
Statement of Federal Financial Accounting Standards 4: Managerial Cost Accounting Standards and Concepts

Status

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Summary

The managerial cost accounting concepts and standards contained in this statement are aimed at providing reliable and timely information on the full cost of federal programs, their activities, and outputs. The concepts of managerial cost accounting contained in this statement describe the relationship among cost accounting, financial reporting, and budgeting. The five standards set forth the fundamental elements of managerial cost accounting.

Managerial Cost Accounting Concepts

Managerial cost accounting should be a fundamental part of the financial management system and, to the extent practicable, should be integrated with other parts of the system. Managerial costing should use a basis of accounting, recognition, and measurement appropriate for the intended purpose. Cost information developed for different purposes should be drawn from a common data source, and output reports should be reconcilable to each other.

Managerial Cost Accounting Standards

Requirement for cost accounting - Each reporting entity should accumulate and report the costs of its activities on a regular basis for management information purposes. Costs may be accumulated either through the use of cost accounting systems or through the use of cost finding techniques.

Responsibility segments - Management of each reporting entity should define and establish responsibility segments. Managerial cost accounting should be performed to measure and report the costs of each segment's outputs. Special cost studies, if necessary, should be performed to determine the costs of outputs.

Full cost - Reporting entities should report the full costs of outputs in general purpose financial reports. The full cost of an output produced by a responsibility segment is the sum of (1) the costs of resources consumed by the segment that directly or indirectly contribute to the output, and (2) the costs of identifiable supporting services provided by other responsibility segments within the reporting entity, and by other reporting entities.

Inter-entity costs - Each entity's full cost should incorporate the full cost of goods and services that it receives from other entities. The entity providing the goods or services has the responsibility to provide the receiving entity with information on the full cost of such goods or services either through billing or other advice.

Recognition of inter-entity costs that are not fully reimbursed is limited to material items that (1) are significant to the receiving entity, (2) form an integral or necessary part of the receiving entity's output, and (3) can be identified or matched to the receiving entity with reasonable precision. Broad and general support services provided by an entity to all or most other entities generally should not be recognized unless such services form a vital and integral part of the operations or output of the receiving entity.

Costing methodology - Costs of resources consumed by responsibility segments should be accumulated by type of resource. Outputs produced by responsibility segments should be accumulated and, if practicable, measured in units. The full costs of resources that directly or indirectly contribute to the production of outputs should be assigned to outputs through costing methodologies or cost finding techniques that are most appropriate to the segment's operating environment and should be followed consistently.

The cost assignments should be performed using the following methods listed in the order of preference: (a) directly tracing costs wherever feasible and economically practicable, (b) assigning costs on a cause-and-effect basis, or (c) allocating costs on a reasonable and consistent basis.

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Executive Summary

1. The managerial cost accounting concepts and standards contained in this statement are aimed at providing reliable and timely information on the full cost of federal programs, their activities, and outputs. The cost information can be used by the Congress and federal executives in making decisions about allocating federal resources, authorizing and modifying programs, and evaluating program performance. The cost information can also be used by program managers in making managerial decisions to improve operating economy and efficiency.
2. The concepts of managerial cost accounting contained in this statement describe the relationship among cost accounting, financial reporting, and budgeting. The five standards set forth the fundamental elements of managerial cost accounting: (1) accumulating and reporting costs of activities on a regular basis for management information purposes, (2) establishing responsibility segments to match costs with outputs, (3) determining full costs of government goods and services, (4) recognizing the costs of goods and services provided among federal entities, and (5) using appropriate costing methodologies to accumulate and assign costs to outputs.
3. These standards are based on sound cost accounting concepts and are broad enough to allow maximum flexibility for agency managers to develop costing methods that are best suited to their operational environment. Also, the managerial cost accounting standards and practices will evolve and improve as agencies gain experience in using them. The following is a summary of the concepts and standards contained in this statement.

Managerial Cost Accounting Concepts

4. Managerial cost accounting should be a fundamental part of the financial management system and, to the extent practicable, should be integrated with other parts of the system. Managerial costing should use a basis of accounting, recognition, and measurement appropriate for the intended purpose. Cost information developed for different purposes should be drawn from a common data source, and output reports should be reconcilable to each other.

Managerial Cost Accounting Standards

Requirement for cost accounting

5. Each reporting entity should accumulate and report the costs of its activities on a regular basis for management information purposes. Costs may be accumulated either through the use of cost accounting systems or through the use of cost finding techniques.

Responsibility segments

6. Management of each reporting entity should define and establish responsibility segments. Managerial cost accounting should be performed to measure and report the costs of each segment's outputs. Special cost studies, if necessary, should be performed to determine the costs of outputs.

Full cost

7. Reporting entities should report the full costs of outputs in general purpose financial reports. The full cost of an output produced by a responsibility segment is the sum of (1) the costs of resources consumed by the segment that directly or indirectly contribute to the output, and (2) the costs of identifiable supporting services provided by other responsibility segments within the reporting entity, and by other reporting entities.

Inter-entity costs

8. Each entity's full cost should incorporate the full cost of goods and services that it receives from other entities. The entity providing the goods or services has the responsibility to provide the receiving entity with information on the full cost of such goods or services either through billing or other advice.
9. Recognition of inter-entity costs that are not fully reimbursed is limited to material items that (1) are significant to the receiving entity, (2) form an integral or necessary part of the receiving entity's output, and (3) can be identified or matched to the receiving entity with reasonable precision. Broad and general support services provided by an entity to all or most other entities generally should not be recognized unless such services form a vital and integral part of the operations or output of the receiving entity.

Costing methodology

10. Costs of resources consumed by responsibility segments should be accumulated by type of resource. Outputs produced by responsibility segments should be accumulated and, if practicable, measured in units. The full costs of resources that directly or indirectly contribute to the production of outputs should be assigned to outputs through costing methodologies or cost finding techniques that are most appropriate to the segment's operating environment and should be followed consistently.
11. The cost assignments should be performed using the following methods listed in the order of preference: (a) directly tracing costs wherever feasible and economically practicable. (b) assigning costs on a cause-and-effect basis, or (c) allocating costs on a reasonable and consistent basis.
12. These accounting standards need not be applied to items that are qualitatively and quantitatively immaterial. The Board recommends that the managerial accounting standards of this Statement become effective for fiscal periods beginning after September 30, 1996. Earlier implementation is encouraged.

Introduction

Background

13. Reliable information on the costs of federal programs and activities is crucial for effective management of government operations. In Statement of Federal Financial Accounting Concepts (SFFAC) No. 1, Objectives of Federal Financial Reporting, issued in 1993, it is stated that the objectives of federal financial reporting are to provide useful information to assist internal and external users in assessing the budget integrity, operating performance, stewardship, and systems and control of the federal government.¹
14. Managerial cost accounting is especially important for fulfilling the objective of assessing operating performance. In relation to that objective, it is stated in SFFAC No. 1 that federal financial reporting should provide information that helps users to determine:
- Costs of specific programs and activities and the composition of, and changes in, those costs;
 - Efforts and accomplishments associated with federal programs and their changes over time and in relation to costs; and
 - Efficiency and effectiveness of the government's management of its assets and liabilities.²
15. It is further stated in SFFAC No. 1 that "The topics of costs and performance measurement are related because it is by associating cost with activities or cost objectives that accounting can make much of its contribution to reporting on performance."³ "Cost" is the monetary value of resources used or sacrificed or liabilities incurred to achieve an objective, such as to acquire or produce a good or to perform an activity or service. Costs incurred may benefit current and future periods. In financial accounting and reporting, the costs that apply to an entity's operations for the current accounting period are recognized as expenses of that period.

¹Statement of Federal Financial Accounting Concepts No. 1, *Objectives of Federal Financial Reporting* (September 2, 1993), pars. 110 and 111.

²Ibid., pars. 126-130.

³Ibid., par. 192.

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16. The Chief Financial Officers Act of 1990 includes among the functions of chief financial officers “the development and reporting of cost information” and “the systematic measurement of performance.”⁴ In July 1993, Congress passed the Government Performance and Results Act (GPRA) which mandates performance measurement by federal agencies.⁵ In September 1993, in his report to the President on the National Performance Review (NPR), Vice President Al Gore recommended an action which required the Federal Accounting Standards Advisory Board to issue a set of cost accounting standards for all federal activities.⁶ Those standards will provide a method for identifying the unit cost of all government activities.
 17. In early 1994, the Federal Accounting Standards Advisory Board (the Board) convened an advisory group to help develop standards for managerial cost accounting in the federal government. The group included members from government, business, and academe. Their views and proposals have been considered by the Board, and their work contributed greatly in developing this document.

Users Of Federal Cost Information

18. The cost of government is a concern to the public as well as to the federal government itself. Most government service efforts and accomplishments cannot be measured in financial terms alone. Unlike private business, there is no “bottom line” or profit index to help measure public sector performance. However, government service efforts and accomplishments can be evaluated using both financial and non-financial measures, and “cost” is an important financial measure for government programs. Internal and external federal information users identified below will find these standards helpful in assessing operating performance, stewardship, systems, and control of the federal government.
19. *Government managers* are the primary users of cost information. They are responsible for carrying out program objectives with resources entrusted to them. Reliable and timely cost information helps them ensure that resources are spent to achieve expected results and outputs, and alerts them to waste and inefficiency.
20. *Congress and federal executives*, including the President, make policy decisions on program priorities and allocate resources among programs. These officials need cost information to

⁴104 Stat. 2938 (See particularly 31 U.S.C. sec 902).

⁵107 Stat. 285 (See particularly, 31 U.S.C. sections 1101, 1105, 1115, 1116-1119, 9703, 9704).

⁶Vice President Al Gore, Creating A Government That Works Better & Costs Less, Accompanying Report of the National Performance Review (September 1993), p. 59.

compare alternative courses of action and to make program authorization decisions by assessing costs and benefits. They also need cost information to evaluate program performance.

21. *Citizens*, including news media and interest groups, are concerned with the costs and results of federal programs that affect their interests. They need program cost information to judge whether resources are allocated to programs rationally and if the programs operate efficiently and effectively.

Objectives

22. The managerial cost accounting concepts and standards presented here are intended for all the user groups identified above. These standards are aimed at achieving three general objectives:
- Provide program managers⁷ with relevant and reliable information relating costs to outputs and activities. Based on this information, program managers can respond to inquiries about the costs of the activities they manage. The cost information will assist them in improving operational economy and efficiency;
 - Provide relevant and reliable cost information to assist the Congress and executives in making decisions about allocating federal resources, authorizing and modifying programs, and evaluating program performance; and
 - Ensure consistency between costs reported in general purpose financial reports and costs reported to program managers. This includes standardizing terminology for managerial cost accounting to improve communication among federal organizations and users of cost information.

Scope Of Standards

23. This statement contains managerial cost concepts and five standards for the federal government. The five standards address the following topics:
- (1) Requirement for cost accounting,
 - (2) Responsibility segments,
 - (3) Full cost,

⁷Statement of Federal Financial Accounting Concepts No. 1, Objectives of Financial Reporting, defined “Program managers” as individuals who manage federal programs, and stated that “Their concerns include operating plans, program operations, and budget execution.” SFFAC No. 1, par. 85.

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- (4) Inter-entity costs, and
 - (5) Costing methodology.

The essence of each standard is briefly stated in a box followed by detailed explanations. **However, both the words in the boxes and the entire text of explanations constitute the requirements of the standards.**

- 24. These standards are based on sound cost accounting concepts and allow sufficient flexibility for agencies to develop managerial cost accounting practices that are suited to their specific operating environments. Also, it is expected that cost accounting standards and practices will evolve and improve as agencies gain experience in using them.
- 25. Other Statements of Federal Financial Accounting Standards (SFFAS) address recognition and measurement of assets and liabilities. For additional guidance, readers should consult: SFFAS No. 1, *Accounting for Selected Assets and Liabilities*; SFFAS No. 2, *Accounting for Direct Loans and Loan Guarantees*; and SFFAS No. 3, *Accounting for Inventory and Related Property*. The Board is working on and will soon complete other recognition and measurement projects related to revenues, liabilities, property, plant, and equipment, and other elements of financial statements.⁸

Terminology

- 26. Managerial cost accounting information, to be useful, must rely on consistent and uniform terminology for concepts, practices, and techniques. Consistent and uniform use of terminology can help avoid confusion and mis-communication among organizations and individuals.
- 27. As a start toward developing consistent managerial cost accounting terminology within the federal government, this statement includes a glossary of basic cost accounting terms.

Materiality

- 28. Except as otherwise noted, the accounting and reporting provisions of these accounting standards need not be applied to items that are qualitatively or quantitatively immaterial.

⁸See FASAB Exposure Drafts, *Accounting for Liabilities of the Federal Government* (November 7, 1994); *Accounting for Property, Plant, and Equipment* (February 28, 1995); and *Revenue and Other Financing Sources* (Pending).

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29. The determination of whether an item is material depends on the degree to which omitting information about the item makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission.

Effective Date

30. The managerial cost accounting standards prescribed in SFFAS No. 4 shall be effective for fiscal periods beginning after September 30, 1997. Earlier implementation is encouraged.

Purposes Of Using Cost Information

31. There are many different purposes for which cost information may be used by the federal government. The focus of this statement is on cost information needed to improve federal financial management and managerial decision making.
32. In managing federal government programs, cost information is essential in the following five areas: (1) budgeting and cost control, (2) performance measurement, (3) determining reimbursements and setting fees and prices, (4) program evaluations, and (5) making economic choice decisions. Each of these uses is discussed below.

Budgeting And Cost Control

33. Information on the costs of program activities can be used as a basis to estimate future costs in preparing and reviewing budgets. Once budgets are approved and executed, cost information serves as a feedback to budgets. Using cost information, federal managers can control and reduce costs, and find and avoid waste. For example, with appropriate cost information, federal managers can:
- Compare costs with known or assumed benefits of activities, identify value-added and non-value-added activities, and make decisions to reduce resources devoted to activities that are not cost-effective;
 - Compare and determine reasons for variances between actual and budgeted costs of an activity or a product;
 - Compare cost changes over time and identify their causes;
 - Identify and reduce excess capacity costs; and
 - Compare costs of similar activities and find causes for cost differences, if any.

Performance Measurement

34. Measuring performance is a means of improving program efficiency, effectiveness, and program results. One of the stated purposes of the GPRA of 1993 is to “. . .improve the confidence of the American people in the capability of the federal government, by systematically holding federal agencies accountable for achieving program results.”
35. Measuring costs is an integral part of measuring performance in terms of efficiency and cost-effectiveness. Efficiency is measured by relating outputs to inputs. It is often expressed by the cost per unit of output. While effectiveness in itself is measured by the outcome or the degree to which a predetermined objective is met, it is commonly combined with cost information to show “cost-effectiveness.” Thus, the service efforts and accomplishments of a government entity can be evaluated with the following measures:
- (1) Measures of service efforts which include the costs of resources used to provide the services and non-financial measures;
 - (2) Measures of accomplishments which are outputs (the quantity of services provided) and outcomes (the results of those services); and
 - (3) Measures that relate efforts to accomplishments, Such as cost per unit of output or cost-effectiveness.
36. Thus, as stated previously, performance measurement requires both financial and non-financial measures. Cost is a necessary element for performance measurement, but is not the only element.

Determining Reimbursements And Setting Fees And Prices

37. Cost information is an important basis in setting fees and reimbursements. Pricing and costing, however, are two different concepts. Setting prices is a policy matter, sometimes governed by statutory provisions and regulations, and other times by managerial or public policies. Thus, the price of a good or service does not necessarily equal the cost of the good or the service determined under a particular set of principles. Nevertheless, cost is an important consideration in setting government prices. With certain exceptions, OMB requires:⁹

⁹OMB Circular A-25, User Charges (Revised July 8, 1993).

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- With respect to goods and services that the government provides in its sovereign capacity to a particular group of individuals as a special benefit, user charges should be sufficient to recover the full cost of those goods and services; and
 - With respect to goods and services that the government provides under business-like conditions, user charges for those goods and services need not be limited to the recovery of full cost and may yield a net revenue.
38. Also, cost information is important in calculating reimbursements for products and services provided by one government agency to another. Even if fees or reimbursements do not recover the full costs due to policy or economic constraints, management needs to be aware of the difference between cost and price. With this information, program managers can properly inform the public, the Congress, and federal executives about the costs of providing the goods or services.

Program Evaluations

39. Costs of federal resources required by programs are an important factor in making policy decisions related to program authorization, modification, and discontinuation. These decisions are usually subject to policy constraints, and often require the consideration of social and economic costs and benefits affecting different sectors of the economy and society. Nevertheless, the costs of federal resources required are an important factor. Information on program costs can be used as a basis for cost-benefit considerations.

Economic Choice Decisions

40. Often, agencies and programs face decisions involving choices among alternative actions, such as whether to do a project in-house or contract it out; to accept or reject a proposal; or to continue or drop a product or service. Making these decisions requires cost comparisons among available alternatives.

Managerial Cost Accounting Concepts

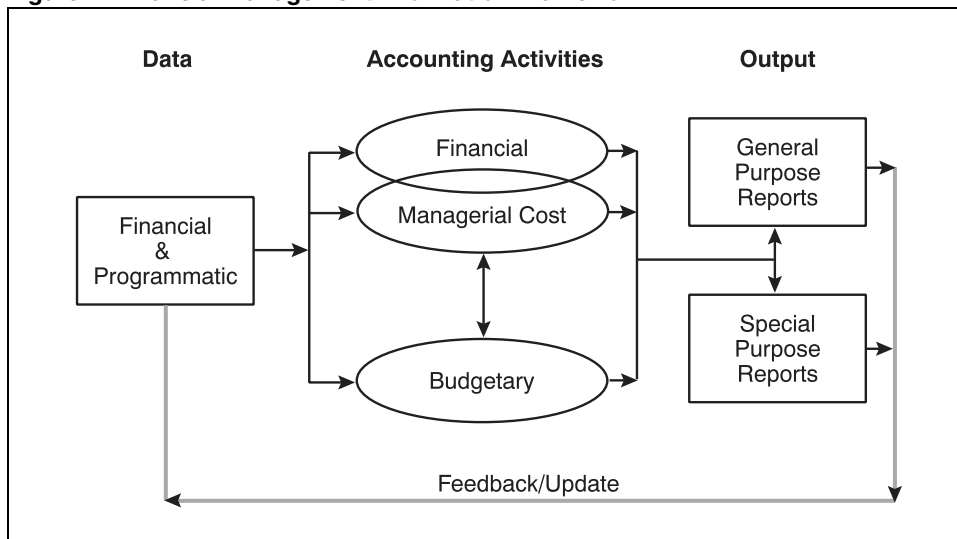
Managerial cost accounting should be a fundamental part of the financial management system and, to the extent practicable, should be integrated with other parts of the system. Managerial costing should use a basis of accounting, recognition, and measurement appropriate for the intended purpose. Cost information developed for different purposes should be drawn from a common data source, and output reports should be reconcilable to each other.

41. Managerial cost accounting should be an essential element of proper financial planning, control, and evaluation for any organization or activity that uses resources having monetary value. Managerial cost accounting is a basic part of the financial management system in that it supports and provides data to the budgetary and financial accounting functions and, by itself, provides useful information for both internal and external users.

Role Of Managerial Cost Accounting In Financial Management

42. Managerial cost accounting is the process of accumulating, measuring, analyzing, interpreting, and reporting cost information useful to both internal and external groups concerned with the way in which the organization uses, accounts for, safeguards, and controls its resources to meet its objectives. Managerial cost accounting, therefore, is the servant of both budgetary and financial accounting and reporting because it assists those systems in providing information. Also, it provides useful information directly to management. These relationships are shown in Figure 1.

Figure 1: Financial Management Information Framework



Common Data Source

43. The information flow within a financial management system begins with a basic information pool or common data source. This data source consists of all financial and programmatic information used by the budgetary, cost, and financial accounting processes. It includes all

financial and much non-financial data, such as environmental data, that are necessary for budgeting and financial reporting.¹⁰ The common data source also includes evaluation and decision information developed as a result of prior reporting and feedback. Other types of data may be included based upon perceived needs and purposes related to the ultimate users of the information.

44. The common data source may include many different kinds of data. It is far more than the information about financial transactions found in the standard general ledger, although that is a significant part of the data source. Few organizations or entities maintain all these data in any one system or location. Furthermore, the use of the term “data source” is not meant to imply the use of computerized systems for source information. Instead, the term is used in a broad way to include many sources of information.
45. Managerial cost accounting, financial accounting, and budgetary accounting draw information as needed from the common data source. The data obtained by each of these is processed to attain specific objectives by reporting useful information.

Relationship to Financial Accounting

46. As shown in Figure 1 by their overlap, managerial cost accounting and financial accounting are closely related or integrated. To some degree, this is due to the historical development of cost accounting as a method for more detailed scorekeeping with the requirement to provide inventory values for external financial reporting purposes.¹¹ In part, it is because cost information generally originates with transactions recorded for financial accounting purposes.
47. While inventory valuation is still part of the fundamental relationship, managerial cost accounting serves financial accounting in several other ways. Fundamentally, managerial cost accounting should assist financial accounting in determining the results of operations during a fiscal period by providing relevant data that are accumulated to produce operating expenses. These data include the allocation of capitalized costs to periods of time or units of usage.
48. Traditionally, managerial cost accounting information pertaining to financial accounting has involved costs of past transactions and the assignment of transaction value to fiscal periods

¹⁰The makeup of core data and environmental data is discussed in Statement of Federal Financial Accounting Concepts No. 1, *Objectives of Federal Financial Reporting*, Chapter 7, and, therefore, a detailed discussion is not provided here.

¹¹Coulthurst, Nigel and John Piper, “The State of Cost and Management Accounting,” *Management Accounting*, April 1986.

and outputs. These purposes and uses are closely aligned with the financial accounting activity and traditional external financial reporting. This past cost aspect has been acknowledged in *Objectives of Federal Financial Reporting* which states that “financial accounting is largely concerned with assigning the value of past transactions to appropriate time periods.”¹²

Relationship to Budgetary Accounting

49. Managerial cost accounting should also provide budgetary accounting with cost information. However, the two are not as closely aligned as is the case with financial accounting (see Figure 1). Mostly, this is because costs are usually recorded, accumulated, and allocated by managerial cost accounting on an accrual basis of accounting which is different from the obligation or cash basis generally used in budgetary accounting.
50. Still, managerial cost accounting does provide cost information to budgetary accounting for use in preparing yearly and long-term budgets for required materials, supplies, equipment, human resources, and other resources needed to produce different levels of outputs. Managerial cost accounting also helps in making many budgetary decisions such as those concerning future capital expenditures and purchase/lease alternatives.
51. It is important to note that the Board’s authority does not extend to recommending budgetary standards or budgetary concepts, and that is not the purpose of this statement.¹³ However, the Board is committed to providing relevant and reliable cost accounting information that supports budget planning, formulation, and execution.

Cost Information for Management Purposes

52. Managerial cost accounting produces information directly for management use, sometimes employing data produced by the budgetary and financial accounting processes. Cost information is used for many different purposes which can be generally classified into five types: performance measurement; cost reduction and control; determination of reimbursements and fee or price setting; program authorization, modification, and discontinuation decisions; and decisions to contract out work or make other changes in the methods of production.
53. To meet these needs, managerial cost accounting should use basic cost data and non-financial or programmatic data. For example, it tracks units of output produced and input

¹²Statement of Federal Financial Accounting Concepts No. 1, *Objectives of Federal Financial Reporting*, par. 168.

¹³Memorandum of Understanding establishing the FASAB, October 10, 1990.

used including the amount of labor in terms of employees or employee-hours. Sometimes, information from cost analysis is used to compare actual to predetermined or anticipated costs. An organization may use cost estimates, cost studies, and cost finding techniques.

54. While managerial cost accounting is concerned not only with past costs and future costs, one of its most important features is the use of present costs to assist management. This current cost aspect of managerial cost accounting is referred to in the *Objectives of Federal Financial Reporting* where it states that “accounting data may be further assigned, allocated, or associated with units of activity or production, segments of organizations, etc., within the same time period. These kinds of intraperiod allocations are developed most extensively in the branch of accounting called cost accounting. Neither the FASB nor the GASB has devoted much attention to this branch of accounting, but the FASAB, because of its unique mission, will need to do so.”¹⁴ Managerial cost accounting information pertaining to present costs is most often used for controlling and reducing those costs, controlling work processes, and measuring current performance.

Reporting Relationships

55. Proper financial management requires that the three accounting processes work closely together to provide useful reporting to both internal and external users. The internal-external dual focus of federal reporting has been established in the *Objectives of Federal Financial Reporting*. It states that “The FASAB and its sponsors believe that any description of federal financial reporting objectives should consider the needs of both internal and external users and the decisions they make.” In addition, it says that “the FASAB... considers the information needs of both internal and external users. In part, this is because the distinction between internal and external users is in many ways less significant for the federal government than for other entities.” It goes on to classify the users of financial information into four major groups: program managers, executives, the Congress, and citizens.¹⁵ These categories include both internal and external users.
56. Federal financial reporting encompasses general and special purpose reports to meet the needs of the four user groups. Information produced by managerial cost accounting appears in or influences both types of reports.¹⁶ As discussed above, managerial cost accounting should provide information for use by both financial accounting and budgetary accounting.

¹⁴Statement of Federal Financial Accounting Concepts No. 1, *Objectives of Federal Financial Reporting*, par. 174.

¹⁵*Ibid.*, pars. 23, 25, and par. 75.

¹⁶The types of general purpose and special purpose reports are discussed in Statement of Federal Financial Accounting Concepts No. 1, *Objectives of Federal Financial Reporting*, Chapter 7.

That information is used by those processes in producing both general purpose and special purpose reports.

57. Managerial cost accounting also results in reports of its own. Most often these are special purpose reports designed for internal users, typically program and line managers. However, they may be for groups generally considered external users.
58. One of the most important aspects of reporting in which managerial cost accounting plays a large role is that of performance reporting. Measuring and reporting actual performance against established goals is essential to assess governmental accountability. Cost information is necessary in establishing strategic goals, measuring service efforts and accomplishments, and relating efforts to accomplishments. The importance of cost information in relation to performance measurement and performance reporting has been recognized in the *Objectives of Federal Financial Reporting*, which said “One reason for performing cost accounting is to assist in performance measurement” and it also stated that “The topics of cost and performance measurement are related because it is by associating cost with activities or ‘cost objectives’ that accounting can make much of its contribution to reporting on performance.”¹⁷

Basis Of Accounting And Recognition/measurement Methods

59. Costs may be measured, analyzed, and reported in many ways. A particular cost measurement has meaning only when considering its purpose. The measurement of costs can vary depending upon the circumstances and purpose for which the measurement is to be used. In *Objectives of Federal Financial Reporting*, it is stated that “the Board’s own focus is on developing generally accepted accounting standards for reporting on the financial operations, financial position, and financial condition of the federal government and its component entities and other useful financial information. This implies a variety of measures of costs and other information that complements the information available in the budget [emphasis added].”¹⁸
60. In addition, it is stated that “In defining the proper measurement, assignment, and allocation of cost for a given purpose, selecting the appropriate accounting method and whether to use full costing should be carefully considered.”¹⁹ Further, it added that “The accrual basis of

¹⁷Ibid., par. 174 and par. 192.

¹⁸Ibid., par. 191.

¹⁹Ibid., par. 196.

accounting generally provides a better matching of costs to the production of goods and services, but its use and application for any given purpose must be carefully evaluated.”²⁰

61. Therefore, managerial cost accounting should provide cost information using a basis of accounting and recognition/measurement standards that are appropriate for the intended use of the information. When managerial cost accounting is used to supply information for use by financial accounting and financial reporting, that information should be consistent with the basis of accounting and recognition/measurement standards required by federal accounting principles. Traditionally this has meant the use of accrual accounting and historical cost measurement, particularly in general purpose reports.
62. When managerial cost accounting is used to supply information for the preparation and review of budgets, cost data should be consistent with the basis of accounting and recognition/measurement used in financial reporting, but may be adjusted to meet the budgetary information needs.
63. Special purpose cost studies and analyses are sometimes performed for decision making. In those studies and analyses, management may need to develop cost data beyond those currently reported in general purpose financial reports. For example, in making planning decisions, management may develop replacement costs and capital costs. However, the basis and methods used should be appropriate for the circumstances and consistent with the intended purposes.

Reconciliation Of Information

64. Different bases of accounting will produce different costs for the same item, activity, or entity. This can confuse users of cost information. Therefore, reports that use different accounting bases or different recognition and measurement methods should be reconcilable, and should fully explain those bases and methods. Regardless of the type of report in which it is presented, cost information should ultimately be traceable back to the original common data source.
65. To be reconcilable, the amount of the differences in the information reported should be ascertainable and the reasons for the differences should be explainable. In some situations, informational differences may be clearly understandable without further explanation. However, other cases may require a narrative statement concerning the differences. In complicated situations, a schedule or table may be required to fully explain the differences.

²⁰Ibid., par. 197.

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66. Financial reporting has long recognized the necessity for reconciliation between information reported on different accounting bases. Reconciliations have been required in federal financial reports to show and explain significant differences between budget reports and financial statements prepared in accordance with generally accepted accounting principles.

Managerial Cost Accounting Standards

Requirement For Cost Accounting

Each reporting entity²¹ should accumulate and report the cost of its activities on a regular basis for management information purposes. Costs may be accumulated either through the use of cost accounting systems or through the use of cost finding techniques.

67. Cost information is essential to effective financial management and should play an important role in federal financial reporting. Managerial cost accounting processes are the means of providing cost information in an efficient and reliable manner on a continuing basis.

Need For Consistent Cost Accounting On A Regular Basis

68. To perform managerial cost accounting on a “regular basis” means that entities should establish procedures to accumulate and report costs continuously, routinely, and consistently for management information purposes. Consistent and regular cost accounting is needed to meet the second objective of federal financial reporting which states information should be provided to help the user determine the costs of providing specific programs and activities and the composition of, and changes in those costs. That objective also requires the reporting of performance information of federal programs and the changes over time in that performance in relation to the costs.
69. The requirement for managerial cost accounting on a regular and consistent basis supports recent legislative actions. The CFO Act of 1990 states that agency CFOs shall provide for the development and reporting of cost information and the periodic measurement of performance. In addition, the GPRA of 1993 requires each agency, for each program, to establish performance indicators and measure or assess relevant outputs, service levels, and outcomes of each program as a basis for comparing actual results with established goals. The

²¹The term “reporting entity” as used in this document conveys the same meaning as defined in FASAB Statement of Recommended Accounting Concepts No. 2, *Entity and Display* (May 1995).

nature of these legislative mandates requires reporting entities to develop and report cost information on a consistent and regular basis.

70. The managerial cost accounting processes consist of collecting data from the common data source, processing that data, and reporting cost and output information in general purpose and special purpose reports. Appropriate procedures and practices should also be established to enable the collection, measurement, accumulation, analysis, interpretation, and communication of cost information. This can be accomplished through the use of a cost accounting system or the use of cost finding techniques and other cost studies and analyses. A cost accounting “system” is an organized grouping of methods and activities designed to consistently produce reliable cost information.

Basic Cost Accounting Processes

71. Regardless of whether a reporting entity uses a cost accounting system or cost finding techniques, the methods and procedures followed should be designed to perform at least a certain minimum level of cost accounting and provide a basic amount of cost information necessary to accomplish the many objectives associated with planning, decision making, control, and reporting. The more important of these minimum criteria for cost accounting are associated with the standards in the remainder of this statement. Others are also important.
- Responsibility Segments - Cost information should be collected by responsibility segments which have been identified by management and outputs should be defined for each responsibility segment.²²
 - Full Costing - Each reporting entity should measure the full cost of outputs so that total operational costs and total unit costs of outputs can be determined. “Full cost” includes the cost of goods or services provided by other entities when the applicable criteria are met.²³
 - Costing Methodology - The costing methodology used (e.g., activity-based costing, job order costing, standard costing, etc.) should be appropriate for management’s needs and the operating environment.²⁴
 - Performance Measurement - Cost accounting should provide information needed to determine and report service efforts and accomplishments and information necessary to meet the requirements of the GPRA or interface with a system that provides such

²²See standard in this statement concerning responsibility segments.

²³See standard concerning full costs and standard concerning inter-entity costing.

²⁴See standard concerning costing methodology.

information. This includes the quantity of inputs and outputs and other non-financial information needed in the measurement of performance.

- Reporting Frequency - Cost information should be reported in a timely manner and on a regular basis consistent with the needs of management and the requirements of both budgetary and financial reporting.
- Standard General Ledger - Managerial cost accounting should be integrated with general financial accounting. Both depend on the standard general ledger for basic financial transaction data.
- Precision of Information - Cost information supplied to internal and external users should be reliable and useful in making evaluations or decisions. At the same time, unnecessary precision and refinement of data should be avoided.
- Special Situations - The managerial cost accounting processes should be designed to accommodate any of management's special cost information needs that may arise due to unusual or special situations or circumstances. If such cost information is needed on a regular basis, appropriate procedures to provide it should be developed.
- Documentation - All managerial cost accounting activities, processes, and procedures should be documented by a manual, handbook, or guidebook of applicable accounting operations. This reference should outline the applicable activities, provide instructions for procedures and practices to be followed, list the cost accounts and subsidiary accounts related to the standard general ledger, and contain examples of forms and other documents used.

Complexity Of Cost Accounting Processes

72. While each entity's managerial cost accounting should meet the basics discussed above, this standard does not specify the degree of complexity or sophistication of any managerial cost accounting process. Each reporting entity should determine the appropriate detail for its cost accounting processes and procedures based on several factors. These include the:
- nature of the entity's operations;
 - precision desired and needed in cost information;
 - practicality of data collection and processing;
 - availability of electronic data handling facilities;
 - cost of installing, operating, and maintaining the cost accounting processes; and
 - any specific information needs of management.
73. Some entities may find that they can purchase basic "off-the-shelf" cost accounting programs, systems, or processes, or adapt those of other federal agencies. All entities should consider using similar or compatible cost accounting processes throughout their component units to facilitate comparison and consolidation of cost information.

Cost Findings, Studies, And Analyses

74. A cost accounting system is a continuous and systematic cost accounting process which may be designed to accumulate and assign costs to a variety of objects routinely or as desired by the management. Such a system may be best for some reporting entities.
75. Some entities may not need a sophisticated system to perform detailed cost accumulation and assignment. They need to accumulate and report costs regularly as required by this standard, but they may determine and analyze costs through special cost studies and analyses. Also, some entities may use a combination of a system supplemented by cost studies.
76. Cost information may be developed and savings achieved in some cases by the use of special cost studies or cost analyses to develop information helpful in certain decision making situations. In addition, cost finding techniques may be used to determine the cost of products or services. Cost finding is a method for determining the cost of producing goods or services using appropriate procedures. Cost finding techniques may also be useful for computing costs in cases where the information is not needed on a recurring basis.

Responsibility Segments

Management of each reporting entity should define and establish responsibility segments. Managerial cost accounting should be performed to measure and report the costs of each segment's outputs. Special cost studies, if necessary, should also be performed to determine the costs of outputs.

77. The standard states that the management of each reporting entity should define and establish responsibility segments. This section explains the concept of responsibility segment, purposes of segmentation, and how responsibility segments can be structured.

Defining Responsibility Segments

78. A responsibility segment is a component of a reporting entity²⁵ that is responsible for carrying out a mission, conducting a major line of activity, or producing one or a group of related products or services. In addition, responsibility segments usually possess the following characteristics:
- (1) Their managers report to the entity's top management directly;

²⁵The term "reporting entity" referred to in this document conveys the same meaning as defined in FASAB Statement of Recommended Accounting Concepts No. 2, *Entity and Display* (May 1995).

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- (2) Their resources and results of operations can be clearly distinguished from those of other segments of the entity.²⁶
79. A responsibility segment is a unit for which managerial cost accounting is performed. Entities may use a centralized accounting system or segment-based systems to provide cost information for each segment. For each segment, managerial cost accounting should:
- (1) Define and accumulate outputs, and if feasible, quantify each type of output in units;
 - (2) Accumulate costs and quantitative units of resources consumed in producing the outputs; and
 - (3) Assign costs to outputs, and calculate the cost per unit of each type of output.
80. Some reporting entities may have only one responsibility segment, if they perform one single mission or one type of service. Other reporting entities may have several responsibility segments. Also, a sub-organization of the federal government may be a reporting entity in itself and, at the same time, it may also be a responsibility segment of a higher level reporting entity to which it belongs. The Forest Service, for example, may be a reporting entity because it may meet the reporting entity criteria. As such, it may establish responsibility segments for itself. At the same time, the Forest Service may be regarded as a responsibility segment of the Department of Agriculture, of which it is a component.
81. However, for a given reporting entity, its management should establish one or more responsibility segments to perform managerial cost accounting functions.

Purposes Of Segmentation

82. A basic purpose of dividing an entity into segments is to determine and report the costs of services and products that each segment produces and delivers. Many federal departments and agencies manage programs that produce a variety of goods and services. Accounting for entity-wide revenues and expenses in aggregate would serve financial reporting for the entity, but would not serve costing purposes. In order to determine the cost of each type of service or product, it is necessary to divide an entity into segments such that each segment is responsible for certain types of services or products. Each segment can then be used as a vehicle for accumulating costs incurred by the segment to match with its outputs. Each segment can use a cost methodology that is best suited to its operations.

²⁶These two characteristics make responsibility segments, as the term is used in this document, differ from cost centers. A cost center can be at any level of an organization and may not report to the top management directly. As will be explained later, a responsibility segment can contain cost centers in itself.

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83. Another important purpose of segmentation is to facilitate cost control and management. Cost information provided for each segment helps managers to examine costs of specific resources consumed and activities performed in each segment. Managers can analyze cost variances in both dollars and the units of resources consumed against budgets or standards. Since each segment performs a particular pattern of processes and activities to produce its output, managers can analyze those processes and activities to compare their costs with the value they contribute to the output.
84. For entities that consist of components engaging in diverse lines of activities, it is desirable to provide financial reports that display information for significant components individually and of the entity in its entirety.²⁷ Some entities may find costs accumulated by segments useful in support of financial reporting by components.
85. For internal management, segmentation could also facilitate performance measurement. Since each segment is responsible for a mission, or a line of activity to produce a certain type of output, performance goals can be set for each segment based on its specific tasks and operating patterns. Information on costs, outputs, and outcomes related to each segment can be used to measure its performance against the goals. The results of the segment performance measurement could also support external reporting on performance measures for the entire reporting entity or its major programs.

Structuring Responsibility Segments

86. Reporting entity management should define and structure its responsibility segments. The designation of responsibility segments should be based on the following factors: (a) the entity's organization structure, (b) its lines of responsibilities and missions, (c) its outputs (goods or services it delivers), and (d) budget accounts and funding authorities. However, the predominant factor is the reporting entity's organization structure and its existing responsibility components, such as bureaus, administrations, offices, and divisions within a department.
87. The U.S. General Services Administration, for example, provides five distinct services: (1) managing public buildings, (2) distributing supplies, (3) providing travel and transportation services, (4) managing information resources (including communication and data processing services), and (5) disposal of real properties. Each of those service areas could be designated as a responsibility segment. The Department of Veterans Affairs (VA), among its other services, provides health care to veterans, pays veterans' compensation and pension

²⁷This point is discussed in FASAB Statement of Recommended Accounting Concepts No. 2, *Entity and Display*, pars. 75-76.

benefits, and provides home loans and home loan guarantees to veterans. Each of these program areas could constitute a responsibility segment.

88. Since responsibility segments are major parts of an entity, some segments may carry more than one program. Some programs may be jointly managed by two or more segments. Thus, each segment must accumulate costs for each type of output produced for various programs. To accomplish this, a network of cost centers can be established within a segment to accumulate costs. Managers of each cost center will be provided with information to control and manage costs within their area of responsibility. Depending on operational patterns and cost methods, cost centers can be structured along different dimensions, such as organizational units, operating processes, and activities.

Full Cost

Reporting entities should report the full costs of outputs in general purpose financial reports. The full cost of an output produced by a responsibility segment is the sum of (1) the costs of resources consumed by the segment that directly or indirectly contribute to the output, and (2) the costs of identifiable supporting services provided by other responsibility segments within the reporting entity, and by other reporting entities.

89. This standard states that reporting entities should measure and report the full costs of their outputs in general purpose financial reports. "Outputs" means products and services generated from the consumption of resources. The full cost of a responsibility segment's output is the total amount of resources used to produce the output. This includes direct and indirect costs that contribute to the output, regardless of funding sources. It also includes costs of supporting services provided by other responsibility segments or entities. The standard does not require full cost reporting in federal entities' internal reports or special purpose cost studies. Entity management can decide on a case-by-case basis whether full cost is appropriate and should be used for internal reporting and special purpose cost studies.

Direct Costs

90. Direct costs are costs that can be specifically identified with an output. All direct costs should be included in the full cost of outputs. Typical direct costs in the production of an output include:
- (a) Salaries and other benefits for employees who work directly on the output;
 - (b) Materials and supplies used in the work;

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- (c) Various costs associated with office space, equipment, facilities, and utilities that are used exclusively to produce the output; and
 - (d) Costs of goods or services received from other segments or entities that are used to produce the output (See discussions and explanations in the next section on “Inter-Entity Costs”).

Indirect Costs

91. Indirect costs are costs of resources that are jointly or commonly used to produce two or more types of outputs but are not specifically identifiable with any of the outputs. Typical examples of indirect costs include costs of general administrative services, general research and technical support, security, rent, employee health and recreation facilities, and operating and maintenance costs for buildings, equipment, and utilities. There are two levels of indirect costs:
- (a) Indirect costs incurred within a responsibility segment. These indirect costs should be assigned to outputs on a cause-and-effect basis, if such an assignment is economically feasible, or through reasonable allocations. (See discussions on cost assignments in the “Costing Methodology” section.)
 - (b) Costs of support services that a responsibility segment receives from other segments or entities. The support costs should be first directly traced or assigned to various segments that receive the support services. They should then be assigned to outputs.
92. A reporting entity and its responsibility segments may incur general management and administrative support costs that cannot be traced, assigned, or allocated to segments and their outputs. These unassigned costs are part of the organization costs, and they should be reported on the entity’s financial statements (such as the Statement of Net Costs) as costs not assigned to programs.²⁸

Certain Cost Elements

Costs of Employees’ Benefits

93. Employee benefits include:

²⁸A similar explanation is provided in FASAB Statement of Recommended Accounting Concepts No. 2, *Entity and Display*, par. 95.

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- (a) Health and life insurance benefits for current employees covered in part by the government's contribution to health and life insurance premiums;
 - (b) Pension benefits for employees, their survivors, and dependents, covered by defined pension plans such as Civil Service Retirement System (CSRS), Federal Employees Retirement Plan (FERS), and Military Retirement System (MRS);
 - (c) Health and life insurance benefits for retired employees, their survivors and dependents, covered in part by the government's contribution to health and life insurance premiums, and referred to as "other retirement benefits" (ORB) in this document;
 - (d) Other postemployment benefits (OPEB) for terminated and inactive employees, which include severance payments, training and counseling, continued health care, and unemployment and workers compensation.
94. Most of the employee benefit programs are covered by trust funds administered by the Office of Personnel Management (OPM) and the Department of Defense (DoD). Contributions to the trust funds come from three sources: current and retired employees, employing agencies, and direct appropriations. The management expenses of the trust funds are paid with the funds' receipts.
95. Federal financial accounting standards require that the employing entity accrue the costs to the federal government of providing pension and ORB benefits to employees and recognize the costs as an expense when the benefits are earned.²⁹ The employing entity should recognize those expenses regardless of whether the benefits are funded by the reporting entity or by direct appropriations to the trust funds. This principle should also be applied to health and life insurance benefits for current employees and comparable benefits for military personnel. The costs of employee benefits incurred by responsibility segments should be directly traced or assigned to outputs.
96. OPEB costs include severance payments, counseling and training, health care, and workers compensation benefits paid to former or inactive employees. OPEB costs are often incurred as a result of such events as reductions in force or on-the-job injuries of employees. Federal financial accounting standards require that OPEB costs be reported as an expense for the period during which a future outflow or other sacrifice of resources is probable and measurable on the basis of events occurring on or before the accounting date.³⁰

²⁹FASAB Exposure Draft, *Accounting for Liabilities of the Federal Government* (November 7, 1994), pars. 62-99.

³⁰Ibid., pars. 100-102.

97. Since the recognition of OPEB costs is linked to the occurrence of an OPEB event rather than the production of output, in many instances, assigning OPEB costs recognized for a period to output of that period would distort the cost of output. In special purpose cost studies or cost findings, management may distribute OPEB costs over a number of years in the past to determine the costs of the outputs that the OPEB recipients helped to produce.

Costs of Public Assistance and Social Insurance Programs

98. Major costs of welfare, insurance, and grant programs are the costs of resources transferred from the federal government to individuals and state and local governments. Some of them are referred to as “transfer payments.” The following are some typical public assistance and insurance programs:

- Grants, such as aid to state and local governments;
- Subsidies, such as agricultural commodity price support and stabilization programs;
- Credit and insurance costs, such as the Family Education Loan Program and Savings Association Insurance;
- Welfare payments such as Aid to Families with Dependent Children (AFDC); and,
- Social insurance, such as the Old Age, Survivors, and Disability Insurance Program.

99. The full cost of such a program includes: (a) the costs of federal resources that have been or will be transferred to individuals and state/local governments, and (b) the costs of operating the programs. These two types of costs should be recognized on a basis of accounting that is prescribed within the Federal Financial Accounting Standards. These two types of costs should be separately identified so that each can be used for different analytic purposes.

100. The costs resulting from transfer payments are determined by the level of grants, subsidies, entitlement benefits, credit subsidies, or loss payments made under insurance and guarantee agreements. They are also determined by the number of eligible persons who receive the transfer payments. The program cost of AFDC, for example, depends on the average payment per family, the number of eligible families, and the federal government’s share in the payments (some payments are made by state and local governments). Information on this type of cost is useful for making policy decisions about levels of subsidies or benefits, eligibility of recipients, and how transfer payments are made. This cost information is also useful for measuring the cost-effectiveness of a transfer payment program.

101. Program operating costs, on the other hand, are costs of managing the program and delivering the payments. They include the costs of personnel, supplies, equipment, and offices. The costs are related to such activities as screening benefit recipients for eligibility, keeping their accounts, making payments and collections, answering inquiries, etc. Information on this type of cost is useful in measuring the efficiency of program operations.

Costs related to Property, Plant and Equipment

102. **Depreciation expense.** General property, plant, and equipment are used in the production of goods and services. Their consumption is recognized as depreciation expense. The depreciation expense incurred by responsibility segments should be included in the full costs of the goods and services that the segments produce.
103. **Recognizing property acquisition costs as expenses.** The costs of acquiring or constructing federal mission and heritage property, plant, and equipment may be charged to expenses at the time the acquisition costs are incurred.³¹ Since the recognition of these expenses is linked to property acquisition rather than production of goods and services, those expenses should not be included in the full costs of goods and services. However, they are part of the costs of the entity or the program that makes the property acquisitions.

Non-production costs

104. A responsibility segment may incur and recognize costs that are linked to events other than the production of goods and services. Two examples of these non-production costs were discussed earlier: (1) OPEB costs that are recognized as expenses when an OPEB event occurs, and (2) certain property acquisition costs that are recognized as expenses at the time of acquisition. Other non-production costs include reorganization costs, and nonrecurring cleanup costs resulting from facility abandonments that are not accrued. Since these costs are recognized for a period in which a particular event occurs, assigning these costs to goods and service produced in that period would distort the production costs. In special purpose cost studies, management may have reasons to determine historical output costs by distributing some of these costs to outputs over a number of past periods. Such distribution may be appropriate when: (a) experience shows that the costs are recurring in a regular pattern, **and** (b) a nexus can be established between the costs and the production of outputs that may have benefited from those costs.

³¹In FASAB Exposure Draft, *Accounting for Property, Plant, and Equipment*, the Board proposed that the costs of acquiring or constructing “federal mission” and “heritage” property, plant, and equipment be recognized as expenses when the costs are incurred. See the ED, pars. 98-117, pages 29-34.

Inter-entity Costs

Each entity's full cost should incorporate the full cost of goods and services that it receives from other entities. The entity providing the goods or services has the responsibility to provide the receiving entity with information on the full cost of such goods or services either through billing or other advice.

Recognition of inter-entity costs that are not fully reimbursed is limited to material items that (1) are significant to the receiving entity, (2) form an integral or necessary part of the receiving entity's output, and (3) can be identified or matched to the receiving entity with reasonable precision. Broad and general support services provided by an entity to all or most other entities should not be recognized unless such services form a vital and integral part of the operations or output of the receiving entity.

105. As stated in the preceding standard, to fully account for the costs of the goods and services they produce, reporting entities should include the cost of goods and services received from other entities. Knowledge of these costs is helpful to top level management in controlling and assessing the operating environment. It is also helpful to other users in evaluating overall program costs and performance and in making decisions about resource allocations and changes in programs.

Inter-entity Activities

106. Within the federal government, some reporting entities rely on other federal entities to help them achieve their missions. Often this involves support services, but may include the provision of goods. Sometimes these arrangements may be stipulated by law, but others are established by mutual agreement of the entities involved. Such relationships can be classified into two types depending upon funding methods.

- Provision of goods or services with reimbursement—In this situation, one entity agrees to provide goods or services to another with reimbursement at an agreed-upon price. The reimbursement price may or may not be enough to recover full costs. Usually the agreement is voluntarily established through an inter-agency agreement. Revolving funds can also be included in this group, because they are usually established to recover costs through sale of their outputs to other government entities. They are usually meant to be self-sustaining through their sales, without receiving additional appropriations. However, they do not always charge enough to cover full costs.
- Provision of goods or services without reimbursement—One entity provides goods or services to another entity free of charge. The agreement may be voluntary, legally mandated, or inherently established in the mission of the providing entity.

107. Recently, consideration has been given to expanding the concept of inter-entity support within the federal government. Under this concept, entities could sell their outputs on a competitive basis. Entities would have the authority to purchase goods or services from any federal or private provider. This is seen as a way to improve government efficiency through

competition since inefficient government providers would be forced to improve or stop providing these goods or services. This could result in consolidating support services in fewer governmental entities. Underlying this concept is the requirement that all costs be recognized in developing the price at which goods and services would be sold to other entities.

Accounting And Implementation Guidance

108. If an entity provides goods or services to another entity, regardless of whether full reimbursement is received, the providing entity should continue to recognize in its accounting records the full cost of those goods or services. The full costs of the goods or services provided should also be reported to the receiving entity by the providing entity.
109. The receiving entity should recognize in its accounting records the full cost of the goods or services it receives as an expense or, if appropriate, as an asset (such as work-in-process inventory). The information on costs of non-reimbursed or under-reimbursed goods or services should be available from the providing entity. However, if such cost information is not provided, or is partially provided, a reasonable estimate may be used by the receiving entity. The estimate should be of the cost of the goods or services received (the estimate may be based on the market value of the goods or services received if an estimate of the cost cannot be made). To the extent that reimbursement is less than full cost, the receiving entity should recognize the difference in its accounting records as a financing source.³² Inter-entity expenses/assets and financing sources would be eliminated for any consolidated financial statements covering both entities.
110. ...[This paragraph was rescinded by SFFAS 30, par. 8 effective for periods beginning after September 30, 2008. Please see SFFAS 4 at www.fasab.gov/standards.html for unamended text effective prior to that date.]

³²See Statement of Recommended Federal Accounting Concepts No. 2, *Entity and Display*, par. 65. See also, FASAB Exposure Draft, *Accounting for Liabilities of the Federal Government*, pars. 62-99, pages 26-46, which addresses accounting for pensions and other retirement benefits (ORB). The payment of pension and ORB costs for an entity by another entity has often been likened to providing goods and services. In the case of pensions, employees of the reporting entity provide services to that entity and part of the salary-related cost is paid by a different entity. The pension administering entity does not provide goods or services to the reporting entity (other than normal pension administration services), but rather pays their costs directly. The difference is subtle but important. However, the accounting is similar. This document is consistent with the section of the liabilities exposure draft dealing with accounting for pensions and other retirement benefits.

Recognition Criteria

111. Ideally, all inter-entity costs should be recognized. This is especially important when those costs constitute inputs to government goods or services provided to non-federal entities for a fee or user charge. The fees and user charges should recover the full costs of those goods and services.³³ Thus, the cost of inter-entity goods or services needs to be recognized by the receiving entity in order to determine fees or user charges for goods and services sold outside the federal government.

...[Selected text was rescinded by SFFAS 30, par. 9 effective for periods beginning after September 30, 2008. Please see SFFAS 4 at www.fasab.gov/standards.html for unamended text effective prior to that date.]

112. However, the situation is often different with goods or services transferred within the federal government that do not involve eventual sales to entities outside the federal government. The federal government in its entirety is an economic entity. Therefore, it is reasonable to expect some flow of goods or services between reporting entities as those entities assist each other in fulfilling their missions and operating objectives. There are some cases in which the cost of non-reimbursed or under-reimbursed goods or services received from other entities need not be recognized as part of the cost of the receiving entity. The following general criteria are provided to help in determining the types of inter-entity costs that should or should not be recognized.

- **Materiality**—As with other accounting standards, the provisions of this standard need not be applied to immaterial items. However, in the context of deciding which inter-entity transactions are to be recognized, materiality, as used here, is directed to the individual inter-entity transaction rather than to all inter-entity transactions as a whole. **Under this concept, a much more limited recognition is intended than would be achieved by reference to the general materiality concept.**

In this context, then, materiality should be considered in terms of the importance of the inter-entity transaction to the receiving entity. The importance of the transactions, and thereby their recognition, should be judged in light of the following factors:

- **Significance to the entity**—The cost of the good or service is large enough that management should be aware of the cost when making decisions.
- **Directness of relationship to the entity's operations**—The good or service provided is an integral part of and necessary to the output produced by the entity.
- **Identifiability**—The cost of the good or service provided to the entity can be matched to the entity with reasonable precision.

³³OMB Circular A-25 addresses user charges by federal entities.

The determination of whether the cost is material requires the exercise of considerable judgment, based on the specific facts and circumstances of each transaction.

- Broad, general support—Some entities provide broad, general support to many, if not all, reporting entities in the federal government. Most often this type of support involves the establishment of policies and/or the provision of general guidance. The costs of such broad services should not be recognized as an expense (or asset) by the receiving entities when there is no reimbursement of costs. Thus the standard does not apply when support is of a general nature provided to all or most entities of the federal government.

An example of this situation can be found in the Office of Management and Budget which establishes policy and provides general guidance to all parts of the executive branch of government. The costs of OMB should not be spread over all reporting entities because the services provided are (1) general and broad in scope, (2) provided to almost all reporting entities in the executive branch, and (3) not specifically or directly tied to the receiving entity's outputs.

On the other hand, some services provided, under certain circumstances, should still be recognized even though they may be considered broad and general in nature if such services are integral to the operations of the receiving entity. Such services include check writing by the Department of Treasury or legal activities performed by the Department of Justice. For example, when the issuance of checks is integral to the operations of an entity (e.g., the Internal Revenue Service and the Social Security Administration), the receiving entity should include the full cost of issuing checks in the full cost of its outputs. However, if the issuance of checks is insignificant and incidental to the operations of an entity, the entity should not normally recognize that cost.

113. The decision as to whether the cost of non-reimbursed or under-reimbursed goods and services should be recognized requires the use of judgement. None of the criteria listed above are, by themselves, fully or exclusively determinative. They should be considered in combination. Ultimately, inclusion or exclusion of the cost should be decided based on the specific facts and circumstances of each case, with consideration of the degree to which inclusion or exclusion would change or influence the actions and decisions of a reasonable person relying on the information provided.

Accounting Example

114. The following tables provide an example of the accounting entries to be made when the receiving entity (Agency R) recognizes an expense for services received from a providing

entity (Agency P) on a non-reimbursable basis. In the example, the full costs of these services to Agency P are \$100,000.

115. Agency R recognizes an “Expense of services provided by Agency P” equal to the full cost of the services received. It also recognizes a financing source, “Services provided by Agency P,” equal to the amount not reimbursed, which in this case is the full \$100,000. Agency P recognizes an “Expense of services provided to Agency R” equal to the full cost of the services provided with a credit to “Appropriations used.”

Table 1: Agency R’s Accounting Entries*

| | Debit | Credit |
|--|-----------|-----------|
| Expense of services provided by Agency P | \$100,000 | |
| Services provided by Agency P | | \$100,000 |

Note: This example shows the cost recognized as an expense. However, as discussed in the text, it may be an asset.

Table 2: Agency P’s Accounting Entries

| | Debit | Credit |
|--|-----------|-----------|
| Expense of services provided to Agency R | \$100,000 | |
| Appropriated capital | | \$100,000 |
| Fund balance with Treasury | \$100,000 | |
| Appropriated capital used | | \$100,000 |

Costing Methodology

Costs of resources consumed by responsibility segments should be accumulated by type of resource. Outputs produced by responsibility segments should be accumulated and, if practicable, measured in units. The full costs of resources that directly or indirectly contribute to the production of outputs should be assigned to outputs through costing methodologies or cost finding techniques that are most appropriate to the segment’s operating environment and should be followed consistently.

The cost assignments should be performed by the following methods listed in the order of preference: (a) directly tracing costs wherever feasible and economically practicable, (b) assigning costs on a cause-and-effect basis, or (c) allocating costs on a reasonable and consistent basis.

116. This standard addresses two aspects of costing: cost accumulation and cost assignment. Each of them is explained and discussed below.

Cost Accumulation

117. Cost accumulation is the process of collecting cost data in an organized way. The standard requires that costs be accumulated by responsibility segments. The accumulation is for costs incurred within each responsibility segment, and does not involve the assignment or allocation of costs incurred by other supporting segments, which will be discussed in the latter part of this section.
118. In the section of this document relating to “Responsibility segments,” it was explained that: “A responsibility segment is a component of a reporting entity, that is responsible for carrying out a mission, conducting a major line of activity, or producing one or a group of related products or services.” The accumulation of costs by responsibility segments does not mean that each responsibility segment must have its own accounting system. The reporting entity may have a centralized accounting system, but the system should be capable of identifying costs with responsibility segments.
119. This standard also requires that the accumulated costs be classified by type of resource, such as costs of employees, materials, capital, utilities, rent, etc. When appropriate and cost effective, information on quantitative units related to various cost categories should be maintained. For example, staff-days may be reported for staff salaries and benefits, and gallons of gasoline consumed for gasoline costs. The quantitative units are useful for cost assignments, and are indispensable for measuring efficiency in using resources.

Cost Assignment

120. The term “cost assignment” refers to the process that identifies accumulated costs with reporting periods and cost objects. The assignment of costs to time periods is to recognize costs either as expenses or assets for each reporting period. It is governed by accounting standards on recognition of assets and expenses, and will not be addressed in this document. This section addresses cost assignment to cost objects. The word “assignment” used in this document includes various methods of attributing costs, such as direct tracing, cause-and-effect basis, and cost allocations.
121. The term “cost object” refers to an activity or item whose cost is to be measured.³⁴ In a broad sense, a cost object can be an organizational division, program, activity, task, product, service, or customer. However, the purpose of cost accounting by a responsibility segment is to measure the costs of its outputs. Thus, the final cost objects of a responsibility segment are its outputs: the services or products that the segment produces and delivers, the missions or tasks that the segment performs, or the customers or markets that the responsibility

³⁴Some literature, the CASB pronouncements for example, use the term “cost objective” for the same meaning.

segment serves. There may be intermediate cost objects that are used in the course of the cost assignment process.

122. Some responsibility segments of an entity may provide supporting services or deliver intermediate products to other segments within the same entity. The costs of the supporting services and intermediate products should be assigned to the segments that receive the services and products. This is referred to as the intra-entity cost assignments. Also, in accordance with the inter-entity cost standard discussed in the preceding section, an entity should recognize inter-entity costs for goods and services received from other federal entities. The inter-entity costs should also be assigned to the responsibility segments that use the inter-entity services and products.
123. Thus, with respect to each responsibility segment, the costs that are to be assigned to outputs include: (a) direct and indirect costs incurred within the responsibility segment, (b) costs of other responsibility segments that are assigned to the segment, and (c) inter-entity costs recognized by the receiving entity and assigned to the segment. If a responsibility segment produces one kind of output only, costs of resources used to produce the output are assigned to the output.
124. This standard is intended to establish a principle, rather than a methodology, for cost assignment. Also cost assignments may be performed in cost findings and studies or may be performed within a system on a regular basis. In principle, costs should be assigned to outputs in one of the methods listed below in the order of preference:
- (a) Directly tracing costs wherever economically feasible;
 - (b) Assigning costs on a cause-and-effect basis; and
 - (c) Allocating costs on a reasonable and consistent basis.
125. These principles apply to all levels of cost assignments including:
- (1) assigning inter-entity costs to segments, (2) assigning the costs of support services and intermediate products among segments of an entity (the intra-entity cost assignments), and (3) assigning direct and indirect costs to outputs.

Directly tracing costs to outputs

126. Direct tracing applies to resources that are directly used in the production of an output. Examples of such resources include materials that are used in the production, employees who directly worked on the output, facilities and equipment used exclusively in the production of the output, and goods or services received from other entities that are directly used in the production of the output.

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127. The method of direct cost tracing usually relies on the observation, counting, and/or recording of the consumption of resource units, such as staff hours or days that are spent on a project or assignment, or gallons of fuel consumed in a transport mission. Direct tracing also applies to specific resources that are dedicated to particular outputs.
128. Direct cost tracing often minimizes distortion and ensures accuracy in cost assignments. However, it can be a relatively costly process. It should be applied only to items that account for a substantial portion of the cost of an output and only when it is economically feasible. For example, it is usually unnecessary to trace the cost of office supplies (pens, papers, computer disks, etc.) to various activities or outputs. The cost of so doing usually outweighs the benefit of the increased accuracy in assigning the resources.

Assigning costs on a cause-and-effect basis

129. For the costs that are not directly traced to outputs, it is preferable that they be assigned to them on a cause-and-effect basis. As mentioned earlier, the ultimate cost objects of a responsibility segment are its outputs. For costs that are not traced to the ultimate objects (outputs), intermediate objects can be established as links between resource costs and outputs. The links reflect a cause-and-effect relationship between resource costs and outputs. Costs that have a similar cause-and-effect relationship to outputs can be grouped into cost pools. (This similar relationship is referred to in some literature as the “cost pool homogeneity concept.”)
130. Activities or work elements that contribute to or support the production of outputs are commonly used as intermediate objects. This is based on the premise that on one hand, outputs require the performance of certain activities, and on the other hand the activities cause costs. Thus, an activity is considered a linkage between the cause and the effect. (See also, discussions on Activity-Based Costing later in this section.) In its policy statement, the Cost Accounting Standards Board expressed a similar view:
- “The preferred presentation of the relationship between the pooled cost and the benefiting cost objectives is a measure of the activity (input) of the function or functions represented by the pool of cost. This relationship can be measured in circumstances where there is direct and definitive relationship between the function or functions and the benefiting cost objectives.”³⁵
131. For example, a computer technology department provides technical support to other departments of an organization. The costs of the department may be assigned to other departments on a cause-and-effect basis through two steps. In the first step, the costs are assigned to the activities of the department, such as hardware installation and maintenance,

³⁵Cost Accounting Standards Board, Restatement of Objectives, Policies and Concepts, par. 2915.

software design and installation, or programming adjustments. In the second step, the costs of these activities are further assigned to other departments based on their consumption of the technical services.

132. Sometimes, an intermediate product, rather than an activity, can be used as a link between the costs and outputs. For example, a hospital laboratory's costs can first be assigned to various medical tests it runs. The costs of the tests can then be assigned to the operating units of the hospital that ordered the tests.

Allocating costs

133. Sometimes, it might not be economically feasible to directly trace or assign costs on a cause-and-effect basis. These may include general management and support costs, depreciation, rent, maintenance, security, and utilities associated with facilities that are commonly used by various segments.
134. These supporting costs can be allocated to segments and outputs on a prorated basis. The cost allocations may involve two steps. The first step allocates the costs of support services to segments, and the second step allocates those costs to the outputs of each segment. The cost allocations are usually based on a relevant common denominator such as the number of employees, square footage of office space, or the amount of direct costs incurred in segments.
135. Suppose the total cost of a personnel department for a fiscal year is \$500,000, and it is allocated to two segments based on the number of employees of the two segments: segment A has 300 employees, and segment B has 200 employees. On the prorated basis, segment A should be allocated 60 percent, or \$300,000 of the personnel cost, and segment B should be allocated 40 percent, or \$200,000 of the personnel department cost. The allocation is shown below:

Table 3: The Allocation of the Personnel Dept. Costs

| Segment | Employees | Percent | Allocated amount |
|--------------|------------|------------|------------------|
| A | 300 | 60 | \$300,000 |
| B | 200 | 40 | \$200,000 |
| Total | 500 | 100 | \$500,000 |

136. For cost allocation purposes, indirect costs may be grouped into pools, and each pool is subject to one allocation base. Costs grouped into one pool should have similar

characteristics. The allocation base should be used consistently to allow cost comparison from one period to another.

137. Cost allocation is a relatively simple method of assigning indirect costs to cost objects. Users of the cost information should be aware that distortions in product costing often result from arbitrary cost allocations. In most cases, there is little correlation between an indirect cost and the allocation base, and the allocation is arbitrary. To assist cost analyses and cost findings, cost accounting should segregate costs that are traced or assigned to outputs from costs that are allocated to outputs.

Assigning common costs

138. Facility and personnel resources may be shared by two or more activities either at the same time or in different times during a fiscal year. For example, a military aircraft maintained for war readiness may be used in peacetime to transport cargo. As another example, a plant may be used to process two or more products.
139. The cost assignment principles discussed in this section should apply to assigning costs to activities or outputs that share the use of resources. Costs that can be traced to each of the activities (or outputs) should be assigned to them directly. These include direct operating costs of each of the activities. For the military aircraft used in peacetime to transport cargo, for example, the costs of fuel and supplies, additional personnel who worked on the cargo, and other costs incidental to the transportation should be directly assigned to the transportation services.
140. To determine the full cost of each of the activities or outputs that share resources, indirect common costs should be assigned to those activities. The term “common costs” refers to the costs of maintaining and operating facilities and other resources that cannot be directly traced to any one of the activities or outputs that share the resources.³⁶ Common costs should be assigned to activities either on a cause-and-effect basis, if feasible, or through reasonable allocations.
141. Sometimes management may find it useful to designate primary and secondary activities that share resources. Primary activity is the primary purpose or mission for which the resources are made available. Secondary activities are those activities that are performed only if they will not interfere with the primary activity. Management can then determine two types of costs: (1) the costs that are necessary for the primary activity and are unavoidable even without the secondary activities, and (2) the costs that are caused by the secondary activities

³⁶This definition is adapted from Statement No. 1 on Management Accounting: Management Accounting Glossary, published by the National Association of Accountants (Montvale, New Jersey: 1991), page 15.

and are incremental to the costs of the primary activity. This type of cost information can be produced through cost findings, and may help management in making resource allocation and capacity utilization decisions.

Cost-benefit considerations

142. Throughout the discussions of this section, it is stated that a cost accumulation and assignment method would be used when it is economically feasible. A method is economically feasible if the benefits resulting from implementing the method outweigh its costs. It is not advantageous to use a costing method if it requires a large amount of resources and yet produces information of little value to users.
143. As a general rule, directly tracing costs and assigning costs on a cause-and-effect basis are more expensive than cost allocations, because they require detailed analyses and record-keeping for costs and activities. However, they are preferable because they produce more reliable cost information than cost allocations.

Selecting A Costing Methodology

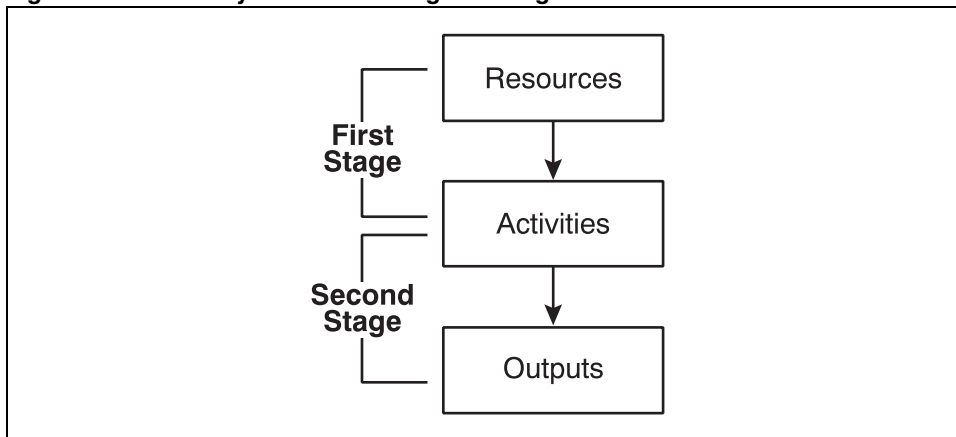
144. This standard does not require the use of a particular type of costing system or costing methodology. Federal entities are engaged in a broad range of diverse operations. A costing system appropriate for one type of operation may not be appropriate for other operations. At many federal agencies, cost accounting practices are either relatively new or experimental. It is too early to tell which cost systems are best for specific types of operations. As experience and research in cost accounting progress, reporting entities and responsibility segments may find a preferred costing methodology for their operations.
145. Agency and program management is in the best position to select a type of costing system that would meet its needs. In making the selection, management should evaluate alternative costing methods and select those that provide the best results under its operating environment.
146. The standard requires that a costing methodology, once adopted, be used consistently. Consistent use provides cost information that can be compared from year to year. However, this requirement does not preclude necessary improvements and refinements to the system or methodology, so long as the effect of any change is documented and explained. On the contrary, improvements are encouraged.
147. Several costing methodologies have been successful in the private sector and in some government entities. Four are briefly described below for agency consideration. It should be noted in particular that activity-based costing has gained broad acceptance by manufacturing and service industries as an effective managerial tool. Federal entities are encouraged to

study its potential within their own operations. In the following paragraphs, activity-based costing will be introduced with other well known costing methodologies, namely job order costing and process costing. Standard costing is also mentioned as an important cost management tool. It is important to note that those costing methodologies are not mutually exclusive. Both activity-based costing and standard costing can be applied to job order or process costing systems.

Activity-based costing (ABC)

148. ABC focuses on the activities of a production cycle, based on the premises that (a) an output requires activities to produce, and (b) activities consume resources. ABC systems use cost drivers to assign costs through activities to outputs. The ABC cost assignment is a two-stage procedure. The first stage assigns the costs of resources to activities and the second stage assigns activity costs to outputs. The procedure is illustrated in the following figure.³⁷

Figure 2: The Activity-Based Two Stage Costing Procedure



149. Implementing an ABC system requires four major steps: (1) identify activities performed in a responsibility segment to produce outputs, (2) assign or map resources to the activities, (3) identify outputs for which the activities are performed, and (4) assign activity costs to the outputs. Each of the steps is briefly explained below.

³⁷The figure and the accompanying discussions are based on Robin Cooper, Robert S. Kaplan, Lawrence S. Maisel, Eileen Morrissey, and Ronald M. Oehm, *Implementing Activity-Based Cost Management* (Montvale, NJ: Institute of Management Accountants, 1992), pages 9-13.

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- (1) Identify activities. This step requires an in-depth analysis of the operating processes of each responsibility segment. Each process may consist of one or more activities required by outputs. Activities may be classified into unit-level, batch-level, product sustaining, and facility sustaining activities.³⁸ Management may combine related small activities into larger activities to avoid excessive costing efforts.
 - (2) Assign resource costs to activities. This step assigns resource costs to the activities identified in step 1. The resource costs include direct and indirect costs usually recorded in general ledger accounts. Depending on feasibility and cost-benefit considerations, resource costs may be assigned to activities in three ways: (a) direct tracing; (b) estimation based on surveys, interviews, or statistical sampling; or (c) allocations.
 - (3) Identify outputs. This step identifies all of the outputs for which activities are performed and resources are consumed by a responsibility segment. The outputs can be products, services, or customers (persons or entities to whom a federal agency is required to provide goods or services). Omitting any output would result in overcharging costs to other outputs.
 - (4) Assign activity costs to outputs. In this step, activity costs are assigned to outputs using activity drivers. Activity drivers assign activity costs to outputs based on individual outputs' consumption or demand for activities. For example, a driver may be the number of times an activity is performed in producing a specific type of output (the transaction driver), or the length of time an activity is performed (the duration driver).
150. ABC can be used in conjunction with job order costing or process costing. For example, making direct loans to the public involves a series of processes, such as loan origination, credit review for individual applicants, preparing loan documents, valuation of collateral, making loan disbursements, computing fees and periodic payments, keeping records, and making collections. These are the “first category” activities that directly affect individual loans. ABC can be applied to this category of activities.
151. The direct loan operations also involve “second category” activities, such as those performed by loan officers to review and assess a portfolio of loans and make policy changes that affect an entire portfolio. If ABC is not used, the costs of the loan officers may be allocated to direct loans based on the number of loans disbursed, or based on the staff hours spent on processing all the loans. However, such an allocation tends to be arbitrary, because some loans require more of their time than others. Under ABC, the costs of loan officers would first be assigned to their portfolio review and workout activities that they perform, then the activity costs would be assigned to the groups of loans for which the activities are performed.

³⁸Cooper, Kaplan, et al. page 20.

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152. A major advantage of using ABC is that it avoids or minimizes distortions in product costing that result from arbitrary allocations of indirect costs. By tracing costs through activities, ABC provides more accurate service or product costs. Experience in the private sector shows that by providing accurate cost measures, ABC has helped improve product costing, strategic pricing, and profit planning.
153. Also important is that ABC encourages management to evaluate the efficiency and cost-effectiveness of activities. Some ABC systems rank activities by the degree to which they add value to the organization or its outputs. Managers use such value rankings to focus their cost reduction programs. ABC encourages management to identify and examine (a) what activities are really needed (value-added activities) in order to accomplish a mission, deliver a service, or meet customer demand, (b) how activities can be modified to achieve cost savings or product improvements, and (c) what activities do not actually add value to services or products (non-value-added activities). ABC integrates with cycle time analysis and value-added analysis.

Job order costing

154. Job order costing is a costing methodology that accumulates and assigns costs to discrete jobs. The word “jobs” refers to products, projects, assignments, or a group of similar outputs.
155. Each job has a number or code to accumulate costs. Resources spent are identified with the job code. Costs are traced to individual jobs to the extent economically feasible. Costs that cannot be directly traced are assigned to jobs either on a cause-and-effect basis or allocation basis.
156. Job order costing is appropriate for responsibility segments that produce special order products, or perform projects and assignments that differ in duration, complexity, or input requirements. Typical situations in the federal government in which job order costing would be appropriate are legal cases, audit assignments, research projects, and repair work for ships, aircraft, or vehicles.

Process costing

157. Process costing is a method that accumulates costs by individual processing divisions (organization divisions that perform production processes). These processing divisions are involved in a continuous production flow, with each division contributing towards the completion of the end products. The output of a processing division either becomes the input of the next processing division or becomes a part of the end product.
158. Each division accumulates costs, assigns the costs to its outputs, and calculates the unit cost of its output. For each period, divisions prepare a cost and production report, showing the

costs, the completed units, and the work-in-process volume. When a certain number of completed units are transferred from a division to the next division, the costs of those units are also transferred and are eventually incorporated into the costs of the end product. Thus, the cost flow follows the physical flow of the production. The unit cost of the end product is the sum of the unit costs of all the divisions.

159. Process costing is appropriate for production of goods or services with the following characteristics: (a) the production involves a regular pattern of process, (b) its output consists of homogeneous units, and (c) all units are produced through the same process procedures. In the private sector, process costing is used by such industries as flour mills, steel foundries, oil refineries, and chemical processing plants. In government, it may be used by some activities that involve repetitive process procedures to deliver a large volume of similar goods or services. An example would be making entitlement benefit payments, which involves a series of consecutive processes for reviewing applications to establish their eligibility, computing the amount of benefits, and issuing checks.

Standard costing

160. Standard costs are carefully predetermined or expected costs that can be applied to activities, services, or products on a per unit basis. Horngren describes standard costing as follows:

“A set of standards outlines how a task should be accomplished in nonfinancial terms (minutes, board feet) and how much it should cost. As work is being done, actual costs incurred are compared with standard costs for various tasks or activities to reveal variances. This feedback helps discover better ways of adhering to standards, of altering standards, and of accomplishing objectives.”³⁹

161. Many organizations frequently review and update the standards to assure that they encourage improvements in efficiency and are within an attainable range.
162. Standard costing helps managers to formulate budgets, control costs, and measure performance. It can be used in conjunction with job order costing, process costing, and activity-based costing. It can be applied to specific outputs or activities, and it can also be applied to a responsibility segment in aggregate by comparing total actual costs with total standard costs based on outputs produced within a certain time period. Typical situations in the federal government in which standard costing would be appropriate are operations that produce services or products on a consistently repetitive basis. Agencies are encouraged to use standard costing in those situations.

³⁹Horngren, Charles T. and George Foster, *Cost Accounting, A Managerial Emphasis*, 7th ed. (Prentice Hall, Englewood Cliffs: New Jersey, 1991), page 222.

Appendix A: Basis For Conclusions

The Nature of Concepts and Standards

163. The difference between accounting concepts and standards is significant. Statements of concepts are more general than statements of standards. Standards are intended to be specific guidance and authoritative in nature. Concepts generally do not contain specific recommendations that would, when issued by the Board's sponsors, become authoritative requirements for federal agencies. Concepts, instead, provide general guidance both to the Board and others. They are also intended to help preparers and users of financial information better understand federal accounting and financial reporting. While the differences can be easily stated, in reality the line between concepts and standards is often broad and presents many gray areas for interpretation.
164. When the Board began the project on managerial cost accounting, it anticipated the issuance of a recommended Statement of Concepts. Given the meager use of cost accounting within many federal agencies, a Statement of Concepts would provide both the Board and preparers of federal financial reports with overall guidance in the area and an indication of the future direction the Board might take in developing standards. However, as the Board and staff began working on the project, it became clear that action was needed to recommend standards for the development of cost information.
165. Cost accounting standards were needed because users of financial information, especially taxpayers and members of Congress, began putting more emphasis on the cost of government programs, products, and activities. The efforts to reduce government spending, control the deficit, and improve government functions necessitated information about the true costs of government. In addition, passage of the CFO Act and the GPRA required agencies to provide cost information as a part of improving their financial management and reporting. Furthermore, the NPR issued a recommendation that the Board move rapidly to recommend cost accounting standards.
166. The Board established the Cost Accounting Task Force to provide advise and guidance on the cost accounting project. On the task force were many individuals knowledgeable about cost accounting in the private sector as well as the limited federal cost accounting activities. The task force also recommended the establishment of cost accounting standards.
167. The Board issued the exposure draft as a recommended statement of standards. The Board knew, however, that since cost accounting is relatively new in the federal environment, the final statement necessarily would contain some conceptual material. Although the exposure draft did not present any direct questions concerning whether parts of the draft should be

viewed as concepts, the issue did arise in public hearings held in November 1994, and January 1995. In addition, a few respondents who mailed in their comments addressed the point.

168. Most of those commenting on the issue stated that they viewed the exposure draft as being somewhat conceptual in nature. Many of those thought that this was appropriate and supported the document and the conceptual material it presented. A few respondents were concerned about the ability to audit some of the standards because of the conceptual nature of the document. Several suggested that the final statement be segregated into concepts and standards and both be issued in one statement.
169. The Board decided that some parts of the final statement would contain information that should be presented as concepts while other parts would be better presented as standards. Therefore, the final statement should be a “hybrid” issuance containing both concepts and standards. The title of the document was changed to “Managerial Cost Accounting Concepts and Standards for the Federal Government.” (The Board decided that the material presented in the exposure draft as the first standard that addressed the relationship among managerial cost accounting, financial reporting, and budgeting should be presented as concepts. The other materials were more in the nature of standards.)

Relationship Among Cost Accounting, Financial Reporting, And Budgeting

170. The Board considers it important for financial preparers and users of financial reports to understand the relationship of cost accounting to the more traditional areas of general financial accounting, financial reporting, and budgeting. It views cost accounting as a basic and integral part of an entity’s financial management system. Therefore, the Board included a standard on this relationship within the exposure draft.
171. The standard addressed the role of managerial cost accounting in financial management and explained how it provides cost information relevant to budgeting, financial reporting, management control, and many decision making processes. The standard discussed the use of a common data source for cost accounting, financial accounting, and budgeting. It explained how the costs may be determined using different bases of accounting and different recognition and measurement methods depending upon the intended use of the information. It also emphasized the need for reconciliation of cost data which may be presented differently in various financial reports. The standard stated that all cost information, regardless of how presented, should be traceable back to the original common data source.
172. Most exposure draft respondents who provided comments on this standard stated that the level of detail presented was about right given the desire of the Board to address cost accounting at a high level. Most respondents agreed with the need to draw cost accounting

data from a common data source that is also the source of financial and budgetary data. Some respondents were concerned that the use of the term “data source” was too closely allied with automated or computerized operations and that the term may be misinterpreted. The Board, however, believes that the term is adequately explained. In fact, the exposure draft clearly stated that this term was not meant to imply the use of computerized systems for source information.

173. Data reconciliation for reports containing cost information developed on different bases of accounting or using different recognition or measurement methods received overwhelming support from respondents to the exposure draft. They said that the ability to reconcile differing cost information is necessary to ensure data integrity, avoid confusion on the part of financial statement users, and support stewardship responsibilities.
174. Many who commented on whether the exposure draft should be viewed as a statement of concepts or a statement of standards implied that this particular standard on relationships of cost accounting to other financial management functions was basically conceptual in nature. The Board agreed and concluded that this section is more in the nature of an explanation of how cost accounting provides useful information and how it fits in with the overall financial management system as opposed to a standard which places a requirement on an entity. The Board decided that this material would be better presented in the final statement as recommended concepts.

Requirement For Cost Accounting

175. The cost accounting task force recommended that a standard be included in the exposure draft requiring each reporting entity to establish cost accounting systems and procedures for its activities. They believed this was necessary to ensure the generation of required cost information.
176. The Board agreed to include the standard in the exposure draft. The standard defined “system” in a broad way as simply an organized grouping of methods and activities designed to consistently produce reliable cost information. The explanations and discussions section of the exposure draft contained information on several factors that would help managers decide how complex and sophisticated their cost accounting system should be. It noted that the system could be constrained by the (1) nature of the entity’s operations, (2) precision needed in cost information, (3) practicality of data collection and processing, (4) availability of electronic data handling, (5) expected cost of the system itself, and (6) any specific management information needs.
177. The exposure draft also listed ten minimum criteria that should be met by all managerial cost accounting systems. Four of these were related directly to the other standards in the

exposure draft (responsibility segments, full costing, costing methodology, and unused capacity costs). The six remaining criteria were concerned with ensuring that the cost data produced was reliable, consistent, and useful. These criteria were (1) ensuring the ability to assist in measurement of performance, (2) reporting information on a timely and consistent basis, (3) integrating cost accounting with the standard general ledger, (4) determining a reasonable and useful level of data precision, (5) accommodating special information needs of management, and (6) documenting the system through a manual or handbook. The standard also allowed for the use of cost finding techniques and special cost studies or analyses.

178. A large number of respondents to the exposure draft supported the requirement for cost accounting systems. They stated that such a requirement is necessary to ensure that appropriate cost data are recorded. They also said that having a requirement for cost systems will help agencies to more easily meet the requirements of the CFO Act and the GPRA. Some qualified their support by stating that the standard should allow an exemption for small entities since establishment of a full cost accounting system may not be cost-beneficial to them. The Board decided that such an exemption would be inappropriate since the standards should apply to all federal activities. Furthermore, it should be far easier for small entities to perform managerial cost accounting in most cases.
179. Those who were negative toward the standard provided several reasons. Several expressed concern about whether accounting standard-setting bodies should require or determine how accounting data are produced. They noted that other accounting standard-setting organizations have stated only what information is required and how that information is displayed in financial statements, not how the information is developed.
180. The Board believes that it should not be constrained by what other standard-setters do. Other standard-setters so far have concerned themselves mainly with entities' external reporting. This is understandable because their mission is to assure that the financial position and results of operations are presented in a fair, reliable, and consistent manner to financial statement users who are external to the reporting entity.
181. FASAB is different in that it has determined that some of the users of federal government financial reports are internal to the government. Given the nature and size of the federal government, internal users often do not have the same type of access to cost information that may be available in commercial enterprises. In addition, the Board views cost accounting information as vital to both internal and external users. The Board has previously determined in its *Objectives of Financial Reporting* that cost information should be reported to meet the needs of Congress, federal executives, and others.
182. Some respondents to the exposure draft were concerned that the requirement for a cost accounting system, along with the system criteria, would not allow management enough

flexibility. They seemed to consider the requirement for a system to mean that cost accounting activities had to be automated with computers and that software had to be developed and employed in a “full-blown” system, as one put it. They believe that such an elaborate system may not be needed in some cases where informal procedures or methods would suffice.

183. The Board does not intend to prescribe an elaborate managerial cost accounting system for every federal organization. It believed that the standard proposed in the ED was sufficiently broad to allow managerial flexibility in the system design. However, the Board does recognize that the term “system” may connote to some a requirement for computerization and sophisticated methodologies.
184. Others stated that establishing the requirement for cost systems should be the responsibility of OMB or JFMIP. Some of the respondents were concerned about the degree to which the standard may overlap with JFMIP’s responsibility to set requirements for cost accounting systems. The NPR recommends setting requirements for cost accounting systems as a responsibility of JFMIP, while asking the Board to provide the cost accounting standards.⁴⁰
185. The Board proposed the requirement for systems to ensure that cost information is produced and reported in a reliable and consistent manner, and emphasized that this was the intent. The point is not whether the information is produced through the use of a system or through other techniques. The Board believes that, in many cases, cost accounting systems will be established as a natural consequence of requiring cost information. Many government agencies are very large and complex organizations, and it is unrealistic to think that they can develop cost data without relying on a system to do so. Other small agencies or reporting entities may not need a system to develop cost data in a regular, consistent, and reliable manner.
186. The Board, therefore, changed the standard to emphasize producing cost accounting information in a reliable and consistent manner. This can be done through the use of cost accounting systems or cost finding techniques. In either case, the main intent of the original standard is preserved. In addition, the concerns expressed over whether the Board or some other organization should establish the requirement for cost “systems” are solved.

⁴⁰Office of the Vice President, Improving Financial Management, Accompanying Report of the National Performance Review (September 1993), page 24.

Responsibility Segments

187. As stated in the ED, a responsibility segment is a component of a reporting entity that is responsible for carrying out a mission, conducting a major line of activity, or producing one or a group of related products or services.
188. The proposal for using responsibility segments in the ED was based on the view that most federal departments and agencies are engaged in more than one line of activity, or producing more than one type of service or product. Furthermore, the activities that an agency performs may differ from each other significantly in required resources and operations. The ED used the Department of Veterans Affairs (VA) as an example. Among its activities, VA administers hospitals and nursing homes to provide health care to veterans, and it also administers direct home loan and loan guarantee programs. These lines of activities are significantly different in operation patterns. The Board believes that for entities that are engaged in diverse activities, identifying responsibility segments is necessary for identifying resources consumed by a distinct line of activity with the outputs of that activity.
189. A majority of respondents supported the requirement for responsibility segments and agreed with the advantages of the requirement. They expressed the view that segmentation provides a basic framework to trace and assign costs to outputs. They also believed that segmentation provides management with the flexibility of choosing a costing methodology that is best suited for a line of activity. The respondents also stated that information generated by responsibility segments can be used to measure performance and to assess accountability.
190. Several respondents, however, presented arguments against using responsibility segments. One such argument was that responsibility segments would constitute an unnecessary layer that conflicts with financial reporting and budgeting systems. The Board disagrees with this view. A responsibility segment is not, and should not be, an additional layer to the organization and the budget structure. It is an accounting mechanism to capture data generated in operations by various components of an organization in its existing structure. Organization and budget structures can be changed for better management but not for the sake of accounting. Accounting may influence but cannot dictate such changes.
191. The Board believes that accounting by segment will help provide information useful to program managers and other users of financial reports. Entity-wide financial reports provide information on the overall financial position and operating results of an entity in aggregate. Such reports, although useful for many purposes, are not sufficient for cost management. A fundamental undertaking of managerial cost accounting is to match costs with activities and outputs. The purpose of segmentation is to segregate entity-wide data by major lines of activities and their outputs. Information related to each segment should tell managers and other users of financial reports about the segment's specific outputs, the activities performed, and resources consumed to produce the outputs.

192. Furthermore, segment-based reporting need not be in conflict with entity-wide financial reporting. They can use a common source of data, such as accounting data collected by the standard general ledger or the budget execution reports. To perform segment-based accounting and reporting, the general accounting or budget execution data can be traced and assigned to segments. The Statement of Federal Financial Accounting Concepts No. 2, *Entity and Display*, discusses a reporting approach similar to the segment-based accounting and reporting:

“With some organizations, and even suborganizations, the activities of one or more programs or other components are as important to the readers of financial statements as are activities of the entity as a whole. This would be particularly true for a department composed of many bureaus, administrations, agencies, services, etc., and particularly if their programs are dissimilar. In those instances, consideration should be given to the preferability of reporting the assets, liabilities, revenues, expenses, etc., of both the significant components individually and of the entity in its entirety.”⁴¹

193. Another argument against requiring responsibility segments was that the requirement is overly prescriptive and would constrain agency management from selecting among various cost collection methods. The Board believes the standard gives management adequate flexibility in structuring cost accounting. As the standard states, it is for the management of each entity to decide how segments should be defined, and how similar products and services can be grouped into one segment.

194. Furthermore, segments are the largest components of an entity. Management has the flexibility to use any cost collection method within each segment. Within a segment, management may define sub-units, functions, projects, business processes, activities, or a combination of them as cost centers to accumulate costs. The costs accumulated at lower levels can then be aggregated to the segment level.

195. In fact, a segment may contain multiple levels of responsibility or cost centers. For example, if veterans health care is defined as one of the DVA's responsibility segments, this segment may define its hospitals, clinics, and nursing homes as responsibility centers. Each hospital, clinic, and nursing home may further define their functional units, activities, or business processes as cost centers.

196. Some respondents correctly pointed out that requiring broad responsibility segments, rather than prescribing traditional cost centers, provides opportunity for entities to use activity-based costing or any other costing methods that they may find appropriate.

197. Several respondents who supported the use of responsibility segments interpreted the wording of the proposed standard as requiring that each segment perform managerial cost

⁴¹FASAB Statement of Recommended Accounting Concepts 2, *Entity and Display*, par. 75.

accounting. They pointed out that for some entities, it is more effective and economical to perform centralized managerial cost accounting. Such centralized accounting is capable of accumulating costs by segments and assigning costs among them. The respondents requested that the wording be revised to provide this flexibility.

198. The Board agrees with this request. The Board believes that entity management should have the discretion to decide whether managerial cost accounting is performed at the entity or segment level, so long as the segment cost information is provided to managers and other users. Thus, the standard recommended in this statement does not require that responsibility segments perform managerial cost accounting.

Full Cost

199. As stated in the ED, the full cost of an output produced by a responsibility segment is the sum of direct and indirect costs that contribute to the output, including the costs of supporting services provided by other segments and entities.
200. The outputs of a responsibility segment are considered as cost objects.⁴² However, in most circumstances, the full costs of intermediate objects, such as activities, processes, projects, programs, or organization units, must also be measured in order to derive the full costs of their outputs. (See ED Par. 173) The full cost information related to outputs as well as those intermediate objects are useful in measuring efficiency and cost-effectiveness.

Usefulness of full cost information

201. **Program evaluation and authorization.** Most respondents supported the full cost standard. They recognized that it is particularly important to determine and report the full cost of a program. Information on full costs of programs can be used in program evaluations. Such evaluations typically relate the full costs of programs to their outputs and outcomes. Decision-makers in the Congress and the federal government at all levels as well as the public should be provided with information on the full costs of programs and their outputs. The full cost information, when used with information on program outputs and outcomes, can aid the Congress and federal executives in making decisions on program authorization and modifications.

⁴²“Cost object” is defined as an activity, output, or item whose cost is to be measured. In a broad sense, a cost object can be an organizational division, a function, task, product, service, or a customer. See Glossary.

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202. **Cost awareness.** Most respondents also agreed that the standard has the advantage of promoting cost awareness. Entity and segment managers should be aware of the costs that are incurred or assigned to their operations. Without the awareness, managing and controlling costs are impossible. The full cost information has not been available and will not likely to be without an accounting standard requiring it.
203. **Setting fees and prices for government goods and services.** Many respondents agreed that full cost should be considered as a primary basis for setting fees and reimbursements for government goods and services. As pointed out in the ED, it is a federal policy that, with certain exceptions, user charges (prices or fees) should be sufficient to recover the full cost of goods, services, and resources provided by the federal government as sovereign.⁴³ The policy further states that when the government sells goods and services under business-like conditions rather than in a sovereign capacity, user charges should be based on market prices and may yield a net revenue in excess of the full cost. The objectives of the policy are to: (1) ensure that government goods and services are provided on a self-sustaining basis, (2) promote efficient allocation of national resources, and (3) allow fair competition with comparable goods and services provided by the private sector.
204. To implement the policy, full cost information is necessary. Only with reliable full cost information can management ensure that user charges fully recover the costs.⁴⁴ Even in some exceptional cases in which user charges are exempted or restricted by law, agencies that provide the goods and services would nevertheless need the full cost information to assess the extent to which costs are not recovered.
205. **Making cost comparisons.** Respondents agreed that the full cost of outputs provides a valid basis for cost comparisons. One of them emphasized the importance of calculating the unit cost of output on the full cost basis. The Board agrees with his view. If an output can be measured in units, its unit cost should be calculated on the full cost basis.
206. The unit cost of a service or product, calculated on a full cost basis, can be compared with a similar service or product produced by other entities either in the federal government or in the private sector. The comparison would not be valid if it is not conducted on a full cost basis.

⁴³OMB Circular No. A-25, User Charges.

⁴⁴The standard of determining full cost discussed in this document, however, should not be construed as a standard for setting fees, prices, and reimbursements. Federal entities should comply with laws and regulations related to pricing policies in general and for specific types of goods and services. Those laws and regulations (including OMB Circular A-25) may prescribe costing requirements other than the full cost standard discussed in this document. Full cost defined by this standard can serve as a point of reference for managerial decisions. However, it is not intended to supersede any costing concept that management is required or permitted by law to use in pricing goods and services.

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207. One of the available cost management tools is trend analysis. In trend analysis, unit costs of a service or product over a number of consecutive periods are examined to find a trend of increases or decreases. This analysis can be valid only when the unit costs of all periods are measured on a consistent basis, such as the full cost basis. When the full cost basis is used, the analyst can further examine the components of the unit cost, such as direct labor and material costs, overhead costs, and costs of services received from other segments or entities. Through examining the various components of the full unit cost, program managers can pinpoint specific areas that contributed to cost increases or decreases.
208. If activity-based costing is used, the cost components would be associated with activities. The trend analysis for activity-based cost components can provide information related to the efficiency of the activities. Managers can also analyze the extent that the individual activities add value to program outputs and objectives.

Limitations of Full Cost Information

209. Several respondents cautioned the Board against “uncritical advocacy” of full costs. They pointed out that full cost is not relevant to all decision-making situations. They explained that some decisions require other cost concepts such as variable, differential, or incremental costs. Thus, some of them said that the Board should not singularly emphasize full cost.
210. The Board is aware of the notion that different cost concepts should be used for different purposes so that the use of a cost concept is relevant to a particular decision-making purpose. For this reason, the Board discussed the limitations and usefulness of full cost in the ED at length. (See ED pars 133 through 146.) Quoting from Anthony and Young, the ED pointed out that full costs are not appropriate for alternative choice decisions such as the decision to (1) add or drop a product or service, (2) perform work in-house or contract out for it, and (3) accept or reject a special request. For these decisions, the appropriate information is differential costs.⁴⁵
211. However, the full cost standard is an accounting standard, rather than a cost analysis or decision-making standard. It requires that full cost information be compiled and reported through cost accounting. In no way does it limit cost analysts and decision-makers to the use of full cost alone in all situations. The Board believes that when the full cost information, instead of any portion of it, is made available, analysts and decision-makers will have a comprehensive data source to develop the cost concepts that they need in their analyses.

⁴⁵Robert N. Anthony and David W. Young, *Management Control in Nonprofit Organizations*, 5th ed. (Burr Ridge, Illinois: Richard D. Irwin Co., 1994) page 235.

212. Some respondents pointed out that full cost requires a complex process of cost assignments and allocations. The Board believes that the assignment of indirect costs is a necessary procedure to obtain full cost. It can be performed through an appropriate costing methodology. As discussed in the costing methodology section of the ED, some modern costing methodologies are available to make rational and reliable cost assignments. However, the Board must caution that the full cost information, like any other accounting information, can only be as good as how it is prepared. For example, it can be unreliable or inaccurate, if arbitrary or irrational cost allocations are used excessively. Thus, the Board recommended a costing methodology standard. Program managers should critically review costing methodologies and techniques used to derive the cost information.

Inclusion or Exclusion of Certain Costs

213. A number of respondents were opposed to the inclusion of accrued employee benefit costs and costs of services provided by other entities that are not reimbursed. (The subject of inter-entity costs will be discussed in the next section.) They argued that these costs are not funded with their budgetary resources and are beyond their control. A large portion of employee benefit costs, including accrued retirement benefit costs, are funded through appropriations to trust funds managed by OPM and DoD. The Board believes that as a principle, full cost should include the costs of all resources applied to a program, activity, and its outputs, regardless of funding sources. For financial reporting, the Board has stated its position that the full costs of employee pension and other retirement benefits determined on an actuarial basis, including the amounts that are funded to the trust funds directly, should be recognized as an expense in the employer entity's financial reports.⁴⁶ The Board does not find a good rationale to depart from this principle in managerial costing.

214. The ED states that some costs should be recognized as a period expense rather than the costs of goods and services (output costs). Examples include the costs of "other post employment benefits" (OPEB), reorganization costs, and acquisition costs of Federal "mission" and "heritage" property, plant, and equipment which are recognized as expenses at the time of acquisition.⁴⁷ These costs will be recognized as expenses for the period in which the related events take place, and are referred to as "period expenses." The ED explained that since these expenses do not contribute to the outputs of the period in which they are incurred, they should not be included in the output costs.

⁴⁶FASAB Exposure Draft, *Accounting for Liabilities of the Federal Government* (Nov. 1994), pars. 80-99, pages 32-46.

⁴⁷"Federal mission PP&E" and "heritage assets" are explained in FASAB Exposure Draft, *Accounting for Property, Plant, and Equipment* (February 28, 1995), pars. 98-115, pages 29-33.

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215. The OPEB costs, for example, may be recognized as expenses for a period in which a reduction in force or an employee injury takes place.⁴⁸ It is not appropriate to attribute the entire OPEB costs to the output costs of that period. Several respondents expressed the view that OPEB costs should be included in full cost. There is no doubt that OPEB costs, as well as other period expenses, are part of the full cost of an entity or a program. They may also be part of the full costs of outputs over many years in which the employees contributed to the production of the outputs. However, they are not the production costs for the period during which they are incurred. Thus, the Board concluded that in cost studies, management may distribute some of the period expenses, such as OPEB costs, to outputs over a number of past periods if (a) experience shows that the OPEB costs are recurring in a regular pattern, and (b) a nexus can be established between the OPEB costs and the outputs produced in those past periods. The Board finds no reason to change this position.
216. Some respondents contended that full cost should include unused capacity costs. As will be explained in a later section on unused capacity costs, the Board has decided not to recommend a standard on measuring unused capacity costs. Thus, to assure valid cost comparisons, full costs should not exclude unused capacity costs.

Controllable and Uncontrollable Costs

217. Some respondents believed that the managers of a responsibility segment should be held accountable only for costs that they can control, and their performance should not be evaluated for costs beyond their control. They found that the full cost reporting would obscure the distinction between controllable and uncontrollable costs. For performance measurement or other purposes, some entities may want to make a distinction between controllable and uncontrollable costs with respect to an individual responsibility segment or a cost center. The full cost information need not interfere with this distinction. This standard does not require the use of full cost for internal reports. If some entities choose full cost for internal reporting, the internal reports can provide a distinction between controllable and uncontrollable costs with respect to individual segments.
218. Ultimately, most costs are controllable at a certain level of the entity. If some of them are not controllable at a lower level of the organization, they may very well be controllable at a higher level. Each segment should concern itself with the costs that are assigned to it on a cause-and-effect basis. These costs are often incurred because of a segment's demand and use of services from other segments or entities. Although the service-receiving segment has no control over the efficiency in producing the service, it can influence the costs by changing the demand for the service. For an entity's top management, full cost reporting provides it

⁴⁸FASAB Exposure Draft, *Accounting for Liabilities of the Federal Government* (Nov. 7, 1994), pars. 100-102, pages 47-48.

with an overview of how the entity's various costs, including the general and administrative costs, are incurred and assigned to the entity's segments. The full cost reporting also makes the entity's top management aware of the costs of services that it receives from other entities. The management can closely review those costs and determine whether actions are needed to control them.

Centralized Accounting

219. The proposed standard in the ED states that "Responsibility segments should be capable of measuring the full costs of their outputs." Several respondents stated that the full costs of segments, programs, and their outputs can be more effectively measured by entities through centralized accounting, rather than by individual segments. They further stated that it would not be cost-beneficial for segments to measure and report the full costs of their activities and outputs on a regular basis (such as monthly basis). The Board agrees that many entities may find it more economical and effective to measure full costs through centralized accounting. Moreover, the Board believes that it should be for entity management to decide as to how frequently the full cost information should be made available in its internal reports. Thus, the wording of the standard has been changed. The full cost requirement is now limited to external reporting via general purpose financial reports.

Costs of Outcomes

220. A respondent suggested that in addition to the full cost of outputs, the standard should also require reporting the full cost of program outcomes. As discussed in the ED, the Board believes that performance measurement of a program requires three major elements: the full cost of the program, its outputs, and its outcomes. (See ED pars 37 and 38) The full cost of a program and its outputs, once measured according to this standard can be related to the outcome of the program to measure its cost effectiveness.

221. This standard does not require a direct measurement of the cost of outcomes because in most instances, program outcomes need to be measured with methodologies beyond those discussed in this document. GPRA defined "outcome measure" as an "assessment of the results of a program activity compared to its intended purpose."⁴⁹ Many programs' policy objectives and intended results are socio-economic or scientific in nature, or involve national defense. The assessment of the program results require expert knowledge in those areas. Thus, unlike costs and outputs, outcomes are not always measured in quantitative or monetary terms.

⁴⁹The Government Performance and Results Act of 1993, PL 103-62, sec 4.

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222. Moreover, unlike costs and outputs that are measured for each accounting and reporting period, such as a quarter or a year, outcome measurement may be long-term in nature. For example, the Senate Report on GPRA states that “Outcome measurement cannot be done until a program or project reaches a point of maturity (usually at least several years of full operation for programs continuing indefinitely) or at completion.” Although all programs cost money, some of them may produce positive results, while others may produce no results or negative results.
223. Because of the complexities in measuring outcomes, the costing principles and methodologies discussed in this document cannot be used to measure the cost of outcomes. The Board believes that the full cost of a program and its outcome should be measured independently, using methodologies appropriate to costs and to outcomes. Once each of them is measured, they can then be related to review the cost-effectiveness of the program.

Inter-entity Costs

224. It is not unusual in the federal government for one agency to provide goods or services to another agency. Sometimes this may be required by law, and often it is a very efficient method of conducting business for the agencies involved and for the government as a whole. In many cases, the agency receiving such goods or services will reimburse the providing agency in accordance with some agreed-upon price. Often, however, there is no charge, or there is a charge that is not sufficient to cover the providing agency’s full cost. When such “free” or lower-than-cost items are used in the production of the receiving agency’s outputs, the result can be an understatement of the full cost of final outputs by the receiving agency.

Survey of Non-Reimbursed Costs

225. The Board recognized that these non-reimbursed or under-reimbursed goods and services could distort the determination of a reporting entity’s full cost of outputs, but it was uncertain of the extent to which this occurs. To identify examples of non-reimbursed inter-entity costs, the Board conducted a limited survey of federal agencies. Of the 22 agencies responding to the survey request, 13 indicated that they provide some type of service or good that is not reimbursed. These covered a wide range of activities, but most of the costs involved were for salaries and salary-related benefits of those employees performing the work. In most cases, the costs were funded through direct appropriations to the providing agencies; however, those agencies could not specifically identify the total amounts involved. Several provided estimates, which ranged from \$360 thousand dollars per year to about \$180 million per year. Several examples of non-reimbursed inter-entity activities identified in the survey are listed below by providing entity:

- Department of Agriculture -- Provides market data, pesticide data, food specification information, water supply forecasts, and other agricultural information. Thirty-six federal agencies regularly receive all or some of this information.
- Department of Commerce -- Provides accounting and grant administration services, computer access and reports, and consultation services to several agencies.
- Department of State -- Provides space and facilities for other agencies in its buildings in the U.S. and overseas.
- General Services Administration -- In some cases, it provides policy and regulatory development services, property management services, and contract award and administration to other agencies without reimbursement.
- National Science Foundation -- Administers a research grant program on engineering and computer science for the Department of Defense.

226. The Board noted that the survey was restricted to non-reimbursed costs between different agencies. As such, the results did not necessarily represent all of the kinds and amounts of transactions and costs between different reporting entities. The survey was also limited to those non-reimbursed costs which the agencies could easily identify in order to respond quickly to the questionnaire. Nevertheless, there were indications that some non-reimbursed costs may be significant in amount.

Usefulness of Recognition

227. Some respondents to the exposure draft stated that recognition of inter-entity⁵⁰ costs would have limited usefulness for managers since they cannot control the cost of items provided by other agencies. In some circumstances, they cannot control the amounts of inter-entity goods or services that must be used in the production of their outputs.

228. The Board realizes that recognition of non-reimbursed or under-reimbursed inter-entity costs will not always have the same degree of usefulness for all levels of management. However, as stated in the standard on full costs, to fully account for the costs of the goods and services they produce, reporting entities will need to include the cost of goods and services received from other entities. Cost reduction and control, performance evaluation, and process

⁵⁰Full cost, as discussed in the full cost standard, contemplates both intra-entity costs and inter-entity costs applicable to a responsibility segment. This standard elaborates on inter-entity costs. Intra-entity costing is accomplished through the costing methodology selected for use within the reporting entity since these costs are passed among responsibility segments.

improvement depend on knowledge of the full costs of producing outputs, including production costs incurred by other federal entities. These costs are most important for use by the entity's top-level management (and to a lesser degree by line managers) in controlling and assessing the operating environment and in making decisions about how best to acquire those goods and services. Knowledge of full cost, including the extent of inter-entity costs, is also important to external users, especially the Congress and taxpayers, in making decisions concerning various programs and allocating resources throughout the government.

229. In addition, the Board believes that, without the recognition of non-reimbursed and under-reimbursed inter-entity costs, the receiving entity has little incentive to control the use of these resources. While they may appear to be "free" to the receiving entity, the costs are absorbed somewhere in the government. If the receiving entity were charged for these costs, top-level management would then have more incentive to economize and control the use of these resources as well as make better decisions concerning how and where to acquire them. This would help reduce overall costs to the taxpayer and provide the other benefits associated with full-costing by responsibility segment.
230. The recognition of all inter-entity costs is also important when an entity produces goods or services that are sold outside of the federal government. For the entity to recover the government's full cost on the sale, knowledge of the total cost, including costs incurred by other federal entities, is vital to the establishment of an appropriate price.

The Use of Estimates

231. The standard places the responsibility on the providing entity to supply the receiving entity with information on the full costs of non-reimbursed or under-reimbursed inter-entity goods and services. This is appropriate since only the providing entity is likely to have such information. Implementation of the standard on full costing should make this requirement fairly easy for the providing entity to fulfill. If, for some reason, the providing entity cannot or does not supply the cost information, the receiving entity has no way to recognize the costs other than through estimation.
232. The Board anticipated this possibility, and requires the receiving entity to use an estimate of the cost of those goods and services if the actual cost information is not provided. The estimate must be reasonable and should be aimed at determining realistic costs incurred by the providing entity. However, if such a cost estimate cannot be made, the receiving entity may base the estimate on the market value of the goods or services.
233. Some respondents to the exposure draft stated that the use of estimates would be too problematic and unreliable and that the receiving entity would not have enough information to make the estimate. Some were concerned that the use of estimates would cause arguments between reporting entities over the cost. Others were concerned that some

entities do not have experienced personnel to make such estimates. A few were concerned about the audit implications of using an estimate.

234. Some respondents expressed concern over the possible use of market values in making the estimate. Some of these respondents stated that government-type goods and services are not often produced outside government and, therefore, such market values may not exist. Others stated that market value does not always bear a direct relationship to true cost or that market values change too rapidly to be of any use.
235. The Board realizes the problems associated with the use of estimates. However, implementation of the other managerial cost accounting standards in this statement by the providing entities should considerably lessen the need for receiving entities to make estimates of inter-entity costs. The Board also believes that, if the inter-entity costs meet the recognition criteria established by the standard, and cost information is not received, then use of a reasonable estimate of cost is preferable to no recognition at all.
236. Estimates are often used in accounting and financial reporting. The recognition of cost based on estimation is not new and can be reliable so long as the estimate is reasonable and based on a rational and systematic method. The Board also realizes that the use of estimation necessarily implies the use of professional judgement. This does not negate the value of the estimate to users of the financial information and should not present a problem in relation to audit requirements.
237. The Board realizes that market values may not always be available for many kinds of inter-entity goods and services. Nevertheless, if such values are available, they can be a good basis for estimating cost if no other basis can be established. Although market values may not be directly related to costs of production and they may fluctuate, they may also be viewed as a fairly reliable guide to the costs an entity might have to incur to obtain inter-entity goods and services from a non-governmental source. As with the determination of all estimates, use of market values as an estimation basis requires the use of judgement and professional care.
238. The Board also realizes that there may be some implementation problems such as disagreements with providing entities over an estimated cost or with the lack of trained personnel to make estimates. These problems are of a practical nature and can be resolved by management. In that regard, they are not unlike other problems faced when implementing any new or changed accounting standard such as making changes to systems and methods and training personnel on the new requirements. Both providing and receiving entities should work closely with each other to resolve any costing problems just as they would to solve any non-accounting related situations.

Recognition Criteria

239. It is clear to the Board that the recognition of each and every non-reimbursed or under-reimbursed inter-entity cost is not possible. The federal government is a very large and complex entity and it is normal to expect some flow of goods and services between its activities as a natural and reasonable method of completing missions and objectives. The Board decided that only certain non-reimbursed or under-reimbursed inter-entity costs should be addressed. The standard, therefore, includes criteria for recognition which will limit the application of the standard to only those items deemed most significant and important.
240. The criteria address the materiality of the non-reimbursed inter-entity cost, whether it is a part of broad and general support for all entities, and whether it is needed to help determine a price to non-governmental entities. The materiality criterion considers materiality in the context of the importance of the item to the receiving entity. Under this criterion, whether an item of inter-entity cost is recognized depends upon three points. The first of these is significance to the receiving entity, i.e. whether the item is important enough that management should be aware of its cost in decision making circumstances. The second is the degree to which the goods or services are an integral and necessary part of the receiving entity's output. The third is the degree to which the good or service can be matched to the specific receiving entity with reasonable precision.
241. The criterion of broad and general support recognizes that some entities provide support to all or most other federal entities, generally as a matter of their mission. The costs of broad and general services should not be recognized by the receiving entity when no reimbursement has been made. However, if the service is an integral and necessary part of the receiving entity's operations and outputs, those costs should be recognized.
242. The criteria also recognize that there are certain cases in which inter-entity costs need to be recognized because there could be an effect upon a resulting price to a non-governmental entity. If a federal entity sells outputs to a non-federal entity, it is usually required to recover the full cost of those goods or services. While cost is not the sole determinant of final price, knowledge of the actual full cost of production to the government as a whole is necessary to ensure that the price is appropriately established at a level that will recover all costs.
243. Most of the respondents to the exposure draft agreed with the recognition criteria. However, a few were concerned about how the criteria might be interpreted and whether the standards were too general in nature. The Board realizes that considerable judgement is required to apply these criteria and notes that the specific facts and circumstances in each case must be considered. This concern, along with other implementation concerns, led the Board to make certain decisions about implementation discussed below under "Implementation Issues."

Consolidation

244. The standard requires that, when non-reimbursed or under-reimbursed inter-entity costs are recognized, the receiving entity should recognize the full costs of the goods or services received as an expense (or asset) and, to the extent that reimbursement is less than full cost, the difference is to be recognized as a financing source. At the same time, of course, the providing entity would continue to recognize the full costs of goods and services provided, and any off-setting reimbursements, in its accounting records. Several respondents to the exposure draft were concerned about the possibility of “double-counting” of costs and others raised concerns about the ability to eliminate these transactions in consolidations.
245. Both the providing entity and the receiving entity are separate reporting entities. Each should recognize in its accounting records and financial reports the true costs of operations and any revenues received. The providing entity incurs a cost in providing the goods or services even though they are sent to another entity. It may also receive a partial payment or reimbursement. These transactions and events should be reflected in its accounting. The receiving entity, as a separate reporting entity, should also recognize its total cost of production. The full cost of non-reimbursed or under-reimbursed goods or services ultimately contributing to its outputs should be reflected in the costs of production. To the extent that reimbursement is not made for those costs, the receiving entity is utilizing a separate source of financing, namely the providing entity. Again, this fact is reflected in the accounting. The result is that costs recognized but not actually paid are off-set by the imputed financing source. While the entity’s financial position is not affected, the real costs of production are reflected.
246. The only possibility for “double-counting” of costs occurs when consolidated financial reports are prepared for a reporting entity that includes both the providing entity and the receiving entity. In preparing such statements, the standard calls for elimination of the inter-entity transactions. In effect, this is no different from the elimination of transactions for which full reimbursement has been made. The only additional transaction to be eliminated is the recognition of the imputed financing source by the receiving entity. The recognition of costs by both the providing entity and the receiving entity and any actual reimbursements would be eliminated anyway if payment for the inter-entity costs were made.
247. The Board realizes that identification and tracking of transactions that must be eliminated for consolidated reports can become complex and difficult. However, this is a practical implementation problem that management should be able to overcome through the use of transaction coding or some other identification method. It likely will require changes in methods and systems currently in use and may require additional training of personnel. The Board has decided upon a method to ease implementation problems as discussed below.

Implementation Issues

248. As discussed above, the Board realizes that there may be problems in implementing the standard on inter-entity costing. Recognition of non-reimbursed or under-reimbursed inter-entity costs is a new concept to federal entities and involves a new way of thinking about costs. There is concern that application of the standard may be inconsistent among federal entities. In addition, there could be problems, particularly at first, in developing estimates of costs; in revising accounting systems and procedures to accommodate these requirements; and in training personnel to accomplish the task. Furthermore, the Board recognizes the concern that some have about the elimination of inter-entity cost transactions for consolidated reporting since the accounting procedures may be complicated.
249. As a result of these problems and concerns, the Board has expressed the need to take a measured, step-by-step, practical approach to implementation of this standard. Therefore, the Board has decided that, in implementing the standard, it recommends that OMB, with assistance from the FASAB staff, should identify the specific inter-entity costs for entities to begin recognizing and OMB should then issue guidance identifying those costs. OMB should consider the requirements of the standard including the recognition criteria in developing the guidance and it should also consider suggestions and information provided by Treasury, GAO, and other agencies. The Board anticipates the largest and most important inter-entity costs will be identified first, followed by others as entities gain experience in the application of the standard. This approach is seen as a practical way to ensure uniformity in the application and implementation of the standard and to provide time and experience in overcoming any other practical problems which may arise. Also, the Board may recommend specific inter-entity costs for recognition in possible future recommended standards.

Costing Methodology

250. The ED discussed cost accumulation and assignment principles. The ED states that costs should be accumulated by responsibility segments, and the accumulated costs should be classified by type of resource such as costs of employees, material, capital, utilities, rent, etc. The ED states that “The accumulation of costs by responsibility segments does not mean that each responsibility segment must have its own accounting system. The reporting entity may have a centralized accounting system, but the system should be capable of identifying costs with responsibility segments.” (See ED par. 170)
251. The ED discussed three cost assignment principles: (a) directly tracing costs wherever feasible and economically practical, (b) assigning costs on a cause-and-effect basis, or (c) allocating costs on a reasonable and consistent basis. These principles apply to costs of services provided by a segment to other segments, as well as assigning costs to ultimate outputs of a segment.

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252. The ED then provided brief descriptions of available costing methodologies: activity-base costing (ABC), job order costing, process costing, and standard costing. The ED pointed out that these costing methodologies are not mutually exclusive. For example, standard costing can be used within ABC. ABC and standard costing combined can then be used with either job order costing or process costing.
253. Most respondents believed that the requirement for cost accumulation by responsibility segment is appropriate. Some of them stated that costs are accumulated at levels lower than segments such as cost centers, processes, or activities within a segment. Such accumulation is consistent with the standard so long as the costs will be aggregated at the segment level. Some of the respondents stated that the requirement is currently feasible because their systems are designed to accumulate expenses by segments and by resource types. Others, however, stated that they must upgrade their general accounting systems in order to meet the standard requirement.
254. All the respondents agreed with the cost assignment principles. One respondent, while supporting the principles, stated that the principles should be explicitly ranked by preference. The Board intended to express an preference among the principles. It stated in the proposed standard that direct cost tracing should be used “wherever it is feasible and economically practical.” The Board further stated in the ED that “for the costs that are not directly traced to outputs, it is preferable that they be assigned to them on a cause-and-effect basis.” (See ED par. 182) However, for cost-benefit considerations, assigning costs by allocations cannot be avoided. The Board emphasized that cost allocations should be performed on a rational basis. It also cautioned that allocations can be arbitrary and thus may result in distortions. (See ED par. 190) To make the intent of preference more explicit, the Board has added words to the standard to indicate that the principles are listed by preference.
255. All the respondents approved the descriptions of available costing methodologies. Some of them stated that the materials included are clear and provide adequate guidance. The respondents agreed with the Board’s position that because federal activities are highly diverse, it is not practical to require a particular costing method for a particular type of activity at this time. However, it is appropriate to require that each entity select a costing methodology that is best suited to its operations and use that methodology consistently.
256. The Board encouraged government entities to study the potential use of ABC in their operations (ED par. 200). This was well received by the respondents. Eighteen respondents supported ABC. Most of them said that ABC can be effective when combined with any of the other costing methodologies. Seven respondents from federal agencies stated that they believed ABC is appropriate for their activities and were considering using it. In addition, two respondents stated that the use of standard costing should also be encouraged. The Board continues to believe that as federal agencies are going through stages in the

development of their managerial costing, more sophisticated and refined costing methods, such as ABC and standard costing, should be considered and used to minimize arbitrary cost allocations and to improve full cost information.

257. The Board considered whether the costing methodology section should be recommended as a concept or a standard. It concluded that it should be a standard. The Board believes that cost accumulation and assignment principles contained in this section are definitive and should be followed by federal entities. Only by adhering to the principles and by continuous refinement of costing methodologies, can reliable full cost information be achieved.

Unused Capacity Costs

258. The ED proposed a standard, which, if adopted, would have required that entities measure the cost of unused operating capacity and report it as a separate expense. For this purpose, some entities, such as DoD, must separate operating capacity from “readiness capacities” which are reserved for war and emergency mobilization rather than normal operations. The operating capacity can be measured in terms of “practical capacity” which is the maximum units of output that the available capacity can produce taking the normal stoppage and interruptions into consideration. Unused capacity is the excess of practical capacity over actual outputs.
259. A number of respondents appreciated the importance of the proposed requirement. They stated that capacity cost information would be very useful in improving the cost and capacity management of federal agencies. Several respondents from the private sector urged that the proposal be adopted immediately.
260. Most respondents from federal agencies, however, stated that capacity measurements involve very complex issues and are not feasible to implement at this time. If the proposed requirement were adopted, agencies would encounter two major types of difficulties. First, they lack guidance on defining and measuring various types of capacity. For example, respondents from DoD stated that it is difficult to develop criteria that can be used to differentiate defense operating capacity costs from mobilization capacity costs. Civilian agencies engaging in administrative, policy making, and regulatory activities also indicated difficulties in defining their practical capacities. Second, respondents of many agencies stated that they do not have the accounting capability to provide reliable capacity measures. Without such capability, unused capacity costs could be improperly estimated and the resulting information could be misleading.
261. Many respondents were also opposed to the proposed standard on the basis of cost-benefit considerations. They estimated that accounting for capacity costs would require substantial time and efforts to implement. This would require the use of their limited accounting

personnel and equipment. Respondents from some agencies do not perceive that they have an over-capacity problem. Thus, it is very uncertain whether capacity accounting results, if produced, could be used to improve their operations.

262. After considering the responses to the ED, the Board is convinced that it is premature to recommend capacity accounting either as a standard or as a concept. The Board is aware that federal agencies have limited personnel and other resources for accounting. They must devote those limited resources to improving general financial reporting and to establishing the more fundamental elements of managerial cost accounting. Thus, it would not be cost beneficial to implement capacity costing at this time.
263. Managing capacity costs is a part of cost management. Although this document does not recommend a standard for measuring capacity costs, the full cost information required by the full cost standard will help management in identifying capacity utilization problems. Some respondents stated that the capacity accounting concepts would be useful to capital intensive, industrial-type activities and activities that deliver repetitive services that are measurable in units. The Board is aware that there are on-going research efforts on the subject in the private accounting communities. Thus, the Board may reconsider capacity accounting in the future.

Effective Date

264. The Board holds the view that managerial cost accounting has been needed across the federal government for a long time. Since the standards are quite general and address only the highest levels of cost accounting, the Board felt that they should be implemented quickly. The earlier managerial cost accounting is started, the earlier the benefits will be seen in managing and controlling federal programs and activities. The Board also believes that an effective date far into the future would not serve to quickly change the government's tendency to neglect cost accounting. Therefore, in the exposure draft, the effective date was set for fiscal periods beginning after September 30, 1995 (i.e., beginning in fiscal year 1996).
265. A majority of respondents to the exposure draft commented that this date was too early and said that they foresee problems with implementation at September 30, 1995. Many reasons were given for a delay in implementation. Chief among these were (1) difficulty in obtaining funding to make necessary changes in financial systems before September 30, 1995, (2) a lack of trained accounting personnel and equipment, and (3) a need for time to develop or modify appropriate cost accounting methodologies and systems and develop management awareness and support. Respondents suggested implementation dates ranging from one to five years after the fiscal year 1996 date given in the exposure draft.

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266. The Board recognized the validity of the concerns of many respondents over funding, training, and development of costing activities. However, it also recognized that federal agencies must be able to develop cost information very soon to meet the requirements of the GPRA. It also noted that reporting entities do not have to possess sophisticated cost accounting systems to meet the requirements in these standards. Federal agencies can take a gradual approach to the development of cost systems, if necessary, while developing basic cost information through other means in the short term.
267. Nevertheless, the Board agreed that the implementation date in the exposure draft may be a problem for many federal agencies since cost accounting is relatively new to most of them and the recommended implementation date is very near. The Board decided, therefore, to delay the implementation date by one additional year and make the standards effective for periods beginning after September 30, 1996, with earlier implementation encouraged.

Glossary

268. Early on in the development of the managerial cost accounting project, the task force determined that many problems can result in cost accounting from the use of similar terms to mean different things. It concluded that the use of consistent cost accounting terminology is necessary to avoid confusion and mis-communication. Therefore, it recommended that the Board attach a glossary to the exposure draft which would define many of the cost accounting terms used.
269. The Board agreed with this recommendation. It also decided that the establishment of uniform cost accounting terminology within the federal government is so important that the glossary should contain not only definitions for terms used in the statement, but also definitions for other important cost accounting terms even if those terms are not used directly in the text of the statement. This glossary would serve as the beginning of a uniform and consistent cost accounting terminology for use within the federal government.
270. Comments were received from only one respondent to the exposure draft concerning the glossary. That respondent did not suggest changing any of the definitions provided in the glossary, but only suggested some additions. The Board decided that the glossary is sufficient for the time being and should be retained in the final statement as an appendix. However, it also decided that it may issue additions to the glossary at a later date as more federal agencies gain experience in the development of cost information, and as the need for additional standard definitions becomes apparent.

Appendix B: Glossary

See Consolidated Glossary in “Appendix E: Consolidated Glossary.”