6-10-30 (Continued)

F. Prior Approval Requirements

1. The policies contained in this Chapter do not affect the provisions of applicable OSM cost principles requiring recipients to obtain prior approval of certain types of leasing arrangements. These policies, however, will be followed in determining the extent to which the rental costs under such arrangements may be charged to OSM grants and cooperative agreements.

2. Prior approval of leases in addition to those specified in the cost principles will not be required. However, in order to avoid possible future cost disallowances, recipients are encouraged to consult with the Federal assistance unit and reach an advance understanding with the agency prior to the allowability of the rental costs to be paid under the lease. Where possible, this should be done prior to the award of the grant to which the rental costs will be charged. Similarly, if the rental costs are to be treated as indirect costs, the recipient should consult with the appropriate Federal cognizant agency prior to entering into the leasing arrangement if it is unsure about the amount of such costs that can be included in its indirect cost pool. See Chapter 6-100.

CHAPTER 6–60
CHARGES FOR FACILITIES PURCHASED OR CONSTRUCTED BY STATE AND LOCAL GOVERNMENTS

6-60-00 PURPOSE

The purpose of this Chapter is to prescribe the conditions under which each of two methods for determing the allowable costs of a capital asset will be used and to establish OSM's policy governing the allowability of the costs of land when the capital expenditure method is used.

6-60-05 BACKGROUND

A. OSM's cost principles for State and local governments adheres to OMB Circular A-87. OMB Circular A-87 provides two methods for determining the allowable costs of a capital asset:

1. Under Circular A-87, the State or locality may charge the costs of the assets to Federally-supported programs through depreciation or use allowances.

2. Under Circular A-87, the State or locality may charge the costs to the programs as a capital expenditure if the expenditure is specifically approved by OSM.

B The prinicipal difference between these two methods relates to the period of time over which the costs of the assets are charged to Federally-supported programs. Under the depreciation - use allowance methods, a portion of the costs is charged to the programs (usually as an indirect cost) each year over a period of years corresponding to the useful life of the asset. Conversely, under the capital expenditure method, the entire cost of the asset is charged to the programs as a direct cost at the time of purchase or construction. In addition, under the depreciation - use allowance method, the costs of land are specifically unallowable, while under the capital expenditure method, the allowability of the costs of land is not specified in the cost principles.

6-60-05 (Continued)

C. Problems have been encountered in determining which of these two methods is appropriate for determining the allowable costs of facilities purchased or constructed by State or local governments under grants (other than construction grants or cooperative agreements) awarded to them by OSM.

6-60-10 APPLICABILITY

A. Grants and Cooperative Agreement Covered

Nonconstruction grants awarded to State and local government agencies are subject to the cost principles in Circular A-87.

B. Type of Property Covered

The Chapter applies to facilities purchased or constructed by State and local governments. It does not apply to (a) facilities that are leased by a State or local government, (b) equipment (whether leased or purchased) or (c) alterations and renovations of facilities. OSM's policies governing the allowability of charges for leased facilities and equipment are contained in Chapter 6-10. OSM's policies on alterations and renovations are contained in Chapter 1-44.

6-60-30 POLICY

A. Cost analyses are to be performed to determine whether lease, purchase, or construction is the most cost effective course of action: The procedure for conducting a cost analysis is presented in Chapter 1-44.

B. Depreciation - Use Allowance Method

Except as otherwise provided in paragraph 6-60-30B, the allowable costs of facilities purchased or constructed by State and local governments will be determined in accordance with the Depreciation - use allowance method described in Circular A-87.

C. Capital Expenditure Method

1. The costs of a facility purchased or constructed by a State or local government may be charged to OSM grants as a capital expenditure only when all of the conditions listed below are met.

6-60-30 (Continued)

If these conditions are met, the total cost of the facility, including the cost of land, is allowable.

a. The charge is not prohibited by law.

b. The facility is being specifically purchased or constructed to be used exclusively in the performance of an OSM supported program, or several Federally supported programs, included among which is an OSM supported program; and the facility is expected to be needed for this purpose on a long-term basis.

c. Accomplishment of program objectives requires the purchase or construction of the facility. A general purpose facility will not meet this condition if the facility is being purchased or constructed because of the need for additional space resulting from the expansion of programs supported by State or local funds or the expansion of Federally-supported programs that are currently housed in facilities that also house State or local programs.

d. The facility is not already owned by the State or locality. This requirement does not apply to land already owned by the State or locality if the land was purchased in contemplation of constructing a building(s) which meets the requirements of this Section.

e. The OSM unit responsible for issuing a grant or cooperative agreement consents to the use of this method and approval is obtained from the OSM unit prior to purchase or construction. If more than one Federal program is to be performed in the facility, all agencies responsible for administering the programs must approve the use of the method. Approval prior to the purchase of land will not be required if the land is purchased in contemplation of constructing a building(s) which meets the requirements of this Section. In these cases, approval must be obtained prior to constructing the building(s).

2. If all of the conditions specified in subparagraph 6-60-30B.1 have been met for the building(s) and other land improvements but have not been met for the land, this method may be used for the building(s) and other land improvements.

6-60-30 (Continued)

3. When this method is used, the full cost of the facility may be charged to the affected program(s) at the time of purchase or construction; or the costs may be charged to the programs over any period of time agreed upon between the State or locality and the Federal assistance unit. If more than one Federal agency is involved, all such agencies and the recipient must agree on a uniform period during which the costs will be charged to the programs and a uniform method of apportioning the cost of the facility among the programs.

4. The use of this method may require the establishment of a special indirect cost rate applicable to the program(s) conducted in the facility. Therefore, when this method is used for programs that provide for the reimbursement of indirect cost, the Federal assistance unit must notify the appropriate Federal cognizant agency before using the State or local agency's published indirect cost rate. (See Chapter 6-100)

5. If the facility is later sold or used for purposes not authorized by OSM, the State or local government will be accountable to the Federal Government for the Federal Interest in the facility. Procedures for satisfying this accountability requirement are set forth in Circular A-87.

D. Interest and Other Financing Costs

The policies contained in this Chapter do not affect the provisions of the cost principles which stipulate that interest expense and other financing costs are unallowable. (Cricular A-87) Therefore, regardless of the method used in determining the allowable costs of facilities, such costs will exclude interest expense and other financing costs associated with the facilities.

CHAPTER 6-70
PROJECTION OF COST DISALLOWANCES RESULTING FROM SYSTEMS DEFICIENCIES REPORTED BY AUDIT

6-70-00 <u>PURPOSE</u>

The purpose of this chapter is to establish a consistent OSM policy on the projection of cost disallowances to periods before and after a system deficiency is found by auditors.

6-70-05 <u>BACKGROUND</u>

Audit reports issued, or approved, by the DOI Audit Agency frequently cite deficiencies in an organization's overall management system which raise questions about the propriety of costs charged to OSM awards. Examples of these deficiencies include inadequate payroll distribution systems, undocumented cost transfers and the like. Since the deficiencies relate to the organization's overall operations rather than to specific grants or cooperative agreements, their impact on charges to the awards is often difficult to determine.

6-70-10 <u>APPLICABILITY</u>

A. The provisions of this chapter are intended solely as internal instructions to OSM staff and shall not be included directly or by reference in the terms and conditions of grant awards.

B. Except as otherwise provided in paragraph C of this section, this chapter applies to:

1. Audit findings which cite deficiencies in a recipient's management system and which result in a dollar settlement on an organization-wide basis; and

2. Other findings which involve the use of statistical sampling or other projection techniques in determining dollar settlements.

C. The chapter does not apply to:

1. Findings on commercial ("for profit") organizations; or

2. Situations involving fraud or deliberate misrepresentations of facts by a recipient.

6-70-20 POLICY

When deficiencies in an organization's management system are reported by audit, primary emphasis shall be placed on ensuring that the dificiencies are adequately corrected. If cost disallowances are made, they shall be limited to costs incurred during (a) the organization's three fiscal years immediately preceding the starting date of the audit, and (b) subsequent periods up to the date the deficiencies are corrected.

Example

Date audit started -- December 12, 1982
Organization's fiscal year -- July 1 to June 30
Date deficiencies corrected -- July 1, 1983
Limitation on cost disallowances -- July 1, 1979 to June 30, 1983

6-70-30 UNALLOWED COSTS

Unallowed costs are discussed in OMB Circular A-87.

Bad debts.
Contingencies.
Contributions and donations.
Entertainment.
Fines and Penalties.
Governor's expenses.
Interest and other financial costs.
Legislative expenses.
Underrecovery of costs under grant agreements.

CHAPTER 6–100
ESTABLISHMENT OF INDIRECT COST RATES

6-100-00 PURPOSE

The purpose of this Chapter is to prescribe OSM's basic policies and procedures governing the establishment of indirect cost rates.

6-100-05 BACKGROUND

A. Indirect costs are the costs incurred by an organization that are not readily identifiable with a particular project or program but are nevertheless necessary to the operation of the organization and the performance of its programs. The costs of operating and maintaining facilities, depreciation and administrative salaries are examples of the types of costs that are usually treated as indirect costs.

B. In theory, all such costs might be charged directly. Practical difficulties, however, will normally preclude this approach. They are therefore grouped into a common pool(s) and distributed to the organization's program through a cost allocation process. The end product of this allocation process is an indirect cost rate (or rates) which is then applied to individual grant awards to determine the amount of indirect costs chargeable to the awards.

6-100-10 APPLICABILITY

This Chapter applies to all OSM grants and cooperative agreements which provide for the reimbursement of indirect costs. This chapter is applicable to each organization that receives an OSM grant or cooperative agreement.

6-100-30 POLICY

A. Submission of Proposals

Except as otherwise provided in paragraph 6-100-50A, a claim for the reimbursement of indirect costs under grants awarded by OSM must be supported by the timely submission of an indirect cost proposal for each fiscal year of the recipient in which such costs are claimed. Recipients that fail to comply with this requirement will be deemed as not having a currently effective indirect cost rate. In the absence of this rate, future grants awarded to the grantee will not provide for the reimbursement of indirect costs. If a rate is subsequently established, based on the late submission of an indirect cost proposal, indirect cost reimbursement will be limited to the indirect cost applicable to the period subsequent to the date the proposal is submitted. Failure to submit a timely proposal may also result in the disallowance of indirect costs previously reimbursed based on the use of a provisional indirect cost rate.

B. Preparation of Proposals

Guidance on the preparation of indirect cost proposals is provided in the following informational brochures which can be obtained from the U.S. Government Printing Office.

OASC-1 (Revised) - A Guide for Colleges & Universities - Cost Principles and Procedures for Establishing Indirect Cost and Other Rates for Grants and Contracts with the Department of Health, Education, and Welfare.

OASC-10 - A Guide for State and Local Government Agencies - Cost Principles and Procedures for Establishing Cost Allocation Plans and Indirect Cost Rates for Grants and Contracts with the Federal Government.

Additional guidance on the preparation of indirect cost proposals can be obtained from the Federal cognizant agency or the Office of the Inspector General Regional Office. The address and States covered by each Office of the Inspector General Regional Office are contained in Exhibit X6-100-1.

C. Reimbursement of Indirect Costs

Indirect cost reimbursement will be based on indirect cost rates established by the Federal cognizant agency.

D. Basic Negotiation Policies

Indirect cost rates will be negotiated between the recipient and the Federal cognizant agency.

6-100-30 (Continued)

E. Subgrants

1. Except as otherwise provided in subparagraph 2 of this paragraph, recipients will be responsible for negotiating appropriate indirect cost rates with subrecipients and cost-type contractors (hereafter collectively referred to as "grantees") awarded funds under OSM grants. Such negotiations will be based on the OSM cost principles applicable to the subgrantee (See Chapter 6-00). The procedures followed by the recipient in conducting the negotiations will be subject to review and audit by, or on behalf of OSM. If the recipient requires assistance in connection with the negotiations, it should request such assistance from the Federal cognizant agency.

2. Recipients will not be required to negotiate indirect cost rates with subgrantees if any of the following conditions exists:

   a. The subgrantee does not provide for the reimbursement of indirect costs.

   b. The subgrantee is also a direct recipient of OSM grants or contracts and is required to negotiate indirect cost rates directly with the Federal cognizant agency. In these cases, the Federal cognizant agency will negotiate indirect cost rates applicable to all OSM supported activities, including those conducted under subgrants. However, although the recipient will not be primarily responsible for these negotiations, it may participate in the negotiations if OSM or the recipient considers such participation necessary or desirable.

6-100-40 NORMAL PROCEDURES FOR ESTABLISHING INDIRECT COST RATES

A. Submission of Proposals

1. An organization that has not previously established an indirect cost rate with the Federal cognizant agency must submit its initial indirect cost proposal to the appropriate Federal cognizant agency immediately after being notified that a grant providing for the reimbursement of indirect costs will be awarded. The proposal, which will be used to establish a rate to permit funding of indirect costs under the award, should normally be based on the organization's actual costs for its most recently completed fiscal year. However, if the organization is aware of factors that are expected to result in a significant change in the rate for the fiscal year during which the grant is to be performed, the proposal must be based on projected costs for that year.

6-100-40 (Continued)

2. Organizations that have previously established indirect cost rates with the Federal cognizant agency must submit a new indirect cost proposal to the appropriate Federal cognizant agency within six months after the close of each fiscal year. The type of rate(s) reflected in the proposal and the fiscal year(s) on which it should be based will be governed by the specific circumstances involved.

   a. If a provisional rate was previously established for the most recently completed fiscal year, the proposal must reflect (1) a final rate for the completed year based on the actual costs of that year, and (2) a fixed, predetermined, or provisional rate for the subsequent year.

      Normally, the rate for the subsequent year should also be based on the actual costs of the most recently completed year. However, if the organization is aware of factors that are expected to result in a significant change in the rate during the subsequent year, the rate computation must be based on projected costs of that year.

   b. If a fixed or predetermined rate was previously established, the proposal must reflect a fixed, predetermined, or provisional for the fiscal year immediately following the year covered by the last negotiation. This rate should be based on the actual costs of the most recently completed year.

3. The recipient organization's initial proposal as well as each succeeding proposal must be accompanied by, and be cross-referenced and reconciled to, its independently audited financial statements for the fiscal year on which the proposal is based. If independently audited statements are not available, the recipient should contact the Federal cognizant agency to determine what other financial documents will be acceptable to substantiate the amounts reflected in the proposal (e.g., internal financial statements).

4. If a recipient organization is unable to submit a proposal by the prescribed due date, it may request an extension of time from the Federal cognizant agency. The request must contain a justification for the extension and must specify the date the proposal will be submitted. Such requests will normally be approved only when they are submitted on or before the due date of the proposal.

6-100-40 (Continued)

B. Negotiation of Rates

1. The Federal cognizant agency will review the indirect cost proposals submitted by recipient organizations and, based on these reviews, will negotiate appropriate indirect cost rates with the organizations. If an audit is deemed necessary, the Federal cognizant agency will contact the recipient to establish an audit date.

2. The results of each negotiation will be formalized by a Negotiation Agreement signed by the appropriate cognizant agency official and an authorized representative of the recipient.

3. Where possible, disputes arising in the negotiation of indirect cost rates will be resolved in accordance with informal appeal procedures established in the Inspector General's Regional Offices. Disputes that cannot be resolved at the State Office level will be resolved in accordance with the procedure contained in the Department's grant appeals regulations.

C. Dissemination of Rate Information

1. A copy of each Negotiation Agreement will be forwarded by the cognizant agency to the Assistant Director, Budget and Administration, OSM. The Division of Financial Management will reproduce and distribute copies of the Agreements to the Federal Assistance Units.

2. An index listing the most current Negotiation Agreement with each recipient will be published and distributed by the OSM Division of Financial Management.

D. Notification to Organizations Without Established Indirect Cost Rates

OSM will notify those recipient organizations which have not previously established indirect cost rates with the cognizant agency that they must establish such rates with the appropriate Federal cognizant agency if they wish to claim indirect cost reimbursement under OSM grants. This notification will be made immediately after the agency has determined that a grant providing for the reimbursement of indirect costs will be awarded. In the event that an organization submits its proposal to OSM, the office will transmit the proposal and supporting documents to the appropriate Federal cognizant agency.

6-100-50 SPECIAL PROCEDURES FOR CERTAIN RECIPIENTS

A. Local Government Agencies

1. Local government agencies (other than local education agencies) are not required to submit their indirect cost proposals unless they are specifically requested by the cognizant Federal negotiation agency. The specific procedures that a local government should follow in establishing its indirect cost rates are indicated below:

   a. Local government agencies that are not required to submit their proposals will establish their rates in accordance with the procedures described in subparagraph 2 through 4 of paragraph 6-100-50A.

   b. Local education agencies will follow the procedures described in paragraph 6-100-50B.

   c. Local government agencies that are requested to submit their proposals to Federal agencies other than DOI will follow the procedures in paragraph 6-100-50C.

   d. Local government agencies that are required to submit their proposals to an Office of the Inspector General Regional Office will establish their rates in accordance with the normal rate negotiation procedures described in Section 6-100-40.

2. Local government agencies that are not required to submit indirect cost proposals must nevertheless substantiate their claims for indirect cost reimbursement. This substantiation must be in the form of an indirect cost rate computation, as described in the brochure "A Guide for State and Local Government Agencies" (OASC-10), for each fiscal year of the agency in which direct cost reimbursement is claimed. The computation along with the supporting documentation described in the brochure must be available as of the time the claim is made and must be retained by the local government agency for possible audit by, or on behalf of, the Department. The retention period shall be in accordance with the OSM's records retention regulations (Section __.42 of the Common Rule).

3. Where an audit of a local government agency's indirect cost computaton results in a disagreement getween the agency and the auditor, the disagreement will be resolved by the congnizant Federal negotiation agency.

B. Local Education Agencies

Local education agencies (LEA's) will submit their indirect cost proposals to their State department of education. The State department of education will be responsible for reviewing the proposals and

6-100-50B. (Continued)

negotiating appropriate predetermined or fixed rates with the LEA's in conformance with special agreements entered into between OSM and each State. The agreed upon rates will be forwarded to the Assistant Director Budget and Administration, OSM, for distribution to the Field Director's Offices.

C. Negotiation Cognizance Assigned to Other Federal Agencies

When a Federal agency other than DOI has been assigned indirect cost negotiation for an institution of higher education or a State or local government agency under OMB Circulars A-21 or A-87 , the recipient msut submit its proposals and establish its rates with the cognizant agency in accordance with the policies and procedures of that agency. The results of the cognizant agency's negotiation will be provided to other Federal agencies upon request.

DOI OFFICE OF THE INSPECTOR GENERAL

Regional Office	Office of the Inspector General Address	For Grantees Located in:
Eastern	U.S. Department of the Interior Office of Inspector General Ballston Towers No. 1 800 N. Quincy Steet, Room 401 Arlington, VA 22217 (Telephone 703-235-1513)	Alabama, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Maine, Michigan, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, Wisconsin
Central	U.S. Department of the Interior Office of Inspector General 134 Union Blvd., Suite 510 Lakewood, CO 80228 (Telephone 303-234-2131)	Arkansas, Colorado, Iowa, Kansas, Louisiana, Minnesota, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Wyoming
Western	U.S. Department of the Interior Office of Inspector General Room W2400 2800 Cottage Way Sacremento, CA 95825 (Telephone 916-484-4874)	Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington

CHAPTER 6-150
REIMBURSEMENT OF INDIRECT COSTS

6-150-00 PURPOSE

The purpose of this Chapter is to prescribe OSM's policies and procedures governing the reimbursement of indirect costs.

6-150-10 APPLICABILITY

This Chapter applies to all OSM grants and cooperative agreements.

6-150-20 POLICY

A. All grants awarded by OSM will provide for the full reimbursement of indirect costs applicable to the grants.

B. Indirect cost reimbursement will be prohibited on grants to individuals.

1. Indirect cost reimbursement on grants and cooperative agreements awarded under programs with legal prohibitions or limitations against the reimbursement of indirect costs will be made in accordance with the legal restrictions.

2. Limitations or prohibitions against the full reimbursement of indirect costs in addition to those described above will be regarded as policy deviations.

C. When a recipient wishes to provide cost sharing or matching in the indirect cost category, the indirect cost rate will be applied to the entire direct cost base amount and OSM will reimburse its fractional share of the total.

D. Indirect cost reimbursement will be based on the indirect cost rates established by the Federal cognizant agency. Recipients who fail to submit timely indirect cost proposals in accordance with the requirement of Chapter 6-100 will be deemed as not having a currently effective indirect cost rate and will not be reimbursed for indirect costs in future grants awarded by OSM. If a rate is subsequently established, based on the late submission of an indirect cost proposal, indirect cost

6-150-20D. (Continued)

reimbursement will be limited to the indirect costs applicable to the period subsequent to the date the proposal is submitted.

E. When a provisional indirect cost rate is used for interim reimbursement of indirect costs, such costs will be adjusted upward or downward, as appropriate, when a permanent rate (i.e., final, predetermined or fixed) is established. If the recipient fails to establish the permanent rate, the indirect costs previously reimbursed based on the provisional rate will be disallowed.

6-150-30 APPLICATION OF INDIRECT COST RATES

A. The dollar amount of indirect costs applicable to a given grant-supported project or program will be determined by multiplying the appropriate indirect cost rate(s) by the direct cost base of the project or program. If the direct costs used in computing the project's or program's indirect cost base are borne entirely by the grant, the full amount of indirect costs applicable to the project or program may be charged to the grant (except where the grant is subject to a limitation or prohibition described in Section 6-150-20). However, if the recipient provides a matching or cost sharing contribution in a direct cost category used in computing the direct cost base, the indirect costs applicable to the contributed direct costs may not be charged to the grant or cooperative agreement. (The indirect costs applicable to the contributed direct costs may, however, be counted as part of the recipient's total contribution -- See Chapter 1-400.) Similarly, if the matching or cost sharing arrangement requires the recipient to share in the total costs of the project or program on a pro-rata basis, the percentage of Federal participation in the project's or program's indirect costs will be the same as the percentage of Federal participation in its direct costs.

B. In applying indirect costs rates to individual grants, the rates established for the periods in which the direct costs are actually incurred under the grants will be applied to those costs. Consequently, when a grant budget period does not coincide with the recipient's fiscal year it will be necessary to use two rates in computing the amount of indirect costs applicable to the grant (i.e., the rates established for the two fiscal years during which the grant was performed).

Example

Rate for fiscal year ending June 30, 1980 -- 35%
Rate for fiscal year ending June 30, 1981 -- 30%
Grant period -- March 1, 1980 to February 28, 1981

Direct base costs incurred under the grant:
March 1, 1980 to June 30, 1980 -- $30,000
July 1, 1980 to February 28, 1981 -- $20,000

6-140-30B. (Continued)

Application of Rates:
35% X $30,000 = $10,500
30% X $20,000 = $ 6,000
Total Indirect
Costs..........$16,500

C. A single rate may be used for purposes of awarding indirect costs on grants that do not coincide with a recipient's fiscal year if the resultant amount does not differ significantly from the amount that would have been awarded had two rates been used. In these cases, the rate covering the earlier fiscal year should normally be used. Final settlement, however, will be based on the rates established for the two fiscal years during which the grant was performed.

D. The selection of the rate(s) and the direct cost base will be based on the information contained in the Negotiation Agreement published by the Federal cognizant agency. The physical and/or administrative environment of the activities covered by each rate will be indicated in the "Locations" column of the Agreement.

6-150-40 REIMBURSEMENT OF INDIRECT COSTS

Each recipient request for indirect costs funds for a new grant or cooperative agreement or additional indirect cost funds for an existing grant or cooperative agreement, will be accompanied by a copy of the current approved Indirect Cost Negotiation Agreement. Requests received without a copy of the Negotiation Agreement attached will not be authorized for an indirect cost reimbursement. Indirect cost reimbursement will be initiated by OSM when a current, signed Negotiation Agreement is received from the recipient.

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

October 29, 1992

THE DIRECTOR

CIRCULAR NO. A-94
Revised
Transmittal Memorandum No. 64

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs

Circular A-94 provides guidance on benefit-cost, cost-effectiveness, and lease-purchase analysis to be used by agencies in evaluating Federal activities. It includes updated guidance on the discount rates to be used in evaluating activities whose benefits and costs are distributed over time. It also contains expanded guidance on the measurement of benefits and costs, treatment of uncertainty, and related issues. This guidance must be followed in all analyses submitted to OMB in support of legislative and budget programs.

This Circular replaces and rescinds OMB Circular No. A-94, "Discount Rates to be Used in Evaluating Time-Distributed Costs and Benefits," dated March 27, 1972. It also replaces Circular No. A-104, "Evaluating Leases of Capital Assets," dated June 1, 1986, which was rescinded previously.

Richard Darman
Director

Attachment

CIRCULAR NO. A-94
Revised
(Transmittal Memo No. 64)

MEMORANDUM FOR HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs

Table of Contents

1. **Purpose**. The goal of this Circular is to promote efficient resource allocation through well-informed decisionmaking by the Federal Government. It provides general guidance for conducting benefit-cost and cost-effectiveness analyses. It also provides specific guidance on the discount rates to be used in evaluating Federal programs whose benefits and costs are distributed over time. The general guidance will serve as a checklist of whether an agency has considered and properly dealt with all the elements for sound benefit-cost and cost-effectiveness analyses.

2. **Rescission**. This Circular replaces and rescinds Office of Management and Budget (OMB) Circular No. A-94, "Discount Rates to Be Used in Evaluating Time-Distributed Costs and Benefits," dated March 27, 1972, and Circular No. A-104, "Evaluating Leases of Capital Assets," dated June 1, 1986, which has been rescinded. Lease-purchase analysis is only appropriate after a decision has been made to acquire the services of an asset. Guidance for lease-purchase analysis is provided in Section 8.c.(2) and Section 13.

3. **Authority**. This Circular is issued under the authority of 31 U.S.C. Section 1111 and the Budget and Accounting Act of 1921, as amended.

4. **Scope**. This Circular does not supersede agency practices which are prescribed by or pursuant to law, Executive Order, or other relevant Circulars. The Circular's guidelines are suggested for use in the internal planning of Executive Branch agencies. The guidelines must be followed in all analyses submitted to OMB in support of legislative and budget programs in compliance with OMB Circulars No. A-11, "Preparation and Submission of Annual Budget Estimates," and No. A-19, "Legislative Coordination and Clearance." These guidelines must also be followed in providing estimates submitted to OMB in compliance with Executive Order No. 12291, "Federal Regulation," and the President's April 29, 1992 memorandum requiring benefit-cost analysis for certain legislative proposals.

a. Aside from the exceptions listed below, the guidelines in this Circular apply to any analysis used to support Government decisions to initiate, renew, or expand programs or projects which would result in a series of measurable benefits or costs extending for three or more years into the future. The Circular applies specifically to:

   (1) Benefit-cost or cost-effectiveness analysis of Federal programs or policies.

   (2) Regulatory impact analysis.

(3) Analysis of decisions whether to lease or purchase.

(4) Asset valuation and sale analysis.

b. Specifically exempted from the scope of this Circular are decisions concerning:

(1) Water resource projects (guidance for which is the approved Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies).

(2) The acquisition of commercial-type services by Government or contractor operation (guidance for which is OMB Circular No. A-76).

(3) Federal energy management programs (guidance for which can be found in the Federal Register of January 25, 1990, and November 20, 1990).

c. This Circular applies to all agencies of the Executive Branch of the Federal Government. It does not apply to the Government of the District of Columbia or to non-Federal recipients of loans, contracts or grants. Recipients are encouraged, however, to follow the guidelines provided here when preparing analyses in support of Federal activities.

d. For small projects which share similar characteristics, agencies are encouraged to conduct generic studies and to avoid duplication of effort in carrying out economic analysis.

5. General Principles. **Benefit-cost analysis** is recommended as the technique to use in a formal economic analysis of Government programs or projects. **Cost-effectiveness analysis** is a less comprehensive technique, but it can be appropriate when the benefits from competing alternatives are the same or where a policy decision has been made that the benefits must be provided. (Appendix A provides a glossary of technical terms used in this Circular; technical terms are bolded when they first appear.)

a. Net Present Value and Related Outcome Measures. The standard criterion for deciding whether a Government program can be justified on economic principles is **net present value** -- the discounted monetized value of expected net benefits (i.e., benefits minus costs). Net present value is computed by assigning monetary values to benefits and costs, discounting future benefits and costs using an appropriate **discount rate**, and subtracting the sum total of discounted costs from the sum total of discounted benefits. Discounting benefits and costs transforms gains and losses occurring in different time periods to a common unit of measurement. Programs with positive net present value increase social resources and are generally preferred. Programs with negative net present value should generally be avoided. (Section 8 considers discounting issues in more detail.)

Although net present value is not always computable (and it does not usually reflect effects on income distribution), efforts to measure it can produce useful insights even when the monetary values of some benefits or costs cannot be determined. In these cases:

(1) A comprehensive enumeration of the different types of benefits and costs, monetized or not, can be helpful in identifying the full range of program effects.

(2) Quantifying benefits and costs is worthwhile, even when it is not feasible to assign monetary values; physical measurements may be possible and useful.

Other summary effectiveness measures can provide useful supplementary information to net present value, and analysts are encouraged to report them also. Examples include the number of injuries prevented per dollar of cost (both measured in present value terms) or a project's internal rate of return.

b. **Cost-Effectiveness Analysis**. A program is cost-effective if, on the basis of life cycle cost analysis of competing alternatives, it is determined to have the lowest costs expressed in present value terms for a given amount of benefits. Cost-effectiveness analysis is appropriate whenever it is unnecessary or impractical to consider the dollar value of the benefits provided by the alternatives under consideration. This is the case whenever (i) each alternative has the same annual benefits expressed in monetary terms; or (ii) each alternative has the same annual effects, but dollar values cannot be assigned to their benefits. Analysis of alternative defense systems often falls in this category.

Cost-effectiveness analysis can also be used to compare programs with identical costs but differing benefits. In this case, the decision criterion is the discounted present value of benefits. The alternative program with the largest benefits would normally be favored.

c. **Elements of Benefit-Cost or Cost-Effectiveness Analysis**.

(1) **Policy Rationale**. The rationale for the Government program being examined should be clearly stated in the analysis. Programs may be justified on efficiency

grounds where they address market failure, such as public goods and externalities. They may also be justified where they improve the efficiency of the Government's internal operations, such as cost-saving investments.

(2) Explicit Assumptions. Analyses should be explicit about the underlying assumptions used to arrive at estimates of future benefits and costs. In the case of public health programs, for example, it may be necessary to make assumptions about the number of future beneficiaries, the intensity of service, and the rate of increase in medical prices. The analysis should include a statement of the assumptions, the rationale behind them, and a review of their strengths and weaknesses. Key data and results, such as year-by-year estimates of benefits and costs, should be reported to promote independent analysis and review.

(3) Evaluation of Alternatives. Analyses should also consider alternative means of achieving program objectives by examining different program scales, different methods of provision, and different degrees of Government involvement. For example, in evaluating a decision to acquire a capital asset, the analysis should generally consider: (i) doing nothing; (ii) direct purchase; (iii) upgrading, renovating, sharing, or converting existing Government property; or (iv) leasing or contracting for services.

(4) Verification. Retrospective studies to determine whether anticipated benefits and costs have been realized are potentially valuable. Such studies can be used to determine necessary corrections in existing programs, and to improve future estimates of benefits and costs in these programs or related ones.

Agencies should have a plan for periodic, results-oriented evaluation of program effectiveness. They should also discuss the results of relevant evaluation studies when proposing reauthorizations or increased program funding.

6. Identifying and Measuring Benefits and Costs. Analyses should include comprehensive estimates of the expected benefits and costs to society based on established definitions and practices for program and policy evaluation. Social net benefits, and not the benefits and costs to the Federal Government, should be the basis for evaluating Government programs or policies that have effects on private citizens or other levels of Government. Social benefits and costs can differ from private benefits and

costs as measured in the marketplace because of imperfections arising from: (i) external economies or diseconomies where actions by one party impose benefits or costs on other groups that are not compensated in the market place; (ii) monopoly power that distorts the relationship between marginal costs and market prices; and (iii) taxes or subsidies.

a. Identifying Benefits and Costs. Both intangible and tangible benefits and costs should be recognized. The relevant cost concept is broader than private-sector production and compliance costs or Government cash expenditures. Costs should reflect the opportunity cost of any resources used, measured by the return to those resources in their most productive application elsewhere. Below are some guidelines to consider when identifying benefits and costs.

(1) Incremental Benefits and Costs. Calculation of net present value should be based on incremental benefits and costs. Sunk costs and realized benefits should be ignored. Past experience is relevant only in helping to estimate what the value of future benefits and costs might be. Analyses should take particular care to identify the extent to which a policy such as a subsidy program promotes substitutes for activities of a similar nature that would occur without the policy. Either displaced activities should be explicitly recorded as costs or only incremental gains should be recorded as benefits of the policy.

(2) Interactive Effects. Possible interactions between the benefits and costs being analyzed and other Government activities should be considered. For example, policies affecting agricultural output should reflect real economic values, as opposed to subsidized prices.

(3) International Effects. Analyses should focus on benefits and costs accruing to the citizens of the United States in determining net present value. Where programs or projects have effects outside the United States, these effects should be reported separately.

(4) Transfers. There are no economic gains from a pure transfer payment because the benefits to those who receive such a transfer are matched by the costs borne by those who pay for it. Therefore, transfers should be excluded from the calculation of net present value. Transfers that arise as a result of the program or project being analyzed should be identified as such, however, and their distributional effects discussed. It should also be recognized that a transfer program may have benefits that are less than the program's real

economic costs due to inefficiencies that can arise in the program's delivery of benefits and financing.

b. <u>Measuring Benefits and Costs</u>. The principle of willingness-to-pay provides an aggregate measure of what individuals are willing to forgo to obtain a given benefit. Market prices provide an invaluable starting point for measuring willingness-to-pay, but prices sometimes do not adequately reflect the true value of a good to society. Externalities, monopoly power, and taxes or subsidies can distort market prices.

Taxes, for example, usually create an excess burden that represents a net loss to society. (The appropriate method for recognizing this excess burden in public investment analyses is discussed in Section 11.) In other cases, market prices do not exist for a relevant benefit or cost. When market prices are distorted or unavailable, other methods of valuing benefits may have to be employed. Measures derived from actual market behavior are preferred when they are available.

(1) <u>Inframarginal Benefits and Costs</u>. Consumers would generally be willing to pay more than the market price rather than go entirely without a good they consume. The economist's concept of consumer surplus measures the extra value consumers derive from their consumption compared with the value measured at market prices. When it can be determined, consumer surplus provides the best measure of the total benefit to society from a Government program or project. Consumer surplus can sometimes be calculated by using econometric methods to estimate consumer demand.

(2) <u>Indirect Measures of Benefits and Costs</u>. Willingness-to-pay can sometimes be estimated indirectly through changes in land values, variations in wage rates, or other methods. Such methods are most reliable when they are based on actual market transactions. Measures should be consistent with basic economic principles and should be replicable.

(3) <u>Multiplier Effects</u>. Generally, analyses should treat resources as if they were likely to be fully employed. Employment or output multipliers that purport to measure the secondary effects of government expenditures on employment and output should not be included in measured social benefits or costs.

7. <u>Treatment of Inflation</u>. Future inflation is highly uncertain. Analysts should avoid having to make an assumption about the general rate of inflation whenever possible.

a. **Real or Nominal Values**. Economic analyses are often most readily accomplished using real or constant-dollar values, i.e., by measuring benefits and costs in units of stable purchasing power. (Such estimates may reflect expected future changes in relative prices, however, where there is a reasonable basis for estimating such changes.) However, where future benefits and costs are given in nominal terms, i.e., in terms of the future purchasing power of the dollar, the analysis should use these values rather than convert them to constant dollars as, for example, in the case of lease-purchase analysis.

Nominal and real values must not be combined in the same analysis. Logical consistency requires that analysis be conducted either in constant dollars or in terms of nominal values. This may require converting some nominal values to real values, or vice versa.

b. **Recommended Inflation Assumption**. When a general inflation assumption is needed, the rate of increase in the Gross Domestic Product deflator from the Administration's economic assumptions for the period of the analysis is recommended. For projects or programs that extend beyond the six-year budget horizon, the inflation assumption can be extended by using the inflation rate for the sixth year of the budget forecast. The Administration's economic forecast is updated twice annually, at the time the budget is published in January or February and at the time of the Mid-Session Review of the Budget in July. Alternative inflation estimates, based on credible private sector forecasts, may be used for sensitivity analysis.

8. **Discount Rate Policy**. In order to compute net present value, it is necessary to discount future benefits and costs. This discounting reflects the time value of money. Benefits and costs are worth more if they are experienced sooner. All future benefits and costs, including nonmonetized benefits and costs, should be discounted. The higher the discount rate, the lower is the present value of future cash flows. For typical investments, with costs concentrated in early periods and benefits following in later periods, raising the discount rate tends to reduce the net present value. (Technical guidance on discounting and a table of discount factors are provided in Appendix B.)

a. **Real versus Nominal Discount Rates**. The proper discount rate to use depends on whether the benefits and costs are measured in real or nominal terms.

(1) A real discount rate that has been adjusted to eliminate the effect of expected inflation should be used to discount constant-dollar or real benefits and costs. A

real discount rate can be approximated by subtracting expected inflation from a nominal interest rate.

(2) A nominal discount rate that reflects expected inflation should be used to discount nominal benefits and costs. Market interest rates are nominal interest rates in this sense.

b. Public Investment and Regulatory Analyses. The guidance in this section applies to benefit-cost analyses of public investments and regulatory programs that provide benefits and costs to the general public. Guidance related to cost-effectiveness analysis of internal planning decisions of the Federal Government is provided in Section 8.c.

In general, public investments and regulations displace both private investment and consumption. To account for this displacement and to promote efficient investment and regulatory policies, the following guidance should be observed:

(1) Base-Case Analysis. Constant-dollar benefit-cost analyses of proposed investments and regulations should report net present value and other outcomes determined using a real discount rate of 7 percent. This rate approximates the marginal pretax rate of return on an average investment in the private sector in recent years. Significant changes in this rate will be reflected in future updates of this Circular.

(2) Other Discount Rates. Analyses should show the sensitivity of the discounted net present value and other outcomes to variations in the discount rate. The importance of these alternative calculations will depend on the specific economic characteristics of the program under analysis. For example, in analyzing a regulatory proposal whose main cost is to reduce business investment, net present value should also be calculated using a higher discount rate than 7 percent.

Analyses may include among the reported outcomes the **internal rate of return** implied by the stream of benefits and costs. The internal rate of return is the discount rate that sets the net present value of the program or project to zero. While the internal rate of return does not generally provide an acceptable decision criterion, it does provide useful information, particularly when budgets are constrained or there is uncertainty about the appropriate discount rate.

(3) Using the **shadow price of capital** to value benefits and costs is the analytically preferred means of capturing the effects of Government projects on resource

allocation in the private sector. To use this method accurately, the analyst must be able to compute how the benefits and costs of a program or project affect the allocation of private consumption and investment. OMB concurrence is required if this method is used in place of the base case discount rate.

c. <u>Cost-Effectiveness, Lease-Purchase, Internal Government Investment, and Asset Sale Analyses</u>. The Treasury's borrowing rates should be used as discount rates in the following cases:

(1) <u>Cost-Effectiveness Analysis</u>. Analyses that involve constant-dollar costs should use the real Treasury borrowing rate on marketable securities of comparable maturity to the period of analysis. This rate is computed using the Administration's economic assumptions for the budget, which are published in January of each year. A table of discount rates based on the expected interest rates for the first year of the budget forecast is presented in Appendix C of this Circular. Appendix C is updated annually and is available upon request from OMB. Real Treasury rates are obtained by removing expected inflation over the period of analysis from nominal Treasury interest rates. (Analyses that involve nominal costs should use nominal Treasury rates for discounting, as described in the following paragraph.)

(2) <u>Lease-Purchase Analysis</u>. Analyses of nominal lease payments should use the nominal Treasury borrowing rate on marketable securities of comparable maturity to the period of analysis. Nominal Treasury borrowing rates should be taken from the economic assumptions for the budget. A table of discount rates based on these assumptions is presented in Appendix C of this Circular, which is updated annually. (Constant dollar lease-purchase analyses should use the real Treasury borrowing rate, described in the preceding paragraph.)

(3) <u>Internal Government Investments</u>. Some Federal investments provide "internal" benefits which take the form of increased Federal revenues or decreased Federal costs. An example would be an investment in an energy-efficient building system that reduces Federal operating costs. Unlike the case of a Federally funded highway (which provides "external" benefits to society as a whole), it is appropriate to calculate such a project's net present value using a comparable-maturity Treasury rate as a discount rate. The rate used may be either nominal or real, depending on how benefits and costs are measured.

Some Federal activities provide a mix of both Federal cost savings and external social benefits. For example, Federal investments in information technology can produce Federal savings in the form of lower administrative costs and external social benefits in the form of faster claims processing. The net present value of such investments should be evaluated with the 7 percent real discount rate discussed in Section 8.b. unless the analysis is able to allocate the investment's costs between provision of Federal cost savings and external social benefits. Where such an allocation is possible, Federal cost savings and their associated investment costs may be discounted at the Treasury rate, while the external social benefits and their associated investment costs should be discounted at the 7 percent real rate.

(4) Asset Sale Analysis. Analysis of possible asset sales should reflect the following:

(a) The net present value to the Federal Government of holding an asset is best measured by discounting its future earnings stream using a Treasury rate. The rate used may be either nominal or real, depending on how earnings are measured.

(b) Analyses of Government asset values should explicitly deduct the cost of expected defaults or delays in payment from projected cash flows, along with Government administrative costs. Such analyses should also consider explicitly the probabilities of events that would cause the asset to become nonfunctional, impaired or obsolete, as well as probabilities of events that would increase asset value.

(c) Analyses of possible asset sales should assess the gain in social efficiency that can result when a Government asset is subject to market discipline and private incentives. Even though a Government asset may be used more efficiently in the private sector, potential private-sector purchasers will generally discount such an asset's earnings at a rate in excess of the Treasury rate, in part, due to the cost of bearing risk. When there is evidence that Government assets can be used more efficiently in the private sector, valuation analyses for these assets should include sensitivity comparisons that discount the returns from such assets with the rate of interest earned by assets of similar riskiness in the private sector.

9. Treatment of Uncertainty. Estimates of benefits and costs are typically uncertain because of imprecision in both underlying data and modeling assumptions. Because such uncertainty is basic to many analyses, its effects should be analyzed and reported. Useful information in such a report would include the key sources of uncertainty; expected value estimates of outcomes; the sensitivity of results to important sources of uncertainty; and, where possible, the probability distributions of benefits, costs, and net benefits.

a. Characterizing Uncertainty. Analyses should attempt to characterize the sources and nature of uncertainty. Ideally, probability distributions of potential benefits, costs, and net benefits should be presented. It should be recognized that many phenomena that are treated as deterministic or certain are, in fact, uncertain. In analyzing uncertain data, objective estimates of probabilities should be used whenever possible. Market data, such as private insurance payments or interest rate differentials, may be useful in identifying and estimating relevant risks. Stochastic simulation methods can be useful for analyzing such phenomena and developing insights into the relevant probability distributions. In any case, the basis for the probability distribution assumptions should be reported. Any limitations of the analysis because of uncertainty or biases surrounding data or assumptions should be discussed.

b. Expected Values. The expected values of the distributions of benefits, costs, and net benefits can be obtained by weighting each outcome by its probability of occurrence, and then summing across all potential outcomes. If estimated benefits, costs, and net benefits are characterized by point estimates rather than as probability distributions, the expected value (an unbiased estimate) is the appropriate estimate for use.

Estimates that differ from expected values (such as worst-case estimates) may be provided in addition to expected values, but the rationale for such estimates must be clearly presented. For any such estimate, the analysis should identify the nature and magnitude of any bias. For example, studies of past activities have documented tendencies for cost growth beyond initial expectations; analyses should consider whether past experience suggests that initial estimates of benefits or costs are optimistic.

c. Sensitivity Analysis. Major assumptions should be varied and net present value and other outcomes recomputed to determine how sensitive outcomes are to changes in the assumptions. The assumptions that deserve the most attention will depend on the dominant benefit and cost elements and the areas of greatest uncertainty of the program being analyzed. For example, in analyzing a retirement program, one would consider changes in the number of beneficiaries, future wage growth, inflation, and the discount rate. In general, sensitivity analysis should be considered for estimates of: (i) benefits and costs; (ii) the discount rate; (iii) the general inflation rate; and (iv) distributional assumptions. Models used in the analysis should be well documented and, where possible, available to facilitate independent review.

d. Other Adjustments for Uncertainty. The absolute variability of a risky outcome can be much less significant than its correlation with other significant determinants of social welfare, such as real national income. In general, variations in the discount rate are not the appropriate method of adjusting net present value for the special risks of particular projects. In some cases, it may be possible to estimate certainty-equivalents which involve adjusting uncertain expected values to account for risk.

10. Incidence and Distributional Effects. The principle of maximizing net present value of benefits is based on the premise that gainers could fully compensate the losers and still be better off. The presence or absence of such compensation should be indicated in the analysis. When benefits and costs have significant distributional effects, these effects should be analyzed and discussed, along with the analysis of net present value. (This will not usually be the case for cost-effectiveness analysis where the scope of Government activity is not changing.)

a. Alternative Classifications. Distributional effects may be analyzed by grouping individuals or households according to income class (e.g., income quintiles), geographical region, or demographic group (e.g., age). Other classifications, such as by industry or occupation, may be appropriate in some circumstances.

Analysis should aim at identifying the relevant gainers and losers from policy decisions. Effects on the preexisting assignment of property rights by the program under analysis should be reported. Where a policy is intended to benefit a specified subgroup of the population, such as the poor, the analysis should consider how effective the policy is in reaching its targeted group.

b. Economic Incidence. Individuals or households are the ultimate recipients of income; business enterprises are merely intermediaries. Analyses of distribution should identify economic incidence, or how costs and benefits are ultimately borne by households or individuals.

Determining economic incidence can be difficult because benefits and costs are often redistributed in unintended and unexpected ways. For example, a subsidy for the production of a commodity will usually raise the incomes of the commodity's suppliers, but it can also benefit consumers of the commodity through lower prices and reduce the incomes for suppliers of competing products. A subsidy also raises the value of specialized resources used in the production of the subsidized commodity. As the subsidy is incorporated in asset values, its distributional effects can change.

11. Special Guidance for Public Investment Analysis. This guidance applies only to public investments with social benefits apart from decreased Federal costs. It is not required for cost-effectiveness or lease-purchase analyses. Because taxes generally distort relative prices, they impose a burden in excess of the revenues they raise. Recent studies of the U.S. tax system suggest a range of values for the marginal excess burden, of which a reasonable estimate is 25 cents per dollar of revenue.

a. Analysis of Excess Burdens. The presentation of results for public investments that are not justified on cost-saving grounds should include a supplementary analysis with a 25 percent excess burden. Thus, in such analyses, costs in the form of public expenditures should be multiplied by a factor of 1.25 and net present value recomputed.

b. Exceptions. Where specific information clearly suggests that the excess burden is lower (or higher) than 25 percent, analyses may use a different figure. When a different figure is used an explanation should be provided for it. An example of such an exception is an investment funded by user charges that function like market prices; in this case the excess burden would be zero. Another example would be a project that provides both cost savings to the Federal Government and external social benefits. If it is possible to make a quantitative determination of the portion of this project's costs that give rise to Federal savings, that portion of the costs may be exempted from multiplication by the factor of 1.25.

12. Special Guidance for Regulatory Impact Analysis. Additional guidance for analysis of regulatory policies is provided in Regulatory Program of the United States Government which is published annually by OMB. (See "Regulatory Impact Analysis Guidance," Appendix V of Regulatory Program of the United States Government for April 1, 1991 to March 31, 1992.)

13. Special Guidance for Lease-Purchase Analysis. The special guidance in this section does not apply to the decision to acquire the use of an asset. In deciding that, the agency should conduct a benefit-cost analysis, if possible. Only after the decision to acquire the services of an asset has been made is there a need to analyze the decision whether to lease or purchase.

a. Coverage. The Circular applies only when both of the following tests of applicability are satisfied:

(1) The lease-purchase analysis concerns a capital asset, (including durable goods, equipment, buildings, facilities, installations, or land) which:

(a) Is leased to the Federal Government for a term of three or more years; or,

(b) Is new, with an economic life of less than three years, and leased to the Federal Government for a term of 75 percent or more of the economic life of the asset; or,

(c) Is built for the express purpose of being leased to the Federal Government; or,

(d) Is leased to the Federal Government and clearly has no alternative commercial use (e.g., a special-purpose government installation).

(2) The lease-purchase analysis concerns a capital asset or a group of related assets whose total fair market value exceeds $1 million.

b. Required Justification for Leases. All leases of capital assets must be justified as preferable to direct government purchase and ownership. This can be done in one of three ways:

(1) By conducting a separate lease-purchase analysis. This is the only acceptable method for major acquisitions. A lease represents a major acquisition if:

(a) The acquisition represents a separate line-item in the agency's budget;

(b) The agency or OMB determines the acquisition is a major one; or

(c) The total purchase price of the asset or group of assets to be leased would exceed $500 million.

(2) By conducting periodic lease-purchase analyses of recurrent decisions to lease similar assets used for the same general purpose. Such analyses would apply to the entire class of assets. OMB approval should be sought in determining the scope of any such generic analysis.

(3) By adopting a formal policy for smaller leases and submitting that policy to the OMB for approval. Following such a policy should generally result in the same lease-purchase decisions as would conducting separate lease-purchase analyses. Before adopting the policy, it should be demonstrated that:

(a) The leases in question would generally result in substantial savings to the Government that could not be realized on a purchase;

(b) The leases are so small or so short-term as to make separate lease-purchase analysis impractical; and

(c) Leases of different types are scored consistently with the instructions in Appendices B and C of OMB Circular No. A-11.

c. Analytical Requirements and Definitions. Whenever a Federal agency needs to acquire the use of a capital asset, it should do so in the way that is least expensive for the Government as a whole.

(1) Life Cycle Cost. Lease-purchase analyses should compare the net discounted present value of the life-cycle cost of leasing with the full costs of buying or constructing an identical asset. The full costs of buying include the asset's purchase price plus the net discounted present value of any relevant ancillary services connected with the purchase. (Guidance on the discount rate to use for lease-purchase analysis is provided in Section 8.c.)

(2) Economic Life. For purposes of lease-purchase analysis, the economic life of an asset is its remaining physical or productive lifetime. It begins when the asset is acquired and ends when the asset is retired from service. The economic life is frequently not the same as the useful life for tax purposes.

(3) Purchase Price. The purchase price of the asset for purposes of lease-purchase analysis is its fair market value, defined as the price a willing buyer could reasonably expect to pay a willing seller in a competitive market to acquire the asset.

(a) In the case of property that is already owned by the Federal Government or that has been donated or acquired by condemnation, an imputed purchase price should be estimated. (Guidance on making imputations is provided in Section 13.c.(6).)

(b) If public land is used for the site of the asset, the imputed market value of the land should be added to the purchase price.

(c) The asset's estimated residual value, as of the end of the period of analysis, should be subtracted from its purchase price. (Guidance on estimating residual value is provided in Section 13.c.(7).)

(4) Taxes. In analyzing the cost of a lease, the normal payment of taxes on the lessor's income from the lease should not be subtracted from the lease costs since the normal payment of taxes will also be reflected in the purchase cost. The cost to the Treasury of special tax benefits, if any, associated with the lease should be added to the cost of the lease. Examples of such tax benefits might include highly accelerated depreciation allowances or tax-free financing.

(5) Ancillary Services. If the terms of the lease include ancillary services provided by the lessor, the present value of the cost of obtaining these services separately should be added to the purchase price. Such costs may be excluded if they are estimated to be the same for both lease and purchase alternatives or too small to affect the comparison. Examples of ancillary services include:

(a) All costs associated with acquiring the property and preparing it for use, including construction, installation, site, design, and management costs.

(b) Repair and improvement costs (if included in lease payments).

(c) Operation and maintenance costs (if included in lease payments).

(d) Imputed property taxes (excluding foreign property taxes on overseas acquisitions except where actually paid). The imputed taxes approximate the costs of providing municipal services such as water, sewage, and police and fire protection. (See Section (6) below.)

(e) Imputed insurance premiums. (See Section (6) below.)

(6) Estimating Imputed Costs. Certain costs associated with the Federal purchase of an asset may not involve a direct monetary payment. Some of these imputed costs may be estimated as follows:

(a) Purchase Price. An imputed purchase price for an asset that is already owned by the Federal Government or which has been acquired by donation or condemnation should be based on the fair market value of similar properties that have been traded on commercial markets in the same or similar localities. The same method should be followed in estimating the imputed value of any Federal land used as a site for the asset.

(b) Property Taxes. Imputed property taxes may be estimated in two ways.

(i) Determine the property tax rate and assessed (taxable) value for comparable property in the intended locality. If there is no basis on which to estimate future changes in tax rates or assessed values, the first-year tax rate and assessed value (inflation adjusted for each subsequent year) can be applied to all years. Multiply the assessed value by the tax rate to determine the annual imputation for property taxes.

(ii) As an alternative to step (i) above, obtain an estimate of the current local effective property tax rate from the Building Owners and Managers Association's Regional Exchange Reports. Multiply the fair market value of the Government-owned property (inflation adjusted for each year) by the effective tax rate.

(c) Insurance Premiums. Determine local estimates of standard commercial coverage for similar property from the Building Owners and Managers Association's Regional Exchange Reports.

(7) Residual Value. A property's residual value is an estimate of the price that the property could be sold for at the end of the period of the lease-purchase analysis, measured in discounted present value terms.

(a) The recommended way to estimate residual value is to determine what similar, comparably aged property is currently selling for in commercial markets.

(b) Alternatively, book estimates of the resale value of used property may be available from industry or Government sources.

(c) Assessed values of similar, comparably aged properties determined for property tax purposes may also be used.

(8) <u>Renewal Options</u>. In determining the term of a lease, all renewal options shall be added to the initial lease period.

14. <u>Related Guidance</u>.

a. OMB Circular No. A-11, "Preparation and Submission of Annual Budget Estimates."
b. OMB Circular No. A-19, "Legislative Coordination and Clearance."
c. OMB Circular No. A-70, "Federal Credit Policy."
d. OMB Circular No. A-76, "Performance of Commercial Activities."
e. OMB Circular No. A-109, "Policies to Be Followed in the Acquisition of Major Systems."
f. OMB Circular No. A-130, "Management of Federal Information Resources."
g. "Joint OMB and Treasury Guidelines to the Department of Defense Covering Lease or Charter Arrangements for Aircraft and Naval Vessels."
h. Executive Order 12291, "Federal Regulation."
i. "Regulatory Impact Analysis Guidance," in <u>Regulatory Program of the United States Government</u>.
j. "Federal Energy Management and Planning Programs; Life Cycle Cost Methodology and Procedures," <u>Federal Register</u>, Vol. 55, No. 17, January 25, 1990, and Vol. 55, No. 224, November 20, 1990.
k. Presidential Memorandum of April 29, 1992, "Benefits and Costs of Legislative Proposals."

15. <u>Implementation</u>. Economic analyses submitted to OMB will be reviewed for conformity with items 5 to 13 in this Circular through the Circular No. A-11, budget justification and submission process, and Circular No. A-19, legislative review process.

16. <u>Effective Date</u>. This Circular is effective immediately.

17. Interpretation. Questions concerning interpretation of this Circular should be addressed to the Office of Economic Policy, Office of Management and Budget (202-395-5873) or, in the case of regulatory issues and analysis, to the Office of Information and Regulatory Affairs (202-395-4852).

APPENDIX A

DEFINITION OF TERMS

Benefit-Cost Analysis -- A systematic quantitative method of assessing the desirability of Government projects or policies when it is important to take a long view of future effects and a broad view of possible side-effects.

Capital Asset -- Tangible property, including durable goods, equipment, buildings, installations, and land.

Certainty-equivalent -- A certain (i.e., nonrandom) outcome that an individual values equally to an uncertain outcome. For a risk-averse individual, the certainty-equivalent for an uncertain set of benefits may be less than the mathematical expectation of the outcome; for example, an individual may value a 50-50 chance of winning $100 or $0 as only $45. Analogously, a risk-averse individual may have a certainty equivalent for an uncertain set of costs that is larger in magnitude than the mathematical expectation of costs.

Cost-Effectiveness Analysis -- A systematic quantitative method for comparing the costs of alternative means of achieving the same stream of benefits or a given objective.

Consumer Surplus -- The maximum sum of money a consumer would be willing to pay to consume a given amount of a good, less the amount actually paid. It is represented graphically by the area between the demand curve and the price line in a diagram representing the consumer's demand for the good as a function of its price.

Discount Rate -- The interest rate used in calculating the present value of expected yearly benefits and costs.

Discount Factor -- The factor that translates expected benefits or costs in any given future year into present value terms. The discount factor is equal to $1/(1 + i)^t$ where i is the interest rate and t is is the number of years from the date of initiation for the program or policy until the given future year.

Excess Burden -- Unless a tax is imposed in the form of a lump-sum unrelated to economic activity, such as a head tax, it will affect economic decisions on the margin. Departures from economic efficiency resulting from the distorting effect of taxes are called excess burdens, because they disadvantage society without adding to Treasury receipts. This concept is also sometimes referred to as deadweight loss.

External Economy or Diseconomy -- A direct effect, either positive or negative, on someone's profit or welfare arising as a by-product of some other person's or firm's activity. Also referred to as neighborhood or spillover effects, or externalities for short.

Incidence -- The ultimate distributional effect of a tax, expenditure, or regulatory program.

Inflation -- The proportionate rate of change in the general price level, as opposed to the proportionate increase in a specific price. Inflation is usually measured by a broad-based price index, such as the implicit deflator for Gross Domestic Product or the Consumer Price Index.

Internal Rate of Return -- The discount rate that sets the net present value of the stream of net benefits equal to zero. The internal rate of return may have multiple values when the stream of net benefits alternates from negative to positive more than once.

Life Cycle Cost -- The overall estimated cost for a particular program alternative over the time period corresponding to the life of the program including direct and indirect initial costs plus any periodic or continuing costs of operation and maintenance.

Multiplier -- The ratio between the direct effect on output or employment and the full effect, including the effects of second order rounds or spending. Multiplier effects greater than 1.0 require the existence of involuntary unemployment.

Net Present Value -- The difference between the discounted present value of benefits and the discounted present value of costs.

Nominal Values -- Economic units measured in terms of purchasing power of the date in question. A nominal value reflects the effects of general price inflation.

Nominal Interest Rate -- An interest rate that is not adjusted to remove the effects of actual or expected inflation. Market interest rates are generally nominal interest rates.

Opportunity Cost -- The maximum worth of a good or input among possible alternative uses.

Real or Constant Dollar Values -- Economic units measured in terms of constant purchasing power. A real value is not affected by general price inflation. Real values can be estimated by deflating nominal values with a general price index, such as the implicit deflator for Gross Domestic Product or the Consumer Price Index.

Real Interest Rate -- An interest rate that has been adjusted to remove the effect of expected or actual inflation. Real interest rates can be approximated by subtracting the expected or actual inflation rate from a nominal interest rate. (A precise estimate can be obtained by dividing one plus the nominal interest rate by one plus the expected or actual inflation rate, and subtracting one from the resulting quotient.)

Relative Price -- A price ratio between two goods as, for example, the ratio of the price of energy to the price of equipment.

Shadow Price -- An estimate of what the price of a good or input would be in the absence of market distortions, such as externalities or taxes. For example, the shadow price of capital is the present value of the social returns to capital (before corporate income taxes) measured in units of consumption.

Sunk Cost -- A cost incurred in the past that will not be affected by any present or future decision. Sunk costs should be ignored in determining whether a new investment is worthwhile.

Transfer Payment -- A payment of money or goods. A pure transfer is unrelated to the provision of any goods or services in exchange. Such payments alter the distribution of income, but do not directly affect the allocation of resources on the margin.

Treasury Rates -- Rates of interest on marketable Treasury debt. Such debt is issued in maturities ranging from 91 days to 30 years.

Willingness to Pay -- The maximum amount an individual would be willing to give up in order to secure a change in the provision of a good or service.

APPENDIX B

ADDITIONAL GUIDANCE FOR DISCOUNTING

1. Sample Format for Discounting Deferred Costs and Benefits

Assume a 10-year program which will commit the Government to the stream of real (or constant-dollar) expenditures appearing in column (2) of the table below and which will result in a series of real benefits appearing in column (3). The discount factor for a 7 percent discount rate is shown in column (4). The present value cost for each of the 10 years is calculated by multiplying column (2) by column (4); the present value benefit for each of the 10 years is calculated by multiplying column (3) by column (4). The present values of costs and benefits are presented in columns (5) and (6) respectively.

Year since initiation, renewal or expansion (1)	Expected yearly cost (2)	Expected yearly benefit (3)	Discount factors for 7% (4)	Present value of costs Col. 2 x Col. 4 (5)	Present value of benefits Col. 3 x Col. 4 (6)
1	$10.00	$ 0.00	0.9346	$ 9.35	$ 0.00
2	20.00	0.00	0.8734	17.47	0.00
3	30.00	5.00	0.8163	24.49	4.08
4	30.00	10.00	0.7629	22.89	7.63
5	20.00	30.00	0.7130	14.26	21.39
6	10.00	40.00	0.6663	6.66	26.65
7	5.00	40.00	0.6227	3.11	24.91
8	5.00	40.00	0.5820	2.91	23.28
9	5.00	40 00	0.5439	2.72	21.76
10	5.00	25.00	0.5083	2.54	12.71
Total				$106.40	$142.41

NOTE: The discount factor is calculated as $1/(1 + i)^t$ where i is the interest rate (.07) and t is the year.

The sum of column (5) is the total present value of costs and the sum of column (6) is the total present value of benefits. Net present value is $36.01, the difference between the sum of discounted benefits and the sum of discounted costs.

2. End-of-Year and Mid-Year Discount Factors

The discount factors presented in the table above are calculated on the implicit assumption that costs and benefits occur as lump-sums at year-end. When costs and benefits occur in a steady stream, applying mid-year discount factors is more appropriate. For instance, the first cost in the table may be estimated to occur after six months, rather than at the end of one year to approximate better a steady stream of costs and benefits occurring over the first year. Similarly, it may be assumed that all other costs and benefits are advanced six months to approximate better a continuing steady flow.

The present values of costs and benefits computed from the table above can be converted to a mid-year discounting basis by multiplying them by 1.0344 (the square root of 1.07). Thus, if the above example were converted to a mid-year basis, the present value of costs would be $110.06, the present value of benefits would be $147.31, and the net present value would be $37.25.

3. **Illustrative Discount Factors for a Discount Rate of 7 Percent**

Year since Initiation, Renewal or Expansion	Year-end Discount Factors	Mid-year Discount Factors	Beginning-of-year Discount Factors
1	0.9346	0.9667	1.0000
2	0.8734	0.9035	0.9346
3	0.8163	0.8444	0.8734
4	0.7629	0.7891	0.8163
5	0.7130	0.7375	0.7629
6	0.6663	0.6893	0.7130
7	0.6227	0.6442	0.6663
8	0.5820	0.6020	0.6227
9	0.5439	0.5626	0.5820
10	0.5083	0.5258	0.5439
11	0.4751	0.4914	0.5083
12	0.4440	0.4593	0.4751
13	0.4150	0.4292	0.4440
14	0.3878	0.4012	0.4150
15	0.3624	0.3749	0.3878
16	0.3387	0.3504	0.3624
17	0.3166	0.3275	0.3387
18	0.2959	0.3060	0.3166
19	0.2765	0.2860	0.2959
20	0.2584	0.2673	0.2765
21	0.2415	0.2498	0.2584
22	0.2257	0.2335	0.2415
23	0.2109	0.2182	0.2257
24	0.1971	0.2039	0.2109
25	0.1842	0.1906	0.1971
26	0.1722	0.1781	0.1842
27	0.1609	0.1665	0.1722
28	0.1504	0.1556	0.1609
29	0.1406	0.1454	0.1504
30	0.1314	0.1359	0.1406

APPENDIX C

DISCOUNT RATES FOR COST-EFFECTIVENESS, LEASE PURCHASE, AND RELATED ANALYSES

__Effective Dates__. This appendix is updated annually at the time of the President's budget submission to Congress. This version of the appendix is valid only through February, 1993. Updates of this appendix will be available upon request from the Office of Economic Policy in OMB (202-395-3381). Copies of the appendix and the Circular may also be obtained from the OMB Publications Office (202-395-7332).

__Nominal Discount Rates__. Nominal interest rates based on the economic assumptions from the Fiscal Year 1993 Budget are presented in the table below. These nominal rates are to be used for discounting nominal flows, as in lease-purchase analysis.

__Nominal Interest Rates on Treasury Notes and Bonds of Specified Maturities (in percent)__

3-Year	5-Year	7-Year	10-Year	30-Year
6.1	6.5	6.7	7.0	7.1

Analyses of programs with terms different from those presented above may use a linear interpolation. For example, a four-year project can be evaluated with a 6.3 percent nominal rate. Programs with durations longer than 30 years may use the 30-year interest rate.

__Real Discount Rates__. Real interest rates based on the economic assumptions from the Fiscal Year 1993 Budget are presented below. These real rates are to be used for discounting real (constant-dollar) flows, as in cost-effectiveness analysis.

__Real Interest Rates on Treasury Notes and Bonds of Specified Maturities (in percent)__

3-Year	5-Year	7-Year	10-Year	30-Year
2.7	3.1	3.3	3.6	3.8

Analyses of programs with terms different from those presented above may use a linear interpolation. For example, a four-year project can be evaluated with a 2.9 percent real rate. Programs with durations longer than 30 years may use the 30-year interest rate.