of reconstructing the estimate.
53. Management should ensure that the following documentation is available for initial subsidy estimates, reestimates, and modifications of existing credit programs:
1. Procedures for calculating the subsidy estimate,
 2. Review and approval process of the subsidy estimate, including the sign-off procedure within the agency,
 3. Calculation of the recorded subsidy estimates, including the underlying assumptions and cash flow model,
 4. Historical supporting documents used in the underlying assumptions,
 5. Documentation of relevant supporting actual cash and economic experience (including the date and source of reports, and how recently the data were updated), which may include:
 - Cash reports on historical performance,
 - Historical data and trends, citing sources of information and relevant time frame,
 - Sensitivity analysis or other analysis that identifies the most critical factors,
 - Reports from the accounting or management systems showing trends
 - Actuarial studies,
 - Experience of other agencies with similar programs,
 - Emergencies (acts of God) or legislated changes (acts of Congress), such as changes in the program terms, maximum allowable loan amount, total program size, or characteristics of the credit program's borrower population, and
 - Economic and/or industry data and subsequent analyses, including industry studies, journal articles, trade papers, and third party studies.¹⁴

¹⁴ For example, past data may document the historical relationship between interest rates, whereas an independent study may demonstrate how trends in past data are expected to change in the future.

6. Documentation of relevant program design factors, which may include:
 - Program definition including fees, grace period, term to maturity, borrower interest rates, legal definitions, and enabling or enacted legislation,
 - Legislation or regulations changing the terms, maximum allowable loan amount, total program size, or characteristics of the credit program's borrower population,
 - Program eligibility requirements,
 - Lender agreements detailing the terms of the guarantee, and
 - Borrower contracts outlining the terms and conditions of the loan or guarantee.

54. Management should ensure that the following documentation is available for new programs or changes to existing programs that may not have historical supporting documentation for cash flow assumptions and spreadsheets. In the absence of valid and relevant historical experience as the support for cash flow assumptions, the agency should document the basis for cash flow assumptions. Typical support will include:

- Relevant experiences from other agencies, including documentation of why another agency's experience is relevant, as well as similarities and differences (particularly possible biases) between the other agency's experience and the changes to existing programs or new programs,
- Extrapolation from subsets of prior program activity, e.g., while prior loans were not targeted for single heads of households, it may be possible to identify prior loans that were made to single heads of households and the experience of such loans in prior records.
- Assumptions used by underwriters for the purposes of determining eligibility, loan approval, or credit scoring.
- Private sector proxies for risk, such as bond ratings to assess default risk, may be used when there is no relevant Federal Government experience. For example, an agency may consider using bond ratings for a state agency that finances similar loan programs, such as education, farm, or housing, with bonds.
- Extrapolations from private sector lending experience including documentation explaining why this experience is applicable to the agency's credit program and possible biases for which an adjustment is needed, e.g., different borrower characteristics.
- Expert opinion may also be used as an interim measure to support cash flow assumptions. In these cases, the agency must document the expert's qualifications, such as professional or academic certification or length of experience, as well as the basis

of the stated opinion. In addition, the following documents should be maintained in support of the expert's opinion:

- Memos from conversations with outside experts,
- Reports and studies on similar industry conditions,
- Minutes from internal meetings describing the basis for any assumptions or changes in assumptions, and
- Previous studies conducted by the expert, including industry studies, journal articles, and third party studies.

Appendix B: Technical Glossary

Allowance for Subsidy – See Direct Loan Subsidy Allowance Account definition.

Assumptions - basic beliefs about the future operating and functional characteristics of the loan or group of loans or loan guarantees. Types of assumptions include:

Cash flow assumptions - all known and/or forecasted information about the characteristics and performance of a loan or group of loans or loan guarantees. Examples include estimates of loan maturity, borrower interest rate, default/delinquency rate, timing of defaults, overall impact of changes in economic factors, etc.

Model assumptions - determinations of how cash flow assumptions are applied through the life of the cohort. For example, determining whether the entire assumed amount of defaults should be applied in 1 year or whether a constant or variable proportion of the assumption value should be allocated to each year. The allocation of cash flows over time is the selected model form and is just as influential as the cash flow assumptions.

Case level - each individual loan or guarantee within a cohort.

Cash flow stream - the agency's projection of the dollar amount for the scheduled cash flows and deviations from scheduled cash flow items for each year over the life of the cohort.

Cash flows - Estimates of payments to or from the Government over the life of a loan or group of loans or loan guarantees. For direct loans, these may include: loan disbursements, repayments of principal, payments of interest, and any other payments such as prepayments, fees, penalties, and other recoveries. For loan guarantees, these may include: payments by the Government to cover defaults and delinquencies, interest subsidies, payments to the Government, such as origination and other fees, penalties and recoveries, and any other payments.

Cohort - all direct loans or loan guarantees of a program for which a subsidy appropriation is provided for a given fiscal year, even if disbursements occur in subsequent years. For direct loans and loan guarantees for which a subsidy appropriation is provided for one fiscal year, the cohort will be defined by that fiscal year. For direct loans and loan guarantees for which multi-year or no-year appropriations are provided, the cohort will be defined by the year of obligation.

Direct Loan Subsidy Allowance Account - the balance maintained in the general ledger that represents the difference between the current outstanding loans receivable balance and the present value of estimated cash outflows minus the present value of the estimated cash inflows over the remaining life of the direct loans. The subsidy allowance is subtracted from the loans receivable balance when calculating the net loans receivable balance. A similar account may also be used for defaulted guaranteed loans.

Econometrics - the application of statistical methods to the estimation of economic relationships.

Financing Account - the non-budgetary account or accounts associated with each credit program account that holds balances, receives the subsidy cost payment from the credit program account, and includes all other cash flows to and from the Government resulting from

post-1991 direct loans or loan guarantees. Each program account is associated with one or more financing accounts, depending on whether the account makes both direct loans and loan guarantees (separate financing accounts are required for direct loans and loan guarantees).

Fund - an aggregation of programs into a common grouping consistent with how the Congress provides appropriations - i.e., the program and financing accounts together and, if needed, the negative subsidy receipt accounts. (This term has other meanings in different contexts.)

Inputs - in the context of Federal credit, cash flow data elements used to develop spreadsheet calculations.

Internal control - an integral component of an organization's management that provides reasonable assurance regarding the achievement of reliable financial reporting, effective and efficient operations, and compliance with applicable laws and regulations. Internal control consists of the control environment, risk assessment, control activities, information and communication and monitoring.

Key assumptions - assumptions that have been established, through sensitivity analysis or other means, to be the elements that have a large impact on estimates, and thus are the most important factors in determining the cost of a loan or group of loans or loan guarantees.

Liability for Loan Guarantees Account – the balance maintained in the general ledger that represents the present value of estimated cash outflows minus the present value of the estimated cash inflows over the remaining life of the outstanding loan guarantees.

Liquidating Account - the budget account that includes all cash flows to and from the Government resulting from pre-1992 direct loans or loan guarantees, unless they have been modified and transferred to a financing account.

Negative Subsidy Receipt Account - the budget account for the receipt of amounts paid from the financing account when there is a negative subsidy cost for the original estimate or a downward reestimate. For mandatory programs, negative subsidies and downward reestimates may be credited directly to the program account as offsetting collections from non-Federal sources.

OMB Credit Subsidy Calculator - computer software developed by OMB for discounting cash flows in estimating credit subsidies. It uses agency cash flow inputs to compute the net present value at the point of disbursement and the subsidy rate associated with those cash flows.

Program - in the context of Federal credit, an aggregation of cohorts which are linked by common terms, conditions, regulations, and/or mission goals; often a sub-division of a fund or the budgetary financing account.

Program Account - the budget account into which an appropriation to cover the subsidy cost of a direct loan or loan guarantee program is made and from which such cost is disbursed to the financing account. Program accounts usually receive a separate appropriation for administrative expenses.

Risk category - subdivisions of a cohort of direct loans or loan guarantees into groups of loans that are relatively homogeneous in cost, given the facts known at the time of obligation or

commitment. Risk categories will group all loans obligated or committed for a program during the fiscal year that share characteristics predictive of defaults or other costs. All cohort level guidance in this technical release also applies to risk categories when they are used.

Service or line of business - an aggregation of funds into a common grouping: for example, grouping funds into single family or multifamily designations. The following example is provided to illustrate the relationship the above terms have to each other and show how they may be aggregated for financial statement purposes. Agencies should consult applicable OMB guidance to determine what level of aggregation is most appropriate and acceptable.

Business line or service: Farm Service Agency

Fund: A. CCC Export Guarantees
B. Agricultural Credit Insurance Fund

Program: B1. Farm Ownership Loans
B2. Farm Operating Loans, subsidized
B3. Farm Operating Loans, unsubsidized

Cohort: B3a. FY 1992 Farm Operating Loans, unsubsidized
B3b. FY 1993 Farm Operating Loans, unsubsidized
B3c. FY 1994 Farm Operating Loans, unsubsidized
B3d. FY 1995 Farm Operating Loans, unsubsidized
B3e. FY 1996 Farm Operating Loans, unsubsidized

Risk category: B3e1. FY 1996 Farm Operating Loans, unsubsidized, Southwest Region
B3e2. FY 1996 Farm Operating Loans, unsubsidized, Northeast Region

Case: B3ai Fiscal year 1992 unsubsidized loan to farmer A
B3aii Fiscal year 1992 unsubsidized loan to farmer B

Appendix C: Summary of Reestimate Requirements

The table below summarizes the reestimate requirements for the budget and financial statement presentations.

Budget		Financial Statement
Interest Rate Reestimate	<p><u>Frequency:</u></p> <p>At least one time when the cohort is 90 percent disbursed - regardless of financial statement materiality. In addition, reestimates should be recorded in the Budget whenever made for financial statement purposes.</p>	<p><u>Frequency:</u></p> <p>Whenever the change in the interest rate materially affects the financial statements or, if no material change occurs prior to the cohort being 90 percent disbursed, at least one time when the cohort is 90 percent disbursed.</p>
	<p><u>Timing:</u></p> <p>At the end of the fiscal year.</p>	<p><u>Timing:</u></p> <p>Typically as of the end of the fiscal year.</p>
Technical Reestimate	<p><u>Frequency:</u></p> <p>Annually unless a different plan is approved by OMB - regardless of financial statement materiality. In addition, reestimates should be recorded in the Budget whenever made for financial statement purposes.</p>	<p><u>Frequency:</u></p> <p>Any year when material.</p> <p>Also, agencies must disclose significant subsequent events after the reestimate date in the financial statement footnotes.</p>
	<p><u>Timing:</u></p> <p>At the end of the fiscal year unless otherwise approved by OMB.</p>	<p><u>Timing:</u></p> <p>Typically as of the end of the fiscal year.</p> <p>Also, agencies must disclose if the reestimate was calculated at a time other than the end of the fiscal year.</p>

Appendix D: Summary of Selected Reporting Requirements¹⁵

Principal Statements	Credit Reform Information Presented
Balance Sheet	Credit program receivables and related foreclosed property, net of related subsidy allowance Liabilities for loan guarantees
Statement of Net Cost	Subsidy expense will be included as part of the gross program costs (present value of fees will be included as an offset in calculating subsidy expense rather than recording actual collection of fees as revenue) Interest revenue and interest expense
Statement of Changes in Net Position	Appropriations received (subsidy) and appropriations used
Statement of Budgetary Resources	Appropriations received (subsidy), borrowing authority, offsetting collections (examples: Collection of fees, principal, interest, subsidy from program account) and obligations (subsidy to financing account, direct loans, interest supplements, default claims) and offsetting receipts (example: negative subsidy or downward reestimate received by general fund receipt account)
Statement of Financing	Reconcile net obligations to net cost using components from the Statements of Budgetary Resources, Changes in Net Position and Net Cost. Examples of reconciling items include upward/downward reestimates of subsidy expense, offsetting collections pertaining to fees and obligations

¹⁵ Refer to FASAB Standards for a complete listing of accounting and reporting requirements. The requirements in the Standards may be supplemented by guidance provided in OMB Bulletin 01-09 and OMB Circular A-11.

Note Disclosures	Credit Reform Information Presented
<p>Direct Loans (and Defaulted Guaranteed Loans) by Program or Fund</p> <p>*Presentation by Program or Fund required by OMB Bulletin 01-09. Comparative data (current and prior years) for Note disclosures required by OMB Bulletin 01-09. SFFAS No. 18 requires the reconciliation of the subsidy cost allowance for direct loans and not defaulted guaranteed loans.</p>	<p>By program or fund:</p> <ul style="list-style-type: none"> • Loans receivable gross, • Interest receivable, • Foreclosed property, • Allowance for subsidy cost (present value), and • Net value of assets related to direct loan programs (and loan guarantee programs) <p>Total amount of loans disbursed for current and prior years</p> <p>Reconciliation between the beginning and ending balance of the subsidy cost allowance at the reporting entity level</p>
<p>Guaranteed Loans by Program or Fund</p> <p>*Presentation by Program or Fund required by OMB Bulletin 01-09. Comparative data (current and prior years) for Note disclosures required by OMB Bulletin 01-09.</p>	<p>By program or fund:</p> <ul style="list-style-type: none"> • Present value of post-1991 liabilities for loan guarantees • Face value of guaranteed loans outstanding, • Amount of outstanding principal guaranteed <p>Reconciliation between the beginning and ending balance of the loan guarantee liability at the reporting entity level</p>
<p>Both Direct Loans (and Defaulted Guaranteed Loans) and Guaranteed Loans by Program or Fund</p> <p>*Presentation by Program or Fund required by OMB Bulletin 01-09. Comparative data (current and prior years) for Note disclosures required by OMB Bulletin 01-09.</p>	<p>By program or fund:</p> <ul style="list-style-type: none"> • Total subsidy expense, and its components • Total subsidy expense for modifications • Total subsidy expense for reestimates, and their components, for current and prior year (interest and technical) • Subsidy rates for the total subsidy cost, and its components, for the current year • Total administrative expense • Description of the characteristics of loan programs • Discussion of events and changes in economic conditions, other risk factors, legislation, credit policies and subsidy estimation methodologies and assumptions that have a significant and measurable effect on subsidy rates, subsidy expense and subsidy reestimates • Nature of the modification of direct loans or loan guarantees, discount rate used to calculate the modification expense, and

	<p>basis for recognizing a gain or loss relating to the modification.</p> <ul style="list-style-type: none">• Restrictions on the use/disposal of foreclosed property, number of properties held and average holding period by type or category, number of properties for which foreclosure proceedings are in process and changes from prior year's accounting methods

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